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

STAFF SUBMITTAL

COMMISSION ON WATER RESOURCE MANAGEMENT

January 23, 2013
Honolulu, Oahu

DOLE FOOD COMPANY
VERIFICATION OF GROUND WATER USE PERMITS (2.060 mgd)

GWUP 942/969 (3307-01 to 10, Pump 2) Waialua Sugar;
Well TMK: 6-7-002:014 (0.360 mgd)

GWUP 943/968 (3407-04 to 06, Pump 1) Waialua Sugar;
Well TMK: 6-7-002:014 (1.275 mgd)

GWUP 944 (3407-11 & 12, Pump 7) Waialua Sugar,
Well TMK: 6-6-025:001 (0.425 mgd)

WAIALUA GROUND WATER MANAGEMENT AREA, OAHU

APPLICANT:

Dole Food Company Hawaii
1116 Whitmore Avenue
Wahiawa, HI 96786

LANDOWNER:

Dole Food Company, Inc.
P.O. Box 2990
Honolulu, HI 96802

SUMMARY OF REQUEST:

At the Commission's October 19, 2012 and December 19, 2012 meetings, Dole Food Company Hawaii ("Dole") updated its water use data for the ground water use permit ("GWUP") applications listed above. After multiple requests, Dole now requests that they retain 2.141 million gallons per day ("mgd") rather than the 2.060 mgd provisionally approved by the Commission (12/19/12).

LOCATION MAP: See Exhibit 1

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BACKGROUND:

From February 15, 2012 through December 19, 2012, the Water Commission Staff Submittals outlined the complex history of the Waialua Ground Water Management Area (GWMA). Since 1990, the Commission changed the aquifer boundaries, revised the sustainable yields, revised ground water use permits, and revoked ground water use permits for non-use in the Waialua GWMA. Revocation of water allocations for long time non-use is especially important to accommodate new Board of Water Supply needs. See the February to December, 2012 Water Commission submittals.

On October 10, 2012, the Commission approved Dole's voluntary cutback of 13.710 mgd spread among five (5) existing ground water use permits (GWUP). The Commission deferred action on Dole's remaining request to retain 8.957 mgd. The Commission expressly required that:

By December 3, 2012, Dole shall submit a complete ground water use permit application (with the necessary water use footprint information identifying the field, crop, and water demand) to justify its claims and proposed uses. In the absence of a complete water use permit application, the permit and the claim for 8.957 mgd will be presented to the Commission for action including revocation for the Waialua Sugar Co. permit.

Dole did not file any GWUP application by the deadline. The day after the deadline, Dole submitted a request to extend the deadline to December 11, 2012. Pursuant to the Commission's express order, the staff had no authority to approve an extension. Dole filed incomplete GWUP applications on December 10, 2012.

At the December 19, 2012 Water Commission meeting, the Commission revoked the majority of Dole Food Company Hawaii's (Dole) allocations in the Waialua GWMA. For the remaining three applications (listed in this submittal), the Commission extended Dole's existing allocations one last time (until the January, 2013 CWRM meeting) to submit complete GWUP applications with all the necessary documentation to verify Dole's actual use (not to exceed: 2.060 mgd) from these wells. Failing verification, the remaining 2.060 mgd from Pump 2 would be revoked in total.

ISSUES / ANALYSIS

Dole's water use data showed that Pumps 1, 2, and 7 were pumped only sporadically since sugar operations closed in 1996. No water was withdrawn from Pumps 1 and 7 for nearly seven years (since January 2006). There was no record of use or reporting from Pumps 2A and 17 since 1996 (sixteen years).

At the December 19, 2012 Commission meeting, Dole testified that actual use from Pump 1, 2, & 7 (although not reported) was 2.060 mgd. Dole voluntarily gave up (and the Commission approved the revocation of) all but this 2.060 mgd, subject to verification by actual water use reports and further information complying with a completed GWUPA. If the pumping could not be substantiated, by the January 23, 2013 meeting, the Commission would revoke all 2.060 mgd.

On December 20, 2012, Dole met with Commission staff to discuss the required information. Dole agreed that information including actual pumpage data and end use information via a GWUPA for these remaining 3 batteries would be sufficient to verify the actual needs. Dole could and will apply for other future needs at a later date.

On January 8, 2013, Dole reported updated water use data and end use information on all three batteries to meet its verification burden (see Exhibits 2 & 3).

The Staff reviewed the data and finds that reporting for Pump 1 and 7 provides a first-time continuous record for the last four years. The last 4 years of Pump 2 data are a combination of reporting by Aqua Engineers and Dole. Gaps of non-use are covered by service from the Honolulu Board of Water Supply. The new Dole figures show a slightly higher overall pumpage than those previously reported at the December 19, 2012 Commission meeting.

Dole’s transmittal also provides current tenants, acreages, and crops irrigated by Pumps 1 and 7. Pump 2 serves domestic & non-potable municipal uses (see Exhibits 2 & 3). The acreage figures are presented for both the gross parcel and net irrigated acres. Staff’s end use analysis and duties are shown in Exhibit 5. The duty of water per acre for Pump 1 & 7 irrigation are within the County’s 4,000 gpd/acre guideline. Domestic use is within the County’s 2,500 gpd/acre guideline for Pump 2. Further analysis, including use of the IWREDSS guideline, will be done when five new Ground Water Use Permit Applications are filed.

The transmittal sheet with this data accurately presents the highest 12-MAV over the last four years (the relevant statutory period for analyzing non-use) . The amount is slightly higher from Dole’s December 19, 2012 representation::

	<u>19 Dec 12</u>	<u>08 Jan 13</u>
WUP 942/969 (Pump 2, 3307-01 to -10)	0.360 mgd	0.406 mgd
WUP 943/968 (Pump 1, 3407-04 to -06, -14 & -15)	1.275 “	1.308 “
WUP 944 (Pump 7 B&C, 3407-11 & -12)	<u>0.425 “</u>	<u>0.425 “</u>
	2.060 mgd	2.141 mgd

RECOMMENDATION:

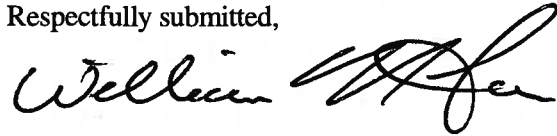
As set forth above and based on the evidence, record, analysis, and verification of water use data in this matter, the staff recommends that the Commission **approve** Dole’s three remaining Ground Water Use Permits up to the amount approved at the December 19, 2012 CWRM meeting (the amounts above 2.060 mgd having been revoked) :

1. GWUP. 942. Modify permit application to 0.360 mgd to Waialua Sugar for private municipal use in new GWUP 969. GWUP 969 updates and supersedes GWUP 942.
2. GWUP 943. Modify permit application to 1.275 mgd to Waialua Sugar for agricultural use under new GWUP 968. GWUP 968 action supersedes GWUP 943.
3. GWUP 944. Approve 0.425 mgd to Waialua Sugar for agricultural irrigation.

January 23, 2013

Dole may always file an application for new use.

Respectfully submitted,



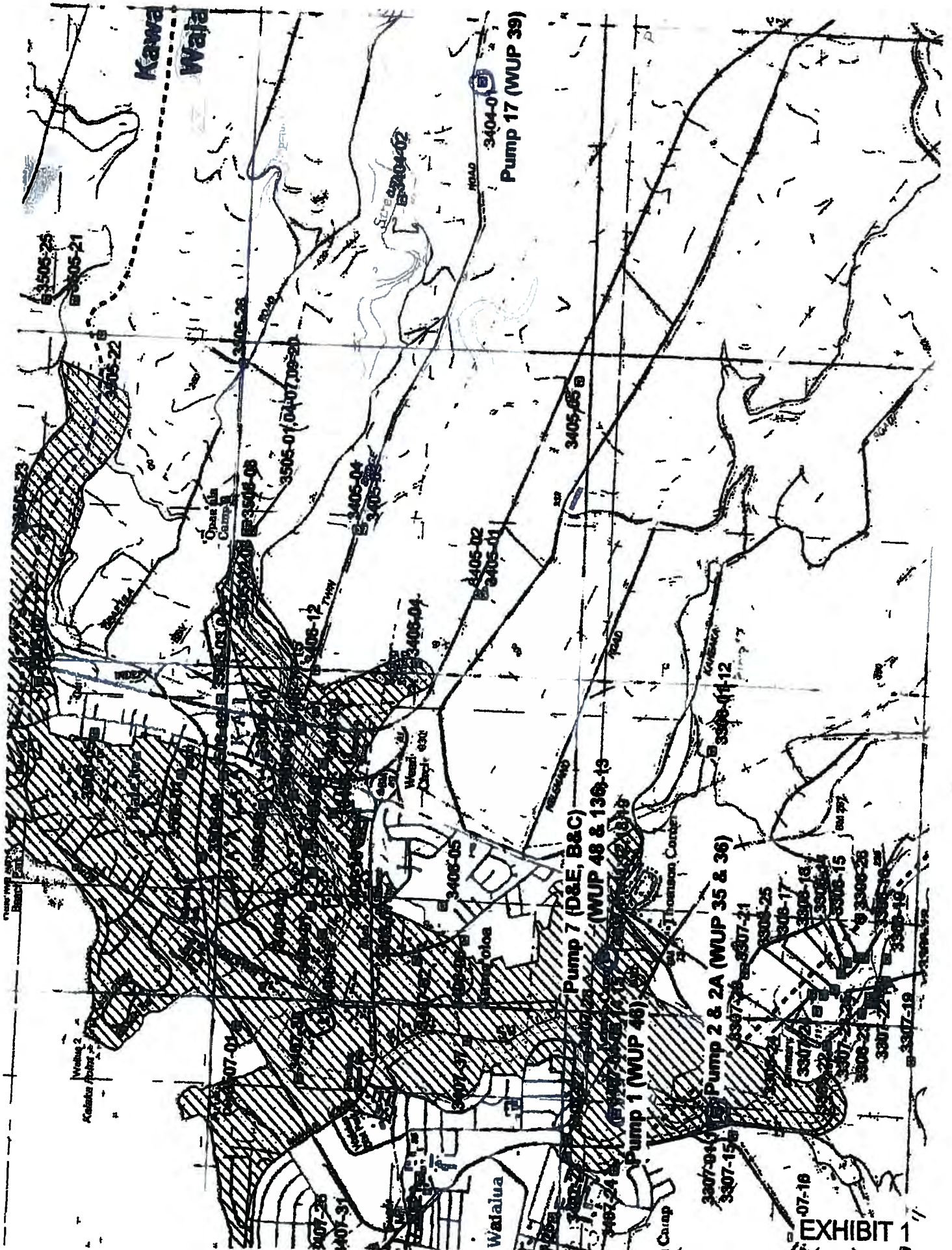
WILLIAM M. TAM
Deputy Director

- Exhibit(s):
- 1 (Location Map)
 - 2 (Dole's Pump 2 Water Use Report & units served- 9 sheets, 2-sided)
 - 3 (Acreages, Tenants, and Crops Irrigated by Pumps 1 & 7)
 - 4 (Staff analysis of historical reported pumpage at Pump 2)
 - 5 (Staff analysis of end use duties)

APPROVED FOR SUBMITTAL:



WILLIAM J. AILA, JR.
Chairperson



Pump 17 (WUP 39)

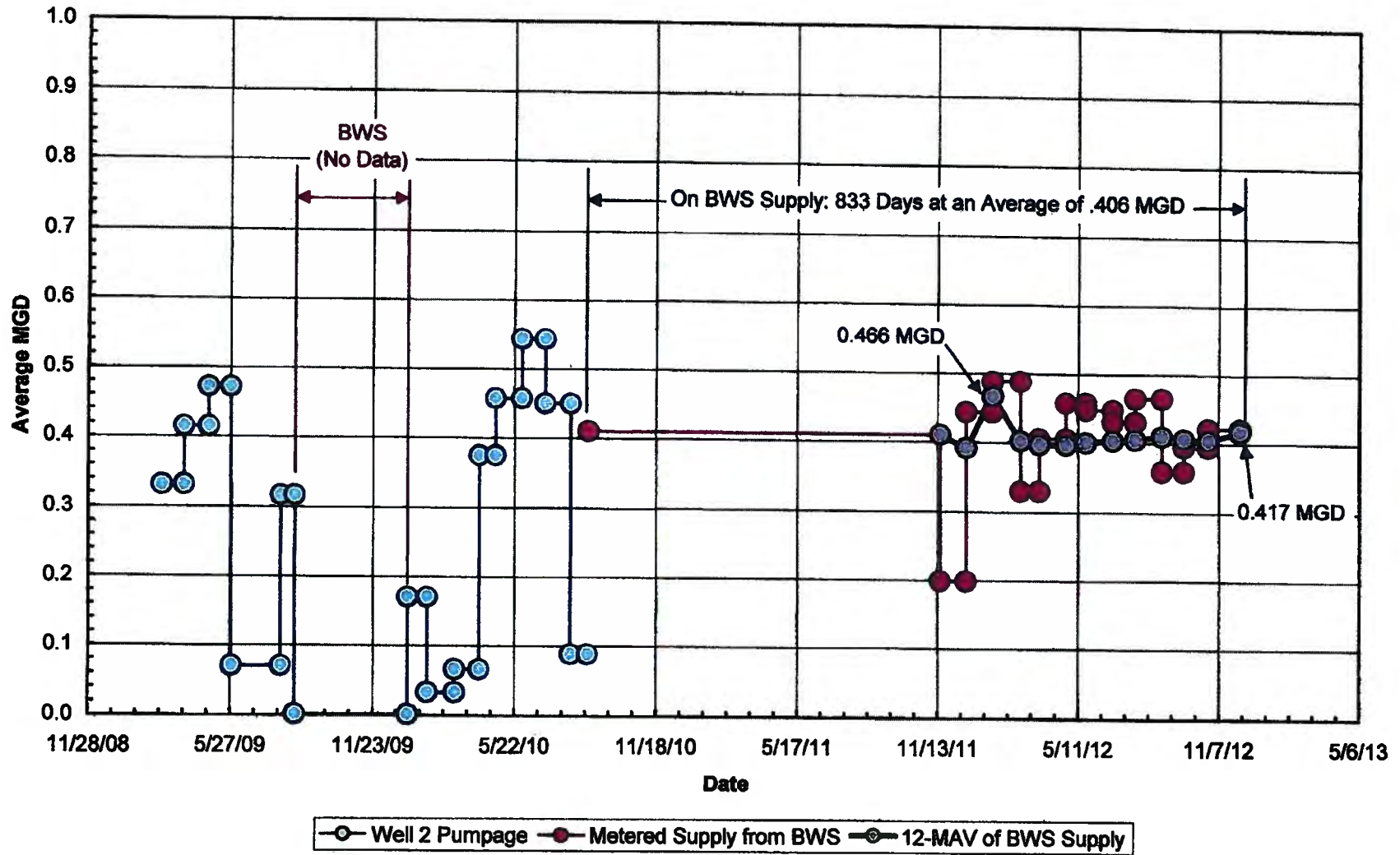
Pump 7 (D&E, B&C)
 (WUP 48 & 136-19)

Pump 2 & 2A (WUP 35 & 36)

EXHIBIT 1

Pump 2 domestic TMK	Total units	Current No. of Units	tenant
6-6-27-06	3	3	otake
6-6-27-07	30	30	otake
6-6-27-08	1	1	otake
6-7-01-62	25	25	millyard-castle & cooke prop.
6-7-01-63	80	80	mill camp housing
6-7-09-03	1	1	kupahu st.
6-7-13-07	4	4	puuiki pavilions
totals:	144	144	
	total acres	cur acres	
6-7-9-03(non-potable)	50	25	cacao fields
Mill Area = 50 acres			

Average MGD of Dole Pump 2 (No. 3307-01) and BWS Supply When Pump 2 Was Out of Service



Pump No. 2 Production

Date	Meter Reading	Pumpage	total gp mo.	avg gpd
23-Nov-2004	0			
25-Nov-2004	965,783	965,783		
29-Nov-2004	3,221,208	2,255,425		
2-Dec-2004	4,741,020	1,519,812		
6-Dec-2004	6,924,245	2,183,225		
10-Dec-2004	9,096,710	2,172,465		
13-Dec-2004	10,826,530	1,729,820		
16-Dec-2004	12,487,280	1,660,750		
20-Dec-2004	14,483,200	1,995,920		
23-Dec-2004	15,991,290	1,508,090		
27-Dec-2004	18,063,780	2,072,490		
30-Dec-2004	19,476,000	1,412,220	19,476,000	628,258
3-Jan-2005	21,331,930	1,855,930		
6-Jan-2005	22,667,210	1,335,280		
10-Jan-2005	24,143,870	1,476,660		
13-Jan-2005	24,990,740	846,870		
17-Jan-2005	26,777,200	1,786,460		
20-Jan-2005	28,058,190	1,280,990		
24-Jan-2005	29,837,750	1,779,560		
27-Jan-2005	31,252,260	1,414,510		
31-Jan-2005	33,181,170	1,928,910	13,705,170	442,102

Pump No. 2 Production

Date	Meter Reading	Pumpage	total gp mo.	avg gpd
3-Feb-2005	34,511,220	1,330,050		
7-Feb-2005	36,125,640	1,614,420		
10-Feb-2005	37,576,220	1,450,580		
15-Feb-2005	39,788,450	2,212,230		
17-Feb-2005	40,840,470	1,052,020		
22-Feb-2005	43,429,290	2,588,820		
24-Feb-2005	44,474,180	1,044,890		
28-Feb-2005	44,683,550	209,370 Power Supply Stolen		
			11,502,380	410,799
3-Mar-2005	45,680,420	996,870		
7-Mar-2005	47,804,600	2,124,180		
10-Mar-2005	49,257,780	1,453,180		
15-Mar-2005	51,672,330	2,414,550		
17-Mar-2005	52,794,490	1,122,160		
21-Mar-2005	54,946,670	2,152,180		
24-Mar-2005	56,603,960	1,657,290		
28-Mar-2005	56,864,470	260,510 Power Supply Stolen		
31-Mar-2005	57,852,070	987,600		
			13,168,520	424,791
4-Apr-2005	59,771,120	1,919,050		
7-Apr-2005	61,256,940	1,485,820		
11-Apr-2005	63,246,870	1,989,930		
14-Apr-2005	64,989,640	1,742,770		
18-Apr-2005	67,165,240	2,175,600		
21-Apr-2005	69,049,280	1,884,040		
25-Apr-2005	71,447,240	2,397,960		
28-Apr-2005	73,196,050	1,748,810	15,343,980	511,466

Pump No. 2 Production

Date	Meter Reading	Pumpage	total gp mo.	avg gpd
3-May-2005	76,003,840	2,807,790		
5-May-2005	76,010,170	6,330	Power Supply Stolen	
9-May-2005	78,420,260	2,410,090		
12-May-2005	80,302,330	1,882,070		
16-May-2005	82,783,710	2,481,380		
19-May-2005	84,705,510	1,921,800		
23-May-2005	87,122,030	2,416,520		
26-May-2005	89,108,120	1,986,090		
31-May-2005	92,152,340	3,044,220	18,956,290	611,493
2-Jun-2005	93,756,830	1,604,490		
6-Jun-2005	96,295,320	2,538,490		
9-Jun-2005	98,233,750	1,938,430		
13-Jun-2005	100,728,401	2,494,651		
18-Jun-2005	102,860,344	2,131,943		
20-Jun-2005	105,335,326	2,474,982		
23-Jun-2005	107,255,743	1,920,417		
27-Jun-2005	109,785,886	2,530,143		
30-Jun-2005	111,732,790	1,946,904	19,580,450	652,682
5-Jul-2005	115,011,260	3,278,470		
7-Jul-2005	116,390,120	1,378,860		
11-Jul-2005	119,015,250	2,625,130		
14-Jul-2005	121,058,000	2,042,750		
18-Jul-2005		Power Supply Stolen		
21-Jul-2005				
25-Jul-2005	122,877,750	1,819,750		
28-Jul-2005	125,079,440	2,201,690	13,346,650	430,537

Pump No. 2 Production

Date	Meter Reading	Pumpage	total gp mo.	avg gpd
2-Aug-2005	128,348,460	3,269,020		
4-Aug-2005	129,874,560	1,526,100		
8-Aug-2005	132,503,300	2,628,740		
11-Aug-2005	134,586,960	2,083,660		
15-Aug-2005	137,441,810	2,854,850		
18-Aug-2005	139,610,180	2,168,370		
22-Aug-2005	142,808,880	3,198,700		
25-Aug-2005	145,062,770	2,253,890		
29-Aug-2005	147,952,880	2,890,110	22,873,440	737,853
1-Sep-2005	149,838,740	1,885,860		
6-Sep-2005	153,197,250	3,358,510		
8-Sep-2005	154,644,270	1,447,020		
12-Sep-2005	157,291,070	2,646,800		
15-Sep-2005	159,249,670	1,958,600		
19-Sep-2005	161,787,200	2,537,530		
22-Sep-2005	163,835,140	2,047,940		
27-Sep-2005	166,821,330	2,986,180		
29-Sep-2005	167,941,270	1,119,940	19,988,380	666,280
4-Oct-2005	170,508,340	2,567,070		
6-Oct-2005	171,633,020	1,124,680		
10-Oct-2005	173,918,020	2,285,000		
13-Oct-2005	175,644,750	1,726,730		
17-Oct-2005	178,067,860	2,423,110		
20-Oct-2005	179,921,520	1,853,660		
24-Oct-2005	182,135,120	2,213,600		
27-Oct-2005	183,665,670	1,530,550		
31-Oct-2005	185,787,250	2,121,580	17,845,980	575,677

Pump No. 2 Production

Date	Meter Reading	Pumpage	total gp mo.	avg gpd
3-Nov-2005	187,379,810	1,592,560		
7-Nov-2005	189,493,660	2,113,850		
10-Nov-2005	191,294,090	1,800,430		
14-Nov-2005	193,560,670	2,266,580		
17-Nov-2005	195,465,050	1,904,380		
21-Nov-2005	197,713,100	2,248,050		
25-Nov-2005	199,903,370	2,190,270		
28-Nov-2005			Power Supply Stolen	
			14,116,120	564,645
1-Dec-2005	201,305,633	1,402,263		
5-Dec-2005	203,446,173	2,140,540		
8-Dec-2005	205,178,160	1,731,987		
12-Dec-2005	207,454,350	2,276,190		
15-Dec-2005	209,406,215	1,951,865		
19-Dec-2005	211,814,040	2,407,825		
22-Dec-2005	213,687,690	1,873,650		
26-Dec-2005	215,969,660	2,281,970		
29-Dec-2005	217,972,790	2,003,130	18,069,420	582,885
2-Jan-2006	220,321,900	2,349,110		
5-Jan-2006	222,143,860	1,821,960		
9-Jan-2006	224,626,940	2,483,080		
12-Jan-2006	226,803,370	2,176,430		
16-Jan-2006	229,406,560	2,603,190		
19-Jan-2006	231,305,570	1,899,010		
23-Jan-2006	233,632,430	2,326,860		
26-Jan-2006	235,238,550	1,606,120		
30-Jan-2006	237,355,040	2,116,490	19,382,250	625,234

Pump No. 2 Production

Date	Meter Reading	Pumpage	total gp mo.	avg gpd
2-Feb-2006	239,150,010	1,794,970		
6-Feb-2006	241,480,570	2,330,560		
9-Feb-2006	243,255,200	1,774,630		
13-Feb-2006	245,630,200	2,375,000		
16-Feb-2006	247,327,290	1,697,090		
21-Feb-2006	249,983,260	2,655,970		
23-Feb-2006	251,035,690	1,052,430		
27-Feb-2006	253,093,550	2,057,860	15,738,510	562,090
2-Mar-2006	254,708,290	1,614,740		
6-Mar-2006	256,703,660	1,995,370		
9-Mar-2006	258,279,690	1,576,030		
13-Mar-2006	260,233,890	1,954,200		
16-Mar-2006	261,728,730	1,494,840		
20-Mar-2006	263,652,360	1,923,630		
23-Mar-2006	265,048,820	1,396,460		
27-Mar-2006	266,876,980	1,828,160		
30-Mar-2006	268,189,300	1,312,320	15,095,750	520,543
3-Apr-2006	270,013,720	1,824,420		
6-Apr-2006	271,405,380	1,391,660		
10-Apr-2006	273,253,890	1,848,510		
13-Apr-2006	274,722,610	1,468,720		
17-Apr-2006	276,831,870	2,109,260		
20-Apr-2006	278,584,320	1,752,450		
24-Apr-2006	280,789,820	2,205,500		
27-Apr-2006	282,566,840	1,777,020	14,377,540	532,501

Pump No. 2 Production

Date	Meter Reading	Pumpage	total gp mo.	avg gpd
1-May-2006	284,719,850	2,152,810		
4-May-2006	286,448,260	1,728,610		
8-May-2006	288,593,440	2,145,180		
11-May-2006	290,408,480	1,815,040		
15-May-2006	292,761,120	2,352,640		
18-May-2006	294,540,000	1,778,880		
22-May-2006	296,950,880	2,410,880		
25-May-2006	298,716,400	1,765,520		
29-May-2006	301,900,285	3,183,885	19,333,445	666,671
1-Jun-2006	303,293,838	1,393,553		
5-Jun-2006	305,855,278	2,561,440		
8-Jun-2006	307,981,321	2,126,043		
13-Jun-2006	311,251,250	3,269,929		
15-Jun-2006	312,712,880	1,461,610		
19-Jun-2006	315,239,550	2,526,690		
22-Jun-2006	317,364,770	2,125,220		
26-Jun-2006	320,103,750	2,738,980		
29-Jun-2006	322,136,210	2,032,460	20,235,925	697,791
3-Jul-2006	324,823,390	2,687,180		
6-Jul-2006	326,832,370	2,008,980		
13-Jul-2006	Power Supply Stolen			
17-Jul-2006	Power Supply Stolen			
20-Jul-2006	329,208,560	2,376,190		
24-Jul-2006	332,022,490	2,813,930		
27-Jul-2006	334,183,600	2,161,110		
31-Jul-2006	336,852,010	2,668,410	14,715,800	507,441

Pump No. 2 Production

Date	Meter Reading	Pumpage	total gp mo.	avg gpd
3-Aug-2006	338,753,540	1,901,530		
7-Aug-2006	341,503,360	2,749,820		
10-Aug-2006	343,732,670	2,229,310		
14-Aug-2006	346,531,970	2,799,300		
17-Aug-2006	348,803,390	2,271,420		
21-Aug-2006	350,381,200	1,577,810		
24-Aug-2006	352,700,410	2,319,210		
28-Aug-2006	355,633,570	2,933,160		
31-Aug-2006	357,887,580	2,254,010	21,035,570	678,567
5-Sep-2006	361,348,610	3,461,030		
7-Sep-2006	362,664,450	1,315,840		
11-Sep-2006	365,395,480	2,731,030		
14-Sep-2006	367,529,780	2,134,300		
19-Sep-2006	370,934,600	3,404,820		
21-Sep-2006	372,355,350	1,420,750		
25-Sep-2006	375,058,900	2,703,550		
28-Sep-2006	377,213,090	2,154,190	19,325,510	644,184
2-Oct-2006	380,206,610	2,993,520		
5-Oct-2006	382,247,900	2,041,290		
9-Oct-2006	384,968,750	2,720,850		
12-Oct-2006	386,974,120	2,005,370		
16-Oct-2006	389,009,600	2,035,480		
19-Oct-2006	390,499,140	1,489,540		
23-Oct-2006	392,476,090	1,976,950		
26-Oct-2006	394,180,010	1,703,920		
30-Oct-2006	396,430,320	2,250,310	19,217,230	619,911

Pump No. 2 Production

Date	Meter Reading	Pumpage	total gp mo.	avg gpd
3-Nov-2006	398,395,250	1,964,930		
6-Nov-2006	399,927,440	1,532,190		
9-Nov-2006	401,611,400	1,683,960		
14-Nov-2006	404,357,358	2,745,958		
16-Nov-2006	405,454,174	1,096,816		
20-Nov-2006	407,581,166	2,126,992		
22-Nov-2006	408,601,730	1,020,564		
27-Nov-2006	411,209,060	2,607,330		
30-Nov-2006	412,879,640	1,670,580	16,449,320	548,311
4-Dec-2006	414,816,840	1,937,200		
11-Dec-2006	418,602,860	3,786,020		
14-Dec-2006	420,303,360	1,700,500		
18-Dec-2006	420,530,650	227,290	Power Supply Stolen	
21-Dec-2006	422,103,990	1,573,340		
26-Dec-2006	424,779,150	2,675,160		
28-Dec-2006	425,912,180	1,133,030	13,032,540	420,405
2-Jan-2007	426,764,570	852,390		
4-Jan-2007	427,501,360	736,790		
8-Jan-2007	429,119,720	1,618,360		
11-Jan-2007	430,095,220	975,500		
15-Jan-2007	431,537,800	1,442,580		
18-Jan-2007	432,736,570	1,198,770		
22-Jan-2007	434,409,280	1,672,710	8,497,100	386,232
25-Jan-2007		0		
29-Jan-2007		0		
		0		
		0		
		0		
19-Feb-2009	25,384,050	0		
23-Feb-2009	26,526,030	1,141,980		
26-Feb-2009	27,513,260	987,230	2,129,210	266,151
2-Mar-2009	28,753,210	1,239,950		

Pump No. 2 Production

Date	Meter Reading	Pumpage	total gp mo.	avg gpd
5-Mar-2009	29,803,660	1,050,450		
9-Mar-2009	31,068,540	1,264,880		
12-Mar-2009	32,006,360	937,820		
16-Mar-2009	33,180,190	1,173,830		
19-Mar-2009	34,107,030	926,840		
23-Mar-2009	35,499,270	1,392,240		
26-Mar-2009	36,532,940	1,033,670		
30-Mar-2009	38,017,150	1,484,210	10,503,890	338,835
3-Apr-2009	39,690,260	1,673,110		
6-Apr-2009	41,095,270	1,405,010		
9-Apr-2009	42,407,550	1,312,280		
13-Apr-2009	43,888,450	1,480,900		
16-Apr-2009	45,050,870	1,162,420		
20-Apr-2009	46,798,550	1,747,680		
23-Apr-2009	48,073,350	1,274,800		
27-Apr-2009	49,654,450	1,581,100		
30-Apr-2009	50,847,830	1,193,380	12,830,680	427,689
4-May-2009	52,821,980	1,974,150		
7-May-2009	54,274,000	1,452,020		
11-May-2009	56,238,640	1,964,640		
14-May-2009				
21-May-2009	60,616,100	4,377,460		
26-May-2009	63,137,150	2,521,050		
28-May-2009	64,039,570	902,420	13,191,740	425,540

Pump No. 2 Production

Date	Meter Reading	Pumpage	total gp mo.	avg gpd
19-Jun-2009				
27-Jul-2009	66,738,510	2,698,940		
30-Jul-2009	68,400,700	1,662,190	4,361,130	363,428
4-Aug-2009	71,223,430	2,822,730		
6-Aug-2009	72,357,660	1,134,230		
17-Aug-2009	74,095,230	1,737,570	5,694,530	406,752
7-Jan-2010	74,265,220	169,990		
8-Jan-2010	74,318,730	53,510		
9-Jan-2010	74,774,060	455,330		
11-Jan-2010	75,566,430	792,370		
14-Jan-2010	76,824,470	1,258,040	2,729,240	209,942
1-Feb-2010	76,511,880	1,687,410		
4-Feb-2010			1,687,410	120,529
16-Feb-2010				
1-Mar-2010				
8-Mar-2010	79,638,080	1,126,200		
11-Mar-2010	80,888,880	1,250,800		
13-Mar-2010	81,551,210	662,330	3,039,330	217,095
5-Apr-2010				
8-Apr-2010	81,652,300	101,090		
12-Apr-2010	82,688,800	1,036,500		
15-Apr-2010	83,712,970	1,024,170		
19-Apr-2010	85,032,820	1,319,850		
22-Apr-2010	86,320,870	1,288,050		
26-Apr-2010	88,116,390	1,795,520		
29-Apr-2010	89,512,260	1,395,870	7,961,050	265,368

Pump No. 2 Production

Date	Meter Reading	Pumpage	total gp mo.	avg gpd
3-May-2010	91,154,870	1,642,610		
7-May-2010	92,738,580	1,583,710		
10-May-2010	94,193,790	1,455,210		
13-May-2010	95,598,070	1,404,280		
17-May-2010	97,411,170	1,813,100		
20-May-2010	98,996,990	1,585,820		
24-May-2010	100,857,734	1,860,744		
27-May-2010	102,184,578	1,326,844	12,672,318	408,784
1-Jun-2010	104,564,750	2,380,172		
3-Jun-2010	105,630,306	1,065,556		
7-Jun-2010	107,611,937	1,981,631		
12-Jun-2010	110,301,610	2,689,673		
14-Jun-2010	111,445,960	1,144,350		
17-Jun-2010	113,040,360	1,594,400		
21-Jun-2010	115,287,650	2,247,290		
24-Jun-2010	116,891,290	1,603,640		
28-Jun-2010	119,287,060	2,395,770	17,102,482	570,083
1-Jul-2010	120,842,490	1,555,430		
6-Jul-2010	123,514,220	2,671,730		
8-Jul-2010	124,763,080	1,248,860		
12-Jul-2010	127,112,320	2,349,240		
15-Jul-2010	128,767,750	1,655,430		
19-Jul-2010	131,351,780	2,584,030		
22-Jul-2010	133,176,780	1,825,000		
27-Jul-2010	134,562,510	1,385,730		
29-Jul-2010	135,221,630	659,120	15,934,570	514,018
2-Aug-2010	135,221,630	0		
5-Aug-2010	135,221,630	0		
10-Aug-2010	135,221,630	0		
12-Aug-2010	135,221,630	0		
17-Aug-2010	135,221,630	0		
19-Aug-2010	135,894,190	672,560		
24-Aug-2010	137,140,640	1,246,450	1,919,010	319,835

Pump 2 Pumpage (MONTHLY)

Date	Meter Reading	days	gallons	Avg'd MGD
11/29/04	3,221,208			
12/30/04	19,476,000	31	16,254,792	0.5243
1/31/05	33,181,170	32	13,705,170	0.4283
2/28/05	44,683,550	28	11,502,380	0.4108
3/31/05	57,852,070	31	13,168,520	0.4248
4/28/05	73,196,050	28	15,343,980	0.5480
5/31/05	92,152,340	33	18,956,290	0.5744
6/30/05	111,732,790	30	19,580,450	0.6527
7/28/05	125,079,440	28	13,346,650	0.4767
8/29/05	147,952,880	32	22,873,440	0.7148
9/29/05	167,941,270	31	19,988,390	0.6448
10/31/05	185,787,250	32	17,845,980	0.5577
12/1/05	201,305,633	31	15,518,383	0.5006
1/2/06	220,321,900	32	19,016,267	0.5943
1/30/06	237,355,040	28	17,033,140	0.6083
2/27/06	253,093,550	28	15,738,510	0.5621
3/30/06	268,189,300	31	15,095,750	0.4870
5/1/06	284,719,650	32	16,530,350	0.5166
6/29/06	322,136,210	59	37,416,560	0.6342
7/31/06	336,852,010	32	14,715,800	0.4599
8/31/06	357,887,580	31	21,035,570	0.6786
9/28/06	377,213,090	28	19,325,510	0.6902
10/30/06	396,430,320	32	19,217,230	0.6005
11/30/06	412,879,640	31	16,449,320	0.5306
1/2/07	426,764,570	33	13,884,930	0.4208
3/2/09	28,753,210			
3/30/09	38,017,150	28	9,263,940	0.3309
4/30/09	50,847,830	31	12,830,680	0.4139
5/28/09	64,039,570	28	13,191,740	0.4711
6/29/09		32	2,215,177	0.0692
7/30/09	68,400,700	31	2,145,953	0.0692
8/17/09	74,095,230	18	5,694,530	0.3164
1/7/10	74,265,220	143	169,990	0.0012
2/1/10	78,511,880	25	4,246,660	0.1699
3/8/10	79,638,080	35	1,126,200	0.0322
4/8/10	81,652,300	31	2,014,220	0.0650
4/29/10	89,512,260	21	7,859,960	0.3743
6/1/10	104,564,750	33	15,052,490	0.4561
7/1/10	120,842,490	30	16,277,740	0.5426
8/2/10	135,221,630	32	14,379,140	0.4493
8/24/10	137,140,640	22	1,919,010	0.0872
3/2/09	28753210			0.3309
3/30/09	38017150	28	9263940	0.3309
3/30/09				0.4139
4/30/09	50847830	31	12830680	0.4139
4/30/09				0.4711

5/28/09	64039570	28	13191740	0.4711
5/29/09				0.0692
7/30/09	68400700	63	4361130	0.0692
7/30/09				0.3164
8/17/09	74095230	18	5694530	0.3164
8/17/09				0.0012
1/7/10	74265220	143	169990	0.0012
1/7/10				0.1699
2/1/10	78511880	25	4246660	0.1699
2/1/10				0.0322
3/8/10	79638080	35	1126200	0.0322
3/8/10				0.0650
4/8/10	81652300	31	2014220	0.0650
4/8/10				0.3743
4/29/10	89512260	21	7859960	0.3743
4/29/10				0.4561
6/1/10	104564750	33	15052490	0.4561
6/1/10				0.5426
7/1/10	120842490	30	16277740	0.5426
7/1/10				0.4493
8/2/10	135221630	32	14379140	0.4493
8/2/10				0.0872
8/24/10	137140640	22	1919010	0.0872

Supply from BWS

date		MG Used	Avg MGD	12-MAV
8/25/2010				
6/24/2011	303	50.415	0.1664	
8/23/2011	60	54.998	0.9166	0.2904
11/17/2011	86	78.83	0.9166	0.3675
12/20/2011	33	6.568	0.1990	0.4550
1/23/2012	34	15.085	0.4437	0.5016
2/28/2012	36	17.57	0.4881	0.5270
3/23/2012	24	7.92	0.3300	0.5377
4/26/2012	34	13.785	0.4054	0.5600
5/22/2012	26	11.89	0.4573	0.5807
6/25/2012	34	15.21	0.4474	0.6045
7/24/2012	29	12.475	0.4302	0.5642
8/27/2012	34	15.8	0.4647	0.5274
9/24/2012	28	10.055	0.3591	0.4793
10/25/2012	31	12.245	0.3950	0.4350
12/5/2012	41	17.28	0.4215	0.4167

Supply for Pump 2 from BWS

Begin Date	End Date	Days	Total Used
*4/30/2010	*6/24/2011	420	50,415,000

*Received statement for this time frame.

6/24/2011	8/23/2011	60	54,998,000
8/23/2011	11/17/2011	86	78,830,000

**7/26/2010	**12/20/2011	512	190,811,000
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**Received statement in Dec. 2011 for this time frame.

12/20/2011	1/23/2012	34	15,085,000
1/23/2012	2/28/2012	36	17,570,000
2/28/2012	3/23/2012	24	7,920,000
3/23/2012	4/26/2012	34	13,785,000
4/26/2012	5/22/2012	26	11,890,000
5/22/2012	6/25/2012	34	15,210,000
6/25/2012	7/24/2012	29	12,475,000
7/24/2012	8/27/2012	34	15,800,000
8/27/2012	9/24/2012	28	10,055,000
9/24/2012	10/25/2012	31	12,245,000
10/25/2012	12/5/2012	41	17,280,000
12/5/2012			

Current Acres Irrigated by Pump 1

Pump 1 TMK	Gross Acres in TMK	Leased Acres	Current Planted Acres**	tenant
6-7-01-13	10.378	10.000	5.19	gilman estates land
crop: banana, potato, ufi, casaba, taro				
6-7-01-26	231.300	148.720	59.49	twin bridge
crop: asparagus, onion, papaya, banana, seed com				
6-7-01-37	24.167	22.247	11.12	co-op
crop: sweet potato, araimo, sincamas, banana, taro, eggplant				
6-7-01-58	47.798	47.420	23.71	co-op
crop: sweet potato, araimo, sincamas, banana, taro				
6-7-01-63p (mill housing)	96.789	7.903	3.95	co-op
crop: sweet potato, araimo, sincamas, banana, taro, eggplant				
6-7-02-07	25.000	25.000	12.50	co-op
crop: sweet potato, araimo, sincamas, banana, taro, eggplant, tomato				
6-7-02-14	26.759	21.594	10.80	inthisane
crop: banana, pumpkin, bittermelon, cucumber, longbean				
6-7-02-37	21.662	21.662	10.83	co-op
crop: sweet potato, araimo, sincamas, banana, taro, eggplant, tomato				
6-8-06-10	333.425	270.000	108.00	castle & cooke land
crop: t-leaf, banana, taro, eggplant, corn asparagus				
	totals:	817.278	574.546	245.59
				43% of Leased Acres planted
				30% of Gross Acres planted

Pump 7	Gross Acres in	Leased Acres	Current Planted Acres**	tenant
TMK	TMK	Acres	Acres**	tenant
6-6-22-01	41.066	41.066	32.853	takenaka
Crop: banana, eggplant, nursery plants, papaya, fruit trees, cucumber,				
6-6-23-03	23.595	8.250	6.600	takenaka
crop: banana, eggplant, nursery plants, lawn grass, papaya, fruit trees				
6-6-24-01	59.153	52.500	26.250	loan lovan/takenaka
crop: potato, fruit tree, sugar cane, sour sop trees, taro				
6-6-25-01*	44.376	42.380	21.190	loan lovan
crop: fruit trees, mango, papaya, taro				
6-6-25-02*	3.210	3.210	1.605	loan lovan
crop: fruit trees, mango, papaya				
6-6-25-06*	2.062	2.062	1.031	loan lovan
crop: fruit trees, mango, papaya				
6-6-27-10	141.895	62.000	37.200	valley 2
Crop: banana, eggplant, bittermellon, papaya, cilantro, lettuce, fruit trees, lemon grass, cucumber, bamboo, okra				
totals:	315.357	211.468	126.729	60% of Leased Acres planted
				40% of Gross Acres planted
*one meter for TMK 6-6-25-01, 02, 06				

3-3307-001	Waialua P2 Batt	12/1/1995	12/31/1995	0	0				
3-3307-001	Waialua P2 Batt	1/1/1996	1/31/1996	0	0				
3-3307-001	Waialua P2 Batt	2/1/1996	2/29/1996	0	0				
3-3307-001	Waialua P2 Batt	3/1/1996	3/31/1996	0	0				
3-3307-001	Waialua P2 Batt	4/1/1996	4/30/1996	0	0				
3-3307-001	Waialua P2 Batt	5/1/1996	5/31/1996	0	0				
3-3307-001	Waialua P2 Batt	6/1/1996	6/30/1996	0	0				
3-3307-001	Waialua P2 Batt	6/1/2003	6/30/2003	18,370,000	0.612333				
3-3307-001	Waialua P2 Batt	7/1/2003	7/31/2003	13,750,000	0.443548				
3-3307-001	Waialua P2 Batt	8/1/2003	8/31/2003	16,550,000	0.533871				
3-3307-001	Waialua P2 Batt	9/1/2003	10/31/2003	26,150,000	0.428609				
3-3307-001	Waialua P2 Batt	9/1/2003	9/30/2003	0	0				
3-3307-001	Waialua P2 Batt	11/1/2003	11/30/2003	14,670,000	0.489				
3-3307-001	Waialua P2 Batt	12/1/2003	12/31/2003	14,250,000	0.459677				
3-3307-001	Waialua P2 Batt	1/1/2004	1/31/2004	13,350,000	0.430645				
3-3307-001	Waialua P2 Batt	2/1/2004	3/31/2004	15,720,000	0.278667				
3-3307-001	Waialua P2 Batt	4/1/2004	6/30/2004	19,470,000	0.213956				
3-3307-001	Waialua P2 Batt	7/1/2004	7/31/2004	16,340,000	0.527097				
3-3307-001	Waialua P2 Batt	8/1/2004	8/31/2004	15,350,000	0.495161				
3-3307-001	Waialua P2 Batt	9/1/2004	9/30/2004	17,460,000	0.582				
3-3307-001	Waialua P2 Batt	10/1/2004	11/30/2004	14,580,000	0.239016				
3-3307-001	Waialua P2 Batt	12/1/2004	12/31/2004	14,580,000	0.470923	11/29/2004	12/30/2004	16,254,792	-1,674,792
3-3307-001	Waialua P2 Batt	1/1/2005	1/31/2005	17,710,000	0.57129	12/31/2004	1/31/2005	13,705,170	4,004,830
3-3307-001	Waialua P2 Batt	2/1/2005	2/28/2005	14,350,000	0.5125	2/1/2005	2/28/2005	11,502,380	2,847,620
3-3307-001	Waialua P2 Batt	3/1/2005	3/31/2005	14,000,000	0.451613	3/1/2005	3/31/2005	13,168,520	831,480
3-3307-001	Waialua P2 Batt	4/1/2005	4/30/2005	17,720,000	0.590667	4/1/2005	4/28/2005	15,343,980	2,376,020
3-3307-001	Waialua P2 Batt	5/1/2005	5/31/2005	17,480,000	0.563871	4/29/2005	5/31/2005	18,956,290	-1,476,290
3-3307-001	Waialua P2 Batt	6/1/2005	6/30/2005	30,210,000	1.007	6/1/2005	6/30/2005	19,580,450	10,629,550
3-3307-001	Waialua P2 Batt	7/1/2005	7/31/2005	10,450,000	0.337097	7/1/2005	7/28/2005	13,346,650	-2,896,650
3-3307-001	Waialua P2 Batt	8/1/2005	8/31/2005	14,860,000	0.479355	7/29/2005	8/29/2005	22,873,440	-8,013,440
3-3307-001	Waialua P2 Batt	9/1/2005	9/30/2005	16,680,000	0.556	8/30/2005	9/29/2005	19,908,390	-3,308,390
3-3307-001	Waialua P2 Batt	10/1/2005	10/31/2005	19,370,000	0.624839	9/30/2005	10/31/2005	17,845,980	1,524,020
3-3307-001	Waialua P2 Batt	11/1/2005	11/30/2005	15,780,000	0.525333	11/1/2005	12/1/2005	15,518,383	261,617
3-3307-001	Waialua P2 Batt	12/1/2005	12/31/2005	19,170,000	0.618387	12/2/2005	1/2/2006	19,016,267	153,733
3-3307-001	Waialua P2 Batt	1/1/2006	1/31/2006	17,570,000	0.566774	1/3/2006	1/30/2006	17,033,140	536,860
3-3307-001	Waialua P2 Batt					1/31/2006	2/27/2006	15,738,510	
3-3307-001	Waialua P2 Batt					2/28/2006	3/30/2006	15,095,750	
3-3307-001	Waialua P2 Batt					3/31/2006	5/1/2006	16,530,350	
3-3307-001	Waialua P2 Batt					5/2/2006	6/29/2006	37,416,560	
3-3307-001	Waialua P2 Batt					6/30/2006	7/31/2006	14,715,800	
3-3307-001	Waialua P2 Batt					8/1/2006	8/31/2006	21,035,570	
3-3307-001	Waialua P2 Batt					9/1/2006	9/28/2006	19,325,510	
3-3307-001	Waialua P2 Batt					9/29/2006	10/30/2006	19,217,230	
3-3307-001	Waialua P2 Batt					10/31/2006	11/30/2006	16,449,320	
3-3307-001	Waialua P2 Batt					12/1/2006	1/2/2007	13,884,930	
3-3307-001	Waialua P2 Batt								
3-3307-001	Waialua P2 Batt					3/2/2009	3/30/2009	9,263,940	
3-3307-001	Waialua P2 Batt					3/31/2009	4/30/2009	12,830,680	
3-3307-001	Waialua P2 Batt					5/1/2009	5/28/2009	13,191,740	
3-3307-001	Waialua P2 Batt					5/29/2009	6/29/2009	2,215,177	
3-3307-001	Waialua P2 Batt					6/30/2009	7/30/2009	2,145,953	
3-3307-001	Waialua P2 Batt					7/31/2009	8/17/2009	5,694,530	
3-3307-001	Waialua P2 Batt					8/18/2009	1/7/2010	169,990	
3-3307-001	Waialua P2 Batt	10/1/2009	10/31/2009	0	0				
3-3307-001	Waialua P2 Batt	11/1/2009	11/30/2009	0	0				
3-3307-001	Waialua P2 Batt	12/1/2009	12/31/2009	0	0				
3-3307-001	Waialua P2 Batt	1/1/2010	1/31/2010	2,729,240	0.090975	1/8/2010	2/1/2010	4,246,660	-1,517,420
3-3307-001	Waialua P2 Batt	2/1/2010	2/28/2010	1,687,410	0.082497	2/2/2010	3/8/2010	1,126,200	561,210
3-3307-001	Waialua P2 Batt	3/1/2010	3/31/2010	3,039,330	0.101311	3/9/2010	4/8/2010	2,014,220	1,025,110
3-3307-001	Waialua P2 Batt	4/1/2010	4/30/2010	7,961,050	0.274519	4/9/2010	4/29/2010	7,859,960	101,090
3-3307-001	Waialua P2 Batt	5/1/2010	5/31/2010	12,672,318	0.422411	4/30/2010	6/1/2010	15,052,490	-2,380,172
3-3307-001	Waialua P2 Batt	6/1/2010	6/30/2010	16,277,740	0.561301	6/2/2010	7/1/2010	16,227,740	50,000
3-3307-001	Waialua P2 Batt	7/1/2010	7/31/2010	14,379,140	0.479305	7/2/2010	8/2/2010	14,379,140	0
3-3307-001	Waialua P2 Batt	8/1/2010	8/31/2010	1,919,010	0.063967	8/3/2010	8/24/2010	1,919,010	0
3-3307-001	Waialua P2 Batt	9/1/2010	9/30/2010	0	0				
3-3307-001	Waialua P2 Batt	10/1/2010	10/31/2010	0	0				
3-3307-001	Waialua P2 Batt	11/1/2010	11/30/2010	0	0				
3-3307-001	Waialua P2 Batt	12/1/2010	12/31/2010	0	0				
3-3307-001	Waialua P2 Batt	1/1/2011	1/31/2011	0	0				
3-3307-001	Waialua P2 Batt	2/1/2011	2/28/2011	0	0				
3-3307-001	Waialua P2 Batt	3/1/2011	3/31/2011	0	0				
3-3307-001	Waialua P2 Batt	4/1/2011	4/30/2011	0	0				
3-3307-001	Waialua P2 Batt	5/1/2011	5/31/2011	0	0				
3-3307-001	Waialua P2 Batt	6/1/2011	6/30/2011	0	0				
3-3307-001	Waialua P2 Batt	7/1/2011	7/31/2011	0	0				
3-3307-001	Waialua P2 Batt	8/1/2011	8/31/2011	0	0				
3-3307-001	Waialua P2 Batt	9/1/2011	9/30/2011	0	0				
3-3307-001	Waialua P2 Batt	10/1/2011	10/31/2011	0	0				
3-3307-001	Waialua P2 Batt	11/1/2011	11/30/2011	0	0				
3-3307-001	Waialua P2 Batt	12/1/2011	12/31/2011	0	0				
3-3307-001	Waialua P2 Batt	1/1/2012	1/31/2012	0	0				
3-3307-001	Waialua P2 Batt	2/1/2012	2/29/2012	0	0				
3-3307-001	Waialua P2 Batt	3/1/2012	3/31/2012	0	0				
3-3307-001	Waialua P2 Batt	4/1/2012	4/30/2012	0	0				
3-3307-001	Waialua P2 Batt	5/1/2012	5/31/2012	0	0				
3-3307-001	Waialua P2 Batt	6/1/2012	6/30/2012	0	0				
3-3307-001	Waialua P2 Batt	7/1/2012	7/31/2012	0	0				
3-3307-001	Waialua P2 Batt	8/1/2012	8/31/2012	0	0				
3-3307-001	Waialua P2 Batt	9/1/2012	9/30/2012	0	0				
3-3307-001	Waialua P2 Batt	10/1/2012	10/31/2012	0	0				
3-3307-001	Waialua P2 Batt	11/1/2012	11/30/2012	0	0				

Waiiua Sugar

Col A

Dole Foods

Col B - A-B

Dole Foods

Aqua Engineers & Dillingham Ranch

Staff Summary of End Use Data for Dole Pumps 2, 1, & 7

Pump 2: Municipal Use

du: dwelling units; ac: acres

<u>TMK</u>	<u>Description</u>	<u>Units</u>	<u>County Standard</u>	<u>Planning gal/day</u>	<u>Total Use</u>
6-6-027:006	Otake Camp	du 3 ac 2	500 g/du 2500 g/ac	1,500 gpd 5,000 "	unspecified "
6-6-027:007	Otake Camp	du 30 ac 6	500 g/du 2500 g/ac	15,000 gpd 15,000 "	" "
6-6-027:008	Otake Camp	du 1 ac 1.5	500 g/du 2500 g/ac	500 gpd 3,750 "	" "
6-7-001:062	Millyard	du 25 ac 8.5	500 g/du 2500 g/ac	12,000 gpd 21,250 "	" "
6-7-001:063	Mill Camp	80 ac 8.5	500 g/du 2500 g/ac	40,000 gpd 21,250 "	" "
6-7-009:003	Kupahu Street	du 1 ac 26.5	500 g/du 2500 g/ac	500 gpd 66,250 "	" "
6-7-013:007	Puuiki Pavillions	4 ac 9.5	500 g/du 2500 g/ac	2,000 gpd 23,750 "	" "
Totals (potable)		du 144 ac 62	500 g/du 2500 g/ac	72,000 gpd 156,250 + "	" "
<hr/>					
6-7-009:003	Mill Area (non-potable)	ac 25	at 2500 g/ac at 4000 g/ac	62,000 gpd 100,000 gpd	" "
<hr/>					
Municipal Total (potable and non-potable)			500 g/du 2500 g/ac	72,000 gpd <u>156,250 gpd</u> 228,250 gpd	
			or 4000 g/ac	<u>100,000 gpd</u> 172,000	406,000
<hr/>					

At largest assumed rates, the total 228,250 gpd shows a leakage difference from reported use at 177,750, or 43% of reported use.

Staff Summary of End Use Data for Dole Pumps 2, 1, & 7

Pump 1: Agricultural Irrigation

gad: gallons per acre per day

<u>TMK</u>	<u>Description</u>	<u>Irrigated Acres</u>	<u>Standard</u>	<u>Planning gal /day</u>	<u>Total Use</u>
6-7-001:-13	Gilman Estate	5.19	4,000 gad	20,760	unspecified
6-7-001:026	Twin Bridge	59.49	"	237,960	"
6-7-001:037	Co-op	11.12	"	44,480	"
6-7-001:058	Co-op	23.71	"	94,840	"
6-7-001:063	Co-op	3.95	"	15,800	"
6-7-002:007	Co-op	12.5	"	50,000	"
6-7-002:014	"inthisane" (?)	10.8	"	43,200	"
6-7-002:037	Co-op	10.83	"	43,320	"
6-8-006:010	Castle & Cooke	<u>108.0</u>	"	<u>432,000</u>	"
Totals		245.59	4,000 gad	982,360 gpd	1,308,000 gpd

At County planning assumed rate of 4,000 gad, estimated use is less than reported use by 325,640 gad, or 25% of reported use, representing leakage.

Pump 7: Agricultural Irrigation

gad: gallons per acre per day

<u>TMK</u>	<u>Description</u>	<u>Irrigated Acres</u>	<u>Standard</u>	<u>Planning gal /day</u>	<u>Total Use</u>
6-6-022:001	Takenaka	32.853	4,000 gad	131,412	unspecified
6-6-023:003	Takenaka	6.600	"	26,400	"
6-6-024:001	Lovan/Takenaka	26.250	"	105,000	"
6-6-025:001	Lovan	21.190	"	84,760	"
6-6-025:002	Lovan	1.065	"	4,260	"
6-6-025:006	Lovan	1.031	"	4,124	"
6-6-027:010	Valley 2	<u>37.200</u>	"	<u>148,800</u>	"
Totals		126.729	4,000 gad	504,756 gpd	425,000 gpd

At County planning assumed rate of 4,000 gad, estimated use is greater than actual reported use, representing greater efficiency of use by 15%.