

## MINUTES

### REGULAR MEETING OF THE BOARD OF WATER SUPPLY

January 27, 2014

At 2:00 PM on January 27, 2014 in the Board Room of the Public Service Building at 630 South Beretania Street, Honolulu, Hawaii, Board Chair Miyashiro called to order the Regular Meeting.

Present: Duane R. Miyashiro, Board Chair  
Mahealani Cypher, Vice Chair  
Theresa C. McMurdo (arrived at 2:10 p.m.)  
David C. Hulihee  
Ross S. Sasamura  
Glenn M. Okimoto

Also Present: Ernest Lau, Manager and Chief Engineer  
Ellen Kitamura, Deputy Manager and Chief Engineer  
Alex Ubiadas  
Joe Cooper  
Paul Kikuchi  
Daryl Hiromoto  
Barry Usagawa  
Jason Takaki  
Jonathan Suzuki  
Ron Wada  
Marc Chun  
Teri Akana  
Jill Kuramoto

Others Present: Krishna Jayaram, Deputy Corporation Counsel  
Marilyn Ushijima, Deputy Corporation Counsel  
Craig Von Bargen, CDM Smith  
Chris Cleveland, Brown and Caldwell  
Glenn Hamamura, Systems Excellence LLC  
Eric Iwamoto, Bowers + Kubota  
Councilmember Kymberly Pine  
Matt Caires, City Council

Absent: Adam C. Wong

APPROVAL  
OF MINUTES

Approval of the Minutes of the Regular Meeting held on December 16, 2013

MOTION  
TO APPROVE

David Hulihee and Mahealani Cypher motioned and seconded, respectively, to approve the Minutes of the Regular Session Meeting of December 16, 2013. The motion was unanimously carried.

Manager Lau introduced and welcomed the Honorable Councilmember Kymberly Pine and her staff person Matt Caires. He also introduced the new Communications Information Officer Jill Kuramoto.

"January 27, 2014

AMENDMENT  
No. 1 TO  
RESOLUTION  
NO. 839, 2013

Chairman and Members  
Board of Water Supply  
City and County of Honolulu  
Honolulu, Hawaii 96843

Chairman and Members:

Subject: Amendment No. 1 to Resolution No. 839, 2013, Acceptance  
of Gift to the Board of Water Supply from Hawaii Energy in  
Support of Pumping Unit Efficiency Training and Energy  
Conservation Program Development

Attached is Resolution No. 839, 2013, Acceptance of Gift to the Board of  
Water Supply (BWS) from Hawaii Energy in Support of Pumping Unit  
Efficiency Training and Energy Conservation Program Development, which  
was approved on November 25, 2013.

We recommend the adoption of the attached Amendment No. 1 to  
Resolution No. 839, 2013, that corrects the total value of the gift to the BWS,  
City and County of Honolulu, in support of the Training and Energy  
Conservation Program Development. The original value inadvertently did  
not include smaller items of equipment that are part of the entire kit. The  
dollar amount of the smaller items equals \$1,193.43. This amount, together  
with the previous gift value of \$10,611.05, brings the total value of the gift to  
\$11,804.48.

Respectfully submitted,

/s/ ERNEST Y. W. LAU, P.E.  
Manager and Chief Engineer

Attachments"

DISCUSSION: There were no comments or discussion.

MOTION TO  
ADOPT  
AMENDMENT  
NO. 1 TO  
RESOLUTION  
NO. 839, 2013

Mahealani Cypher motioned to adopt Amendment No. 1 to Resolution No. 839, 2013, Acceptance of Gift to the Board of Water Supply from Hawaii Energy in Support of Pumping Unit Efficiency Training and Energy Conservation Program Development. The motion was seconded by Ross Sasamura and unanimously carried.

AMENDMENT NO. 1 TO RESOLUTION NO. 839, 2013, ADOPTED ON JANUARY 27, 2014			
	AYE	NO	COMMENT
DUANE R. MIYASHIRO	X		
MAHEALANI CYPHER	X		
THERESIA C. MCMURDO			ABSENT
ADAM C. WONG			ABSENT
DAVID C. HULIHEE	X		
ROSS S. SASAMURA	X		
GLENN M. OKIMOTO	X		



BOARD OF WATER SUPPLY  
CITY AND COUNTY OF HONOLULU

AMENDMENT NO. 1 TO RESOLUTION NO. 839, 2013

ACCEPTANCE OF GIFT TO THE BOARD OF WATER SUPPLY  
FROM HAWAII ENERGY  
IN SUPPORT OF PUMPING UNIT EFFICIENCY TRAINING  
AND ENERGY CONSERVATION PROGRAM DEVELOPMENT


WHEREAS, Resolution No. 839, 2013, which recommended the acceptance of energy efficiency data acquisition and logging equipment from Hawaii Energy totaling \$10,611.05, in support of Pumping Unit Efficiency Training and Energy Conservation Program Development, was approved on November 25, 2013; and

WHEREAS, inadvertently items that were part of the equipment kit were not included in the original listing, totaling \$1,193.43, bringing the total value of the gift in support of the Training and Energy Conservation Program Development to \$11,804.48; and

WHEREAS, gifts to the Board of Water Supply (BWS) are beneficial because assessing and increasing the efficiency of all of the BWS pumping units on the island could result in significant energy savings; now, therefore,

BE IT RESOLVED that the BWS hereby accepts the additional items valued at \$1,193.43 and directs the Manager and Chief Engineer, or his delegate, to accept and thank the various donors for these gifts.

ADOPTED:



DUANE R. MIYASHIRO  
Chairman

Honolulu, Hawaii  
January 27, 2014

# BOARD OF WATER SUPPLY

CITY AND COUNTY OF HONOLULU  
630 SOUTH BERETANIA STREET  
HONOLULU, HI 96843



November 25, 2013

KIRK CALDWELL, MAYOR

DUANE R. MIYASHIRO, Chairman  
MAHEALANI CYPHER, Vice Chair  
THERESIA C. McMURDO  
ADAM C. WONG  
DAVID C. HULIHEE

ROSS S. SASAMURA, Ex-Officio  
GLENN M. OKIMOTO, Ex-Officio

ERNEST Y. W. LAU, P.E.  
Manager and Chief Engineer

ELLEN E. KITAMURA, P.E.  
Deputy Manager and Chief Engineer *uk*

Chairman and Members  
Board of Water Supply  
City and County of Honolulu  
Honolulu, Hawaii 96843

Chairman and Members:

Subject: Adoption of Resolution No. 839, 2013, Acceptance of Gift to the  
Board of Water Supply from Hawaii Energy in Support of Pumping  
Unit Efficiency Training and Energy Conservation Program Development

We recommend acceptance of the proposed gift to the Board of Water Supply (BWS), City and County of Honolulu, from Hawaii Energy in support of our energy efficiency and conservation efforts via the Conservation Branch of the Water Resources Division. The donor's total value of this gift is \$10,611.05.

The BWS' Conservation Branch has historically emphasized water conservation. In recent years, the Branch has also been emphasizing the mutually beneficial relationship between water and energy conservation – recognizing that a considerable amount of water is needed to create energy, and a substantial amount of electrical energy is needed to pump, treat, store and deliver water. The 2013 Water Conservation Week Poster and Poetry Contest's theme "Save Water, Save Energy," of which Hawaii Energy was a partner, was one of the first public manifestations of that message. The Pumping Unit Efficiency Training, conducted by Hawaii Energy, is a technical component of this message. The BWS is currently the fifth largest consumer of electricity from the Hawaiian Electric Company. Therefore, the Conservation Branch is looking to develop its program to create new initiatives to reduce the use of energy.

This donation from Hawaii Energy will help the BWS develop a program to assess the efficiency of all its pumping units, island wide. With over 380 pumping units, this equipment, along with the training provided by Hawaii Energy, will help determine the logistical issues to accomplish this task.

We deeply appreciate the continued support of this Board for this very valuable and worthwhile energy conservation program. Not only does reducing our energy use reduce the operating cost of the BWS, it also helps conserve our natural resources.

Respectfully submitted,

ERNEST Y. W. LAU, P.E.  
Manager and Chief Engineer

Attachment

**APPROVED**

BOARD OF WATER SUPPLY  
CITY AND COUNTY OF HONOLULU

RESOLUTION NO. 839, 2013

ACCEPTANCE OF GIFT TO  
THE BOARD OF WATER SUPPLY  
FROM HAWAII ENERGY  
IN SUPPORT OF PUMPING UNIT EFFICIENCY TRAINING  
AND ENERGY CONSERVATION PROGRAM DEVELOPMENT

WHEREAS, the Board of Water Supply's (BWS) Conservation Program seeks to promote water conservation and energy conservation – recognizing the symbiotic relationship between water and energy, such that a considerable amount of water is needed to create energy, and a substantial amount of electrical energy is needed to pump, treat, store and deliver water; and

WHEREAS, the BWS may accept gifts to the Department as long as it does not provide special consideration, treatment, advantage, privilege, or exemption for or coerces a potential donor; and

WHEREAS, Hawaii Energy is offering a gift of energy efficiency data acquisition and logging equipment totaling \$10,611.05 for the BWS to use to develop its Pumping Unit Efficiency assessment program; and

WHEREAS, the gift to the BWS is beneficial because assessing and increasing the efficiency of all of the BWS pumping units on the island could result in significant energy savings; now, therefore,

BE IT RESOLVED that the BWS hereby accepts the gift valued at \$10,611.05 and directs the Manager and Chief Engineer, or his delegate, to accept and thank the donor for this gift.

ADOPTED:



DUANE R. MIYASHIRO  
Chairman

Honolulu, Hawaii  
November 25, 2013

ITEM FOR INFORMATION NO. 1

"January 27, 2014

FINANCIAL  
UPDATE FOR  
THE QUARTER  
ENDED  
DECEMBER 31,  
2013

Chairman and Members  
Board of Water Supply  
City and County of Honolulu  
Honolulu, Hawaii 96843

Chairman and Members:

Subject: Financial Update for the Quarter Ended  
December 31, 2013

The following Board of Water Supply's financial reports and graphs are attached:

- Budget vs Actual Revenue and Expense Totals
- Statement of Revenues, Expenses and Change in Net Assets
- Balance Sheet
- Budget vs Actual Appropriation Budget – Total BWS Summary
- Graph of Budget vs Actual Expenses from Capital Projects
- Graph Representing Operating Expenditures by Category
- Graphs of Total Budgeted Operating Expenditures and Total Budgeted Operating Revenues

Respectfully submitted,

/s/ ERNEST Y. W. LAU, P.E.  
Manager and Chief Engineer

Attachments"

The foregoing was for information only.

DISCUSSION: There were no comments or discussion.

Budget vs. Actual  
Revenue and Expense Totals  
As of December 31, 2013

	YTD Actuals	YTD Budget	Favorable/ (Unfavorable) Variance
Revenues	102,940,000	101,759,000	1,181,000
Operating Expenses	(61,300,000)	(82,606,000)	21,306,000
Net Revenues (expenditures)	<u>41,640,000</u>	<u>19,153,000</u>	<u>22,487,000</u>



Board Of Water Supply  
Statement of Revenues, Expenses And Change In Net Assets  
As of December 31, 2013

Current Month Actual	% Revenue	Last Year Actual	% Revenue	Description	Year to Date Actual	% Revenue	Last Year to Date Actual	% Revenue	% Change
REVENUE									
15,409,267.39	100.00	13,517,605.35	100.00	OPERATING REVENUE	102,249,112.04	100.00	92,833,089.77	100.00	10.14
15,409,267.39	100.00	13,517,605.35	100.00	REVENUE	102,249,112.04	100.00	92,833,089.77	100.00	10.14
OPERATING EXPENSES									
2,404,105.66-	15.60	2,244,686.12-	16.61	LABOR COSTS	15,125,085.14-	14.79	13,009,652.12-	14.01	16.26
935,187.60-	6.07	745,539.18-	5.52	SERVICES	5,591,207.72-	5.47	4,615,268.87-	4.97	21.15
426,474.05-	2.77	180,462.44-	1.34	SUPPLIES	2,203,753.71-	2.16	1,242,102.56-	1.34	77.42
2,813.00-	.02	1,589.87-	.01	EDUCATION & TRAINING	16,197.89-	.02	38,877.45-	.04	58.34-
1,661,489.16-	10.78	2,200,205.73-	16.28	UTILITIES	12,194,944.80-	11.93	13,239,061.13-	14.26	7.89-
91,209.07-	.59	191,389.68-	1.42	REPAIR AND MAINTENANCE	1,146,674.23-	1.12	2,240,218.66-	2.41	48.81-
1,061,121.59-	6.89	1,367,438.75-	10.12	MISC	8,882,237.39-	8.69	8,073,784.63-	8.70	10.01
1,257,925.66-	8.16	1,128,217.73-	8.35	RETIREMENT SYSTEM CONTRIBUTIO	6,455,258.70-	6.31	8,972,183.25-	9.66	28.05-
3,284.19-	.02	50,006.92	.37	MISC EMPLOYEES' BENEFITS	86,184.69	.08	29,205.79	.03	195.09
7,843,609.98-	50.90	8,009,522.58-	59.25	OPERATING EXPENSES	51,529,174.89-	50.40	51,401,942.88-	55.37	.25
238,892.40-	1.55	713,003.77-	5.27	NON OPERATING REVENUE AND EXPE	1,981,883.05-	1.94	3,761,965.45-	4.05	47.32-
329,649.20	2.14	1,634,602.35	12.09	CONTRIBUTION IN AID	4,643,503.51	4.54	6,794,247.02	7.32	31.66-
3,707,303.98-	24.06	4,217,084.14-	31.20	OTHER EXPENSES	24,427,541.86-	23.89	25,027,480.99-	26.96	2.40-
3,949,110.23	25.63	2,212,597.21	16.37	Change In Net Assets	28,954,015.75	28.32	19,435,947.47	20.94	48.97

Board Of Water Supply  
Balance Sheet  
As of December 31, 2013

Description	Amounts			Change	
	Current	Last Month End	Last Year End	This Month	This Year
ASSETS					
CURRENT ASSETS	42,923,266.01	36,788,072.78	39,231,152.60	6,135,193.23	3,692,113.41
RESTRICTED ASSETS	1,829,011.32	2,046,055.03	15,820,173.22	-217,043.71	-13,991,161.90
INVESTMENTS	220,093,924.19	220,093,924.19	194,327,978.98	0.00	25,765,945.21
OTHER ASSETS	6,161,944.95	8,599,184.04	8,861,200.80	-2,437,239.09	-2,699,255.85
PROPERTY / PLANT	1,132,730,145.47	1,132,772,188.75	1,138,464,175.73	-42,043.28	-5,734,030.26
TOTAL ASSETS	<u>1,403,738,291.94</u>	<u>1,400,299,424.79</u>	<u>1,396,704,681.33</u>	<u>3,438,867.15</u>	<u>7,033,610.61</u>
LIABILITIES					
CURRENT LIABILITIES	14,605,336.66	15,126,198.37	29,685,255.92	-520,861.71	-15,079,919.26
OTHER LIABILITIES	23,997,663.30	23,987,044.67	28,874,707.12	10,618.63	-4,877,043.82
BONDS PAYABLE, NONCURRENT	287,387,578.61	287,387,578.61	289,351,020.25	0.00	-1,963,441.64
LIABILITIES	<u>325,990,578.57</u>	<u>326,500,821.65</u>	<u>347,910,983.29</u>	<u>-510,243.08</u>	<u>-21,920,404.72</u>
NET ASSETS					
RETAINED EARNINGS	345,595,651.58	366,629,937.37	331,998,095.37	-21,034,285.79	13,597,556.21
FUND BALANCE	594,633,831.66	594,633,831.66	594,633,831.66		0.00
RESERVE FOR ENCUMBRANCES	107,955,877.91	86,921,592.12	121,553,434.12	21,034,285.79	-13,597,556.21
CURRENT YEAR CHANGES TO FU	29,562,352.22	25,613,241.99	608,336.47	3,949,110.23	28,954,015.75
NET ASSETS	<u>1,077,747,713.37</u>	<u>1,073,798,603.14</u>	<u>1,048,793,697.62</u>	<u>3,949,110.23</u>	<u>28,954,015.75</u>
TOTAL LIABILITIES AND NET ASSETS	<u>1,403,738,291.94</u>	<u>1,400,299,424.79</u>	<u>1,396,704,680.91</u>	<u>3,438,867.15</u>	<u>7,033,611.03</u>

## Budget vs Actual Appropriation Budget - Total BWS Summary

(\$000's)

CIFIS 14820-3021

AS OF 12/31/2013

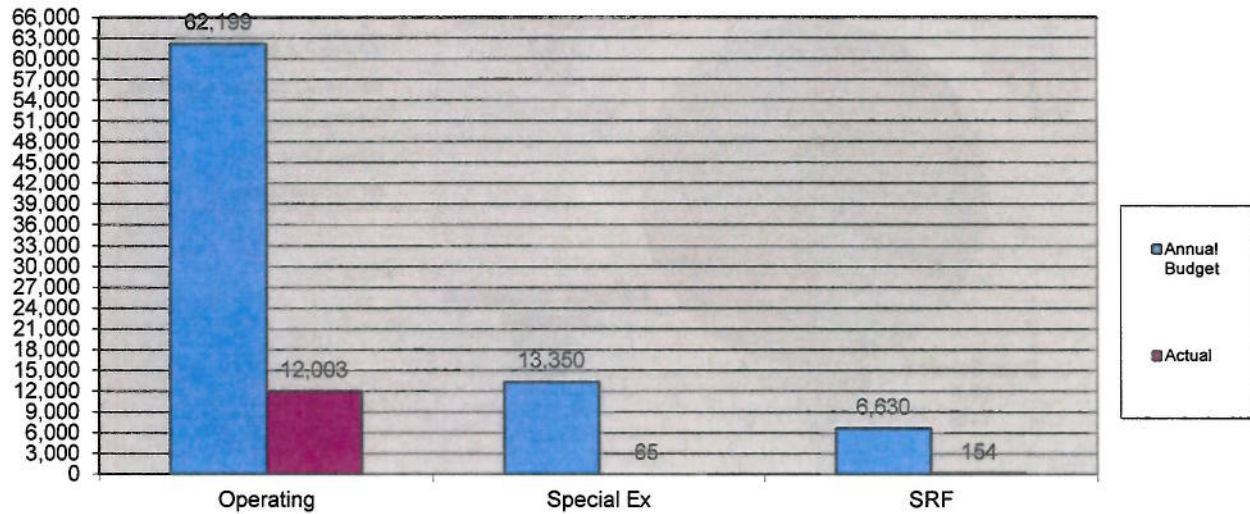
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BUSINESS UNIT ALL

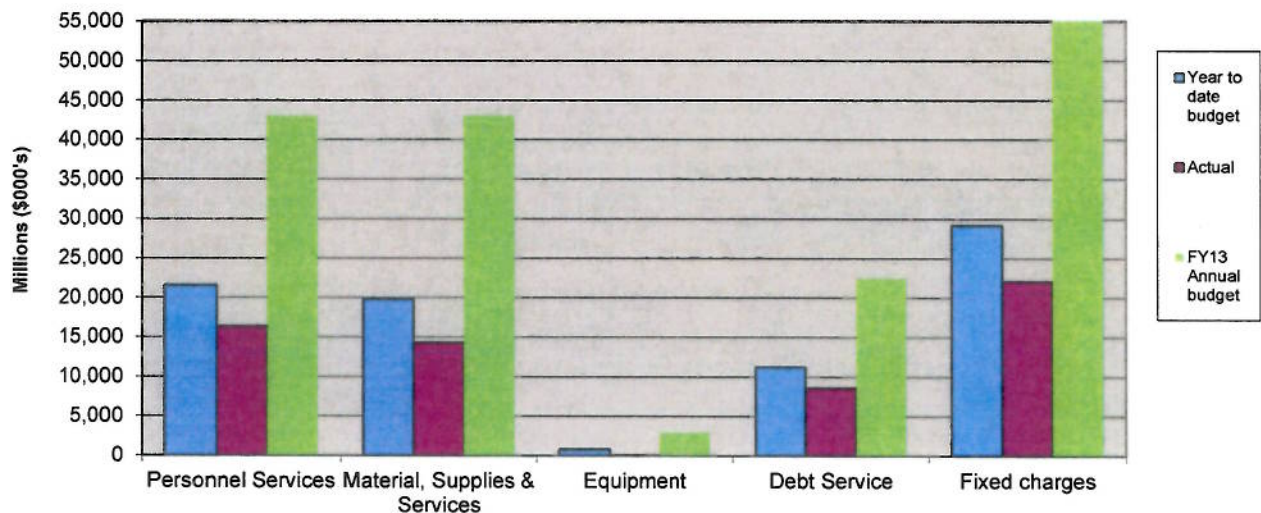
YTD-TO-DATE				FOR THE FISCAL YEAR					
YTD Actuals	YTD Budget	Avail/ (Over)	%	Object Description	Revenues/ Expend	Open Encumb	Annual Budget	Avail/ (Over)	%
102,940	101,759	(1,181)	1.16	REVENUE	102,940		203,518	100,578	49.42
OPERATING EXPENSES:									
16,338	21,587	5,249	24.32	Personnel Services	16,338		43,021	26,683	62.02
MATERIALS AND SUPPLIES									
5,166	8,618	3,452	40.06	Services	3,488	1,678	18,213	13,047	71.64
3,881	4,580	699	15.26	Supplies	2,545	1,336	10,057	6,176	61.41
53	217	164	75.58	Education & Training	38	15	478	425	88.91
	7	7	100.00	Utilities			14	14	100.00
936	1,569	633	40.34	Repairs & Maint	533	403	4,207	3,271	77.75
4,237	4,822	585	12.13	Misc	4,110	127	10,095	5,858	58.03
80	831	751	90.37	Equipment	25	55	2,950	2,870	97.29
8,545	11,240	2,695	23.98	Debt Service	8,545		22,479	13,934	61.99
FIXED CHARGES:									
13,027	15,906	2,879	18.10	Utilities	13,027		31,813	18,786	59.05
1,650	1,650			Case Fees	1,650		3,300	1,650	50.00
3,668	3,780	112	2.96	Retirement System Contribution	3,668		7,560	3,892	51.48
3,719	7,799	4,080	52.31	Misc Employees' Benefits	3,719		15,598	11,879	76.16
61,300	82,606	21,306	25.79	TOTAL OPERATING EXPENDITURES	57,686	3,614	169,785	108,485	63.90
41,640	19,153	(22,487)		NET REVENUES (EXPENDITURES)	45,254	(3,614)	33,733	(7,907)	



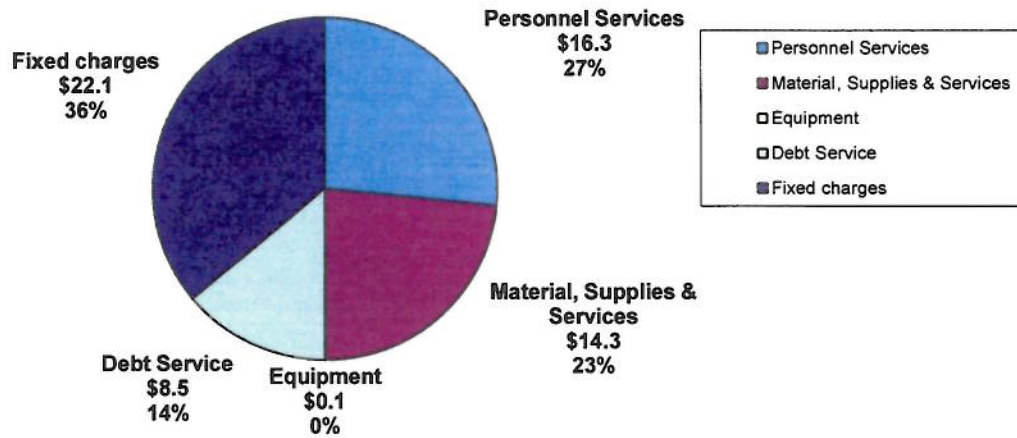
**FY 2014 Capital Program (Annual Budget vs. Actual Expenditures and Encumbrances)**  
as of December 31, 2013 (millions of dollars)



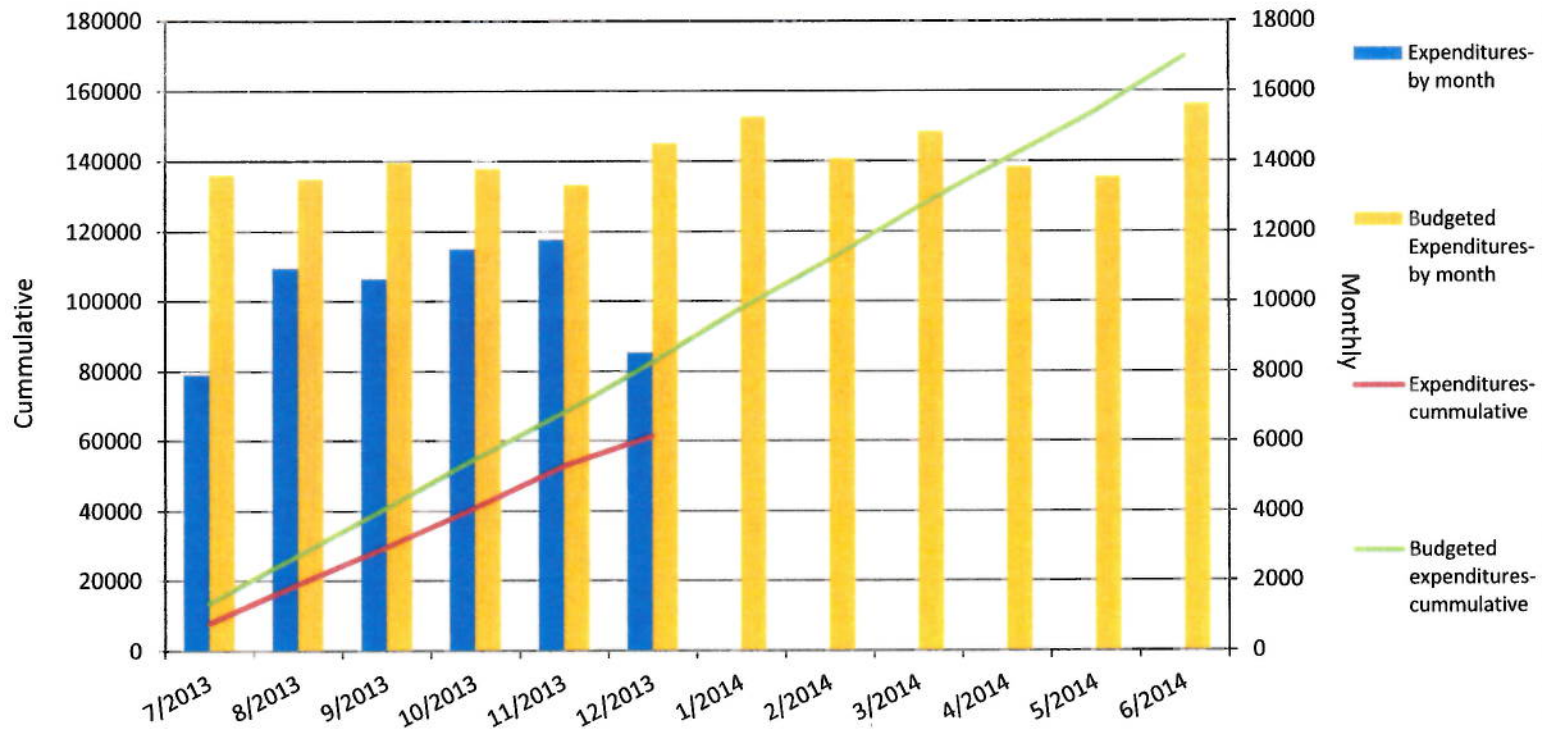
**Operating Expenditures by Category (Budget vs. Actual Expenditures and Encumbrances)**  
as of December 31, 2013 (millions of dollars)



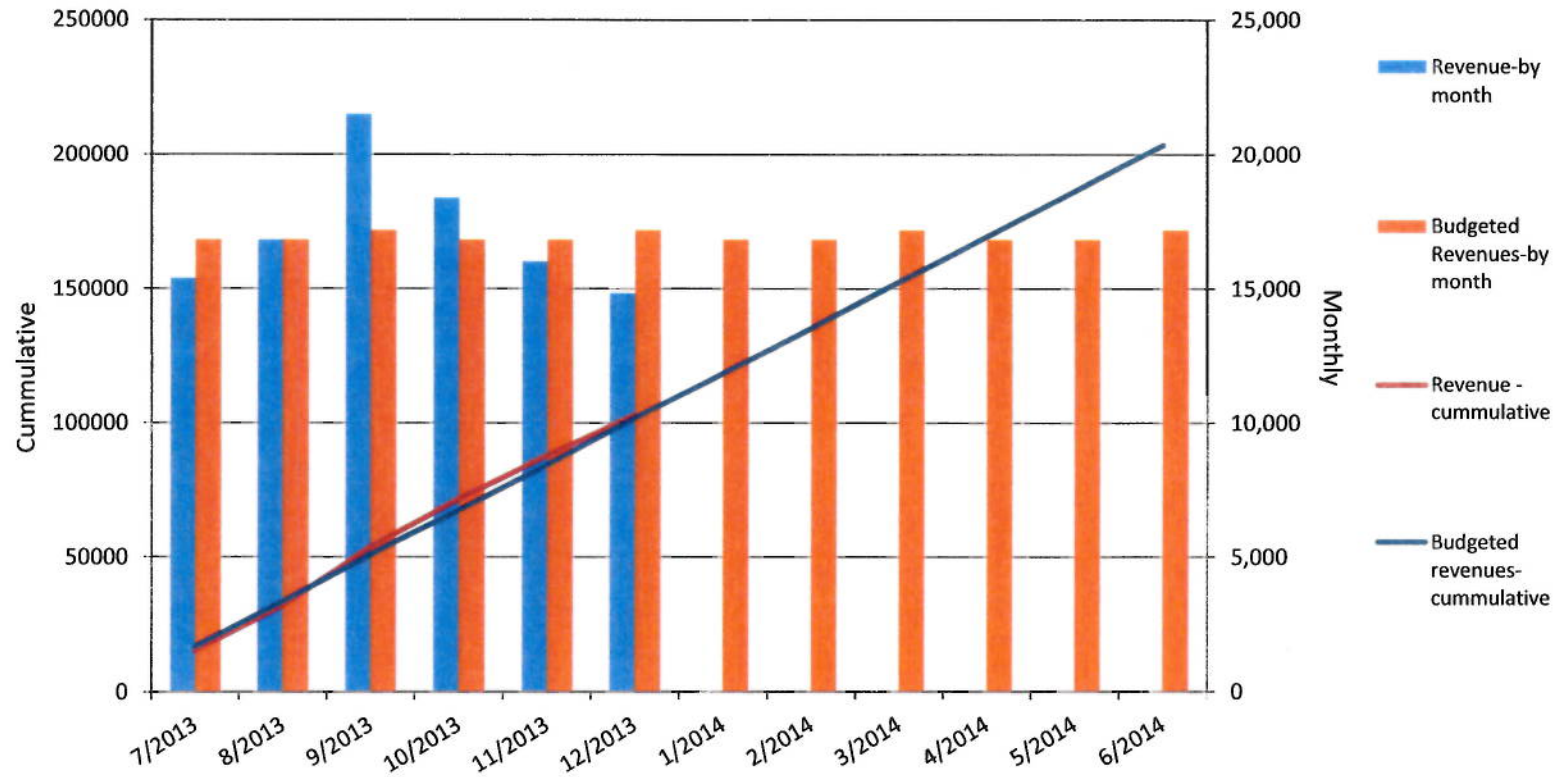
**Total Operating Expenditures -\$61.3**  
**As of December 31, 2013**  
(millions of dollars)



## BUDGETED OPERATING EXPENDITURES FY 2014



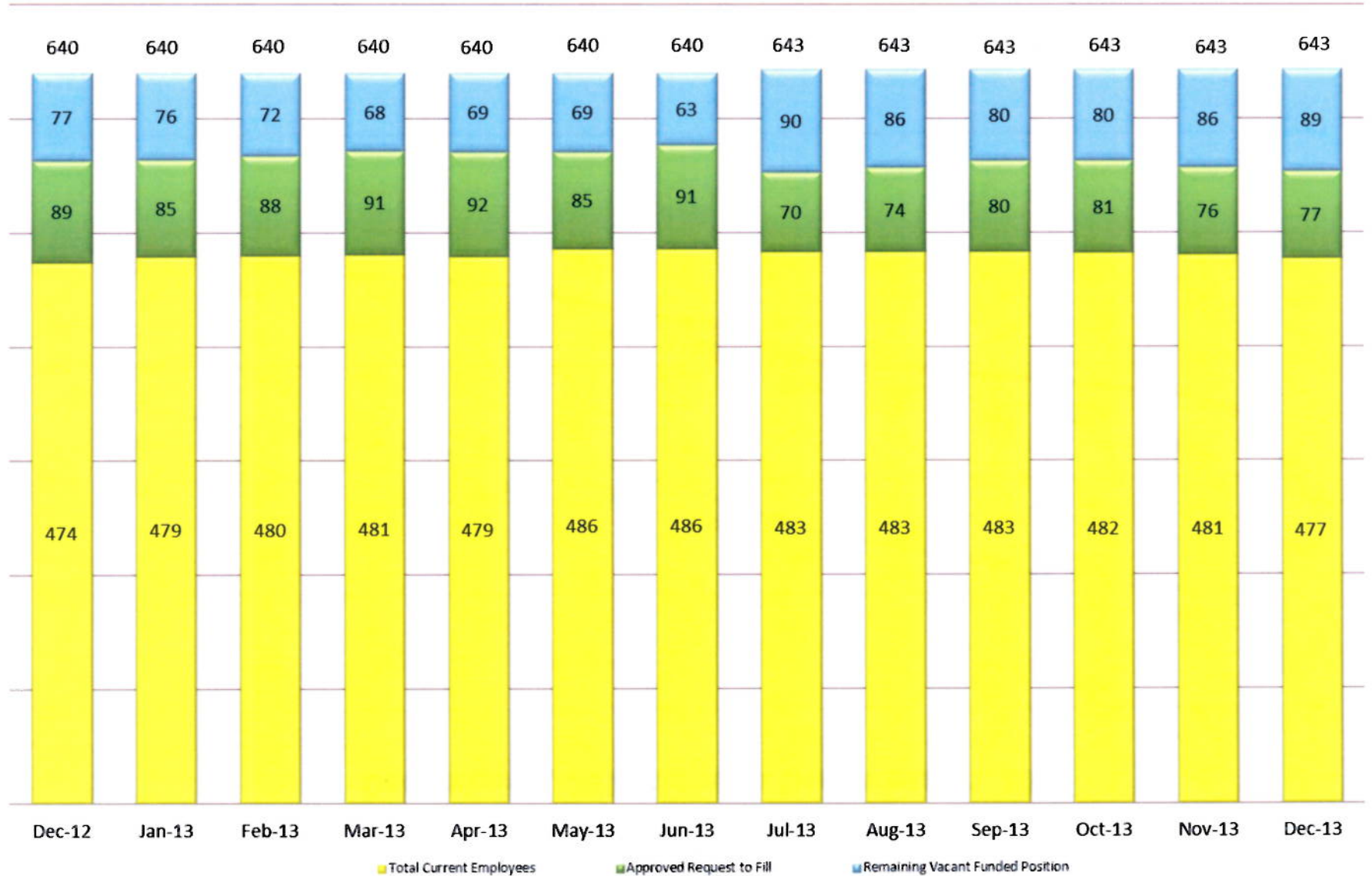
# BUDGETED OPERATING REVENUES FY 2014



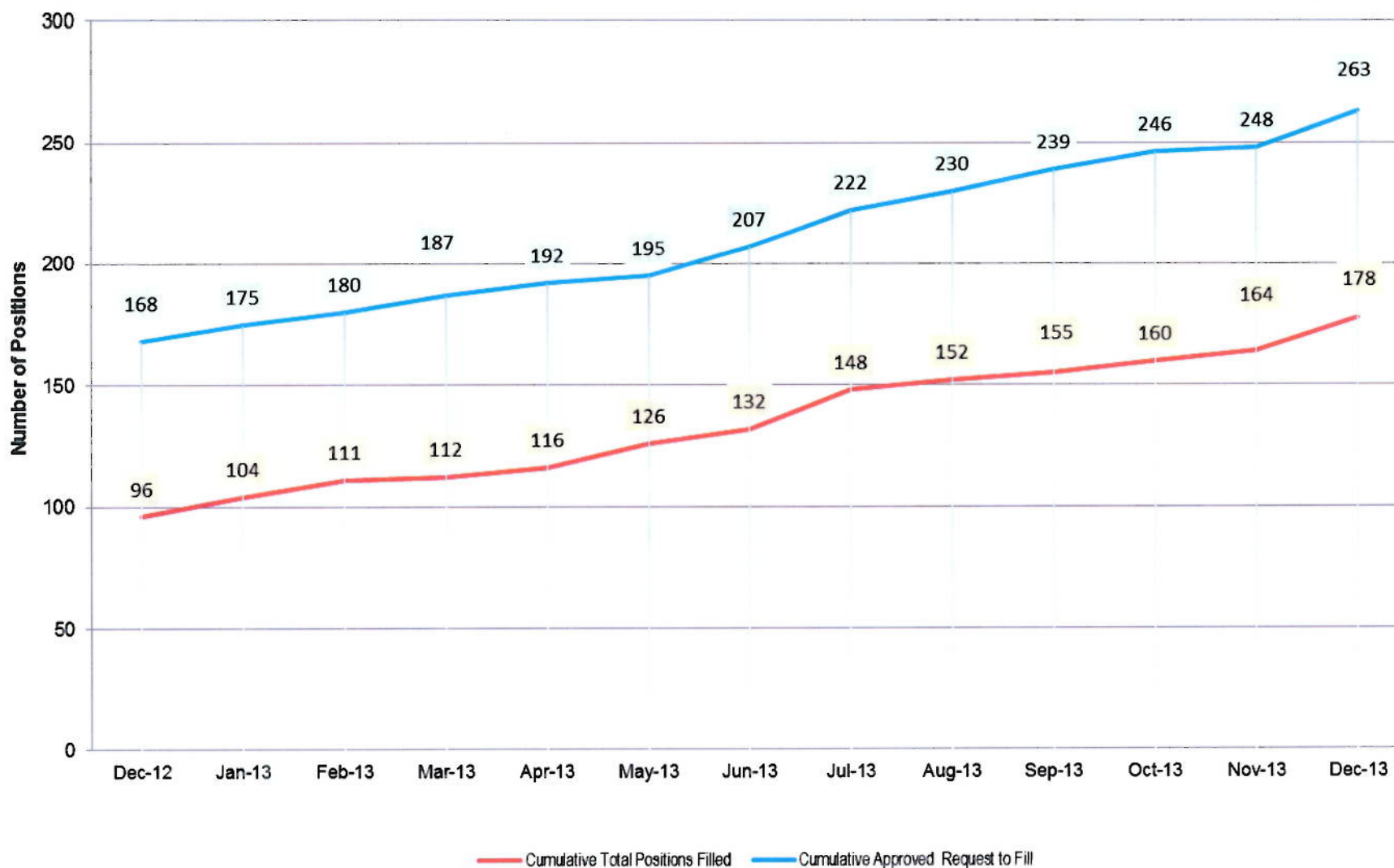


ITEM FOR INFORMATION NO. 2

## Positions Filled December 1, 2012 through December 31, 2013



## Cumulative Totals December 1, 2012 through December 31, 2013

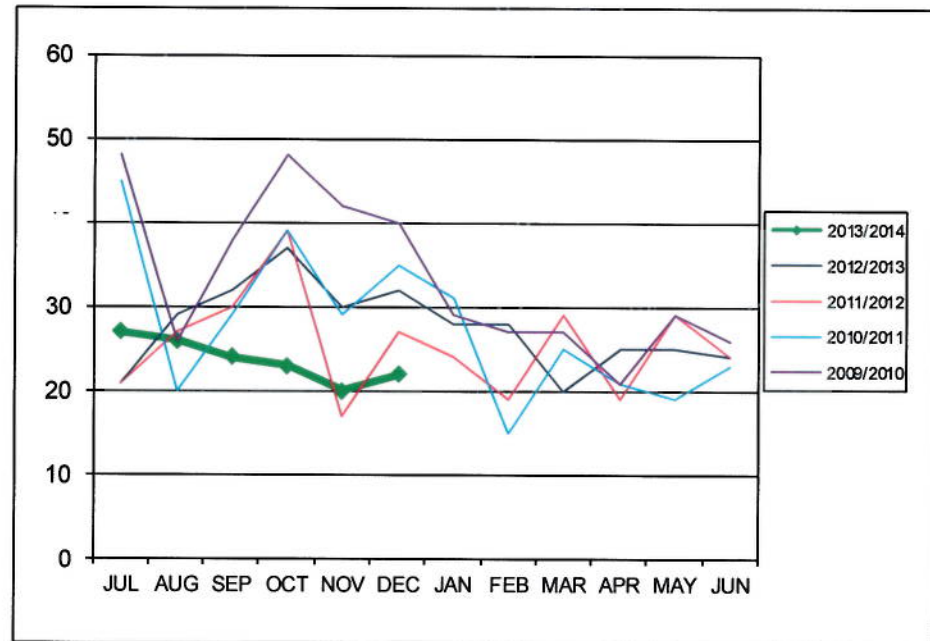


DISCUSSION:       There were no comments or discussion.

## WATER MAIN REPAIR REPORT for December 2013

	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	Total
<b>2013/2014</b>	<b>27</b>	<b>26</b>	<b>24</b>	<b>23</b>	<b>20</b>	<b>22</b>							<b>142</b>
<b>2012/2013</b>	21	29	32	37	30	32	28	28	20	25	25	24	331
<b>2011/2012</b>	21	27	30	39	17	27	24	19	29	19	29	24	305
<b>2010/2011</b>	45	20	29	39	29	35	31	15	25	21	19	23	331
<b>2009/2010</b>	48	26	38	48	42	40	29	27	27	21	29	26	401

<u>Date</u>	<u>Address</u>	<u>Size</u>	<u>Cause</u>
12/2	1190 Dillingham Blvd.	12" C.I.	Corrosion
12/3	3114 Monsarrat Ave.	6" C.I.	Unknown
12/6	459 Kalama St.	6" C.I.	Corrosion
12/7	224 Mokauea St.	8" C.I.	Corrosion
12/12	3752 Old Pali Rd.	8" C.I.	Corrosion
12/15	2073 Hoolaulea St.	12" C.I.	Unknown
12/15	5509 Kawaiui St.	8" C.I.	Unknown
12/15	92-902 Welo St.	8" D.I.	Settlement
12/16	45-270 Waikalua Rd.	8" C.I.	Settlement
12/16	3215 Lower Rd.	6" C.I.	Damage
12/17	98-473 Kaonohi St.	8" C.I.	Corrosion
12/18	61-168 Punalau St.	4" A.C.	Corrosion
12/18	1268 Nanakai St.	8" P.V.C.	Settlement
12/18	94-1062 Pulelo St.	8" P.V.C.	Settlement
12/21	86-497 Paheehee Rd.	8" C.I.	Corrosion
12/21	Prince Edward St. near Uluniu St.	4" D.I.	Corrosion
12/22	1221 Nanakai St.	8" P.V.C.	Settlement
12/23	459 Kalama St.	6" C.I.	Unknown
12/25	824 Kahena Pl.	4" C.I.	Corrosion
12/26	2202 Pauoa Rd.	4" Galv.	Corrosion
12/28	1440 Akialoa Pl.	8" C.I.	Unknown
12/31	111 Kaiolino Wy.	4" C.I.	Corrosion



**Bold \* - Pro-active Leak Repair**

28.4 miles of pipelines were surveyed by the Leak Detection Team in the month of December



DISCUSSION: Field Operations Program Administrator Daryl Hiromoto informed the Board that there were 22 main breaks for the month of December 2013. Currently, at halfway through the fiscal year, there have been about 142 main breaks. If this trend continues, it is projected that there may be less than 300 main breaks at the end of the fiscal year.

Chair Miyashiro asked Mr. Hiromoto to explain what they are doing differently to result in less breaks. Mr. Hiromoto replied that improvements were made to manage the system better by allowing the water to flow more naturally with less pumping, which results in less stress on the pipelines. Mr. Miyashiro thanked Mr. Hiromoto and said to keep up the good work.

ITEM FOR INFORMATION NO. 4

"January 27, 2014

BOARD OF  
WATER SUPPLY  
WATER MASTER  
PLAN

Chairman and Members  
Board of Water Supply  
City and County of Honolulu  
Honolulu, Hawaii 96843

Chairman and Members:

Subject: Quarterly Update of the Board of Water Supply  
Water Master Plan

In October 2013, we presented the three (3) phases of the Board of Water Supply Water Master Plan's (WMP) approach and schedule. The Phase 1 initial evaluation, plan methodology and scoping have been completed. In December 2013, the Phase 2 condition assessments and water system analyses were initiated and should continue through 2014. Upon completion of the system assessments, our consultants will compile proposed projects into a 30-year Capital Improvement Program (CIP) with a supporting WMP document and conduct a financial plan and rate study to adequately fund the CIP and operating programs.

Concurrently, our consultants are evaluating and improving the CIP implementation process of planning, engineering, design and construction, to ensure best practices, sufficient technical staffing, collaborative coordination and project tracking procedures are in place.

A communications plan to support the internal and external WMP key messages are in place. A quarterly newsletter is attached for your information.

Respectfully submitted,

/s/ ERNEST Y. W. LAU, P.E.  
Manager and Chief Engineer

Attachment"

The foregoing was for information only.

DISCUSSION: Water Resources Program Administrator Barry Usagawa updated the Board on the Water Master Plan (WMP).

Board Member McMurdo inquired how the quarterly newsletter was distributed and if it was distributed at neighborhood board meetings. Mr. Usagawa replied that during October-November, the BWS neighborhood board representatives spoke briefly about the WMP at their neighborhood board meetings.

Mr. Miyashiro asked if the newsletter was only internal at this point. Mr. Lau replied that it was, but they will be discussing the variety of ways to distribute the newsletter, both internally and externally. He added they will distribute the newsletter at the neighborhood boards, in bill inserts to the customers, and posting it on the BWS website. Board Vice Chair Cypher agreed that including the newsletter as a bill insert is a good idea.

Ms. McMurdo commented that the newsletter is not very inviting to look at. She stated that many people wouldn't read it because it is very text heavy. Ms. McMurdo suggested that there be one key, prominent message for the customer to take away. Ms. Cypher suggested that the handout be short and simple, and Mr. Lau added that the handout could refer the customers to a link on the BWS website for more information. The Board Members and the Manager also discussed adding more pictures on the newsletter of consumers and BWS employees.



## Water Master Plan Newsletter Volume 1, No. 1

**THE BOARD OF WATER SUPPLY** is changing and adapting to the needs of its customers in the 21st Century to provide safe, reliable and affordable water.

Our needs are substantial because our aging water systems are large and complex. We have 2,100 miles of pipes, 184 pump stations and 172 reservoirs. Much of our system is more than 50 years old.

That's why we are creating the BWS Water Master Plan (WMP). Upgrading our water system is crucial to our future as an independent water agency serving the people of Oahu.

Inevitably, changes will have to be made – and change can be hard. Everyone will have questions and concerns. However, we can't make this plan work without you, our employees. One step to ensure that you will know what's coming up is this newsletter.

Here is how we will develop the WMP:

- ✓ We will make a comprehensive condition assessment of our pipelines, pumps, reservoirs, sources, treatment and office facilities.
- ✓ After the assessment, we will develop a long-range water master plan and a 30-year capital improvement program with repair, replacement and upgrade projects.
- ✓ With a CIP plan in place, we will create financial plan and a rate to fund these projects.

The project started in March 2013 and we expect it to be completed in 2-1/2 years.

**Condition Assessment:** Our water system pipelines and facilities will be inspected, tested and analyzed to estimate their remaining useful life and their criticality. Project priorities will be established based on these assessments. For example, pipelines will be evaluated based on main break and leak analyses and pipeline replacement priorities established.

**CIP:** Our customers cannot afford to fund all the necessary projects at one time so work must be phased over time with critical projects done first.

We will develop a 30-year CIP. We will prioritize projects developed during the Condition Assessment phase and establish cost and construction schedules. Critical projects will be done first, with other projects phased over the 30-year period.

**Financial Plan and Rate Study:** Our funding requirements will be estimated based on the CIP program and operating costs. The cost of service for different users (e.g. residential, commercial, industrial, agricultural, nonpotable, recycled water) will be determined to ensure every customer pays their fair share. Based on the revenue requirements, the rate study will develop a rate structure that will be equitable to all our customers. We will create a public outreach program to engage our customers in the development of a revised rate schedule.

**Implementation of the CIP:** The construction of CIP projects is the most important part of this program. Otherwise, the plan is another stack of paper sitting on a shelf.

To support the implementation of the CIP, the BWS has engaged consultants to evaluate BWS processes and organizational structures, develop and assist in implementing best practices and to identify possible organizational improvements. Brown and Caldwell will be working with capital projects and Bowers and Kubota with construction.

**WMP Project Team:** CDM Smith, a national engineering consulting firm, will develop the plan. Ernie Lau and Ellen Kitamura are leading this effort with Barry Usagawa serving as the executive sponsor and facilitator. BWS division heads will be heavily involved along with a core group of BWS branch and section heads that will provide technical review and support.

Ron Wada is the project manager with Russ Stepp and Dave Jochim from Stepp Consulting serving as program advisers.

Expect more detailed information on the project in future newsletters. We hope to have quarterly newsletters that will discuss work underway or completed.



## ITEM FOR INFORMATION NO. 5

### CAPITAL PROJECTS PROGRAM AND CONSTRUCTION MANAGEMENT PRESENTATION

#### DISCUSSION:

Capital Projects Program Administrator Jason Takaki introduced Jonathan Suzuki, Capital Projects Assistant Program Administrator; Chris Cleveland from Brown and Caldwell; and Eric Iwamoto from Bowers + Kubota. Mr. Takaki stated that Mr. Cleveland and Mr. Iwamoto are helping with Capital Project Division's optimization efforts.

Following Mr. Takaki's presentation, Ms. Cypher inquired if the communications plan will include collaborating with the Communications Office. Mr. Takaki replied that it will, in order to have better communication both internally and externally.

Board Member Okimoto referred to the Communicating Performance slide and stated that there needs to be an award to Notice to Proceed because sometimes the project manager will proceed, accommodating the contractor's schedule. Mr. Takaki agreed. In reference to the same slide, Mr. Miyashiro inquired if the Department will stick to the suggested targets. Mr. Takaki pointed out that the metrics shown are just a draft, and the core team is still reviewing them. The metrics and targets may change.

Mr. Miyashiro asked if the action plan to improve effectiveness will impact the current fiscal year's capital improvement program budget. Mr. Lau replied that this improvement process on how the Capital Projects Division delivers projects will take some time to develop, so it will not affect the current budget. Mr. Takaki added that the improvements to this program will take years to implement due to staffing challenges and processes that are beyond the Department's control. Board Member Hulihee stated that projects differ, so each project will have different metrics. Mr. Lau agreed and stated that they face many challenges, but steps are being taken to improve and challenge the status quo.

Ms. McMurdo requested an explanation of why improvements will take years to complete. Mr. Cleveland explained that some things can be implemented right away, in terms of structure; however some improvements involve cultural change within the organization, which will take years to fully implement. One example shared by Mr. Cleveland was that they would like to have projects fully defined before placing them in the Capital Improvement Program so that they are ready to execute once approved. Another example is defining which project delivery mechanisms work best for the interest of the Department and putting the right contracting procedures in place to make it successful each time. Mr. Cleveland explained that these are some things that will take time within the organization to take place. Ms. McMurdo expressed her concern about the improvements taking several years to complete. Mr. Cleveland assured Ms. McMurdo that working on this project will not sidetrack the Division from trying to get the projects executed faster, but the two will work in parallel to assure consistent performance over time. Deputy Manager Kitamura explained that Mr. Cleveland and Mr. Iwamoto bring their expertise to the Department to teach the engineers best practices, which will not affect the execution of the projects. Mr. Lau assured Ms. McMurdo that this effort to make changes is underway, but at the same time, the staff is working very hard to get the projects out as best as they can, given the challenges that they face. Mr. Lau stated that the Department understands that the Board wants the projects delivered quickly, but he wanted to point out to the Board that it is important the projects are delivered with quality so they don't face long term problems. If

current practices are continued and projects are rushed, projects may not be constructed in an optimal or best practices fashion.

Ms. Cypher suggested that BWS educate the public on the improvement plans the Department is working on, in order to service the customers better and to keep things affordable for them.

Mr. Miyashiro thanked Mr. Takaki for his report. Mr. Takaki thanked the Board for their time and support.

2



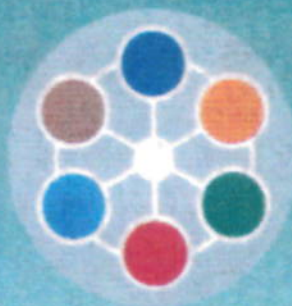
WATER FOR LIFE

*Safe, dependable, and affordable water now and into the future*



Board of Water Supply  
City and County of Minnesota

# Capital Projects Program and Construction Management



Board of Water Supply  
January 27, 2014





## Project Context

- Mission:  
*Safe, dependable, and affordable water...*
- It's all about our assets ...
  - Current assets represent **at least \$4-5 billion** community investment!
  - We will be adding **\$80 million / year**
- CPD delivers the assets (*new + replacements*)
- Key to long-term BWS success





## What Is CPD's Current Role?



- Execute annual budget
- Develop project plans and specifications (engineering)
- Review and approve external agency plans
- Head Water System Standards committee
- Oversee water system construction (inspection)

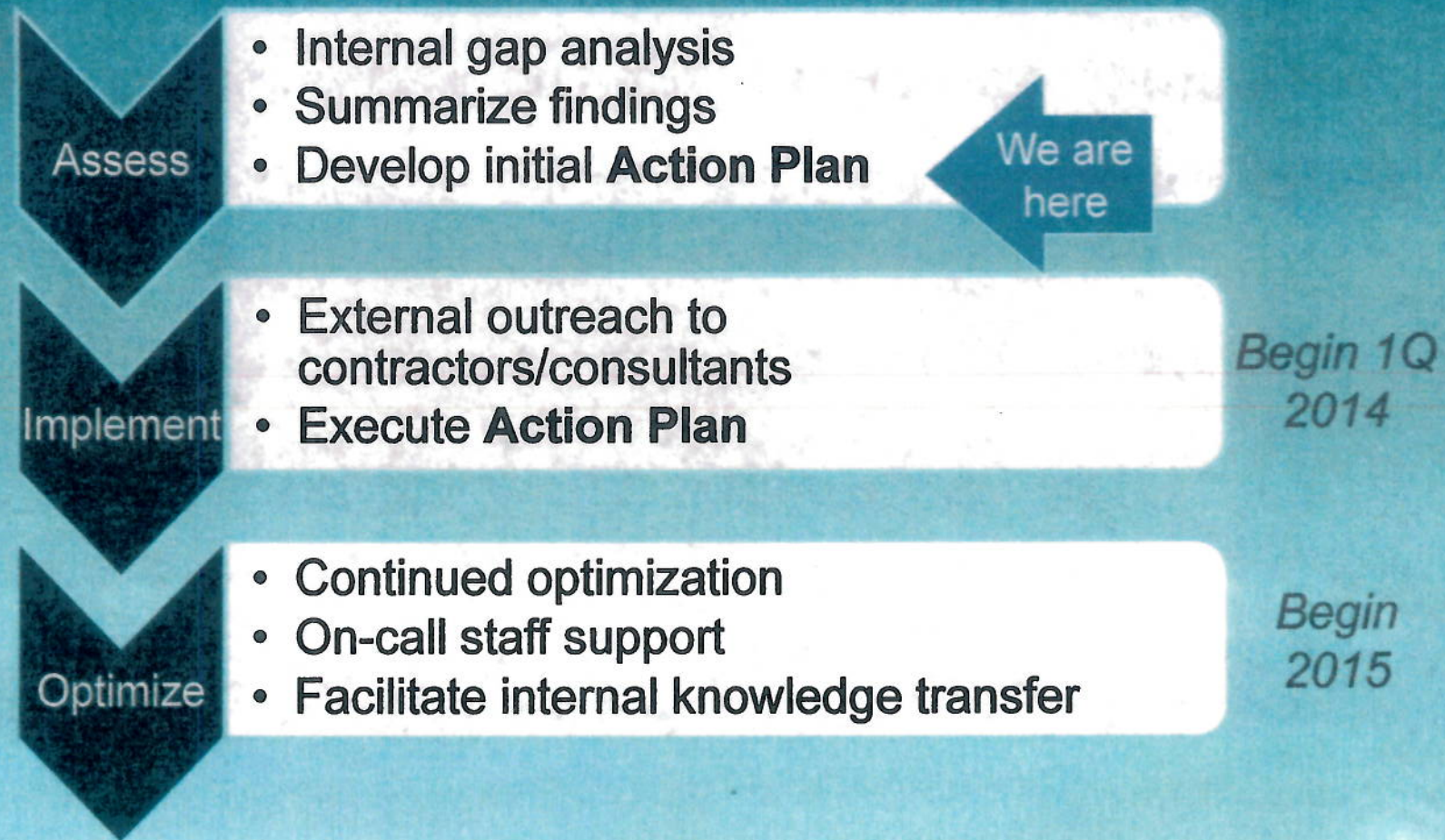


- Transfer completed assets to operations





## CPD Optimization Overview







## Desired Outcomes

Safe, dependable, and affordable water...



BWS is a 'preferred' owner

- Enlist top contractors and consultants
- Shared and equitable risk management



Consistent project delivery

- Predictable schedules
- Reliable estimates and fewer change orders



Project quality assurance

Prepared to execute Water Master Plan





## Assessment

- Review current practices
- Interview internal customers
- Interview Division staff
- Identify level of service “gaps”
- Identify best practices
- Develop and prioritize achievable **Action Plans** to improve effectiveness

***Recognize need to improve project delivery***







## Initial Findings (Engineering)

- Update the project definition process
- Establish standard practices for project scoping and budgeting
- Identify metrics to better communicate status
- Develop electronic data management tools
  - Project Management Information System (PMIS)
  - Project information archive
- Succession plan





## Initial Findings (Inspections)

- Establish standards to improve quality and consistency
  - Scope projects to better capture existing conditions
  - Define risks and permitting needs
  - Define roles and responsibilities
- Manage work requirements to leverage in-house capabilities
- Develop electronic tools to streamline reporting
- Succession plan





## Communicating Performance

Metric	Developed	Suggested Target	How Used
<b>Days to Advertise</b>	Measured as the days between when project sent to Procurement and Notice to Post for bids	Less than 30 days	Trended to measure coordination with Procurement, bid efficiency
<b>Days to Award</b>	Days between posting and Notice to Award	Less than 30 days	Trend information to measure the completeness of the design.
<b>Actual Cost / Budgeted Cost</b>	Ratio of Project planned and/or budgeted costs against the actual accrued project costs	Range 1.00 - 1.10	Trended to measure the efficiency of project development process (could track for planning, design and construction project phases)
<b>Budgeted Project Duration / Actual Project Duration</b>	Ratio of Project planned duration divided by actual duration (months).	Greater than 1.0	Project delivery effectiveness, schedule management. Assist in better managing stakeholder expectations
<b>Permitting Duration</b>	Measured as the days between submittal for coordinating agency permits and date response received	60 days	Although not in direct control of BWS, this appears to have significant impact on the project duration. May track for each key permitting agency.
<b>Actual Project Start Date less Planned Start Date</b>	Measured as the actual project start date less the planned start date in CIP	Less than 30	Trended to indicate project delivery consistency and prioritization effectiveness.
<b>Change Order Ratio</b>	Measured as the total cost of change orders divided by the Contractor's bid price.	Range 5 – 8 % Consider different rates for Project type	Indicator of design completeness / clarity / thoroughness and ability to anticipate unforeseen conditions. Identify inspection effectiveness

*Board thoughts and perspectives?*





## Next Steps

- Form Core Team - *December 2013* ✓
- Prepare **Action Plan** - *February 2014*
- Engage external partners - *Spring 2014*
  - *Consultants*
  - *Contractors*
- Begin implementation - *Spring 2014*  
*...likely take several years to complete*



ITEM FOR INFORMATION NO. 6

QUARTERLY CAPITAL IMPROVEMENT PROGRAM STATUS REPORT  
ALL DIVISIONS

Quarter	JUL-SEPT	OCT-DEC	JAN-MAR	APR-JUN	Awarded to Date	Total Budgeted
Design Contracts Awarded (\$)	\$17,544.00	\$1,321,785.00	\$0.00	\$0.00	\$1,339,329.00	\$16,144,000.00
Construction Contracts Awarded (\$)	\$2,189,909.00	\$3,541,818.45	\$0.00	\$0.00	\$5,731,727.45	\$51,423,000.00
Project Totals	\$2,207,453.00	\$4,863,603.45	\$0.00	\$0.00	\$7,071,056.45	\$67,567,000.00

Quarter	JUL-SEPT	OCT-DEC	JAN-MAR	APR-JUN	Totals
Design Contracts Completed (\$)	\$0.00	\$1,546,498.00	\$0.00	\$0.00	\$1,546,498.00
Construction Contracts Completed (\$)	\$4,142,532.66	\$211,192.00	\$0.00	\$0.00	\$4,353,724.66
Totals	\$4,142,532.66	\$1,757,690.00	\$0.00	\$0.00	\$5,900,222.66

On Going Design Projects (#)	167
On Going Design Projects (\$)	\$65,486,559.65
On Going Construction Projects (#)	57
On Going Construction Projects (\$)	\$175,258,622.54

CAPITAL IMPROVEMENT PROGRAM QUARTERLY UPDATE - ALL DIVISIONS

**DESIGN AND CONSTRUCTION PROJECTS AWARDED - SECOND QUARTER FY 2014**

Item #	Project Title	Expend Type	Budget Amount	Awarded
003A1	Construction Management for Kapiolani Boulevard 12-Inch Main, Job 12-007	Const	600,000.00	600,000.00
004B	Makaha Wells V, Replacement of Pumping Unit	Const	162,000.00	162,000.00
020A	Mililani Wells IV: Replacement of Pump No. 2	P&E	137,969.00	137,969.00
24	Kilauea Avenue 8-Inch Main	Const	525,000.00	630,908.45
37	Niimalu Loop and Kukii Street 8-inch Main	P&E	140,000.00	244,900.00
042A	Beretania Engineering Building Interior Repainting	Const	240,838.00	240,838.00
042E	Kaonohi 277 and Moanalua 405 No. 1 and No. 2 Reservoir Repairs	Const	1,908,072.00	1,908,072.00
50	Security Fencing at Various Locations	P&E	100,000.00	478,442.00
051B	Waimalu 217, Waiau 285 and 550, and Pearl City 865 Reservoirs	P&E	39,941.00	39,941.00
056A	Geotechnical Survey for FY15 Pipeline Projects	P&E	370,979.00	370,979.00
056B	Archaeological Services for Installation of Fire Hydrants at Various Locations in Kailua	P&E	46,276.00	46,276.00
056C	State of Hawaii fees for plan reviews and approvals	P&E	3,278.00	3,278.00
	<b>2nd Quarter totals</b>		<b>4,274,353.00</b>	<b>4,863,603.45</b>

**DESIGN AND CONSTRUCTION PROJECTS COMPLETED - SECOND QUARTER FY 2014**

Job #	Project Title	Date	Amount
12-014H	Wilhelmina Rise Booster I: Repair of Pump No. 2	8/26/2013	\$32,249.00
12-014R	Kunia Booster: Repair of Pump No. 1	9/17/2013	\$55,543.00
2006-025D	Facility Repair and Renovation, Honolulu	10/10/2013	\$431,131.00
12-014D	Pearl City Shaft: Repair of Pumping Units	10/22/2013	\$123,400.00
2006-031	Kaluanui Wells Renovation	11/5/2013	\$146,682.00
2009-016	Beretania PSB Air Conditioning System Improvements	11/5/2013	\$178,738.00
2000-094	Honouliuli 228 Reservoir No. 3	11/8/2013	\$789,947.00
	<b>2nd Quarter totals</b>		<b>1,757,690.00</b>

DISCUSSION:

Capital Projects Program Administrator Jason Takaki briefed the Board on the Capital Improvement Program Quarterly Status. Board Member Okimoto stated that half a year has gone by and only 10 percent of the work has been done. He inquired if the Department will be able to spend the \$51 million budgeted by the end of the fiscal year. Mr. Takaki and Mr. Lau discussed the Department's continuing efforts to award the contracts early on to avoid rushing at the end of the fiscal year. There is an improvement from last year, however, they are still not where they want to be and will continue to improve.

ITEM FOR INFORMATION NO. 7

"January 27, 2014

GROUNDWATER  
LEVELS

Chairman and Members  
Board of Water Supply  
City and County of Honolulu  
Honolulu, Hawaii 96843

Chairman and Members:

Subject: Status Update of Groundwater Levels at All Index  
Stations

There is one aquifer index well within low groundwater status for the production week that ended on January 4, 2014. Kaimuki is under an alert status. The weekly production average for the period was 125.80 million gallons per day.

The Board of Water Supply rainfall index for the month of December 2013 was 66 percent of normal, with a 5-month moving average of 76 percent. The Hawaii Drought Monitor indicates no abnormally dry conditions for Oahu, as of January 7, 2014. The National Weather Service is forecasting above normal rainfall through April 2014. Index monitor wells are indicating a normal seasonal recovery in head levels.

Respectfully submitted,

/s/ ERNEST Y. W. LAU, P.E.  
Manager and Chief Engineer

Attachments"

The foregoing was for information only.

DISCUSSION: There were no comments or discussion.



# PUMPAGE, HEAD, AND RAINFALL REPORT

Week of 12/29/13 to 1/04/14

STATION	MGD	HEAD	STATION	MGD	HEAD	STATION	MGD	HEAD		MGD	HEAD
METRO			WINDWARD			EWA-WAIAANAE (CONT)			PH (CONT)		
KULIOUOU	0.00					MAKAHA IV	0.00		PEARL CITY II	1.08	
WAILUPE	0.00		WAIMANALO II	0.32		MAKAHA V	0.00		PEARL CITY III	0.35	
WAIALAE-IKI	0.00		WAIMANALO III	0.32		MAKAHA VI	0.32		WAIU	1.19	
AINA KOA	0.42		KUOU I	0.40		MAKAHA SHAFT	0.04	10.53	NEWTOWN	2.07	
AINA KOA II	1.00		KUOU II	0.00		KAMAILE	0.81		KAONOHI I	0.79	
WAIALAE SHAFT	0.00		KUOU III	0.26		WAIAANAE I	0.08		WAIMALU I	0.00	
MANOA II	0.00		LULUKU	1.03		WAIAANAE II	0.27		AIEA	0.00	
PALOLO	0.99		HAIKU	0.18		WAIAANAE III	0.00		AIEA GULCH 497	0.39	
KAIMUKI HIGH	3.02	21.40	IOLEKAA	0.16		MAKAKILO	0.26		AIEA GULCH 550	0.29	
KAIMUKI LOW	0.47		KAHALUU	0.00		HONOULIULI I	0.95		HALAWA 277	0.00	
WILDER	7.87		WAIHEE	0.00		HONOULIULI II	6.76		HALAWA 550	0.00	
BERETANIA HIGH	4.50	22.15	KAHANA	0.86		SUBTOTAL:	10.79		KAAHUMANU MTR (-)	0.00	
BERETANIA LOW	2.26		PUNALUU I	0.00	17.14	IMPORT FROM PH			KAAMILO FLO MTR (-)	0.00	
KALIIHI HIGH	0.44	21.94	PUNALUU II	0.35		KAPOLEI LINE BSTR	12.14		KUNIA I	5.04	18.73
KALIIHI LOW	1.91		PUNALUU III	1.14		HONOULIULI LB FLOW	5.26		KUNIA II	1.82	
KAPALAMA	0.97		KALUANUI	1.24		EWA BEACH FLOW	1.37		KUNIA III	1.36	
KALIIHI SHAFT	8.51		MAAKUA	0.35		HONOULIULI I (-)	-0.95		HOAEAE	4.77	
MOANALUA	0.97	18.99	HAUULA	0.00		HONOULIULI II (-)	-6.76		EWA SHAFT	0.00	
SUBTOTAL:	33.31					SUBTOTAL:	11.06		WAIPAHU INTCON. (-)	0.00	
			KAHUKU	0.94					EWA-WAIAANAE (-)	-11.06	
IMPORT FROM PH			OPANA	0.35		PEARL HARBOR			PH LOCAL USE:	23.92	
HALAWA SHAFT	7.15	16.66	WAIALEE I	0.24		WAHIAWA	1.66		TOTAL SUBURBAN:	56.02	
KAAMILO	0.00		WAIALEE II	0.37		WAHIAWA II	1.78				
KALAUAO	7.69	17.16	SUNSET BEACH	0.00		MILILANI I	1.78		KALAUAO SPRINGS	0.44	
PUNANANI	10.35		SUBTOTAL:	8.50		MILILANI II	0.00		BARBERS POINT (NP)	0.01	
KAONOHI II	0.00					MILILANI III	0.69		GLOVER TUNNEL (NP)	0.51	
WAIMALU II	0.00	15.13	WIND. EXPORT	0.14		MILILANI IV	2.09				
KAAHUMANU	0.94					WAIPIO HTS.	0.20		HEAD CONDITION		
HECO WAIU	2.81		HALEIWA-WAIALUA			WAIPIO HTS. I	0.13		CAUTION	ALERT	CRITICAL
MANANA	0.50		HALEIWA	0.00		WAIPIO HTS. II	0.04			Kaimuki	
KAAHUMANU FLOW MT	0.00		WAIALUA	1.90		WAIPIO HTS. III	0.84				
KAAMILO FLOW MTR	0.00		SUBTOTAL:	1.90		WAIPAHU	2.42	18.48			
TOTAL IMP/EXP WAIPI. INT:	0.00					WAIPAHU II	0.15				
IMPORT FRM WIND:	0.14		EWA-WAIAANAE			WAIPAHU III	1.38				
SUBTOTAL:	29.57		MAKAHA I	0.00		WAIPAHU IV	2.15				
			MAKAHA II	0.48		PEARL CITY SHAFT	0.00	14.86			
TOTAL METRO:	62.88		MAKAHA III	0.82		PEARL CITY I	0.51				

CWRM PERMITTED USE FOR BWS POTABLE SOURCES						PUMPAGE	2014	2013	GRAVITY	2014	2013
	A	B	C	D	E	SUBURB.	56.02	60.72	SUBURB.	6.49	14.94
WATER DISTRICTS	PERMITTED USE	2014	DIFF. B-A	YEAR/ DATE	DIFF. D-A	METRO	62.88	64.71	METRO	0.41	0.33
						TOTAL:	118.90	125.43	TOTAL:	6.90	15.27
HONOLULU	45.27	33.72	-11.54						Manoa	0.17	
WINDWARD	25.21	11.57	-13.64			NUUANU #5			Palolo	0.24	
NORTH SHORE	4.08	3.80	-0.28			(rainfall)	1.57"	0.11"	Waim. I&II	0.21	
WAHIAWA	4.27	3.44	-0.83						Waim. III&IV	0.19	
WAIAANAE	4.34	3.51	-0.83						Waihee incl.	1.16	
EWA-KUNIA	15.88	7.97	-7.91						Waihee tun.	1.47	
PEARL HARBOR	92.66	60.97	-31.69						Luluku	0.05	
TOTAL:	191.71	124.97	-66.73						Haiku	0.00	
									Kahalu	1.90	
									Waia. C&C	1.40	
									Waia plant.	0.12	

DROUGHT STATUS REPORT  
DRAFT IN MGD

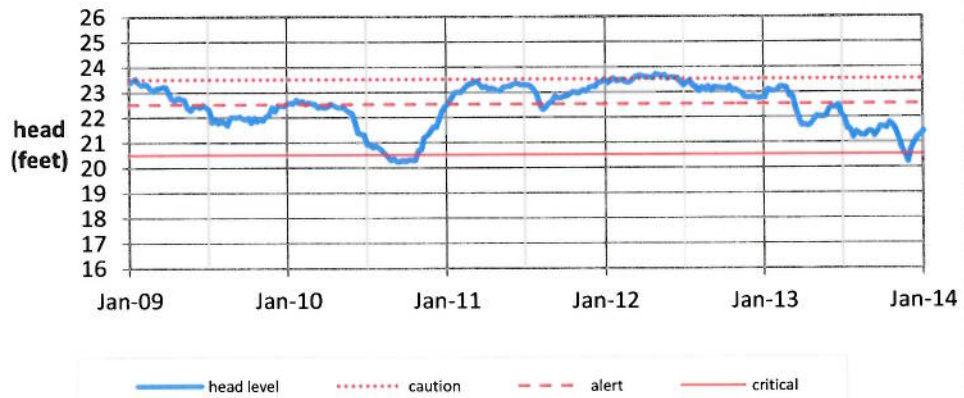
WATER USE DISTRICT	AUTHORIZED USE	2013	12/29-1/04 2014						
HONOLULU	45.27	30.91	33.86						
WINDWARD	25.21	20.18	11.43						
NORTH SHORE	4.08	3.42	3.80						
WAHIAWA	4.27	2.47	3.44						
EWA-WAIAANAE	20.22	26.59	23.36						
PEARL HARBOR	92.66	57.14	49.90						
TOTAL	191.71	140.71	125.80						

Accounts for in-district pumpage and transfers

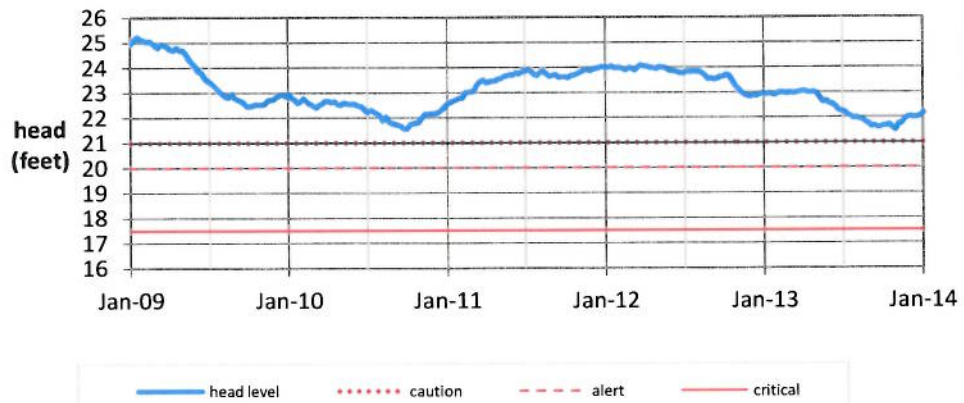
HEAD IN FEET

		2013	12/29-1/04 2014						
HONOLULU									
KAIMUKI		22.74	21.40						
BERETANIA		22.89	22.15						
KALIHI		22.21	21.94						
MOANALUA		18.80	18.99						
PEARL HARBOR									
HALAWA		16.25	16.66						
KALAUAO		16.83	17.16						
PEARL CITY		14.64	14.86						
WAIPAHU		18.20	18.48						
KUNIA		18.45	18.73						
EWA-WAIAANAE									
MAKAHA		12.55	10.53						
WINDWARD									
PUNALUU		15.35	17.14						
KALUANUI		15.27	16.84						
NORTH SHORE									
WAIALUA		11.34	11.21						

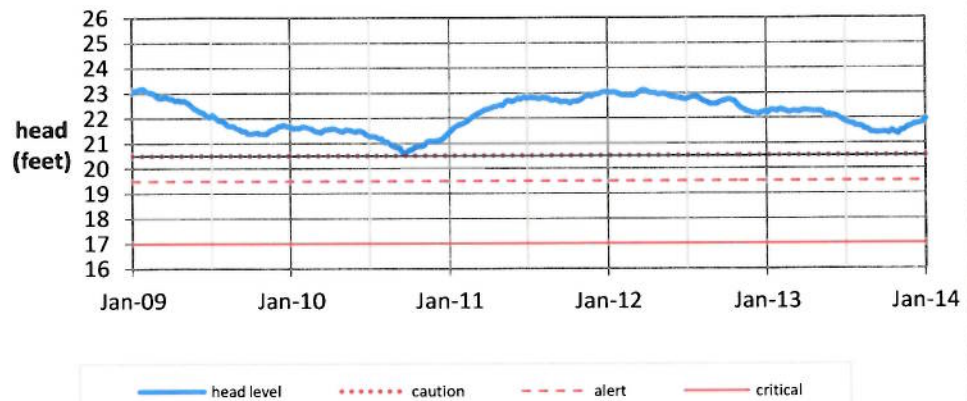
### Kaimuki



### Beretania

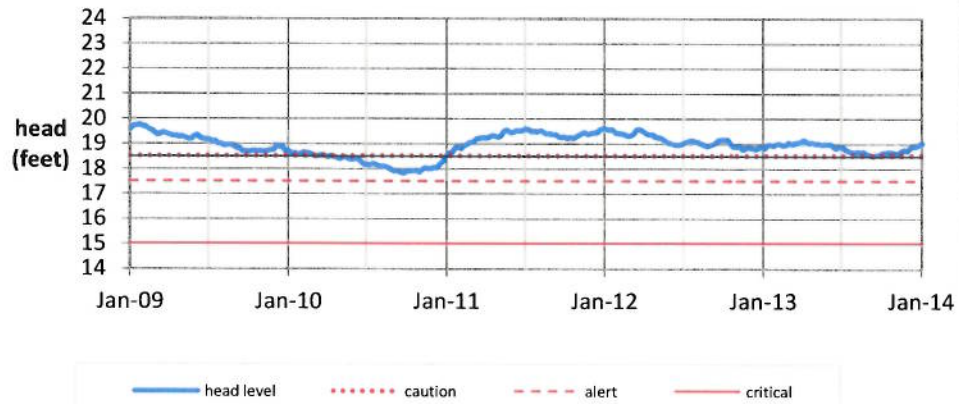


### Kalihi

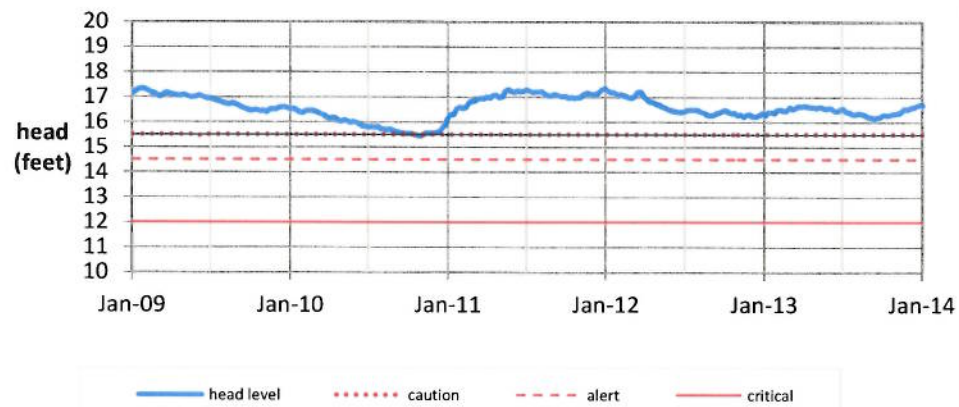




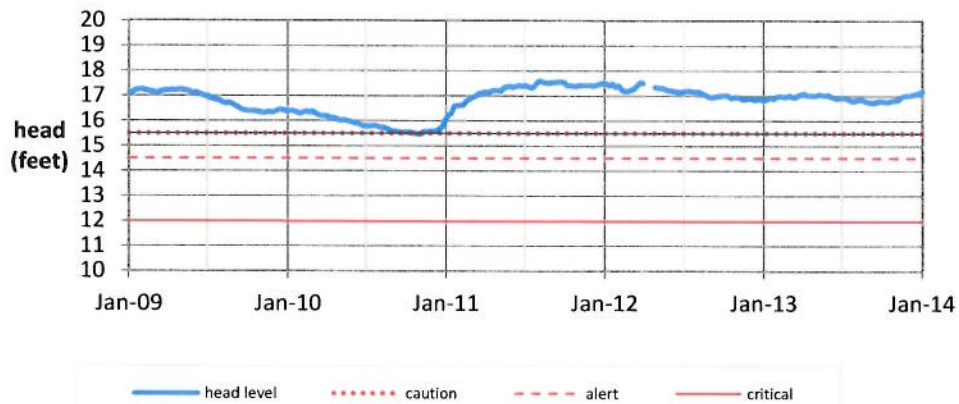
### Moanalua



### Halawa

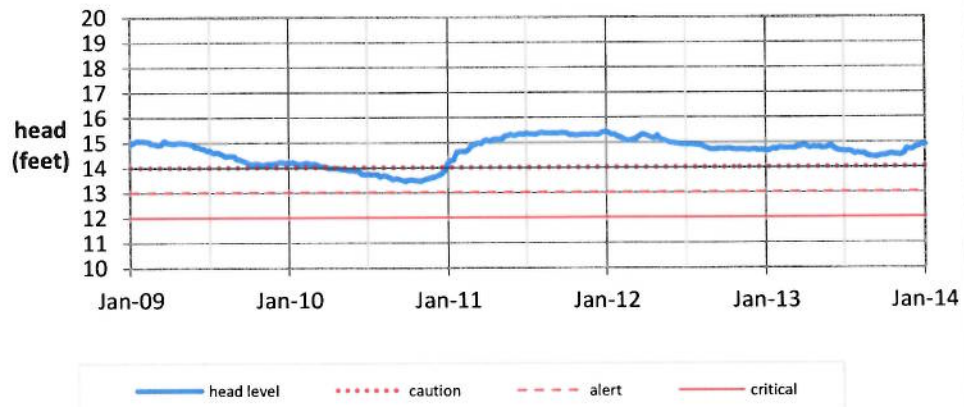


### Kalauao

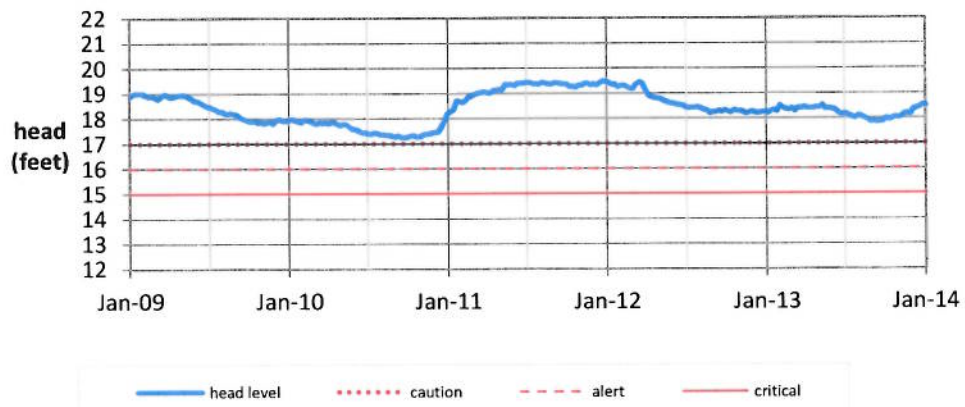




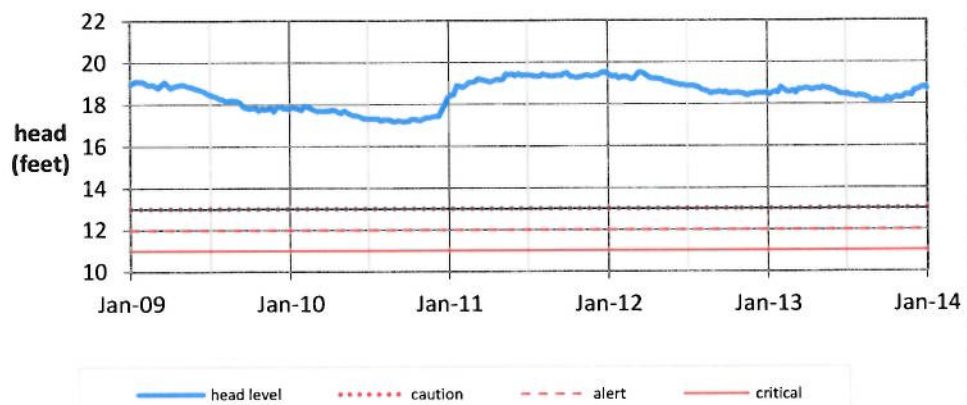
### Pearl City



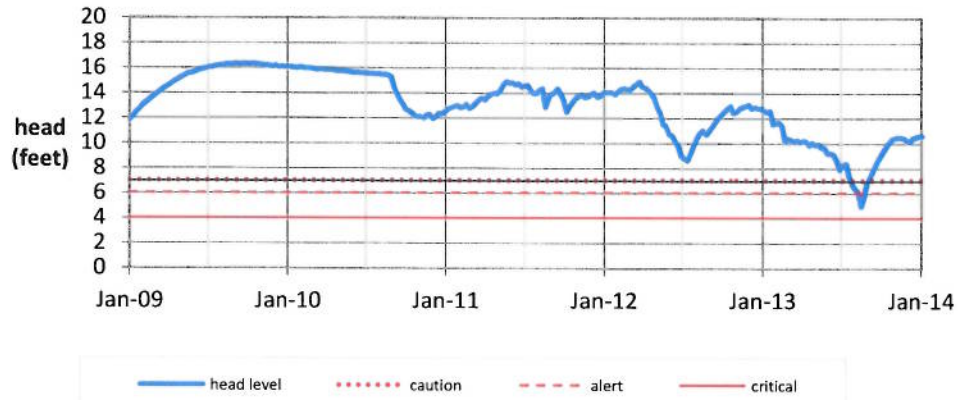
### Waipahu



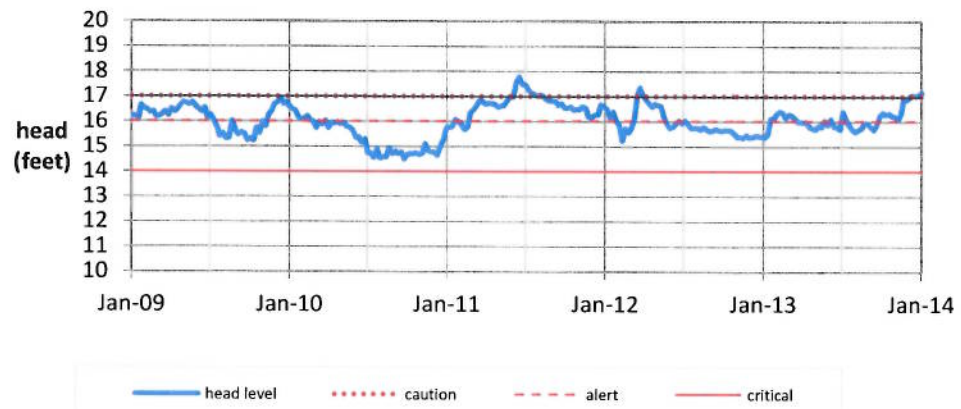
### Hoaeae-Kunia



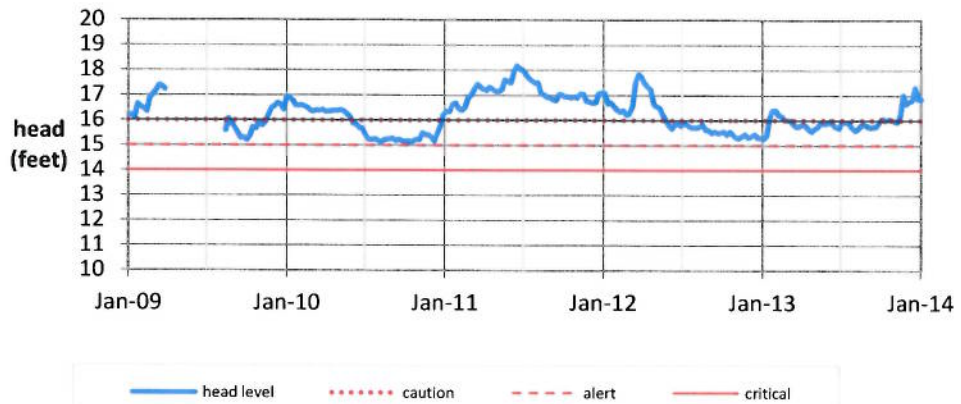
### Makaha



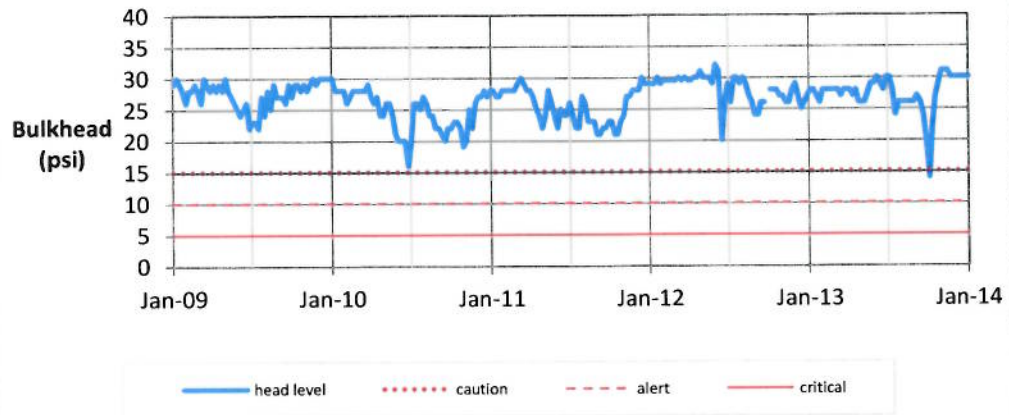
### Punaluu



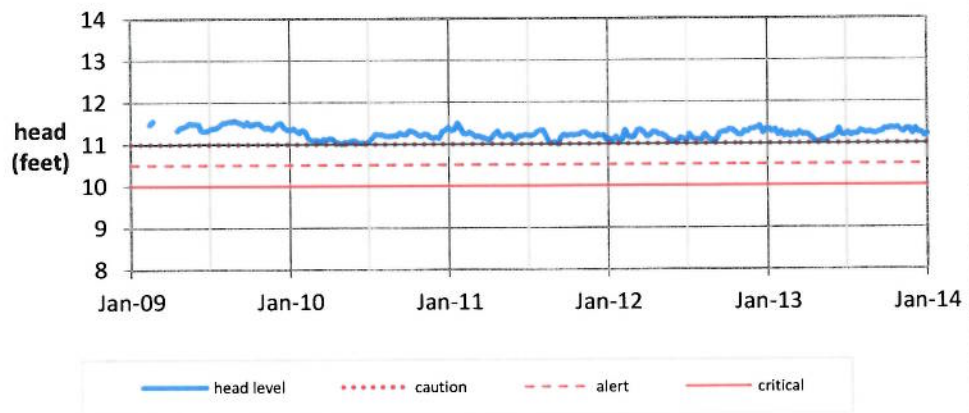
### Kaluanui

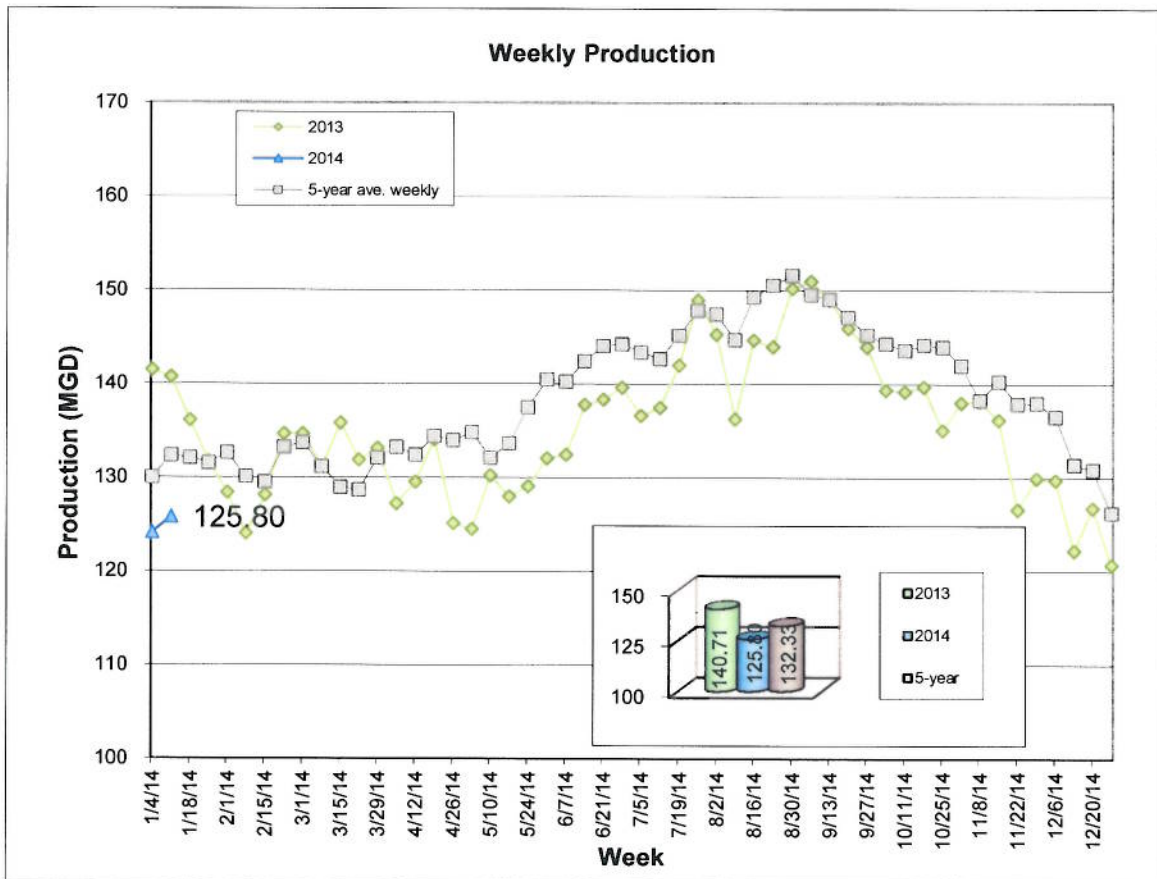
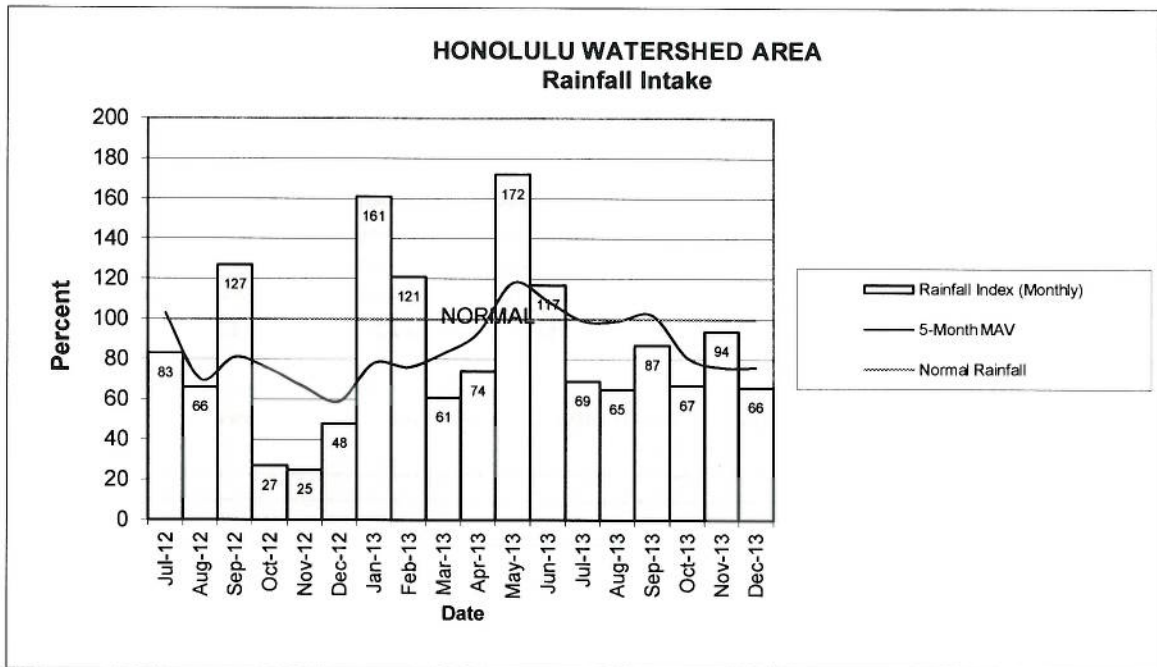


## Waihee Tunnel



## Waialua







MOTION TO  
RECESS INTO  
EXECUTIVE  
SESSION

Upon unanimously approved motion, the Board Recessed into Executive Session Pursuant to [HRS § 92-5(a)(2)] at 2:53 PM to Consider Issues Pertaining to Matters Posted for Discussion at an Executive Session.

OPEN  
SESSION

The Board reconvened in open session at 3:15 PM

No action was taken and no decision was made during Executive Session.

MOTION TO  
ADJOURN

There being no further business Chair Miyashiro at 3:15 PM called for a motion to adjourn the Open Session. Ross Sasamura so moved; seconded by Theresia McMurdo and unanimously carried.

THE MINUTES OF THE REGULAR SESSION BOARD MEETING ON JANUARY 27, 2014 WERE APPROVED AT THE FEBRUARY 24, 2014 BOARD MEETING			
	AYE	NO	COMMENT
DUANE R. MIYASHIRO	X		
MAHEALANI CYPHER	X		
THERESIA C. MCMURDO	X		
ADAM C. WONG	X		
DAVID C. HULIHEE	X		
ROSS S. SASAMURA	X		
GLENN M. OKIMOTO			ABSENT

Respectfully submitted,



LISA K. KIM

APPROVED:



DUANE R. MIYASHIRO  
Chairman of the Board

FEB 24 2014

Date