

MINUTES

REGULAR MEETING OF THE BOARD OF WATER SUPPLY

March 28, 2016

At 2:03 PM on March 28, 2016 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, Chair
David C. Hulihee
Bryan P. Andaya
Ross S. Sasamura

Also Present: Ernest Lau, Manager and Chief Engineer
Ellen Kitamura, Deputy Manager and Chief Engineer
Alex Ubiadas
Erwin Kawata
Barry Usagawa
Marc Chun
Karen Tom
Daryl Hiromoto
Jason Takaki
Joe Cooper
Robert Morita
Mike Matsuo
Kevin Ihu
Tracy Burgo
Henderson Nuuhiwa
Jennifer Elflein
Kalei Schoenstein
Dymian Racoma
Luxury Purganan

Others Present: Moana Yost, Deputy Corporation Counsel
Randall Ishikawa, Deputy Corporation Counsel
Dean Nakano, Brown and Caldwell
Chris Cleveland, Brown and Caldwell
Tom Myers, Brown and Caldwell
Stephanie Chin, Brown and Caldwell
Audrey Harris, Harris and Company
Jon Toyoda, CDM Smith
Eric Iwamoto, Bowers + Kubota

Absent: Adam C. Wong, Vice Chair
Kapua Sproat
Ford N. Fuchigami

APPROVAL OF
MINUTES

Approval of the Minutes of the Regular Meeting held on February 22,
2016

MOTION
TO APPROVE

David Hulihee and Ross Sasamura motioned and seconded, respectively,
to approve the Minutes of the Regular Session Meeting of February 22,
2016. The motion was unanimously carried.

"March 28, 2016

ADOPTION OF
RESOLUTION
NO. 863, 2016

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

Chair and Members:

Subject: Adoption of Resolution No. 863, 2016, Acceptance of
Gifts to the Board of Water Supply from Various
Donors in Support of the 2016 Water Conservation
Week Program

We recommend the adoption of the attached Resolution No. 863, 2016, that accepts the proposed gifts to the Board of Water Supply (BWS), City and County of Honolulu, in support of the 2016 Water Conservation Week (WCW) Program. The donors' total value of these gifts is \$11,688.00:

<u>Donor Name</u>	<u>Amount</u>
Sodexo (Refreshments for awards ceremony reception)	\$ 2,188.00 (in-kind)
Friends of Halawa Xeriscape Garden	\$ 2,000.00
Times Supermarkets	\$ 2,000.00
Hard Rock Café Honolulu (Cookies for awards ceremony reception, and gift cards for award recipients' and teachers' gift bags)	\$ 2,000.00 (in-kind)
Alexander and Baldwin, Incorporated	\$ 1,000.00
Hawaii Energy	\$ 1,000.00
Aloha Pacific Federal Credit Union	\$ 500.00
Board of Water Supply Federal Credit Union	\$ 500.00
Pasha Hawaii	<u>\$ 500.00</u>
TOTAL	\$11,688.00

The WCW program is a successful, long-running public education program that promotes the value of water and the importance of water efficiency, as a component of sound water management, to Oahu's students in grades Kindergarten through 12. Studies have shown that when youth embrace water conservation practices at an early age, they are more likely to encourage their parents to be water efficient and later raise their own children to seek water efficiencies. The BWS hopes to perpetuate this lifestyle through our program.

Donations from these sponsors will help the BWS offset program costs that include the printing of 20,000 copies of the 2017 Water Conservation Calendars that feature the 2016 winning entries, as well as an awards ceremony for winners and honorable mentions of the 2016 WCW Poster and Poetry contests. The calendars are distributed to all Oahu schools, elected officials, and the general public.

We deeply appreciate the continued support of this Board for this very valuable and worthwhile public education program. All participants in our WCW program are encouraged to always embrace their roles as responsible stewards of our precious water resource.

Respectfully submitted,

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

Attachment"

DISCUSSION: Tracy Burgo, Acting Information Officer, gave the report. There were no comments or discussion.

MOTION TO ADOPT RESOLUTION NO. 863, 2016 Ross Sasamura motioned to adopt Resolution No. 863, 2016, Acceptance of Gifts to the Board of Water Supply from Various Donors in Support of the 2016 Water Conservation Week Program. The motion was seconded by Bryan Andaya. The item did not receive the requisite number of votes for approval, three affirmative and one recusal.

RESOLUTION NO. 863, 2016, ACCEPTANCE OF GIFTS TO THE BOARD OF WATER SUPPLY FROM VARIOUS DONORS IN SUPPORT OF THE 2016 WATER CONSERVATION WEEK PROGRAM, DID NOT RECEIVE THE REQUISITE NUMBER OF VOTES FOR APPROVAL

	AYE	NO	COMMENT
DUANE R. MIYASHIRO	X		
ADAM C. WONG			ABSENT
DAVID C. HULIHEE			RECUSE
KAPUA SPROAT			ABSENT
BRYAN P. ANDAYA	X		
ROSS S. SASAMURA	X		
FORD N. FUCHIGAMI			ABSENT

BOARD OF WATER SUPPLY
CITY AND COUNTY OF HONOLULU

RESOLUTION NO. 863, 2016

ACCEPTANCE OF GIFTS TO THE BOARD OF WATER SUPPLY
FROM VARIOUS DONORS IN SUPPORT OF THE
2016 WATER CONSERVATION WEEK PROGRAM

WHEREAS, the Board of Water Supply's (BWS) Water Conservation Week program is an annual activity that uses a poster and poetry contest to educate Oahu's youth about the importance of using water efficiently and features the winning and honorable mention entries in an annual Water Conservation Calendar; and

WHEREAS, the BWS may solicit 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, the BWS will solicit for gifts on its agency website, which is available for access by any interested person or business; and

WHEREAS, Sodexo, Friends of Halawa Xeriscape Garden, Times Supermarkets, Hard Rock Café Honolulu, Alexander and Baldwin, Incorporated, Hawaii Energy, Aloha Pacific Federal Credit Union, Board of Water Supply Federal Credit Union, and Pasha Hawaii are offering monetary and other donations valued at a total of \$11,688.00 in support of the 2016 Water Conservation Week program; and

WHEREAS, a gift to the BWS benefits the Department because it assists endeavors such as the BWS's Water Conservation Week public education program and reduces the need for ratepayer funds to support the program's key components; and

WHEREAS, the gifts will be used to offset reasonable and necessary costs of the printing and delivery of 20,000 Water Conservation Calendars featuring the contests' winning entries, as well as an awards ceremony to reveal and recognize the student winners and honorable mentions; now, therefore,

BE IT RESOLVED that the Board of Water Supply hereby accepts the various gifts valued at \$11,688.00 and directs the Manager and Chief Engineer, or his delegate, to accept and thank the various donors for these gifts.

ADOPTED:

DUANE R. MIYASHIRO
Chair

Honolulu, Hawaii
March 28, 2016

ITEM FOR INFORMATION NO. 1

"March 28, 2016

CAPITAL
PROJECTS
DIVISION AND
CONSTRUCTION
MANAGEMENT
PROGRAM
MANAGEMENT
UPDATE

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

Chair and Members:

Subject: Capital Projects Division and Construction Management
Program Management Update

Jason Takaki, Capital Projects Division Program Administrator, will provide an update on Capital Projects Division and Construction Management Program Management.

Respectfully submitted,

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

Attachment"

The foregoing was for information only.

DISCUSSION

Jason Takaki, Capital Projects Division Program Administrator, started off with his presentation. Chris Cleveland and Stephanie Chin from Brown and Caldwell gave a demonstration of the project management information system, MANAO, which will support the workflows developed to enhance project delivery.

Mr. Cleveland explained how staff will use MANAO to help develop and track progress on projects executed by the Capital Projects Division. Mr. Cleveland further documented how the collective information could be used to help prioritize the Capital Improvement Program and be documented in the project definition report. Chair Miyashiro asked how this is populated in terms of priority. Mr. Cleveland responded that it would be based on the value of the benefits and risk mitigation offered by completion of the projects having the highest benefit to cost ratio up to the available capital budget in any year. The calculation process for this ratio is still being discussed with staff.

Mr. Takaki continued with his presentation showing how they would use MANAO to better measure Capital Projects Division project delivery performance and asked if the Board Members had any suggestions on performance measures which would be helpful to them to know the capital program is being executed effectively and reinforcing overall BWS interests. The Board had no additional suggestions at this time. Mr. Lau encouraged the Board to contact him or Deputy Manager Kitamura if they have any suggestions in the future.

Manager Lau thanked Mr. Takaki, Deputy Manager Kitamura, Brown and Caldwell, and Bowers + Kubota for heading the BWS in a good direction.



Capital Projects Division and Construction Management Program Management Update



Board of Water Supply
March 28, 2016





Desired Program Outcomes



Prepared to execute Water Master Plan

- Provide organizational capacity (expect 2- to 4-fold demand increase)
- Enhance efficiencies to increase capabilities



Consistent project delivery

- Higher quality projects



BWS as a 'preferred' Owner

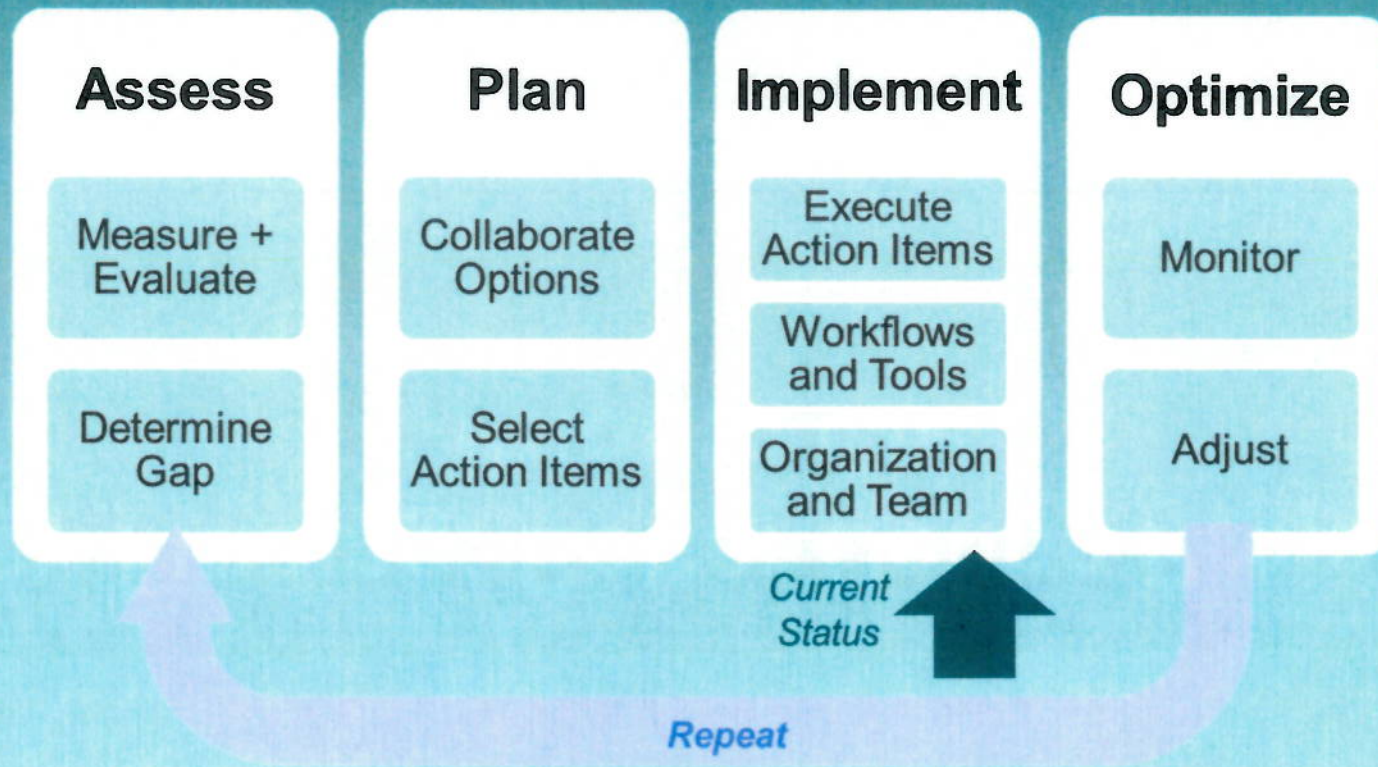
- Attract top Contractors and Consultants





CPD Program Overview

Continuing Organizational Optimization





Key Finding: Better Define Projects Prior to CIP

- Modify the project initiation process
 - Collaborate on objectives with requestor
 - Identify schedule drivers *e.g., permitting, agency approvals, procurement, etc.*
 - Cost estimate standards
 - Develop “business case” for action
- **Project Definition Report (PDR)** to accompany each proposed CIP item





SOP - Project Definition Report: Outline for Project Execution

- Record of intent and support inquiries
- Adhere to standards

3.0 Additional Project Information



Figure 3-1: 1000' Figure of Kahuku Wells

Related information, studies, or reports:
As-built for previous projects include:

- Job 10-0008 Kahuku Wells: Repair of Pump No. 1
- Job 09-0005 Kahuku Wells: Repair of Pump No. 1 and No. 2
- Job 01-0020 Kahuku Deep Monitor Well: Drilling and Casing One Monitor Well
- Job 00-0077 Kahuku Wells: Replace Pumping Units and Apparatuses
- Job 00-0461 Kahuku Water Development: Installation of Two Pumps, Control Building, Piping, Electrical Equipment, 0.5 MG Reservoir, Transmission Main, and Access Road
- Job 79-006A Kahuku Water Development: Drilling, Casing, and Testing Two Wells

Ongoing construction project:

- Job 11-004 Waialua Wells and Kahuku Wells Renovation

Recently completed Well Drilling Project

- Job 12-001 Kahuku Wells Unit No. 3. Documents include Project Solicitation Notice, Final EA Background Summary, Final Progress and Payment Report, Construction Permit application.

See Attachment D for additional Project Background/History.

4.0 Photos



Figure 4 (Top Left): General site and central building
Figure 4 (Top Right): Well No. 3
Figure 4 (Bottom Left): Well No. 1
Figure 4 (Bottom Right): Well No. 2

5.0 Budget Information

Project Cost Estimate Notes:

Total Project Cost (incl Eng and CM):	\$2,518,000 (AJCE Class 5 Cost Estimate)
Range (2008 to 2009):	\$2,208,000 to \$3,000,000
Construction Cost:	\$1,797,000 (AJCE Class 5 Cost Estimate)
Range (2008 to 2009):	\$868,000 to \$3,476,000

Project Definition Report

Kahuku Wells, Unit 3
October 10, 2004

- 1.0 Project Background
- 2.0 Description of Project
- 3.0 Additional Project Information
- 4.0 Photos
- 5.0 Budget Information
- 6.0 Schedule Information
- 7.0 Attachments

Attachment A - Detailed Scope for Conceptual Cost Estimate
Attachment B - AJCE Class 5 Conceptual Cost Estimate
Attachment C - Conceptual Project Schedule
Attachment D - Project Background/History

Approval Signatures

Required Signatures:

Signature	Date
Signature	Date
Signature	Date
Signature	Date
Signature	Date
Signature	Date
Signature	Date
Signature	Date

1.0 Project Background

Project Name: Kahuku Wells, Unit 3

Project Number:

Justification Date: October 10, 2004

Category:

1. Pump Station/Well

2. Reservoir

3. Pipeline

Project Type:

1. Existing Asset Repair

2. Existing Asset Replacement

3. New Asset Capacity

4. New Asset Regulatory

5. New Asset Level of Service

Division Requested Project: Water Resources

Project Request Date: N/A

Project Contact Information:

Name: Matthew Murayama

Email address: mmurayama@hawaii.gov

Division: Capital Projects

Telephone: (808) 740-5536

Project Location: YH 5-0-0-5

Additional Description of Location: Kahuku Wells access/lot from 56-430 Pehelua's Loop

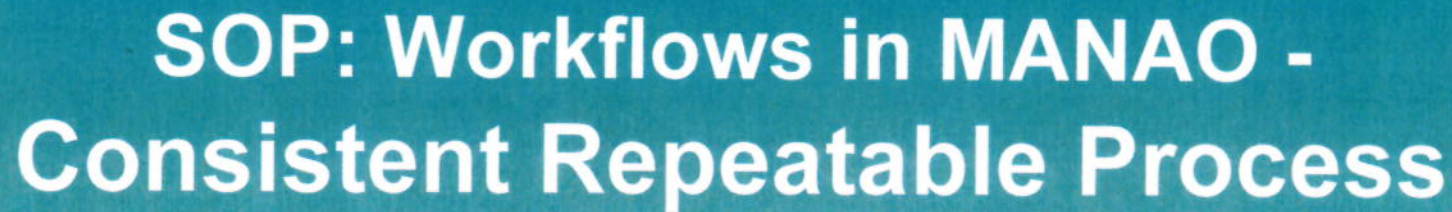


2.0 Description of Project

Objective: The project will install a three well pump unit and a permanent emergency generator at the Kahuku Wells facility to ensure BWS capacity standards are met for the future demand estimate and to provide emergency backup power to this is a stand-alone source that is critical for fire protection, a hospital and other.

New Construction: This includes installing a pump and motor (700 gpm) on the existing new well, including necessary piping, valves, transmission and control, electrical equipment and apparatuses, and installation of a new permanent emergency generator.

- Clarify expectations
- Set key project performance metrics



Home Page

“Smart-forms” prompt for input

Auto notify for reviews and direct for next action



Manage Project From Conception Through Completion

MANAIO
My Tasks
Board Projects
Non-Board Projects
Construction Projects
Permits
Contractors External Site
Feedback

Manoa Wells II

Project Request
Engineer Scoping

Project Record ID 10214	Request Date 3/10/2016	Project Phase* CIP Prioritization	Record Status Open
Project Name* Manoa Wells II			
Requesting Division* Water System Operations	Asset Type* Facility	Project Type* Existing Asset Replacement	
Requesting Division Contact* [v]	Primary Email SKChm@brownandcald.com	Primary Phone (808) 111-2222	
Alternate Contact [v]	Alternate Contact Email	Alt Phone	

Site Visit to Well in Manoa Wells II
Collapse Section
Linked Documents

TRIX
9-9-545-001
List all relevant As-Builts
Job 96-002

Relevant HONU screenshots uploaded
Yes [v]

Site Visit to Well in Manoa Wells II
Collapse Section
Linked Documents

Site Visited
Yes [v]
Additional Description of Location
Located at: ...

Location map and key photos uploaded
Yes [v]

Conceptual Scope developed and uploaded
Yes [v]

Detailed Description of Project
Project Objective
Replace MCC and other electrical equipment



PDR Fields Are Organized and Automatically Exported By MANAO

Project Definition Report

1.0 Project Background

Date

2/5/2016

Project Type

Existing Asset-Repair

Project Name

Haiku Reservoir 2 - Test

Project Asset

Facility

MANAO ID

10193

Requesting Division

Field Operations

Request Date

1/19/2016

Project Contact Information

Name

Mike Prett

Email Address

mpret@brwncaid.com

Telephone

111-222-3333

Project Location

TMC

12345

Additional Description of Location

NE of Kam hwy onramp

Existing Facility Name

HAIKU 500 RES 2

2.0 Description of Project

Project Objective

Rehab existing reservoir. There are known cracks and issues inside of the reservoir including exposed rebar, spalling concrete and foundational cracking. This will be a comprehensive inspection and rehabilitation effort to extend the useful life of this important reservoir. BWS would like to ensure resiliency of this facility while deferring a new capital investment of a replacement reservoir as long as possible.

Benefits to BWS

Defers capital cost of rebuilding reservoir

Applicable Permits

Permit Name	Permit Type	Permit Number	Agency POC
Demolition Permit	EPA 10-day notification for demolition/renovation	50033	Susan
Coastal Permit 1	Coastal Zone Management (CZM)	50035	Johnny
Building Permit 1	Building	50036	
EIS and EDR Support	EIS preparation notice	50042	NMFS

3.0 Additional Project Information

Relevant As-Builts

Upload

Other Information

Items have been uploaded to the library

5.0 Budget Information/6.0 Schedule Information

Selected Alternative

1

WATER FOR LIFE

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



Board of Water Supply
City and County of Honolulu

Permits Module Tracks Permits Throughout Project

Permit List
Permits for Project 10198 [Refresh](#)

Permit Number	Title	Permit Type	Submitted By	Expire Date
50047	Building Permit	DPP (One-Time Review)		
50048	HECO	HECO		
50049	Hawaiian Tel	Hawaiian Telephone		
50050	SMA Approval	Special management area (SMA)		

[Back](#) [Page 1](#)

Edit Permit Form

Permit Number
50049

Project *
10198 - Waialae Iki Booster No. 1 Relocation

Other Related Projects

[Add New](#)

Permit Type *
Hawaiian Telephone

Permit Name *
Hawaiian Tel

Agency POC
John Smith

Agency POC Phone
808-555-1873

Agency POC Email
jsmith@htel.com

Responsible Party
J Smith

Submitted By
Consultant

Lead Time Required
20 Days

Fee
\$1,000.00

App Submittal Date
3/18/2016

Issued Date
3/17/2016

Expiration Date
4/22/2016

Permit Closed Date

Notes
Will probably need new Hawaiian Tel feed. Contact John Smith at Hawaii Tel. ASAP

Created on Monday, February 1, 2016 10:11 PM by Stephanie Chen
Last modified on Monday, February 1, 2016 3:42 PM by Stephanie Chen

[Linked Docs](#) [Save](#) [Close/Cancel](#)

WATER FOR LIFE

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



Board of Water Supply
City and County of Honolulu

PDR Inventory Justifies Most Important Efforts Move Forward

Project Rec ID	Title	Benefit Over Status Quo	Project Phase	Project Type	Total Project Cost	Design Cost	Construction Cost	Completion Year
10198	Waipahu Booster No. 1 Relocation	\$ 3,450,518.00	CIP Prioritization	New Asset-Cover of Service	\$ 6,619,000.00	\$ 555,151.00	\$ 5,651,225.00	2016
10191	pipeline test A	\$ 3,000,000.00	CIP Prioritization	Existing Asset-Replacement	\$ 2,250,000.00	\$ 75,000.00	\$ 1,505,500.00	2017
10192	Pump Station C	\$ 2,000,000.00	CIP Prioritization	Existing Asset-Repair	\$ 191,545.00	\$ 35,000.00	\$ 156,545.00	2016
10200	Waipahu Wells I	\$ 1,000,000.00	CIP Prioritization	Existing Asset-Repair	\$ 2,100,000.00	\$ 100,000.00	\$ 2,000,000.00	2017
10195	MK Test 1016a	\$ 1,000,000.00	CIP Prioritization	New Asset-Capacity	\$ 227,325.00	\$ 75,000.00	\$ 152,325.00	2016
10199	Lanikai WSI	\$ 500,000.00	CIP Prioritization	Existing Asset-Replacement	\$ 15,111,111.00	\$ 111,111.00	\$ 13,900,000.00	2016
10193	Haiku Reservoir 2 - Test	\$ 500,000.00	CIP Prioritization	Existing Asset-Repair	\$ 2,250,000.00	\$ 250,000.00	\$ 2,000,000.00	2016
10189	Test Pump Station B	\$ 322,222.00	CIP Prioritization	New Asset-Capacity	\$ 2,250,000.00	\$ 31,535.00	\$ 1,516,516.00	2016
10197	Halawa Wells and Halawa Booster No. 2	\$ 200,000.00	CIP Prioritization	Existing Asset-Replacement	\$ 5,250,000.00	\$ 250,000.00	\$ 5,000,000.00	2016
10186	MK Test 0951a	\$ 156,516.00	CIP Prioritization	New Asset-Capacity	\$ 30,000,020.00	\$ 20.00	\$ 30,000,000.00	2017
10190	Test Pump Station C	\$ 150,000.00	CIP Prioritization	New Asset-Regulatory	\$ 1,550,806.00	\$ 35,155.00	\$ 1,515,651.00	2016
10188	Mk Test 1201ab	\$ 123,251.00	CIP Prioritization	Existing Asset-Replacement	\$ 166,806.00	\$ 15,155.00	\$ 151,651.00	2016
Totals					\$ 67,966,613.00	\$ 1,533,127.00	\$ 63,303,798.00	



Key Project “Phases”

Each project follows the same path

D Development

Mutually
Define Project
Objectives

Setup Project
Record Verify
Business Case

N Negotiation

Select
Resources

Finalize
Contract
Approvals

E Execution

Perform Work

Control Costs
& Change

Engage Team

C Closeout

Work
completed

Final
paperwork



Capital Project Execution Key to Financial Performance

- Annual capital budget often represents **30 to 40% of annual expenditures**
- Timing of capital investments
 - Reserves
 - Cash flow
 - Rates
- Project quality and service life impacts return on investments



Metrics Influence Organizational Behavior

- Encumbered resources – an important financial factor for BWS... however, does this factor demonstrate:
 - Were resources committed effectively and efficiently?
 - Were the most beneficial projects completed vs. those committing the most resources?
- **Is encumbered \$\$ an outcome or metric?**





What Behaviors Does BWS Need from CPD?

- Anticipate the WMP program will generate more projects than available resources
- Are the right projects being undertaken?
- Are projects completed as planned?
 - Financially
 - Schedule
- **Predictability is key to future performance**





CPD Measures by Project Phase

CPD performance affecting BWS at each project phase

D

Development

Scope

Budget and
Schedule

N

Negotiation

Contractor
Expectations

Equitable Risk
Assignment

E

Execution

Permit

Change
Control

Communication

C

Closeout

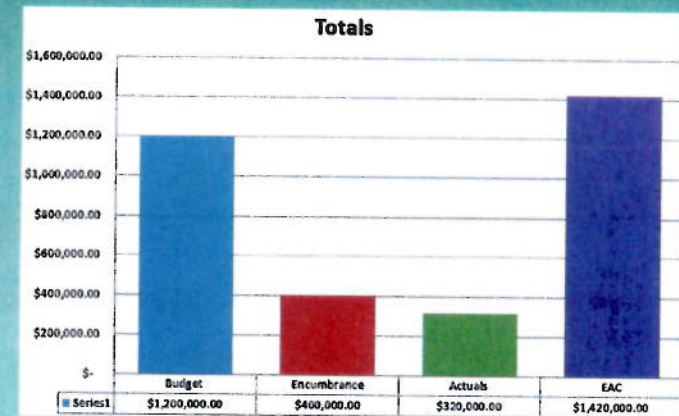
Scope
Compliance

Budget and
Schedule
Effectiveness



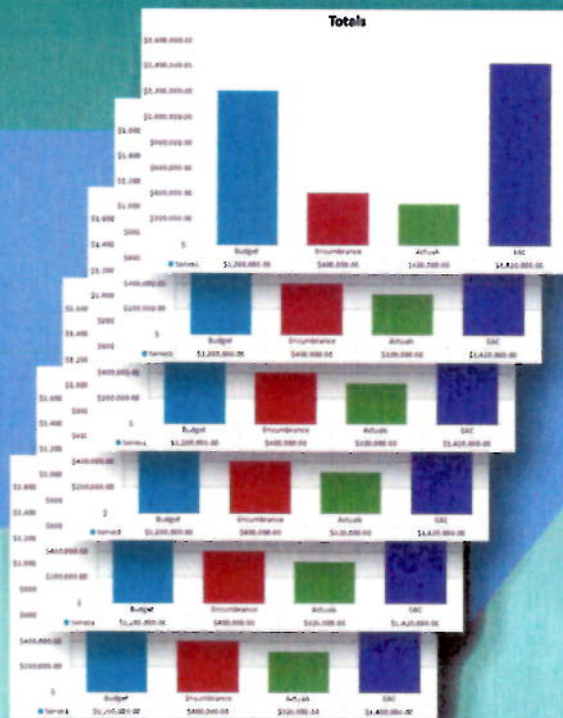
Proposed Metrics

- Plan vs Actual across ALL projects
 - Financially
(budget vs. expenditures)
 - Forecast
(planned number of projects)
 - Statistics
(number of projects open/closed)

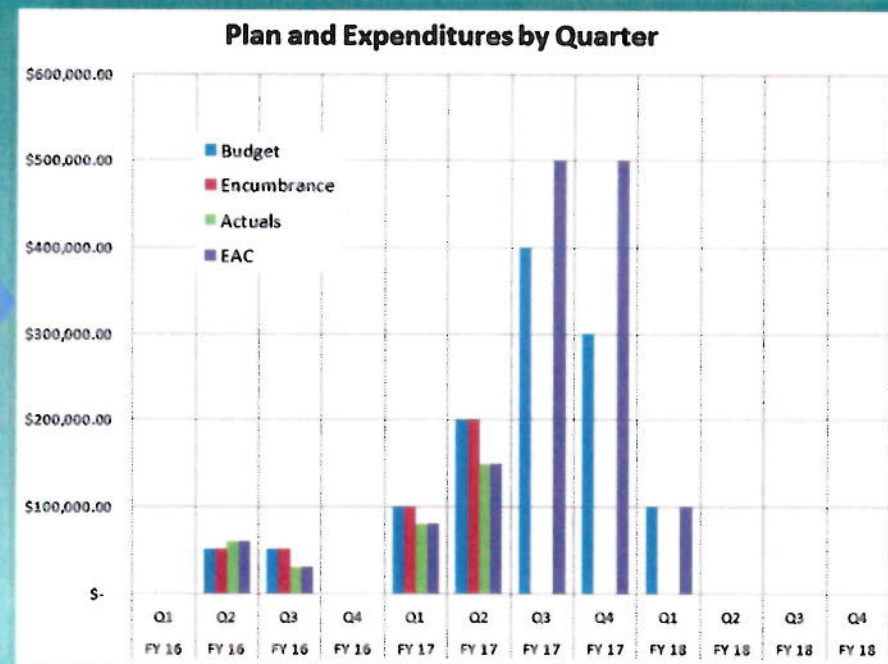




Proposed Metrics



Individual Projects



Composite All Projects



Proposed Metrics

- Number of projects by phase and type
 - Planning, design, construction
 - Rehabilitation vs. new asset
- Variance information
 - Projects exceeding cost / schedule target (e.g. 5% or 10%)
 - Rehabilitation vs. new asset
 - Projects FORECASTING a variance





Right Metrics Benefit Everyone

- What's going well and what needs attention
- Transparency about performance
 - Is the plan getting executed on time and on budget?
- Where are resources required most
 - Identify Branches, project phases, etc.
- Streamlines project delivery





Implementation

- Standard Operation Procedures (SOPs)
 - Workflows
 - Project Definition Reports
 - MANAO project management information system
- Training in April 2016





3-Month Training Schedule SOPs and MANAO

Proposed SOP Training Schedule

Shading color represents different sessions

		Branch or Section						MANAO
		Plan Review	Design-Civil	Mech/Elec	Support	Construction	Inspectors	Sessions
Share Point Essentials								
Non-Board	Non-Board Project Initiation and Assignment							
	Review Cycles							
	Approval							
BWS Project Definition and Scoping	New Project Request							
	Proposed Project Scope Development (PDR)							
	Schedule Development							
	Cost Estimating							
	Permitting							
	BCE							
BWS Project Execution	Identify Selection Committee							
	Consultant Selection							
	Consultant Ranking							
	Scope and Fee Negotiation							
	Contract/NTP Development							
	Preliminary Design							
	Pre-Final Design							
	Final Design							
	Design Change Order							
Construction	RFI							
	Submittal							
	Change Order							
	Meeting Minutes							
	Daily Reports							
	Photo Management							
MANAO Update	SOP Update							



Implementation

- Filling open positions and planning for future demand / succession
 - Admin - Engineering Support Tech (2 / 2)
 - Engineers – Entry / mid-level (up to 8)
 - Inspectors – Construction aides (5 on board)
- Populating tools with FY17 and WMP-identified projects



WATER FOR LIFE

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



Board of Water Supply
City and County of Honolulu

Questions?



"March 28, 2016

**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 week that ended on March 5, 2016. The weekly production average for the period was 138.99 million gallons per day.

The Board of Water Supply rainfall index for the month of February 2016 was 28 percent of normal; with a 5-month moving average of 88 percent. As of March 8, 2016, the Hawaii Drought Monitor shows abnormally dry conditions for all of Oahu and moderate drought conditions for leeward Oahu.

Per the National Weather Service, climate models indicate El Niño conditions are continuing through the winter season, yielding below-normal rainfall from January through June 2016.

Most index monitor wells continue to exhibit relatively stable trends, and are expected to start decreasing as we move into the summer months.

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. There were no comments or discussion.

PUMPAGE, HEAD, AND RAINFALL REPORT

Week of 2/28/16 to 3/05/16

STATION		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	1.00	
WAILUPE	0.00		WAIMANALO II	0.34		MAKAHA V	0.00		PEARL CITY III	0.51	
WAIALAE-IKI	0.00		WAIMANALO III	0.41		MAKAHA VI	0.00		WAIU	0.82	
AINA KOA	0.48		KUOU I	0.61		MAKAHA SHAFT	0.00	nodata	NEWTOWN	2.24	
AINA KOA II	1.04		KUOU II	0.07		KAMAILE	0.00		KAONOHI I	1.31	
WAIALAE SHAFT	0.00		KUOU III	0.55		WAIAANAE I	0.19		WAIMALU I	0.00	
MANOA II	0.00		LULUKU	1.04		WAIAANAE II	0.36		AIEA	0.23	
PALOLO	0.99		HAIKU	0.31		WAIAANAE III	0.36		AIEA GULCH 497	0.50	
KAIMUKI HIGH	3.21	23.84	IOLEKAA	0.00		MAKAKILO	0.30		AIEA GULCH 550	0.24	
KAIMUKI LOW	1.21		KAHALUU	0.91		HONOULIULI I	0.45		HALAWA 277	0.00	
WILDER	7.17		WAIHEE	0.00		HONOULIULI II	5.78		HALAWA 550	0.00	
BERETANIA HIGH	4.25	23.38	KAHANA	0.80		SUBTOTAL:	9.34		KAAHUMANU MTR(-)	0.00	
BERETANIA LOW	1.02		PUNALUU I	0.00	18.99	IMPORT FROM PH			KAAMILO FLO MTR (-)	0.00	
KALIHI HIGH	2.39	20.90	PUNALUU II	1.89		KAPOLEI LINE BSTR	15.34		KUNIA I	4.90	19.29
KALIHI LOW	1.94		PUNALUU III	1.54		HONOULIULI LB FLOW	0.00		KUNIA II	1.95	
KAPALAMA	0.42		KALUANUI	0.00		EWA BEACH FLOW	0.00		KUNIA III	1.53	
KALIHI SHAFT	8.26		MAAKUA	0.39		HONOULIULI I (-)	-0.45		HOAEAE	6.75	
MOANALUA	1.24	19.83	HAUULA	0.00		HONOULIULI II (-)	-5.78		EWA SHAFT	0.00	
SUBTOTAL:	33.62					SUBTOTAL:	9.11		WAIPAHU INTCON. (-)	-2.91	
			KAHUKU	0.33					EWA-WAIAANAE (-)	-9.11	
IMPORT FROM PH			OPANA	1.02		PEARL HARBOR			PH LOCAL USE:	31.55	
HALAWA SHAFT	9.83	17.24	WAIALEE I	0.00		WAIHAWA	2.30		TOTAL SUBURBAN:	62.22	
KAAMILO	0.00		WAIALEE II	0.00		WAIHAWA II	1.36				
KALAUAO	9.42	17.90	SUNSET BEACH	0.00		MILILANI I	3.16		KALAUAO SPRINGS	0.95	
PUNANANI	12.15		SUBTOTAL:	10.21		MILILANI II	0.00		BARBERS POINT (NP)	1.62	
KAONOHI II	0.00					MILILANI III	1.53		GLOVER TUNNEL (NP)	0.47	
WAIMALU II	0.00	15.78	WIND. EXPORT	0.14		MILILANI IV	1.21				
KAHUMANU	0.84					WAIPIO HTS.	0.18		HEAD CONDITION		
HECO WAIU	0.00		HALEIWA-WAIALUA			WAIPIO HTS. I	0.29		CAUTION	ALERT	CRITICAL
MANANA	0.48		HALEIWA	0.00		WAIPIO HTS. II	0.35				
KAHUMANU FLOW MT	0.00		WAIALUA	2.15		WAIPIO HTS. III	1.24				
KAAMILO FLOW MTR	0.00		SUBTOTAL:	2.15		WAIPAHU	2.91	19.00			
TOTAL IMP/EXP WAIP. INT:	0.00					WAIPAHU II	0.80				
IMPORT FRM WIND:	0.14		EWA-WAIAANAE			WAIPAHU III	1.49				
SUBTOTAL:	32.86		MAKAHA I	0.87		WAIPAHU IV	3.27				
			MAKAHA II	0.17		PEARL CITY SHAFT	0.95	15.46			
TOTAL METRO:	66.48		MAKAHA III	0.86		PEARL CITY I	0.55				

CWRM PERMITTED USE FOR BWS POTABLE SOURCES						PUMPAGE	2016	2015	GRAVITY	2016	2015
	A	B	C	D	E	SUBURB.	62.22	60.97	SUBURB.	9.89	8.35
WATER DISTRICTS	PERMITTED USE	2016	DIFF. B-A	YEAR/ DATE	DIFF. D-A	METRO	66.48	64.43	METRO	0.40	0.43
HONOLULU	45.27	34.02	-11.25			TOTAL:	128.70	125.40	TOTAL:	10.29	8.78
WINDWARD	25.21	17.19	-8.02						Manoa	0.17	
NORTH SHORE	4.08	3.50	-0.58			NUUANU #5			Palo	0.23	
WAIHAWA	4.27	3.66	-0.61			(rainfall)	0.00"	0.83"	Waim. I&II	0.00	
WAIAANAE	4.34	3.51	-0.83						Waim. III&IV	0.19	
EWA-KUNIA	15.88	6.53	-9.35						Waihee incl.	0.95	
PEARL HARBOR	92.66	72.63	-20.03						Waihee tun.	5.08	
TOTAL:	191.71	141.04	-50.67						Luluku	0.05	
									Haiku	0.00	
									Kahalu	2.06	
									Waia. C&C	1.40	
									Waia plant.	0.16	

DROUGHT STATUS REPORT
DRAFT IN MGD

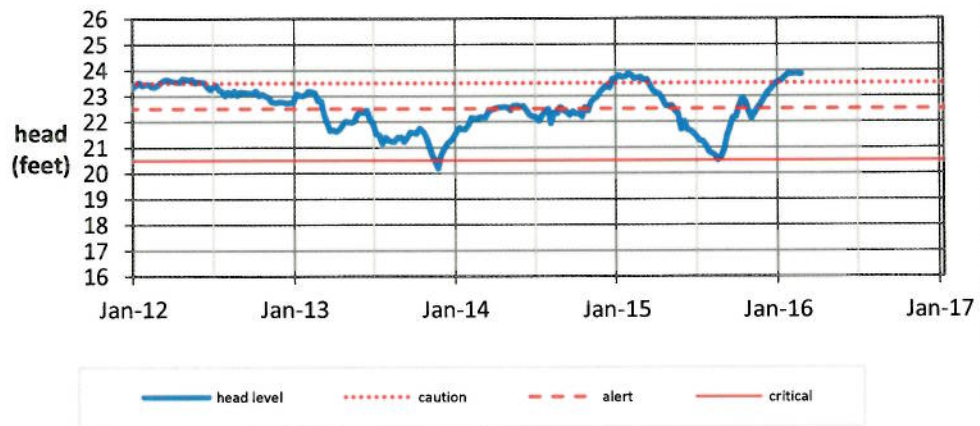
WATER USE DISTRICT	AUTHORIZED USE		2/21-2/27 2016		2/28-3/05 2016				
HONOLULU	45.27		33.86		34.16				
WINDWARD	25.21		16.12		17.05				
NORTH SHORE	4.08		3.44		3.50				
WAHIAWA	4.27		3.49		3.66				
EWA-WAIANAE	20.22		19.90		20.01				
PEARL HARBOR	92.66		59.78		60.61				
TOTAL	191.71		136.59		138.99				

Accounts for in-district pumpage and transfers

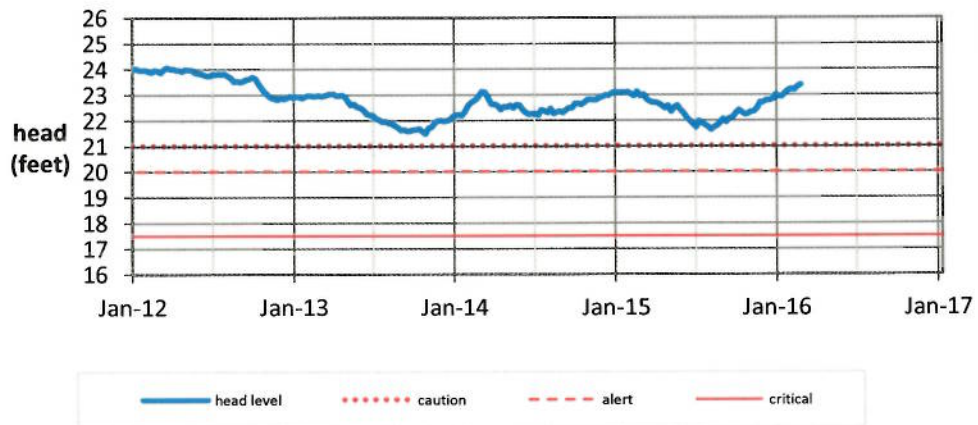
HEAD IN FEET

		2015	2/21-2/27 2016	2015	2/28-3/05 2016				
HONOLULU									
KAIMUKI		23.71	23.86	23.74	23.84				
BERETANIA		23.13	23.31	22.95	23.38				
KALIHI		22.38	22.84	22.32	20.90				
MOANALUA		19.39	19.78	19.34	19.83				
PEARL HARBOR									
HALAWA		16.89	17.26	16.84	17.24				
KALAUAO		17.29	17.91	17.28	17.90				
PEARL CITY		14.93	15.48	14.90	15.46				
WAIPAHI		18.64	18.96	18.53	19.00				
KUNIA		19.06	19.24	18.96	19.29				
EWA-WAIANAE									
MAKAHA		16.33	NO DATA	16.34	NO DATA				
WINDWARD									
PUNALUU		17.93	19.09	17.79	18.99				
KALUANUI		17.89	18.66	17.96	18.60				
NORTH SHORE									
WAIALUA		11.19	11.27	11.20	11.23				

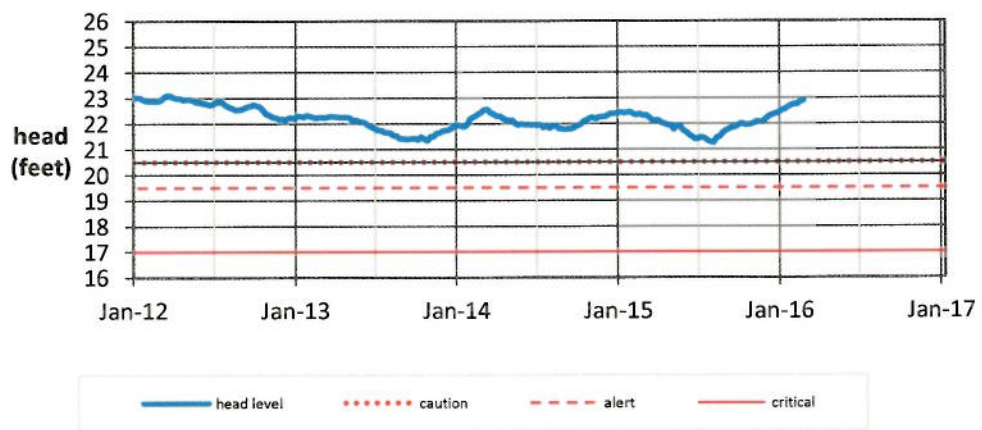
Kaimuki



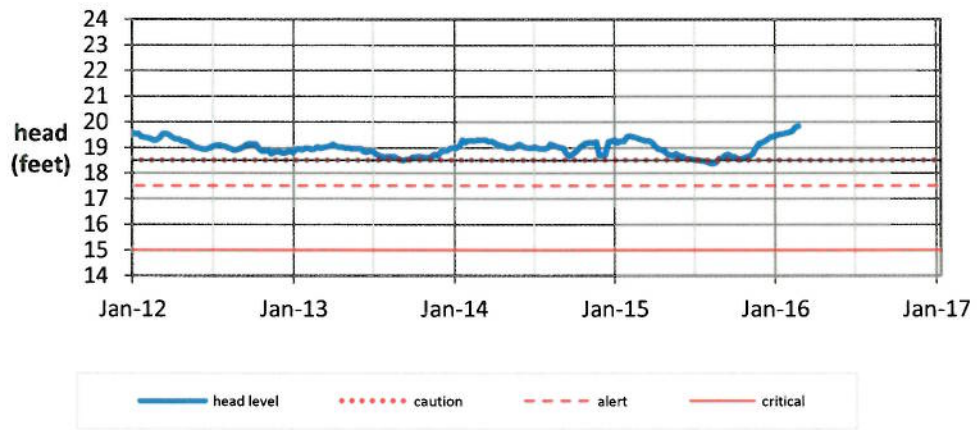
Beretania



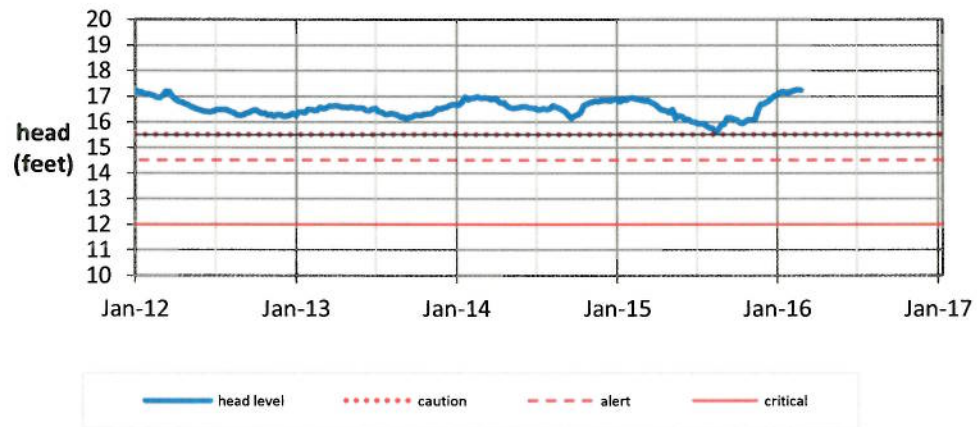
Kalihi



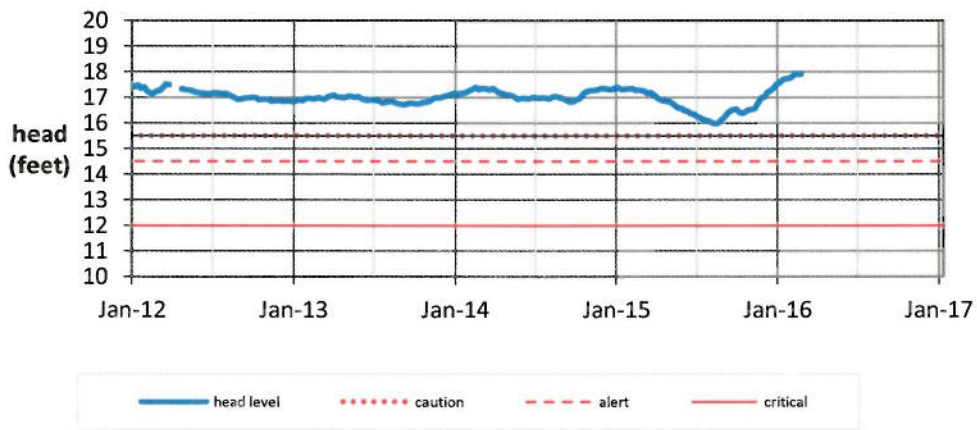
Moanalua



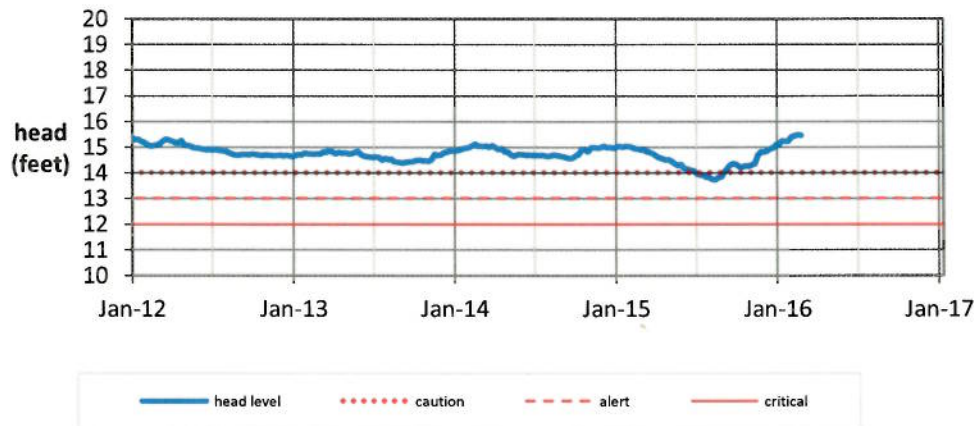
Halawa



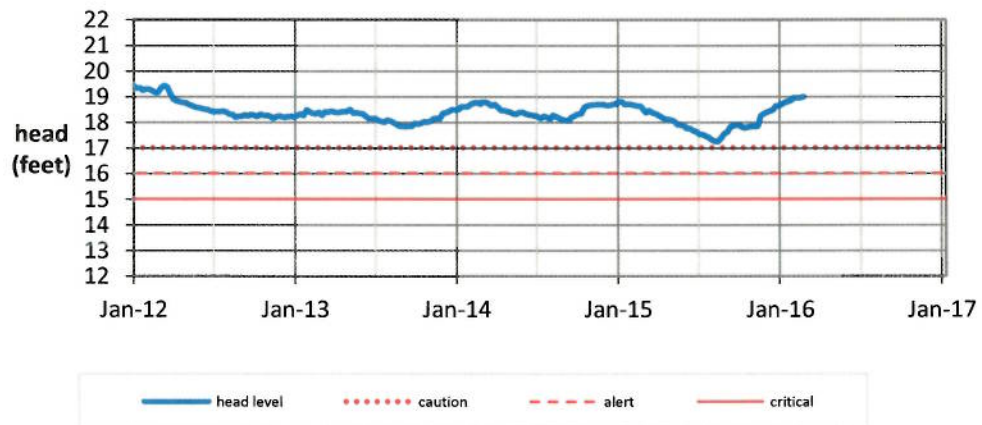
Kalauao



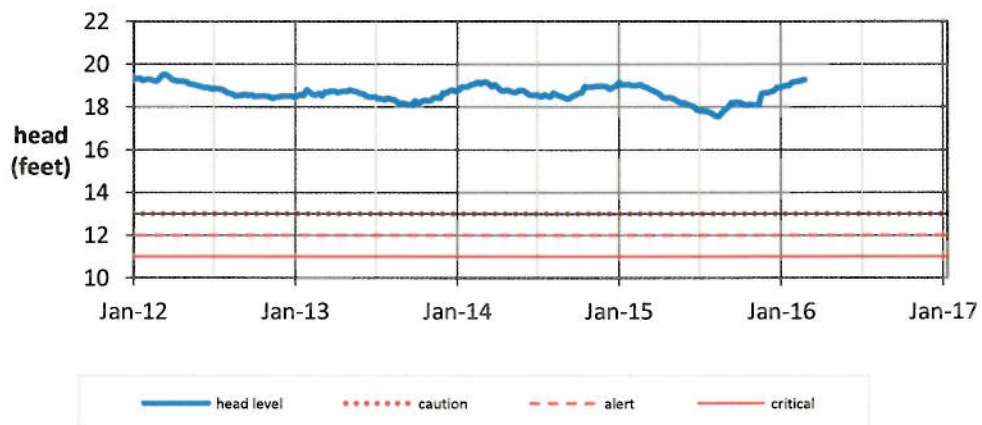
Pearl City



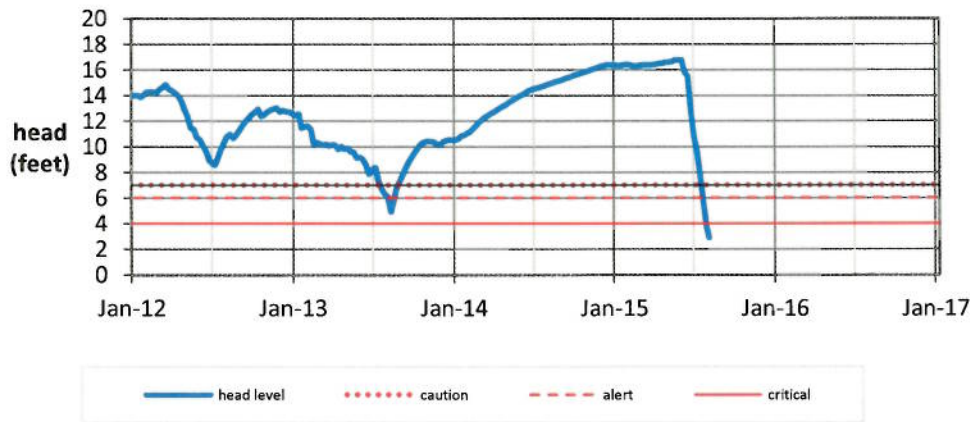
Waipahu



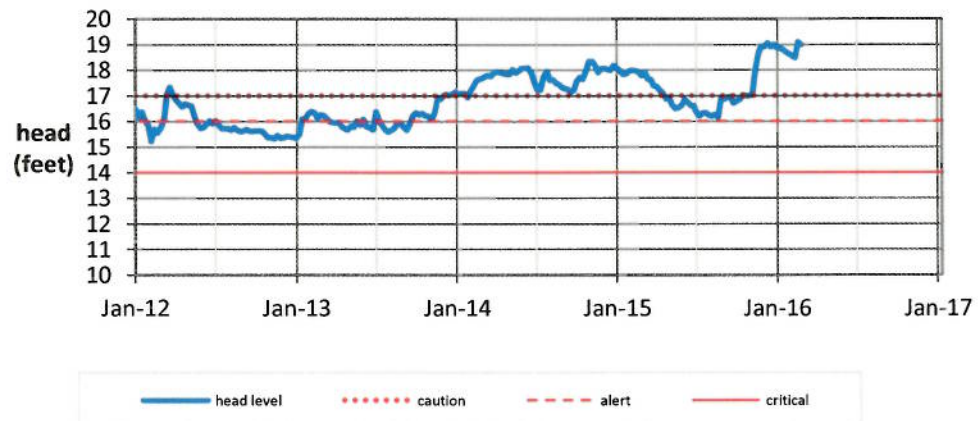
Hoeae-Kunia



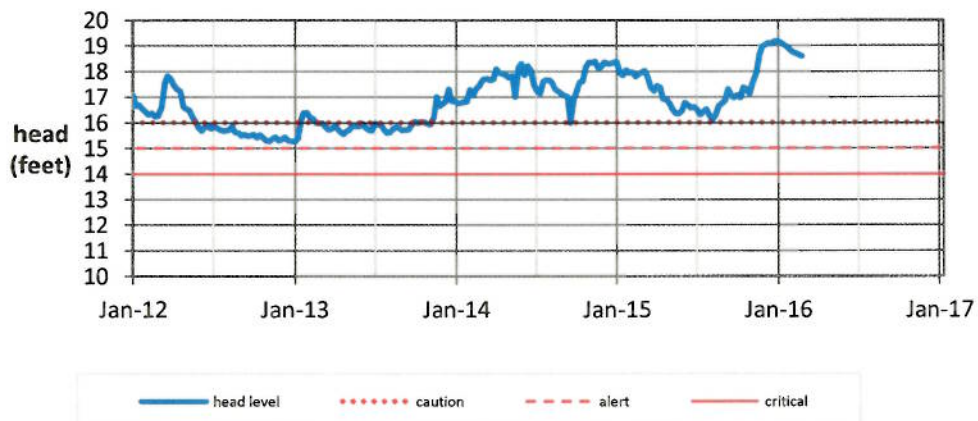
Makaha Out of Service since 8/17/15

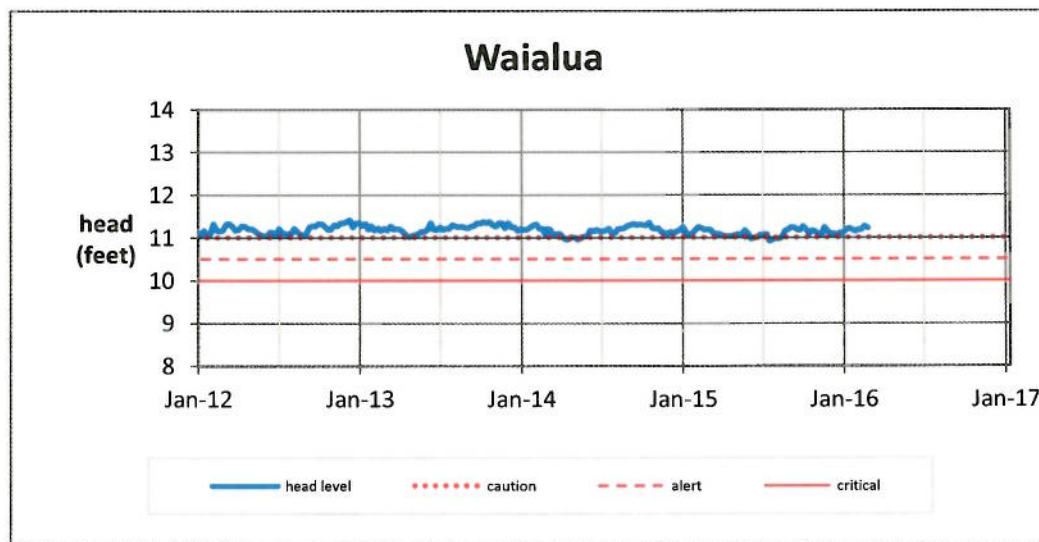
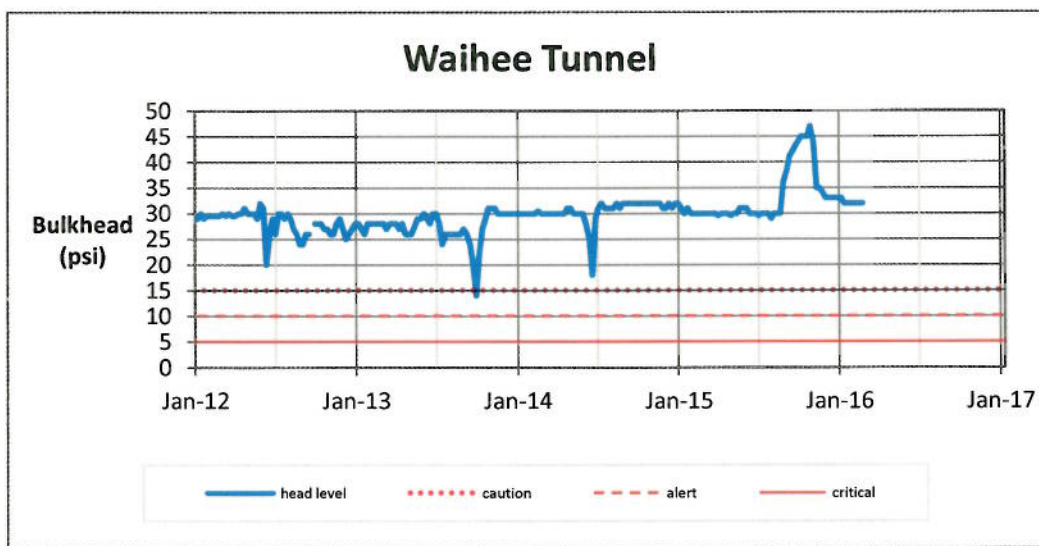


Punaluu

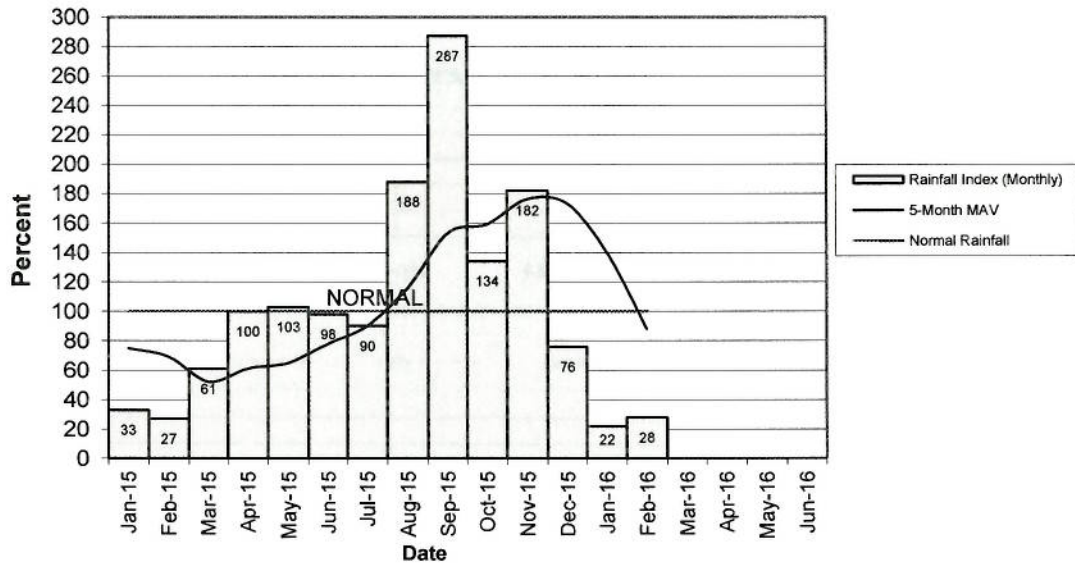


Kaluanui

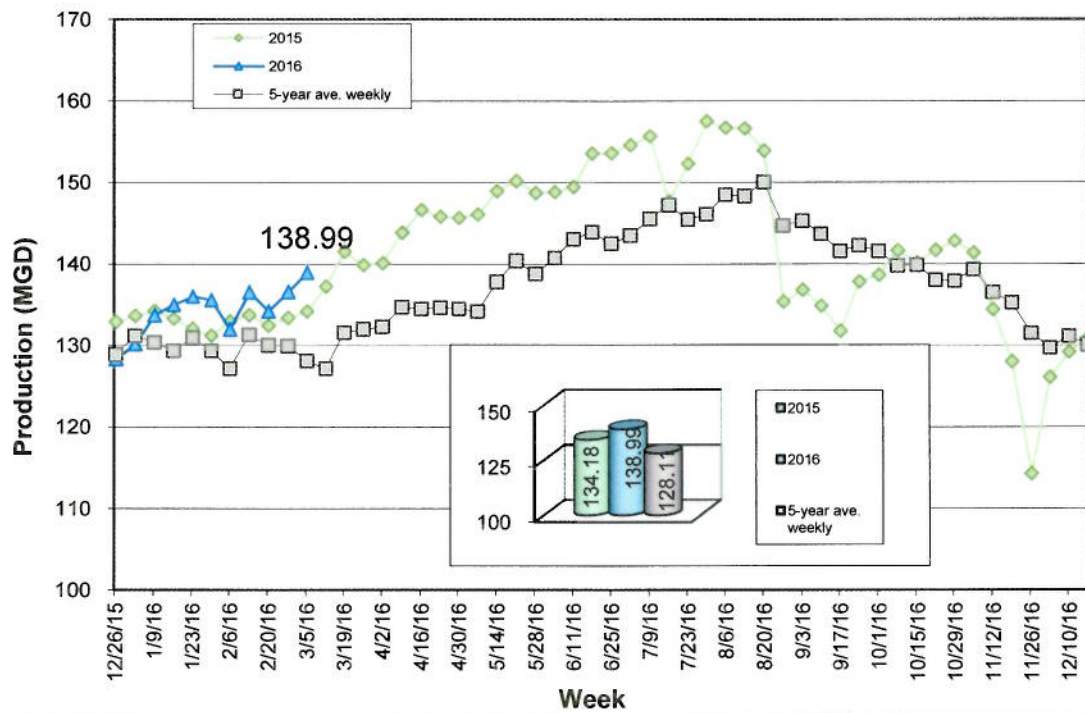




HONOLULU WATERSHED AREA Rainfall Intake



Weekly Production

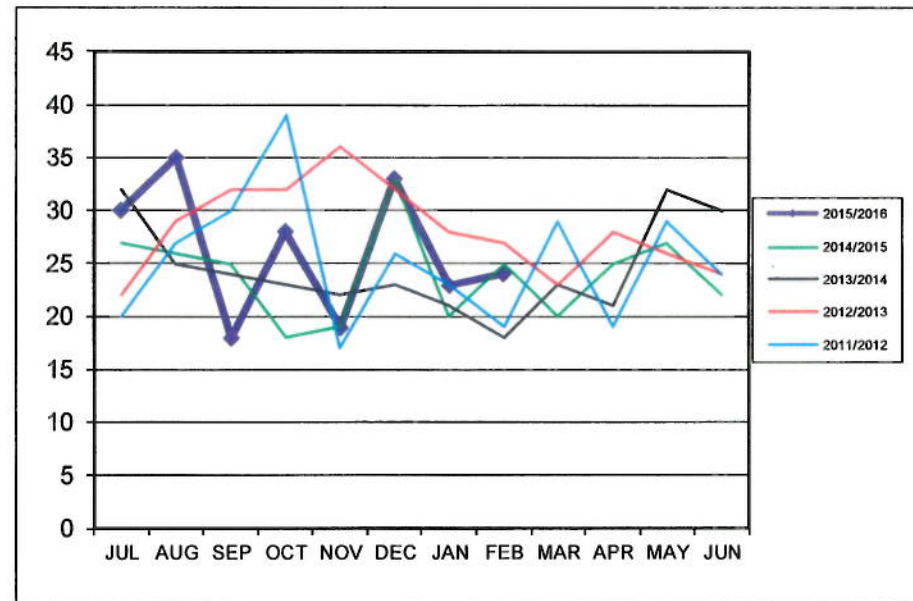


ITEM FOR INFORMATION NO. 3

WATER MAIN REPAIR REPORT for February 2016

	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	Total
2015/2016	30	35	18	28	19	33	23	24					210
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
2011/2012	20	27	30	39	17	26	23	19	29	19	29	24	302

Date	Address	Size
2/4	94-247 Puamano Pl.	6" C.I.
2/4	965 Kanakou Pl.	4" C.I.
2/5	400 bl. Keawe St.	6" C.I.
2/9	3041 Manoa Rd.	12" C.I.
2/9	47-519 Hui lo St.	4" D.I.
2/10	733 Middle St.	24" C.C.
2/11	89-1219 Pikaiolela St.	4" D.I.
2/12	860 Mapunapuna St.	8" C.I.
2/12	98-1071 Alania St.	8" C.I.
2/14	910 Kopke St.	6" C.I.
2/16	2869 Von Hamm Pl.	4" C.I.
2/17	2673A Liliha St.	8" C.I.
2/18	710 Pumehana St.	8" D.I.
2/18	easement--2287 Auhuhu St.	8" C.I.
2/22	2425 Holomua Pl.	4" C.I.
2/22	41-1520 Lukanela St.	6" C.I.
2/22	59-770 Kamehameha Hwy.	8" C.I.
2/22	3291 Pinaoula St.	4" C.I.
2/23	2325 Liliha St.	8" C.I.
2/26	41-740 Kaulukau St.	4" C.I.
2/28	45-510 Paleka Rd.	16" C.I.
2/28	98-173 Pahemo St.	8" P.V.C.
2/29	94-312 Anakahi Pl. *	4" C.I.
2/29	550 South St.	8" D.I.



Bold * - Pro-active Leak Repair

19.4 miles of pipelines were surveyed by the Leak Detection Team in the month of February.

DISCUSSION

Daryl Hiromoto, Field Operations Division Program Administrator, gave the report. There were no comments or discussion.

ITEM FOR INFORMATION NO. 4

"March 28, 2016

DEFERRED
CIP PROJECTS

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

Chair and Members:

Subject: Deferred Capital Improvement Program Projects for
Fiscal Year 2015 – Fiscal Year 2016

In accordance with Resolution No. 861, 2015 (Fiscal Year [FY] 2015-2016 Capital Improvement Program Budget – Amendment No. 1), the funding of the FY 2016 Capital Improvement Program (CIP) Budget is revised as follows:

CIP projects being deferred:

1) Item No. 37 – Nalu Enhancement: \$1,640,000

This project was to modify and enhance the financial accounting system software at Board of Water Supply (BWS). There is insufficient time to effectively evaluate the submittals and negotiate a contract before the end of the current fiscal year. This project will be reprogrammed in the FY 2016-2017 budget.

2) Item No. 38 – Document Management System: \$100,000

This project was to assess the current state of document management technology and identify an appropriate solution to be implemented at BWS. With the initiation of the SharePoint Services and Support project, it was determined that SharePoint's capability as a solution should first be assessed before researching another solution. If it is determined to be insufficient, then a future budget request may be submitted for this project.

3) Item No. 39 – Data Center Renovation Project: \$250,000

This project was to redesign the current Data Center layout including a reconfiguration of adjacent workspace areas. Given the activity of the Workspace Planning project, the Information Technology Division has decided to defer this project. In the meantime, the division will focus on reducing the need for a physical Data Center on premise and address any interim reconfigurations to the Data Center room in-house.

The appropriations for these deferred projects will be added to the CIP Contract Adjustment Account.

Respectfully submitted,

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

The foregoing was for information only.

DISCUSSION:

Henderson Nuuhiwa, Information Technology Division Program Administrator, explained the reasons for the project deferrals. Mr. Miyashiro asked when Item No. 37 would commence, and if BWS is confident the accounting software would function reliably in the interim. Mr. Lau responded that this item will commence in the middle of the next fiscal year, and Waterworks Controller Joe Cooper confirmed the current software will continue to function properly during this time.

ITEM FOR INFORMATION NO. 5

"March 28, 2016

UPDATE ON
THE ESPC
PROJECT

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

Chair and Members:

Subject: Update on the Board of Water Supply Energy Savings
Performance Contracting Project

The Energy Savings Performance Contracting (ESPC) project has taken a major step towards implementation. On March 11, 2016, the Guaranteed Energy Savings Agreement (GESA) was approved and executed with a Notice to Proceed date of March 15, 2016. The total GESA cost is \$33,125,398.00, and has a term of 20 years.

Our contractor, NORESKO, and the Board of Water Supply (BWS) have begun meeting to finalize the process details of the design/build phase of the project to support the ambitious schedule. NORESKO and BWS will continue to work closely together with weekly project meetings and monthly management meetings.

An ESPC is an alternative project delivery approach that allows a government agency to enter into a long term partnership with an energy service company (ESCO). This partnership allows the BWS to implement comprehensive energy efficiency, renewable energy, and operational improvements which guarantee enough energy savings over the next 20 years to pay for the contract. The current project will provide nearly \$60 million savings over the project life.

Respectfully submitted,

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

The foregoing was for information only.

DISCUSSION:

Marc Chun of the Water Resources Division and the ESPC project team lead, gave the report. Mr. Miyashiro asked if BWS will save \$9 million a year in energy savings. Mr. Chun and Mr. Lau responded that the BWS will be saving approximately \$3 million per year. The \$9 million is the savings after all costs are accounted for during the life of the contract. Board Member Andaya asked what the next major milestones will be. Mr. Chun responded that it would be to complete the public notification for historic preservation review, as stipulated by the State Historic Preservation Division and required by the Federal "Section 106" requirements. Mr. Lau added that BWS's use of the State Revolving Fund loans triggered the "106" requirements.

ITEM FOR INFORMATION NO. 6

"March 28, 2016

UPDATE ON
CHARTER
COMMISSION
PROPOSALS

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

Chair and Members:

Subject: Update on Charter Commission Proposals Pertaining to
the Board of Water Supply

The following is an update of the proposed Charter Commission Proposals affecting the Board of Water Supply (BWS).

The Honolulu Charter Commission met on March 17, 2016, for deliberation and decision-making on Charter Proposal Nos. 6, 20, and 88. Deputy Manager, Ellen Kitamura, provided testimony on BWS's position on the proposals. Board member Bryan Andaya and BWS Stakeholder Advisory Group members Helen Nakano and John Reppun also provided oral testimonies in support of BWS.

Below is a summary of the three proposals:

Charter Proposal 6: This proposal recommends that the City Council be given greater oversight of the BWS in order to save taxpayers money. The proposal also indicates that BWS is not proactive nor effective in addressing mainbreaks. BWS opposed this proposal.

Charter Proposal 20: This proposal seeks to transfer the decision-making authority over the BWS operation and capital improvement program budgets to the City Council. The City Council would have the authority to add, delete, and amend projects and budget-line items. BWS opposed this proposal.

Charter Proposal 88: This proposal provides clarity in identifying which sources of revenues could be considered when setting water rates. Currently the Charter is unclear as to whether or not the BWS can include offsets from revenues derived from other sources or activities, in addition to monthly water charges, when setting water rates. BWS supported this proposal.

During the deliberation and decision-making portion of the meeting, the Commission decided to form a Permitted Interaction Group to review these proposals in more detail and then report on their findings and recommendations to the Commission at a later date. The members of the Permitted Interaction Group are:

Governor John D. Waihee III, Chair
Mr. Reginald V. Castanares, Jr.
Ms. Donna Ikeda
Ms. Edlyn Taniguchi
Mr. R. Brian Tsujimura

Deputy Manager Kitamura, BWS staff, and I will be meeting with each of the Permitted Interaction Group members to discuss the proposals and provide additional information as needed.

I would like to thank Board member Andaya, Ms. Helen Nakano, Mr. John Reppun, and Mr. Vina Cruz for attending the Commission Meeting in support of BWS, and also appreciate the written testimonies in support of the BWS by other community members.

Respectfully submitted,

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

The foregoing was for information only.

DISCUSSION:

Ellen Kitamura, Deputy Manager, gave the report. Mr. Miyashiro asked about the Permitted Interaction Group process. Ms. Kitamura explained that the Permitted Interaction Group members were identified at the March 17, 2016 Charter Commission meeting. The Permitted Interaction Group can now hold meetings that are not open to the public. They will report on their findings and recommendations at a future public Charter Commission meeting. At that meeting, public testimony will be accepted by the Charter Commission. The Charter Commission cannot discuss or act on the report at this meeting and will have to schedule another public meeting for deliberation and decision-making on the Permitted Interaction Group's recommendations. Mr. Miyashiro asked if this Permitted Interaction Group was created just for BWS proposals. Ms. Kitamura responded that in addition to the three BWS proposals, two other non-BWS proposals will be considered by the Permitted Interaction Group; Proposal No. 4 to provide the City Council with the power to remove the Corporation Counsel by a vote of two-thirds of the entire Council membership and Proposal No. 78 to allow the Mayor to create a fund with City Council approval. Mr. Miyashiro asked if other similar Permitted Interaction Groups were created for other proposals, and Ms. Kitamura responded yes.

Ms. Kitamura and Mr. Lau thanked Mr. Andaya for attending and testifying on behalf of BWS at the last Charter Commission meeting. Mr. Andaya encouraged Board Members and anyone who has an interest in the way BWS is run to get involved in the process by setting up meetings with the Commissioners to stress the importance of keeping BWS semi-autonomous. Mr. Andaya spoke especially about Proposal Nos. 6 and 20, which could fundamentally change how BWS is governed and how they could completely change the decision-making authority

over the BWS operation and capital improvement program budgets because the City Council would have the authority to add, delete, and amend projects and budget-line items.

MOTION TO
RECESS INTO
EXECUTIVE
SESSION

Upon unanimously approved motion, the Board recessed into Executive Session Pursuant to [HRS §92-5(a)(2)] at 2:59 PM to Consider Issues Pertaining to Matters Posted for Discussion at an Executive Session

OPEN
SESSION

The Board reconvened in Open Session at 3:08 PM

MOTION TO
ADJOURN

There being no further business Chair Miyashiro at 3:09 PM called for a motion to adjourn the Open Session. Bryan Andaya so moved; seconded by Ross Sasamura and unanimously carried.

THE MINUTES OF THE REGULAR SESSION BOARD MEETING ON MARCH 28, 2016 WERE APPROVED AT THE APRIL 25, 2016 BOARD MEETING			
	AYE	NO.	COMMENT
DUANE R. MIYASHIRO	X		
ADAM C. WONG	X		
DAVID C. HULIHEE	X		
KAPUA SPROAT			ABSENT
BRYAN P. ANDAYA			ABSENT
ROSS S. SASAMURA	X		
FORD N. FUCHIGAMI			ABSENT

Respectfully submitted,



LISA K. KIM

APPROVED:



DUANE R. MIYASHIRO
Chair of the Board

APR 25 2016

Date