

MINUTES

REGULAR MEETING OF THE BOARD OF WATER SUPPLY

February 27, 2017

At 2:03 PM on February 27, 2017 in the Board Room of the Public Service Building at 630 South Beretania Street, Honolulu, Hawaii, Board Chair Andaya called to order the Regular Meeting.

Present: Bryan P. Andaya, Chair
Kapua Sproat
Kay C. Matsui
Ross S. Sasamura

Also Present: Ernest Lau, Manager and Chief Engineer
Ellen Kitamura, Deputy Manager and Chief Engineer
Erwin Kawata
Barry Usagawa
Mike Fuke
Jason Takaki
Joe Cooper
Mike Matsuo
Kevin Ihu
Kathleen Pahinui
Henderson Nuuhiwa
Robert Morita
Jennifer Elflein
Teriann Akana
Leanne Matsumoto

Others Present: Jeff Lau, Deputy Corporation Counsel
Jessica Wong, Deputy Corporation Counsel
Tom Myers, Brown and Caldwell
John Montgomery, U.S. Navy

Absent: Adam C. Wong, Vice Chair
David C. Hulihee
Ford N. Fuchigami

Mr. Andaya asked everyone to observe a moment of silence in memoriam of Manager Ernest Lau's father who passed away this past weekend.

APPROVAL OF
MINUTES

Approval of the Minutes of the Regular Meeting held on January 30, 2017

MOTION
TO APPROVE

Ross Sasamura and Kapua Sproat motioned and seconded, respectively, to approve the Minutes of the Regular Session Meeting of January 30, 2017. The motion was unanimously carried.

ITEM REQUIRING BOARD ACTION

2. APPROVAL OF ABOLISHMENT OF POSITIONS

"February 27, 2017

DISCUSSION: Mr. Andaya stated that they will defer this item. However, as it was on the agenda and notice given to the public, he asked if anyone would like to provide testimony. No one came forth.

Manager Lau requested that the approval of abolishment of positions be deferred to the March Board meeting. Mr. Lau explained the reason for the deferral is that BWS is not ready to present a very complete and understandable report to the Board.

MOTION TO DEFER THE APPROVAL OF ABOLISHMENT OF POSITIONS

Ross Sasamura and Kapua Sproat motioned and seconded, respectively, to defer the approval of abolishment of positions. The motion was unanimously carried.

DEFERRAL OF THE APPROVAL OF ABOLISHMENT OF POSITIONS TO THE MARCH 28, 2017 BOARD MEETING WAS APPROVED ON FEBRUARY 27, 2017			
	AYE	NO	COMMENT
BRYAN P. ANDAYA	X		
ADAM C. WONG			ABSENT
DAVID C. HULIHEE			ABSENT
KAPUA SPROAT	X		
KAY C. MATSUI	X		
ROSS S. SASAMURA	X		
FORD N. FUCHIGAMI			ABSENT

LEGISLATIVE
UPDATE

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

Chair and Members:

This report addresses the current status of various 2017 Legislative measures as of February 16, 2017. On February 17, 2017, (First Lateral) both houses of the State Legislature vote on those measures that each chamber wants to advance to their final committees. A brief description and current disposition of various proposals of interest to the Board of Water Supply (BWS) follows:

House Bills

HB215: (County Services) Requires counties to respond within 72 hours to claims relating to disruption of water or sewer service; Subjects the counties to treble damages in civil court for failure to respond. **Status:** Water and Land (WAL) Committee deferred bill.

HB628: (Infrastructure Construction Financing) Establishes the Infrastructure Capacity Construction Loan Revolving Fund to provide loans to counties, state agencies, or private developers for infrastructure improvements. Appropriates funds. **Status:** Finance (FIN) Committee passed as is; deck for Third Reading.

HB630: (Drought Mitigation) Appropriates funds for county drought mitigation projects and one full time equivalent planner IV position within Commission on Water Resource Management (CWRM) to update the Hawaii drought plan. **Status:** WAL Committee deleted monies; referred to FIN Committee.

HB631: (Abandoned Wells) Authorize CWRM to require an owner or prior owner of an abandoned well to repair or seal the well at the owner's or prior owner's expense. Appropriates funds for three positions to assist Department of Land and Natural Resources (DLNR) with the inspection of abandoned wells and the enforcement of well construction and pump installation standards. **Status:** WAL Committee passed with amendments; referred to FIN Committee.

HB632: (Water Infrastructure Loan Program (WILP) Broadens the WILP to include loans made to water utilities and amends various definitions to include water tanks. **Status:** WAL Committee passed as is; referred to FIN Committee.

HB633: (Dams and Reservoirs) Clarifies that aboveground freshwater storage tanks are included in the definition of "appurtenant works" for the purposes of

the special purpose revenue bond program. **Status:** WAL Committee passed as is; referred to FIN Committee.

HB634: (Nuuanu Reservoir #1) Authorizes the issuance of special purpose revenue bonds (SPRB's) to BWS and Hawaiian Electric Company (HECO) to upgrade Nuuanu Reservoir #1 to meet State Dam Safety Standards, as a component of the Nuuanu Hydroelectricity Project. **Status:** Energy and Environmental (EEP) and Water and Land (WAL) Committees passed with amendments to clarify BWS is recipient of SPRB's and blanked out funding amount; referred to FIN Committee.

HB635: (Nuuanu Reservoir #4) Authorizes the issuance of special purpose revenue bonds to BWS and HECO to upgrade Nuuanu Reservoir #4 to meet State Dam Safety Standards, as a component of the Nuuanu Hydroelectricity Project. **Status:** EEP and WAL Committees passed with amendments to clarify BWS is recipient of SPRB's and blanked out funding amount; referred to FIN committee.

HB636: (Water Conservation Program) Establishes a two-year water conservation financial assistance pilot program to provide financial assistance to county-owned public water systems. **Status:** WAL Committee passed with amendments; referred to FIN Committee.

HB838: (Water Security) Amends the two-year pilot program in DLNR that enables public-private partnerships to provide funds for projects that increase water security. **Status:** Passed with amendments; referred to FIN Committee.

HB1536: (Irrigation) Among other things, amends the definition of "public utility" in Chapter 269, HRS, to include the production, conveyance, etc. of water for human consumption. **Status:** WAL Committee expressly exempted the county boards of water supply from the definition of public utility and deleted reference to "for human consumption"; referred to Judiciary (JUD) Committee.

HB1582: (Constitutional Amendment) Proposes a constitutional amendment to ensure access to clean drinking water, meaningful health care, and a quality education are among the inherent and inalienable rights of individuals. **Status:** JUD Committee passed with amendments; referred to FIN Committee.

Senate Bills

SB633: (Water Security Financing) Establishes a water security fee on water withdrawn from municipal and private water systems and establishes a water security fund administered by the CWRM for the purposes of providing matching grants for water security projects; fee to be collected by the appropriate county Board of Water Supply through regular billing of customers. **Status:** Water and Land (WTL) and Public Safety, Intergovernmental, and Military Affairs (PSM) Committees deferred the measure.

SB635: (Water Conservation Program) Establishes a two-year water conservation financial assistance pilot program to provide financial assistance to county-owned public water systems. **Status:** Water and Land (WTL), Agriculture and Environment (AEN) and Public Safety, Intergovernmental, and Military Affairs (PSM) Committees passed with amendments to provide \$500K in funds to the county Boards of Water Supply to implement program (not CWRM) based on population percentage.

SB1259: (Underground Storage Tanks) Requires Department of Health (DOH) to adopt rules for Underground Storage Tanks and tank systems to conform with certain federal regulations and additional requirements for field-constructed UST's and tank systems. **Status:** Agriculture and Environment (AEN) and Public Safety, Intergovernmental and Military Affairs (PSM) Committees jointly passed with amendments to require DOH to adopt rules conforming to federal regulations by 09/01/18; jointly referred to Commerce, Consumer Protection, and Health (CPH) and Ways and Means (WAM) Committees.

SB1275: (Irrigation) Among other things, amends the definition of "public utility" in Chapter 269, HRS, to include the production, conveyance, etc. of water for human consumption. **Status:** Agriculture and Environment (AEN) and Commerce, Consumer Protection, and Health (CPH) Committees expressly exempted the County Boards of Water Supply from the definition of public utility and the reference to "for human consumption"; jointly referred to the Judiciary and Labor (JDL) and Ways and Means (WAM) Committees.

After the First Lateral deadline on February 17, 2017, measures that are still alive will be considered for further deliberation by the respective committees to which the bills were referred. The constitutionally mandated five day recess period between February 23, 2017 and March 1, 2017 (when the Legislature does not convene in floor sessions) will allow the committees to use this time to schedule final hearings on most of the bills that will be considered for First Crossover on March 9, 2017 (when bills are passed to the other legislative chamber for further consideration).

Generally, the process is then repeated but with the House deliberating on Senate bills and vice-versa. During the period between April 17, 2017 and April 27, 2017, conference committees convene and attempt to resolve their differences between the House and Senate versions of the bills. If resolution is not made the bill(s) die. If agreement is reached the "conference draft" is voted on by both chambers and delivered to the governor whereby the governor may sign the bill into law, let it become law without a signature, or veto the measure. The 2017 State Legislature is scheduled to adjourn on May 4, 2017.

Respectfully submitted,

/s/

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

Attachments”

The foregoing was for information only.

DISCUSSION:

Manager Lau stated that he wanted to keep the Board informed about various bills that have been introduced, their status, and what might affect BWS. BWS has been providing written and in-person testimony. One bill that BWS is watching closely is Senate Bill 1259 relating to underground storage tanks, which addresses and requires the State Department of Health (DOH) to adopt rules that would conform to new federal regulations and include additional rules to make the DOH's rules and regulations stricter. This bill required that the tanks at Red Hill be upgraded within a 10 year time frame, as opposed to what the Administrative Order on Consent (AOC) allows, anywhere between 22 to 27 years to complete all the work at Red Hill. The bill also proposes that the tanks be double-lined. A double-wall tank with an inter-spacial space could capture fuel, and provide a better idea of what might have leaked from the inner tank wall and is recommended by the Environmental Protection Agency (EPA), and Department of Defense's (DOD) Uniform Facilities Criteria Guidance. The Red Hill Underground Fuel Storage Tank bill attracted at least two dozen people, including the Sierra Club and Earth Justice in support of the measure. It was opposed by the DOH, and the Navy. The EPA did not submit testimony to this bill. Senate Bill 1259 passed the Agriculture and Environment and Public Safety Intergovernmental, and Military Affairs Committee, and BWS is watching to see if it will get heard jointly by the Senate, Commerce, Consumer Protection and Health Committee, and the Ways and Means Committee. As the session goes on, the number decreases as the legislature passes bills from the Senate to the House, and vice-versa. If bills don't get heard, they remain in the committees that they are assigned to.

Manager Lau said that BWS has spoken to a number of Legislative Senators, and it does not look promising at this point.

Mr. Andaya noted that there has been extensive commentary in the media regarding this issue.

Mr. Lau understands that the Hawaii Congressional Delegation may introduce similar measures that urge the funding of actions that the AOC comes up with and that the DOD funds those actions in their budget. Mr. Lau stated that it is a positive sign that the Congressional Delegation understands the urgency of the matter and realizes that their role is to make sure the funding is in place and implement whatever is decided upon by the parties of the AOC. BWS will seek to have more discussions with the Navy, EPA, and DOH on the AOC.

ITEM FOR INFORMATION NO. 2

"February 27, 2017

FINANCIAL
PLAN AND
RATE STUDY
UPDATE

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

Chair and Members:

Subject: Board of Water Supply Financial Plan and Rate Study Update

Joe Cooper, Waterworks Controller, will present an update of our Water Master Plan Financial Plan and Rate Study.

Respectfully submitted,

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

Attachments"

The foregoing was for information only.

DISCUSSION

Joe Cooper, Waterworks Controller, gave the presentation. He stated that these policies should provide financial stability and best value to the community, manage risks, promote strategic thinking, and lower BWS's costs of borrowing. BWS proposes reorganizing and revising the financial policies adopted in 2004. The policy that had the most discussion at the Stakeholder Advisory Group meeting was the level of working capital, sometimes referred to as days cash on hand.

Manager Lau mentioned if a major hurricane hit Oahu and a caused major devastation to the island, one idea is to suspend billing since BWS's ability to bill and collect monies may be difficult because BWS will lose power immediately. Also, BWS won't be able to pump water and get water restored back to BWS pumping stations, except using emergency generators. Once BWS's water service is back to normal, then BWS would resume billing again and provide service to the customers.

Ms. Sproat commented after Hurricane Iniki hit on Kauai, it took over two months for power to be restored to her home. Oahu has been very fortunate not to have been hit by a major disaster, but if it comes, it could have major ramifications.

Mr. Lau agreed and said Hawaiian Electric has 40,000 wooden poles in their system, and they are not rated for hurricane force winds. So most or all of them will probably come down.

Mr. Cooper stated just from the financial aspect, disaster recovery is an important aspect. But days cash on hand is also used by bond rating agencies, for interest costs. It's just one factor in their analysis and guidelines that they use, but having a policy, and having an adequate amount of cash on hand, whatever that number is, does help to keep BWS's interest costs down. For an AA or better rating, credit rating agencies look for 90-300 days of cash reserves.

Mr. Lau stated that all of this was presented and discussed with the Stakeholder Advisory Group, but ultimately, it is the Board that would update BWS's financial policies. One objective is to maintain BWS's current bond rating of AA+ and Aa2.

The other financial policies discussed were purposes and uses of debt, the debt to net asset ratio, and the debt service coverage ratio.

Mr. Andaya mentioned he was at a Stakeholder Advisory Group meeting, and the presenter explained the background of this, different metrics used, and how they are derived. He found it very interesting, very detailed, and learned a lot.

In answering a question from Ms. Sproat, Mr. Cooper stated that the current policy was developed in early 2000, when there was a much lower level debt. He thinks the monthly portion of the annual debt service was included in the days cash requirement because it wasn't as large.

Mr. Lau stated that BWS is not proposing that the Board take any action on this today, but wanted to provide the Board with a preview. At some future Board meeting, BWS will have a revised financial policy proposal for the Board's consideration and adoption.

Mr. Cooper stated that the Stakeholder Advisory Group was concerned and interested in how the financial policies could affect rates and future rates. Various scenarios of how these policies affect rates and how much BWS borrows, may be presented by the BWS consultants at the March's Board meeting.

BWS hopes to develop a time line and bring this to the Board for approval approximately in April.

WATER FOR LIFE

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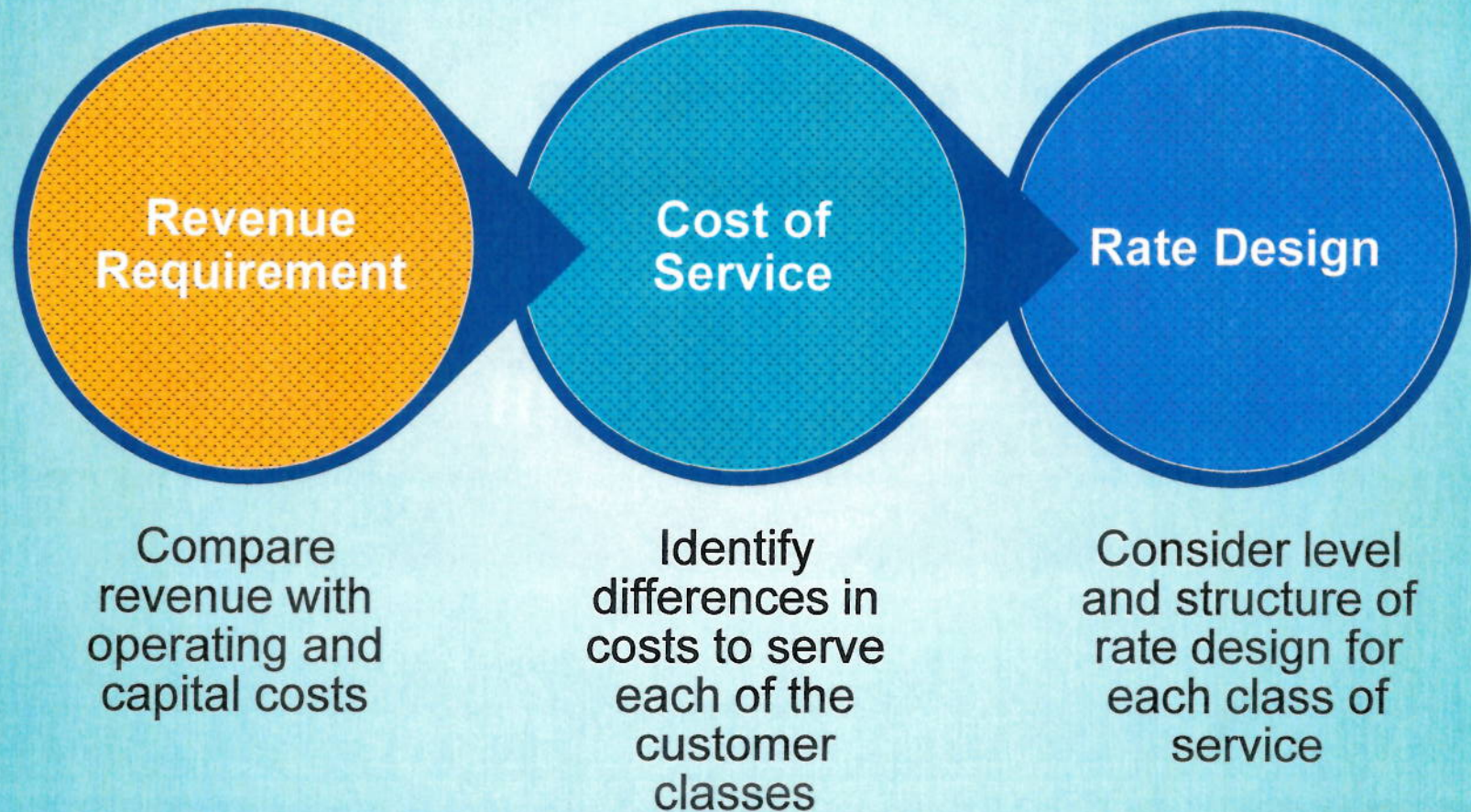
Board of Water Supply
City and County of Honolulu

Board Update

Long-Term Financial Plan and Rate Study

February 27, 2017

Three Primary Steps of Rate Making



4 Major Drivers of Revenue Requirements and Rates

Operations &
Maintenance

Operations and maintenance costs

Capital
Expenses Paid
in Cash vs.
Debt

How the Capital Improvement Program
is financed

Reserves and
Working Capital

Financial policies for credit ratings
and stability

Trends and
Risks

Preparedness to respond to changing
trends and risks

Financial Policies are Essential to Sound Public Financial Management

- ◆ Promote stability and continuity
- ◆ Define shared understanding of financial practices and financial resources management to provide best value to community
- ◆ Define boundaries and manage risks to financial condition
- ◆ Promote long-term and strategic thinking
- ◆ Support good bond ratings to lower cost of borrowing

Adopting Financial Policies, GFOA Best Practice, September 2015

Summary of BWS's Current Financial Policies

- 💧 Unrestricted fund balance = 45 days operating expenses, including annual debt service
- 💧 1.60x senior annual debt service
- 💧 1.30x junior annual debt service
- 💧 40% to 50% debt to net assets ratio
- 💧 No specific contingency reserve
- 💧 Maintain relationships with rating agencies

Proposed Updated Policy Framework

1. Fund balance / working capital

- 💧 Unrestricted fund balance of 45 days
- 💧 No specific contingency reserve

2. Purposes and uses of debt

- 💧 Maintain relationships with rating agencies

3. Debt to net assets ratio

- 💧 40% to 50% debt to net assets ratio

4. Debt service coverage ratio

- 💧 1.60x senior annual debt service
- 💧 1.30x junior annual debt service

1. Fund Balance / Working Capital (Amount of Cash I Have on Hand)

Problem/Need

- ◆ Ensure timely funding of operating and maintenance expenses, debt service and construction payments
- ◆ Allow for differences between when costs are incurred and when revenues are received
- ◆ Cover contingencies, including disasters and other unforeseen events
- ◆ Provide sufficient flexibility and strength to support credit rating objectives

1. Fund Balance / Working Capital (Amount of Cash I Have on Hand)



Current

- Unrestricted fund balance = 45 days of operating expenses
- Includes annual debt service
- Allows setting aside net revenues that exceed budget for general contingencies (no limits)



Straw Man

- Target 180 days, never less than 60 days
- Exclude annual debt service (for consistency)
- Cover disasters and unforeseen circumstances
- Large enough to provide some rate stabilization
- >180 days may be re-programmed to fund CIP

2. Purposes and Uses of Debt (When and Why I'll Borrow)

Problem/Need

- ◆ Ability to finance growing need for system repair and replacement
- ◆ Align payment for projects with useful life of facility
- ◆ More effectively allocate facility costs with customers who benefit
- ◆ Mitigate spikes in capital investment needs, thus stabilizing rate impacts

2. Purposes and Uses of Debt (When and Why I'll Borrow)



Current

- Select most economical financing source
- Term of debt limited to life of facility it is funding
- Cannot fund operations & maintenance
- No more than 20% variable rate debt
- Pay-as-you-go funding "...in a range in conjunction with debt to net assets ratio."



Straw Man

- Select most economical financing source
- Term of debt limited to life of facility it is funding
- Cannot fund operations & maintenance
- No more than ~~25~~20% variable rate debt

3. Debt to Net Assets Ratio (How Much I Can Borrow)

Problem/Need

- Manage financial leverage, the amount of debt being used to build new assets
- Provide flexibility for additional borrowing to meet needs
- Maintain strong credit ratings

3. Debt to Net Assets Ratio (How Much I Can Borrow)



Current

- 40% to 50% debt to net assets ratio



Straw Man

- No more than 50% debt to net assets ratio

4. Debt Service Coverage (DSC) Ratio (Ability to Make Loan Payments)

Problem/Need

- ◆ Manage ability to pay debts after also paying for all operating and maintenance expenses
- ◆ Provide flexibility for additional borrowing to meet needs
- ◆ Maintain strong credit ratings

4. Debt Service Coverage Ratio (Ability to Make Loan Payments)



Current

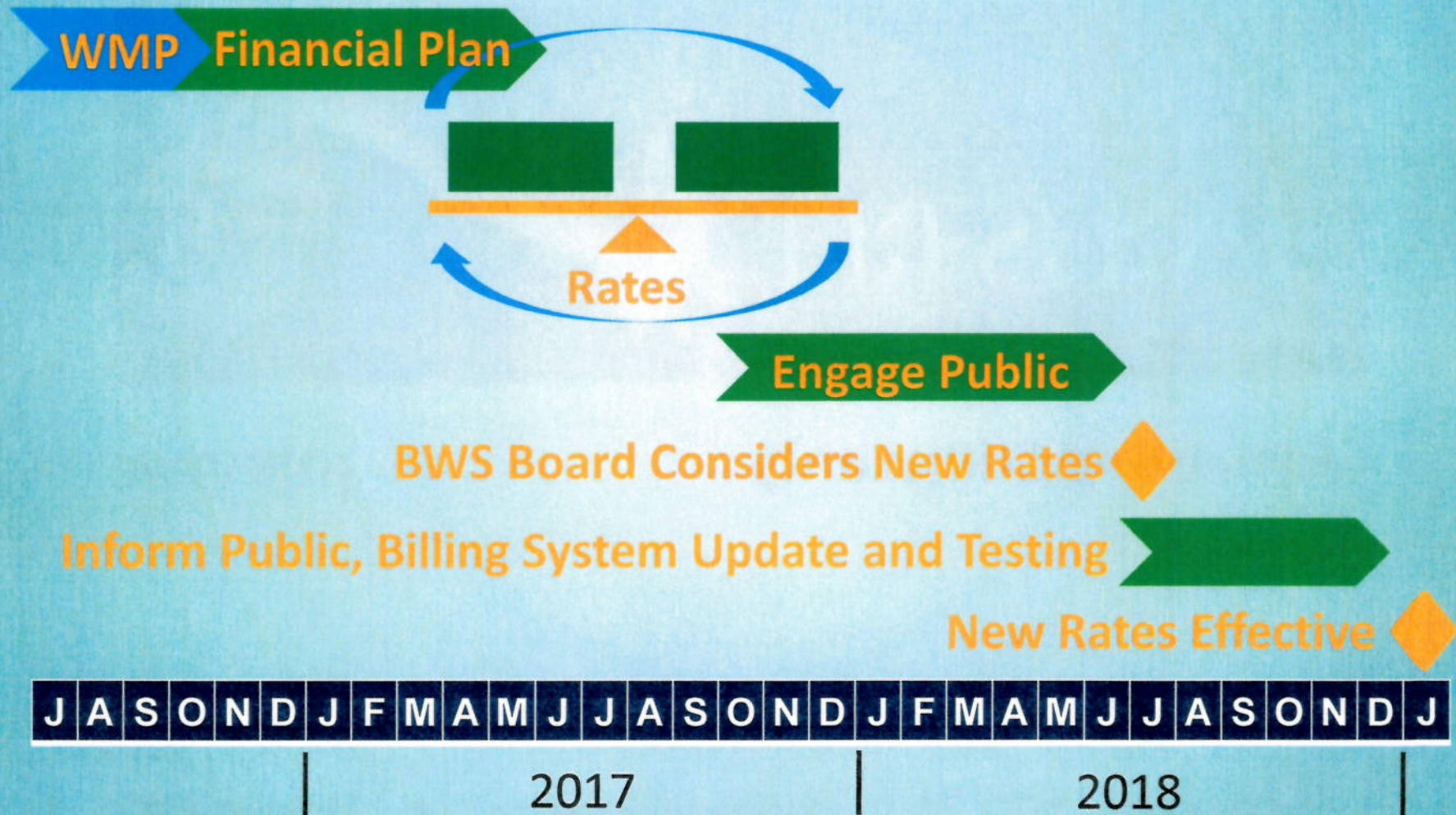
- 1.6x senior annual debt service
- 1.3x junior annual debt service



Straw Man

- ~~1.7x senior annual debt service~~
- ~~1.3x junior annual debt service~~
- 1.6x total annual debt service (including SRF)

Financial Plan and Rates Schedule



WATER FOR LIFE

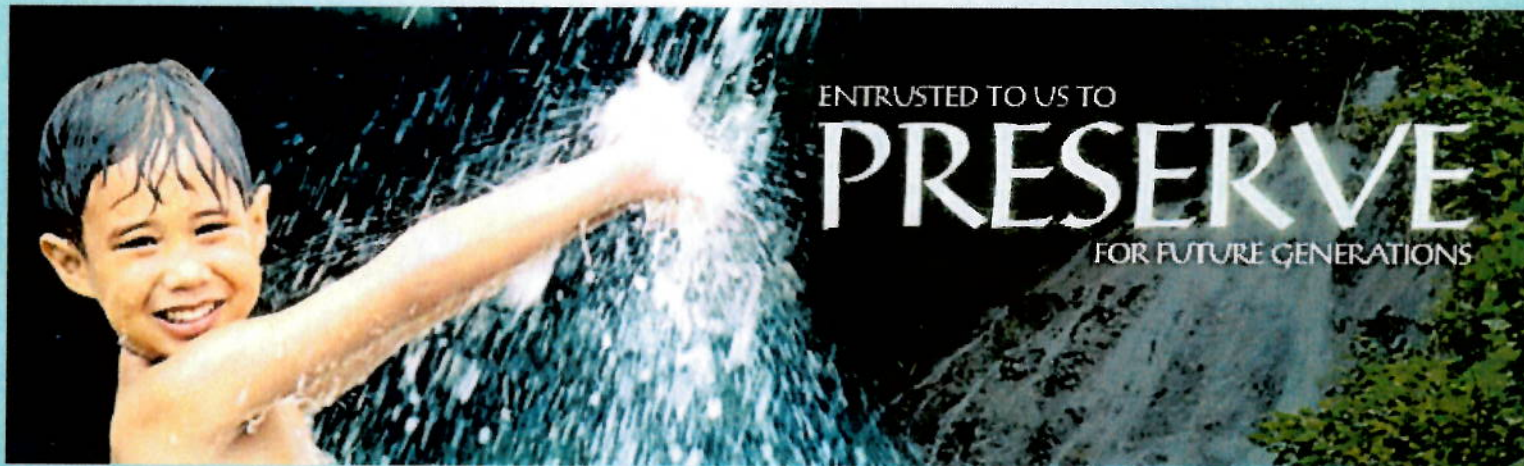
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Board of Water Supply
City and County of Honolulu

Mahalo!

Questions & Answers



ITEM FOR INFORMATION NO. 3

"February 27, 2017

PERFORMANCE
METRICS
UPDATE

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

Chair and Members:

Subject: Board of Water Supply Performance Metrics Update

Jennifer Elflein, Customer Care Division Program Administrator and Joseph Cooper, Finance Division Waterworks Controller will present a brief update on the Board of Water Supply performance metrics to measure progress in meeting the three sustainability goals set in the strategic plan.

Respectfully submitted,

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

Attachment"

The foregoing was for information only.

DISCUSSION:

Jennifer Elflein, Customer Care Program Administrator, and Joseph Cooper, Waterworks Controller gave the report.

Ms. Elflein informed the Board that in quarter two, the BWS received almost 46,000 calls and the average wait time was 3 minutes and 12 seconds, which is more than double the wait time in quarter two, fiscal year 2016.

During this period, BWS increased collection activity, made more outbound calls, handled more payment arrangements, and processed payments to their accounts. With more calls coming in, and the wait time being longer, it has affected the abandoned call rate, which is at 15.6 percent. Abandoned call rate is the percentage of the total number of callers who hung up before being answered. In quarter two, 41 percent of the callers who hung up did so within the first 30 seconds.

Customer Care Division is leveraging the staff in different ways and making adjustments to maximize their responsiveness to BWS customers. For example, the Personal Services Contract (PSC) staff hired to handle collection work are assisting the Call Center with inbound phone calls, as needed. Over time, changes have been made to the way breaks and lunches are scheduled and vacation time granted. A PSC has been hired to focus on processing credit card payments and a Customer Service Representative is dedicated to serving walk in customers. The Call Center is in the process of evaluating which staff should be performing certain non-phone tasks while still ensuring

those customers are responded to in a timely fashion. In addition to phone calls, the Call Center also responds to about 1,300 electronic requests and as many as 1,000 walk in customers per month.

Customer Care is in a state of transition due to the retirements of the Call Center Supervisor and Collections Supervisor. Currently, personnel are on temporary assignments.

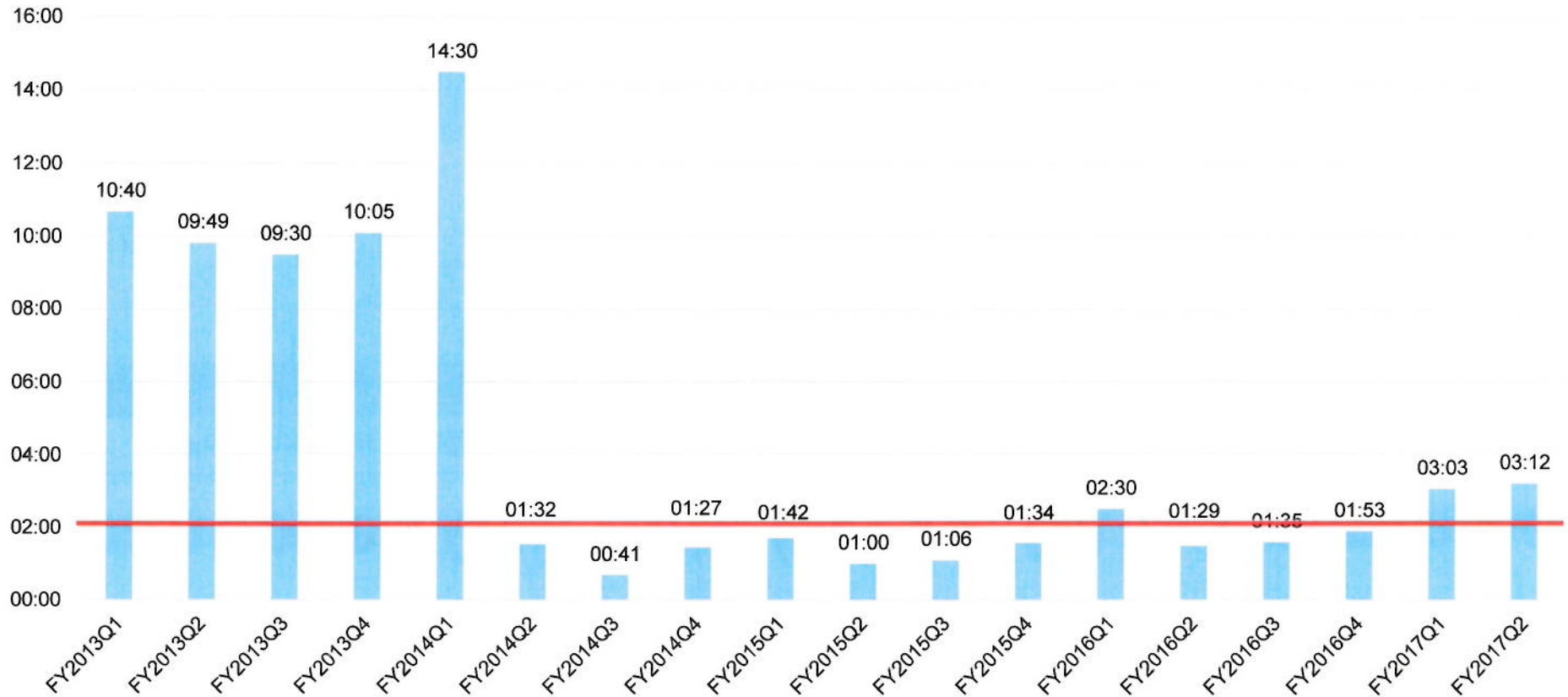
Ms. Elflein added she is very happy that the team has banded together and are doing a great job. The collection staff is doing a great job by bringing in payments. With the holiday season, BWS didn't collect as much as they did in the first quarter, but have collected about \$470,000.00. Over time, BWS is making changes as the Board and the call center staff understands the call center metrics. Customer Care will improve on workflow and look at ways to become more efficient.

Mr. Cooper discussed the estimated bills. In the second quarter, October through December, BWS sent out 8,619 estimated bills, out of a total of 509,851 bills that was sent in the same period. This is about 1.7 percent, which is under BWS's target of 2 percent. Estimated bills are largely driven by deficiency of our meter reading system, and BWS is looking at opportunities to develop new technology for that.

Mr. Andaya inquired about receiving more calls regarding the water main break that occurred on Kalanianaʻole Highway several weeks ago. Ms. Elflein said Customer Care Division does receive main break calls, but they were not impacted by calls regarding the Kalanianaʻole Highway main break. Mr. Lau stated that Customer Care handles calls relating to bills and payments and starting and stopping services. Deputy Manager Kitamura said that the Kalanianaʻole Highway main break occurred on a Saturday, so the calls came in after-hours, which was handled by the Control Center. Mr. Lau stated that the Control Center fielded about 400 calls.

Average Wait Time (min)

Goals	Performance Metric	Base	Current	Target	AWWA	Status	Report	Lead
Operational	Call Center Average Wait Time (min)	6.9	3.03	<2.00	1.9	■	Q	CC



▲ Excellent

■ Good

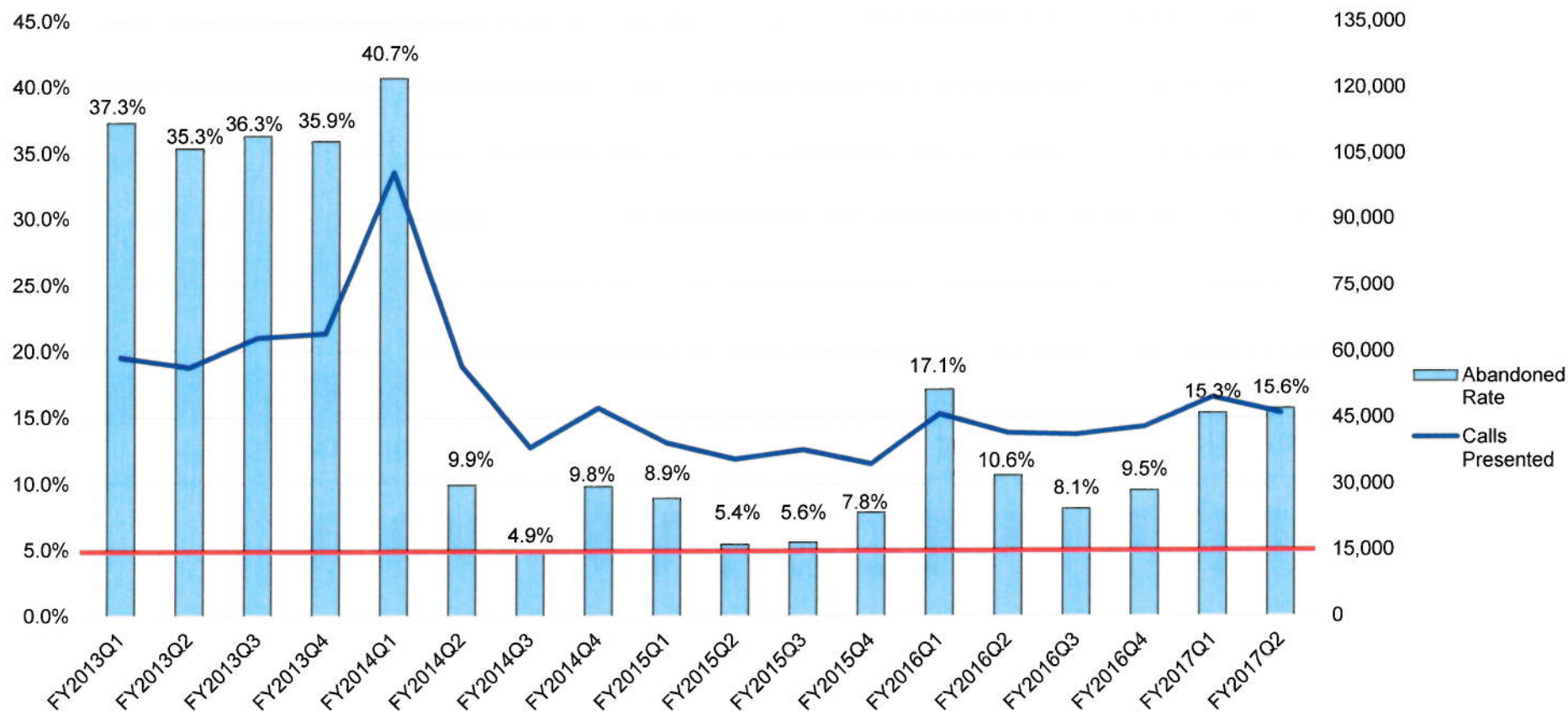
■ Fair

▼ Poor



Abandoned Call Rate (%) vs. Calls Presented

Goals	Performance Metric	Base	Current	Target	AWWA	Status	Report	Lead
Operational	Call Center Abandon Rate	22%	15.6%	5%	8%	▼	Q	CC



Excellent



Good



Fair



Poor

WATER FOR LIFE

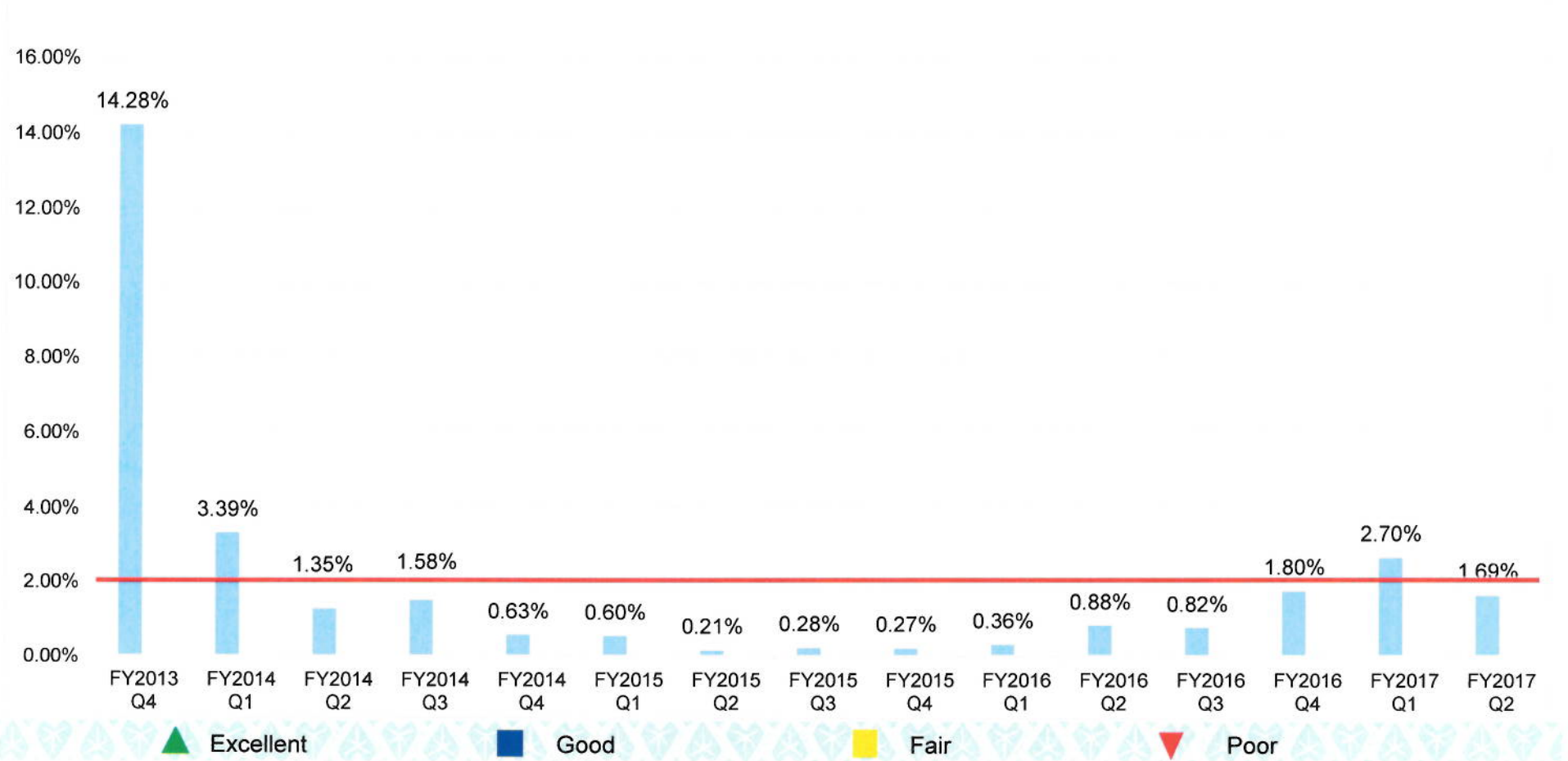
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Board of Water Supply
City and County of Honolulu

Estimated Bills (%)

Goals	Performance Metric	Base	Current	Target	AWWA	Status	Report	Lead
Financial	Estimated Bills Rate	7%	0.88%	<2%	NA	▲	Q	FN



ITEM FOR INFORMATION NO. 4

Quarterly Capital Improvement Program Status Report
All Divisions

Quarter Awarded	JUL - SEP		OCT - DEC		JAN - MAR		APR - JUN		Awarded to Date	Total Budgeted
Design Contracts Awarded (#/\$)	0	\$0.00	1	\$200,000.00		\$0.00		\$0.00	\$200,000.00	\$13,880,000.00
Construction Contracts Awarded (#/\$)	5	\$1,475,168.00	7	\$11,423,670.36		\$0.00		\$0.00	\$12,898,838.36	\$53,555,000.00
Project Totals	5	\$1,475,168.00	8	\$11,623,670.36	0	\$0.00	0	\$0.00	\$13,098,838.36	\$67,435,000.00

Quarter Completed	JUL - SEP		OCT - DEC		JAN - MAR		APR - JUN		Totals
Design Contracts Completed (#/\$)	2	\$1,133,706.68		\$187,644.00					\$1,321,350.68
Construction Contracts Completed (#/\$)	0	\$0.00		\$830,900.00					\$830,900.00
Totals	2	\$1,133,706.68	0	\$1,018,544.00	0	\$0.00	0	\$0.00	\$2,152,250.68

Ongoing Projects	
Ongoing Design Projects (#)	200
Ongoing Design Projects (\$)	\$65,203,987.95
Ongoing Construction Projects (#)	117
Ongoing Construction Projects (\$)	\$241,748,361.74

Quarterly Capital Improvement Program Status Report
All Divisions

DESIGN AND CONSTRUCTION PROJECTS AWARDED - SECOND QUARTER FY 2017

Item #	Project Title	Expend Type	Budget Amount	Awarded
14	Aiea Kai Place and Way 8-inch Mains	CONST	\$1,800,000.00	\$2,295,139.00
20	Fire Hydrant Installations at Various Locations	CONST	\$450,000.00	\$624,700.00
38H	Public Service Building Finance Pre-Audit Room Wall Removal	CONST	\$4,311.00	\$4,311.00
38J	Inspection/Assessment Of The Makaha Shaft	CONST	\$4,650.00	\$4,650.00
42	Manana Corporation Yard Improvements	CONST	\$1,815,000.00	\$1,864,799.00
45	Security Improvements at Various Locations	P & E	\$200,000.00	\$200,000.00
57	Halawa Wells and Halawa Booster No. 2	CONST	\$2,500,000.00	\$3,185,071.36
60	Facility Repair and Repainting: Wahiawa 1361' Reservoirs 1 & 2	CONST.	\$1,100,000.00	\$3,445,000.00
2nd Quarter totals			\$7,873,961.00	\$11,623,670.36

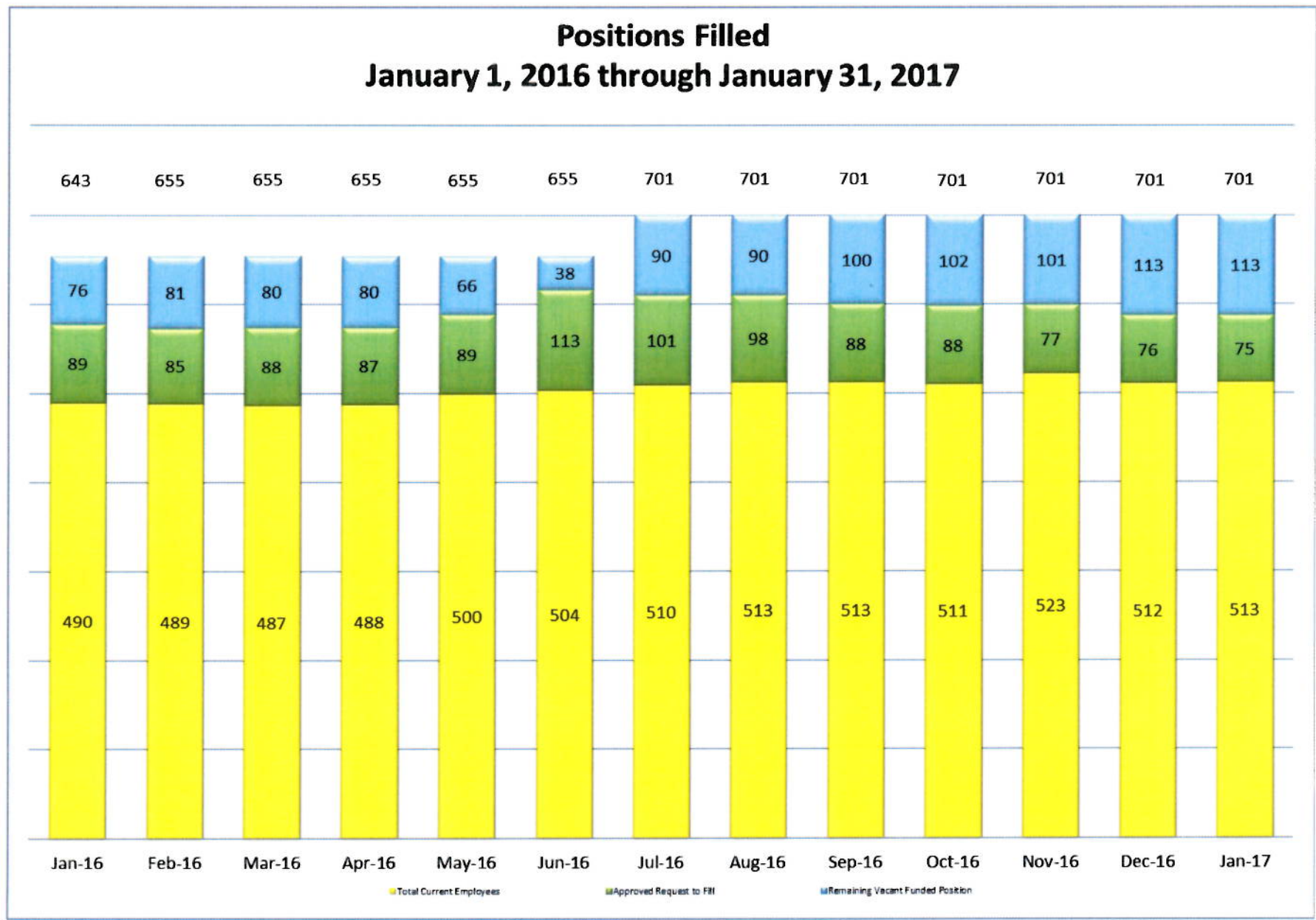
DESIGN AND CONSTRUCTION PROJECTS COMPLETED - SECOND QUARTER FY 2017

Job #	Project Title	Completion Date	Contract Amount
2012-012	Woodlawn Water System Improvements, Part II	11/16/2016	170,300.00
2014-020B	Kuliouou Well: Replace Power Converter	10/17/2016	17,344.00
15-025	Kawananakoa Place 8-Inch Mains	10/21/2016	830,900.00
2nd Quarter totals			\$1,018,544.00

DISCUSSION:

Jason Takaki, Capital Projects Program Administrator, gave the report. Mr. Lau mentioned that encumbering \$13 million in the first two quarters is progress in a positive direction. He thanked Mr. Takaki and his staff, and the other divisions and offices in BWS. Mr. Lau stated that BWS is trying to initiate more work earlier in the fiscal year and change the paradigm where a lot goes out in the last quarter.

ITEM FOR INFORMATION NO. 5



Cumulative Totals January 1, 2016 through January 31, 2017



DISCUSSION

Teriann Akana, Acting Executive Assistant of the Human Resources Office, gave the report. There were no comments or discussion.

"February 27, 2017

GROUNDWATER
LEVELS

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

Chair and Members:

Subject: Status Update of Groundwater Levels at All Index
Stations

There were no aquifer index wells within low groundwater status for the production month of January, 2017. The monthly production average for January, 2017 was 134.87 million gallons per day.

The Board of Water Supply rainfall index for the month of January, 2017 was 37 percent of normal; with a 5-month moving average of 96 percent. As of February 7, 2017, the Hawaii Drought Monitor shows abnormally dry conditions for most of leeward Oahu.

The National Weather Service is forecasting below normal rainfall for February, 2017, with decreased chances of above normal rainfall from March to May, 2017.

Most index monitoring wells are exhibiting slightly increasing trends due to the decreased pumpage during the winter months. Windward wells, which are more sensitive to fluctuations in rainfall, are still exhibiting slight decreasing or static trends during the same time period.

Respectfully submitted,

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

Attachments"

The foregoing was for information only.

DISCUSSION: Barry Usagawa, Water Resources Division Program Administrator, gave the report.

Ms. Sproat asked why the National Weather Service (NWS) changed their forecast. Mr. Usagawa replied that the NWS uses climate models to forecast trends based on rainfall and ocean circulation data.

**PRODUCTION, HEAD AND RAINFALL REPORT
MONTH OF JANUARY 2017**

POTABLE

STATION	MGD
HONOLULU (1)	
KULIOUOU	0.08
WAILUPE	0.04
AINA KOA	0.33
AINA KOA II	0.99
MANOA II	0.00
PALOLO	1.12
KAIMUKI HIGH	2.03
KAIMUKI LOW	1.51
WILDER	7.82
BERETANIA HIGH	4.93
BERETANIA LOW	2.52
KALIHI HIGH	1.89
KALIHI LOW	4.85
KAPALAMA	0.59
KALIHI SHAFT	6.85
MOANALUA	1.28
HALAWA SHAFT	7.50
KAAMILO	0.00
KALAUAO	5.21
PUNANANI	12.41
KAHUMANU	0.74
HECO WAIU	2.73
MANANA	0.41
WELLS SUBTOTAL:	65.26
MANOA TUNNEL	0.17
PALOLO TUNNEL	0.23
GRAVITY SUBTOTAL:	0.40
HONO. SUBTOTAL:	65.66

STATION	MGD
WINDWARD (2)	
WAIMANALO II	0.25
WAIMANALO III	0.22
KUOU I	0.42
KUOU II	0.11
KUOU III	0.17
LULUKU	0.93
HAIKU	0.00
IOLEKAA	0.00
KAHALUU	0.82
KAHANA	0.80
PUNALUU I	0.00
PUNALUU II	1.79
PUNALUU III	1.28
KALUANUI	0.00
MAAKUA	0.37
HAUULA	0.00
WELLS SUBTOTAL:	7.14
WAIM. TUNNELS I & II	0.00
WAIM. TUNNELS III&IV	0.19
WAIHEE INCL. WELLS	0.94
WAIHEE TUNNEL	4.94
LULUKU TUNNEL	0.17
HAIKU TUNNEL	0.00
KAHALUU TUNNEL	1.59
GRAVITY SUBTOTAL:	7.83
WIND. SUBTOTAL:	14.96

STATION	MGD
NORTH SHORE (3)	
KAHUKU	0.30
OPANA	0.44
WAIALEE I	0.00
WAIALEE II	0.47
HALEIWA	0.00
WAIALUA	1.13
N.SHORE SUBTOTAL:	2.35

STATION	MGD
MILILANI (4)	
MILILANI I	2.74
MILILANI II	0.00
MILILANI III	0.00
MILILANI IV	1.68
MILILANI SUBTOTAL:	4.41

STATION	MGD
WAHIAWA (5)	
WAHIAWA	1.55
WAHIAWA II	1.41
WAHIAWA SUBTOTAL:	2.97

STATION	MGD
PEARL CITY-HALAWA (6)	
HALAWA 277	0.86
HALAWA 550	0.00
AIEA	0.97
AIEA GULCH 497	0.58
AIEA GULCH 550	0.22
KAONOHI I	0.85
WAIMALU I	0.00
NEWTOWN	0.82
WAIU	0.73
PEARL CITY I	0.51
PEARL CITY II	0.99
PEARL CITY III	0.38
PEARL CITY SHAFT	0.95
PEARL CITY-HALAWA SUBTOTAL:	7.86

STATION	MGD
WAIPAHU-EWA (7)	
WAIPIO HTS.	1.63
WAIPIO HTS. I	0.97
WAIPIO HTS. II	0.23
WAIPIO HTS. III	1.02
WAIPAHU	2.98
WAIPAHU II	0.64
WAIPAHU III	2.71
WAIPAHU IV	2.89
KUNIA I	4.54
KUNIA II	1.74
KUNIA III	1.37
HOAEAE	6.85
HONOULIULI I	0.00
HONOULIULI II	4.45
MAKAKILO	0.28
WAIPAHU-EWA SUBTOTAL:	32.10

STATION	MGD
WAIANAE (8)	
MAKAHA I	0.75
MAKAHA II	0.23
MAKAHA III	0.55
MAKAHA V	0.26
MAKAHA VI	0.00
MAKAHA SHAFT	0.00
KAMAILE	0.29
WAIANAE I	0.29
WAIANAE II	0.02
WAIANAE III	0.62
WELLS SUBTOTAL:	3.00
WAIK. C&C TUNNEL	1.40
WAIK. PLANT. TUNNELS	0.16
GRAVITY SUBTOTAL:	1.56
WAIANAE SUBTOTAL:	4.56

NONPOTABLE

NONPOTABLE	MGD
KALAUAO SPRINGS	0.48
BARBERS POINT WELL	1.08
GLOVER TUNNEL NP	0.41
NONPOTABLE TOTAL:	1.97

RECYCLED WATER (DECEMBER 2016)

RECYCLED WATER	MGD
HONOULIULI WRF R-1	5.69
HONOULIULI WRF RO	1.50
RECYCLED WATER TOTAL:	7.19

**PRODUCTION, HEAD AND RAINFALL REPORT
MONTH OF JANUARY 2017**

PRODUCTION SUMMARIES

TOTAL WATER	MGD
PUMPAGE	125.09
GRAVITY	9.79
POTABLE TOTAL:	134.87
NONPOTABLE	1.97
RECYCLED WATER	7.19
TOTAL WATER:	144.03

CWRM PERMITTED USE AND BWS ASSESSED YIELDS FOR BWS POTABLE SOURCES				
WATER USE DISTRICTS		A PERMITTED USE/ BWS YLDS	B JAN 2017	C DIFF. A-B
1	HONOLULU	82.93	65.26	17.67
2	WINDWARD	25.02	9.09	15.93
3	NORTH SHORE	4.74	2.35	2.39
4	MILILANI	7.53	4.41	3.12
5	WAHIAWA	4.27	2.97	1.30
6	PEARL CITY-HALAWA	12.25	7.86	4.39
7	WAIPAHU-EWA	50.63	32.10	18.53
8	WAIANAE	4.34	3.00	1.34
TOTAL:		191.71	127.03	64.68

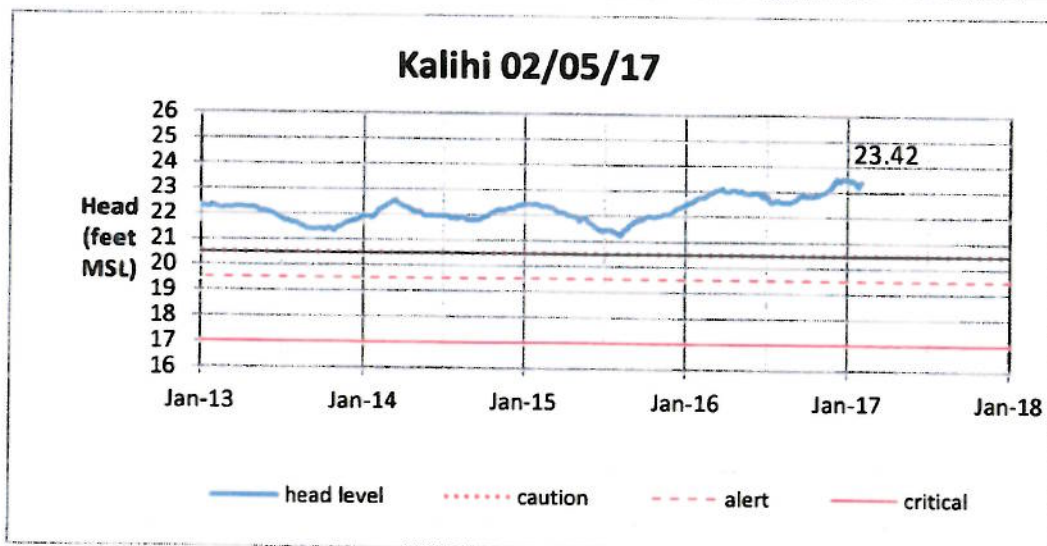
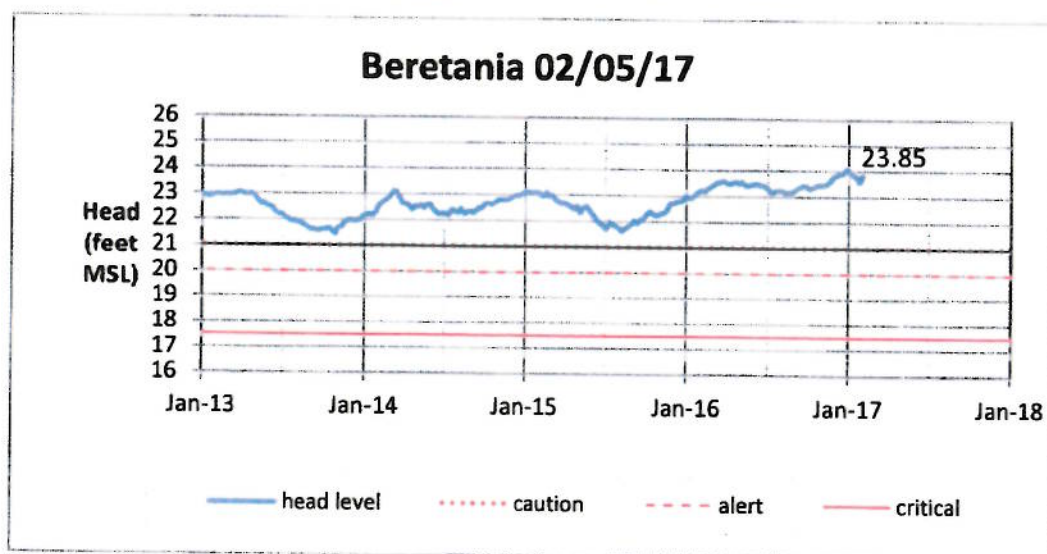
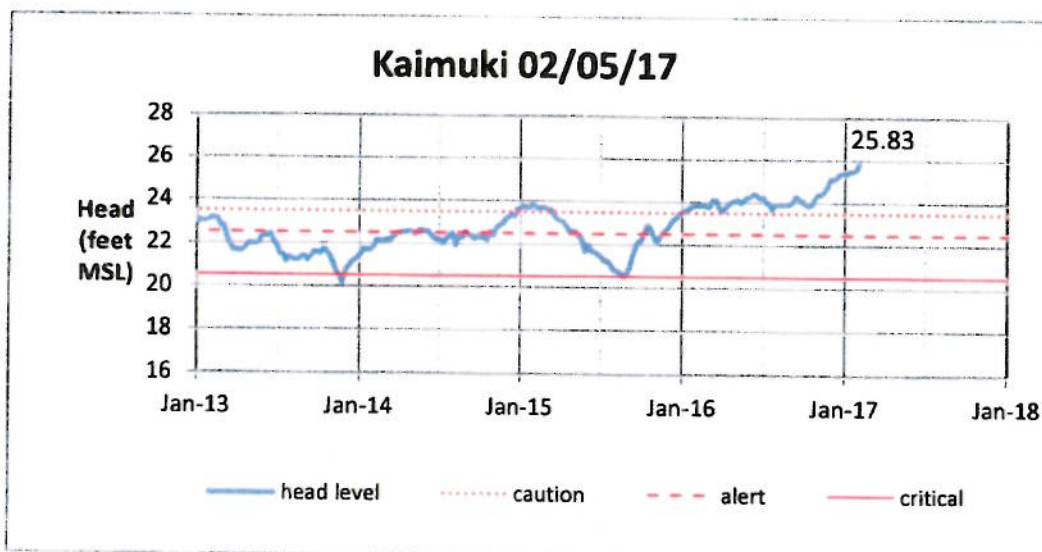
CWRM PERMITTED USE FOR BWS NONPOTABLE SOURCES				
WATER USE DISTRICTS		A PERMITTED USE	B JAN 2017	C DIFF. A-B
7	WAIPAHU-EWA (BARBERS POINT WELL)	1.00	1.08	-0.08
TOTAL:		1.00	1.08	-0.08

EFFECTIVE WATER DEMAND PER DISTRICT

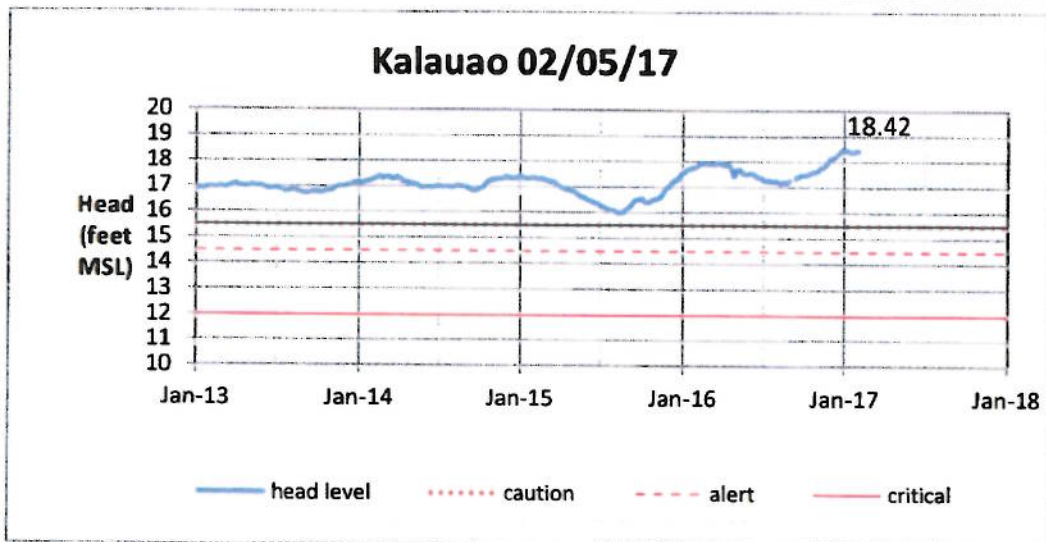
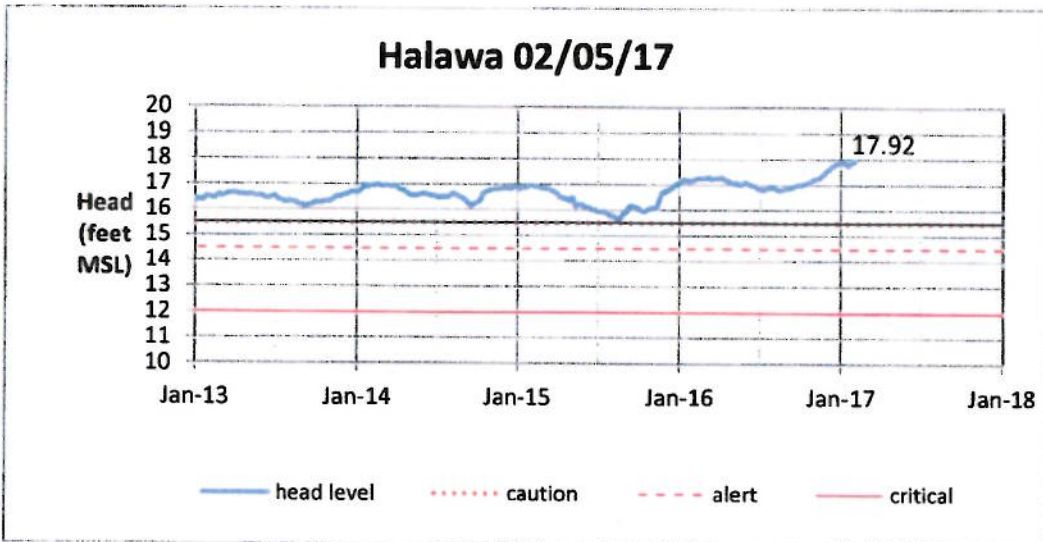
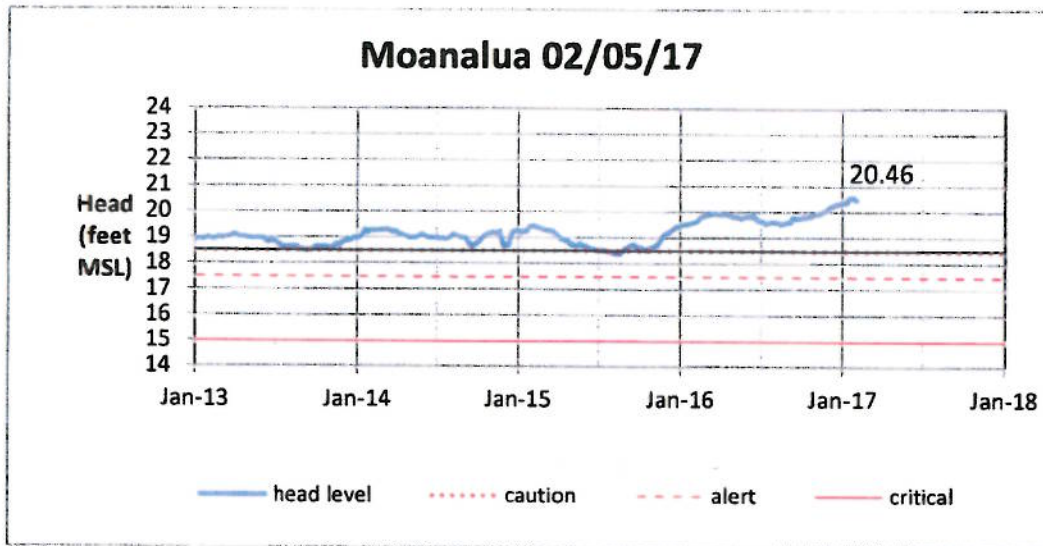
IMPORT/EXPORT BETWEEN WATER USE DISTRICTS			
FROM	TO		MGD
2	1	WINDWARD EXPORT	0.14
7	8	BARBERS PT LB	5.22

WATER USE DISTRICTS		SUBTOTAL	IMPORT	EXPORT	EFFECTIVE WATER DEMAND
1	HONOLULU	65.26	0.14	-	65.40
2	WINDWARD	9.09	-	0.14	8.95
3	NORTH SHORE	2.35	-	-	2.35
4	MILILANI	4.41	-	-	4.41
5	WAHIAWA	2.97	-	-	2.97
6	PEARL CITY-HALAWA	7.86	-	-	7.86
7	WAIPAHU-EWA	32.10	-	5.22	26.89
8	WAIANAE	3.00	5.22	-	8.22
TOTAL:		127.03	5.36	5.36	127.03

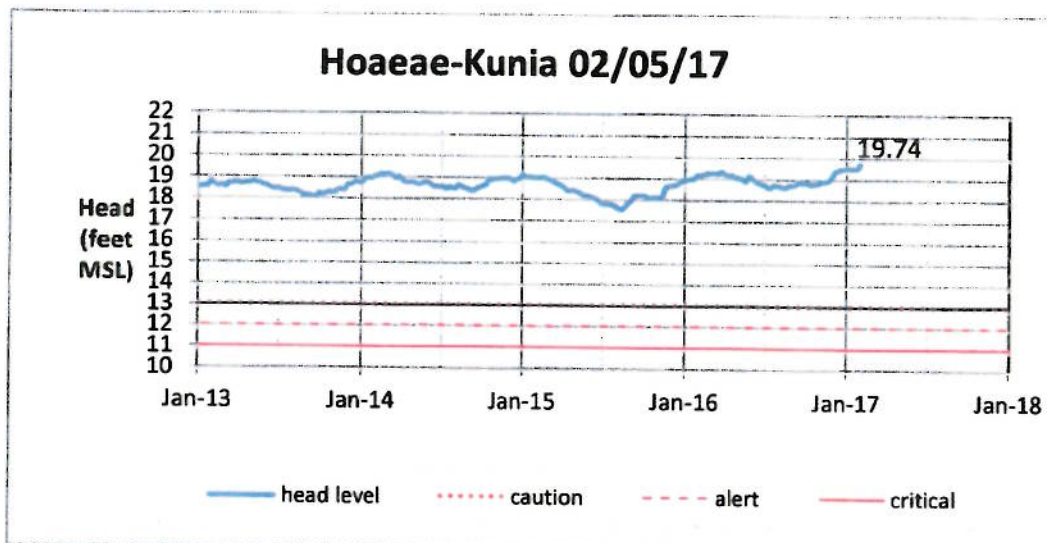
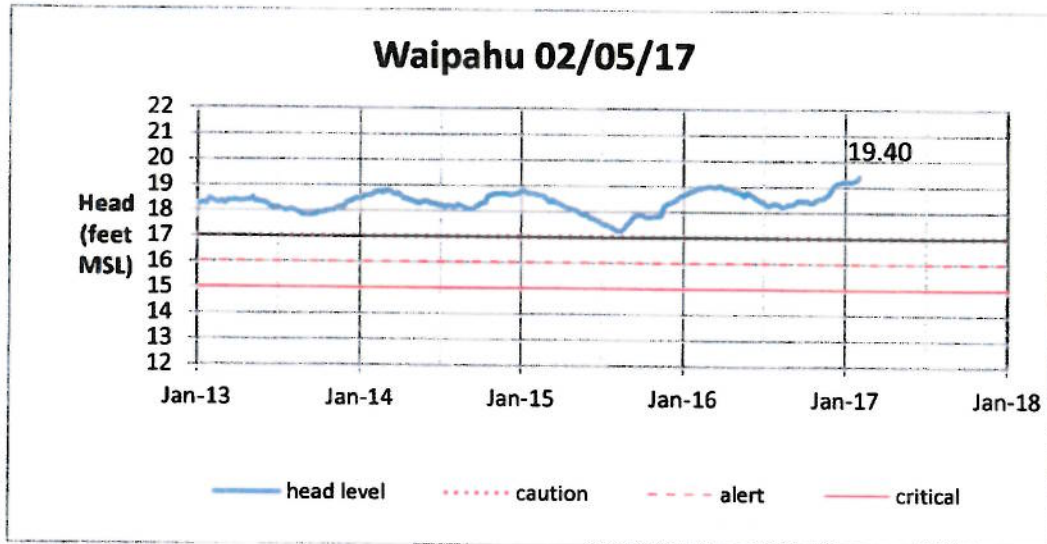
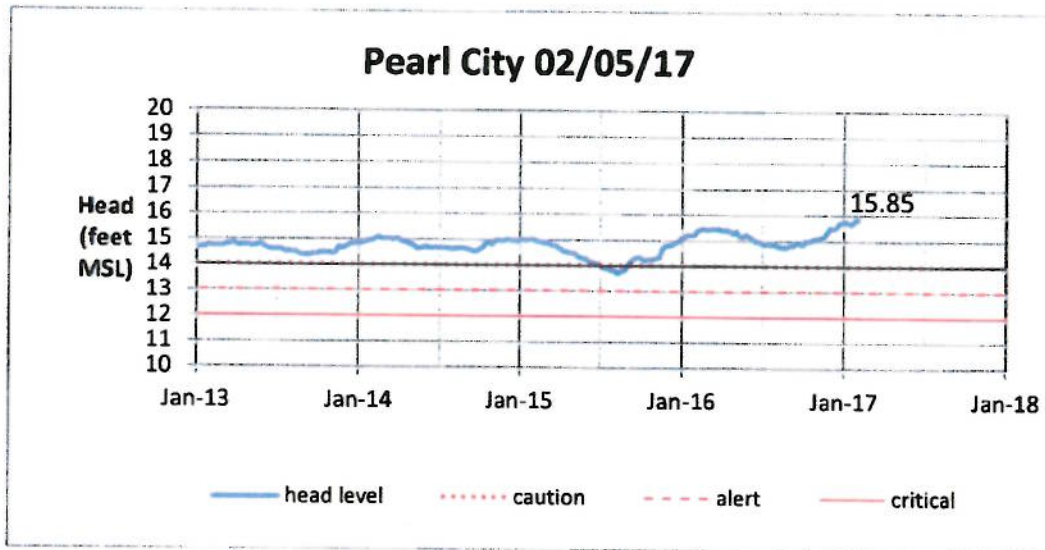
Weekly Head Report



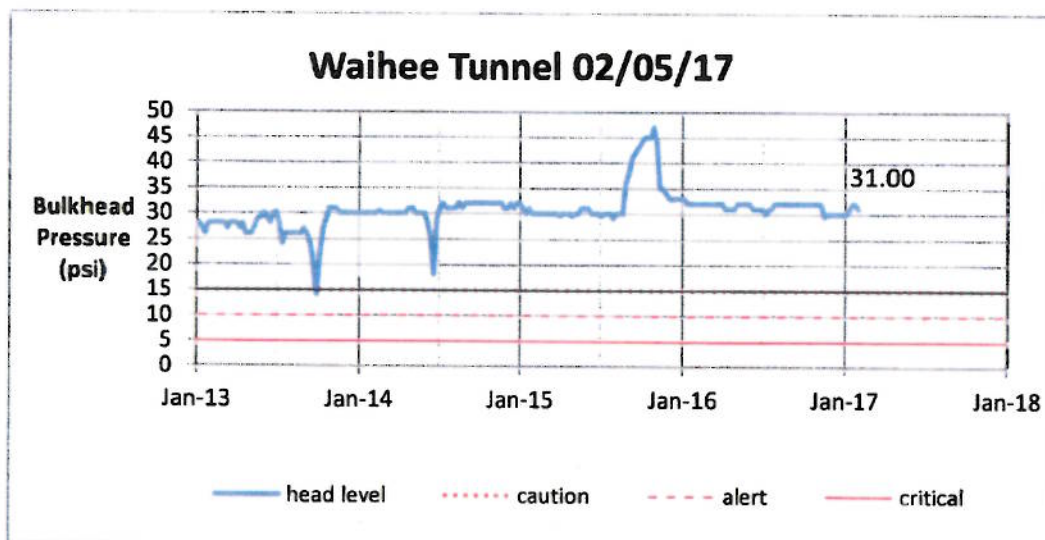
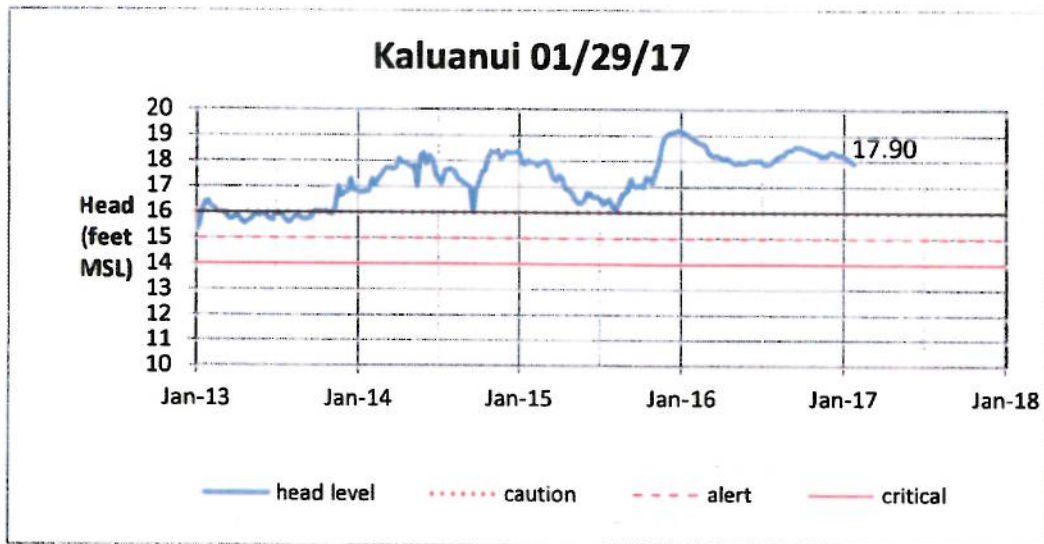
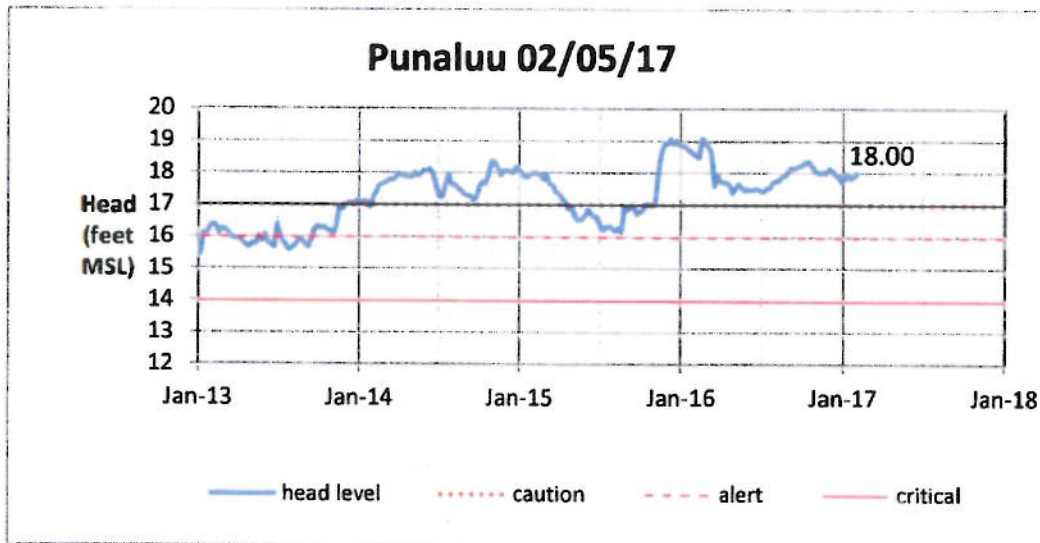
Weekly Head Report



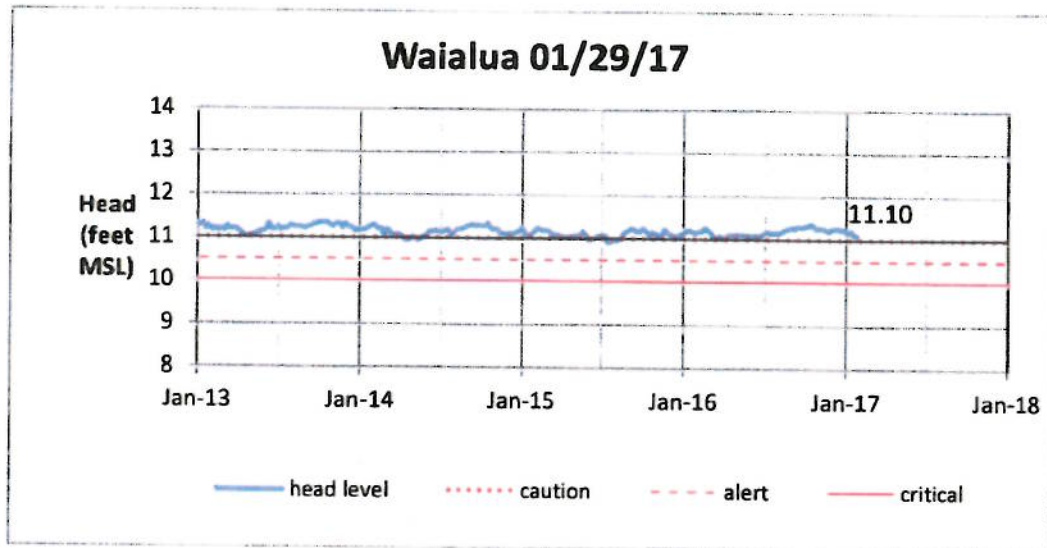
Weekly Head Report

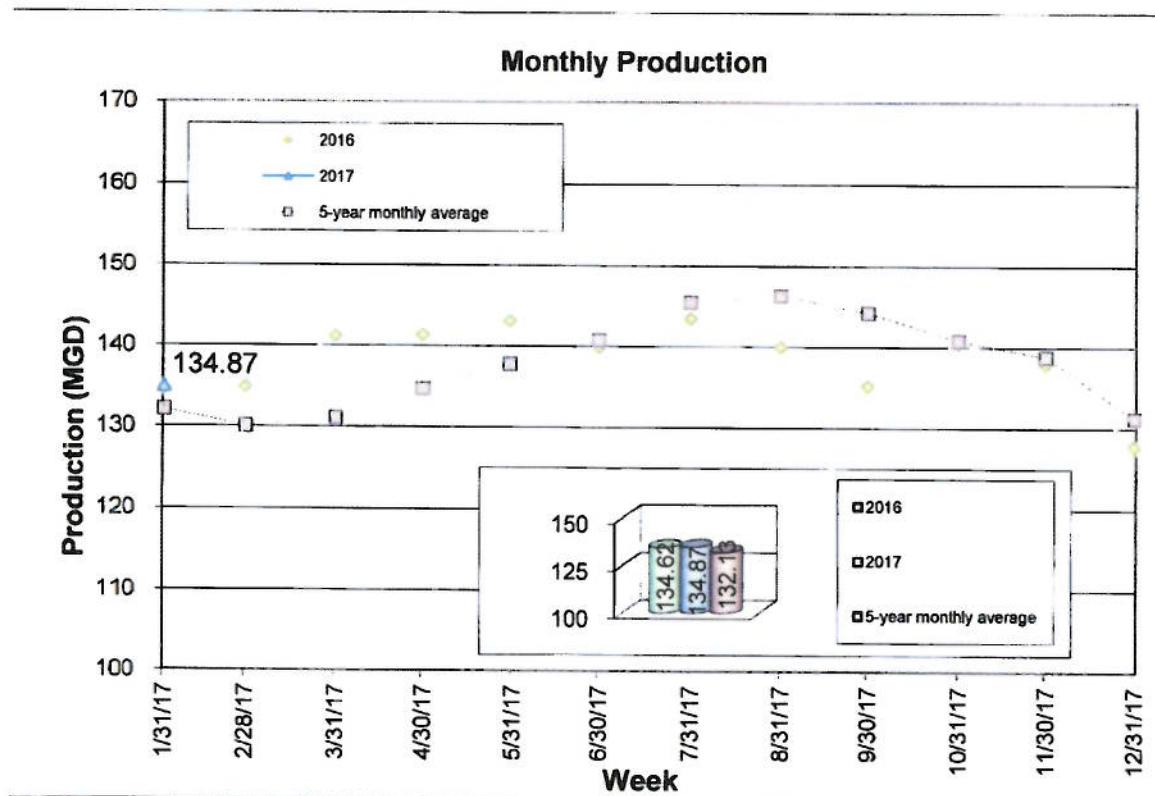
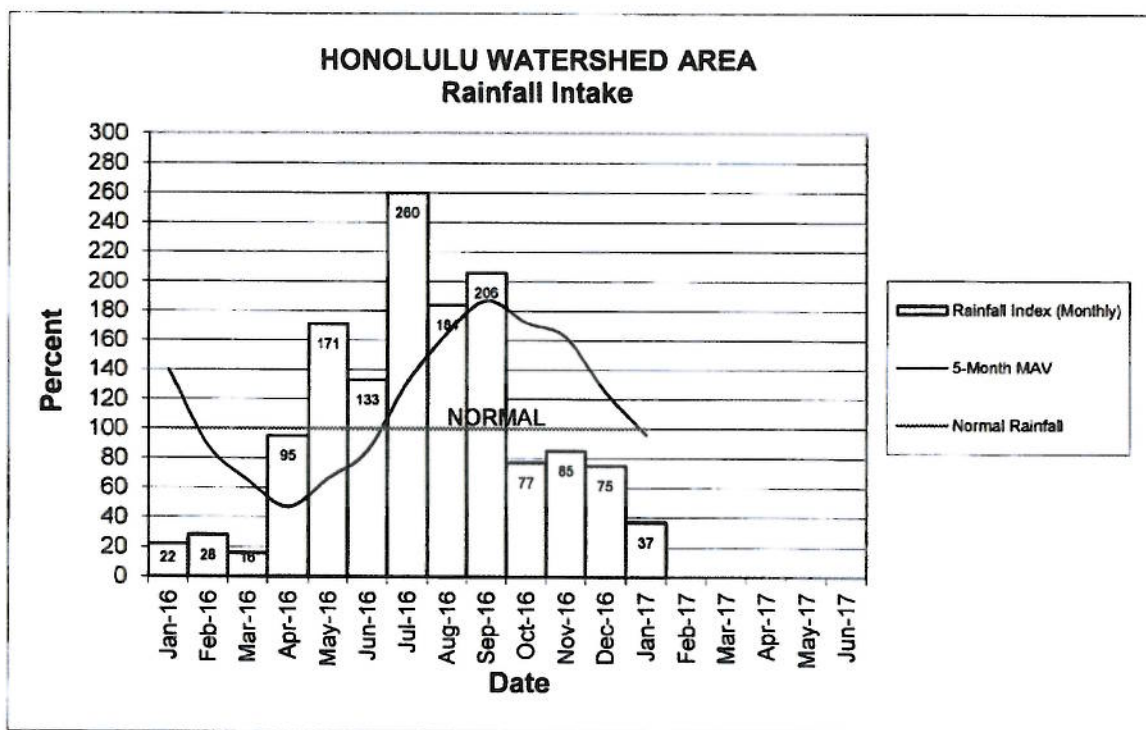


Weekly Head Report



Weekly Head Report





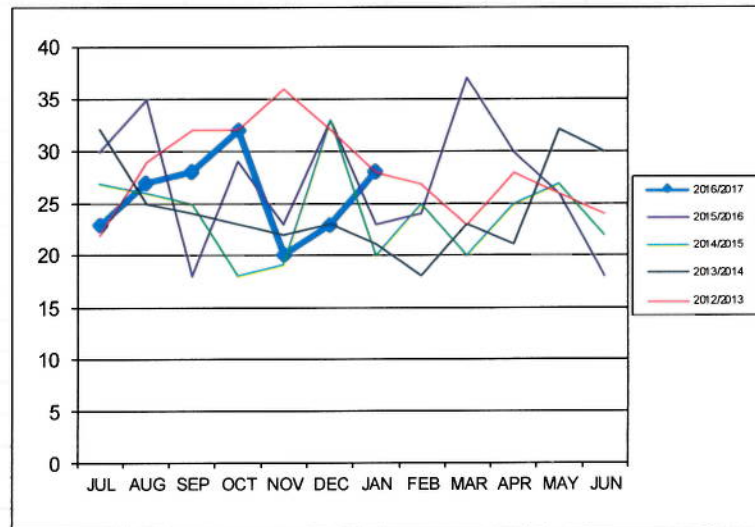
ITEM FOR INFORMATION NO. 7

WATER MAIN REPAIR REPORT

for January 2017

	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	Total
2016/2017	23	27	28	32	20	23	28						181
2015/2016	30	35	18	29	23	33	23	24	37	30	26	18	326
2014/2015	27	26	25	18	19	33	20	25	20	25	27	22	287
2013/2014	32	25	24	23	22	23	21	18	23	21	32	30	294
2012/2013	22	29	32	32	36	32	28	27	23	28	26	24	339

Date	Address	Size (In)	Pipe Type
1/1/2017	91-862 MAKULE RD, EWA BEACH	4	GAL
1/5/2017	86-364 KAWILI ST, WAIANAE	8	DI
1/5/2017	86-421 POPOHAU PL, WAIANAE	12	CI
1/8/2017	85-190 ALA HEMA ST, HONOLULU	6	AC
1/11/2017	45-995 WAILELE RD, KANE OHE	8	CI
1/12/2017	98-607 KUINI ST, AIEA	4	DI
1/13/2017	915 HALEKAUWILA ST, HONOLULU	8	CI
1/13/2017	3618 SALT LAKE BLVD, HONOLULU	6	CI
1/16/2017	925 9TH AVE, HONOLULU	6	CI
1/17/2017	54-236 A HONOMU ST, HAUULA	8	CI
1/17/2017	41-878 KAULUKANU ST, WAIMANALO	4	CI
1/18/2017	94-54 LEOLUA ST, WAI PAHU	12	CI
1/19/2017	3531 ALANI DR, HONOLULU	8	CI
1/21/2017	KAL HWY/AINA KOA, HONOLULU	24	CI
1/21/2017	94-120 HULAHE ST, WAI PAHU	8	CI
1/22/2017	2423 10TH AVE, HONOLULU	8	CI
1/23/2017	470 KRAUSS ST, HONOLULU	6	CI
1/25/2017	2147 PUOWAINA DR, HONOLULU	4	CI
1/25/2017	45-579 APAPANE ST, KANE OHE	8	CI
1/26/2017	58-122 MAMAO ST, HALEIWA	8	CI*
1/27/2017	940 AUAHI ST, HONOLULU	12	CI
1/28/2017	98-520 KIPAEPAE ST, AIEA	8	AC
1/28/2017	87-1102 OHEOHE ST, WAIANAE	8	PVC
1/28/2017	59-461 HOALIKE RD, HALEIWA	4	CI
1/30/2017	432 PUUIKENA DR, HONOLULU	12	CI
1/30/2017	94-137 MOKUKAUA ST, WAI PAHU	8	CI
1/31/2017	2031 LILIHA ST, HONOLULU	12	PVC
1/31/2017	2146 KANEALII AVE, HONOLULU	8	CI



* Leak found by Leak Detection Team

19.3 miles of pipelines were surveyed by the Leak Detection Team in the month of January.

DISCUSSION: Mike Fuke, Acting Field Operations Division Program Administrator, gave the report.

Mr. Fuke discussed the Kalanianaʻole Highway main break. The crew worked 24 hours for four straight days, and then had three other breaks on two subsequent days.

Mr. Andaya thanked Mr. Fuke, his crew and everyone who dealt with the major water main break on Kalanianaʻole Highway. He knows it wasn't easy for the whole side of that island, and Ms. Pahinui did a good job with the media and public relations. Mr. Andaya made mention of BWS attending a public meeting regarding this main break.

Manager Lau also recognized the cooperation from the Honolulu Police Department, State Department of Transportation Highways Division, City Department of Transportation Services, and also the Mayor's Office. Andrew Pereira of the Mayor's Office was very helpful in helping BWS with the extensive media outreach. Mr. Lau also commended BWS Field Operations, Water System Operations, and the Communications Office for a great job. It wasn't easy, but with everyone's cooperation, there were only 11 customers whose water service was impacted. The rest of East Honolulu continued to receive water service. Traffic became the largest issue.

Before going into Executive Session, Mr. Andaya distributed the 2016 American Water Works Association Compensation Survey to all of the Board Members.

**MOTION TO
RECESS INTO
EXECUTIVE
SESSION**

Upon unanimously approved motion, the Board recessed into Executive Session Pursuant to [HRS §92-5(a)(2)] at 2:47 PM to Consider Issues Pertaining to Matters Posted for Discussion at an Executive Session

**OPEN
SESSION**

The Board reconvened in Open Session at 3:04 PM

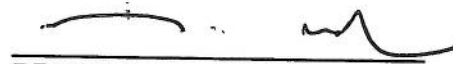
**MOTION TO
ADJOURN**

There being no further business Chair Andaya at 3:05 PM called for a motion to adjourn the Open Session. Ross Sasamura so moved; seconded by Kapua Sproat and unanimously carried.

Respectfully submitted,


LORRAINE H. LEE

APPROVED:


BRYAN P. ANDAYA
Chair of the Board

APR 24 2017

Date

THE MINUTES OF THE REGULAR SESSION BOARD MEETING ON FEBRUARY 27, 2017 WERE APPROVED AT THE APRIL 24, 2017 BOARD MEETING			
	AYE	NO	COMMENT
BRYAN P. ANDAYA	X		
ADAM C. WONG	X		
DAVID C. HULIHEE			ABSENT
KAPUA SPROAT	X		
KAY C. MATSUI			ABSENT
ROSS S. SASAMURA	X		
FORD N. FUCHIGAMI			ABSENT