

MINUTES

REGULAR MEETING OF THE BOARD OF WATER SUPPLY

July 22, 2013

At 2:11 PM on July 22, 2013 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
Theresia C. McMurdo
Ross S. Sasamura

Also Present: Ernest Lau, Manager and Chief Engineer
Ellen Kitamura, Deputy Manager and Chief Engineer
Tracy Burgo
Alex Ubiadas
Daryl Hiromoto
Barry Usagawa
Karen Tom
Paul Kikuchi
Jason Takaki
Ron Wada
Keoni Mattos
Erwin Kawata

Others Present: Krishna Jayaram, Deputy Corporation Counsel
Marilyn Ushijima, Deputy Corporation Counsel
Russell Stepp, Stepp Consulting, Incorporated
David Jochim, Stepp Consulting, Incorporated
Craig Von Bargaen, CDM Smith
Michael Hernandez-Soria, Hawaiian Cool Water LLC
Catherine Cruz, KITV
Robert Guaneon, KITV

Absent: Glenn M. Okimoto
Adam C. Wong
Kaulana H. R. Park

APPROVAL
OF MINUTES

Approval of the Minutes of the Regular Meeting held on June 24, 2013

MOTION
TO APPROVE

Theresia McMurdo and Mahealani Cypher motioned and seconded, respectively, to approve the Minutes of the Regular Session Meeting of June 24, 2013. The motion was unanimously carried.

"July 22, 2013

ADOPTION OF
RESOLUTION
NO. 835, 2013

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

Chairman and Members:

Subject: Adoption of Resolution No. 835, 2013, Acceptance of Gift to the Board of Water Supply from Hawaiian Earth Products, Incorporated, in Support of the 2013 25th Annual Halawa Xeriscape Garden Open House and Unthirsty Plant Sale

We recommend acceptance of the proposed gift to the Board of Water Supply (BWS), City and County of Honolulu, from Hawaiian Earth Products, Incorporated, in support of our 2013 25th Annual Halawa Xeriscape Garden Open House and Unthirsty Plant Sale. The donor's total value of this gift is \$850.00.

The BWS's Annual Halawa Xeriscape Garden Open House and Unthirsty Plant Sale is a successful public outreach program that focuses the attention of Oahu water users on the importance of outdoor water efficiency. Studies show that more than 50 percent of residential water use occurs outdoors, so it makes sense for the BWS to promote ways to achieve water savings in this area, which in turn can reduce the customer's combined water and wastewater bill. This event gives the BWS the opportunity to carry this out on a large scale.

This donation from Hawaiian Earth Products will help the BWS provide free soil conditioner compost to Plant Sale visitors and encourage them to incorporate some of the techniques they learn at the event into their own home gardens.

We deeply appreciate the continued support of this Board for this very valuable and worthwhile public outreach program. Plant Sale attendees are encouraged to use the information we provide at the event to become better stewards of our precious water resource.

Respectfully submitted,

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

Attachment"

DISCUSSION:

Vice Chair Cypher commented that 26 years ago when the garden was first being developed, Mr. Ed Doty headed a recycling group that donated \$1 million to the Department to get the garden started. When BWS had the garden's first open house, the line of people waiting to get in went a half mile down the block and about 2000 people came to the event. Ms. Cypher thanked the Department for continuing to support this water conservation educational program.

Manager Lau recognized Kazu Hayashida who was the Manager at the time, and Mahealani Cypher who was the head of the Community Relations Office at the time, for their efforts in getting this garden started.

Chair Miyashiro inquired if BWS does business with Hawaiian Earth Products and if the gift from them is technically for the public who attend the event. Mr. Lau replied that BWS purchases mulch from them and that their donation of the mulch is a gift to those who attend and who want it.

**MOTION TO
ADOPT
RESOLUTION
NO. 835, 2013**

Mahealani Cypher motioned to adopt Resolution No.835, 2013, Acceptance of Gift from Hawaiian Earth Products, Incorporated, in Support of the 2013 25th Annual Halawa Xeriscape Garden Open House and Unthirsty Plant Sale. The motion was seconded by Ross Sasamura and unanimously carried.

RESOLUTION NO. 835, 2013, ACCEPTANCE OF GIFT FROM HAWAIIAN EARTH PRODUCTS, INCORPORATED, IN SUPPORT OF THE 2013 25 TH ANNUAL HALAWA XERISCAPE GARDEN OPEN HOUSE AND UNTHIRSTY PLANT SALE, ADOPTED ON JULY 22, 2013			
	AYE	NO	COMMENT
DUANE R. MIYASHIRO	X		
MAHEALANI CYPHER	X		
THERESIA C. MCMURDO	X		
ADAM C. WONG			ABSENT
KAULANA H. R. PARK			ABSENT
ROSS S. SASAMURA	X		
GLENN M. OKIMOTO			ABSENT

BOARD OF WATER SUPPLY
CITY AND COUNTY OF HONOLULU

RESOLUTION NO. 835, 2013

ACCEPTANCE OF GIFT TO THE BOARD OF WATER SUPPLY
FROM HAWAIIAN EARTH PRODUCTS, INCORPORATED
IN SUPPORT OF THE 2013
25th ANNUAL HALAWA XERISCAPE GARDEN OPEN HOUSE
AND UNTHIRSTY PLANT SALE

WHEREAS, the Board of Water Supply's (BWS) Annual Halawa Xeriscape Garden Open House and Unthirsty Plant Sale is an annual public outreach activity that educates Oahu water users about incorporating drought tolerant plants, earth-friendly planting and maintenance techniques, and water conservation methods in their landscapes and gardens to promote efficient outdoor water use; 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, Hawaiian Earth Products, Incorporated, is offering a gift of 25 cubic yards of Soil Conditioner Compost totaling \$850.00 for the BWS to give away to the public at its 2013 25th Annual Halawa Xeriscape Garden Open House and Unthirsty Plant Sale; and

WHEREAS, the gift to the BWS is beneficial because using soil conditioner compost improves the soil's ability to retain water and reduces irrigation needs of landscapes or gardens that use it, further promoting outdoor water use efficiency; now, therefore,

BE IT RESOLVED that the Board of Water Supply hereby accepts the gift valued at \$850.00 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
July 22, 2013

"July 22, 2013

TOPICS FOR
FUTURE BOARD
MEETINGS

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

Chairman and Members:

Subject: Topics for Future Board Meetings

We would like to take this time to allow the members of the Board to inform us of any topic or concern pertaining to Board of Water Supply operations that the Board would want addressed at future Board Meetings.

The following is a list of pending topics requested by the Board with a tentative timetable of when the topics will be presented:

TOPIC	TENTATIVE TIMETABLE
1. Human Resources long-term strategy plan	November 25, 2013
2. 24" Farrington Highway water line: Develop a plan to minimize negative effects to Waianae residents	To be determined. This will be investigated as part of the BWS Master Plan.
3. Presentation by Kapua Sproat	August 26, 2013

Respectfully submitted,

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

DISCUSSION:

Mr. Lau informed the Board that they will be incorporating topic no. 2 as part of their investigation in the BWS Water Master Plan development to see if there are ways to increase the reliability of water service to the Leeward coast, therefore, this topic will not be put on the Board agenda.

Board Member McMurdo inquired if there was a way to have a general update item on the agenda so that the Manager could provide the Board with any type of updates. Deputy Corporation Counsel Krishna Jayaram replied that for the purpose of an agenda, the item would have to be specific. Mr. Lau informed Ms. McMurdo that he and Chair Miyashiro discuss the agenda prior to each meeting so if she wanted a topic discussed, she could let him or Mr. Miyashiro know ahead of time. Mr. Jayaram stated that the agenda gets posted six days before the meeting. Ms. McMurdo requested updates on customer service and estimated billing at the August Board meeting.

ITEM FOR INFORMATION NO. 1

"July 22, 2013

FINANCIAL
UPDATE FOR
THE QUARTER
ENDED
JUNE 30, 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
June 30, 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:

Chief Financial Officer Paul Kikuchi briefed the Board on the financial reports and graphs.

Mr. Miyashiro inquired if the 75 percent increases for both services and supplies reflected the Capital Improvement Program (CIP). Mr. Kikuchi replied that these increases do not reflect the CIP, but rather reflect their efforts to upgrade about 51,000 batteries in the automatic meter reading system. Ms. McMurdo questioned what items are included in the miscellaneous category under operating expenses. Mr. Kikuchi will email the Board members a list of these items.

Budget vs. Actual
Revenue and Expense Totals
As of June 30, 2013

	YTD Actuals	YTD Budget	Favorable/ (Unfavorable) Variance
Revenues	184,709,000	184,103,000	606,000
Operating Expenses	(145,150,000)	(165,180,000)	20,030,000
Net Revenues (expenditures)	<u>39,559,000</u>	<u>18,923,000</u>	<u>20,636,000</u>

Board Of Water Supply
Statement of Revenues, Expenses And Change In Net Assets
For the Twelve Months Ending June 30, 2013

Current Month Actual	% Revenue	Last Year Actual	% Revenue	Description	Year to Date Actual	% Revenue	Last Year to Date Actual	% Revenue	% Change
REVENUE									
14,918,047.20	100.00	16,261,351.48	100.00	OPERATING REVENUE	183,204,830.01	100.00	159,507,730.07	100.00	14.86
14,918,047.20	100.00	16,261,351.48	100.00	REVENUE	183,204,830.01	100.00	159,507,730.07	100.00	14.86
OPERATING EXPENSES									
2,444,922.41-	16.39	2,402,135.51-	14.77	LABOR COSTS	27,120,583.59-	14.80	27,672,692.36-	17.35	2.00-
950,414.58-	6.37	362,958.40	2.23	SERVICES	13,328,751.47-	7.28	7,624,594.47-	4.78	74.81
502,246.02-	3.37	591,835.31	3.64	SUPPLIES	3,307,106.71-	1.81	1,876,695.07-	1.18	76.22
1,315.22-	.01	2,743.14-	.02	EDUCATION & TRAINING	69,298.97-	.04	107,871.53-	.07	35.76-
77,411.47-	.52	2,683,666.98-	16.50	UTILITIES	27,323,059.69-	14.91	27,905,460.97-	17.49	2.09-
156,598.07-	1.05	187,097.27-	1.15	REPAIR AND MAINTENANCE	3,653,126.26-	1.99	2,617,590.06-	1.64	39.56
825,844.76-	5.54	2,205,646.77-	13.56	MISC	16,177,171.01-	8.83	17,308,385.04-	10.85	6.54-
753,860.90-	5.05	2,037,169.30-	12.53	RETIREMENT SYSTEM CONTRIBUTIO	15,569,396.47-	8.50	19,376,360.03-	12.15	19.65-
31,370.24-	.21	672,540.51-	4.14	MISC EMPLOYEES' BENEFITS	79,838.74-	.04	299,215.16-	.19	73.32-
5,743,983.67-	38.50	9,236,205.77-	56.80	OPERATING EXPENSES	106,628,332.91-	58.20	104,788,864.69-	65.70	1.76
1,075,375.22-	7.21	406,763.47	2.50	NON OPERATING REVENUE AND EXPE	9,136,746.18-	4.99	6,596,213.62-	4.14	38.52
1,037,331.40	6.95	11,621,951.26	71.47	CONTRIBUTION IN AID	20,616,041.61	11.25	25,198,240.48	15.80	18.18-
4,760,191.83-	31.91	5,469,383.85-	33.63	OTHER EXPENSES	56,399,089.80-	30.78	53,934,781.29-	33.81	4.57
4,375,827.88	29.33	13,584,476.59	83.54	Change In Net Assets	31,656,702.73	17.28	19,386,110.95	12.15	63.30

Board Of Water Supply
Balance Sheet
As of June 30, 2013

Description	Amounts			Change	
	Current	Last Month End	Last Year End	This Month	This Year
ASSETS					
CURRENT ASSETS	43,355,514.89	37,067,813.45	29,929,783.03	6,287,701.44	13,425,731.86
RESTRICTED ASSETS	15,336,919.68	1,367,707.64	15,263,512.23	13,969,212.04	73,407.45
INVESTMENTS	194,327,978.98	207,173,189.09	177,147,005.65	-12,845,210.11	17,180,973.33
OTHER ASSETS	6,816,855.31	6,606,131.87	12,241,142.86	210,723.44	-5,424,287.55
PROPERTY / PLANT	1,137,976,269.32	1,141,337,400.07	1,146,384,229.53	-3,361,130.75	-8,407,960.21
TOTAL ASSETS	<u>1,397,813,538.18</u>	<u>1,393,552,242.12</u>	<u>1,380,965,673.30</u>	<u>4,261,296.06</u>	<u>16,847,864.88</u>
LIABILITIES					
CURRENT LIABILITIES	19,207,205.92	15,339,060.77	23,812,976.19	3,868,145.15	-4,605,770.27
OTHER LIABILITIES	28,678,151.20	28,774,635.29	30,179,563.60	-96,484.09	-1,501,412.40
BONDS PAYABLE, NONCURRENT	289,351,020.25	289,921,441.30	298,052,675.43	-570,421.05	-8,701,655.18
LIABILITIES	<u>337,236,377.37</u>	<u>334,035,137.36</u>	<u>352,045,215.22</u>	<u>3,201,240.01</u>	<u>-14,808,837.85</u>
NET ASSETS					
RETAINED EARNINGS	337,023,626.64	363,313,836.16	431,878,292.93	-26,290,209.52	-94,854,666.29
FUND BALANCE	594,633,831.66	594,633,831.66	594,633,831.66		0.00
RESERVE FOR ENCUMBRANCES	97,262,999.78	70,972,790.26		26,290,209.52	97,262,999.78
CURRENT YEAR CHANGES TO FU	31,656,702.73	27,171,020.26	2,408,333.49	4,485,682.47	29,248,369.24
NET ASSETS	<u>1,060,577,160.81</u>	<u>1,056,091,478.34</u>	<u>1,028,920,458.08</u>	<u>4,485,682.47</u>	<u>31,656,702.73</u>
TOTAL LIABILITIES AND NET ASSETS	<u>1,397,813,538.18</u>	<u>1,390,126,615.70</u>	<u>1,380,965,673.30</u>	<u>7,686,922.48</u>	<u>16,847,864.88</u>

Board Of Water Supply
Budget vs Actual Appropriation Budget - Total BWS Summary

7/10/2013

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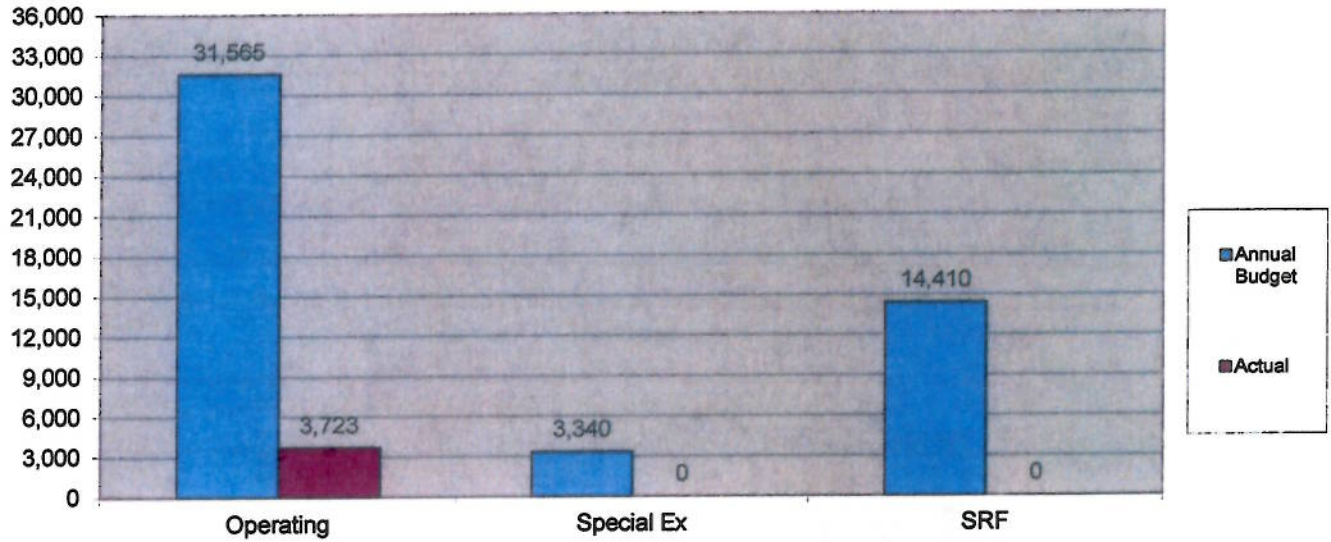
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AS OF 6/30/2013

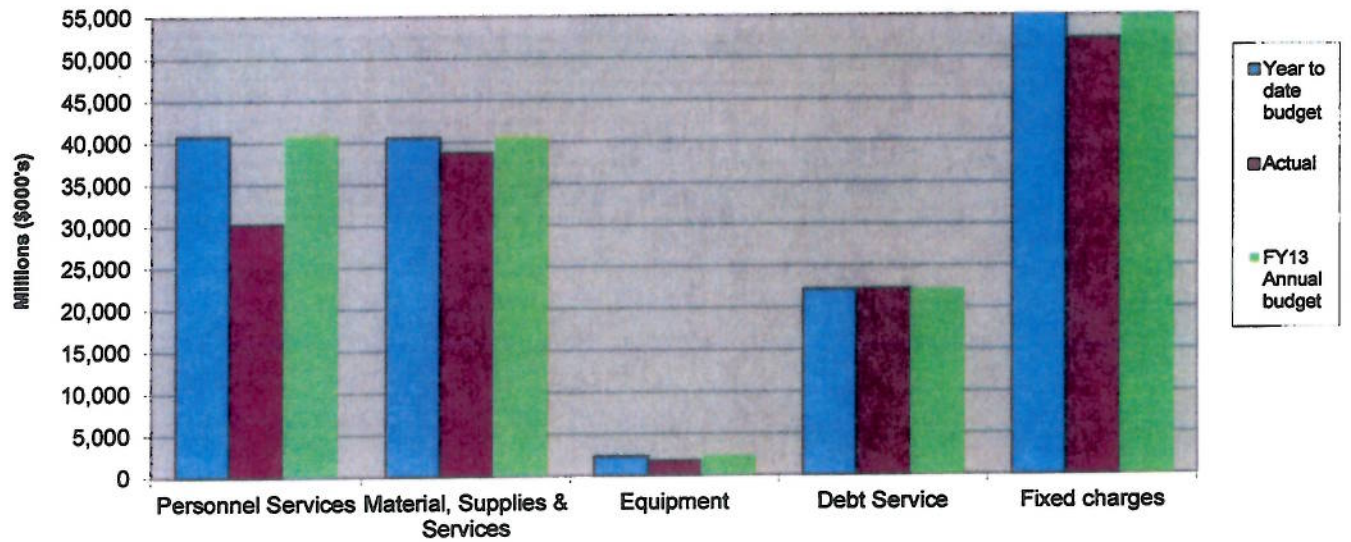
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YTD-TO-DATE				Object Description	FOR THE FISCAL YEAR				
YTD Actuals	YTD Budget	Avail/ (Over)	%		Revenues/ Expend	Open Encumb	Annual Budget	Avail/ (Over)	%
184,709	184,103	(606)	.33-	REVENUE	184,709		184,103	(606)	.33-
OPERATING EXPENSES:									
30,234	40,803	10,569	25.90	Personnel Services	30,234		40,803	10,569	25.90
MATERIALS AND SUPPLIES									
16,912	15,642	(1,270)	8.12-	Services	10,088	6,824	15,642	(1,270)	8.12-
8,171	7,897	(274)	3.47-	Supplies	6,812	1,359	7,897	(274)	3.47-
110	435	325	74.71	Education & Training	110		435	325	74.71
	10	10	100.00	Utilities			10	10	100.00
3,306	5,306	2,000	37.69	Repairs & Maint	2,469	837	5,306	2,000	37.69
10,239	11,264	1,025	9.10	Misc	8,786	1,453	11,264	1,025	9.10
1,741	2,328	587	25.21	Equipment	410	1,331	2,328	587	25.21
22,206	22,189	(17)	.08-	Debt Service	22,206		22,189	(17)	.08-
FIXED CHARGES:									
27,738	32,606	4,868	14.93	Utilities	27,738		32,606	4,868	14.93
3,300	3,300			Case Fees	3,300		3,300		
6,727	7,080	353	4.99	Retirement System Contribution	6,727		7,080	353	4.99
14,466	16,320	1,854	11.36	Misc Employees' Benefits	9,966	4,500	16,320	1,854	11.36
145,150	165,180	20,030	12.13	TOTAL OPERATING EXPENDITURES	128,846	16,304	165,180	20,030	12.13
39,559	18,923	(20,636)		NET REVENUES (EXPENDITURES)	55,863	(16,304)	18,923	(20,636)	

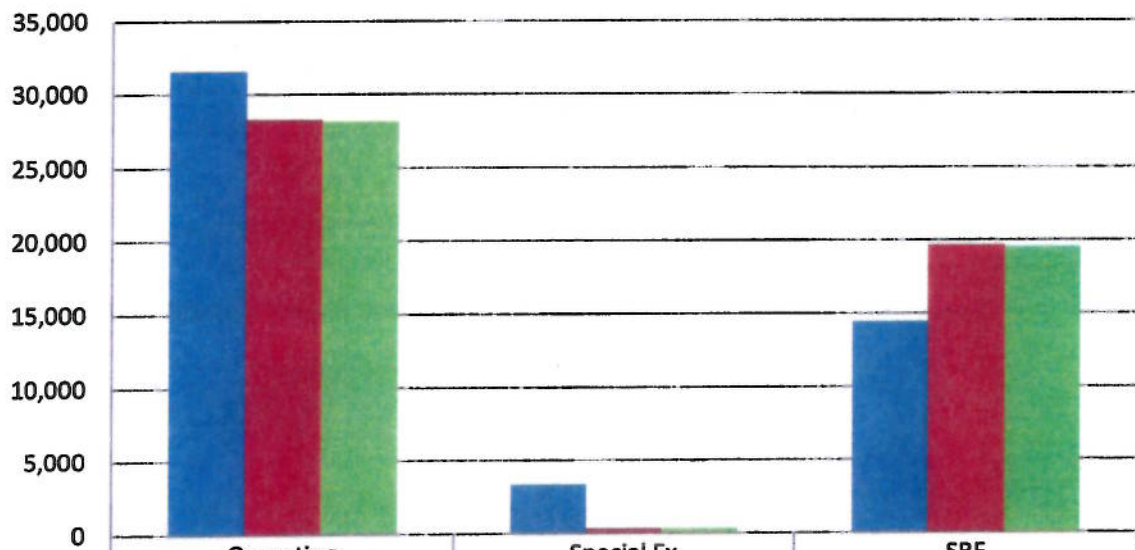
FY 2013 Capital Program (Annual Budget vs. Actual Expenditures and Encumbrances)
as of June 30, 2013 (millions of dollars)



Operating Expenditures by Category (Budget vs. Actual Expenditures and Encumbrances)
as of June 30, 2013 (millions of dollars)

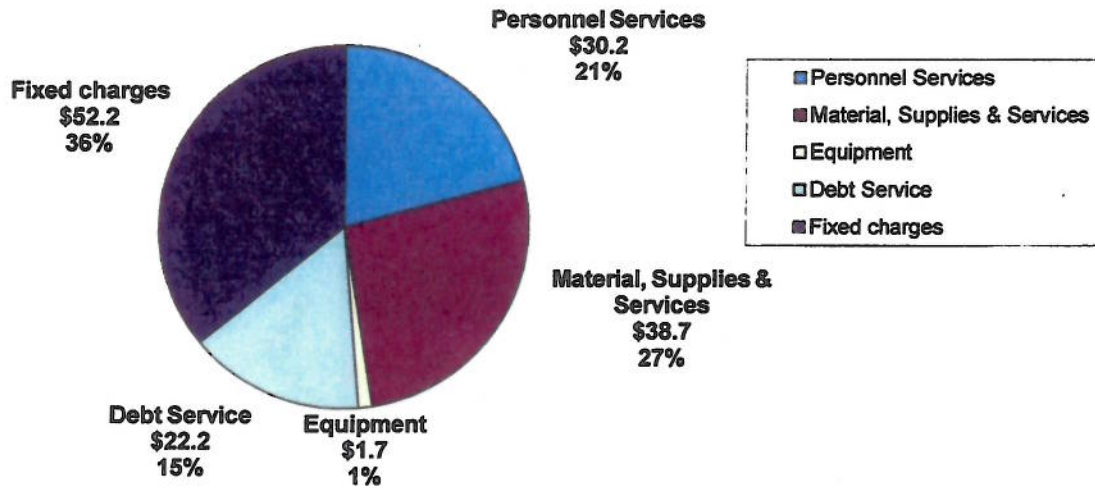


FY 2013 Capital Program Original/Amended Budget vs Total Expended, Encumbered or Awarded

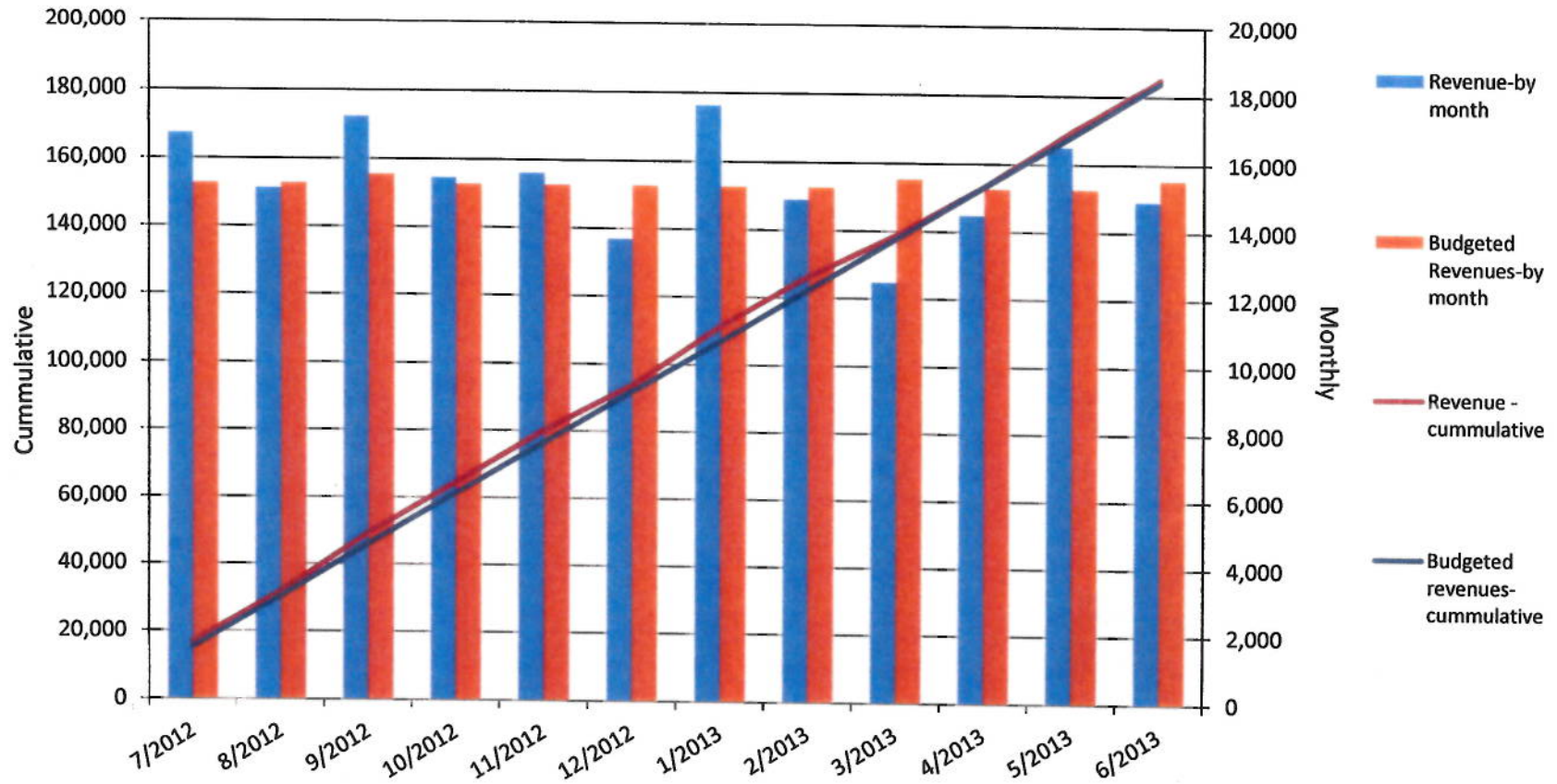


	Operating	Special Ex	SRF
Annual Budget	31,565	3,340	14,410
Amended Budget	28,298	340	19,677
Actual	28,180	319	19,524

Total Operating Expenditures -\$145.0
As of June 30, 2013
(millions of dollars)



BUDGETED OPERATING REVENUES FY 2013



ITEM FOR INFORMATION NO. 2

Quarterly Capital Improvement Program Status Report
Capital Projects Division

Quarter	JUL-SEPT	OCT-DEC	JAN-MAR	APR-JUN	Total Budgeted	Awarded to Date
Design Contracts Awarded (\$)	\$0.00	\$0.00	\$36,568.38	\$5,513,973.01	\$4,427,565.00	\$5,550,541.39
Construction Contracts Awarded (\$)	\$0.00	\$572,530.00	\$2,046,350.00	\$24,194,441.60	\$26,750,985.00	\$26,813,321.60
FY13 Project Totals	\$0.00	\$572,530.00	\$2,082,918.38	\$29,708,414.61	\$31,178,550.00	\$32,363,862.99

Quarter	JUL-SEPT	OCT-DEC	JAN-MAR	APR-JUN
Design Contracts Completed (\$)	\$1,650,565.16	\$4,642,047.17	\$117,056.00	\$86,400.00
Construction Contracts Completed (\$)	\$135,300.00	\$0.00	\$1,983,012.70	\$619,564.56
Totals	\$1,785,865.16	\$4,642,047.17	\$2,100,068.70	\$705,964.56

On Going Design Projects (#)	116
On Going Design Projects (\$)	\$28,267,430.55
On Going Construction Projects (#)	57
On Going Construction Projects (\$)	\$142,313,169.87

**Quarterly Capital Improvement Program Status Report
Capital Projects Division**

Item #	Project Title	Expend Type	Budget Amount	Encumbrance
21A	Repainting	Const	419,750.00	419,750.00
21K	Woodlawn 705 Reservoir Cleaning	Const	0.00	2,780.00
17	Water Main Installation & Replacement - DDC Kuahea Street	Const	100,000.00	150,000.00
	2nd Quarter totals		519,750.00	572,530.00
33C	Archaeological Monitoring - University Avenue	P&E	36,568.38	36,568.38
21B	Repainting	Const	284,200.00	284,200.00
16	Foster Village Water System Improvements, Part III - SRF	Const	1,307,150.00	1,307,150.00
22	Heeia Corporation Yard Air Conditioning Improvements	Const	295,835.00	455,000.00
	3rd Quarter totals		1,923,753.38	2,082,918.38
11	Kamaile Wells Renovation	P&E	150,000.00	291,980.50
26D	Hawaii Loa 475 & Booster No. 2	P&E	0.00	186,320.00
10	Kalihi Pump Station Low And High Service Renovation	P&E	200,000.00	729,829.00
18	Fire Hydrant Installations at Various Locations	P&E	100,000.00	323,708.45
26B	Kailua Heights and Waimanalo Boosters	P&E	170,750.00	170,750.00
33B	Geotechnical Survey	P&E	387,497.00	387,497.00
12	Barbers Point Line Booster Improvements	P&E	200,000.00	256,990.00
35	Salt Lake Boulevard 36-Inch Main - Foster Village To Aliamanu	P&E	340,000.00	247,106.00
26A	Kawela 228, Kapolei 215, Wahiawa 1361 Reservoirs	P&E	283,415.00	283,415.00
33D	Archaeological Monitoring - Kamehameha Highway (Heeia)	P&E	50,942.62	77,840.62
8A	Pump Renewal and Replacement	P&E	739,452.00	739,452.00
33A	CM for Emergency Generator	P&E	319,992.00	319,992.00
8B	Pump Renewal and Replacement	P&E	1,348,948.00	1,399,092.44
19	Water Main Installation & Replacement: Alternate Project Delivery Pilot Implementation	P&E	100,000.00	100,000.00
5R	Kalauao Springs	Const	928,000.00	130,000.00
15	Woodlawn Drive 8-Inch Main - SRF	Const	2,000,000.00	3,537,600.00
21G	Barbers Point 215 Access Road	Const	211,990.00	251,777.00
21D	Pohakupu 272 Reservoir No. 1	Const	2,084,060.00	2,084,060.00
13	Kamehameha Highway 16-Inch and 8-Inch Mains (Heeia) - SRF	Const	7,800,000.00	5,974,693.60
14	Mapunapuna Water System Improvements, Part I - SRF	Const	3,370,000.00	3,370,000.00
21H	Halawa Gardens Pavilion Walkway Replacement	Const	0.00	28,287.00
20	Mililani Wells III GAC Valve Replacement And Backwash System Isolation	Const	2,750,000.00	3,599,318.00
17A	Kapiolani Boulevard 12-Inch Main, McCully to Date	Const	5,200,000.00	5,218,706.00
	4th Quarter totals		28,735,046.62	29,708,414.61
	Grand Total		31,178,550.00	32,363,862.99

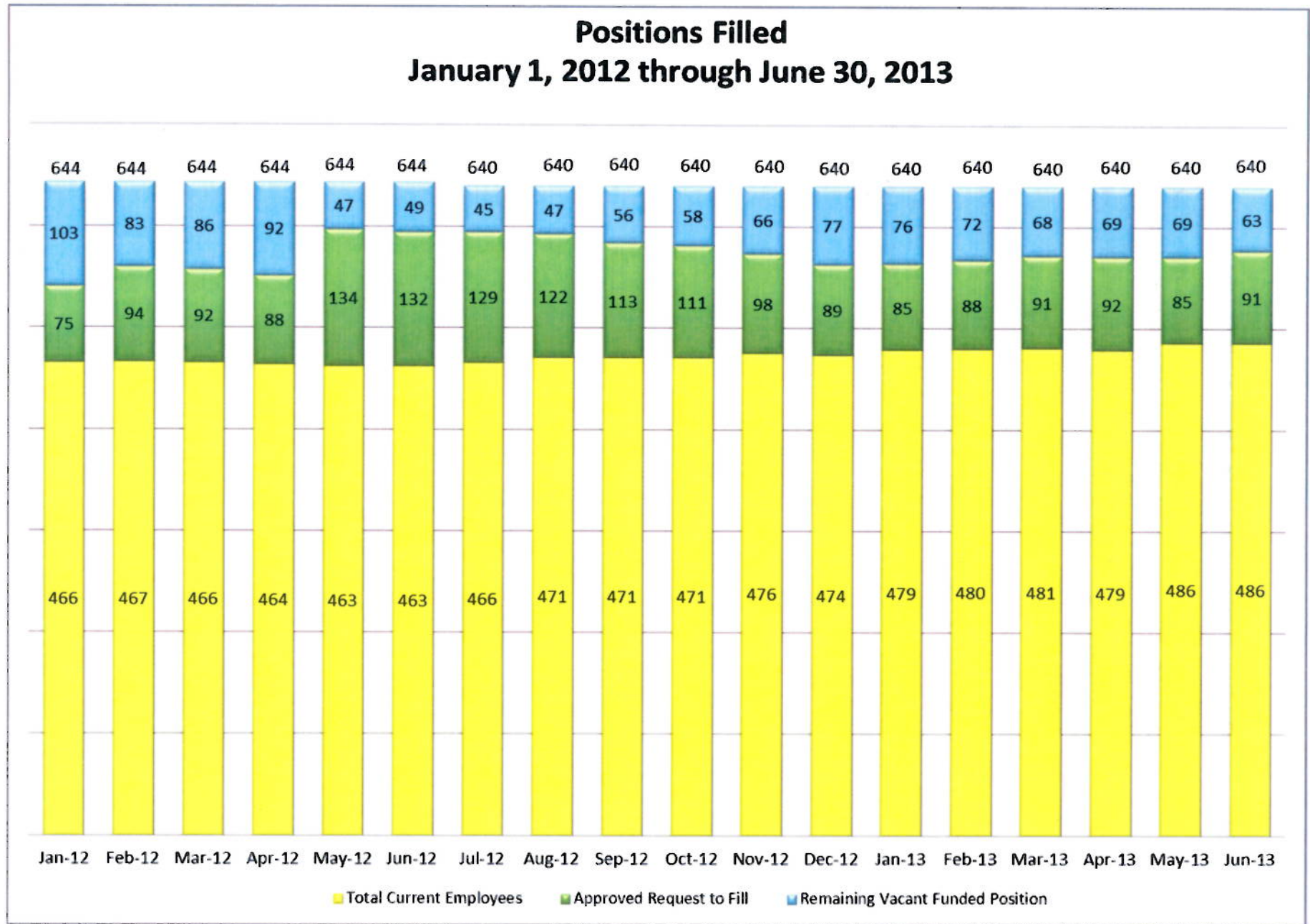
DISCUSSION:

Program Administrator Jason Takaki explained the Capital Improvement Program quarterly reports to the Board. He pointed out that these reports are for the Capital Projects Division only and reflect the completion of the Fiscal Year (FY) 2013, ending June 30. The award total represents 104 percent of the appropriations directed by the Capital Projects Division and continues an increasing trend of project execution, 90 percent in FY 2011, 92 percent in FY 2012, and 104 percent in FY 2013. As requested by Board Member Kaulana Park, the second report shows a detailed list of projects that make up the contract award numbers.

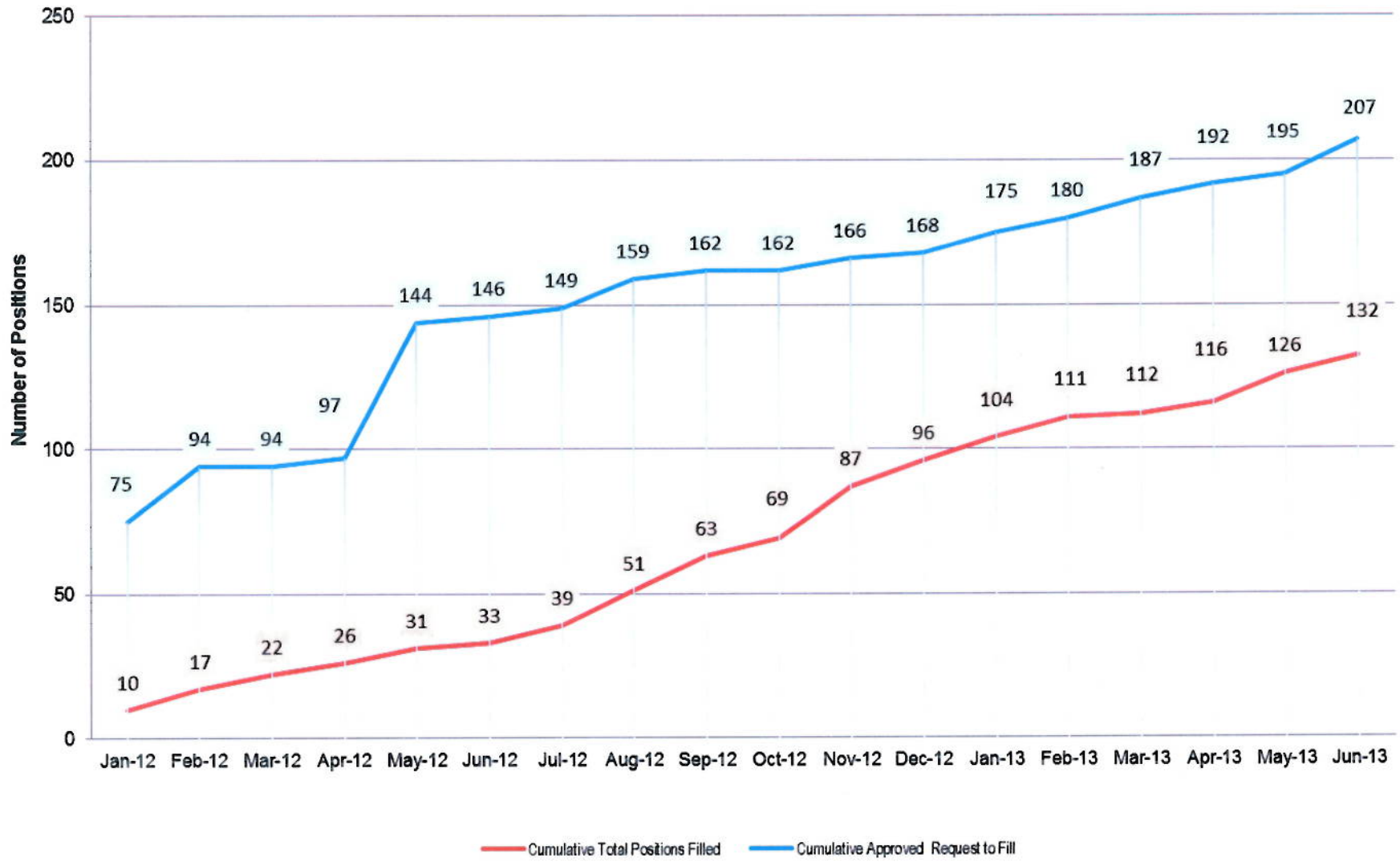
Mr. Lau thanked Mr. Takaki and his staff for working hard to get the projects out. He asked for the public's patience as the increase in construction projects may have negative impacts on traffic and road conditions.

Ms. Cypher commented that for the first six months of the fiscal year, no design contracts were awarded. Mr. Lau acknowledged this and said that the Capital Projects Division is working hard on working on process improvements to help change this.

Positions Filled January 1, 2012 through June 30, 2013



Cumulative Totals January 1, 2012 through June 30, 2013



DISCUSSION:

Karen Tom of the Human Resources Office briefed the Board on the graphs. Ms. McMurdo inquired if all the full time customer service representatives' (CSR) positions have been filled. Ms. Tom explained that five permanent positions are currently in the recruitment process. If no internal applicants apply by this Wednesday, then they will fill these positions on a provisional basis until a list can be obtained by the Department of Human Resources. Provisional basis means that they can fill the civil service positions on a temporary basis until a list is established. When that occurs, they would need to fill the vacancies from that list. Ms. Tom also stated that they have hired a number of contract hires, and Mr. Lau has approved 10 more. Ms. McMurdo asked when the 10 additional contract hires will start and if 10 are sufficient. Mr. Lau stated that some have already started and they are in the process of hiring the remainder. He also stated that currently they have about 25 CSRs and his goal is to bring that up to 30.

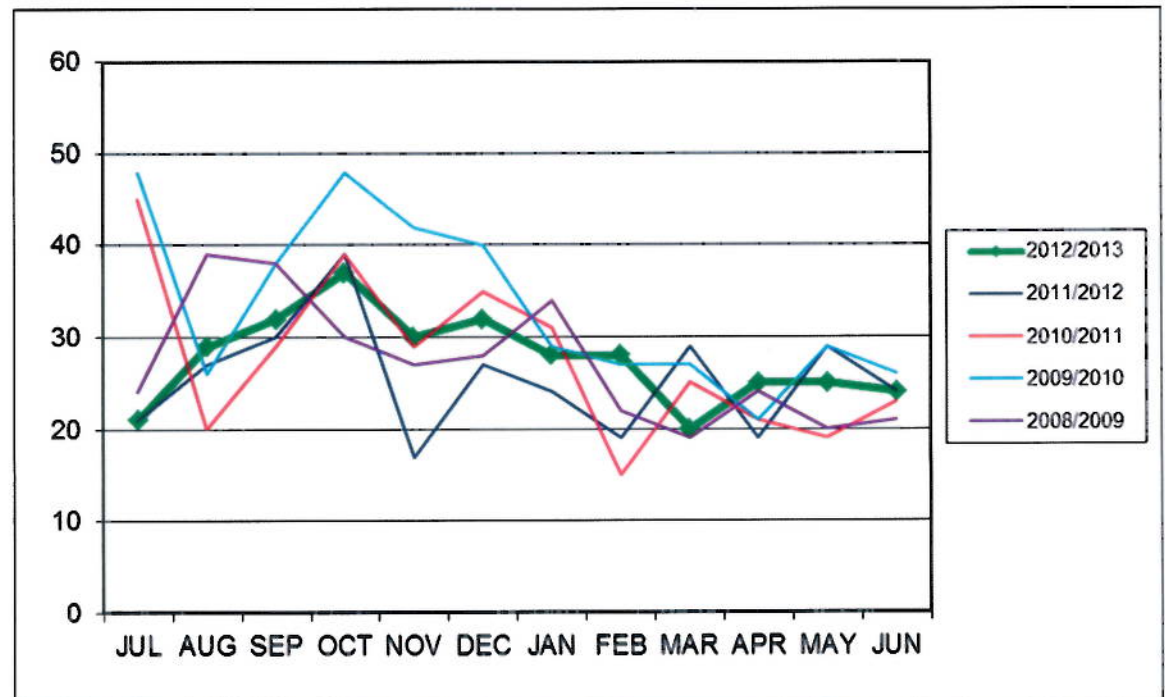
ITEM FOR INFORMATION NO. 4

WATER MAIN REPAIR REPORT

for June 2013

	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	Total
2012/2013	21	29	32	37	30	32	28	28	20	25	25	24	331
2011/2012	21	27	30	39	17	27	24	19	29	19	29	24	305
2010/2011	45	20	29	39	29	35	31	15	25	21	19	23	331
2009/2010	48	26	38	48	42	40	29	27	27	21	29	26	401
2008/2009	24	39	38	30	27	28	34	22	19	24	20	21	326

<u>Date</u>	<u>Address</u>	<u>Size</u>
6/2	98-143 Kanuku St. 159109	6" C.I.
6/4	260 Kaiolohia Pl. 160414	8" D.I.
6/9	808 Kahena Pl. 164155	4" C.I.
6/9	1142 Ala Liliko St. 164163	12" C.I.
6/9	2204 Aumakua St. 164172	8" C.I.
6/10	Liliha St at N Vineyard Blvd & King	12" D.I.
6/12	770 Kapiolani Blvd. 165839	8" C.I.
6/13	2416 Parker Pl. 167131	8" P.V.C.
6/14	1723 Akaakoa St. 168106	8" C.I.
6/14	4774 Aukai Ave. 168141	8" C.I.
6/15	3536 Harding Ave. 169508	6" C.I.
6/20	mountain line--46-206	16" C.I.
6/20	Kamehameha Hakuone St. & Hakuone Pl. 172157	6" C.I.
6/20	2025 Keeaumoku St. 172256	4" Steel
6/25	mountain line--46-206	16" C.I.
6/25	Kamehameha	8" C.I.
6/26	91-440 Pupu St.	6"
6/26	74 Kaneohe Bay Dr. 177857	6"



6/26	3600 Waialae Ave. 177873	6" C.I.
6/27	4925 Kahala Ave. 179187	24" C.I.
6/27	2405 Campus Rd.	20" C.I.
6/28	858 Lunalilo Home Rd. 179905	4" C.I.
6/28	862 Lunalilo Home Rd. 180048	4" C.I.
6/28	98-1607 Kaahumanu St. 179958	12" D.I.
6/28	98-1681 Laauhuahua Pl.	8" C.I.

Bold * - Pro-active Leak
Repair

The miles of pipelines surveyed by the Leak Detection Team in the month of May will be announced at the July 22, 2013 Board Meeting

DISCUSSION:

Program Administrator Daryl Hiromoto announced that the Leak Detection (LDT) team surveyed 2.4 miles of pipelines in the month of June. The amount of miles was relatively low compared to other months because the LDT needed to install a number of leak loggers. The fiscal year ended with 331 main breaks, which computes to about 6.3 breaks per mile of pipe.

ITEM FOR INFORMATION NO. 5

"July 22, 2013

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 are three aquifer index wells within low groundwater status for the production week that ended on July 6, 2013. Punaluu and Kaluanui are in caution status, and Kaimuki is under an alert status. The weekly production average for the period was 137.48 million gallons per day.

The Board of Water Supply rainfall index for the month of June was 108 percent of normal, with a 5-month moving average of 107 percent. The United States Geological Survey (USGS) reported stream discharges at their monitored stream gages ranging from normal to high for the month of June. As of July 2, 2013, the U. S. Drought Monitor site reports no drought condition on the island of O'ahu. The National Weather Service is forecasting below normal precipitation amounts through November 2013. Head levels are continuing their seasonal decline.

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 6/30/13 to 7/06/13

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	1.12	
WAILUPE	0.00		WAIMANALO II	0.72		MAKAHA V	0.34		PEARL CITY III	0.37	
WAIALAE-IKI	0.00		WAIMANALO III	0.55		MAKAHA VI	0.00		WAIU	1.64	
AINA KOA	0.42		KUOU I	0.00		MAKAHA SHAFT	0.13	8.22	NEWTOWN	1.28	
AINA KOA II	0.76		KUOU II	0.08		KAMAILE	0.00		KAONOHI I	0.78	
WAIALAE SHAFT	0.00		KUOU III	0.65		WAIAANAE I	0.14		WAIMALU I	0.00	
MANOA II	0.00		LULUKU	1.07		WAIAANAE II	0.36		AIEA	0.00	
PALOLO	1.07		HAIKU	0.31		WAIAANAE III	0.00		AIEA GULCH 497	0.42	
KAIMUKI HIGH	2.56	22.34	IOLEKAA	0.02		MAKAKILO	0.28		AIEA GULCH 550	0.25	
KAIMUKI LOW	2.95		KAHALUU	0.49		HONOULIULI I	0.64		HALAWA 277	0.40	
WILDER	9.82		WAIHEE	0.00		HONOULIULI II	7.11		HALAWA 550	0.00	
BERETANIA HIGH	3.42	22.19	KAHANA	0.00		SUBTOTAL:	10.93		KAHUMANU MTR (-)	0.00	
BERETANIA LOW	2.48		PUNALUU I	0.00	16.37	IMPORT FROM PH			KAAMILO FLO MTR (-)	0.00	
KALIH I HIGH	1.65	21.82	PUNALUU II	0.66		KAPOLEI LINE BSTR	15.72		KUNIA I	5.04	18.48
KALIH I LOW	1.30		PUNALUU III	1.26		HONOULIULI LB FLOW	0.00		KUNIA II	2.07	
KAPALAMA	1.43		KALUANUI	1.30		EWA BEACH FLOW	0.00		KUNIA III	1.39	
KALIH I SHAFT	7.93		MAAKUA	0.39		HONOULIULI I (-)	-0.64		HOAEAE	6.62	
MOANALUA	1.43	18.85	HAUULA	0.16		HONOULIULI II (-)	-7.11		EWA SHAFT	0.00	
SUBTOTAL:	37.21					SUBTOTAL:	7.97		WAIPAHU INTCON. (-)	-3.18	
			KAHUKU	0.41					EWA-WAIAANAE (-)	-7.97	
IMPORT FROM PH			OPANA	1.02		PEARL HARBOR			PH LOCAL USE:	29.50	
HALAWA SHAFT	6.53	16.51	WAIALEE I	0.12		WAIHAWA	2.85		TOTAL SUBURBAN:	59.62	
KAAMILO	0.00		WAIALEE II	0.29		WAIHAWA II	0.00				
KALAUAO	8.52	16.92	SUNSET BEACH	0.00		MILILANI I	3.55		KALAUAO SPRINGS	2.16	
PUNANANI	10.20		SUBTOTAL:	9.50		MILILANI II	0.00		BARBERS POINT (NP)	1.39	
KAONOHI II	0.00					MILILANI III	0.00		GLOVER TUNNEL (NP)	0.51	
WAIMALU II	0.00	14.94	WIND. EXPORT	0.50		MILILANI IV	1.69				
KAHUMANU	0.99					WAIPIO HTS.	0.24		HEAD CONDITION		
HECO WAIU	2.76		HALEIWA-WAIALUA			WAIPIO HTS. I	0.15		CAUTION	ALERT	CRITICAL
MANANA	0.01		HALEIWA	0.00		WAIPIO HTS. II	0.17		Kaluanui	Kaimuki	
KAHUMANU FLOW MT	0.00		WAIALUA	2.23		WAIPIO HTS. III	0.98		Punaluu		
KAAMILO FLOW MTR	0.00		SUBTOTAL:	2.23		WAIPAHU	3.18	18.15			
TOTAL IMP/EXP WAI. INT:	3.18					WAIPAHU II	0.35				
IMPORT FRM WIND:	0.50		EWA-WAIAANAE			WAIPAHU III	2.40				
SUBTOTAL:	32.68		MAKAHA I	0.72		WAIPAHU IV	3.17				
			MAKAHA II	0.09		PEARL CITY SHAFT	0.00	14.61			
TOTAL METRO:	69.89		MAKAHA III	1.11		PEARL CITY I	0.53				

CWRM PERMITTED USE FOR BWS POTABLE SOURCES						PUMPAGE	2013	2012	GRAVITY	2013	2012
	A	B	C	D	E	SUBURB.	59.62	65.37	SUBURB.	7.55	10.79
WATER DISTRICTS	PERMITTED USE	2013	DIFF. B-A	YEAR/ DATE	DIFF. D-A	METRO	69.89	69.17	METRO	0.42	0.37
HONOLULU	45.27	37.63	-7.64			TOTAL:	129.51	134.54	TOTAL:	7.97	11.16
WINDWARD	25.21	13.58	-11.63			NUUANU #5			Manoa	0.17	
NORTH SHORE	4.08	4.06	-0.02			(rainfall)	1.19"	1.65"	Palolo	0.25	
WAIHAWA	4.27	2.85	-1.42						Waim. I&II	0.23	
WAIAANAE	4.34	3.26	-1.08						Waim. III&IV	0.19	
EWA-KUNIA	15.88	8.03	-7.85						Waihee incl.	0.99	
PEARL HARBOR	92.66	66.79	-25.87						Waihee tun.	2.52	
TOTAL:	191.71	136.21	-55.50						Luluku	0.08	
									Haiku	0.00	
									Kahaluu	2.07	
									Waia. C&C	1.37	
									Waia plant.	0.11	

DROUGHT STATUS REPORT
DRAFT IN MGD

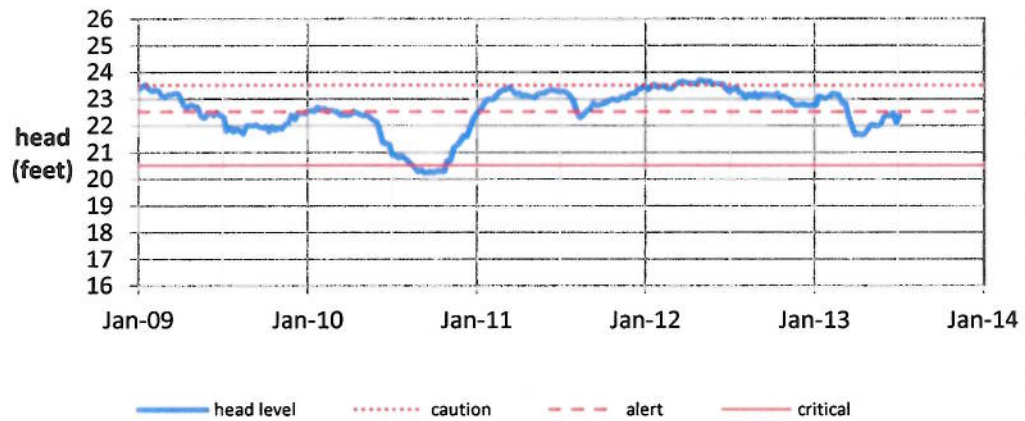
WATER USE DISTRICT	AUTHORIZED USE	2012	6/16-6/22 2013	2012	6/23-6/29 2013	2012	6/30-7/06 2013		
HONOLULU	45.27	32.68	38.38	31.42	39.89	31.30	38.13		
WINDWARD	25.21	20.74	14.58	18.32	13.34	17.82	13.25		
NORTH SHORE	4.08	3.85	4.08	3.70	3.85	3.85	4.06		
WAHIAWA	4.27	3.11	2.77	3.12	2.68	3.11	2.85		
EWA-WAIAANAE	20.22	25.59	20.20	25.55	20.39	25.57	20.37		
PEARL HARBOR	92.66	65.33	59.62	63.82	56.45	63.83	58.82		
TOTAL	191.71	151.30	139.62	145.92	136.60	145.48	137.48		

Accounts for in-district pumpage and transfers

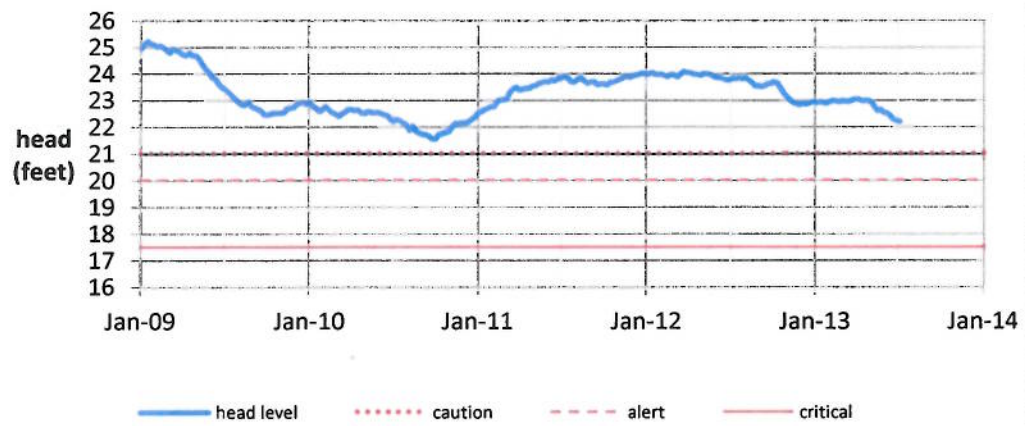
HEAD IN FEET

		2012	6/16-6/22 2013	2012	6/23-6/29 2013	2012	6/30-7/06 2013		
HONOLULU									
KAIMUKI		23.35	22.46	23.25	22.09	23.34	22.34		
BERETANIA		23.75	22.27	23.75	22.22	23.81	22.19		
KALIHI		22.76	21.95	22.74	21.87	22.79	21.82		
MOANALUA		18.94	18.81	19.00	18.86	19.04	18.85		
PEARL HARBOR									
HALAWA		16.38	16.43	16.41	16.49	16.46	16.51		
KALAUAO		17.13	16.90	17.15	16.91	17.18	16.92		
PEARL CITY		14.90	14.64	14.91	14.62	14.90	14.61		
WAIPAHU		18.50	18.15	18.43	18.14	18.41	18.15		
KUNIA		18.92	18.48	18.86	18.47	18.87	18.48		
EWA-WAIAANAE									
MAKAHA		9.67	8.57	8.94	7.87	8.74	8.22		
WINDWARD									
PUNALUU		16.02	15.76	15.91	15.68	16.03	16.37		
KALUANUI		15.85	15.73	15.78	15.68	15.89	15.97		
NORTH SHORE									
WAIALUA		11.12	11.20	11.05	11.19	11.21	11.25		

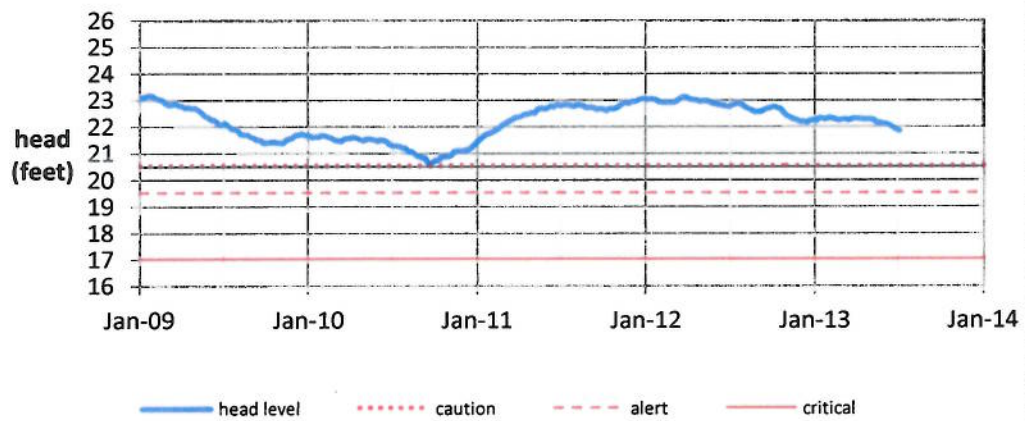
Kaimuki



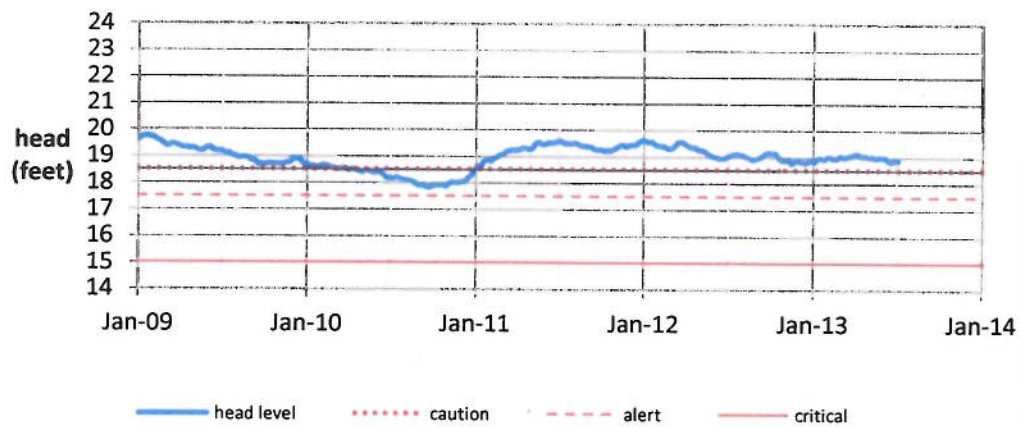
Beretania



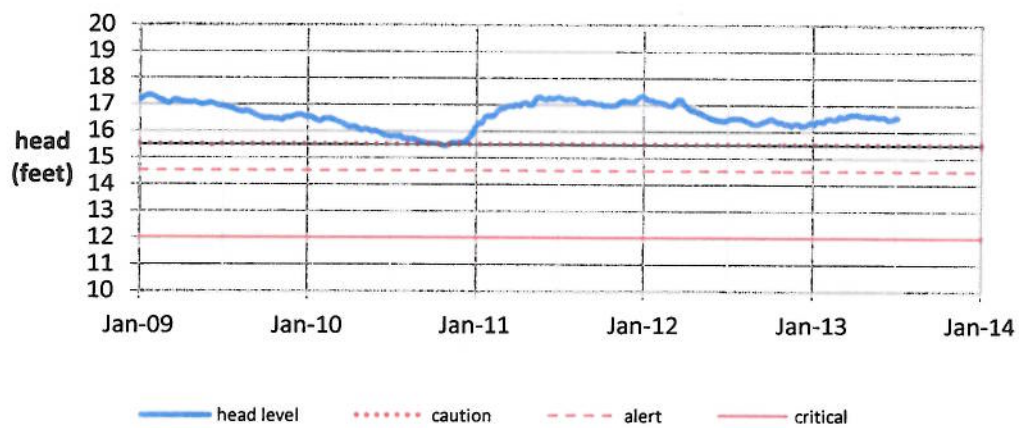
Kalihi



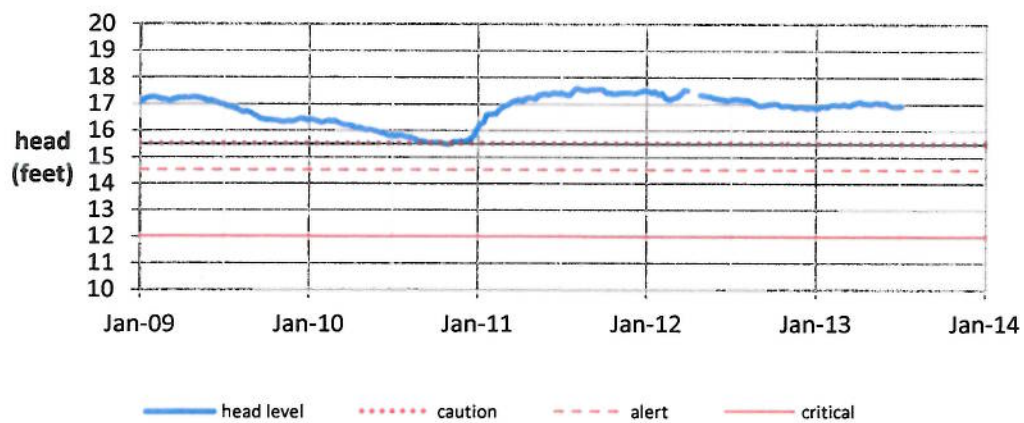
Moanalua



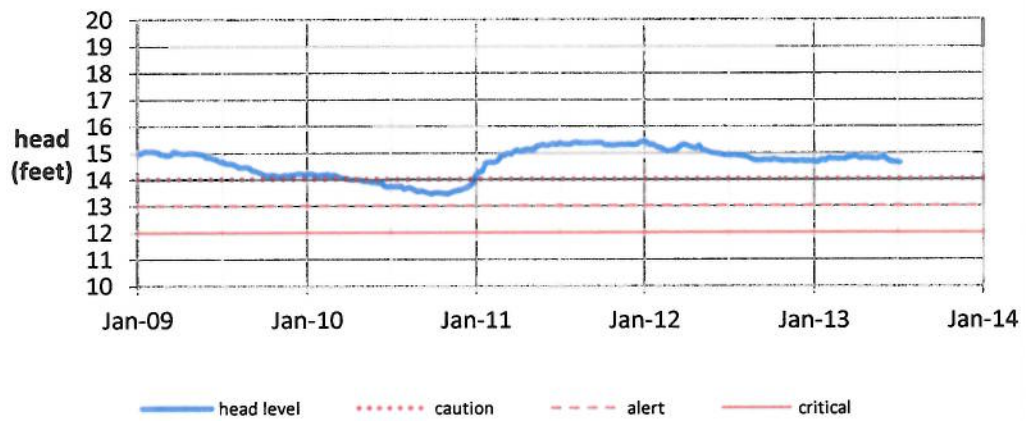
Halawa



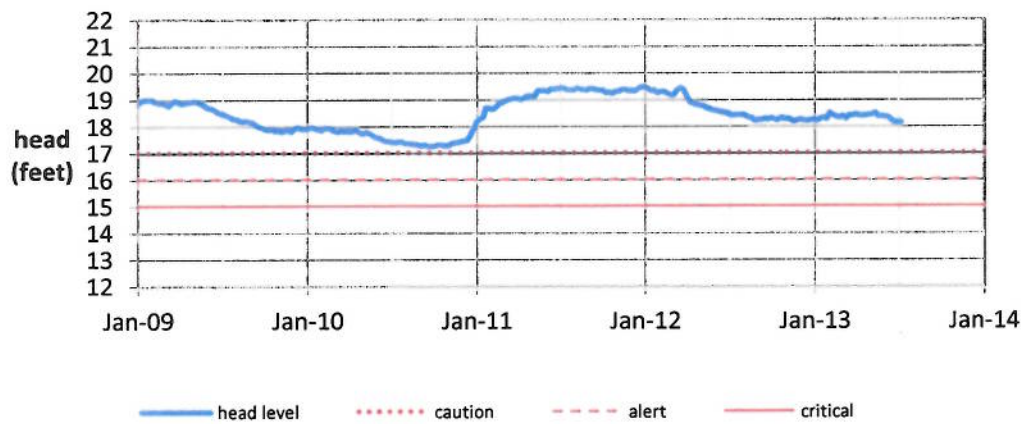
Kalauao



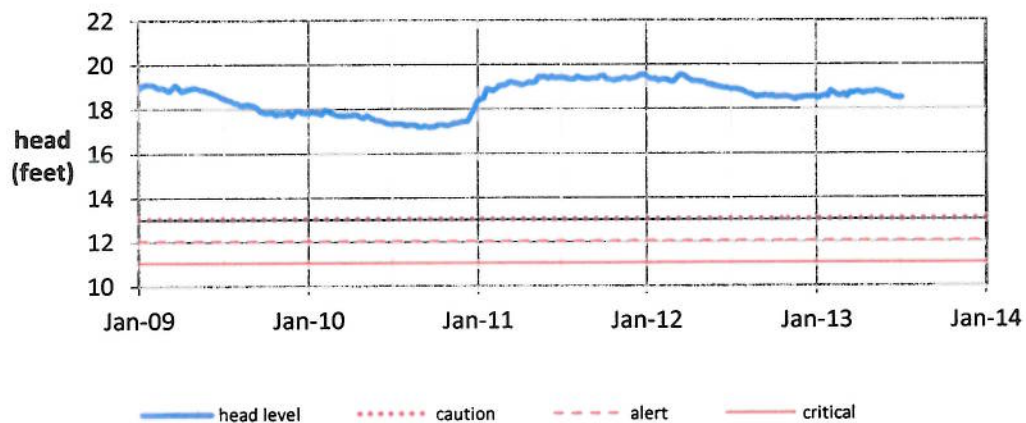
Pearl City



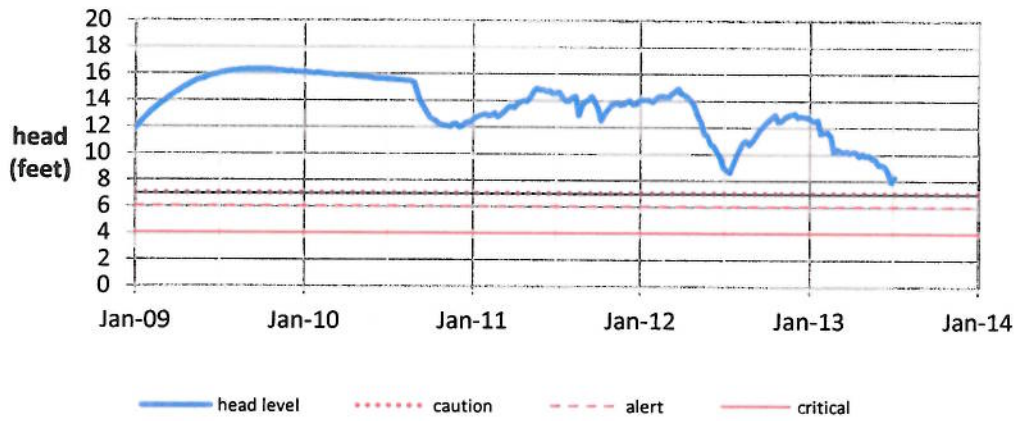
Waipahu



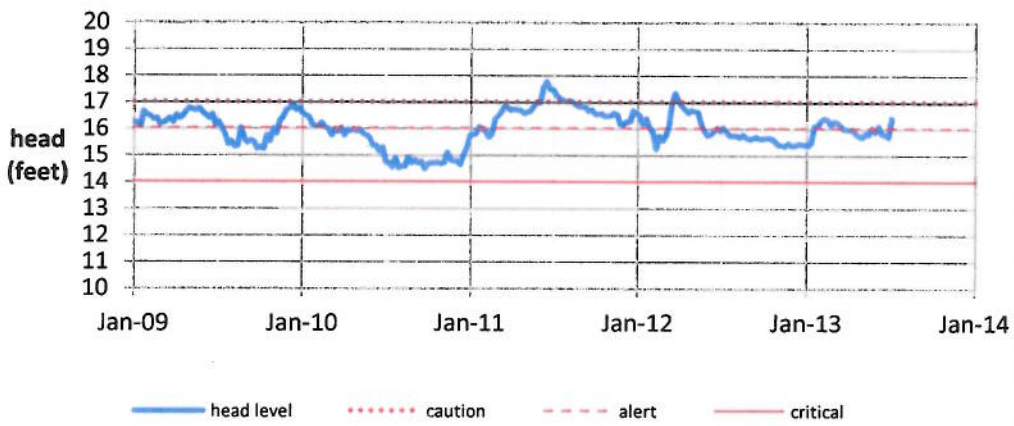
Hoeae-Kunia



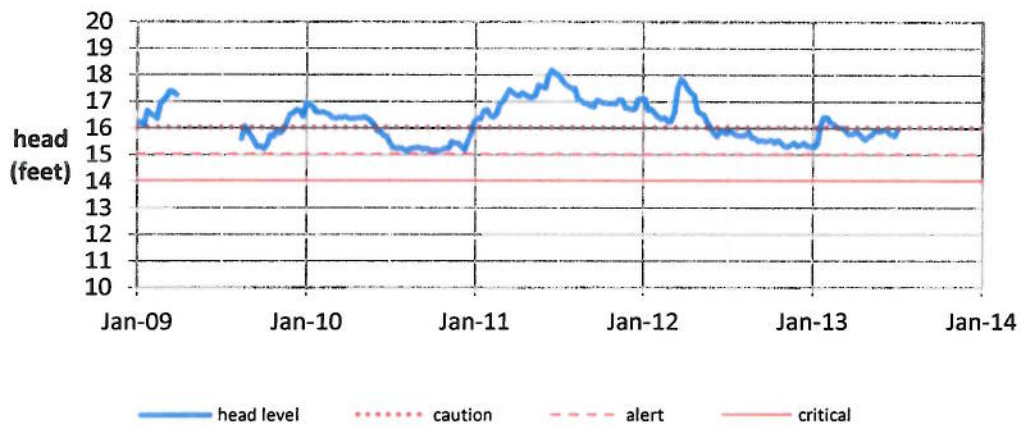
Makaha



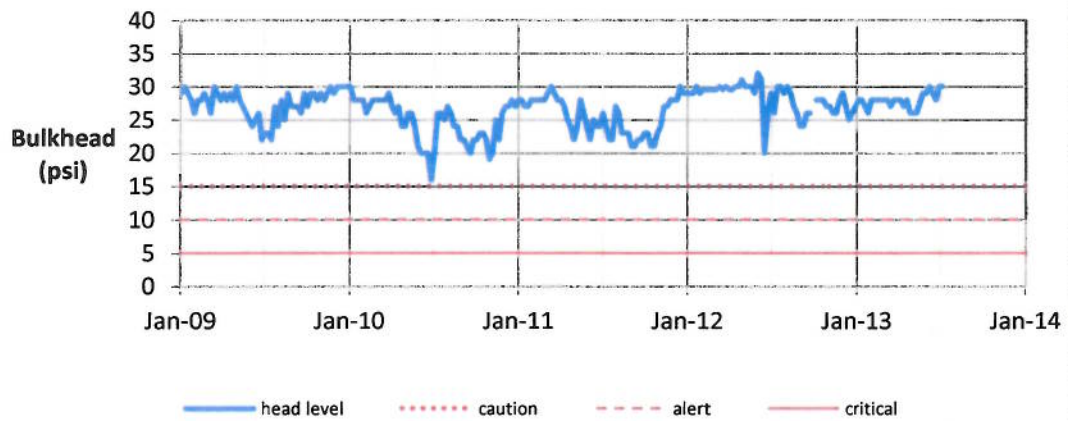
Punaluu



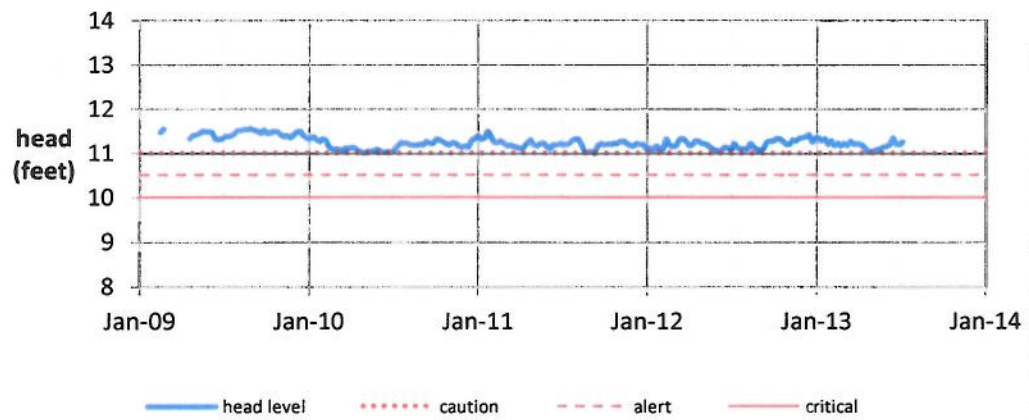
Kaluanui



Waihee Tunnel



Waialua



ITEM FOR INFORMATION NO. 6

"July 22, 2013

HALAWA
XERISCAPE
GARDEN OPEN
HOUSE AND
UNTHIRSTY
PLANT SALE

Chairman and Members
Board of Water Supply
City and County of Honolulu
Honolulu, Hawaii 96834

Chairman and Members:

Subject: Twenty-Fifth Annual Halawa Xeriscape Garden Open House and
Unthirsty Plant Sale

I am pleased to invite you to attend the 25th Annual Halawa Xeriscape Garden Open House and Unthirsty Plant Sale on Saturday, August 3, 2013, from 9:00 a.m. to 3:00 p.m., at 99-1268 Iwaena Street in Halawa Valley's Central Park Industrial Area.

This community-focused event provides the public with opportunities to learn about xeriscaping, an ideal way to reduce water consumption outdoors, maintain an attractive yard, and contribute to preserving our water resources.

Our co-sponsor, The Friends of Halawa Xeriscape Garden, a non-profit organization, has organized about a dozen Oahu nurseries to participate in another exceptional plant sale featuring a variety of less-thirsty plants. Proceeds from the plant sale support the education programs at the garden.

Free instructional workshops will be offered throughout the day that include "Plants Drink Tea Too," "Magnificent Neem and Its Many Uses," "Xeriscape 101," "Container Gardening Myth Busters," "5 Simple Steps to a Beautiful Garden," and "Introduction to Aquaponics." We are also planning family-oriented educational activities and inviting various organizations such as Hawaiian Electric Company, Hawaii Nature Center, and University of Hawaii's Master Gardener Program to share in promoting resource and environmental conservation.

A food booth, organized by a group of dedicated Board of Water Supply and water industry-related employees, help to raise funds for American Water Works Association's Water for People Project. This project is part of a larger mission to improve the quality of life in less fortunate countries with water, sanitation, health, and hygiene related issues.

Our annual Open House and Unthirsty Plant Sale helps to remind us all of our responsibility to use, protect, and preserve our most precious natural resource – fresh water. We hope you and your family will join us on August 3rd.

Respectfully submitted,

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

The foregoing was for information only.

DISCUSSION:

Mr. Lau invited Chair Miyashiro and all of the Board Members to attend this event on August 3rd. Ms. Cypher mentioned that the Friends of Halawa Xeriscape Garden (Friends) is a community group that helps support the garden and they are the ones who propagate the plants that are sold at the plant sale. Mr. Lau added that the Friends are at the garden every Wednesday and Saturday when the garden is open to the public, giving out free mulch.

ITEM FOR INFORMATION NO. 7

"July 22, 2013

PUBLIC
OUTREACH AND
ENGAGEMENT
UPDATE

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

Chairman and Members:

Subject: Public Outreach and Engagement Update

Information Officer Tracy Burgo will provide an overview of the Board of Water Supply's Public Outreach and Engagement Update.

Respectfully submitted,

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

Attachment"

The foregoing was for information only.

DISCUSSION:

Information Officer Tracy Burgo provided an overview of the Public Outreach Plan.

Ms. McMurdo commended Ms. Burgo and Mr. Lau for being on the Carroll Cox Radio Show to answer questions from the community. She also commended Keoni Mattos of the Communications Office for the great job in coordinating the BWS Neighborhood Board Representative Program. She suggested that in the next round of Neighborhood Board Meetings, BWS should have a proactive message and address questions regarding customer service and estimated billing. Ms. McMurdo stated that she visited BWS's Facebook page and noticed that some of the questions from the public had not yet been responded to and asked that someone respond to them in a timely manner.

Ms. Cypher also thanked the Department for trying to be more effective in working with the community. She stated that every employee in the Department, as well as the Board Members, is responsible for the image of the BWS. Ms. Cypher commented that Mr. Lau has worked hard to convey to staff that their efforts can affect the customers positively or negatively, so it's important that everyone works together to give their very best to the customers.

Mr. Miyashiro also commended BWS staff and commented that one of his goals as the Chair was to have transparency within BWS where Board Members and BWS staff felt comfortable to speak their minds, and he feels

that this has been accomplished. He stated that as a result of increased construction projects, there may be more complaints about construction, traffic, road conditions, etc. He reminded the Communications Office to inform the public that the ultimate reason for the construction projects is to better serve them by providing safe, reliable, and affordable drinking water; however with that, some inconveniences may arise.

WATER FOR LIFE

Ka Wai Ola



Board of Water Supply
City and County of Honolulu

Public Outreach and Engagement Update



July 22, 2013





Proactive communications intended to improve awareness and engagement

- Offers positive focus amid currently challenging conditions
- Addresses critical success factor of employee, customer, and Board support identified during Water Master Plan (WMP) kickoff meeting
- Requires developing and implementing a comprehensive strategy to earn this support



BWS taking leadership as THE source of information about our system

- Providing proactive, timely information about our current events
 - Television, radio, print media interviews
 - Direct engagement with our customers
 - Press releases
 - Editorial boards – Aug. 12 w/Star Advertiser
- Informing staff and public about the WMP
- Identifying opportunities to build support for WMP through successful “early actions”



BWS working on foundational components to support proactive communications

- Key messaging & packaging information
- Customer-centric communications
- Requesting interviews to provide the BWS's perspectives on issues
- Pre-scripted crisis communications materials
- Build support for the BWS through
 - Community Advisory Group
 - Build Stakeholders through ongoing BWS activities such as Watershed Management Plan, etc.

Communications Plan development already underway

- Development led by BWS Information Officer
- Consulting support provided by CDM Smith and Becker Communications
- Plan completion (Version 1.0) expected September 2013
- “Living Document”
 - Responsive to changing conditions
 - Updated to incorporate lessons learned



ITEM FOR INFORMATION NO. 8

BOARD OF WATER SUPPLY WATER MASTER PLAN STATUS UPDATE

DISCUSSION: Manager Lau did a presentation on the BWS Water Master Plan (WMP) Update.

The following are questions by Ms. McMurdo:

- 1) Does corrosion occur with age of the pipe? Mr. Lau replied that age could cause corrosion but it is not the only factor. Corrosion can occur from soil conditions, stray electrical currents, pressure in the pipes, ground movement, construction issues, etc.
- 2) How many of the main breaks are due strictly because of the age of the pipes? What were the ages of the 331 pipes that broke last year? Mr. Lau replied that they don't have actual numbers to these questions. If an old pipe doesn't experience any problems like corrosion, pressure issues, etc., it could last a very long time. Mr. Wada added that their initial analysis did not show a strong correlation between age and breaks.
- 3) Ms. McMurdo stated that she would like to know how many breaks are caused by age, by construction issues, by water hammers, etc. Mr. Lau stated that a failure analysis will be done in the WMP and they'll be able to better identify these things.
- 4) Is there a nationwide standard with regards to a certain age of the pipe? Mr. Lau replied that he wasn't sure but doesn't think there is a cut and dry standard across the board. Mr. Wada stated that they're seeing many instances where the section of the break shows corrosion, but the other sections of the pipe still look good even though they're 60-70 years old.
- 5) What percentage of the pipes are over 60 years old? Mr. Lau replied that out of the 2100 miles of pipeline, there are about 300+ miles that are over 70 years old and about 60 percent over 40 years old.
- 6) What causes a water hammer? Mr. Lau explained that when a valve is closed too quickly, while large volumes of water flow through the pipe, it causes the water to hit against the valve and that pressure would reflect backwards up the pipeline. Another way is if large hotels or facilities have a lot of pumps and valves in their property that are not working well, it could cause a water hammer that travels back to the BWS's water system. The manner in which BWS operates valves in pumping stations could also create a water hammer. Managing pressure so the system doesn't fluctuate too widely could help reduce main breaks.
- 7) Does adding a development to the system affect the pressure? Mr. Lau explained that an evaluation is done to make sure the development meets BWS's requirements of source, transmission and storage. If not, they are required to develop a water master plan to ensure minimal problems to BWS's operations.

WATER FOR LIFE

Ka Wai Ola



Board of Water Supply
City and County of Honolulu

Honolulu Board of Water Supply Water Master Plan *Status Update*

July 22, 2013



WATER FOR LIFE

Ka Wai Ola



Board of Water Supply
City and County of Honolulu

The Water Master Plan is a Program to Identify Problems, Develop Solutions and Take Action to ensure a safe, reliable and affordable water supply for now and generations to come





Comprehensive Scope

- Water Sources
- Water Quality Monitoring & Treatment
- Pipelines & Main Breaks
- Pump Stations
- Reservoirs
- Water System Capacity & Operations
- Prioritized Capital Improvements
- Financial Plan and Rate Study
- Implementation Plan
- Knowledge Transfer & Capacity Building



BWS's Master Plan Approach

- Identify the causes of problems
- Develop solutions
 - Affordable
 - Long lasting
- Take actions to implement



Identify the Causes of Problems

- Root cause & failure analyses
- Condition assessment
 - Pipeline assessment
 - Facility inspections
- Water system analyses



Develop Solutions

- Repair, replacement & upgrade program
- Changes
 - Engineering Design
 - Maintenance & Operations
- Financing plan and rate study



Take Actions

- Take “Early Actions” to address critical problems
- Reprioritize/Develop CIP
- Provide resources to implement CIP
- Implement changes

WATER FOR LIFE

Ka Wai Ola



Board of Water Supply
City and County of Honolulu

**BWS has initially identified three primary
causes of main breaks**





Primary Root Cause #1: Corrosion



Typical Failure Mechanism:

- Graphitic and/or pitting corrosion forms holes in pipe wall
- Spot corrosion accelerates
- Structural support of surrounding soil is compromised
- **Combination of these elements cause blow-outs, splits or large leaks occur**

Primary Root Cause #2: Construction Issues



Pipe Installed on Rock:

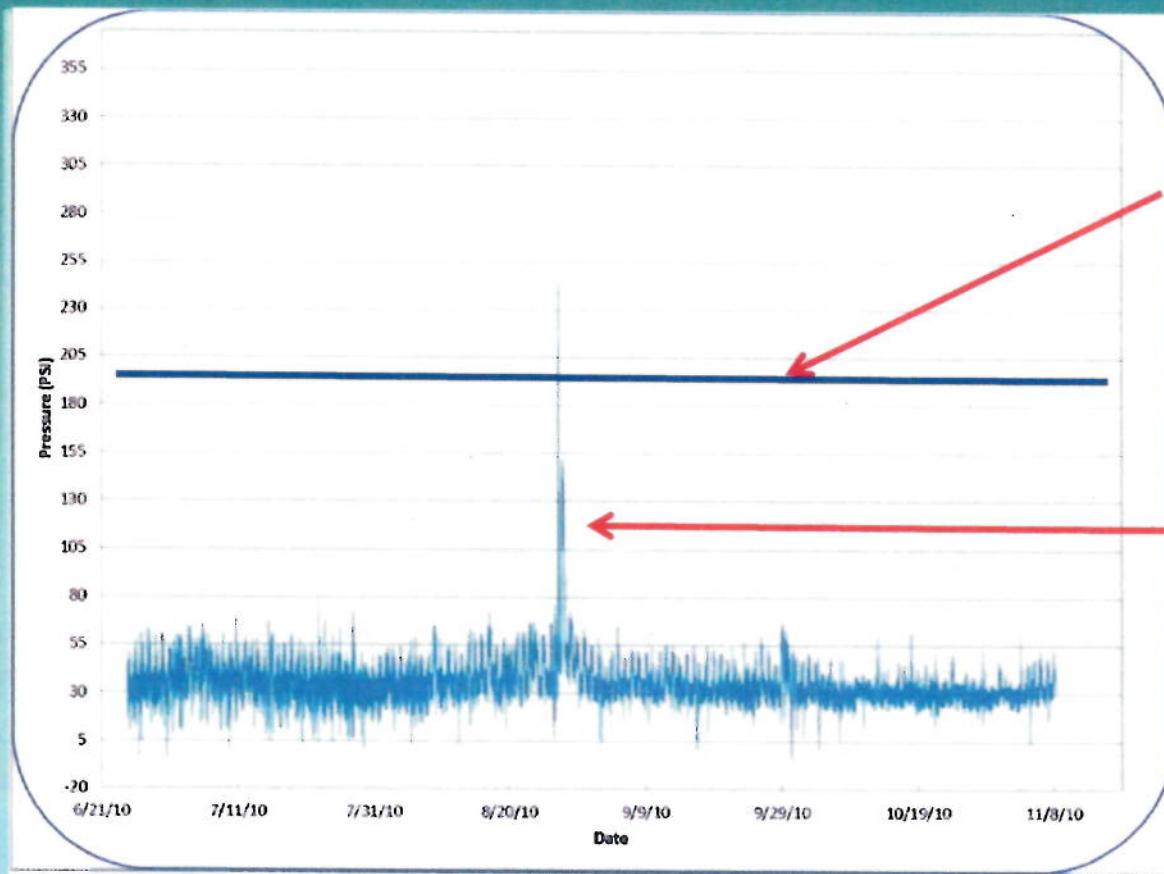
Alewa Heights Dr.

8" PVC

May 22, 2013



Primary Root Cause #3: Pressure Surges



Pressure threshold of
pipe

Pressure surge

WATER FOR LIFE

Ka Wai Ola



Board of Water Supply
City and County of Honolulu

BWS has Identified Initial Solutions & Is Taking Action to Address Water Main Break Root Causes



Addressing Corrosion Issues



Actions:

- Main break investigations by BWS forensics team
- Soils mapping to identify “hot” areas
- Pipe material and corrosion protection standards
- Pipeline condition assessment



Addressing Construction Issues:



Actions & Activities:

- Evaluate construction management (CM) practices and procedures
- Procure CM staff support
- Review existing construction specifications
- Outreach to consultant & construction community



Addressing Pressure Surges:



Actions & Activities:

- Conduct post-break forensic review of well & booster station operations data
- Install pressure recorders
- Perform well & booster station condition assessment

Instantaneously monitoring pressure recorder at Lualualei Booster Station



Water Master Plan Schedule

Phase 2

Root Cause Analysis & Condition Assessment

- Pipelines
- Reservoirs
- Pump Stations



Phase 1 Pilot Phase

Phase 3

Water Master Plan Development

- Water Master Plan
- CIP Prioritization
- Rate Study



As Work Progresses – Future Discussion Topics:

- Water Sources
- Water Quality & Treatment
- Wells & Booster Stations
- Reservoirs
- Water System Operations
- CIP Implementation
- Financial Plan & Rate Study

WATER FOR LIFE

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Board of Water Supply
City and County of Honolulu

Questions



ITEM FOR INFORMATION NO. 9

"July 22, 2013

WATER QUALITY
PROGRAM
PRESENTATION

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

Chairman and Members:

Subject: Water Quality Program Presentation

Program Administrator Erwin Kawata of the newly created Water Quality Division will be giving a presentation on the Board of Water Supply water quality monitoring program.

Respectfully submitted,

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

Attachment"

The foregoing was for information only.

DISCUSSION: Water Quality Division Program Administrator Erwin Kawata informed the Board that in June 2013, Mr. Lau approved the creation of the Water Quality Division. Mr. Kawata gave a presentation on the water quality monitoring program.

Mr. Kawata stated that BWS was recently issued a Tier 3 Notice of Violation for not testing Kahana Well 1 in 2010 and Waipahu Wells III Granular Activated Carbon in 2011 and 2012 for various Safe Drinking Water Act contaminants. Ms. McMurdo inquired when the last time BWS received a violation prior to this one. Mr. Kawata replied that they had one a year ago for not taking enough samples from the Kahuku Water System. Prior to that they had a violation in the mid-1980's for not taking enough samples for microbiological testing in the Mililani area, and prior to that BWS received no violations. All violations were Tier 3 violations which do not have a direct impact on human health. The Safe Drinking Water Act (SDWA) regulations allow BWS to use water sources that are under a Tier 3 condition.

Ms. McMurdo recommended that BWS issue a press release to inform the public about this newly created Water Quality Division and to explain about the increased responsibilities such as how the number of contaminants that are required to be regulated went from 18 in 1974 to 91 in 2013 and how

up until June 2010, the Department of Health conducted testing of the drinking water but from July 2010, those duties got transferred to BWS. Ms. McMurdo stated that these things help the customer to understand the need for increasing water rates, and it shows how the Department is responsible for much more than just delivering water to them. Mr. Kawata explained that in 2009, the Water Quality Division's budget for drinking water analysis was \$70,000 a year. Today it is \$350,000 a year, just for regulatory monitoring and doesn't include their other programs and monitoring.



Board of Water Supply Water Quality Program

Board Presentation July 22, 2013

Erwin Kawata
Program Administrator
Water Quality Division





Today's Presentation

- Drinking Water Standards
- Regulating Agencies
- Who is performing drinking water testing
- BWS water testing past and present
- Recent events





Safe Drinking Water Act (SDWA)

- Enacted in 1974
- Amended in 1986 and 1996
- Contaminants regulated in 1974 = 18; Today it is 91; 79 applies to BWS.
- Specific requirements
 - Maximum contaminant limits (MCLs) = drinking standards
 - Monitoring
 - Treatment
 - Enforcement
 - Public Notification
- Water quality data collection rules (i.e. Unregulated Contaminant Monitoring Rule)





SDWA Regulating Agencies

- U.S. Environmental Protection Agency
 - Implements SDWA
 - Writes federal regulations
 - Enforces requirements
 - Give states authority to implement and enforce regulations called Primacy
- State of Hawaii Department of Health (DOH)
 - Primacy Agency in Hawaii
 - Adopts federal regulations
 - Can have more stringent rules
 - 1, 2, 3 – Trichloropropane (TCP)
 - Nickel





Drinking Water Testing

- Department of Health
 - 1974 – June 30, 2010
 - Large water utilities (BWS) responsible from July 1, 2010
 - All other utilities from January 1, 2011
- BWS
 - Chemical and Microbiological Laboratories
 - Water treatment and resource monitoring
 - SDWA Testing since July 1, 2010





BWS Water Testing

- Past
 - Started chemical testing (chloride and pH) in 1931
 - Started bacteriological examinations in 1933
 - Water quality deemed “excellent”
 - One chemist and one microbiologist
- Today
 - 4 chemists, 4 microbiologists, 5 lab technicians
 - 1 Laboratory director
 - 6,000 chemical and 6,000 microbiological tests annually
 - SDWA requirements



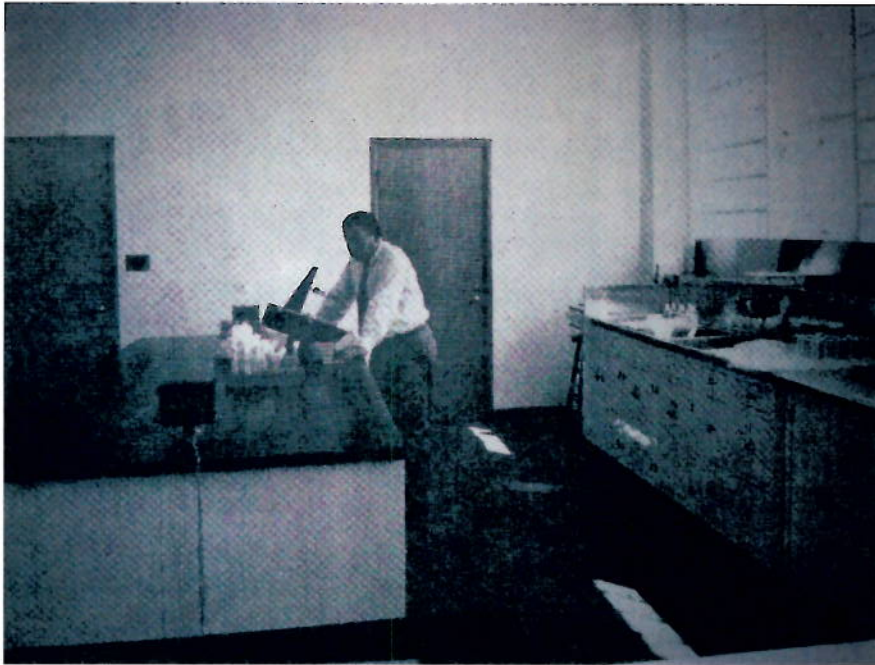


BWS Chemistry Laboratory - 2013





BWS Microbiology Lab – 1941 and Today





Laboratory Function in BWS Organization

- 1938 – Distribution System Division responsible for water service of sufficient quality and quantity and adequate fire protection
- 1958 – Water Distribution Division
- 1967 – Operations Division
- 1973 – Planning and Engineering
- 2000 – Operations Unit
- 2010 – Water Systems Operations (formerly Operations Unit)
- 2013 – Water Quality Division created





Water Quality Division

- Created in 2013
- Reporting to the Manager the independent auditing and monitoring of BWS water quality and related activities free from operational influences
- Subject matter expertise focused and highly specialized
- Reduce dependence solely on DOH for regulatory confirmation of rule compliance





Water Quality Division – cont.

- Responsible for all matters relating to the administration and compliance of the department's island-wide water system with all drinking water and environmental laws, rules, and regulations
 - Chemical, microbiological, biological and radiological testing and drinking water rule compliance
 - Laboratory quality assurance audit and sanitary surveys
 - Environment rule management and compliance (storm water regulations, hazardous waste, National Pollutant Discharge Elimination System (NPDES) permitting, Underground Storage Tank (UST) rules)





Recent Events

- Aina Haina Reservoir
 - Reservoir and distribution system water testing for crack sealant materials
 - Toxicological evaluation of sealants in water
- DOH Re-evaluation of 1,2,3-TCP MCL
 - Toxicological peer review of DOH proposal
 - Critical examination of latest TCP health assessments
- Tier 3 Notice of Violation (NOV)
 - Self reported to DOH, BWS not testing Kahana Well 1 (in 2010) and Waipahu Wells III Granular Activated Carbon [GAC] (in 2011 and 2012) for various SDWA contaminants





Questions



MOTION TO
ADJOURN

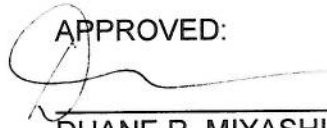
There being no further business Chair Miyashiro at 3:46 PM called for a motion to adjourn the Open Session. Theresia McMurdo so moved; seconded by Mahealani Cypher and unanimously carried.

Respectfully submitted,



LISA K. KIM

APPROVED:



DUANE R. MIYASHIRO
Chairman of the Board

AUG 26 2013

Date

THE MINUTES OF THE REGULAR SESSION BOARD MEETING ON JULY 22, 2013 WERE APPROVED AT THE AUGUST 26, 2013 BOARD MEETING			
	AYE	NO	COMMENT
DUANE R. MIYASHIRO	X		
MAHEALANI CYPHER	X		
THERESIA C. MCMURDO	X		
ADAM C. WONG	X		
KAULANA H. R. PARK			ABSENT
ROSS S. SASAMURA	X		
GLENN M. OKIMOTO			ABSENT