

Report to the Twenty-Fifth Legislature
2009 Regular Session

20-YEAR REVIEW OF WATER USE PERMITS



Prepared by the

Department of Land and Natural Resources
Commission on Water Resource Management
State of Hawaii

In response to

Section 174C-56,
Hawaii Revised Statutes

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20-YEAR REVIEW OF WATER USE PERMITS

-EXECUTIVE SUMMARY-

The Commission on Water Resource Management (Commission) of the Department of Land and Natural Resources (Department) has prepared this report for the Hawaii Legislature in accordance with Section 174C-56, Hawaii Revised Statutes (HRS). This report summarizes the Commission's water use permit program and the compliance status of all ground water use permits approved by the Commission during the 20-year period between 1987, when the Commission was first established, through June 15, 2007.

In accordance with the State Water Code (Chapter 174C, HRS), the Commission has designated water management areas (WMAs) on the islands of Oahu, Molokai, and Maui, to regulate and control the use of ground water sources. Except for wells that serve a single domestic user, owners of existing or proposed wells within a designated groundWMA must obtain a ground water use permit from the Commission. The purpose of water use permits is to allow for the maximum reasonable and beneficial use of ground water while ensuring that the resources are adequately protected.

To prepare this 20-year review report, the Commission hired a consultant (Brown and Caldwell, Inc.) to perform a comprehensive review of the conditions and compliance status of ground-water use permits approved and active through June 15, 2007. The consultant compiled and reviewed all of the Commission's permit records, including water use permit files, hearing records, water use declarations, and water use reporting records, and then arranged field visits with most of the permit holders to observe their water systems. The information gathered during the records review and field visits was then evaluated to determine the whether the permit holders have complied with the Commission's permit conditions.

A total of 359 active ground water use permits were reviewed. Of these, 56 (16%) permits were found to be in full compliance with their permit conditions. One or more of the following common compliance issues were found for the remaining 303 permits:

- Lack of proper reporting – 240 permits (67%);
- Water source and/or end use property information (tax map keys, or TMKs) that did not comport with the TMKs shown on the permit – 129 permits (36%);
- Incidences of overpumping – 47 permits (13%);
- Either partial or total nonuse (i.e., using less water than allowed by the permit) – 76 permits (21%); and
- Failure to submit a water shortage plan – 56 permits (16%).

This 20-year review was a good step in reconnecting with permit holders. Through the contacts made with permit holders, the Commission learned that some were not aware of their reporting requirements. Importantly, this review has shown that there is a need to implement or refine protocols for monitoring compliance and for more timely follow up with permit holders when compliance concerns are identified. The Commission is developing a system that will automate the collection and monitoring of water use information to make it easier for permittees to submit their reports and for staff to enforce reporting requirements. Part of the solution will

be through the Department's recent efforts to facilitate resource enforcement through its Civil Resource Violations System (CRVS), which the Board of Land and Natural Resources approved on December 12, 2008.

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20-YEAR REVIEW OF WATER USE PERMITS

INTRODUCTION

The sections of the State Water Code (Chapter 174C-56, HRS) and the Department of Land and Natural Resources' administrative rule (§ 13-171-22(b), Hawaii Administrative Rules (HAR)) that pertain to the designation of water management areas and approval of water use permits, read as follows:

“At least once every twenty years, the Commission shall conduct a comprehensive study of all permits issued under this chapter to determine whether the conditions on such permits are being complied with. The Commission shall prepare a formal report to the Legislature which shall be available to the public.”

This report has been prepared for the Legislature by the Commission on Water Resource Management (Commission) of the Department of Land and Natural Resources (Department) to summarize the water use permit program and compliance status of all ground water use permits issued by the Commission through June 15, 2007.

BACKGROUND

Responsibilities of the Commission: The Commission is regulatory body consisting of seven individuals that was established in 1987 when the Hawaii State Legislature adopted the State Water Code. The Commission fulfills a constitutional responsibility to set policies, protect resources, define uses, establish priorities while assuring rights and uses, and establish regulatory procedures. Land-based surface water and ground water resources fall under the jurisdiction of the Commission, but coastal waters do not. The Commission undertakes resource assessments, planning, and regulatory measures to allocate, manage, and protect Hawaii's valuable water resources.

Water Management Areas: The Commission has the authority to establish a Water Management Area (WMA) designation for areas where water resources may be threatened by current and future withdrawals such that further administrative control is required to ensure reasonable-beneficial use of the water resources in the public interest (§174C-41, HRS). In addition to the statewide requirement for well or stream diversion construction permits, a WMA designation imposes the additional regulatory requirement of justifying the end uses of water-supply wells and/or stream diversions drawing water from water sources within a WMA. Currently, the only WMAs are on the islands of Oahu, Molokai, and Maui. Until recently, WMAs were only designated for ground-water sources. However, in March of 2008, the Commission designated the first WMA for surface water on the island of Maui. This 20-year water use permit review examined only permits issued for ground water uses.

In 1993, the Commission designated the boundaries of the Ewa caprock aquifer to manage it separately from the underlying Waipahu-Waiawa, Ewa-Kunia, and Makaiwa aquifer system areas. The Ewa caprock aquifer is a source of brackish water and salt water and therefore designated for use as a non-potable water source. Uses of ground water from this aquifer system area are primarily for irrigation and industrial purposes. Because of uncertainties regarding the non-potable utility and sustainable yield of the caprock aquifer, the Commission has not calculated a sustainable yield estimate for it. In lieu of sustainable yield, the Commission has adopted a chloride limit of 1,000 milligrams per liter as a basis for regulating water use in the Ewa caprock aquifer system in areas where irrigation uses are prevalent. This limit corresponds to the generally accepted upper limit of irrigation-quality water.

Water Use Permits: With the exception of wells that serve a single domestic user, owners of existing or proposed wells within a designated ground water management area must obtain a ground water use permit from the Commission. §174C-48(a), HRS, reads:

“No person shall make any withdrawal, diversion, impoundment, or consumptive use of water in any designated water management area without first obtaining a permit from the commission. However, no permit shall be required for domestic consumption of water by individual users, and no permit shall be required for the use of a catchment system to gather water. An existing use in newly designated areas may be continued until such time as the commission has acted upon the application subject to compliance with section 174C-51.”

The Commission began approving ground-water use permits in 1987, after the Legislature passed the State Water Code. Before 1987, water use in what was formerly known as “ground water control areas” was approved by the Board of Land and Natural Resources (BLNR), in accordance with Chapter 177, HRS. Beginning in 1979, water use permits were required only in the areas of Pearl Harbor, Honolulu (designated in 1981), and Waiialua (designated in 1982), all on Oahu. Many of these older ground water use permits had limited and differing time durations, class distinctions, and conditions of use compared to the contemporary water use permits established under the State Water Code. Few of the BLNR approvals actually issued ground water use permit documents to permittees. Unless transferred or modified, several of these older permits continue with their original conditions.

Contemporary water use permits issued under the State Water Code have themselves evolved since 1987 by and through various Commission actions and Supreme Court rulings. As of April 16, 2003,¹ all water use permits approved by the Commission contain standard and specific conditions that well owners must meet in order to withdraw water from a WMA. The purpose of water use permits is to allow for the maximum reasonable and beneficial use of ground water while ensuring that the resources are adequately protected. To achieve this goal, every water use permit contains certain standard conditions (see Appendix A) and, often, special conditions that apply to a specific project or type of use. In addition to various resource and competing legal use protections,

¹ Commission water use permit approvals prior to April 16, 2003, had various standard conditions of approval. As these older permits are transferred, updated, or modified, their standard conditions are made consistent with current standard conditions.

permit modification, transfer, and revocation stipulations, every water use permit approved by the Commission includes conditions that:

- Set the maximum withdrawal rate based on a 12-month moving average from individual wells or batteries of wells;
- Allow water use only in approved areas, defined as “use TMKs”;
- Allow water use only for purposes consistent with county zoning land use designations within such use TMKs and their justified water needs, to ensure the reasonable and beneficial use of the water;
- Require the permittee to report metered water withdrawal rates, chloride concentrations, and water levels at the source(s) on a regular basis; and
- Require the permittee to submit water shortage plans

WATER USE PERMIT REVIEW PROJECT

Project Scope: On June 15, 2007, the Commission entered into an agreement with the engineering firm Brown and Caldwell, Inc., to conduct a review of existing water use permits for ground-water sources. The main goal of this project was to document the conditions of each permit and assess each permit for compliance. The contracted tasks for this effort were as follows:

- Task 1: Review and document all active water use permit conditions;
- Task 2: Schedule and conduct field investigations for each permit and document standard and special conditions compliance;
- Task 3: Prepare individual field reports for each water use permit documenting the above conditions of use and permit compliance;
- Task 4: Prepare a report to the Legislature summarizing the methodology, findings, and recommendations of this project.

Methodology: Four major tasks outline the review methodology as follows:

Task 1 involved reviewing existing State well records that require water use permits and therefore include the water use permit records, Commission hearing records, water use declarations, and reporting records for monthly withdrawals, well water levels, and chloride concentrations. Project files were made for each water use permit containing applicable permit conditions, TMK maps, geographic information system aerial maps, and a graph of the latest 12-month moving average water use (through June 15, 2007). A reference list of all permit conditions that have been used by the Commission was also compiled for all permits approved since 1987 (Appendix A – Standard Conditions, Appendix B – Special Conditions). The results of Task 1 provided a baseline of permit information necessary to conduct the field investigations included in Task 2.

Task 2 began with the mailing of an initial letter and survey form to all water use permit holders explaining the purpose of the project and requesting current contact and water system information. Once the survey forms were completed and returned, phone interviews were conducted to obtain a better understanding of the permit holder’s water system and water use, and to schedule a field investigation. Brown and Caldwell staff then met with permit holders in the field or their representatives to tour and observe their water systems, document current uses, and assess compliance. During the field investigations, photographs were taken of each well, associated appurtenances, and end use locations. The conditions checked during each field visit included:

- Well location(s) using global positioning system coordinates;
- Installation of a functional flowmeter;
- Type of beneficial end use(s);
- Location of beneficial end use(s); and
- Evidence of wasting of water.

For Task 3, an individual field report was compiled to document each field visit. Each field report describes the water system condition and any observed non-compliance issues, and includes photographs and notes from the field visit. An electronic spreadsheet of all water use permits was also developed that contains the permit information and noted non-compliance issues.

Task 4 involved preparation of this legislative report to discuss the water use permit review project and the findings and recommendations.

MAJOR PROJECT FINDINGS

Number of Water Use Permits Reviewed: Brown and Caldwell reviewed a total of 359 active water use permits for the islands of Oahu, Molokai, and Maui, summarized on Table 1.

Table 1. Water Use Permits Reviewed by Island

Island	Number of Permits
Oahu	300
Molokai	47
Maui	12
Total	359

The permits reviewed were approved by the Commission between 1987 and June 15, 2007. All percentages shown hereafter are based the total of 359 permits reviewed. The findings of this review are summarized on Table 2.

Table 2. Summary of Water Use Permits Reviewed and Major Findings

Permit Status and Compliance Issues	Number	Percent of Total	Reference
Total number of permits reviewed (active through June 15, 2007)	359		
Oahu	300	--	
Molokai	47	--	
Maui	12	--	
Permits not investigated (35 permittees) ¹	44	12	Appendix C
Results of Compliance Assessment			
Full compliance	56	16	
Outdated information (water user and/or landowner contact address or phone number)	107	30	Appendix D
Lack of proper reporting	240	67	Appendix E
-- Lack of an approved flow meter for measuring water withdrawals	133	37	"
-- Inconsistent reporting of water use, with gaps more than 12 months	17	5	"
-- No reporting of water withdrawals	112	31	"
-- No reporting of chloride concentrations	239	67	"
Overpumping ²	47	13	Appendix F
Source and/or end use location changes	129	36	
Water shortage plans submitted	56	16	
4-year partial or total non-use	76	21	Appendix G
Special alternative source requirements	120	33	Appendix H

Notes:

mgd = million gallons per day

¹ Some permits could not be investigated in the field either because of a lack of response from the permit holders, or because of cancellations of scheduled field visits with no further correspondence.

² A permit holder is found to be in violation of overpumping when the 12-month moving average of water withdrawals exceeds the permitted withdrawal rate at any time.

Permits Not Investigated: The status of 44 permits (12%) for 35 permittees could not be investigated in the field despite best good-faith efforts either because of a complete lack of response from permit holders, or because scheduled visits were cancelled by the permit holder with no further correspondence. Permits that could not be field investigated are listed in Appendix C.

Full Compliance: Of the 359 existing permits, 56 (16%) complied with all applicable standard and special conditions of their water use permit.

Outdated Contact Information: It was found that 107 permits (30%) required an update in water user, landowner, and/or address information, as listed in Appendix D. Two common reasons for outdated contact information were changes in the permit holder's staff assigned to

handle water use permit affairs without notification to the Commission, and some permit holders did not request a permit transfer when the landowner and/or water user changed.

Lack of Proper Reporting: All water use permits require recording and reporting of metered monthly water withdrawal records, including water level and chloride concentration data. These data are needed to: (1) assess the actual water use and to compare the results to allocated (permitted) water use and sustainable yields established for each ground-water management area (aquifer system areas); and (2) to monitor the ground water conditions in an aquifer system area and aquifer sector. The results of the permit review and field investigations showed that 240 permits (67%) had some form of reporting violation. The causes are attributed to the following:

- Lack of an approved flow meter for measuring water withdrawals – 133 (37%);
- Inconsistent reporting of water use, with gaps greater than 12 months – 17 (5%);
- No reporting of water withdrawals – 112 (31%);
- No reporting of chloride concentrations – 239 (67%).

Several of the 240 permits with reporting violations were found to have two or more of these violations. This finding is outlined in greater detail in Appendix E.

This assessment of reporting violations excluded the following cases:

- Permits for which the standard conditions and/or special conditions could not be located or determined during completion of Task 1;
- Permits with specific conditions that exempted the permit holder from certain reporting requirements; and
- Permits for which unique circumstances did not require reporting, such as a permit that was recently granted and the permit holder has not yet drilled the well or wells covered by the permit.

Through this review, several permit holders stated that they did not know of any requirements for reporting water use, chloride concentrations, and water levels as part of their permit conditions despite written documentation that includes the following:

- At least two statewide water use reporting notifications and distribution of reporting forms efforts in 1991 and 1992 through the Commission's registration program; and
- All well construction permits, pump installation permits, water use permits, and certificates of completion contain the standard condition requiring water use reporting, which is required for all well owners and operators statewide (§13-168-7, HAR) and customized report forms are attached to these documents.

Also, many permit holders stated that they had received no correspondence or communication from the Commission in years. This applies mainly to the smaller private or commercial users; however, 62 of the reporting violations noted are associated with permits held by the municipal water agencies on Oahu, Molokai, and Maui. Though the Commission utilizes a database to track and analyze the reported water use data, much of the data entry and follow-up with delinquent reporters is done manually.

Source and/or End Use Location Changes: A total of 129 permits (36%) were found to have source and/or end use TMK locations that were not included in their corresponding water use permit or recorded in the Commission's water use permit database. The TMK locations for end uses differed from those on record as a consequence of expanded crop areas beyond the area permitted, or as a result of subdivision or reconsolidation of properties within a WMA

Over-pumping: A permit holder is found to be in violation of over-pumping when the 12-month moving average of water withdrawals exceeds the permitted withdrawal rate at any time. The results of this survey showed that 47 permits (13%) had 12-month moving averages that exceeded the maximum permitted withdrawal rate at least periodically. Appendix F lists permits with over-pumping histories, and includes the permitted water allocation, number of years analyzed, number of over-pumping incidents, and longest incident duration. The period of record examined for this assessment was the most recent 4 years, although some permits were approved during this period and have pumping and performance records shorter than 4 years.

4-Year Partial or Total Non-Use: Though not a compliance issue, this review also assessed continuous 4-year partial or total non-use of allocated amounts. Standard water use permit condition 15 notifies the permit holder(s) that a 4-year period of continuous partial or total non-use is grounds for revocation by the Commission. A listing of the reported 4-year continuous partial or total non-use is included in Appendix G. There is significant partial and total non-use, which is mostly attributed to older sugar plantation allocations no longer in use or which have been transferred to the Honolulu Board of Water Supply for future developments.

Water Shortage Plans Submitted: 56 (16%) of permittees have submitted a water shortage plan, as required by their permits. The State Water Code (§174C-62, HRS) requires the Commission, not permit holders, to formulate water shortage plans. However, staff believes an important starting point for formulating these plans is to give permit holders an opportunity to specify what they are willing to do, on a voluntary basis, in the event the Commission declares a water shortage.

Special Alternative Source Requirements: For private non-potable irrigation needs, the Commission has approved the use of potable and brackish waters when there was no reasonable alternative source and water is available within the limits of sustainable yield. Special conditions were added to several of these types of permits, in which the Commission has reserved its right to revoke a permit when a reasonable alternative source becomes available. Permits that included an alternative source condition are listed in Appendix H. It was beyond the scope of this project to assess whether alternatives are available to these permit holders.

AQUIFER SYSTEM AREA OVERALLOCATIONS

The following paragraphs describe the current collective status of water use permits in the context of ground-water management areas, or designated aquifer system areas, rather than the compliance performance of individual permittees. Appendix I lists all the current active water use permit allocations for potable aquifer system areas and compares them against the recently-updated sustainable yields for each of these areas, as published in the 2008 update of the Water Resources Protection Plan (WRPP).

There are 27 designated ground-water management areas with a total allocation of 335.510 million gallons per day (mgd) out of a potential total sustainable yield of 477 mgd (see Table 3). Thus, approximately 70% of the estimated available potable water is already allocated. When viewed on an individual aquifer system basis, 6 of the 27 WMAs are overallocated.

Table 3. Summary of Ground Water Management Area Allocations

Aquifer System Area Overallocations ¹	Number	2008 Sustainable Yield (mgd)	Allocated Quantity (mgd)	Overallocated Quantity (mgd)	Reference
Number of designated ground water management areas	27	447			Appendix I
Total quantity allocated			335.510		"
Quantity available for allocation			111.490		"
Individual aquifer system areas overallocated (all on Oahu)	6				Appendix I
Moanalua		16	19.960	3.960	"
Mokuleia		8	8.025	0.025	"
Nuuanu		14	15.165	1.165	"
Palolo		5	5.646	0.646	"
Waialua		25	30.311	5.311	"
Waimalu		45	46.951	1.951	"

Notes:

mgd = million gallons per day

¹ Sustainable yields have been estimated for each aquifer system area, and were recently updated in the 2008 Water Resources Protection Plan.

Table 3 lists the aquifer system areas that are currently overallocated and the overallocation amounts, based on the latest sustainable yield estimates, are all on Oahu. These aquifer system areas are: (1) Moanalua (3.960 mgd); (2) Mokuleia (0.025 mgd); (3) Nuuanu (1.165 mgd); (4) Palolo (0.646 mgd); (5) Waialua (5.311 mgd); and (6) Waimalu (1.951 mgd). Most of these allocations were granted by the BLNR, before the establishment of the State Water Code in 1987, at a time when sustainable yield estimates were higher and covered different areas than the 2008 WRPP sustainable yield updates. Also, actual reported pumpage in Mokuleia, Waialua, and, until recently, Palolo is significantly lower than allocated amounts and current 2008 estimated sustainable yield limits. The Moanalua, Nuuanu, Palolo, and Waimalu aquifer system areas are considered to be the areas that require close monitoring.

DISCUSSION

Over the years the Commission has become aware of the need to improve compliance protocols. In dealing directly with the water use permit holders during this review, it appears that there is a need to implement or refine protocols for monitoring permit compliance and to follow up on compliance concerns such as overpumping or delinquent water use reports. Part of the solution is to enforce the water use reporting requirement. Additionally, more effort is needed toward automating the collection and monitoring of water use information to make it easier for permittees to submit their reports and for staff to enforce reporting requirements. Systems should be in place for more timely detection of reporting deficiencies and for alerting Commission staff to contact those permit holders and inquire about their water use or other compliance issues. Fortunately, part of the solution will be aided by the Department's recent efforts to facilitate resource enforcement through its Civil Resource Violations System (CRVS), which the BLNR recently approved in December 2008.

This 20-year review was a good step in reconnecting with permit holders. Some permit holders were not aware of the reporting requirements, but stated that they wish to comply with their permit conditions and have requested the proper reporting forms in spite of the fact that such forms are routinely issued as described earlier in this report.

PLANNED COMMISSION ACTIONS

Several follow-up actions based on this 20-year review had already been anticipated and firmer plans and actions set into motion. The Commission approved the update to the WRPP, 17 years in the making, on August 28, 2008. The WRPP is the Commission's primary contribution to the overall Hawaii Water Plan, which is a compilation of documents intended to serve as a long-range guide for water resource management in the State. Section 6 of the WRPP contains the following recommendations for the Commission's ground water use reporting program:

- The Commission should continue development of the ground water use database to implement an automatic notification system that will flag delinquent reports, and send notices to well owners/water users that have neglected to send in pumpage reports.
- The Commission should utilize internet technology to provide well owners and water users the option of submitting pumpage reports online. This will be far more efficient for ground water users and should also reduce data input errors.
- The Commission should obtain additional funding and staff resources for the water use reporting program and amend its current policy to instead require currently exempt individual water systems using less than 1,700 gallons per day (gpd) to report water use.
- The Commission should consider resurrecting the monthly newsletter to provide up-to-date information on deep monitor well, chloride, water level, and/or water use information currently collected by the Commission.

The Commission has also entered into a \$45,000 contract with a consultant to upgrade its water use reporting database system with overarching goal of increased ease and efficiency to collect, archive, retrieve, and analyze water use data. This project is divided into two phases. Phase I deals with database migration to SQL platform, data consolidation, and development of database tools. Phase II involves the development of web-based applications and services to facilitate the submission of monthly reporting by permittees. The current contract only addresses Phase I components.

Information Updates – Contact Information, Landowner, and Water User: Many of the permit records that were found to have outdated information were updated, as needed. These updates included current information for the designated permit holder contact person, landowner, water user, addresses, and phone numbers. The Commission will follow up, as needed, with other permit holders to confirm and update their records, especially those listed in Appendix C. A more robust water use reporting system would help to reduce the incidences of outdated contact information as permittees would be contacted more frequently.

For those non-respondents, listed in Appendix D, to this 20-year review staff will undertake more aggressive legal actions and recommendations to the Commission including but not limited to revocations.

Improve Reporting Performance: The Commission plans the following other actions to address the lack of proper water use reporting:

- Follow-up with those that permit holders who are required to have and were found not have a functioning flowmeter or other approved measuring device installed on their well(s) to measure their water withdrawals
- Re-contact permit holders who are not submitting water use reports, and clarify that reporting of water withdrawals, well water level data, and chloride measurements is required by the State Water Code, its rules, and is a standard condition of every water use permit approved by the Commission.
- Provide technical assistance and outreach, where necessary, to develop permit holders' capacity to successfully measure and report the required information.
- Monitor reporting performance and address incidents of nonreporting by sending notices to permit holders to permit holders who are not regularly submitting water use reports and when reports lack the required information.
- Utilize the Department's CRVS to facilitate water use reporting violations for water management areas first. It is anticipated that implantation of the CRVS may occur as soon as February 2009, and part of the implementation is to come up with a schedule of fines for water use reporting violations.

Work with Permit Holders to Verify Source and End Use Locations: This is probably the most difficult issue to address as staff needs to review the individual field reports in greater detail and work with permit holders where source and end use locations are in error and need

correction. In cases where there are obvious violations staff needs to bring these to the Commission for action rather than use the CRVS to enforce these particular permit conditions.

Over-pumping: Over-pumping can result from a number of factors. For municipal operators, it is sometimes due to system operational and optimization changes. The Commission has in the past recognized this through its declaratory ruling DEC-ADM97-A1 that allows the shifting of water use permit allocations within a single aquifer system area for a user with multiple sources. So long as the total allocation for the user remains unchanged within the aquifer system area and there are no negative anticipated impacts to the ground and surface waters this can be and has been done administratively under this Commission ruling. This primarily benefits the municipal department of water supplies or other public water systems with multiple sources as they attempt to meet and balance demand and protect well infrastructure through optimization. However, there have been informal requests, primarily from the Honolulu Board of Water Supply, that administrative allocations between other aquifer system areas be allowed to utilize this ruling. To date, the Commission has not allowed this to be an administrative action though the need, as evidenced by the overallocations in the Honolulu aquifer sector area and the available allocation in the Pearl Harbor aquifer sector area, could mean that this issue may be worth implementing through Commission action.

Overpumping for agricultural users are usually due to drought events that required increased pumping to maintain crops. However, if area of crop production (total number of acres) has increased beyond permitted end use locations, this too would account for a higher demand on the water source(s) than is allocated. Part of the Commission's attempt to better assess the reasonable and beneficial irrigation needs considering drought (in addition to soils, localized weather, irrigation methods, etc.) has been through work with the Department of Natural Resources and Environmental Management, College of Tropical and Human Resources, University of Hawaii and the United States Department of Agriculture, Natural Resource Conservation Service to construct of an irrigation model. Known as the Irrigation Water Requirement Estimation Decision Support System (IWREDSS) and beginning in 2008, this tool is being used as a guideline to estimate irrigation requirements though more field verification and validation is required before it is officially adopted as the official method to estimate irrigation requirements. Refining this tool would help rectify overpumpage allocations for non-potable irrigation needs.

4-Year Partial and Total Non-Use: It has been a policy of the Commission to revoke permits due to non-use when new requests for allocations are made and there is not enough allocation available within a water management area to accommodate such requests. Such requests have been infrequent events and, in the past, have been reconciled by voluntary revocation of larger non-use permit holders. There has also been much discussion with the public and other purveyors over the years that the 12-month moving average and 4-year window for non-use is not appropriate measures of average water use since such time frames do not account for prolonged drought periods. Thus, further review is necessary for an across the board revocation of 4-year partial non-use. However, total non-use of allocations that have not been used over a 4-year period seem to be an issue the Commission can address through revocation in the short-term with proper notification to permittees who fall into this category; primarily those listed in Appendices C and D. Particularly, this will help to address overallocation issues in the

Waiialua and Mokuleia aquifer system area where large former sugar allocations remain unchanged.

Overallocation: As mentioned earlier, overallocation can be addressed in two ways:

- 1) Revocation of 4-year or total non-use allocations. This would address the overallocations situation in the Waiialua and Mokuleia aquifer system areas where older water use permits to former large agricultural needs have been reduced.
- 2) Explore facilitating the optimization of the Honolulu Board of Water Supply pumpage patterns by allowing allocation transfers between aquifer system areas. This would be most helpful to address the Moanalua, Nuuanu, Palolo, and Waimalu aquifer system area overallocation situations.

A third way to address the overallocation is to continue to refine sustainable yield estimates through infrastructure optimization using 3-D numerical models and field monitoring networks. These are expensive and long-term projects that have and will continue to require much time, effort, and cost on the part of the Commission, other governmental agencies (e.g., U.S. Geological Survey, County Department of Water Supplies), and private professionals in the field of hydrology to update sustainable yield estimates using and developing these tools and data collection networks.

**APPENDIX A
STANDARD CONDITIONS LIST**

1. The water described in this water use permit may only be taken from the location described and used for the reasonable beneficial use described at the location described above. Reasonable beneficial uses means “the use of water in such a quantity as is necessary for economic and efficient utilization, which is both reasonable and consistent with State and County land use plans and the public interest.” (HRS § 174C-3)
2. The right to use ground water is a shared use right.
3. The water use must at all times meet the requirements set forth in HRS § 174C-49(a), which means that it:
 - a. Can be accommodated with the available water source;
 - b. Is a reasonable-beneficial use as defined in HRS § 174C-3;
 - c. Will not interfere with any existing legal use of water;
 - d. Is consistent with the public interest;
 - e. Is consistent with State and County general plans and land use designations;
 - f. Is consistent with County land use plans and policies; and
 - g. Will not interfere with the rights of the Department of Hawaiian Home Lands as provided in Section 221 of the Hawaiian Homes Commission Act and HRS § 174C-101(a).
4. The ground-water use here must not interfere with surface or other ground-water rights or reservations.
5. The ground-water use here must not interfere with interim or permanent instream flow standards. If it does, then:
 - a. A separate water use permit for surface water must be obtained in the case an area is also designated as a surface water management area;
 - b. The interim or permanent instream flow standard, as applicable, must be amended.
6. The water use authorized here is subject to the requirements of the Hawaiian Homes Commission Act, as amended, if applicable.
7. The water use permit application and submittal, as amended, approved by the Commission at its <Insert Date>meeting are incorporated into this permit by reference.
8. Any modification of the permit terms, conditions, or uses may only be made with the express written consent of the Commission.

Variations of Standard Condition (8) are as follows:

- i. Modification of any permit condition shall be approved by the Commission. Modification of any permit condition without notification may result in the revocation of the water use permit.

**APPENDIX A
STANDARD CONDITIONS LIST**

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.

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- 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

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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.

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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.

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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

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suggested that the developer consider use of dual lines in the subdivisions so that effluent may be used in the existing reuse system. Another consideration is the development of brackish water wells in the Kaluakoi Aquifer system for mixing with the effluent generated at the resort.

13. Within six (6) months from the date of approval of a water use permit for the well, the application shall evaluate the filter back discharges into Kakaako Gulch to determine if excessive preventable waste is occurring and identify possible measures to eliminate or reduce such waste. The evaluation shall be conducted in cooperation with the Commission staff and staff of the Department of Health's Safe Drinking Water Branch, which regulates the drinking water system.
14. Within six (6) months from the date of approval of a water use permit for the well, the applicant shall 1) implement a leakage control and detection system and compete repairs to prevent such leakage and 2) implement use of xeriscaping and low-flow fixtures.
15. Action on the future use portion of the water use permit application for Well #17 (Well No. 0901-01) is deferred pending the establishment of existing uses in the aquifer. Kukui Inc.'s application for uses in excess of those uses existing on July 15, 1992 will be considered "new" uses and will be taken up by the Commission as soon as other existing use applications have been decided. In the interim,
 - a. The Commission shall recognize that there is disagreement between the applicant's staff calculations of reasonable-beneficial existing use
 - b. The Applicant will have the burden of proof to show within six (6) months reasonable-beneficial existing use calculations that support the applicant's request as opposed to staff's calculations.
 - c. The Commission's enforcement of the approved existing use allocation will be suspended for six (6) months.
16. The permittee shall submit a notice of intent and written request to continue the use at least ninety (90) days prior to the expiration of the interim five-year permit.
17. The Commission shall delegate to Maui Department of Water Supply the authority to allocate the use of water for municipal purposes, as provided in §174C-48(b).
18. Maui Department of Water Supply shall be exempt from the requirements for permit modifications, as provided in §174C-57(c).
19. The permittee must meter water use and monitor chloride concentrations on a monthly basis and submit monthly reports of water use and chloride concentrations to the Commission.
20. Standard Condition 16 is waived for saltwater wells.
21. The permit will be revoked if (1) stream monitoring shows that pumping the well reduces stream flow, or (2) the electromagnetic resistivity survey indicates that the

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- 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.

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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.

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43. Require adherence to the Conservation Conditions.
44. In the event a water shortage is declared by the Commission, permittees in the <Insert Aquifer Sytem> 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.

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58. In the event that emergency water use occurs, the permittee shall notify the Commission in writing within one (1) day of pumping, to inform 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

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- 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.

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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.

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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.

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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 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

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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

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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.

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LIST OF PERMITS NOT FIELD INVESTIGATED

	Permittee/Water User	WUP Nos.
	Island of Molokai	
1	Department of Hawaiian Homelands State of Hawaii	267
2	Department of Parks & Recreation County of Maui	195
3	Hawaiian Research, Ltd.	462
4	Kaluakoi Water LLC	617
5	Kanukuawa Ranch	338
6	Maui Electric Co.	293, 294
7	Molokai Ranch, Ltd.	604, 607
8	National Park Service U.S. Dept. of the Interior	201
9	Stanley T. Ort Trust	526
10	Waiola O Molokai, Inc.	429
	Island of Oahu	
1	AgriBusiness Development Corp.	621
2	Basin Project, Inc.	743
3	Department of Environmental Services City & County of Honolulu	337
4	Department of Parks & Recreation City & County of Honolulu	785
5	Department of Wastewater Management City & County of Honolulu	160
6	DLNR, Division of State Parks State of Hawaii	311
7	Dudley W.A. Chang Trust	290
8	Gibson, Peter	658
9	Gunter, Ryan	334
10	Harris Rug & Carpet Cleaners	084
11	Honolulu Resource Recovery Venture	062
12	James Campbell Co., LLC	809
13	Kahala Hotel & Resort	215
14	Kaio, Jacob I. Sr.	307
15	Kamake'eaina, Herbert	314
16	Kamehameha Schools	636
17	Marconi Point LLC	754, 755, 756
18	Michael Watanabe	090, 091
19	Mokuleia Aquafarm	446
20	Onomea Bay LLC	249, 251
21	Robinson Kunia Land LLC	619, 767, 804
22	Roman Catholic Church	814
23	Sterman, Richard	353
24	Trias, Weston	626
25	Waiawa Village, LLC	573, 574
35	Total # of Permits Not Field Investigated	

**APPENDIX D
PERMITS WITH WATER USER, LANDOWNER, AND/OR ADDRESS CHANGES**

Current Information Shown

	Permittee/Water User	Water User Address	Landowner	Landowner Address	WUP No.
	Island of Maui				
1	Living Water Foundation, LLC	P.O. Box 2327 Wailuku, HI 96793	Living Water Foundation, LLC	P.O. Box 2327 Wailuku, HI 96793	704
	Island of Molokai				
1	Granger, Robert M.	P.O. Box 1830 Kaunakakai, HI 96748	D.E. Johnson	P.O. Box 371 Kaunakakai, HI 96748	268
2	Hodgins, Pearl	P.O. Box 125 Kaunakakai, HI 96748	Hodgins, Pearl	P.O. Box 125 Kaunakakai, HI 96748	214
3	Iaea, Stella	P.O. Box 405 Kaunakakai, HI 96748	Lukela Estate	P.O. Box 405 Kaunakakai, HI 96748	266
4	Kim Markham	7641 Kamehameha V Hwy. Kaunakakai, HI 96748	Kim Markham	7641 Kamehameha V Hwy. Kaunakakai, HI 96748	678
5	Kanukuawa Ranch	1331 Kamaile St. Honolulu, HI 96814	Kanukuawa Ranch	1331 Kamaile St. Honolulu, HI 96814	338
6	Keawa Nui Farm, Inc.	HC-01 P.O. Box 479 Kaunakakai, HI 96748	Bishop Estate	P.O. Box 3466 Honolulu, HI 96801	443
7	Maui Electric Co.	P.O. Box 378 Kaunakakai, HI 96748	Maui Electric Co.	P.O. Box 378 Kaunakakai, HI 96748	293
8	Molokai Ranch, Ltd.	P.O. Box 259 Maunaloa, HI 96770	Molokai Ranch, Ltd.	P.O. Box 259 Maunaloa, HI 96770	604
9	Molokai Ranch, Ltd.	P.O. Box 259 Maunaloa, HI 96770	Molokai Ranch, Ltd.	P.O. Box 259 Maunaloa, HI 96770	607
10	Hodgins, Pearl	P.O. Box 125 Kaunakakai, HI 96748	Pearl Hodgins	P.O. Box 125 Kaunakakai, HI 96748	310
11	Stanley T. Ort Trust	HC-01 Box 590 Kaunakakai, HI 96748	Stanley T. Ort Trust	HC-01 Box 590 Kaunakakai, HI 96748	526
12	Department of Hawaiian Homelands	P.O. Box 2008 Ho'olehua, HI 96729	Department of Hawaiian Homelands	P.O. Box 2008 Ho'olehua, HI 96729	267

APPENDIX D
PERMITS WITH WATER USER, LANDOWNER, AND/OR ADDRESS CHANGES

	Permittee/Water User	Water User Address	Landowner	Landowner Address	WUP No.
	Island of Oahu				
1	Sterman, Richard	66-520 Kamehameha Hwy. Haleiwa, HI 96712	Richard Sterman	66-520 Kamehameha Hwy. Haleiwa, HI 96712	353
2	AES Hawaii, Inc.	91-086 Kaomi Lp. Kapolei, HI 96707	Hawaii MMGD c/o Reid Mangement & Research, LLC	733 Bishop St., Makai #1820 Honolulu, HI 96813	161
3	Arbors Association	91-920 La'aulu St. Ewa Beach, HI 96706	Arbors Association	91-920 La'aulu St. Ewa Beach, HI 96706	788
4	Renior, Jean-Paul	47-477 Waihee Pl. Kaneohe, HI 96744	Jean-Paul Renior	47-477 Waihee Pl. Kaneohe, HI 96744	580
5	Hi'ipaka, LLC	59-864 Kamehameha Hwy. Haleiwa, HI 96712	Hi'ipaka, LLC	59-864 Kamehameha Hwy. Haleiwa, HI 96712	173
6	BG Farm	P.O. Box 363 Haleiwa, HI 96712	Chieko Takahashi	P.O. Box 36 Haleiwa, HI 96712	455
7	Kamehameha Schools	567 S. King St., Suite 200 Honolulu, HI 96813	State DLNR, SMF Enterprises, Bishop Estate, Dole/Castle & Cooke, AMFAC	Various	636
8	Honolulu BWS	630 South Beretania, St. Honolulu, HI 96843	Honolulu BWS	630 South Beretania St. Honolulu, HI 96843	468
9	Waialae Country Club	4997 Kahala Ave. Honolulu, HI 96816	Bishop Estate	4997 Kahala Ave. Honolulu, HI 96816	150
10	Department of Parks & Recreation	1000 Uluohia St., Suite 309 Kapolei, HI 96707	Department of Parks & Recreation	1000 Uluohia St., Suite 309 Kapolei, HI 96707	785
11	Department of Environmental Services City & County of Honolulu	1000 Uluohia St., Suite 308 Kapolei, HI 96707	Department of Environmental Services City & County of Honolulu	1000 Uluohia St., Suite 308 Kapolei, HI 96707	337
12	James Campbell Company, LLC	1001 Kamokila Blvd. Kapolei, HI 96707	James Campbell Company, LLC	1001 Kamokila Blvd. Kapolei, HI 96707	390
13	James Campbell Company, LLC	1001 Kamokila Blvd. Kapolei, HI 96707	James Campbell Company, LLC	1001 Kamokila Blvd. Kapolei, HI 96707	346
14	James Campbell Company, LLC	1001 Kamokila Blvd. Kapolei, HI 96707	James Campbell Company, LLC	1001 Kamokila Blvd. Kapolei, HI 96707	297
15	Rina Enterprises	P.O. Box 900664, Sandy, UT 84090	Rina Enterprises	P.O. Box 900664, Sandy, UT 84090	233

APPENDIX D
PERMITS WITH WATER USER, LANDOWNER, AND/OR ADDRESS CHANGES

	Permittee/Water User	Water User Address	Landowner	Landowner Address	WUP No.
16	Onomea Bay LLC	110 W. El Portal Rd. San Clemente, CA 92672	Onomea Bay LLC	110 W. El Portal Rd. San Clemente, CA 92672	251
17	James Campbell Company, LLC	1001 Kamokila Blvd. Kapolei, HI 96707	James Campbell Company, LLC	1001 Kamokila Blvd. Kapolei, HI 96707	248
18	Onomea Bay LLC	110 W. El Portal Rd. San Clemente, CA 92672	Onomea Bay LLC	110 W. El Portal Rd. San Clemente, CA 92672	249
19	Dudley W.A. Chang Trust	47-590 Ahilama Rd. Kaneohe, HI 96744	Dudley W.A. Chang Trust	47-590 Ahilama Rd. Kaneohe, HI 96744	290
20	DOT - Airports Honolulu International Airport	300 Rodger Rd., #12 Honolulu, HI 96819	DOT - Airports Honolulu International Airport	300 Rodger Rd., #12 Honolulu, HI 96819	053
21	Kaimana Ventures, Ltd.	23 S. Vineyard Blvd., #302 Honolulu, HI 96813	Kaimana Ventures, Ltd.	23 S. Vineyard Blvd., #302 Honolulu, HI 96813	028
22	Robinson Kunia Land LLC	1132 Bishop St., Suite 1930 Honolulu, HI 96813	State DLNR, SMF Enterprises, Bishop Estate, Dole/Castle & Cooke, AMFAC	Various	619
23	Galbraith Estate Bank of Hawaii Trustee, Dept. 722	P.O. Box 3170 Honolulu, HI 96802	Galbraith Estate Bank of Hawaii Trustee, Dept. 722	P.O. Box 3170 Honolulu, HI 96802	717
24	Certified Management - Sunrise AOA	91-299 Hanapouli Circle #A Ewa Beach, HI 96706	Certified Management - Sunrise AOA	91-299 Hanapouli Circle #A Ewa Beach, HI 96706	790
25	Certified Management - Coronado AOA	3179 Koapaka St. Honolulu, HI 96819	Certified Management - Coronado AOA	3179 Koapaka St. Honolulu, HI 96819	791
26	Ewa By Gentry Community Association	91-1795 Keaunui Dr. Ewa Beach, HI 96706	Ewa By Gentry Community Association	91-1795 Keaunui Dr. Ewa Beach, HI 96706	060
27	Harris Rug & Carpet Cleaners	260 Elelupe Rd. Honolulu, HI 96821	Harris Rug & Carpet Cleaners	260 Elelupe Rd. Honolulu, HI 96821	084
28	Hawaii Country Club	P.O. Box 861634 Wahiawa, HI 96786	Hawaii Country Club	P.O. Box 861634 Wahiawa, HI 96786	454
29	Hawaiian Marine Enterprises	P.O. Box 301 Kahuku, HI 96731	James Campbell Company, LLC	1001 Kamokila Blvd. Kapolei, HI 96707	467
30	Holt, Lemon	53-007 Halai Place Hauula, HI 96717	Lemon W. Holt	53-007 Halai Place Hauula, HI 96717	224
31	Honolulu Int. CC	1690 Ala Pu'umalu St. Honolulu, HI 96818	Honolulu Int. CC	1690 Ala Pu'umalu St. Honolulu, HI 96818	031
32	Honolulu BWS	630 South Beretania Street Honolulu, HI 96843	James Campbell Company, LLC	1001 Kamokila Blvd. Kapolei, HI 96707	158

APPENDIX D
PERMITS WITH WATER USER, LANDOWNER, AND/OR ADDRESS CHANGES

	Permittee/Water User	Water User Address	Landowner	Landowner Address	WUP No.
33	Honolulu BWS	630 South Beretania St. Honolulu, HI 96843	James Campbell Company, LLC	1001 Kamokila Blvd. Kapolei, HI 96707	165
34	Honolulu BWS	828 Fort Street Mall, #500 Honolulu, HI 96813	James Campbell Company, LLC	1001 Kamokila Blvd. Kapolei, HI 96707	155
35	Honolulu BWS	630 South Beretania St. Honolulu, HI 96843	James Campbell Company, LLC	1001 Kamokila Blvd. Kapolei, HI 96707	164
36	Kahala Hotel & Resort	5000 Kahala Ave. Honolulu, HI 96816	Kahala Hotel & Resort	5000 Kahala Ave. Honolulu, HI 96816	215
37	DLNR, Division of State Parks	1151 Punchbowl St., Room 310 Honolulu, HI 96813	DLNR, Division of State Parks	1151 Punchbowl St., Room 310 Honolulu, HI 96813	311
38	Kawaiahao Church	957 Punchbowl St. Honolulu, HI 96813	Kawaiahao Church	957 Punchbowl St. Honolulu, HI 96813	017
39	Waiawa Village, LLC	99-1205 Halawa Valley St. Aiea, HI 96701	Waiawa Village, LLC	99-1205 Halawa Valley St. Aiea, HI 96701	574
40	Waiawa Village, LLC	99-1205 Halawa Valley St. Aiea, HI 96701	Waiawa Village, LLC	99-1205 Halawa Valley St. Aiea, HI 96701	573
41	Kewalo Research Lab	1129 Ala Moana Blvd. Honolulu, HI 96814	State HCDA	677 Ala Moana Blvd. Honolulu, HI 96813	600
42	ITT Sheraton Hotels Kyo-Ya Company, Ltd.	2353 Kalakaua Avenue Honolulu, HI 96815	ITT Sheraton Hotels Kyo-Ya Company, Ltd.	ITT Sheraton Hotels Kyo-Ya Company, Ltd.	006
43	First Presbyterian Church of Honolulu	45-550 Kionaole Rd. Kaneohe, HI 96744	First Presbyterian Church of Honolulu	45-550 Kionaole Rd. Kaneohe, HI 96744	748
44	Gunter, Ryan	53-416 C1 Kamehameha Hwy. Hauula, HI 96717	Ryan Gunter	53-416 C1 Kamehameha Hwy. Hauula, HI 96717	334
45	Theodore J.P. Lopez Trust	1291 Moanalualani Way, Apt. H Honolulu, HI 96819	Theodore J.P. Lopez Trust	1291 Moanalualani Way, Apt. H Honolulu, HI 96819	044
46	Kamehameha Schools	567 S. King St., Suite 200 Honolulu, HI 96813	Kamehameha Schools	567 S. King St., Suite 200 Honolulu, HI 96813	065
47	Marconi Point LLC	201 Ohua Avenue, Apt. 3308-02, Box 805, Honolulu, HI 96815	Marconi Point LLC	201 Ohua Avenue, Apt. 3308-02, Box 805, Honolulu, HI 96815	756
48	North Shore Water, LLC	820 Mililani Street, Suite #711 Honolulu, HI 96813	Dillingham Ranch Aina LLC	c/o Kennedy-Wilson, Inc., 9601 Wilshire Blvd., Suite 220, Beverly Hills, CA 90210	813

APPENDIX D
PERMITS WITH WATER USER, LANDOWNER, AND/OR ADDRESS CHANGES

	Permittee/Water User	Water User Address	Landowner	Landowner Address	WUP No.
49	Theodore J.P. Lopez Trust	1291 Moanalualani Way, Apt. H Honolulu, HI 96819	Theodore J.P. Lopez Trust	1291 Moanalualani Way, Apt. H Honolulu, HI 96819	263
50	Kamake'eaina, Herbert	P.O. Box 272 Hauula, HI 96717	Herbert Kamake'eaina	P.O. Box 272 Hauula, HI 96717	314
51	Ocean Seafoods	1068 Pu'uwai St. Honolulu, HI 96819	Inny's Wholesale Distribution, Inc.	1068 Pu'uwai St. Honolulu, HI 96819	463
52	Pacific Club	1451 Queen Emma St. Honolulu, HI 96813	Pacific Club	1451 Queen Emma St. Honolulu, HI 96813	012
53	Palama Settlement	810 North Vineyard Blvd. Honolulu, HI 96817	Palama Settlement	810 North Vineyard Blvd. Honolulu, HI 96817	023
54	Kamehameha Schools	567 S. King St., Suite 200 Honolulu, HI 96813	Kamehameha Schools	567 S. King St., Suite 200 Honolulu, HI 96813	056
55	Trias, Weston	96-137 Waiawa Rd. Pearl City, HI 96782	Weston Trias	96-137 Waiawa Rd. Pearl City, HI 96782	626
56	Topa Management Co.	745 Fort Street Lobby Honolulu, HI 96813	Duesenburg Investment Company	745 Fort Street Lobby Honolulu, HI 96813	603
57	Luana Hills Country Club	770 Auloa Rd. Kailua, HI 96734	Luana Hills Country Club	770 Auloa Rd. Kailua, HI 96734	196
58	Sea Life Park Hawaii	41-202 Kalaniana'ole Hwy. Waimanalo, HI 96795	State of Hawaii	P.O. Box 621 Honolulu, HI 96809	217
59	Sea Life Park Hawaii	41-202 Kalaniana'ole Hwy. Waimanalo, HI 96795	State of Hawaii	P.O. Box 621 Honolulu, HI 96809	218
60	Malaekahana Hui West	54-316 Kamehameha Hwy., Suite #4-5 Hauula, HI 96717	Malaekahana Hui West	54-316 Kamehameha Hwy., Suite #4-5 Hauula, HI 96717	780
61	Malaekahana Hui West	54-316 Kamehameha Hwy., Suite #4-5 Hauula, HI 96717	Malaekahana Hui West	54-316 Kamehameha Hwy., Suite #4-5 Hauula, HI 96717	781
62	Stanhope Farms	P.O. Box 546 Waialua, HI 96791	Stanhope Farms	P.O. Box 546 Waialua, HI 96791	657
63	Waiawa Correctional Facility	P.O. Box 1839 Pearl City, HI 96782	State DLNR, SMF Enterprises, Bishop Estate, Dole/Castle & Cooke, AMFAC	Various	630
64	State DLNR Engineering Division	P.O. Box 373 Honolulu, HI 96809	Honolulu BWS	630 South Beretania St. Honolulu, HI 96843	076

APPENDIX D
PERMITS WITH WATER USER, LANDOWNER, AND/OR ADDRESS CHANGES

	Permittee/Water User	Water User Address	Landowner	Landowner Address	WUP No.
65	State DLNR Engineering Division	P.O. Box 373 Honolulu, HI 96809	Honolulu BWS	630 South Beretania St. Honolulu, HI 96843	075
66	Hawaii Housing Finance & Development Corporation	677 Queen Street, Suite 300 Honolulu, HI 96813	Hawaii Housing Finance & Development Corporation	677 Queen Street, Suite 300 Honolulu, HI 96813	800
67	Hawaii Housing Finance & Development Corporation	677 Queen Street, Suite 300 Honolulu, HI 96813	Hawaii Housing Finance & Development Corporation	677 Queen Street, Suite 300 Honolulu, HI 96813	801
68	Hawaii Housing Finance & Development Corporation	677 Queen Street, Suite 300 Honolulu, HI 96813	Hawaii Housing Finance & Development Corporation	677 Queen Street, Suite 300 Honolulu, HI 96813	265
69	State of Hawaii - Waimano Home & Training School	2385 Waimano Home Rd. Pearl City, HI 96782	State of Hawaii - Waimano Home & Training School	2385 Waimano Home Rd. Pearl City, HI 96782	110
70	Tadao Abe	91-1219 Laulaunui Ln. Ewa Beach, HI 96706	Campbell Estate	1001 Kamokila Blvd. Kapolei, HI 96707	495
71	U.S. Air Force Kaena Point Satellite Tracking Station	P.O. Box 868 Waianae, HI 96792-0868	State of Hawaii, DLNR Division of Forestry and Wildlife	1151 Punchbowl St., Room 325 Honolulu, HI 96813	038
72	U.S. Army	U.S. Army Support Command Fort Shafter, HI, 96858	U.S. Army	U.S. Army Support Command Fort Shafter, HI, 96858	029
73	U.S. Army	APVG-GWC-T, Building #113 Wheeler Army Airfield Schofield Barracks, HI 96858	U.S. Army	APVG-GWC-T, Building #113 Wheeler Army Airfield Schofield Barracks, HI 96858	027
74	Department of the Navy NAVFAC Hawaii - Environmental (EV)	400 Marshall Road, Building X-11 Pearl Harbor, HI 96860-3139	Department of the Navy NAVFAC Hawaii - Environmental (EV)	400 Marshall Road, Building X-11 Pearl Harbor, HI 96860-3139	086
75	Department of the Navy NAVFAC Hawaii - Real Estate (RES1/AM1)	400 Marshall Road, Building X-11 Pearl Harbor, HI 96860-3139	Department of the Navy NAVFAC Hawaii - Real Estate (RES1/AM1)	400 Marshall Road, Building X-11 Pearl Harbor, HI 96860-3139	189
76	Department of the Navy NAVFAC Hawaii - Environmental (EV)	400 Marshall Road, Building X-11 Pearl Harbor, HI 96860-3139	Department of the Navy NAVFAC Hawaii - Environmental (EV)	400 Marshall Road, Building X-11 Pearl Harbor, HI 96860-3139	064
77	Department of the Navy NAVFAC Hawaii - Environmental (EV)	400 Marshall Road, Building X-11 Pearl Harbor, HI 96860-3139	Department of the Navy NAVFAC Hawaii - Environmental (EV)	400 Marshall Road, Building X-11 Pearl Harbor, HI 96860-3139	111
78	Department of the Navy NAVFAC Hawaii - Environmental (EV)	400 Marshall Road, Building X-11 Pearl Harbor, HI 96860-3139	Department of the Navy NAVFAC Hawaii - Environmental (EV)	400 Marshall Road, Building X-11 Pearl Harbor, HI 96860-3139	085

APPENDIX D
PERMITS WITH WATER USER, LANDOWNER, AND/OR ADDRESS CHANGES

	Permittee/Water User	Water User Address	Landowner	Landowner Address	WUP No.
79	Department of the Navy NAVFAC Hawaii - Environmental (EV)	400 Marshall Road, Building X-11 Pearl Harbor, HI 96860-3139	Department of the Navy NAVFAC Hawaii - Environmental (EV)	400 Marshall Road, Building X- 11 Pearl Harbor, HI 96860-3139	433
80	Dole Food Company, Inc.	1116 Whitmore Ave. Wahiawa, HI 96786	Dole Food Company, Inc.	1116 Whitmore Ave. Wahiawa, HI 96786	136
81	Dole Food Company, Inc.	1116 Whitmore Ave. Wahiawa, HI 96786	Dole Food Company, Inc.	1116 Whitmore Ave. Wahiawa, HI 96786	138
82	Dole Food Company, Inc.	1116 Whitmore Ave. Wahiawa, HI 96786	Dole Food Company, Inc.	1116 Whitmore Ave. Wahiawa, HI 96786	032
83	Kamehameha Schools	567 S. King St., Suite 200 Honolulu, HI 96813	Kamehameha Schools	567 S. King St., Suite 200 Honolulu, HI 96813	137
84	Dole Food Company, Inc.	1116 Whitmore Ave. Wahiawa, HI 96786	Dole Food Company, Inc.	1116 Whitmore Ave. Wahiawa, HI 96786	052
85	Kamehameha Schools	567 S. King St., Suite 200 Honolulu, HI 96813	Kamehameha Schools	567 S. King St., Suite 200 Honolulu, HI 96813	054
86	Dole Food Company, Inc.	1116 Whitmore Ave. Wahiawa, HI 96786	Dole Food Company, Inc.	1116 Whitmore Ave. Wahiawa, HI 96786	036
87	Dole Food Company, Inc.	1116 Whitmore Ave. Wahiawa, HI 96786	Dole Food Company, Inc.	1116 Whitmore Ave. Wahiawa, HI 96786	046
88	Dole Food Company, Inc.	1116 Whitmore Ave. Wahiawa, HI 96786	Dole Food Company, Inc.	1116 Whitmore Ave. Wahiawa, HI 96786	035
89	Dole Food Company, Inc.	1116 Whitmore Ave. Wahiawa, HI 96786	Dole Food Company, Inc.	1116 Whitmore Ave. Wahiawa, HI 96786	048
90	Dole Food Company, Inc.	1116 Whitmore Ave. Wahiawa, HI 96786	Dole Food Company, Inc.	1116 Whitmore Ave. Wahiawa, HI 96786	039
91	Dole Food Company, Inc.	1116 Whitmore Ave. Wahiawa, HI 96786	Dole Food Company, Inc.	1116 Whitmore Ave. Wahiawa, HI 96786	049
92	Waikele Golf, LLC	94-200 Paioa Pl. Waipahu, HI 96797	Waikele Golf, LLC	94-200 Paioa Pl. Waipahu, HI 96797	623
93	Kikila Partners	1 Aloha Tower Dr., Floor 5 Honolulu, HI 96813	Kikila Partners	1 Aloha Tower Dr., Floor 5 Honolulu, HI 96813	264
94	Wallace, Scott	59-530 Aukauka Road Haleiwa, HI 96712	Scott Wallace	59-530 Aukauka Road Haleiwa, HI 96712	849
107	Total # of Permittees with Changes				

APPENDIX E
LIST OF PERMITS LACKING PROPER REPORTING

	Permittee/Water User	WUP No.	Type of Reporting Violation				
			Lack of Approved Flow Meter	Gaps in Water Use Reporting (>12-Mo)	No Reporting of Water Use	No Reporting of Chlorides	No Reporting at All
	Island of Maui						
1	Living Water Foundation, LLC	704			X	X	X
2	Maui Department of Water Supply	700				X	
3	Maui Department of Water Supply	701				X	
4	Maui Department of Water Supply	703				X	
5	Maui Department of Water Supply	698				X	
6	Maui Department of Water Supply	696				X	
7	Maui Department of Water Supply	695				X	
8	Maui Department of Parks & Recreation	710			X	X	X
9	Maui Department of Parks & Recreation	713			X	X	X
10	Maui Department of Parks & Recreation	712			X	X	X
11	Maui Department of Parks & Recreation	711			X	X	X
	Island of Molokai						
1	Agrigenetics, Inc.	583		X		X	
2	Department of Parks & Recreation County of Maui	195			X	X	X
3	Curtis, David	177	X		X	X	X
4	Granger, Robert M.	268	X		X	X	X
5	Hale Mahaolu	312	X			X	
6	Hawaiian Research, Ltd.	274				X	
7	Hawaiian Research, Ltd.	273				X	
8	Hawaiian Research, Ltd.	216				X	
9	Hawaiian Research, Ltd.	462	X		X	X	X
10	Hodgins, Pearl	214	X		X	X	X
11	Iaea, Stella	266	X		X	X	X
12	Inouye, Shigenobu	184	X		X	X	X
13	Kainalu Ranch	222			X	X	X
14	Kalaiakamanu Hou Church	200	X		X	X	X
15	Kaluakoi Water LLC	617				X	
16	Kanukuawa Ranch	338			X	X	X
17	Kawela Plantation Hometown Association	208				X	
18	Kawela Plantation Hometown Association	209	X			X	
19	Kawela Plantation Hometown Association	207	X			X	
20	Kerner, Greg	461	X		X	X	X
21	Mahealani Ranch	206			X	X	X
22	Keawa Nui Farm, Inc.	443	X		X	X	X
23	Maui DWS	223				X	
24	Maui DWS	269				X	
25	Maui DWS	221				X	
26	Maui DWS	359				X	
27	Maui Electric Co.	293			X	X	X
28	Maui Electric Co.	294			X	X	X

**APPENDIX E
LIST OF PERMITS LACKING PROPER REPORTING**

	Permittee/Water User	WUP No.	Type of Reporting Violation				
			Lack of Approved Flow Meter	Gaps in Water Use Reporting (>12-Mo)	No Reporting of Water Use	No Reporting of Chlorides	No Reporting at All
29	Molokai Ranch, Ltd.	604	X		X	X	X
30	Molokai Ranch, Ltd.	607	X	X		X	
31	National Park Service	201	X		X	X	X
32	Oceanic Institute	622	X		X	X	X
33	Hodgins, Pearl	310	X		X	X	X
34	Pu'u O Hoku Ranch	490			X	X	X
35	Stanley T. Ort Trust	526	X		X	X	X
36	Department of Hawaiian Homelands	267				X	
37	State Department of Agriculture	220	X		X	X	X
38	Steve Chaikin	771	X	X		X	
39	Steve Chaikin	770				X	
40	T.T. Meyer, Inc.	299	X		X	X	X
41	T.T. Meyer, Inc.	308	X		X	X	X
42	T.T. Meyer, Inc.	300	X		X	X	X
43	Urauchi, John N.	291	X		X	X	X
44	Waiola O Molokai, Inc.	429	X		X	X	X
45	Westcoatt, Wren	354	X		X	X	X
	Island of Oahu						
1	Sterman, Richard	353	X		X	X	X
2	Abe, Tadahiro	456	X		X	X	X
3	Aina Nui Corporation	670				X	
4	AOAO Suncrest/Shores/Lombard/Avalon	799				X	
5	Arbors Association	788			X	X	X
6	Hi'ipaka, LLC	173	X		X	X	X
7	BG Farm	455	X		X	X	X
8	Bishop Estate	210				X	
9	Honolulu BWS	468		X		X	
10	Department of Parks & Recreation	785	X		X	X	X
11	City & County of Honolulu Golf Course Division	585			X	X	X
12	City & County of Honolulu Department of Education	606	X		X	X	X
13	Department of Environmental Services City & County of Honolulu	337	X		X	X	X
14	Department of Wastewater Management	160	X		X	X	X
15	James Campbell Company, LLC	390	X		X	X	X
16	James Campbell Company, LLC	346	X		X	X	X
17	James Campbell Company, LLC	297	X			X	
18	Rina Enterprises	233	X		X	X	X
19	Onomea Bay LLC	251	X		X	X	X
20	James Campbell Company, LLC	248	X		X	X	X
21	Onomea Bay LLC	249	X		X	X	X
22	Dudley W.A. Chang Trust	290	X		X	X	X
23	Chevron Products, Co.	451				X	
24	Chevron Products, Co.	453				X	
25	Chevron Products, Co.	452				X	
26	D.R. Horton - Schuler Homes, LLC	805				X	
27	Del Monte Fresh Produce	507				X	

**APPENDIX E
LIST OF PERMITS LACKING PROPER REPORTING**

	Permittee/Water User	WUP No.	Type of Reporting Violation				
			Lack of Approved Flow Meter	Gaps in Water Use Reporting (>12-Mo)	No Reporting of Water Use	No Reporting of Chlorides	No Reporting at All
28	Del Monte Fresh Produce	589				X	
29	Dillingham Ranch Aina LLC	779		X		X	
30	Dillingham Ranch Aina LLC	777	X			X	
31	Dillingham Ranch Aina LLC	776	X			X	
32	Diversified Ag Promotions LLC	757				X	
33	E.L.C. Foundation	356	X		X	X	X
	Galbraith Estate						
34	Bank of Hawaii Trustee, Dept. 722	717				X	
35	Gary Takiguchi	500	X		X	X	X
36	Certified Management - Coronado AOA	791		X		X	
37	Ewa By Gentry Community Association	060				X	
38	Gentry Homes, Ltd.	793				X	
39	Gentry Homes, Ltd.	794				X	
40	Gibson, Peter	658	X		X	X	X
41	Gora, Dan	045	X		X	X	X
42	Grace Pacific, Inc.	664				X	
43	Grace Pacific, Inc.	205				X	
44	Hanohano Enterpreise, Inc.	313	X			X	
45	Haseko (Ewa), Inc.	784		X		X	
46	Hawaii Country Club	454				X	
47	Hawaii Reserves Inc.	746				X	
48	Hawaii Reserves Inc.	735	X	X		X	
49	Hawaii Reserves Inc.	389	X		X	X	X
50	Hawaii Reserves Inc.	733				X	
51	Hawaii Reserves Inc.	734	X			X	
52	Hawaii Reserves Inc.	736				X	
53	Hawaii State Hospital	304	X		X	X	X
54	Hawaiian Electric Company	176	X		X	X	X
55	Hawaiian Marine Enterprises	467	X			X	
56	Henry, Frank A.	183	X		X	X	X
57	Honolulu BWS	315				X	
58	Honolulu BWS	318				X	
59	Honolulu BWS	324				X	
60	Honolulu BWS	322				X	
61	Honolulu BWS	321				X	
62	Honolulu BWS	323				X	
63	Honolulu BWS	677	X		X	X	X
64	Honolulu BWS	676				X	
65	Honolulu BWS	330				X	
66	Honolulu BWS	624				X	
67	Honolulu BWS	705	X		X	X	X
68	Honolulu BWS	165	X		X	X	X
69	Honolulu BWS	582				X	
70	Honolulu BWS	598				X	
71	Honolulu BWS	597				X	
72	Honolulu BWS	591				X	
73	Honolulu BWS	587				X	
74	Honolulu BWS	715				X	
75	Honolulu BWS	761	X		X	X	X
76	Honolulu BWS	608	X		X	X	X

**APPENDIX E
LIST OF PERMITS LACKING PROPER REPORTING**

	Permittee/Water User	WUP No.	Type of Reporting Violation				
			Lack of Approved Flow Meter	Gaps in Water Use Reporting (>12-Mo)	No Reporting of Water Use	No Reporting of Chlorides	No Reporting at All
77	Honolulu BWS	744				X	
78	Honolulu BWS	536				X	
79	Honolulu BWS	594				X	
80	Honolulu BWS	362				X	
81	Honolulu BWS	593				X	
82	Honolulu BWS	333				X	
83	Honolulu BWS	674				X	
84	Honolulu BWS	675	X		X	X	X
85	Honolulu BWS	609	X		X	X	X
86	Honolulu BWS	745				X	
87	Honolulu BWS	479				X	
88	Honolulu BWS	478				X	
89	Honolulu BWS	477				X	
90	Honolulu BWS	764	X		X	X	X
91	Honolulu BWS	762				X	
92	Honolulu BWS	406				X	
93	Honolulu BWS	331				X	
94	Honolulu BWS	475				X	
95	Honolulu BWS	325				X	
96	Honolulu BWS	332				X	
97	Honolulu BWS	803				X	
98	Honolulu BWS	806				X	
99	Honolulu BWS	329				X	
100	Honolulu BWS	327				X	
101	Honolulu BWS	486				X	
102	Honolulu BWS	483				X	
103	Honolulu BWS	485				X	
104	Honolulu BWS	482				X	
105	Honolulu BWS	484				X	
106	Honolulu BWS	481				X	
107	Honolulu BWS	480				X	
108	Ka'ala Ranch	679			X	X	X
109	Kahala Hotel & Resort	215	X		X	X	X
110	DLNR, Division of State Parks	311	X		X	X	X
111	Kahuku Land, LLC	772				X	
112	Kahuku Land, LLC	773				X	
113	Kahuku Shrimp Co., Inc.	659	X		X	X	X
114	Kaio, Jacob I. Sr.	307	X		X	X	X
115	Kalaeloa Partners, L.P.	163				X	
116	Kapaka Farm	530				X	
117	Kapaka Farm	529				X	
118	Kawaihāo Church	017	X		X	X	X
119	Waiawa Village, LLC	574	X		X	X	X
120	Waiawa Village, LLC	573	X		X	X	X
121	Kewalo Research Lab	600	X		X	X	X
122	Kipapa Acres Association of Owners	642		X		X	
123	First Presbyterian Church of Honolulu	748				X	
124	Gunter, Ryan	334	X		X	X	X
125	Kualoa Ranch, Inc.	343	X		X	X	X
126	Kualoa Ranch, Inc.	342	X		X	X	X

**APPENDIX E
LIST OF PERMITS LACKING PROPER REPORTING**

	Permittee/Water User	WUP No.	Type of Reporting Violation				
			Lack of Approved Flow Meter	Gaps in Water Use Reporting (>12-Mo)	No Reporting of Water Use	No Reporting of Chlorides	No Reporting at All
127	Kuilima Resort Co. DBA Turtle Bay Golf	272				X	
128	Theodore J.P. Lopez Trust	044	X		X	X	X
129	Laie Water Co., Inc.	739				X	
130	Kamehameha Schools	065	X		X	X	X
131	Marconi Point LLC	755	X		X	X	X
132	Marconi Point LLC	754	X		X	X	X
133	Mark H. Ortiz	742		X		X	
134	McKinley High School	194	X		X	X	X
135	Michael Jewett & Megan Ward	732	X	X		X	
136	Marconi Point LLC	756	X		X	X	X
137	Mokuleia Aquafarm	446	X		X	X	X
138	North Shore Water, LLC	813				X	
139	Linda Gusman	245	X		X	X	X
140	Nakamura, Takemitsu	179	X		X	X	X
141	Nazarene Church	057	X		X	X	X
142	Theodore J.P. Lopez Trust	263	X		X	X	X
143	Kamake'eaina, Herbert	314	X		X	X	X
144	Oahu Country Club	349				X	
145	Ocean Seafoods	463	X		X	X	X
146	Ota, Gentaro	219	X		X	X	X
147	Pacific Club	012				X	
148	Palm Court Association	786	X		X	X	X
149	Palm Villa II Association	787		X		X	
150	Paradise Shrimp Farm	643	X		X	X	X
151	Trias, Weston	626		X		X	
152	Pearl Country Club	466		X		X	
153	Topa Management Co.	603			X	X	X
154	Poamoho Venture, L.P.	175				X	
155	Polynesian Cultural Center	385			X	X	X
156	Punahou School	586				X	
157	Robinson Kunia Land LLC	767	X		X	X	X
158	Romulo Aguinaldo	663	X		X	X	X
159	Luana Hills Country Club	196		X		X	
160	Royal Kunia CC	575				X	
161	Sea Life Park Hawaii	217			X	X	X
162	Sea Life Park Hawaii	218			X	X	X
163	Stanhope Farms	657	X		X	X	X
164	State DLNR Engineering Division	075	X		X	X	X
165	State Department of Agriculture	246	X	X		X	
166	Hawaii Housing Finance & Development Corporation	800				X	
167	Hawaii Housing Finance & Development Corporation	265				X	
168	Taba Farm, Inc.	749	X		X	X	X
169	Tadao Abe	495	X		X	X	X
170	The Oceanic Institute	211	X		X	X	X
171	U.S. Army	464			X	X	X
172	U.S. Army	027		X		X	

APPENDIX E
LIST OF PERMITS LACKING PROPER REPORTING

	Permittee/Water User	WUP No.	Type of Reporting Violation				
			Lack of Approved Flow Meter	Gaps in Water Use Reporting (>12-Mo)	No Reporting of Water Use	No Reporting of Chlorides	No Reporting at All
173	U.S. DOC/NOAA/NWS	795	X		X	X	X
174	U.S. Fish & Wildlife Service	627				X	
175	U.S. Fish & Wildlife Service	753				X	
176	Department of the Navy NAVFAC Hawaii - Real Estate (RES1/AM1)	189	X	X		X	
177	Department of the Navy NAVFAC Hawaii - Environmental (EV)	433				X	
178	UH Department of Animal Science	528	X			X	
179	Valley of the Temples	335			X	X	X
180	VIP Sanitation, Inc.	750			X	X	X
181	Waikele Golf, LLC	623				X	
182	Kikila Partners	264	X		X	X	X
183	Brian Grady	759	X		X	X	X
184	Brian Grady	752	X		X	X	X
240	Totals		106	18	112	240	112

**APPENDIX F
OVERPUMPAGE VIOLATIONS**

	Permittee/Water User	WUP No.	Water Allocation (MGD) ¹	# of Consecutive Years Analyzed	# of Overpumping Incidents	Longest Duration of Overpumping (Months)	Maximum Pumpage (MGD)	Overpumpage Current ²
	Island of Molokai							
1	Hale Mahaolu	312	0.005	4	1	35	0.70	Yes
2	Maui DWS	223	0.330	4	1	23	0.45	No
3	Maui DWS	221	0.185	4	1	48	0.50	Yes
4	Maui DWS	359	0.516	4	2	20	0.77	Yes
5	Department of Hawaiian Homelands	267	0.367	4	1	35	0.70	Yes
	Island of Oahu							
1	Chevron Products, Co.	453	2.000	4	2	42	2.30	Yes
2	Coral Creek Golf, Inc.	796	0.498	4	2	3	0.90	Yes
3	Coral Creek Golf, Inc.	797	0.800	4	1	12	1.80	Yes
4	Coral Creek Golf, Inc.	798	0.892	4	1	6	1.60	Yes
5	Kaimana Ventures, Ltd.	028	0.021	4	1	48	0.04	Yes
6	Ewa By Gentry Community Association	060	0.040	4	1	31	0.05	Yes
7	Gentry Homes, Ltd.	793	0.249	4	2	8	0.26	Yes
8	Gentry Homes, Ltd.	794	0.056	4	1	23	0.12	Yes
9	Honolulu Int. CC	031	0.346	4	3	12	0.57	Yes
10	Honolulu BWS	094	11.320	4	1	37	12.30	No
11	Honolulu BWS	092	6.610	4	3	18	8.30	No
12	Honolulu BWS	097	11.750	4	1	9	12.40	No
13	Honolulu BWS	067	0.850	3	1	22	1.30	Yes
14	Honolulu BWS	104	11.970	4	1	8	12.50	No
15	Honolulu BWS	102	1.110	4	2	19	1.18	No
16	Honolulu BWS	324	0.411	4	2	9	0.47	No
17	Honolulu BWS	030	3.790	4	1	33	4.30	No
18	Honolulu BWS	107	0.630	4	1	11	1.10	No
19	Honolulu BWS	676	0.010	4	1	37	0.08	Yes
20	Honolulu BWS	040	1.730	4	1	37	2.40	Yes
21	Honolulu BWS	041	1.000	4	1	8	1.14	No
22	Honolulu BWS	018	0.700	4	1	9	0.82	No
23	Honolulu BWS	153	4.48 ³	4	1	48	6.30	Yes
24	Honolulu BWS	155						
25	Honolulu BWS	164						
26	Honolulu BWS	118	0.000	4	1	48	2.90	Yes
27	Honolulu BWS	598	1.000	4	2	14	1.70	Yes
28	Honolulu BWS	591	7.000	4	2	24	9.50	Yes
29	Honolulu BWS	536	1.310	4	1	18	1.40	No
30	Honolulu BWS	362	0.667	4	1	48	1.10	Yes
31	Honolulu BWS	406	0.600	4	2	11	0.72	Yes
32	Honolulu BWS	482	0.700	4	1	48	1.20	Yes
33	Honolulu BWS	481	1.200	4	1	48	1.80	Yes
34	Oahu Country Club	349	0.060	4	1	34	0.15	Yes
35	State of Hawaii - Waimano Home & Training School	110	0.136	4	1	3	10.00	Yes
36	Department of the Navy NAVFAC Hawaii - Environmental (EV)	085	4.659	4	1	2	8.70	No
41	Total # of Overpumpage Violations							

¹ MGD = Million Gallons Per Day on a 12-Month Moving Average

² Assessed from the most recent pumpage data.

³ Permits 153, 155, & 164 have allocations of 2.24, 1.12, & 1.12 MGD, respectively. The Commission has allowed Honolulu BWS to report these pumpages as one total amount, with a combined permitted allocation of 4.48 MGD.

**APPENDIX G
4-YEAR PARTIAL OR TOTAL NON-USE**

Permittee/Water User	WUP No.	Water Allocation (MGD) ¹	Highest % of Allocation Used In Most Recent 4-Yr Period (Based on 12-MAV)					
			0%	1 - 20%	21 - 40%	41 - 60%	61 - 80%	>80%
Island of Molokai								
1 Hawaiian Research, Ltd.	216	0.046			X			
2 Kaluakoi Water LLC	617	1.018						X
3 Kawela Plantation Hometown Association	208	0.285					X	
4 Kawela Plantation Hometown Association	209	0.285					X	
5 Kawela Plantation Hometown Association	207	0.285					X	
6 Maui DWS	269	0.036				X		
Island of Oahu								
1 AES Hawaii, Inc.	161	13.000						X
2 Aina Nui Corporation	670	0.957		X				
3 Chevron Products, Co.	452	0.100			X			
4 D.R. Horton - Schuler Homes, LLC	805	7.969			X			
5 Del Monte Fresh Produce	507	1.075					X	
6 Del Monte Fresh Produce	589	3.960					X	
7 Galbraith Estate								
Bank of Hawaii Trustee, Dept. 722	717	2.000			X			
8 Certified Management - Sunrise AOA	790	0.040				X		
9 Grace Pacific, Inc.	664	0.044						X
10 Grace Pacific, Inc.	205	0.124						X
11 Hawaii Country Club	454	0.400						X
12 Hawaii Reserves Inc.	746	0.171					X	
13 Hawaii Reserves Inc.	747	0.039	X					
14 Hawaii Reserves Inc.	382	0.142			X			
15 Hawaii Reserves Inc.	383	0.091				X		
16 Hawaii Reserves Inc.	386	0.036				X		
17 Honolulu Resource Recovery Venture	062	2.260					X	
18 Honolulu BWS	074	1.900					X	
19 Honolulu BWS	315	0.452						X
20 Honolulu BWS	114	2.980						X

**APPENDIX G
4-YEAR PARTIAL OR TOTAL NON-USE**

	Permittee/Water User	WUP No.	Water Allocation (MGD) ¹	Highest % of Allocation Used In Most Recent 4-Yr Period (Based on 12-MAV)					
				0%	1 - 20%	21 - 40%	41 - 60%	61 - 80%	>80%
21	Honolulu BWS	082	1.000						X
22	Honolulu BWS	158	2.240					X	
23	Honolulu BWS	081	1.500					X	
24	Honolulu BWS	322	0.600						X
25	Honolulu BWS	321	0.250					X	
26	Honolulu BWS	058	6.000						X
27	Honolulu BWS	072	1.890					X	
28	Honolulu BWS	071	1.500				X		
29	Honolulu BWS	024	9.500						X
30	Honolulu BWS	134	0.300			X			
31	Honolulu BWS	330	0.457						X
32	Honolulu BWS	624	1.220					X	
33	Honolulu BWS	159	0.300				X		
34	Honolulu BWS	571	1.093						X
35	Honolulu BWS	011	7.000					X	
36	Honolulu BWS	117	3.270						X
37	Honolulu BWS	582	2.710						X
38	Honolulu BWS	587	1.000					X	
39	Honolulu BWS	740	0.302			X			
40	Honolulu BWS	744	1.250					X	
41	Honolulu BWS	594	6.948						X
42	Honolulu BWS	333	0.927						X
43	Honolulu BWS	674	0.700				X		
44	Honolulu BWS	745	2.022						X
45	Honolulu BWS	477	1.080						X
46	Honolulu BWS	762	5.000						X
47	Honolulu BWS	331	0.153			X			
48	Honolulu BWS	325	2.969				X		
49	Honolulu BWS	332	2.128						X
50	Honolulu BWS	329	1.340					X	
51	Honolulu BWS	327	0.713			X			
52	Honolulu BWS	486	1.327						X
53	Honolulu BWS	483	1.800					X	

**APPENDIX G
4-YEAR PARTIAL OR TOTAL NON-USE**

	Permittee/Water User	WUP No.	Water Allocation (MGD) ¹	Highest % of Allocation Used In Most Recent 4-Yr Period (Based on 12-MAV)					
				0%	1 - 20%	21 - 40%	41 - 60%	61 - 80%	>80%
54	Kahuku Land, LLC	772	1.075			X			
55	Kahuku Land, LLC	773	0.600					X	
56	Kalaeloa Partners, L.P.	163	3.168				X		
57	Kapaka Farm	530	0.190						X
58	Kapaka Farm	529	0.038						X
59	Kapolei People's, Inc.	802	1.000			X			
60	Ko'olina Co.	655	0.700						X
61	ITT Sheraton Hotels Kyo-Ya Company, Ltd.	006	0.336						X
62	First Presbyterian Church of Honolulu	748	0.150				X		
63	Kuilima Resort Co. DBA Turtle Bay Golf	272	0.302						X
64	Laie Water Co., Inc.	739	1.375						X
65	Pacific Club	012	0.040			X			
66	Punahou School	586	0.158						X
67	Queen's Medical Center	015	0.237						X
68	Royal Kunia CC	575	0.600					X	
69	Hawaii Housing Finance & Development Corporation	800	0.494						X
70	Hawaii Housing Finance & Development Corporation	265	0.075		X				
71	U.S. Fish & Wildlife Service	789	0.216					X	
72	U.S. Fish & Wildlife Service	753	1.000				X		
73	Department of the Navy NAVFAC Hawaii - Environmental (EV)	086	0.697						X
74	Department of the Navy NAVFAC Hawaii - Environmental (EV)	111	14.977						X
75	UH Department of Animal Science	528	0.026			X			
76	Waikele Golf, LLC	623	0.950				X		
82	Total # of 4-Year Partial or Total Non-Use Permits								

¹ MGD = Million Gallons Per Day on a 12-Month Moving Average

APPENDIX H
PERMITS WITH SPECIAL CONDITION FOR AVAILABLE ALTERNATIVE SOURCES

	Permittee/Water User	WUP No.
1	Living Water Foundation, LLC	704
2	Maui Department of Water Supply	700
3	Maui Department of Water Supply	701
4	Maui Department of Water Supply	703
5	Maui Department of Water Supply	698
6	Maui Department of Water Supply	697
7	Maui Department of Water Supply	696
8	Maui Department of Water Supply	695
9	Maui Department of Parks & Recreation	710
10	Maui Department of Parks & Recreation	713
11	Maui Department of Parks & Recreation	712
12	Maui Department of Parks & Recreation	711
13	Hawaiian Research, Ltd.	274
14	Hawaiian Research, Ltd.	273
15	Kim Markham	678
16	Maui DWS	359
17	Stanley T. Ort Trust	526
18	Steve Chaikin	771
19	Steve Chaikin	770
20	Teves, Harvey	751
21	Abe, Tadahiro	456
22	Aina Nui Corporation	670
23	AOAO Suncrest/Shores/Lombard/Avalon	799
24	Arbors Association	788
25	Renior, Jean-Paul	580
26	BG Farm	455
27	Department of Parks & Recreation	785
28	City & County of Honolulu Golf Course Division	585
29	City & County of Honolulu Department of Education	606
30	Department of Wastewater Management	160
31	James Campbell Company, LLC	390
32	James Campbell Company, LLC	346
33	Onomea Bay LLC	251
34	James Campbell Company, LLC	248
35	Onomea Bay LLC	249
36	Coral Creek Golf, Inc.	796
37	Coral Creek Golf, Inc.	797
38	Coral Creek Golf, Inc.	798
39	D.R. Horton - Schuler Homes, LLC	805
40	Del Monte Fresh Produce	507
41	Del Monte Fresh Produce	589
42	Diversified Ag Promotions LLC	757
43	Ewa By Gentry Community Association	792
44	Gary Takiguchi	500

	Permittee/Water User	WUP No.
45	Certified Management - Sunrise AOAO	790
46	Certified Management - Coronado AOAO	791
47	Gentry Homes, Ltd.	793
48	Gentry Homes, Ltd.	794
49	Gibson, Peter	658
50	Grace Pacific, Inc.	664
51	Haseko (Ewa), Inc.	784
52	Hawaii Country Club	454
53	Hawaii Prince Golf Club	783
54	Hawaii Reserves Inc.	746
55	Hawaii Reserves Inc.	747
56	Hawaii Reserves Inc.	389
57	Hawaii Reserves Inc.	382
58	Hawaii Reserves Inc.	383
59	Hawaii Reserves Inc.	386
60	Hawaiian Marine Enterprises	467
61	Honolulu BWS	582
62	Honolulu BWS	598
63	Honolulu BWS	597
64	Honolulu BWS	591
65	Honolulu BWS	587
66	Honolulu BWS	608
67	Honolulu BWS	740
68	Honolulu BWS	594
69	Honolulu BWS	593
70	Honolulu BWS	609
71	Ka'ala Ranch	679
72	Kahuku Land, LLC	772
73	Kahuku Land, LLC	773
74	Kahuku Shrimp Co., Inc.	659
75	Kapaka Farm	530
76	Kapaka Farm	529
77	Kapolei People's, Inc.	802
78	Waiawa Village, LLC	574
79	Waiawa Village, LLC	573
80	First Presbyterian Church of Honolulu	748
81	Kuilima Resort Co. DBA Turtle Bay Golf	272
82	Laie Water Co., Inc.	739
83	Marconi Point LLC	755
84	Marconi Point LLC	754
85	Mark Hamamoto	766
86	Michael Jewett & Megan Ward	732
87	Minami Farm	656
88	Marconi Point LLC	756

APPENDIX H
PERMITS WITH SPECIAL CONDITION FOR AVAILABLE ALTERNATIVE SOURCES

	Permittee/Water User	WUP No.
89	Mokuleia Aquafarm	446
90	Palm Court Association	786
91	Palm Villa II Association	787
92	Trias, Weston	626
93	Pearl Country Club	466
94	Polynesian Cultural Center	385
95	Punahou School	586
96	Robinson Kunia Land LLC	804
97	Robinson Kunia Land LLC	767
98	Romulo Aguinaldo	663
99	Royal Kunia CC	575
100	Sandwich Isles Communications	765
101	Malaekahana Hui West	782
102	Malaekahana Hui West	780
103	Malaekahana Hui West	781
104	Stanhope Farms	657

	Permittee/Water User	WUP No.
105	Hawaii Housing Finance & Development Corporation	800
106	Hawaii Housing Finance & Development Corporation	801
107	Taba Farm, Inc.	749
108	Tadao Abe	495
109	Tesoro Hawaii Corp.	768
110	U.S. DOC/NOAA/NWS	795
111	U.S. Fish & Wildlife Service	789
112	U.S. Fish & Wildlife Service	627
113	U.S. Fish & Wildlife Service	753
114	UH Department of Animal Science	528
115	VIP Sanitation, Inc.	750
116	Waiawa Development, LLC	693
117	Waiawa Development, LLC	692
118	Waikele Golf, LLC	623
119	Brian Grady	759
120	Brian Grady	752

**APPENDIX I
CURRENT ACTIVE WATER USE PERMIT ALLOCATIONS**

Island Water Use Permit Index *(non-saltwater/non-caprock)*

ISLAND OF Maui

WUP No.	Approved	Applicant	Well No	Well Name	WUP (mgd)	12-MAV (mgd)	Diff
WMA Aquifer System: lao					Sustainable Yield = 20		
1/31/2007		Kehalani Mauka, LLC	5330-05	Shaft 33	0.613		
2/15/2006		Living Water Foundation, LLC	5531-01	Waihee Mauka 1	0.020		
1/31/2007		Maui DWS	5131-01	Waikapu Tank	0.400		
1/31/2007		Maui DWS	5230-03	lao Tank	0.498		
1/31/2007		Maui DWS	5330-05	Shaft 33	4.878		
2/15/2006		Maui DWS	5330-09	Mokuhau 1	1.500		
2/15/2006		Maui DWS	5330-11	Mokuhau 3	2.000		
2/15/2006		Maui DWS	5430-01	Waiehu Hts 1	0.500		
2/15/2006		Maui DWS	5430-02	Waiehu Hts 2	0.500		
2/15/2006		Maui DWS	5431-02	Waihee 1	1.900		
2/15/2006		Maui DWS	5431-03	Waihee 2	1.500		
2/15/2006		Maui DWS	5431-04	Waihee 3	3.400		
		lao (12 Wells)					
				Totalling Available Allocation	17.709		
				Island Total	17.709		

**APPENDIX I
CURRENT ACTIVE WATER USE PERMIT ALLOCATIONS**

Island Water Use Permit Index *(non-saltwater/non-caprock)*

ISLAND OF Molokai

WUP No.	Approved	Applicant	Well No	Well Name	WUP (mgd)	12-MAV (mgd)	Diff
WMA Aquifer System: KAHANUI					Sustainable Yield =	3	
	8/4/1993	NATIONAL PARK SERVICE KAHANUI (1 detail record)	1058-01	WAIHANAU #239		0.094	
					Totalling Available Allocation	0.094	2.906
WMA Aquifer System: KAMILOLOA					Sustainable Yield =	3	
	8/4/1993	COUNTY OF MAUI, PARK & RE	0501-07	KAUNAKAKAI PARK		0.075	
	11/17/1993	HALE MAHAOLU	0501-06	HOME PUMEHANA		0.005	
	9/15/1993	Holden's Foundation Seeds, LLC	0501-04	Kupa Shaft		0.056	
	9/15/2003	Holden's Foundation Seeds, LLC	0601-01	Oloolo Kaunakakai		0.075	
	12/28/1998	WAIOLA MOLOKAI, INC. KAMILOLOA (5 Wells)	0759-01	WAIOLA NO. 1		0.656	
					Totalling Available Allocation	0.867	2.133
WMA Aquifer System: KAWELA					Sustainable Yield =	5	
	3/14/1995	CURTIS, DAVID	0352-10	KAMALO-CURTIS		0.012	
	3/14/1995	GRANGER, R.M.	0456-17	JOHNSON		0.016	
	8/4/1993	INOUYE, SHIGENOBU	0352-11	SHIGE'S FARM		0.004	
	4/14/1994	KANUKUAWA RANCH	0354-03	WELL #3		0.017	
	3/14/1995	KAWELA PLTN HOMEOWN AS	0456-04	BREADFRUIT WELL		0.285	
	3/14/1995	KAWELA PLTN HOMEOWN AS	0456-06	DW3		0.285	
	3/14/1995	KAWELA PLTN HOMEOWN AS	0456-08	DW2			
	3/14/1995	KAWELA PLTN HOMEOWN AS	0456-09	DW1			
	3/14/1995	KAWELA PLTN HOMEOWN AS	0457-04	AG #1			
	3/14/1995	Maui DWS	0457-01	KAWELA SHAFT		0.330	
	4/14/1994	T.T. MEYER, INC.	0354-01	MEYER INC. #1		0.029	
	4/14/1994	T.T. MEYER, INC.	0354-02	MEYER INC. #2		0.040	
	4/14/1994	T.T. MEYER, INC.	0354-04	MEYER INC. #4		0.005	
	10/21/2005	TEVES, HARVEY KAWELA (14 Wells)	0354-07	KEONEKUINO-TEVES		0.045	
					Totalling Available Allocation	1.068	3.932
WMA Aquifer System: KUALAPUU					Sustainable Yield =	5	
	12/19/2001	KALUAKOI LAND, LLC	0901-01	WELL 17		1.018	
	10/20/1995	Maui DWS	0801-03	KUALAPUU MAUKA		0.516	
	9/15/1993	Maui DWS	1059-01	WAIKALAE TUNNEL		0.036	
	3/14/1995	STATE DHHL		RESERVATION		2.905	
	9/15/1993	STATE DHHL	0801-01	DHHL 1		0.367	
	9/15/1993	STATE DHHL KUALAPUU (6 Wells)	0801-02	DHHL 2			
					Totalling Available Allocation	4.842	0.158

**APPENDIX I
CURRENT ACTIVE WATER USE PERMIT ALLOCATIONS**

Island Water Use Permit Index *(non-saltwater/non-caprock)*

ISLAND OF Molokai

WUP No.	Approved	Applicant	Well No	Well Name	WUP (mgd)	12-MAV (mgd)	Diff
WMA Aquifer System: MANAWAINUI					Sustainable Yield = 2		
	4/14/1994	AGRIGENETICS, INC DBA MYC	0705-05	NAIWA	0.012		
	11/17/1993	Holden's Foundation Seeds, LLC	0603-01	Umipaa	0.046		
	8/4/1993	KALAIKAMANU HOU CHURCH	0602-03	KALAIKAMANU HOU	0.005		
	11/17/1993	MAUI ELECTRIC CO.	0603-07	NAIWA DUG			
	11/17/1993	MAUI ELECTRIC CO.	0604-03	NAIWA MECO OPENPI			
	6/13/2006	STEVE CHAIKIN	0605-01	ORCA SHAFT #1	0.600		
		MANAWAINUI (6 Wells)					
				Totalling Available Allocation	0.663		1.337
WMA Aquifer System: UALAPUE					Sustainable Yield = 8		
	11/16/1993	HSPA	0448-01	MAPULEHU SHAFT#1	0.003		
	4/16/1997	KERNER, GREG	0448-03	MAPULEHU SHAFT	0.007		
	8/4/1993	MAHEALANI RANCH	0352-09	KAMALO	0.010		
	6/17/1998	Manaba Enterprises, Inc.	0350-07	Manawai 1	0.015		
	9/15/1993	Maui DWS	0449-01	UALAPUE SHAFT	0.185		
		Monsanto Company	0350-07	MANAWAI #1	0.015		
	11/17/1993	PETRO, PEARL FRIEL	0549-01	MAPULEHU TUNNEL	0.010		
	2/18/2004	Richard & Kim Markham	0449-06	Markham	0.008		
	11/17/1993	URAUCHI, JOHN N.	0352-12	URAUCHI #1	0.001		
	3/14/1995	WESTCOATT, WREN	0350-05	WESCOATT	0.004		
		UALAPUE (10 Wells)					
				Totalling Available Allocation	0.258		7.742
WMA Aquifer System: WAIALUA					Sustainable Yield = 8		
	6/2/1994	KAINALU RANCH	0546-02	PUELELU WELL	0.202		
	11/6/1998	PUU O HOKU RANCH	0844-01	PUU O HOKU NO. 1	0.235		
		WAIALUA (2 Wells)					
				Totalling Available Allocation	0.437		7.563
WMA Aquifer System: WAIKOLU					Sustainable Yield = 5		
	1/12/1994	STATE DOA, AG RES MGT DIV	0855-01	WAIKOLU TUN #22	0.853		
	1/12/1994	STATE DOA, AG RES MGT DIV	0855-02	WAIKOLU #23			
	1/12/1994	STATE DOA, AG RES MGT DIV	0855-03	WAIKOLU #24			
		WAIKOLU (3 Wells)					
				Totalling Available Allocation	0.853		4.147
				Island Total		9.082	

**APPENDIX I
CURRENT ACTIVE WATER USE PERMIT ALLOCATIONS**

Island Water Use Permit Index *(non-saltwater/non-caprock)*

ISLAND OF OAHU

WUP No.	Approved	Applicant	Well No	Well Name	WUP (mgd)	12-MAV (mgd)	Diff
WMA Aquifer System: EWA-KUNIA				Sustainable Yield =		16	
1/26/2000		AINA NUJ CORPORATION	2006-01	EP 10		0.957	
1/26/2000		AINA NUJ CORPORATION	2006-02	EP 10			
1/26/2000		AINA NUJ CORPORATION	2006-03	EP 10			
1/26/2000		AINA NUJ CORPORATION	2006-04	EP 10			
1/26/2000		AINA NUJ CORPORATION	2006-05	EP 10			
1/26/2000		AINA NUJ CORPORATION	2006-06	EP 10			
1/26/2000		AINA NUJ CORPORATION	2006-07	EP 10			
1/26/2000		AINA NUJ CORPORATION	2006-08	EP 10			
1/26/2000		AINA NUJ CORPORATION	2006-09	EP 10			
1/26/2000		AINA NUJ CORPORATION	2006-10	EP 10			
1/26/2000		AINA NUJ CORPORATION	2006-11	EP 10			
6/20/2001		DEL MONTE FRESH PROD (HI)	2703-01	KUNIA		1.075	
6/20/2001		DEL MONTE FRESH PROD (HI)	2703-02	KUNIA BASAL			
10/29/2003		GRACE PACIFIC CORP.	2104-01	LOWER MAKAKILO		0.044	
7/28/1993		GRACE PACIFIC, INC.	2104-01	LOWER MAKAKILO		0.124	
2/13/1991		HONOLULU BWS	1905-04	EWA DESALT PLANT		0.500	
5/17/1989		HONOLULU BWS	2004-04	MAKAKILO		1.500	
5/17/1989		HONOLULU BWS	2006-14	BARBERS POINT		1.000	
5/17/1989		HONOLULU BWS	2006-15	BARBERS POINT			
9/13/1989		HONOLULU BWS	2303-01	HONOULIULI 1&2		2.240	
9/13/1989		HONOLULU BWS	2303-02	HONOULIULI 1&2			
		Honolulu BWS	2303-03	Honouliuli II-1		4.480	
		Honolulu BWS	2303-04	Honouliuli II-2			
		Honolulu BWS	2303-05	Honouliuli II-3			
		Honolulu BWS	2303-06	Honouliuli II-4			
10/25/1985		KO OLINA CO.	2006-13	W. BEACH ESTATES		0.700	
6/12/1987		STATE DLNR, DOWALD	1905-04	EWA DESALT PLANT		0.500	
8/22/1986		U.S. NAVY	2103-03	BARBERS PT SHFT		2.337	
		EWA-KUNIA (28 Wells)					
				Totalling		15.457	
				Available Allocation		0.5430	
WMA Aquifer System: KAHANA				Sustainable Yield =		15	
2/21/1996		HONOLULU BWS	3353-01	KAHANA WELLS		0.600	
2/21/1996		HONOLULU BWS	3353-02	KAHANA WELLS			
12/8/1993		KAHANA VALLEY STATE PAR	3352-01	KAHANA ARTESIAN		0.008	
5/18/1994		KUALOA RANCH, INC.	3251-01	TOMASU		0.288	
5/18/1994		KUALOA RANCH, INC.	3251-03	SAITO		0.200	
12/8/1993		KUALOA RANCH, INC.	3351-04	YAMAMOTO		0.005	
		KAHANA (6 Wells)					
				Totalling		1.101	
				Available Allocation		13.899	

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Island Water Use Permit Index *(non-saltwater/non-caprock)*

ISLAND OF OAHU

WUP No.	Approved	Applicant	Well No	Well Name	WUP (mgd)	12-MAV (mgd)	Diff
WMA Aquifer System:		KALIHI	Sustainable Yield =		9		
	7/28/1993	BISHOP ESTATE	2051-01	KAMEHAMEHA A	0.229		
	7/28/1993	BISHOP ESTATE	2051-02	KAMEHAMEHA B			
	9/11/1981	HONOLULU BWS	1952-06	KALIHI STA	6.948		
	9/11/1981	HONOLULU BWS	1952-07	KALIHI STA			
	9/11/1981	HONOLULU BWS	1952-08	KALIHI STA			
	9/11/1981	HONOLULU BWS	1952-16	KALIHI STA			
	9/11/1981	HONOLULU BWS	1952-17	KALIHI STA			
	9/11/1981	HONOLULU BWS	1952-18	KALIHI STA			
	9/11/1981	HONOLULU BWS	1952-19	KALIHI STA			
	9/11/1981	HONOLULU BWS	1952-22	KALIHI STA			
	12/14/1999	HONOLULU BWS	2052-13	KAPALAMA #2	1.500		
	12/14/1999	HONOLULU BWS	2052-14	KAPALAMA #1			
	7/13/1994	OAHU COUNTRY CLUB	2050-01	OCC IRRIGATION	0.060		
	9/11/1981	PALAMA SETLMT	1952-15	PALAMA SETLMT	0.024		
		KALIHI (14 Wells)					
				Totalling Available Allocation	8.761	0.239	
WMA Aquifer System:		KAWAILOA	Sustainable Yield =		29		
	2/19/1992	ATTRACTIONS HAWAII	3803-01	WAIMEA FALLS 1	0.100		
	2/19/1992	ATTRACTIONS HAWAII	3803-03	WAIMEA FALLS 2	0.200		
	1/26/1994	HONOLULU BWS	4101-07	WAIALEE I	0.339		
	1/26/1994	HONOLULU BWS	4101-08	WAIALEE II	0.411		
	11/18/1992	NAKAMURA, TAKEMITSU	4002-09	NAKAMURA T.	0.001		
	9/11/1981	PANIOLO RANCH	3704-01	MEADOW GOLD SH	0.430		
	11/18/1992	Patricia L. Clark	4002-06	Henry F.	0.005		
	11/13/2007	Sean Ginella	4100-06	Kawela Mauka	0.102		
	10/26/2000	UH DEPT OF ANIMAL SCIENC	4101-10	WAIALEE	0.026		
		KAWAILOA (9 Wells)					
				Totalling Available Allocation	1.614	27.386	

**APPENDIX I
CURRENT ACTIVE WATER USE PERMIT ALLOCATIONS**

Island Water Use Permit Index *(non-saltwater/non-caprock)*

ISLAND OF OAHU

WUP No.	Approved	Applicant	Well No	Well Name	WUP (mgd)	12-MAV (mgd)	Diff
WMA Aquifer System: KOOLAULOA				Sustainable Yield =		36	
	12/8/1993	CAMPBELL ESTATE	4057-11	SUGAR MILL PUMP	0.028		
	12/8/1993	CAMPBELL ESTATE	4157-04	PUMP 15 (ARMY)			
	12/8/1993	CAMPBELL ESTATE	4157-04	PUMP 15	1.517		
	11/9/2005	Diversified Ag Promotions LLC	4158-12	Kahuku Air Base	0.300		
	11/9/2005	Diversified Ag Promotions LLC	4158-13	Kahuku Air Base			
	1/25/1995	E.L.C. FOUNDATION	3755-03	HAUULA	0.019		
	12/8/1993	HANOHANO ENTERPRISES, IN	3553-01	HANOHANO	0.432		
	8/16/2006	Hawaii Reserves Inc.	3755-04	Laie Maloo	0.039		
	8/16/2006	Hawaii Reserves Inc.	3856-07	Prawn Farm	0.171		
	12/7/1998	HAWAII RESERVES, INC.	3755-06	TRUCK FARM	0.142		
	12/7/1998	HAWAII RESERVES, INC.	3855-04	WELFARE FARM	0.091		
	12/7/1998	HAWAII RESERVES, INC.	3856-04	QUARRY WELL D	0.036		
	12/8/1993	HAWAII RESERVES, INC.	3956-01	MALAEKAHANA (KP7)	0.062		
	12/7/1998	HAWAII RESERVES, INC.	3956-05	EGG FARM	0.001		
	12/8/1993	HAWAII RESERVES, INC.	4056-01	KAWANANAKOA	0.576		
	12/8/1993	HAWAII RESERVES, INC.	4057-10	PUMP 12-A	1.200		
	9/1/1993	HOLT, LEMON	3654-02	LW HOLT	0.002		
	10/22/1997	HONOLULU BWS	3453-06	PUNALUU III	1.327		
	10/22/1997	HONOLULU BWS	3453-07	PUNALUU III			
	10/22/1997	HONOLULU BWS	3553-02	PUNALUU I	0.360		
	1/26/1994	HONOLULU BWS	3553-03	PUNALUU II	4.618		
	1/26/1994	HONOLULU BWS	3553-04	PUNALUU II			
	1/26/1994	HONOLULU BWS	3553-06	PUNALUU II			
	1/26/1994	HONOLULU BWS	3553-07	PUNALUU II			
	1/26/1994	HONOLULU BWS	3553-08	PUNALUU II			
	1/26/1994	HONOLULU BWS	3554-03	PUNALUU II			
		HONOLULU BWS	3554-04	KALUANUI	1.093		
		HONOLULU BWS	3554-05	KALUANUI			
		HONOLULU BWS	3554-06	KALUANUI			
	1/26/1994	HONOLULU BWS	3655-01	HAUULA	0.250		
	10/18/1995	HONOLULU BWS	3655-02	MAAKUA	0.667		
	1/26/1994	HONOLULU BWS	4057-15	KAHUKU BATTERY	0.600		
	1/26/1994	HONOLULU BWS	4057-16	KAHUKU BATTERY			
	6/18/2003	Kahuku Land, LLC	4100-01	Turtle Bay GC	0.600		
	6/18/2003	Kahuku Land, LLC	4159-01	Pump 2	1.075		
	6/18/2003	Kahuku Land, LLC	4159-02	Pump 2A			
	12/8/1993	KAIO, JACOB I. SR.	3956-07	KAIO ARTESIAN	0.017		
	12/15/2004	KAPAKA FARM	3554-01	KAPAKA FARM 1	0.038		
	12/15/2004	KAPAKA FARM	3654-03	KAPAKA FARM 3	0.190		
		LAIE WATER CO., INC.	3855-06	CAMPUS WELL	1.375		
		LAIE WATER CO., INC.	3855-07	CERAMICS WELL			
		LAIE WATER CO., INC.	3855-08	LIBRARY WELL			
		LAIE WATER CO., INC.	3856-05	QUARRY E			
		LAIE WATER CO., INC.	3856-06	QUARRY F			
		Ming Dynasty Fish Co.	4258-04	Amor RCA Brackish	0.010		
	1/26/1994	NIHIPALI, GEORGE N.	3855-12	NIHIPALI	0.009		
	12/7/1998	POLYNESIAN CULTURAL CEN.	3855-09	PCC LAGOON WELL	0.568		
	8/3/1994	Serenity Park LLC	3957-01	Pump 3	1.244		

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Island Water Use Permit Index *(non-saltwater/non-caprock)*

ISLAND OF OAHU

WUP No.	Approved	Applicant	Well No	Well Name	WUP (mgd)	12-MAV (mgd)	Diff
	3/1/1995	Serenity Park LLC	3957-03	Pump 3A			
	5/16/2000	Serenity Park LLC	4057-07	Pump 12	0.300		
	12/8/1993	STATE DOA	4057-01	PUMP 1	0.307		
		U.S. Fish and Wildlife Service	4157-05	Kii Wildlife Refuge 1	1.000		
		U.S. Fish and Wildlife Service	4157-06	Kii Wildlife Refuge 2			
		U.S. Fish and Wildlife Service	4157-07	Kii Wildlife Refuge 3			
		U.S. Fish and Wildlife Service	4157-13	Kii Wildlife Refuge 4			
		KOOLAULOA (55 Wells)					
				Totalling	20.264		
				Available Allocation	15.736		

WMA Aquifer System: KOOLAUPOKO				Sustainable Yield =	30
	10/27/1993	CHANG, DUDLEY W.A.	2750-09	KAHALUU	0.002
	3/16/1994	HAWAII STATE HOSPITAL	2448-01	HI STATE HOSP/416	0.088
	8/16/1995	HONOLULU BWS	2348-02	KUOU WELLS I	2.969
	8/16/1995	HONOLULU BWS	2348-03	KUOU WELLS I	
	10/22/1997	HONOLULU BWS	2348-05	KUOU WELL II	0.010
		HONOLULU BWS	2348-06	KUOU WELL III	0.196
	3/13/1996	HONOLULU BWS	2349-01	LULUKU TUNNEL	0.713
	10/22/1997	HONOLULU BWS	2349-02	LULUKU WELL	1.050
	3/13/1996	HONOLULU BWS	2450-01	HAIKU TUNNEL	1.340
	8/16/1995	HONOLULU BWS	2450-02	HAIKU WELL	0.457
	8/16/1995	HONOLULU BWS	2549-01	IOLEKAA	0.153
	3/13/1996	HONOLULU BWS	2651-01	KAHALUU TUNNEL	2.128
	8/16/1995	HONOLULU BWS	2651-03	KAHALUU WELL	0.927
	10/13/1993	Jean Paul Renoir & Kiiko Nakah	2751-08	RL Montgomery	0.036
		KOOLAU GOLF PARTNERS LL	2347-02	MINAMI 1	0.150
		KOOLAU GOLF PARTNERS LL	2347-03	MINAMI 2	
	3/16/1994	STATE HFDC	2853-04	WAIAHOLE A	0.075
	3/16/1994	STATE HFDC	2853-05	WAIAHOLE B	
	3/16/1994	VALLEY OF THE TEMPLES	2550-01	HEEIA	0.018
		KOOLAUPOKO (19 Wells)			
				Totalling	10.312
				Available Allocation	19.688

WMA Aquifer System: MOANALUA				Sustainable Yield =	16
	9/11/1981		2153-02	DAMON ESTATE	0.021
	9/11/1981	HON INT CC	2154-01	HONOLULU INT CC	0.346
	9/11/1981	HONOLULU BWS	2052-08	KALIHI SHAFT	9.500
	9/11/1981	HONOLULU BWS	2153-10	MOANALUA STA	3.790
	9/11/1981	HONOLULU BWS	2153-11	MOANALUA STA	
	9/11/1981	HONOLULU BWS	2153-12	MOANALUA STA	
	9/11/1981	U.S. ARMY	2053-11	FORT SHAFTER	1.035
	9/11/1981	U.S. ARMY	2153-07	TRIPLER	0.609
	9/11/1981	U.S. ARMY	2153-08	TRIPLER	
	5/17/1989	U.S. NAVY	2254-01	HALAWA RED HILL	4.659
		MOANALUA (10 Wells)			
				Totalling	19.96
				Available Allocation	-3.96

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ISLAND OF OAHU

WUP No.	Approved	Applicant	Well No	Well Name	WUP (mgd)	12-MAV (mgd)	Diff
WMA Aquifer System: MOKULEIA					Sustainable Yield = 8		
9/11/1981		D.O.T. AIRPORTS	3412-02	DILLINGHAM AFB	0.055		
9/11/1981		Dillingham Ranch Aina LLC	3310-01	MOKULEIA HMSTDS	1.250		
12/14/1988		Dillingham Ranch Aina LLC	3310-02	MOKULEIA HMSTDS	0.850		
9/11/1981		Dillingham Ranch Aina LLC	3410-03	MOKULEIA HMSTDS	1.500		
2/18/2003		HAWAII FISH CO.	3412-04	HAWAII FISH CO. #1	0.576		
1/13/2004		KAALA RANCH	3309-02	MOKULEIA	0.127		
7/12/2006		Mark Hamamoto	3306-16	Hamamoto - 2006	0.013		
9/11/1981		North Shore Water Company, LL	3410-01		0.500		
9/17/2003		STANHOPE FARMS	3308-02	STANHOPE FARMS	0.056		
9/11/1981		U.S. AIR FORCE	3314-03	USAF KAENA PT.	0.018		
6/2/1993		WAIALUA SUGAR [02]	3409-13	PUMP 11	0.530		
6/2/1993		WAIALUA SUGAR [02]	3411-04	PUMP 5	2.550		
6/2/1993		WAIALUA SUGAR [02]	3411-06	PUMP 5			
6/2/1993		WAIALUA SUGAR [02]	3411-07	PUMP 5			
6/2/1993		WAIALUA SUGAR [02]	3411-08	PUMP 5			
6/2/1993		WAIALUA SUGAR [02]	3411-09	PUMP 5			
6/2/1993		WAIALUA SUGAR [02]	3411-10	PUMP 5			
6/2/1993		WAIALUA SUGAR [02]	3411-11	PUMP 5			
6/2/1993		WAIALUA SUGAR [02]	3411-13	PUMP 5			
		MOKULEIA (19 Wells)					
				Totalling Available Allocation	8.025	-0.025	
WMA Aquifer System: NUUANU					Sustainable Yield = 14		
9/11/1981		HONOLULU BWS	1849-13	WILDER STA	7.000		
9/11/1981		HONOLULU BWS	1849-14	WILDER STA			
9/11/1981		HONOLULU BWS	1849-15	WILDER STA			
9/11/1981		HONOLULU BWS	1849-16	WILDER STA			
9/11/1981		HONOLULU BWS	1851-12	BERETANIA STATION	7.000		
9/11/1981		HONOLULU BWS	1851-13	BERETANIA STATION			
9/11/1981		HONOLULU BWS	1851-31	BERETANIA STATION			
9/11/1981		HONOLULU BWS	1851-33	BERETANIA STATION			
9/11/1981		HONOLULU BWS	1851-34	BERETANIA STATION			
9/11/1981		HONOLULU BWS	1851-35	BERETANIA STATION			
9/11/1981		HONOLULU BWS	1851-67	BERETANIA STATION			
9/11/1981		HONOLULU BWS	1851-74	BERETANIA STATION			
9/11/1981		HONOLULU BWS	1851-75	BERETANIA STATION			
9/11/1981		HONOLULU BWS	1948-01	MANOA II	0.700		
9/11/1981		KAWAIAHAO CHURCH	1851-73	KAWAIAHAO CHURCH	0.030		
9/11/1981		PACIFIC CLUB	1851-07	PACIFIC CLUB	0.040		
4/18/2001		PUNAHOU SCHOOL	1849-10	PUNAHOU SCHOOL	0.158		
9/11/1981		QUEENS HOSP	1851-54	QUEENS HOSPITAL	0.237		
		NUUANU (18 Wells)					
				Totalling Available Allocation	15.165	-1.165	

**APPENDIX I
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ISLAND OF OAHU

WUP No.	Approved	Applicant	Well No	Well Name	WUP (mgd)	12-MAV (mgd)	Diff
WMA Aquifer System: PALOLO					Sustainable Yield =	5	
9/11/1981		HONOLULU BWS	1748-03	KAIMUKI STA	4.000		
9/11/1981		HONOLULU BWS	1748-04	KAIMUKI STA			
9/11/1981		HONOLULU BWS	1748-05	KAIMUKI STA			
9/11/1981		HONOLULU BWS	1748-06	KAIMUKI STA			
9/11/1981		HONOLULU BWS	1748-07	KAIMUKI STA			
9/11/1981		HONOLULU BWS	1748-08	KAIMUKI STA			
9/11/1981		HONOLULU BWS	1748-09	KAIMUKI STA			
9/11/1981		HONOLULU BWS	1748-10	KAIMUKI STA			
9/11/1981		HONOLULU BWS	1847-01	PALOLO	1.310		
9/11/1981		HONOLULU BWS	1847-02	PALOLO ADDITION			
9/11/1981		KOKUSAI KOGYO CO., LTD.	1749-19	KOKUSAI, K.	0.336		
		PALOLO (11 Wells)					
				Totalling Available Allocation	5.646	-0.646	
WMA Aquifer System: WAHIAWA					Sustainable Yield =	23	
6/20/2001		DEL MONTE FRESH PRODUC	2803-05	DEL MONTE WELL 3	3.960		
6/20/2001		DEL MONTE FRESH PRODUC	2803-07	DEL MONTE WELL 4			
11/20/1987		GALBRAITH ESTATE	3103-01	DEL MONTE #5	2.000		
5/17/1989		HONOLULU BWS	2901-08	WAHIAWA I	3.270		
5/17/1989		HONOLULU BWS	2901-09	WAHIAWA I			
5/17/1989		HONOLULU BWS	2901-11	WAHIAWA I			
5/17/1989		HONOLULU BWS	2902-01	WAHIAWA II			
5/17/1989		HONOLULU BWS	2902-02	WAHIAWA II	1.000		
2/21/2008		Kelena Farms LLC	3203-01	WSCo. Pump 25	1.442		
7/12/2006		Sandwich Isles Communications	2801-03	SIC-01	0.100		
5/14/1997		U.S. ARMY	2901-02	SCHOFIELD SHAFT	5.648		
5/14/1997		U.S. ARMY	2901-03	SCHOFIELD SHAFT			
5/14/1997		U.S. ARMY	2901-04	SCHOFIELD SHAFT			
5/14/1997		U.S. ARMY	2901-10	SCHOFIELD SHAFT			
6/5/1996		U.S. NAVY PUBLIC WORKS	3100-02	WAHIAWA DEEP	0.208		
6/2/1993		WAIALUA SUGAR	3102-02	PUMP 24	2.580		
7/19/1995		WAIALUA SUGAR	3203-02	PUMP 26	1.720		
		WAHIAWA (17 Wells)					
				Totalling Available Allocation	21.928	1.072	

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ISLAND OF OAHU

WUP No.	Approved	Applicant	Well No	Well Name	WUP (mgd)	12-MAV (mgd)	Diff
WMA Aquifer System: WAI AHOLE DITCH				Sustainable Yield =		27	
	7/13/2006	AGRIBUSINESS DEV CORP	2657-05	WAIAWA DEV TUN	2.030		
	7/13/2006	AGRIBUSINESS DEV CORP	2853-01	WAI AHOLE MAIN			
	7/13/2006	AGRIBUSINESS DEV CORP	2953-01	UWAU DEV TUN			
	7/13/2006	AGRIBUSINESS DEV CORP	2953-02	WAIKANE DEV TUN #2			
	7/13/2006	AGRIBUSINESS DEV CORP	2953-03	UWAU TUN EXT			
	7/13/2006	AGRIBUSINESS DEV CORP	3053-01	WAIKANE DEV TUN #1			
	7/13/2006	AGRIBUSINESS DEV CORP	3154-01	KAHANA DEV TUN			
	12/28/2001	BISHOP ESTATE	2657-05	WAIAWA DEV TUN	0.170		
	12/28/2001	BISHOP ESTATE	2853-01	WAI AHOLE MAIN			
	12/28/2001	BISHOP ESTATE	2953-01	UWAU DEV TUN			
	12/28/2001	BISHOP ESTATE	2953-02	WAIKANE DEV TUN #2			
	12/28/2001	BISHOP ESTATE	2953-03	UWAU TUN EXT			
	12/28/2001	BISHOP ESTATE	3053-01	WAIKANE DEV TUN #1			
	12/28/2001	BISHOP ESTATE	3154-01	KAHANA DEV TUN			
	12/28/2001	DOLE/CASTLE & COOKE	2657-05	WAIAWA DEV TUN	2.130		
	12/28/2001	DOLE/CASTLE & COOKE	2853-01	WAI AHOLE MAIN			
	12/28/2001	DOLE/CASTLE & COOKE	2953-01	UWAU DEV TUN			
	12/28/2001	DOLE/CASTLE & COOKE	2953-02	WAIKANE DEV TUN #2			
	12/28/2001	DOLE/CASTLE & COOKE	2953-03	UWAU TUN EXT			
	12/28/2001	DOLE/CASTLE & COOKE	3053-01	WAIKANE DEV TUN #1			
	12/28/2001	DOLE/CASTLE & COOKE	3154-01	KAHANA DEV TUN			
	7/13/2006	Edmund C. Olson Trust No. 2	2657-05	WAIAWA DEV TUN	0.024		
	7/13/2006	Edmund C. Olson Trust No. 2	2853-01	WAI AHOLE MAIN			
	7/13/2006	Edmund C. Olson Trust No. 2	2953-01	UWAU DEV TUN			
	7/13/2006	Edmund C. Olson Trust No. 2	2953-02	WAIKANE DEV TUN #2			
	7/13/2006	Edmund C. Olson Trust No. 2	2953-03	UWAU TUN EXT			
	7/13/2006	Edmund C. Olson Trust No. 2	3053-01	WAIKANE DEV TUN #1			
	7/13/2006	Edmund C. Olson Trust No. 2	3154-01	KAHANA DEV TUN			
	7/13/2006	HI Agricultural Research Ctr.	2657-05	WAIAWA DEV TUN	0.260		
	7/13/2006	HI Agricultural Research Ctr.	2853-01	WAI AHOLE MAIN			
	7/13/2006	HI Agricultural Research Ctr.	2953-01	UWAU DEV TUN			
	7/13/2006	HI Agricultural Research Ctr.	2953-02	WAIKANE DEV TUN #2			
	7/13/2006	HI Agricultural Research Ctr.	2953-03	UWAU TUN EXT			
	7/13/2006	HI Agricultural Research Ctr.	3053-01	WAIKANE DEV TUN #1			
	7/13/2006	HI Agricultural Research Ctr.	3154-01	KAHANA DEV TUN			
	12/28/2001	MILILANI GOLF CLUB	2657-05	WAIAWA DEV TUN	0.250		
	12/28/2001	MILILANI GOLF CLUB	2853-01	WAI AHOLE MAIN			
	12/28/2001	MILILANI GOLF CLUB	2953-01	UWAU DEV TUN			
	12/28/2001	MILILANI GOLF CLUB	2953-02	WAIKANE DEV TUN #2			
	12/28/2001	MILILANI GOLF CLUB	2953-03	UWAU TUN EXT			
	12/28/2001	MILILANI GOLF CLUB	3053-01	WAIKANE DEV TUN #1			
	12/28/2001	MILILANI GOLF CLUB	3154-01	KAHANA DEV TUN			
	12/28/2001	MILILANI MEMORIAL PARK	2657-05	WAIAWA DEV TUN	0.140		
	12/28/2001	MILILANI MEMORIAL PARK	2853-01	WAI AHOLE MAIN			
	12/28/2001	MILILANI MEMORIAL PARK	2953-01	UWAU DEV TUN			
	12/28/2001	MILILANI MEMORIAL PARK	2953-02	WAIKANE DEV TUN #2			
	12/28/2001	MILILANI MEMORIAL PARK	2953-03	UWAU TUN EXT			
	12/28/2001	MILILANI MEMORIAL PARK	3053-01	WAIKANE DEV TUN #1			

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ISLAND OF OAHU

WUP No.	Approved	Applicant	Well No	Well Name	WUP (mgd)	12-MAV (mgd)	Diff
	12/28/2001	MILILANI MEMORIAL PARK	3154-01	KAHANA DEV TUN			
	7/13/2006	Monsanto Company	2657-05	WAIAWA DEV TUN	2.636		
	7/13/2006	Monsanto Company	2853-01	WAIAHOLE MAIN			
	7/13/2006	Monsanto Company	2953-01	UWAU DEV TUN			
	7/13/2006	Monsanto Company	2953-02	WAIKANE DEV TUN #2			
	7/13/2006	Monsanto Company	2953-03	UWAU TUN EXT			
	7/13/2006	Monsanto Company	3053-01	WAIKANE DEV TUN #1			
	7/13/2006	Monsanto Company	3154-01	KAHANA DEV TUN			
	12/28/2001	NIHONKAI	2657-05	WAIAWA DEV TUN	0.480		
	12/28/2001	NIHONKAI	2853-01	WAIAHOLE MAIN			
	12/28/2001	NIHONKAI	2953-01	UWAU DEV TUN			
	12/28/2001	NIHONKAI	2953-02	WAIKANE DEV TUN #2			
	12/28/2001	NIHONKAI	2953-03	UWAU TUN EXT			
	12/28/2001	NIHONKAI	3053-01	WAIKANE DEV TUN #1			
	12/28/2001	NIHONKAI	3154-01	KAHANA DEV TUN			
	7/13/2006	Pioneer Hi-Bred Intl., Inc.	2657-05	WAIAWA DEV TUN	0.470		
	7/13/2006	Pioneer Hi-Bred Intl., Inc.	2853-01	WAIAHOLE MAIN			
	7/13/2006	Pioneer Hi-Bred Intl., Inc.	2953-01	UWAU DEV TUN			
	7/13/2006	Pioneer Hi-Bred Intl., Inc.	2953-02	WAIKANE DEV TUN #2			
	7/13/2006	Pioneer Hi-Bred Intl., Inc.	2953-03	UWAU TUN EXT			
	7/13/2006	Pioneer Hi-Bred Intl., Inc.	3053-01	WAIKANE DEV TUN #1			
	7/13/2006	Pioneer Hi-Bred Intl., Inc.	3154-01	KAHANA DEV TUN			
	7/13/2006	PUU MAKAKILO	2657-05	WAIAWA DEV TUN	0.750		
	7/13/2006	PUU MAKAKILO	2853-01	WAIAHOLE MAIN			
	7/13/2006	PUU MAKAKILO	2953-01	UWAU DEV TUN			
	7/13/2006	PUU MAKAKILO	2953-02	WAIKANE DEV TUN #2			
	7/13/2006	PUU MAKAKILO	2953-03	UWAU TUN EXT			
	7/13/2006	PUU MAKAKILO	3053-01	WAIKANE DEV TUN #1			
	7/13/2006	PUU MAKAKILO	3154-01	KAHANA DEV TUN			
	2/22/2007	Robinson Kunia Land, LLC	2657-05	WAIAWA DEV TUN	2.390		
	2/22/2007	Robinson Kunia Land, LLC	2953-01	UWAU DEV TUN			
	2/22/2007	Robinson Kunia Land, LLC	2953-02	WAIKANE DEV TUN #2			
	2/22/2007	Robinson Kunia Land, LLC	2953-02	WAIAHOLE MAIN			
	2/22/2007	Robinson Kunia Land, LLC	2953-03	UWAU TUN EXT			
	2/22/2007	Robinson Kunia Land, LLC	3053-01	WAIKANE DEV TUN #1			
	2/22/2007	Robinson Kunia Land, LLC	3154-01	KAHANA DEV TUN			
	12/28/2001	STATE DLNR	2657-05	WAIAWA DEV TUN	0.150		
	12/28/2001	STATE DLNR	2853-01	WAIAHOLE MAIN			
	12/28/2001	STATE DLNR	2953-01	UWAU DEV TUN			
	12/28/2001	STATE DLNR	2953-02	WAIKANE DEV TUN 2			
	12/28/2001	STATE DLNR	2953-03	UWAU TUN EXT			
	12/28/2001	STATE DLNR	3053-01	WAIKANE DEV TUN 1			
	12/28/2001	STATE DLNR	3154-01	KAHANA DEV TUN			
	7/13/2006	Sygenta Hawaii LLC	2657-05	Waiawa Dev Tunnel	0.590		
	7/13/2007	Sygenta Hawaii LLC	2853-01	Waiahole Main			
	7/13/2007	Sygenta Hawaii LLC	2953-01	Uwau Tunnel			
	7/13/2006	Sygenta Hawaii LLC	2953-02	Waikane Tunnel 2			
	7/13/2006	Sygenta Hawaii LLC	2953-03	Uwau Tunnel Extension			
	7/13/2006	Sygenta Hawaii LLC	3053-01	Waikane Tunnel 1			

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ISLAND OF OAHU

WUP No.	Approved	Applicant	Well No	Well Name	WUP (mgd)	12-MAV (mgd)	Diff
	7/13/2006	Sygenta Hawaii LLC WAIAHOLE DITCH (98 Wells)	3154-01	Kahana Tunnel			
				Totalling	12.47		
				Available Allocation	14.53		
WMA Aquifer System: WAIALAE-EAST				Sustainable Yield =		2	
	9/11/1981	HONOLULU BWS	1745-01	WAILUPE	0.300		
	9/11/1981	HONOLULU BWS	1746-02	WAIALAE IKI	0.190		
	4/15/1992	HONOLULU BWS	1843-01	KULIOUOU	0.300		
		WAIALAE-EAST (3 Wells)		Totalling	0.79		
				Available Allocation	1.21		
WMA Aquifer System: WAIALAE-WEST				Sustainable Yield =		4	
	9/11/1981	BISHOP ESTATE	1646-01	WAIALAE C C	0.460		
	10/22/1997	HONOLULU BWS	1746-01	AINA KOA	0.480		
	5/20/1998	Honolulu BWS	1746-04	WAIALAE NUI RIDGE	0.997		
	6/22/1984	HONOLULU BWS	1747-03	WAIALAE NUI	0.700		
	10/22/1997	HONOLULU BWS	1747-05	WAIALAE WEST	0.160		
		WAIALAE-WEST (5 Wells)		Totalling	2.797		
				Available Allocation	1.203		

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ISLAND OF OAHU

WUP No.	Approved	Applicant	Well No	Well Name	WUP (mgd)	12-MAV (mgd)	Diff
WMA Aquifer System: WAIALUA				Sustainable Yield =		25	
11/16/1994		A.J. LOPEZ SONS, INC.	3406-16	LOPEZ NO. 1	0.072		
12/18/1996		BG FARM	3506-10	BG FARM	0.003		
9/11/1981		GORA, DAN	3406-08	GORA	0.144		
9/11/1981		HONOLULU BWS	3405-01	WAIALUA	1.730		
9/11/1981		HONOLULU BWS	3405-02	WAIALUA			
9/11/1981		HONOLULU BWS	3405-03	HALEIWA	1.000		
9/11/1981		HONOLULU BWS	3405-04	HALEIWA			
9/11/1981		KAWAMATA, S.	3406-03	KAWAMATA, S.	0.100		
9/11/1981		KUNIHIRO, S.	3406-06	KUNIHIRO, S.	0.200		
9/11/1981		KUNIHIRO, S.	3407-02	KUNIHIRO, S.			
6/2/1993		MICHAEL JEWETT & MEGAN	3406-02	PUMP 9	0.160		
10/13/1993		NHAC	3407-02	LOPEZ	0.200		
10/13/1993		POAMOHO VENTURE, L.P.	3205-02	POAMOHO A	0.600		
6/2/1993		WAIALUA SUGAR	3407-11	PUMP 7	2.930		
6/2/1993		WAIALUA SUGAR	3407-12	PUMP 7	0.000		
6/2/1993		WAIALUA SUGAR	3505-01	PUMP 3	1.552		
6/2/1993		WAIALUA SUGAR	3505-02	PUMP 3			
6/2/1993		WAIALUA SUGAR	3505-03	PUMP 3			
6/2/1993		WAIALUA SUGAR	3505-04	PUMP 3			
6/2/1993		WAIALUA SUGAR	3505-05	PUMP 3			
6/2/1993		WAIALUA SUGAR	3505-06	PUMP 3			
6/2/1993		WAIALUA SUGAR	3505-07	PUMP 3			
6/2/1993		WAIALUA SUGAR	3505-08	PUMP 3			
6/2/1993		WAIALUA SUGAR	3505-09	PUMP 3			
6/2/1993		WAIALUA SUGAR	3505-10	PUMP 3			
6/2/1993		WAIALUA SUGAR	3505-11	PUMP 3			
6/2/1993		WAIALUA SUGAR	3505-12	PUMP 3			
6/2/1993		WAIALUA SUGAR	3505-13	PUMP 3			
6/2/1993		WAIALUA SUGAR	3505-14	PUMP 3			
6/2/1993		WAIALUA SUGAR	3505-15	PUMP 3			
6/2/1993		WAIALUA SUGAR	3505-16	PUMP 3			
6/2/1993		WAIALUA SUGAR	3505-17	PUMP 3			
6/2/1993		WAIALUA SUGAR	3505-18	PUMP 3			
6/2/1993		WAIALUA SUGAR	3505-19	PUMP 3			
6/2/1993		WAIALUA SUGAR	3505-20	PUMP 3			
6/2/1993		WAIALUA SUGAR [02]	3307-01	PUMP 2	4.370		
6/2/1993		WAIALUA SUGAR [02]	3307-02	PUMP 2			
6/2/1993		WAIALUA SUGAR [02]	3307-03	PUMP 2			
6/2/1993		WAIALUA SUGAR [02]	3307-04	PUMP 2			
6/2/1993		WAIALUA SUGAR [02]	3307-05	PUMP 2			
6/2/1993		WAIALUA SUGAR [02]	3307-06	PUMP 2			
6/2/1993		WAIALUA SUGAR [02]	3307-07	PUMP 2A	3.586		
6/2/1993		WAIALUA SUGAR [02]	3307-08	PUMP 2			
6/2/1993		WAIALUA SUGAR [02]	3307-09	PUMP 2			
6/2/1993		WAIALUA SUGAR [02]	3307-10	PUMP 2			
6/2/1993		WAIALUA SUGAR [02]	3307-11	PUMP 2A	0.864		
6/2/1993		WAIALUA SUGAR [02]	3307-12	PUMP 2A			
6/2/1993		WAIALUA SUGAR [02]	3307-13	PUMP 2A			

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WUP No.	Approved	Applicant	Well No	Well Name	WUP (mgd)	12-MAV (mgd)	Diff
	6/2/1993	WAIALUA SUGAR [02]	3307-14	PUMP 2A			
	6/2/1993	WAIALUA SUGAR [02]	3404-01	PUMP 17	8.630		
	6/2/1993	WAIALUA SUGAR [02]	3407-04	PUMP 1	2.330		
	6/2/1993	WAIALUA SUGAR [02]	3407-05	PUMP 1			
	6/2/1993	WAIALUA SUGAR [02]	3407-06	PUMP 1			
	6/2/1993	WAIALUA SUGAR [02]	3407-14	PUMP 1			
	6/2/1993	WAIALUA SUGAR [02]	3407-15	PUMP 1			
	6/2/1993	WAIALUA SUGAR [02]	3407-18	PUMP 7	0.180		
	6/2/1993	WAIALUA SUGAR [02]	3407-19	PUMP 7			
	6/2/1993	WAIALUA SUGAR [02]	3506-03	PUMP 8	1.660		
	6/2/1993	WAIALUA SUGAR [02]	3506-04	PUMP 8			
		WAIALUA (59 Wells)					
				Totalling	30.311		
				Available Allocation	-5.311		

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ISLAND OF OAHU

WUP No.	Approved	Applicant	Well No	Well Name	WUP (mgd)	12-MAV (mgd)	Diff
WMA Aquifer System:		WAIMALU	Sustainable Yield =		45		
10/22/1997		HONOLULU BWS	2255-37	HALAWA WELLS	1.080		
10/22/1997		HONOLULU BWS	2255-38	HALAWA WELLS			
10/22/1997		HONOLULU BWS	2255-39	HALAWA WELLS			
5/17/1989		HONOLULU BWS	2354-01	HALAWA SHAFT	11.320		
10/22/1997		HONOLULU BWS	2355-03	AIEA GULCH A	0.980		
10/22/1997		HONOLULU BWS	2355-05	AIEA GULCH C			
10/22/1997		HONOLULU BWS	2355-06	AIEA WELLS A	1.300		
10/22/1997		HONOLULU BWS	2355-07	AIEA WELLS B			
5/17/1989		HONOLULU BWS	2355-09	KALAUAO WELLS	11.750		
5/17/1989		HONOLULU BWS	2355-10	KALAUAO WELLS			
5/17/1989		HONOLULU BWS	2355-11	KALAUAO WELLS			
5/17/1989		HONOLULU BWS	2355-12	KALAUAO WELLS			
5/17/1989		HONOLULU BWS	2355-13	KALAUAO WELLS			
5/17/1989		HONOLULU BWS	2355-14	KALAUAO WELLS			
5/17/1989		HONOLULU BWS	2356-49	WAIMALU WELLS	0.080		
5/17/1989		HONOLULU BWS	2356-50	WAIMALU WELLS			
10/22/1997		HONOLULU BWS	2356-55	KAONOHI I	1.350		
10/22/1997		HONOLULU BWS	2356-56	KAONOHI I			
10/22/1997		HONOLULU BWS	2356-58	KAAMILO	1.200		
10/22/1997		HONOLULU BWS	2356-59	KAAMILO			
5/17/1989		HONOLULU BWS	2357-23	KAHUMANU I #1	1.110		
5/17/1989		HONOLULU BWS	2357-24	KAHUMANU I #2			
3/27/1987		HONOLULU BWS	2456-01	NEWTOWN	1.500		
3/27/1987		HONOLULU BWS	2456-02	NEWTOWN			
3/27/1987		HONOLULU BWS	2456-03	NEWTOWN			
5/17/1989		HONOLULU BWS	2457-05	PUNANANI	11.970		
5/17/1989		HONOLULU BWS	2457-06	PUNANANI			
5/17/1989		HONOLULU BWS	2457-09	PUNANANI			
5/17/1989		HONOLULU BWS	2457-10	PUNANANI			
5/17/1989		HONOLULU BWS	2457-11	PUNANANI			
5/17/1989		HONOLULU BWS	2457-12	PUNANANI			
3/27/1987		HONOLULU BWS	2457-13	WAIAU	1.890		
3/27/1987		HONOLULU BWS	2457-14	WAIAU			
3/27/1987		HONOLULU BWS	2457-15	WAIAU			
12/16/1992		HONOLULU BWS [01]	2357-11	HECO WAIAU G-11	0.000		
12/16/1992		HONOLULU BWS [01]	2357-12	HECO WAIAU G-12	0.000		
8/22/1986		LAU TARO FARM	2356-70	KALAUAO	0.100		
4/11/1980		MINAMI FARM	2455-02	MINAMI FARM	0.158		
7/15/1998		PEARL COUNTRY CLUB	2356-54	PEARL COUNTRY CLU	0.330		
5/17/1989		STATE OF HAWAII	2557-01	WAIMANO TRNG SCH	0.136		
5/17/1989		STATE OF HAWAII	2557-02	WAIMANO TRNG SCH			
5/17/1989		U.S. NAVY	2255-32	AIEA HALAWA SHFT	0.697		
		WAIMALU (42 Wells)		Totalling Available Allocation	46.951	-1.951	

**APPENDIX I
CURRENT ACTIVE WATER USE PERMIT ALLOCATIONS**

Island Water Use Permit Index *(non-saltwater/non-caprock)*

ISLAND OF OAHU

WUP No.	Approved	Applicant	Well No	Well Name	WUP (mgd)	12-MAV (mgd)	Diff
WMA Aquifer System:		WAIMANALO		Sustainable Yield =	10		
		HONOLULU BWS	1942-01	WAIMANALO III	0.200		
	1/26/1994	HONOLULU BWS	1943-01	WAIMANALO WELL II	0.452		
	1/26/1994	HONOLULU BWS	2043-02	WAIMANALO WELL I			
	2/21/1996	HONOLULU BWS	2044-03	WAIMANALO TUN. I	0.700		
	2/21/1996	HONOLULU BWS	2044-04	WAIMANALO TUN. II			
	2/21/1996	HONOLULU BWS	2045-03	WAIMANALO TUN. III			
	2/21/1996	HONOLULU BWS	2045-05	WAIMANALO TUN. IV			
	10/27/1993	ROYAL HAWAIIAN CC	2045-06	ROYAL HAWAIIAN 6	0.155		
	10/27/1993	ROYAL HAWAIIAN CC	2145-01	ROYAL HAWAIIAN 1			
	10/27/1993	ROYAL HAWAIIAN CC	2145-02	ROYAL HAWAIIAN 2			
	10/27/1993	ROYAL HAWAIIAN CC	2145-04	ROYAL HAWAIIAN 4			
	11/17/1993	STATE DHHL		RESERVATION	0.124		
		WAIMANALO (12 Wells)		Totalling	1.631		
				Available Allocation	8.369		

**APPENDIX I
CURRENT ACTIVE WATER USE PERMIT ALLOCATIONS**

Island Water Use Permit Index *(non-saltwater/non-caprock)*

ISLAND OF OAHU

WUP No.	Approved	Applicant	Well No	Well Name	WUP (mgd)	12-MAV (mgd)	Diff
WMA Aquifer System: WAIPAHU-WAIAWA			Sustainable Yield = 104				
12/18/1996		ABE, TADAHIRO	2202-02	HONOULIULI	0.009		
4/18/2001		C&C DES, GOLF COURSE DIV	2201-03	EP 2	0.000		
4/18/2001		C&C DES, GOLF COURSE DIV	2201-04	EP 2			
4/18/2001		C&C DES, GOLF COURSE DIV	2201-07	EP 2			
1/26/2000		D.R. Horton - Schuler Homes, L	2102-02	EP 18 Battery	7.969		
1/26/2000		D.R. Horton - Schuler Homes, L	2102-04	EP 18 Battery			
1/26/2000		D.R. Horton - Schuler Homes, L	2102-05	EP 18 Battery			
1/26/2000		D.R. Horton - Schuler Homes, L	2102-06	EP 18 Battery			
1/26/2000		D.R. Horton - Schuler Homes, L	2102-07	EP 18 Battery			
1/26/2000		D.R. Horton - Schuler Homes, L	2102-08	EP 18 Battery			
1/26/2000		D.R. Horton - Schuler Homes, L	2102-09	EP 18 Battery			
1/26/2000		D.R. Horton - Schuler Homes, L	2102-10	EP 18 Battery			
1/26/2000		D.R. Horton - Schuler Homes, L	2102-11	EP 18 Battery			
1/26/2000		D.R. Horton - Schuler Homes, L	2102-12	EP 18 Battery			
1/26/2000		D.R. Horton - Schuler Homes, L	2102-13	EP 18 Battery			
1/26/2000		D.R. Horton - Schuler Homes, L	2102-14	EP 18 Battery			
1/26/2000		D.R. Horton - Schuler Homes, L	2102-15	EP 18 Battery			
1/26/2000		D.R. Horton - Schuler Homes, L	2102-16	EP 18 Battery			
1/26/2000		D.R. Horton - Schuler Homes, L	2102-17	EP 18 Battery			
1/26/2000		D.R. Horton - Schuler Homes, L	2102-18	EP 18 Battery			
1/26/2000		D.R. Horton - Schuler Homes, L	2102-19	EP 18 Battery			
1/26/2000		D.R. Horton - Schuler Homes, L	2102-20	EP 18 Battery			
1/26/2000		D.R. Horton - Schuler Homes, L	2102-21	EP 18 Battery			
1/26/2000		D.R. Horton - Schuler Homes, L	2102-22	EP 18 Battery			
1/26/2000		D.R. Horton - Schuler Homes, L	2202-03	EP 18 Battery			
1/26/2000		D.R. Horton - Schuler Homes, L	2202-04	EP 18 Battery			
1/26/2000		D.R. Horton - Schuler Homes, L	2202-05	EP 18 Battery			
1/26/2000		D.R. Horton - Schuler Homes, L	2202-06	EP 18 Battery			
1/26/2000		D.R. Horton - Schuler Homes, L	2202-07	EP 18 Battery			
1/26/2000		D.R. Horton - Schuler Homes, L	2202-08	EP 18 Battery			
1/26/2000		D.R. Horton - Schuler Homes, L	2202-09	EP 18 Battery			
1/26/2000		D.R. Horton - Schuler Homes, L	2202-10	EP 18 Battery			
1/26/2000		D.R. Horton - Schuler Homes, L	2202-11	EP 18 Battery			
1/26/2000		D.R. Horton - Schuler Homes, L	2202-12	EP 18 Battery			
1/26/2000		D.R. Horton - Schuler Homes, L	2202-13	EP 18 Battery			
1/26/2000		D.R. Horton - Schuler Homes, L	2202-14	EP 18 Battery			
1/26/2000		D.R. Horton - Schuler Homes, L	2202-15	EP 18 Battery			
1/26/2000		D.R. Horton - Schuler Homes, L	2202-16	EP 18 Battery			
1/26/2000		D.R. Horton - Schuler Homes, L	2202-17	EP 18 Battery			
1/26/2000		D.R. Horton - Schuler Homes, L	2202-18	EP 18 Battery			
1/26/2000		D.R. Horton - Schuler Homes, L	2202-19	EP 18 Battery			
1/26/2000		D.R. Horton - Schuler Homes, L	2202-20	EP 18 Battery			
8/26/1998		GARY TAKIGUCHI	2201-02	HONOULIULI	0.019		
5/17/1989		HARRIS RUG CL	2201-14	HARRIS RUG	0.003		
1/30/2002		HAWAII COUNTRY CLUB	2603-01	HAW COUNTRY CLUB	0.400		
		HONOLULU BWS	2202-21	EP 15, 16	7.661		
5/17/1989		HONOLULU BWS	2301-34	HOAEAE WELLS 1	6.610		
5/17/1989		HONOLULU BWS	2301-35	HOAEAE WELLS 2			

**APPENDIX I
CURRENT ACTIVE WATER USE PERMIT ALLOCATIONS**

Island Water Use Permit Index *(non-saltwater/non-caprock)*

ISLAND OF OAHU

WUP No.	Approved	Applicant	Well No	Well Name	WUP (mgd)	12-MAV (mgd)	Diff
	5/17/1989	HONOLULU BWS	2301-36	HOAEAE WELLS 3			
	5/17/1989	HONOLULU BWS	2301-37	HOAEAE WELLS 4			
	5/17/1989	HONOLULU BWS	2301-38	HOAEAE NO.5			
	5/17/1989	HONOLULU BWS	2301-39	HOAEAE NO.6			
		HONOLULU BWS	2301-44	WAIPAHAU IV	3.000		
		HONOLULU BWS	2301-45	WAIPAHAU IV			
		HONOLULU BWS	2301-46	WAIPAHAU IV			
		HONOLULU BWS	2301-47	WAIPAHAU IV			
	5/17/1989	HONOLULU BWS	2302-01	KUNIA I	5.000		
	5/17/1989	HONOLULU BWS	2302-02	KUNIA I			
	5/17/1989	HONOLULU BWS	2302-03	KUNIA I			
	5/17/1989	HONOLULU BWS	2302-04	KUNIA I			
	7/11/1985	HONOLULU BWS	2400-01	WAIPAHAU I	6.000		
	7/11/1985	HONOLULU BWS	2400-02	WAIPAHAU I			
	7/11/1985	HONOLULU BWS	2400-03	WAIPAHAU I			
	7/11/1985	HONOLULU BWS	2400-04	WAIPAHAU I			
	8/22/1986	HONOLULU BWS	2400-05	WAIPAHAU II	2.100		
	8/22/1986	HONOLULU BWS	2400-06	WAIPAHAU II			
	8/22/1986	HONOLULU BWS	2400-08	WAIPAHAU II			
	6/21/2000	HONOLULU BWS	2400-09	WAIPAHAU III	3.029		
	6/21/2000	HONOLULU BWS	2400-10	WAIPAHAU III			
	6/21/2000	HONOLULU BWS	2400-11	WAIPAHAU III			
	6/21/2000	HONOLULU BWS	2400-12	WAIPAHAU III			
	6/21/2000	HONOLULU BWS	2400-13	WAIPAHAU III			
	8/22/1986	HONOLULU BWS	2400-14	WAIPAHAU II			
		Honolulu BWS	2401-04	Kunia III	3.050		
		Honolulu BWS	2401-05	Kunia III			
		Honolulu BWS	2401-06	Kunia III			
		HONOLULU BWS	2402-01	KUNIA II	2.710		
		HONOLULU BWS	2402-02	KUNIA II			
		HONOLULU BWS	2402-03	KUNIA II			
		HONOLULU BWS	2402-05	KUNIA II			
		Honolulu BWS	2457-01	Pearl City II	1.500		
		Honolulu BWS	2457-02	Pearl City II			
		Honolulu BWS	2457-03	Pearl City II			
		Honolulu BWS	2458-01	Pearl City Shaft	1.000		
		Honolulu BWS	2458-03	Pearl City I	1.150		
		Honolulu BWS	2458-04	Pearl City I			
		Honolulu BWS	2458-05	Manana	0.700		
		Honolulu BWS	2459-19	Waipio Heights	0.500		
		Honolulu BWS	2459-20	Waipio Heights			
		Honolulu BWS	2459-23	Waipio Heights I	0.500		
		HONOLULU BWS	2459-23	WAIPIO HTS I	0.680		
		HONOLULU BWS	2459-24	WAIPIO HTS I			
		Honolulu BWS	2459-24	Waipio Heights I			
		HONOLULU BWS	2500-01	WAIPIO HTS II	1.000		
		HONOLULU BWS	2500-02	WAIPIO HTS II			
	3/27/1987	HONOLULU BWS	2557-03	PEARL CITY III	0.500		
	6/2/1993	HONOLULU BWS	2600-03	MILILANI III	1.250		

**APPENDIX I
CURRENT ACTIVE WATER USE PERMIT ALLOCATIONS**

Island Water Use Permit Index *(non-saltwater/non-caprock)*

ISLAND OF OAHU

WUP No.	Approved	Applicant	Well No	Well Name	WUP (mgd)	12-MAV (mgd)	Diff
	6/2/1993	HONOLULU BWS	2600-04	MILILANI III			
		Honolulu BWS	2659-02	Waipio Heights III	1.250		
		Honolulu BWS	2659-03	Waipio Heights III			
		Honolulu BWS	2800-01	Mililani I	2.670		
		Honolulu BWS	2800-02	Mililani I			
		Honolulu BWS	2800-03	Mililani I			
		Honolulu BWS	2800-04	Mililani I			
	7/28/1993	HONOLULU BWS	2858-01	MILILANI IV	2.022		
	7/28/1993	HONOLULU BWS	2858-02	MILILANI IV			
	7/28/1993	HONOLULU BWS	2858-03	MILILANI IV			
	7/28/1993	HONOLULU BWS	2858-04	MILILANI IV			
		Honolulu BWS	2859-01	Mililani II	1.590		
		Honolulu BWS	2859-02	Mililani II			
	12/19/2001	KENNETH SIMON	2358-35	PEARL CITY	0.040		
	12/19/2000	KENNETH SIMON	2358-36	PEARL CITY	0.004		
	12/19/2001	KENNETH SIMON	2358-44	PEARL CITY			
	7/19/1989	KIPAPA ACRES ASSOC OF O	2600-02	KIPAPA ACRES	0.100		
	12/18/1996	MARK H. ORTIZ	2202-01	ORTIZ	0.003		
	5/17/1989	MICHAEL WATANABE	2300-11	WATANABE, A.	0.680		
	5/17/1989	MICHAEL WATANABE	2300-20	WATANABE, A.	0.400		
	7/11/1985	NAZARENE CHURCH	2358-49	PEARL CITY	0.003		
	12/18/2002	PEARL CITY COMMUNITY CHU	2359-10	PEARL CITY COMM C	0.005		
	10/18/2006	Robinson Kunia Land, LLC	2602-03	Robinson No. 1	0.100		
	5/17/1989	Roman Catholic Church - Hawaii	2101-01	Honouliuli	0.110		
	6/5/1996	ROYAL KUNIA CC	2401-07	ROYAL KUNIA CC	0.600		
	6/21/2000	STATE DHHL		RESERVATION	1.358		
	3/21/2007	TABA FARM, INC.	2358-21	Taba Farm	0.864		
	3/21/2007	TABA FARM, INC.	2358-22	Taba Farm			
	3/21/2007	TABA FARM, INC.	2358-26	Taba Farm			
	3/21/2007	TABA FARM, INC.	2358-29	Taba Farm			
	8/26/1998	TADAO ABE	2201-02	HONOULIULI	0.002		
	9/18/2002	U.S. FISH & WILDLIFE	2359-19	PHNWR NO. 1	0.180		
	5/17/1989	U.S. NAVY	2558-10	WAIAWA SHAFT	14.977		
	10/25/2005	WAIAWA DEVELOPMENT LLC	2658-07	GENTRY WAIAWA 1	0.524		
	10/25/2005	WAIAWA DEVELOPMENT LLC	2658-08	GENTRY WAIAWA 2	0.458		
	7/28/1993	Waiawa Ridge Development LL	2659-04	Waiawa 575 No. 2	0.300		
	1/26/2000	Waikele Country Club Inc.	2301-01	WP 1	0.950		
	1/26/2000	Waikele Country Club Inc.	2301-02	WP 1			
	1/26/2000	Waikele Country Club Inc.	2301-03	WP 1			
	1/26/2000	Waikele Country Club Inc.	2301-05	WP 1			
	1/26/2000	Waikele Country Club Inc.	2301-07	WP 1			
	1/26/2000	Waikele Country Club Inc.	2301-08	WP 1			
	1/26/2000	Waikele Country Club Inc.	2301-09	WP 1			
	5/17/1989	YOSHIMURA, D.	2459-21	WAIPAHU	0.006		
		WAIPAHU-WAIAWA (141 Wells)					
				Totalling	85.536		
				Available Allocation	18.464		

Island Total 308.719
Statewide Total 335.510