



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

February 15, 2012
Honolulu, Hawaii

STAFF SUBMITTAL

**HEARING TO REVIEW AND PARTIALLY AND/OR COMPLETELY
MODIFY OR REVOCATE WATER USE PERMITS IN THE
WAIALUA GROUND WATER MANAGEMENT AREA, OAHU**

1. GWUP 035 (3307-01 to -10, Pump 2) Waialua Sugar; Well TMK: 6-7-002:014
2. GWUP 036 (3307-07 and -11 to 14, Pump 2A) Waialua Sugar; Well TMK: 6-7-003:019
3. GWUP 039 (3404-01, Pump 17) Waialua Sugar; Well TMK: 6-4-001:001
4. GWUP 040 (3405-01 & 02, Waialua Wells) HBWS; Well TMK: 6-4-001:008
5. GWUP 041 (3405-03 & 04, Haleiwa Wells) HBWS; Well TMK: 6-1-001:001
6. GWUP 043 (3406-03, Kawamata Well) S. Kawamata; Well TMK: 6-2-007:021 & 022
7. GWUP 044 (3406-06 and 3407-02, Kunihiro Wells) S. Kunihiro, Well TMK: 66-023:009 & 004
8. GWUP 046 (3407-04 to 06, -14 & 15, Pump 1) Waialua Sugar; Well TMK: 6-7-002:014
9. GWUP 048 & 136 (3407-11 & 12, -18 & 19, Pump 7 D&E, B&C) Waialua Sugar;
TMK: 6-6-025:001
10. GWUP 175 (3205-02, Poamoho A) Poamoho Venture; Well TMK: 6-5-001:16
11. GWUP 263 (3407-02, Lopez Well) Native Hawaiian Advisory Council; TMK: 6-6-023:004
12. GWUP 353 (3406-16, Lopez 1) R. Sterman; Well TMK: 6-6-015:004
13. GWUP 455 (3506-10, BG Farm) BG Farm; Well TMK: 6-2-006:012
14. GWUP 643 (3407-38, Paradise Production) Paradise Shrimp; Well TMK: 6-7-001:032
15. GWUP 732 (3406-02, Pump 9) M. Jewett & M. Ward; Well TMK: 6-6-016:013
16. GWUP 894 (3505-01 to 20, Pump 3) Kamehameha Schools; TMK: 6-2-010:001
17. GWUP 895 (3506-03 & 04, Pump 8) Kamehameha Schools; TMK: 6-2-006:007
18. GWUP 898 (3406-08, Gora Well) ML Gora; Well TMK: 6-6-016:015

SUMMARY:

The current Waialua Ground Water Management Area (Waialua GWMA) sustainable yield is 25 million gallons /day (mgd) – reduced from 40 mgd in 2008. The current allocation of water that may be withdrawn from the aquifer is 30.887 mgd. The over allocation is 5.887 mgd.

The Waialua Ground Water Management Area was first designated by the State Board of Land and Natural Resources in 1981 under the pre-Water Code law (Haw. Rev. Stat. chap. 177 (repealed 1987)) and reflected plantation agriculture practices which have largely disappeared. The old permits are no longer used. Nor do they reflect current needs. Therefore, it is time to revisit the old permits and revoke the unused allocations so that new demand may be met.

Accordingly, the Commission staff requests that water use permits in the Waialua Ground Water Management Area which show four (4) or more years of continuous non-use and/or voluntary cancellation should be modified and/or revoked. The purpose of this action is to bring allocations a) below the current estimated sustainable yield of 25 mgd; and b) make water available for requested new allocations.

The Honolulu Board of Water Supply (BWS) is requesting additional ground water from the Waialua GWMA, but this request may not be addressed until unused allocations are revoked and the total allocations reduced below 25 mgd.

This submittal requests that the Commission approve a **Total Revocation of 21.651 mgd** (see Tables 1 & 2).

LOCATION MAP: See Exhibit 1 – Current Waialua GWMA

BACKGROUND:**a. Current Necessity**

On August 28, 2008, the Commission adopted the updated Water Resource Protection Plan which revised the sustainable yield for ground water aquifers throughout the state. Specifically, the Waialua Aquifer System Area (Waialua ASA) sustainable yield was reduced from 40 mgd to 25 mgd. The Waialua ASA was first designated in 1981. The current ground water use permit allocations total 30.887 mgd. This creates an over-allocation of 5.887 mgd (see Exhibit 2).

On October 5, 2010, the BWS submitted a ground water use permit application (GWUPA) for 0.270 mgd from the “Waialua Wells” (Well Nos. 3405-01 & 02, Waialua GWMA). Although reporting is limited, the current 12-month moving average (12-MAV) for actual pumpage is about 6 mgd. The existing allocations exceed the sustainable yield so there is no available water to meet new applications. If unused portions of existing allocations are not revoked or other modifications to existing uses are not made, then new requests must be denied. The BWS waived the normal 90-day processing for their GWUP application in order for these revocations to be made.

The minimum amount that needs to be evoked to accommodate the BWS is 6.157 mgd. In light of the recent statewide 20-year water use permit review and the carry-over of pre-1987 ground water permits from the Board of Land and Natural Resources, it is appropriate to review all permits in the

Waiialua GWMA for a comprehensive update.

The staff did initial fact-finding and field investigations. Letters were sent on August 1, 2011 and August 9, 2011 to all ground water use permittees with wells in the Waiialua Aquifer System area. The staff requested missing information on water use and the permittees' intentions for future use.

b. History

Prior to the Water Code, Haw. Rev. Stat. Chap 174C (1987), the Board of Land and Natural Resources (BLNR) governed ground water management areas under Haw. Rev. Stat. Chap. 177 (replaced 1987). In 1981, the BLNR designated the Waiialua Ground Water Control Area (GWCA). The BLNR made allocations to existing users which for Waiialua Sugar in 1981 totaled nearly 40 mgd. The sustainable yield then was 60 mgd for the area from Mokuleia to Kawailoa (see Exhibit 3).

Following the adoption of the Water Code (1987), improved understanding of aquifer boundaries, types, and sustainable yield modeling led to a new set of hydrologic units, aquifer system areas and sustainable yields. In 1990, the Commission adopted the Waiialua, Mokuleia, and Kawailoa aquifer system areas (ASA) in the Water Resource Protection Plan. The smaller Waiialua ASA retained 40 mgd of the former 60 mgd sustainable yield for the larger Waiialua GWCA. For comparison, Exhibit 4 shows the current boundaries and sustainable yield of the Waiialua GWMA.

In 1993, new ground water use applications required a reduction of allocations in the Waiialua GWMA. Waiialua Sugar voluntarily cutback about 1.5 mgd in June 1993 to make water available for Poamoho Ventures (WUP 175, Well 3205-02). By 1996, the plantation closed operations. In September, 2002 the mill closed. The "Mill Pumps" and "Pump 10" were sealed further reducing pumping by 10.65 mgd. This reduced the then existing allocation in the Waiialua GWMA to approximately 30 mgd. (see Exhibit 5). Although ownership of the Waiialua Sugar production wells changed, the Commission was not notified. The ground water use permits were not transferred as required under Haw. Rev. Stat. 174C-56. Most of those allocations have remained unused. The new well owners have some continuing use.

The Commission reviewed and adopted sustainable yield figures most recently in the 2008 Water Resource Protection Plan. Updated recharge data, loss of return irrigation flow, loss of Wahiawa "spillover," and additional modeling efforts to identify a range of reasonable sustainable yield estimates led to a revised downward calculation of 25 mgd for the Waiialua GWMA.

Existing ground water use permit allocations exceed the 25 mgd sustainable yield. Revocation of unused allocations is required; 1) to bring the total allocations within the sustainable yield; and 2) to accommodate new applications from this aquifer. Exhibit 6 graphically summarizes these sustainable yields vs. allocation history for the entire Waiialua ASA.

When BWS submitted its Ground Water Use Permit Applications for the Waiialua Well batteries, the staff began to review the overall Waiialua GWMA situation to resolve the over-allocation issue. The recent 20-year Water Use Permit Review raised a number of gaps and inconsistencies suggesting further field investigations and contacts with existing permittees were necessary. The 20-year review highlighted outdated information about use and non-use. Staff made initial inquiries to major existing permit holders. Waiialua Sugar wells were transferred primarily to Dole Food Company. A few wells went to Kamehameha Schools and individual owners. Dole Foods assumed ownership of productive

wells with a total allocation of about 22.9 mgd, yet the water use permits have never been officially transferred to them. Dole has been delinquent in reporting its use as required by the Commission’s Hawaii Administrative Rule, section 13-168-7. Dole agreed to prepare new water use permit applications to forecast ongoing and new uses. After one year, Dole finally submitted its new ground water use applications. Based upon the new use applications, staff recommends revoking those unused balances identified by Dole.

REVOCAION DISCUSSION

a. Summary

The Commission adopted 25 mgd as the sustainable yield for the Waialua Aquifer System Area. After investigation and consultation with the various permittees (where possible), the staff proposes to proceed with revoking unused allocations.

Given actual reported use plus anticipated restoration of agriculture through this area, the total continuing allocations appear to be approximately 9.308 mgd. Table 1 summarizes the current ground water available in the aquifer area.

Table 1. Waialua Aquifer System Area

<u>ITEM</u>	Waialua Aquifer System Area (mgd)
Sustainable Yield	25
Existing Ground Water Use Allocations	30.887
Less: Recommended continued allocations (Existing Reported Water Use = 5.027 (shown in Table 2) Reservation to DHHL	9.308 0
Total Recommended Allocation Cutback/Revocations	21.651
Sustainable Yield less continued allocations (25.000 – 9.308) (Amount Made Available with this recommendation)	15.692

Details supporting Table 1 are described below and further summarized in Table 2 and Exhibit 7. **Current User Status Details** (in chronological/numerical order of approval):

1. **GWUP 035 (Well Nos. 3307-01 to -10, Pump 2).** 4.370 mgd to Waialua Sugar for cane irrigation. Ownership of this gallery of 10 wells was transferred to Dole Foods, but the water use permit was not transferred. Dole Foods’ initial response in May 2011 indicated minimal use of these wells, approximately 0.290 mgd (7% of allocation). An incomplete December 30, 2011 application for a new ground water use permit included metered pumpage between January to August 2010, slightly less than the earlier figures (average = 0.262 mgd). It is over a year old. Dole’s applications do not include irrigation map boundary footprints.

Recommendation: Modify GWUP 035 to an allocation of 0.262 mgd.

Revoke 4.180 mgd. Require irrigation footprint of service area.

2. GWUP 036 (Well Nos. 3307-07 and -11 to 14, Pump 2A). 4.450 mgd to Waiialua Sugar - 3.586 mgd irrigation plus 0.864 mgd drinking water. Ownership of this gallery of five wells was transferred to Dole Foods without the transfer of the ground water use permit. Dole refurbished the wells for standby use. A December 30, 2011 transmittal indicated there are no current plans for using this well including the drinking water portion. Some, if not all, of the drinking water demands under this GWUP are now met through BWS sources.

Recommendation: Revoke GWUP 036 entirely.

3. GWUP 039 (Well No. 3404-01, Pump 17). 8.630 mgd to Waiialua Sugar for cane irrigation. The ownership was transferred to Dole Foods without the transfer of the ground water use permit. A December 30, 2011 transmittal indicated there are no current plans for using this well.

Recommendation: Revoke GWUP 039 entirely.

4. GWUP 040 (Well Nos. 3405-01 & 02, Waiialua Wells) 1.730 mgd to the Honolulu Board of Water Supply for municipal drinking uses. Pumping from this pair of wells exceeds its water permit allocation by 0.160 mgd (9%). BWS filed an application to increase the allocation by 0.270 (16%), for a new total of 2.000 mgd. This would allow for additional growth in municipal service within the near future.

Recommendation: Approve increase to 2.000 mgd when water is available.

5. GWUP 041 (Well Nos. 3405-03 & 04, Haleiwa Wells). 1.000 mgd to the Honolulu Board of Water Supply for municipal drinking uses. The 12-MAV pumpage in December 2011 for this pair of wells exceeded the BWS allocation by 0.04 mgd (4%).

Recommendation: Maintain existing WUP 041 at 1.000 mgd.

6. GWUP 043 (Well No. 3406-03, Kawamata Well) 0.100 mgd to Kengo Kawamata for irrigation. The property is held by Kengo's son and wife, and a cousin and wife, but the permit has not been transferred. The property will be sold so there will be a new owner.

Staff received a letter dated January 18, 2011 voluntarily cancelling their water use permit.

7. GWUP 044 (Well Nos. 3406-06 and 3407-02, "Kunihiro Wells"), a name given to two wells, one owned by Hannah Gilman Trust (Well No. 3406-06), the other by the Theo J. P. Lopez Trust (Well No. 3407-02) with a GWUPA of 0.200 mgd to Shizuo Kunihiro for both wells for irrigation. Use of Well No. 3407-02 under this GWUP has been superseded by GWUP 263 (see below) and GWUP 044 should have been revoked entirely back on October 13, 1993. Therefore, this is the official follow-up to do so now. Well No. 3406-06 has been lost to overgrowth. It was drilled in 1957 by Hawaiian Drilling, 100 ft deep from a ground elevation of less than 10 feet, with an 8-inch casing and an original artesian head (+11 ft. msl) higher than the ground elevation. Both wells originally were under artesian pressure above the ground surface and are believed to continue to flow freely under artesian pressure. These need to be sealed or modified to avoid waste. If future use is anticipated, the wellheads should be modified, then capped and locked, to avoid waste pending future use supported by a new GWUPA from the Gilman Trust well owners. Future use would be conditioned upon metering and reporting.

Recommendation: Revoke GWUP 044, for Well No. 3406-06. Recover available 0.200 mgd as anticipated in the October 13, 1993 approval of WUP 263;

Require locating and either sealing or valving, capping, and locking the well.

8. GWUP 046 (Well Nos. 3407-04 to -06, -14 & -15; Pump 1) 2.330 mgd to Waialua Sugar for irrigation. Ownership of this gallery of five wells was transferred to Dole Foods, but the water use permit was not transferred. Dole reported early in this process a 12-month moving average use of 0.622 mgd. An incomplete December 30, 2011 application for a new ground water use permit included some current metered figures, increased to a single year 12-month moving average of 1.047 mgd. Dole's applications do not include irrigation footprints.

Recommendation: Modify WUP 046 to 1.047 mgd. Revoke 1.283 mgd. Require current footprint areas serviced by this source.

9. GWUP 048 & 136 (Well Nos. 3407-18 & 19; -11 & 12 Pump 7 D&E, Pump 7 B&C) 0.180 mgd and 2.930 mgd, respectively, to Waialua Sugar for irrigation. Ownership of all four wells under these two water use permits are now under Dole Foods, but the water use permits were not transferred. Total current use for all four wells and two water use permits was reported early in this process to be 0.193 mgd. An incomplete December 30, 2011 application for a new ground water use permit included some current metered figures for all four pumps, two water permits, in a lump sum, increased to a single year annualized average of 0.361 mgd. Dole's applications do not include irrigation footprints.

Recommendation: Revoke WUP 048 by 0.180 mgd. Modify GWUP 136 to 0.361 mgd to Dole for diversified agriculture. Revoke 2.569 mgd. Require current footprint areas serviced by this source.

10. GWUP 175 (Well No. 3205-02, Poamoho Well A) 0.600 mgd to Poamoho Venture, LP for 150 acres of agricultural irrigation since 1993. Water use reporting shows a maximum 12 month moving average of about 0.092 mgd (15.3% of allocation) over the past 4 years. Communications from the owners indicate changing conditions have prevented the full use of the approved allocation, but that efforts continue and full use is anticipated. The 20-year review and recent staff field investigations verified substantial investments in a first-class facility have been made for full build out of this agricultural project. The owners also have access to surface water from the Wahiawa Reservoir Ditch, which is a significant alternative to using potable ground water for crops that do not require potable water. Some of the lot owners are using this water. The owners intend to offer potable water from the well to other farmers in the vicinity who need it for certain food crops, and to encourage tenants within their service area who do not need potable water to use ditch water.

Recommendation: Maintain WUP 175 at 0.600 mgd; additional plans on the alternative use options needs to be submitted as well as periodic updates of the respective end use footprints.

11. GWUP 263 (Well No. 3407-02, Lopez Well 2). 0.200 mgd to the Native Hawaiian Advisory Council (NHAC) for domestic and emergency potable uses and for aquaculture (prawn) and irrigation of 4.5 ac watercress, taro, ong choy, hasu, etc irrigation. This well was formerly covered by WUP 044 but later changed to this subsequent permit back on October 13 1993 at the request of NHAC. The well continues to be owned by the Lopez Family Trust. For clarification we are referring to this well as Lopez Well 2. NHAC is no longer in operation. The 20-year review and a field investigation by staff on November 25, 2011 verified the family continues to use it for fishponds and kalo. The artesian source has several historic measurements showing a flow of 100 gpm (0.144 mgd) as of 1983. Also, it does not have a flow meter as required under the October 13, 1993 permit approval. Estimated reported use for 2011 averages to 0.007 mgd (3.5% of their allocation).

Recommendation: Modify WUP 263 to 0.144 mgd. Revoke 0.056 mgd.
Transfer to Theo J Lopez Trust.

12. GWUP 353 (Well No. 3406-16, Lopez Well 1) 0.072 mgd to A.J. Lopez Sons, Inc. for irrigation. The GWUPA allows a 300 gpm pump to operate 4 hours a day, which translates into the 0.072 allocation. During the 20-year review, it was discovered that the property had been sold to Mr. Richard Sterman, but the 20-year review did not perform a field investigation. The water use permit was never officially transferred. Staff verified that the well ownership was actually sold to Kaala View LLC, c/o Mr. Richard Sterman and recently followed up with a field investigation on December 14, 2011. The well was overgrown with vegetation but flowed freely through a culvert into an irrigation drainage ditch that empties into Paukauila Stream about 1,000 feet from the mouth of Kaiaka Bay. Mr. Sterman stated the well or the ditch water over the 13 acre parcel is not pumped or used, but at least one other neighbor does take water from the common drainage ditch downstream. There are several drainage ditches like this in the area that appear to expose the water table. Mr. Sterman stated the intention to use the well productively in the future, but plans are still being developed. In the meantime, the well needs to be maintained and artesian flow needs to be controlled.

Recommendation: Maintain WUP 353 at 0.072 mgd; written transfer for GWUP needs to be requested by Kaala View, LLC c/o Mr. Sterman. Wellhead modifications are needed to valve flow to eliminate waste, a meter must be installed, and water use reporting must begin.

13. GWUP 455 (Well No. 3506-10, BG Farm Well) 0.003 to BG Farm for irrigation. The owner responded to our letter, indicating that the allocation had not been used in years, with no plans to use it. Moreover, the 20 year review shows that the source is a spring and pond, not a well, flowing in to the adjacent stream.

Staff received a letter dated January 20, 2011, voluntarily cancelling the water use permit, and announcing the removal of the pump from the pond.

14. GWUP 643 (Well No. 3407-38, Paradise Production Well) 0.576 mgd of brackish water to Paradise Shrimp Farm for aquaculture. Recently, the permittee filed an application to deepen the well because the current water quality is brackish rather than salt (for which GWUPA was originally approved). It is not yet clear whether the existing well can be easily modified or if a new well will be drilled and the existing well sealed. The objective is to develop salt water rather than brackish ground water. If a new well is constructed, the salt water use permit would be transferred administratively to it under DEC-ADM97-A1, which allows such modification without a new application. A properly constructed salt water well should not affect the sustainable yield. The GWUPA to clarify this switchover to salt water is not yet complete.

Recommendation: Maintain WUP 643 at 0.576 mgd as it currently uses brackish water.

The permittee is acting to remedy the violation since the GWUP is restricted to salt water only. The incomplete application should be finished within three months.

15. GWUP 732 (Well No. 3406-02, Pump 9) 0.160 mgd to Michael Jewett and Megan Ward for diversified agriculture irrigation. This well and the water use permit were transferred from Waialua Sugar to the new owner. The 20-year review established that the pumping equipment was rusted and non-functional, although the owner intended to refurbish it. Staff recently revisited the site. The well is back in service with a flow meter intended for full use. No water use reports have yet been received. Little use is currently being made.

Recommendation: Maintain WUP 732 at 0.160 mgd.

16. GWUP 894 (Well Nos. 3505-01 to -20, Pump 3 Battery "Opauala") 1.552 mgd to Kamehameha Schools (KS) for agricultural irrigation served by 20 wells. The original GWUP 137 approved by the BLNR and reviewed in 1993 by the Commission was transferred to KS in 2010. KS responded that the allocation is not in full use now, but they plan to make full use of the allocation. KS made a presentation to staff and later to the Commission during the December 12, 2011 briefing. KS stated it had made a substantial (more than \$10M) investment in infrastructure upgrades. This includes drilling new access wells to the sump gallery, piping and valving to bring well controls to the surface, and pipe replacements for ditch distribution lines to extensive agricultural holdings. These holdings will be served both by high quality ground water and by surface water once used by Waialua Sugar. A recent Assessment of the Wahiawa Irrigation System, which serves the Waialua area, corroborates KS's upgrades on its lands, including the removal of the Opauala siphon and installation of piping across their holdings at a lower elevation.

Recommendation: Maintain WUP 894 at 1.552 mgd.

17. GWUP 895 (Well Nos. 3506-03 & 04, Pump 8A-B) 1.660 mgd to Kamehameha Schools for agricultural irrigation served by two wells. The original GWUP 054 approved by the BLNR and reviewed in 1993 by the Commission was transferred to KS in 2010. KS responded that the allocation is not in full use now, but they have plans to make full use of the allocation, same as noted for Pump 3 (GWUP 894). The recent presentation to staff noted plans to refurbish these wells similar to Pump 3. This includes drilling new access to the sump gallery, piping and valving to bring well controls to the surface.

Recommendation: Maintain WUP 895 at 1.660 mgd.

18. GWUP 898 (Well No. 3406-08, Gora Well) 0.144 mgd for aquaculture and irrigation. The ground water use permit was transferred to the current holder from her deceased husband, but a family dispute over the well and property was resolved by changing ownership of the existing well and end use area to a different member of the family. This well continues to be used but has not been reporting use. Staff has requested a written response from the new owner to affirm continued use of the GWUP.

Recommendation: Maintain WUP 898 at 0.144 mgd. Administratively transfer to new owner Mr. Michael Aki.

Table 2: Recommended water use permit allocations (mgd)

GWUP Well No	Well Name	Well Owner	WUP Alloc.	4-Year Use*	Recommendation	
035	3307-01 to -10	Pump 2	Dole Foods	4.370	0.262	0.262 -4.180
036	3307-07 to -14	Pump 2A	Dole Foods	3.586 0.864	0.000	0.000 -4.450
039	3404-01	Pump 17	Dole Foods	8.630	0.000	0.000 -8.630
040	3405-1&2	Waialua	HBWS	1.730	2.125	1.730
041	3405-3&4	Haleiwa	HBWS	1.000	0.679	1.000
043	3406-03	Kawamata	S. Kawamata	0.100	0.000 written cancellation	0.000 -0.100
044	3406-06	"Kunihiro" (Gilman)	Gilman Trust	0.200	unknown	0.000 -0.200
046	3407-4, 5, 6; -14&15	Pump 1	Dole Foods	2.330	1.047	1.047 -1.283
048	3407-18 & -19	Pump 7D,E	Dole Foods	0.180	No report	0.000 -0.180
136	3407-11 & -12	Pump 7B,C	Dole Foods	2.930	0.361	0.361 -2.569
175	3205-02	Poamoho A	Poamoho Ventures	0.600	0.092	0.600
263	3407-02	"Kunihiro" (Lopez 2)	Theo Lopez Trust	0.200	0.007	0.144 0.056
353	3406-16	Lopez 1	Richard Serman	0.072	No report	0.072
455	3506-10	BG Farm	BG Farm	0.003	0.000 written cancellation	0.000 -0.003
643	3407-38	Paradise Production	Paradise Shrimp	0.576	No report	0.576
732	3406-02	Pump 9	Jewett & Ward	0.160	No report	0.160
894	3505-01 to -20	Pump 3	Kamehameha Schools	1.552	0.870 (7 mo)	1.552
895	3506-03 & 04	Pump 8 (A&B)	Kamehameha Schools	1.660	0.317 (7 mo)	1.660
898	3406-08	Gora	Mary Lou Gora	0.144	No report	0.144

(Totals:) 30.887 -6 **9.308**
 (Municipal total = 2.730)
 (Irrigation total = 6.578)
Revocation total = -21.651

* 4-year use is the reported maximum 12-month moving average in the past 4 years.

RECOMMENDATION:

Staff recommends:

1. That the Commission revoke portions of existing ground water use permits in the Waialua Ground Water Management Area as set forth above and in Table 2. Total revocations are 21.651 mgd (as shown in Table 2).

2. Special conditions and orders are recommended for ground water use permits (GWUPs) being partially or completely revoked, or allowed to continue under this revocation review as follows:

GWUP 035 (3307-01 to 10, Pump 2). Revoke **4.180 mgd** of the original 4.370 mgd. Continue use of **0.262 mgd** for agricultural irrigation to be issued under GWUP 942. Require a current end use footprint map be submitted.

GWUP 036 (3307-07 & -11 to 14, Pump 2A). Total revocation of **4.450 mgd**. **Submit** plans within 6 months either for maintaining or sealing the wells.

GWUP 039 (3404-01, Pump 17). Total revocation of **8.630 mgd**; plans shall be submitted within 6 months either for maintaining or sealing the well.

GWUP 043 (3406-03, Kawamata Well). **0.100 mgd** is voluntarily cancelled by consent letter dated January 18, 2011, which is an administrative action that normally does not require a hearing but is brought up as part of this comprehensive at the Waialua GWMA revocation review.

GWUP 044 (3406-06, Gilman Trust Well). Total revocation of **0.200 mgd**;

1. Lost well shall be located
2. If the well is to be retained for future use, the wellhead must be valved and kept capped and locked.
3. If the well is not to be retained, it shall be sealed six months from the date of this meeting.

GWUP 046 (3407-04 to 06, 14 & 15, Pump 1). Revoke **1.283 mgd** of the original 2.330 mgd, continuing use of **1.047 mgd** for agricultural irrigation to be issued under a GWUP 943 and requiring a current end use footprint map.

GWUP 048 (3407-18 & 19, Pump 7 D&E). Total revocation of **0.180 mgd**; plans shall be submitted within 6 months either for maintaining or sealing the wells.

GWUP 136 (3407-11 & 12, Pump 7 B&C). Revoke **2.569 mgd** of original 2.930 mgd. Continue use of **0.361 mgd** for agricultural irrigation to be issued under GWUP 944. Require a current end use footprint map.

GWUP 175 (3205-02, Poamoho Well A) continue **0.600 mgd** for irrigation:

1. As use increases, reflected in periodic increases reported to the Commission, a new footprint of the end use area shall be filed for the record.
2. Use of Wahiawa Reservoir Ditch water shall be support by a periodically submitted end use footprint map.

GWUP 263 (3407-02, "Lopez Well 2"). Revoke 0.056 mgd of original 0.200 mgd. Continue use of 0.144 mgd for agricultural irrigation to be issued under GWUP 950. Require a current end use footprint map. A flow meter must be installed and water use reported starting within 6 months. Following six months' reporting, the amount of use will be reviewed for possible modification of the water use permit.

GWUP 353 (3406-16, Lopez Well 1). Continue 0.072 mgd for diversified agriculture irrigation, subject to revocation in 90-days, unless:

1. The well is cleared of overgrown vegetation and maintained.
2. A well construction permit to modify the well to control flow and install a flow meter is submitted.
3. A footprint map of the end use area for GWUP 353 is filed for the record.
4. Monthly flow from the well commences on an annual basis.

GWUP 455 (3506-10, BG Farm Well). 0.003 mgd is voluntarily cancelled by consent letter dated January 20, 2012, which is an administrative action that normally does not require a hearing but is brought up as part of this comprehensive at the Waialua GWMA revocation review.

GWUP 643 (3407-38, Paradise Production). Continue 0.576 mgd for agricultural irrigation. Application to modify existing well or construct new well and seal existing well to be completed in three months, subject to action on potential violation of water use permit conditions.

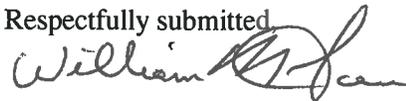
GWUP 732 (3406-02, Pump 9). Continue 0.160 mgd for diversified irrigation.

GWUP 894 (3505-01 to -20, Pump Battery 3 "Opauala"). Continue 1.552 mgd for agricultural irrigation.

GWUP 895 (3506-03, Pump 8). Continue 1.660 mgd for agricultural irrigation.

GWUP 898 (3406-08, Gora Well). Continue 0.144 mgd for agricultural irrigation. Reassign to the current owner of well and end use property (Aki) under a new GWUP number to be assigned administratively when the written transfer request is received from the new owner. If the written request for transfer is not received within 90 days, then GWUP 898 shall be revoked.

Respectfully submitted,



WILLIAM M. TAM
Deputy Director

- Exhibit(s):
- 1 (Location Map – Current Waialua Ground Water Management Area)
 - 2 (Current GWUP Allocations in Wailua GWMA)
 - 3 (Original 1981 Waialua Ground Water Control Area)
 - 4 (Current 2012 Waialua Ground Water Management Area)
 - 5 (Tabular History of GWUP Allocations and Changing SY Limits)
 - 6 (Graphical History of GWUP Allocations and Changing SY Limits)
 - 7 (Graphical Water Use History Current Permittees in WGWMA)

APPROVED FOR SUBMITTAL:



WILLIAM J. AILA, JR., Chairperson

Aquifer System Water Use Permit Index *(non-salt-caprock-dike)*

ISLAND OF OAHU

WUP No.	Approved	Permittee	Well No.	Well Name	WUP (mgd)	12-MAV (mgd)
WMA Aquifer System: WAIALUA					Sustainable Yield = 25	
035	6/2/1993	WAIALUA SUGAR [02]	3307-01	PUMP 2	4.370	0.262
	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]	3307-08	PUMP 2		
	6/2/1993	WAIALUA SUGAR [02]	3307-09	PUMP 2		
	6/2/1993	WAIALUA SUGAR [02]	3307-10	PUMP 2		
036	6/2/1993	WAIALUA SUGAR [02]	3307-07	PUMP 2A	3.586	0.0 NR
	6/2/1993	WAIALUA SUGAR [02]	3307-11	PUMP 2A	0.864	0.0 NR
	6/2/1993	WAIALUA SUGAR [02]	3307-12	PUMP 2A		
	6/2/1993	WAIALUA SUGAR [02]	3307-13	PUMP 2A		
	6/2/1993	WAIALUA SUGAR [02]	3307-14	PUMP 2A		
039	6/2/1993	WAIALUA SUGAR [02]	3404-01	PUMP 17	8.630	0.0 NR
040	9/11/1981	HONOLULU BWS	3405-01	WAIALUA	1.730	2.125
	9/11/1981	HONOLULU BWS	3405-02	WAIALUA		
041	9/11/1981	HONOLULU BWS	3405-03	HALEIWA	1.000	0.679
	9/11/1981	HONOLULU BWS	3405-04	HALEIWA		
043	9/11/1981	KAWAMATA, S.	3406-03	KAWAMATA, S.	0.100	0.0 NR
044	9/11/1981	KUNIHIRO, S.	3406-06	KUNIHIRO, S.	0.200	0.0 NR
	9/11/1981	KUNIHIRO, S.	3407-02	KUNIHIRO, S.		
046	6/2/1993	WAIALUA SUGAR [02]	3407-04	PUMP 1	2.330	1.047
	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		
048	6/2/1993	WAIALUA SUGAR [02]	3407-18	PUMP 7D	0.180	NR
	6/2/1993	WAIALUA SUGAR [02]	3407-19	PUMP 7E		
136	6/2/1993	WAIALUA SUGAR	3407-11	PUMP 7B	2.930	0.361
	6/2/1993	WAIALUA SUGAR	3407-12	PUMP 7C		
175	10/13/1993	POAMOHO VENTURE, L.P.	3205-02	POAMOHO A	0.600	0.092
263	10/13/1993	NHAC	3407-02	LOPEZ	0.200	NR
353	11/16/1994	A.J. LOPEZ SONS, INC.	3406-16	LOPEZ NO. 1	0.072	NR
455	12/18/1996	BG FARM	3506-10	BG FARM	0.003	0.0 NR

Thursday, January 26, 2012

Page 1 of 2

EXHIBIT 2

<i>WUP No.</i>	<i>Approved</i>	<i>Permittee</i>	<i>Well No.</i>	<i>Well Name</i>	<i>WUP (mgd)</i>	<i>12-MAV (mgd)</i>
643	7/16/2003	PARADISE SHRIMP FARM	3407-38	PARADISE PRODUCTION #1	0.576	NR
732	6/2/1993	MICHAEL JEWETT & MEGAN WARD	3406-02	PUMP 9	0.160	NR
894	6/2/1993	Kamehameha Schools	3505-01	Pump 3	1.552	NR
	6/2/1993	Kamehameha Schools	3505-02	Pump 3		
	6/2/1993	Kamehameha Schools	3505-03	Pump 3		
	6/2/1993	Kamehameha Schools	3505-04	Pump 3		
	6/2/1993	Kamehameha Schools	3505-05	Pump 3		
	6/2/1993	Kamehameha Schools	3505-06	Pump 3		
	6/2/1993	Kamehameha Schools	3505-07	Pump 3		
	6/2/1993	Kamehameha Schools	3505-08	Pump 3		
	6/2/1993	Kamehameha Schools	3505-09	Pump 3		
	6/2/1993	Kamehameha Schools	3505-10	Pump 3		
	6/2/1993	Kamehameha Schools	3505-11	Pump 3		
	6/2/1993	Kamehameha Schools	3505-12	Pump 3		
	6/2/1993	Kamehameha Schools	3505-13	Pump 3		
	6/2/1993	Kamehameha Schools	3505-14	Pump 3		
	6/2/1993	Kamehameha Schools	3505-15	Pump 3		
	6/2/1993	Kamehameha Schools	3505-16	Pump 3		
	6/2/1993	Kamehameha Schools	3505-17	Pump 3		
	6/2/1993	Kamehameha Schools	3505-18	Pump 3		
	6/2/1993	Kamehameha Schools	3505-19	Pump 3		
	6/2/1993	Kamehameha Schools	3505-20	Pump 3		
895	6/2/1993	B P Bishop Estate Trust	3506-03	Pump 8	1.660	NR
	6/2/1993	B P Bishop Estate Trust	3506-04	Pump 8		
898	9/11/1981	Mary Lou Gora	3406-08	Gora	0.144	NR
<i>Summary for 'SYSTEM' = WAIALUA (60 detail records)</i>						
Totaling 30.887						
Available -5.887						

WAIALUA GROUND WATER CONTROL AREA

2-27-81 BLNR

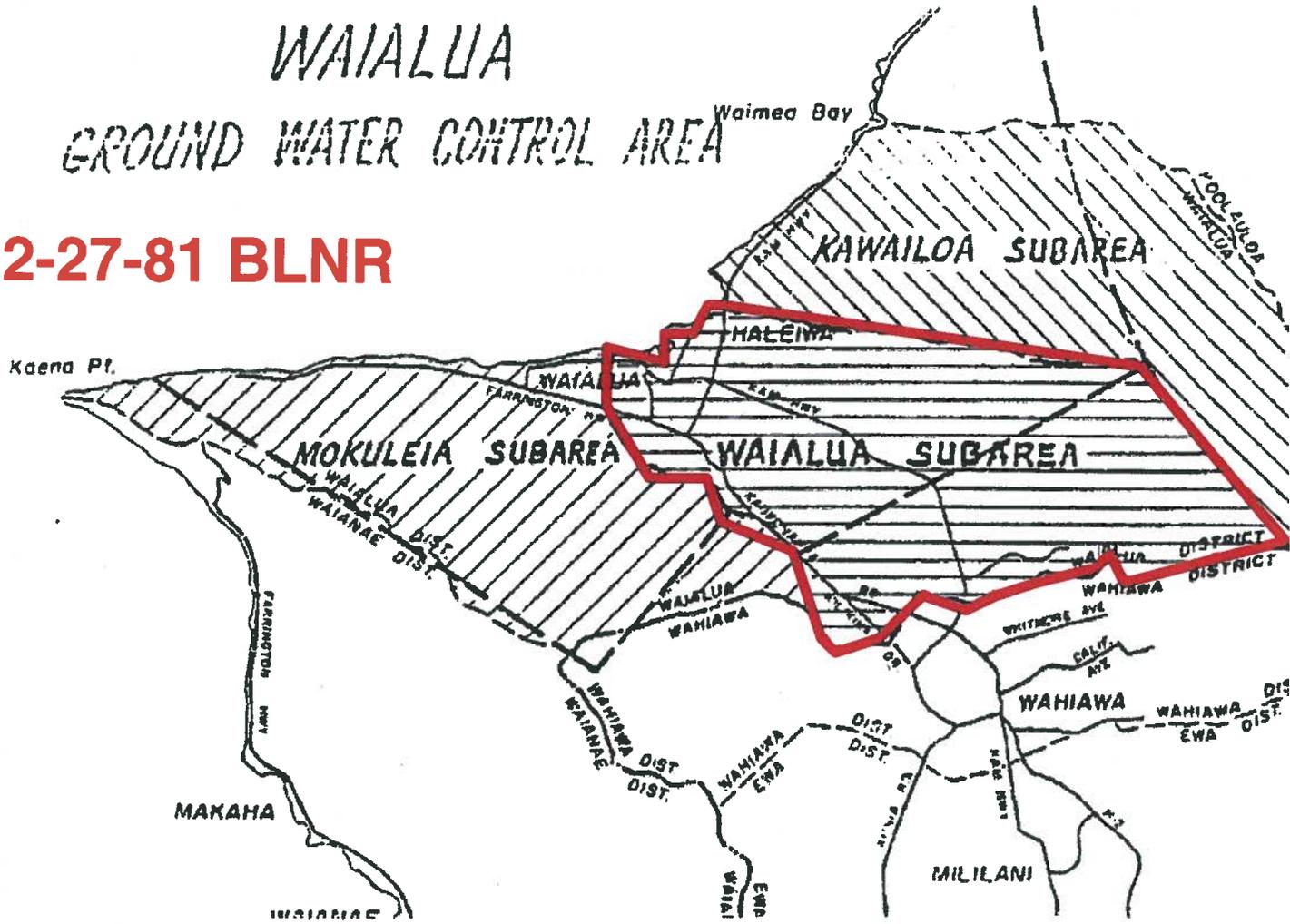


EXHIBIT 3

WaialuaAqWUP.table

Exhibit 2: Tabular History of **Water Use Permit Allocations** and **Changing SY Limits**

Waialua Aquifer System Area

for agriculture irrigation

for domestic use

use not defined

Approval dates and Quantities

WUP#	Well #	Well Name	9/11/81 ¹	WGWMA ²	proposed
			mgd	appr. date mgd	
035	3307-01 to -06 -08 to -10	"Pump 2"	4.37	6/2/93 4.37	0.2623
036	3307-07, -11 to -14	"Pump 2A"	3.586 0.864	6/2/93 3.586 0.864	0.000
039	3404-01	"Pump 17"	8.198 0.432	6/2/93 8.630	0.000
040	3405-01 & -02	"Waialua Wells"	1.73	6/2/93 1.730	1.730
041	3405-03 & -04	"Haleiwa Wells"	1.0	6/2/93 1.000	1.000
043	3406-03	Kawamata	0.1	6/2/93 0.100	0.000
044	3406-06 3407-02 ⁴	Kunihiro "	0.2	10/13/93 ³ 0.000 6/2/93 --	0.000
046	3407-04 to -06 -14, -15	"Pump 1"	2.33	6/2/93 2.330	1.047
047	3407-07 to 10, -16-17, 20-21	"Mill Pumps" ⁴	4.63	9/18/02 0.000	(sealed)
048	3407-18 & 19	"Pump 7D/E"	0.18	6/2/93 0.180	0.000
135	3306-01 to 12	"Pump 10" ⁴	6.02	9/18/02 0.000	(sealed)
136	3407-11 & 12	"Pump 7B/C" ⁵	3.75	6/2/93 ⁶ 2.930	0.361
175	3205-02	Poamoho A ⁶		10/13/93 0.600	0.600
263	3407-02	Lopez ³		10/13/93 0.200	0.144
353	3406-16	Lopez #1 ⁷		11/16/94 0.072	0.072
455	3506-10	BG Farm ⁸		12/18/96 0.003	0.000
643	3407-38	Paradise Production ⁹		7/16/03 0.576*	0.576
732	3406-02	"Pump 9" ¹⁰	0.16	6/2/93 0.160	0.160
894	3505-01 to -20	"Pump 3" ^{5,11}	3.052 0.108	6/2/93 ⁶ 1.552	1.552
895	3506-03 & 04	"Pump 8" ¹¹	1.66	6/2/93 1.660	1.660
898	3406-08	Gora ¹²	0.144	6/2/93 0.144	0.144
Totals			42.514	30.111*	9.308
SY (Waialua Aquifer System Area) (8/28/08)			60 (July 1981)	40 (3/17/93)	25

* Paradise Production is for salt water, not counted against SY

EXHIBIT 5

Notes:

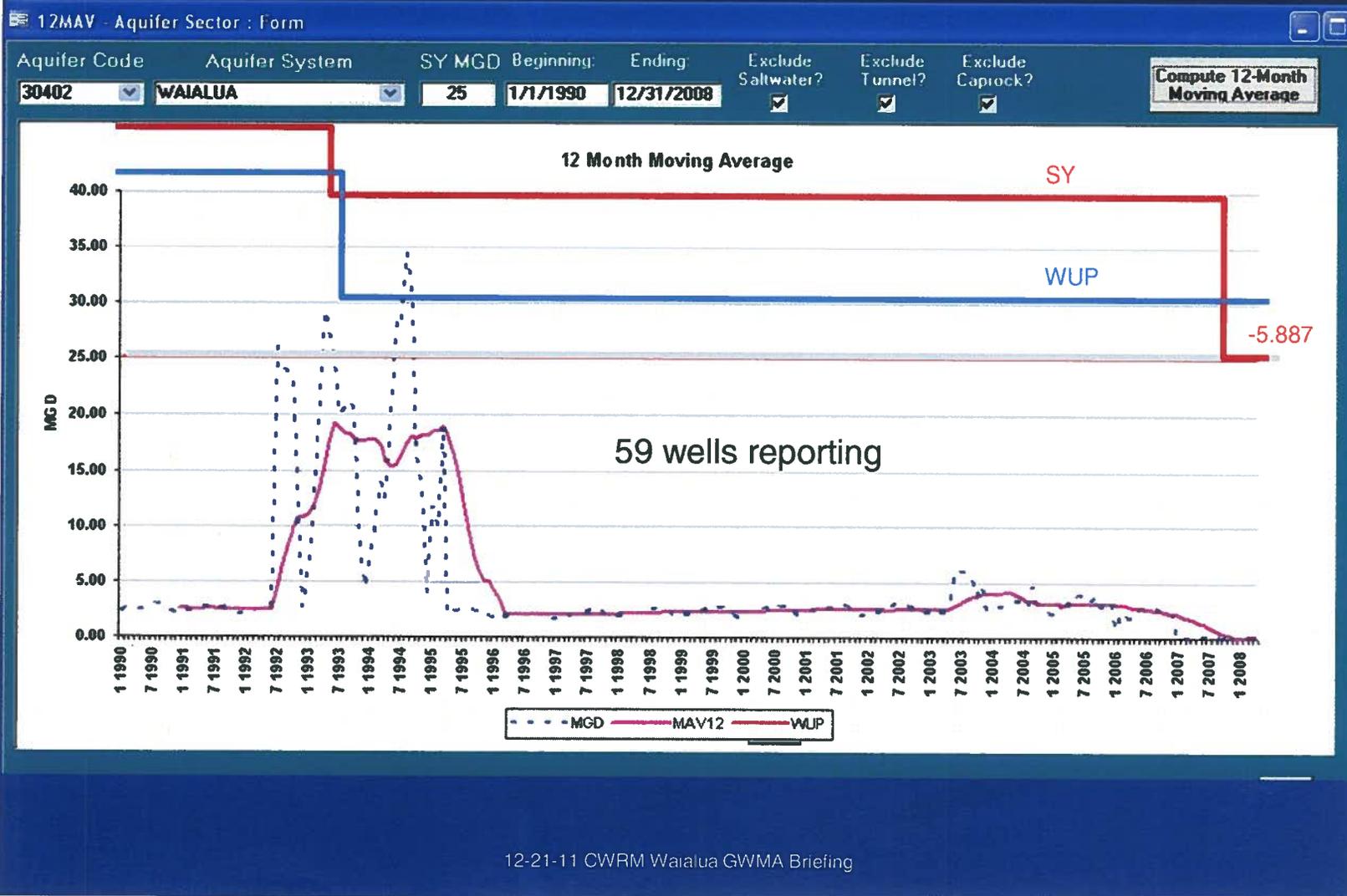
- 1 9/11/81 BLNR action under Waialua Ground Water Control Area (established 2/27/81): allocations preserved 5-year average historical use and were subject to special conditions, were not given water use permit numbers.
- 2 under the Water Code, continuing use is allowed under the Waialua Ground Water Management Area, and assigned permit numbers. New uses are based on the reasonable-beneficial test. Estimated sustainable yields assigned in 1990 Water Resource Protection Plan are depicted retroactively under column showing 1981 continuing allocations, showing an appropriate total allocation under existing conditions. (cont. next p.)
- 3 3407-02 ("Kunihiro Well") owned by Theodore J.P Lopez Trust, aka Lopez Sons, water used in 1981 on separate parcel by S. Kunihiro, original water use declarant. Following Kunihiro disuse, Lopez granted use to Native Hawaiian Advisory Council (NHAC); well name changed to "Lopez Well" to reflect owner. Property and well transferred to Richard Sterman, used by ___. Well name to be clarified as "Lopez Well #2". Kunihiro WUP 44 reduced to 0.000 by CWRM action 10/13/93.
- 4 3407-var ("Mill Pumps") WUP revoked by CWRM action 9/18/02; abandonment acknowledged 1/13/03
3306-01 to -12 ("Pump 10") " " " "
8/05/02
- 5 3407-11 & -12 ("Pump 7 B&C"), and 3505-01 to-20 ("Pump 3"), voluntarily cutback approved by CWRM 6/3/93
- 6 3205-02 (Poamoho Well A) drilled in September 1994; WCR1 not accepted as complete until 2/17/98; WCR2 complete 5/15/98
- 7 3406-16 (Lopez Well #1) apparently dug around 1935, not declared during official window. Registered 8/18/94 to enter system with water use permit.
- 8 3506-10 (BG Farm Well) registered 5/31/89
- 9 3407-38 (Paradise Shrimp Farm Production Well) drilled in November 2003
- 10 3406-02 ("Pump 9") property and water transferred 1/24/05 from Waialua Sugar to M. Jewett & M. Ward
- 11 3505-01 to -20 ("Opae'ula Pump 3") transferred 7/7/10 from Waialua Sugar to Kamehameha Schools
3506-03 & -04 ("Pump 8") " " " "
; both sets of wells were assigned new WUP Nos.
- 12 3406-08 (Gora Well) water use permit transferred to person no longer controlling well or end use; to be reassigned.

Initial allocations under the Waialua Ground Water Control Area of the Board of Land and Natural Resources were approved September 11, 1981. Following the creation of the Water Code and the Commission, the existing permits were continued and assigned permit numbers which would change with each new use, owner, or change of allocation. The first Water Resource Protection Plan was approved by the Commission in 1990, setting the estimated sustainable yields.

Commission action on June 2, 1993 reflected the need to reduce overall pumpage (42.514 mgd) from the area defined as the Waialua Ground Water Management Area and assigned a lower sustainable yield (40 mgd). Voluntary cutbacks were offered by Waialua Sugar and accepted by the Commission, affecting three sets of wells, one of which ("Pump 10") was subsequently abandoned and sealed.

The 2008 review of sustainable yields for the revised Water Resource Protection Plan resulted in a still lower sustainable yield estimated for the Waialua Aquifer System (25 mgd). Although this timing followed the closing of sugar production and consequent drop in ground water withdrawals, the 20-year review of all water use permits during this same period suggested strongly that all users should be addressed simultaneously, rather than simply seeking voluntary cutbacks. The trigger for this action is the current proposal by the Honolulu Board of Water Supply to increase pumpage at Well Nos. 3405-01 & 02 ("Waialua Wells") against allocations still in effect, in excess of the adopted sustainable yield.

Waialua Ground Water Pumpage



Graphical representation of timeline for WGWMA changes in sustainable yield and allocations.

EXHIBIT 6

Summary

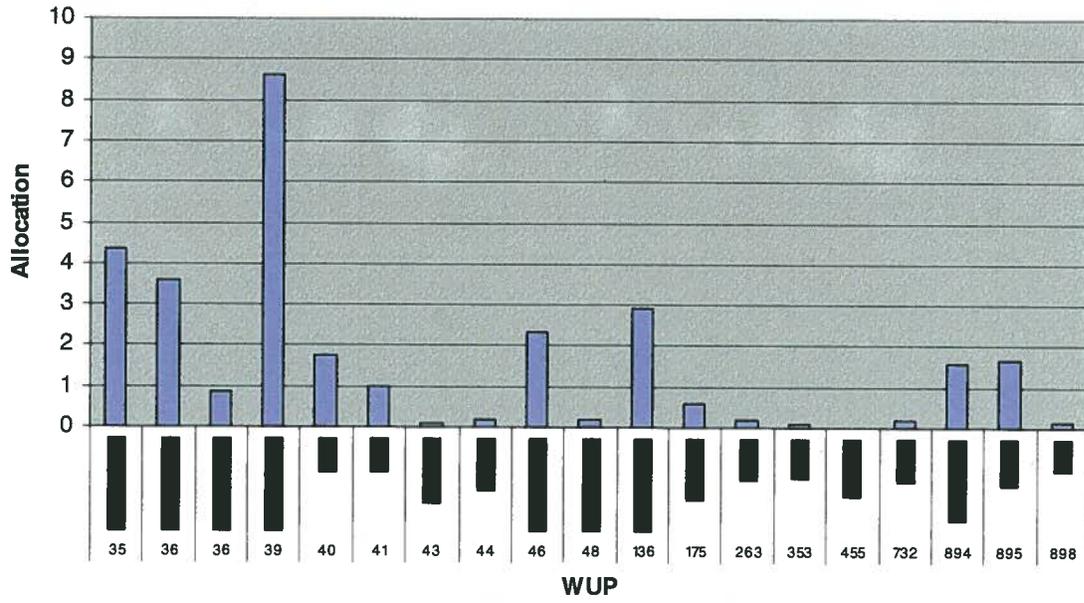


Exhibit 7

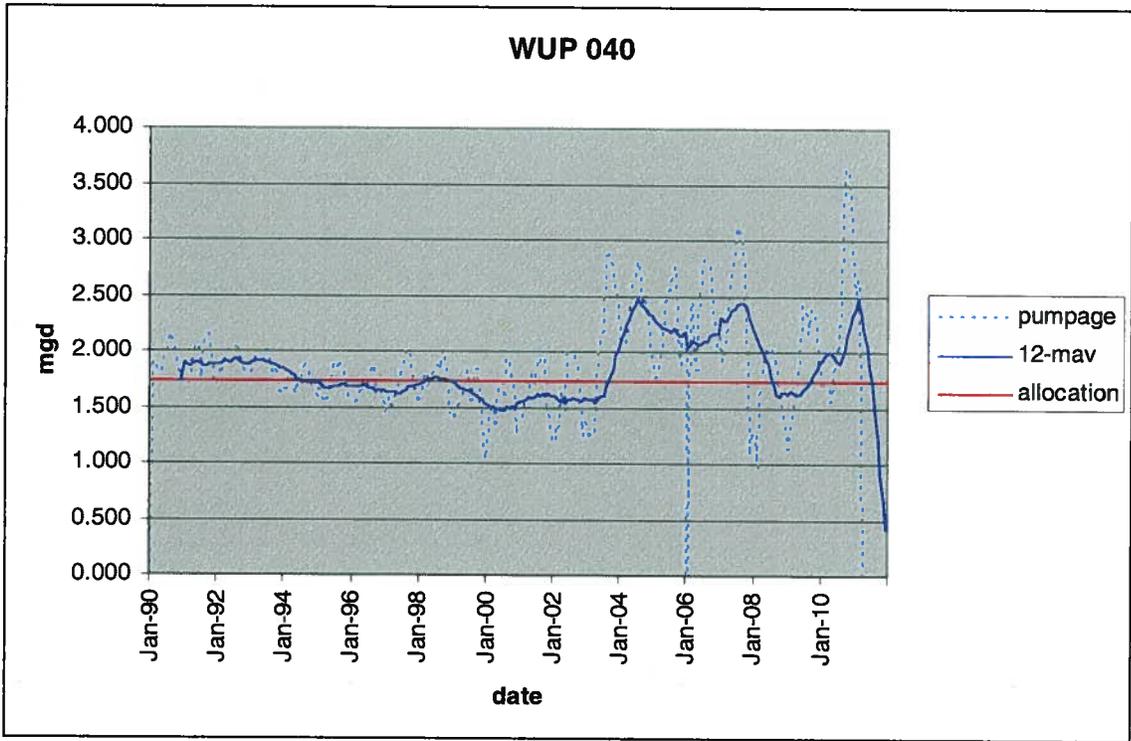
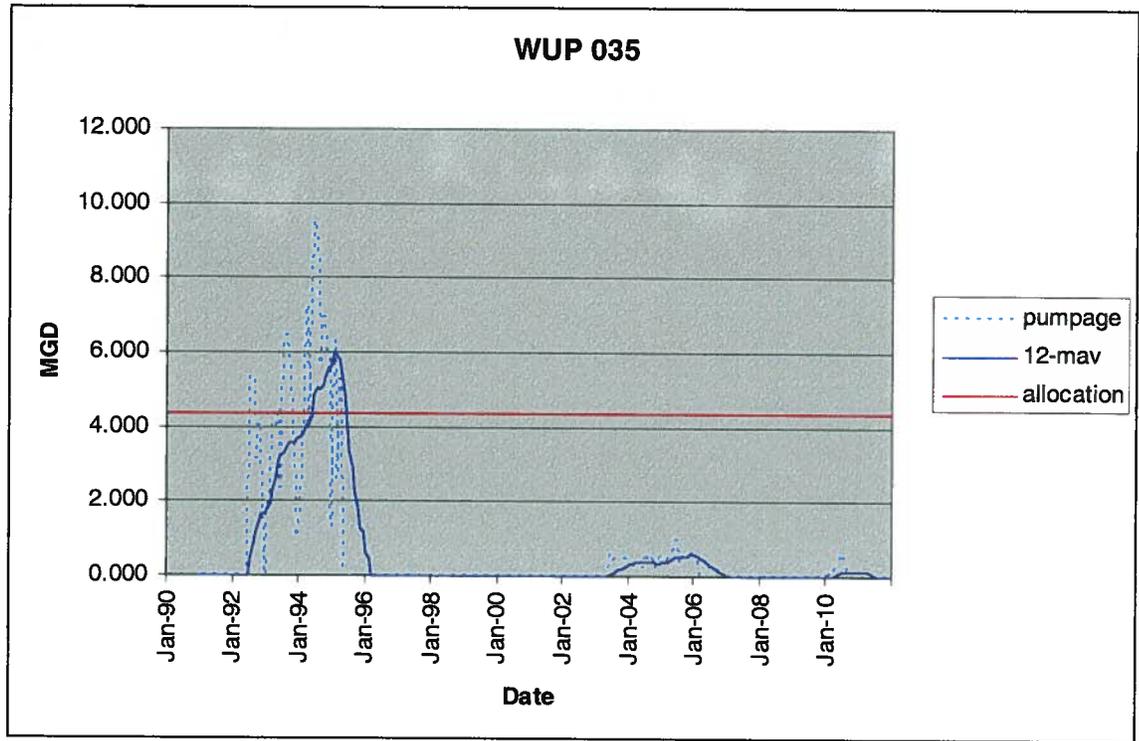


Exhibit 7

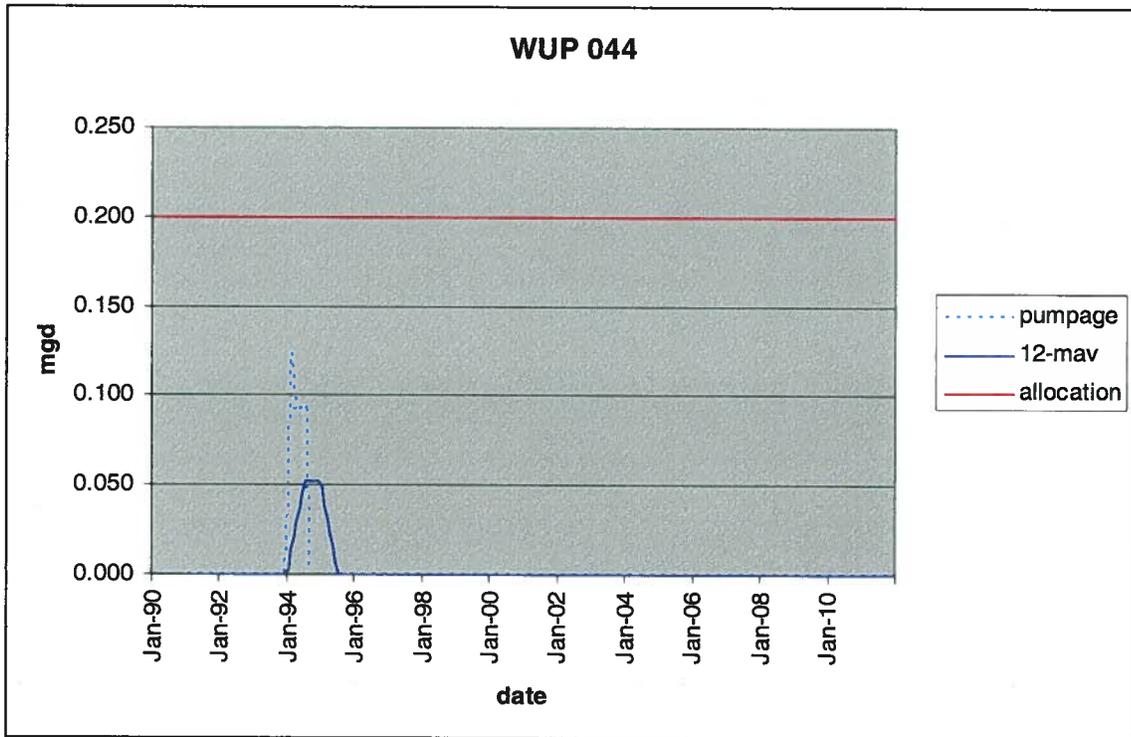
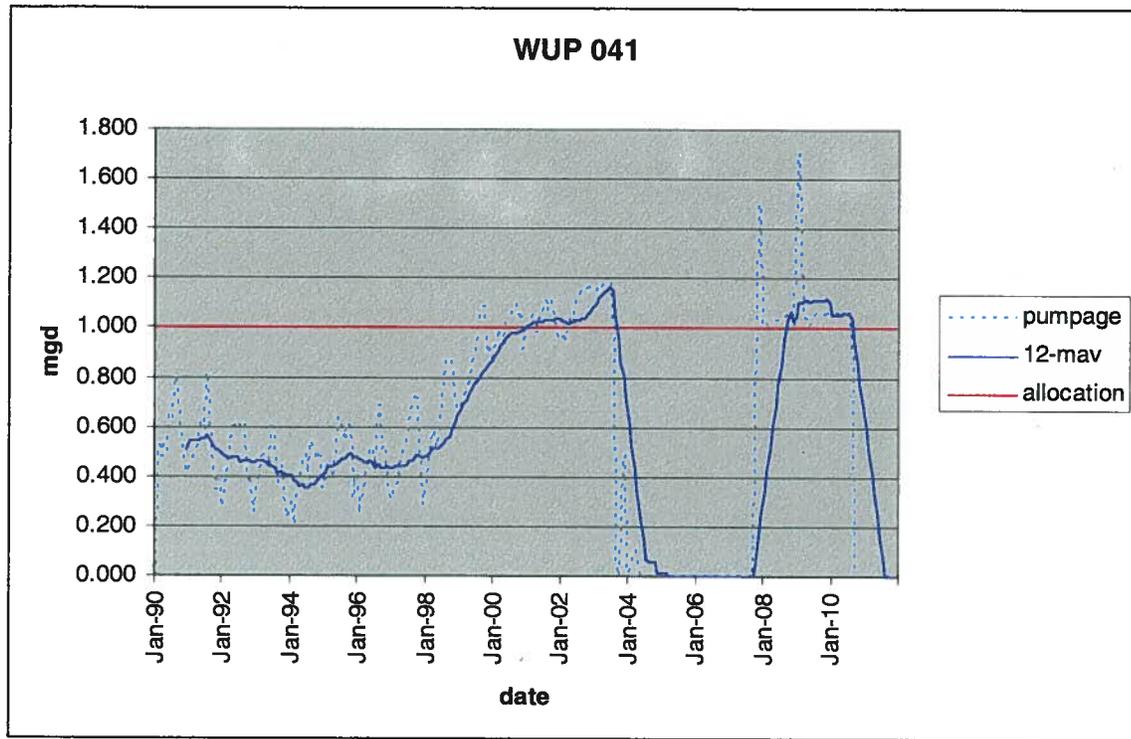


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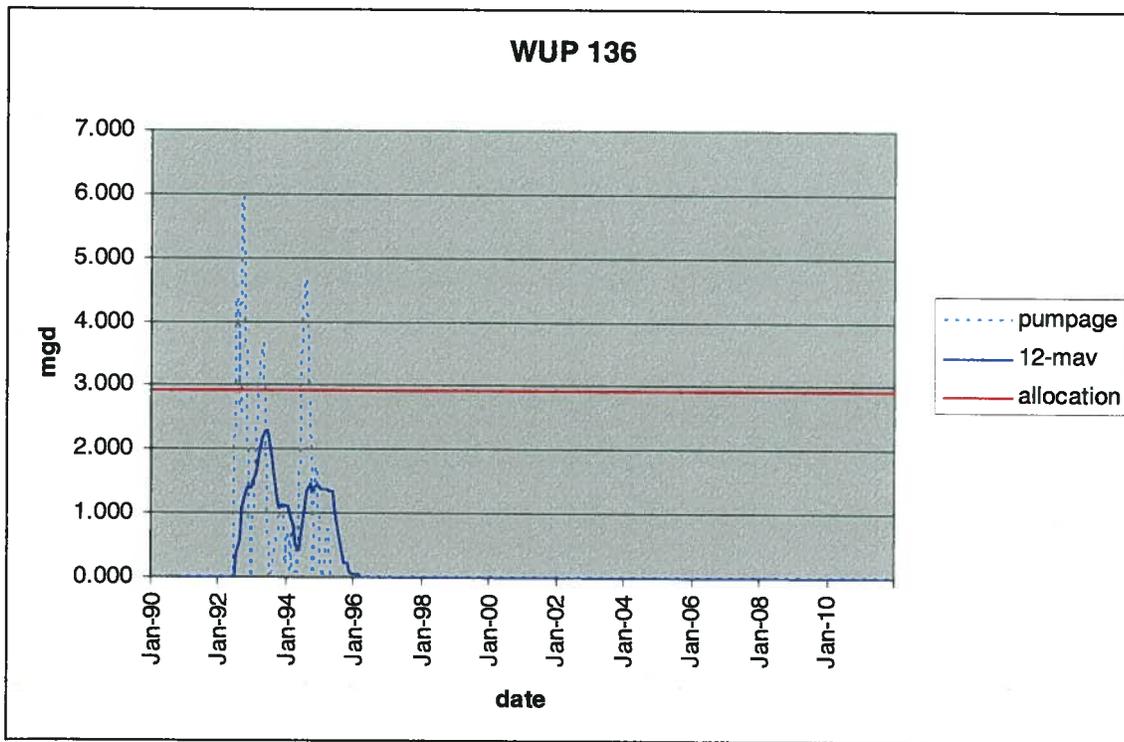
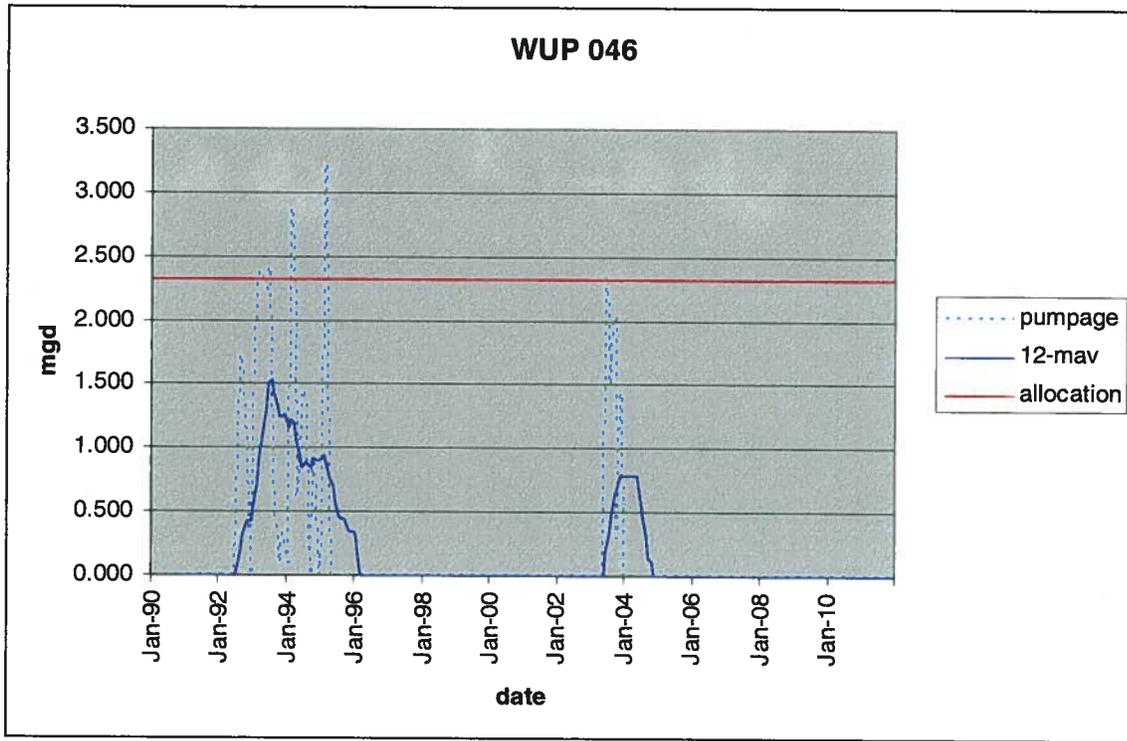


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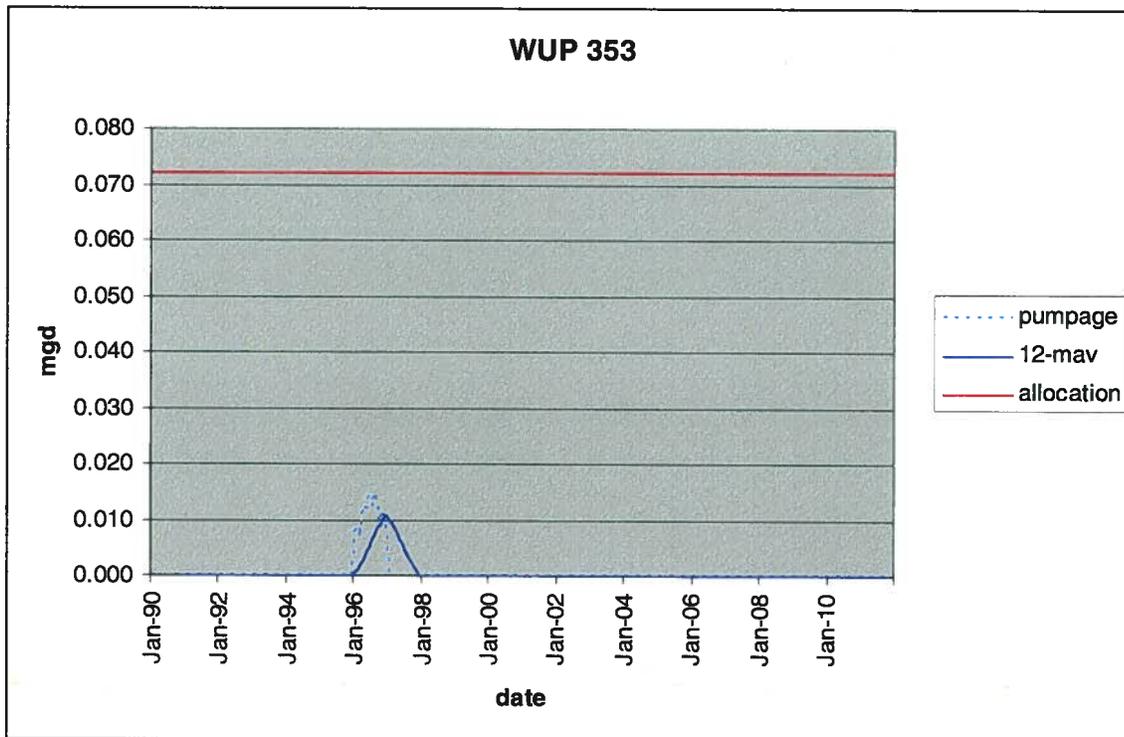
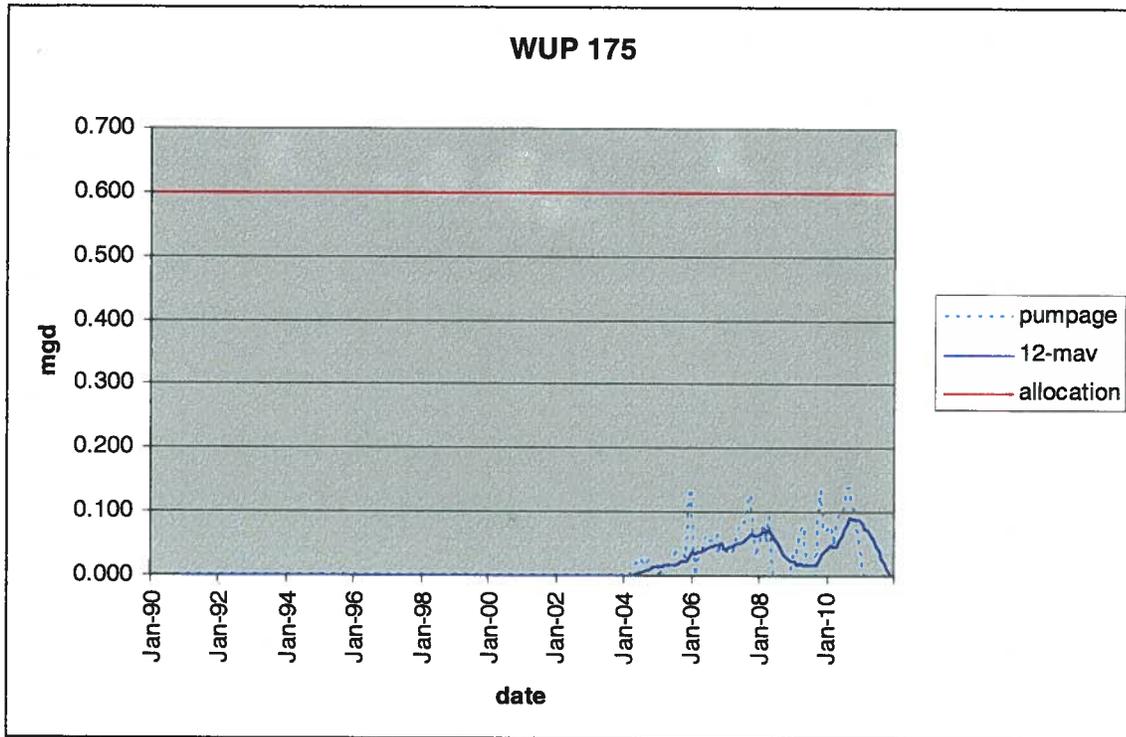


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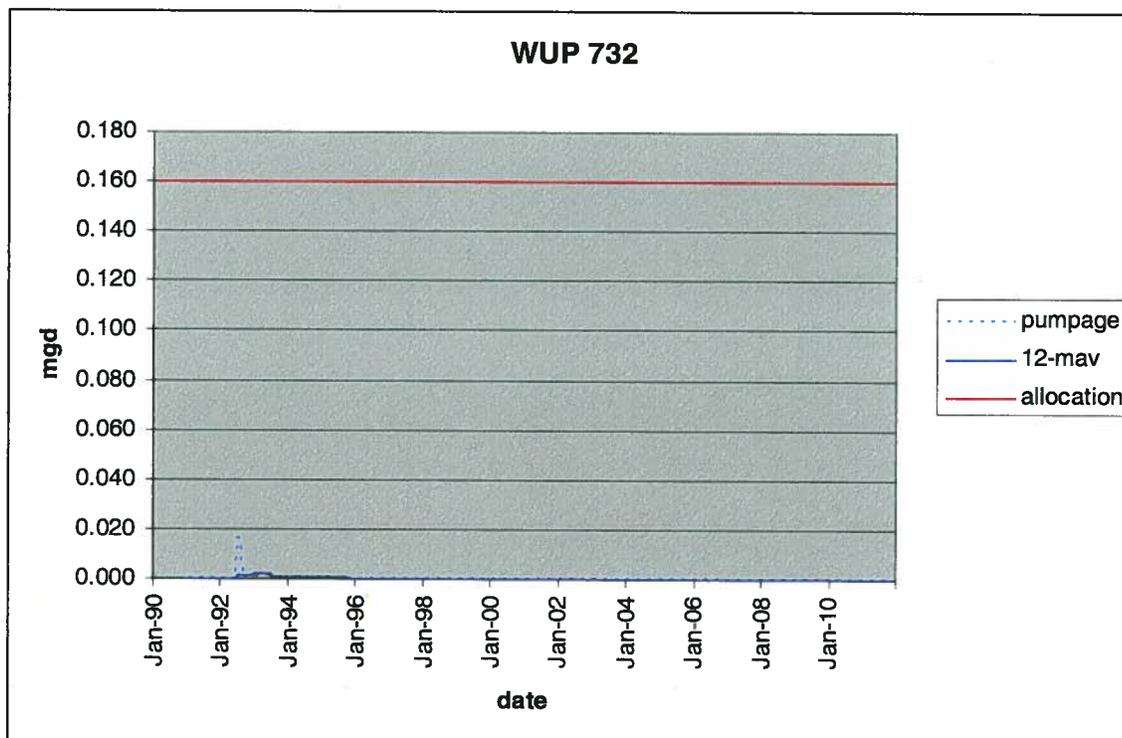
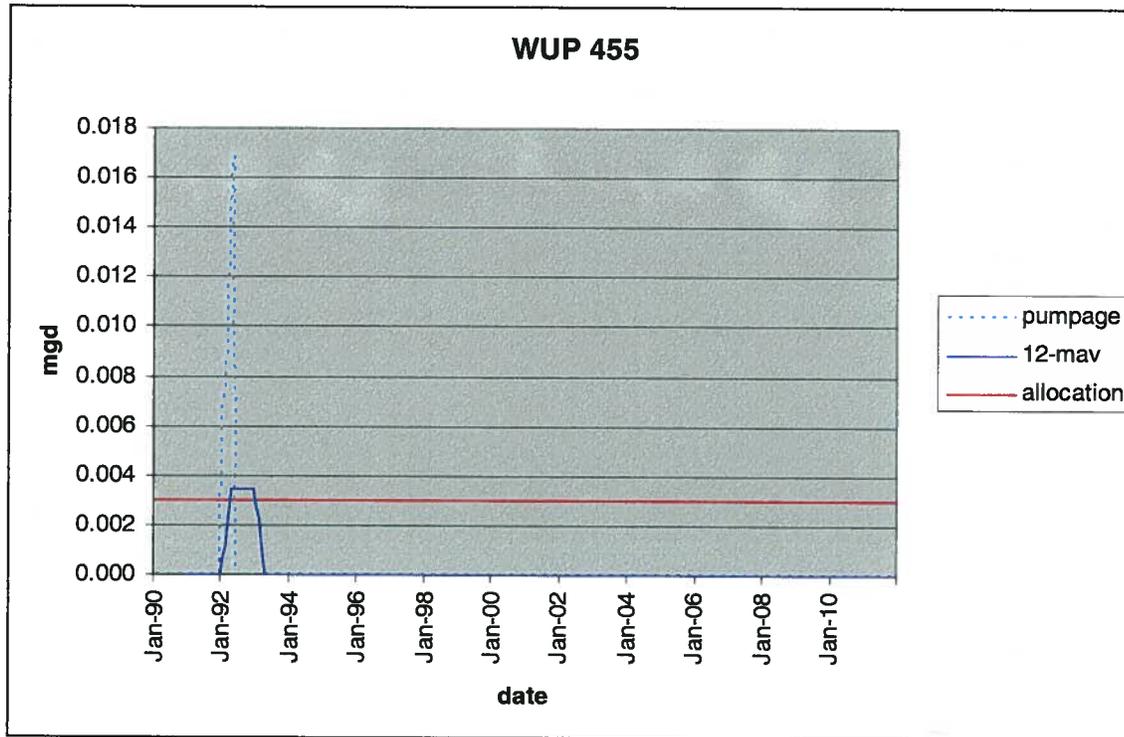


Exhibit 7

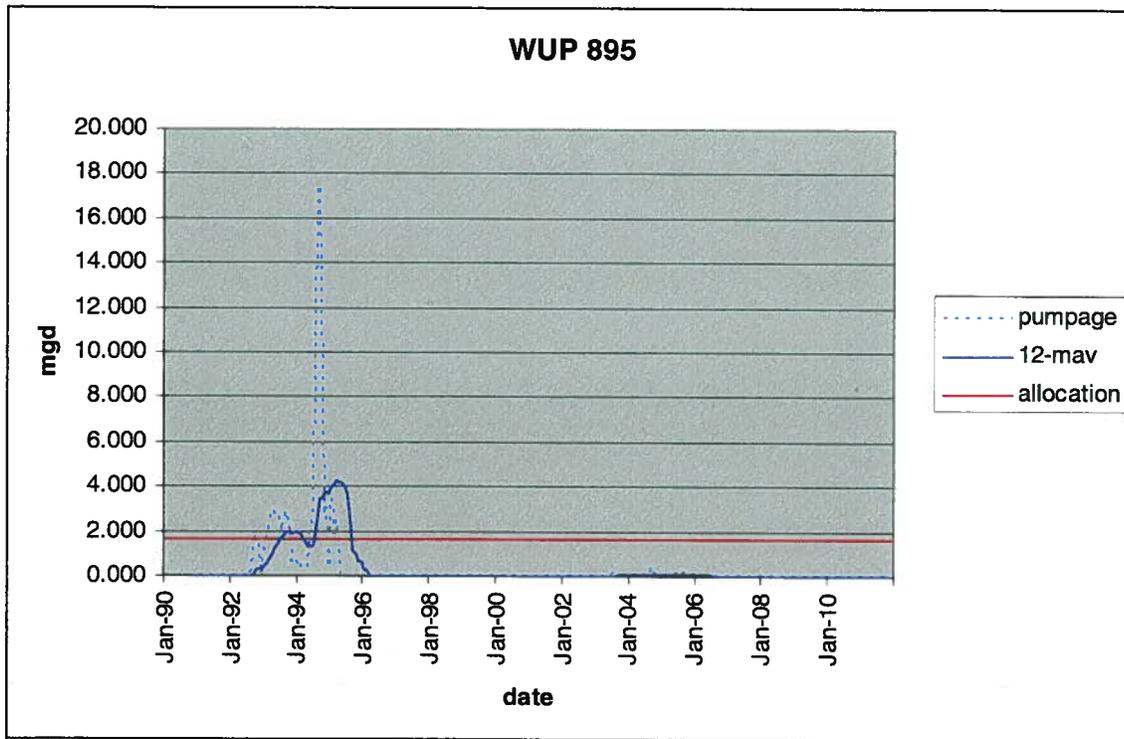
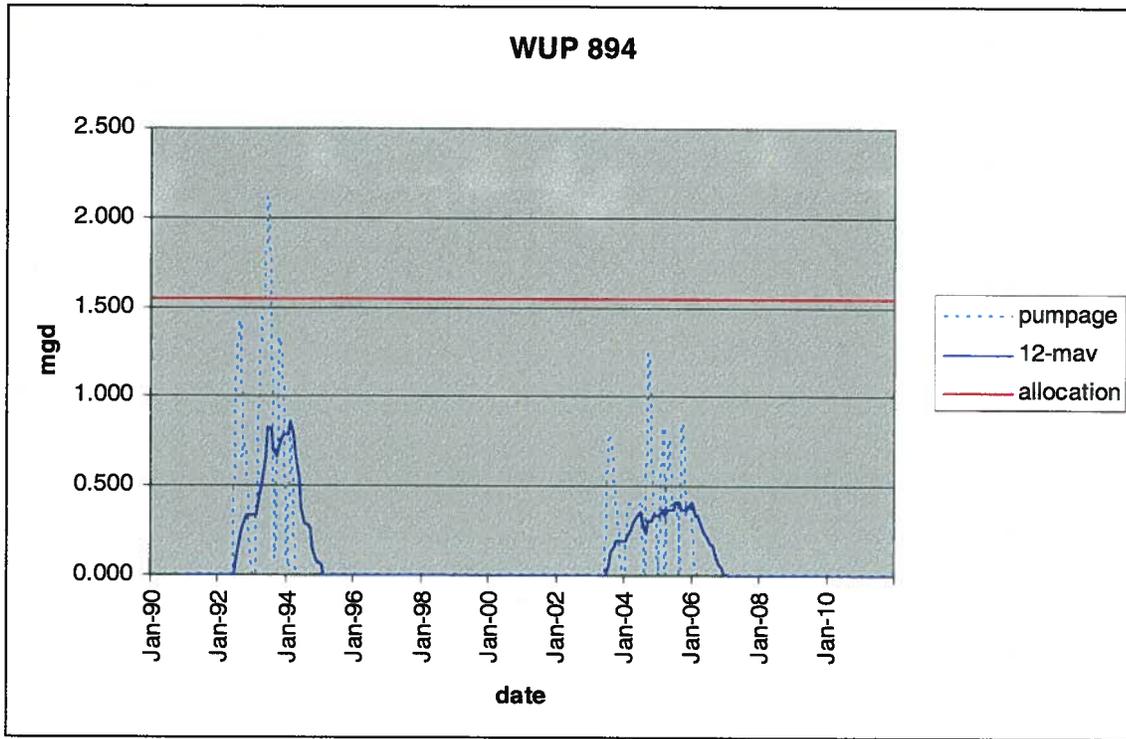


Exhibit 7

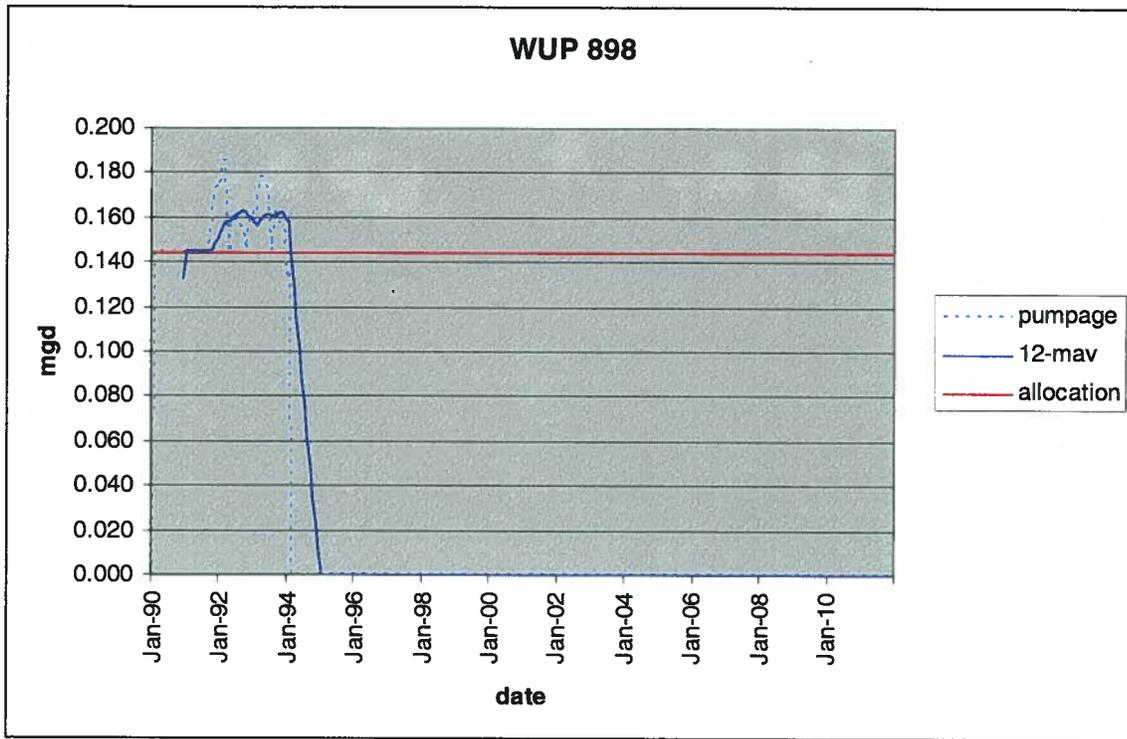


EXHIBIT 7