

MINUTES
REGULAR MEETING
OF THE
BOARD OF WATER SUPPLY

April 22, 2019

At 2:02 PM on April 22, 2019 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
Ray C. Soon
Max J. Sword
Ross S. Sasamura
Jade T. Butay

Also Present: Ernest Lau, Manager and Chief Engineer
Ellen Kitamura, Deputy Manager and Chief Engineer
Erwin Kawata
Barry Usagawa
Marc Chun
Mike Fuke
Jason Takaki
Joe Cooper
Kevin Ihu
Kathleen Elliott-Pahinui
Robert Morita
Michele Thomas
Jennifer Elflein
Henderson Nuuhiwa
Michael Matsuo
Lorna Heller
Glenn Ah Yat

Others Present: Jessica Wong, Deputy Corporation Counsel
David Ebersold, CDM Smith

Absent: Kapua Sproat, Vice Chair
Kay C. Matsui

APPROVAL OF
MINUTES

Approval of the Minutes of the Regular Meeting held on March 25, 2019.

MOTION
TO APPROVE

Ross Sasamura and Jade Butay motioned and seconded, respectively, to approve the Minutes of the Regular Session Meeting of March 25, 2019. The motion was unanimously carried.

"April 22, 2019

AUTHORIZING
A PUBLIC
HEARING

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

Chair and Member:

Subject: Authorizing a Public Hearing to Consider the Proposed Fiscal Year
2019-2020 Operating and Capital Improvement Program Budget

We recommend that the Board authorize a public hearing to be held at 2:00 p.m. on Tuesday, May 28, 2019, to consider the resolution to adopt the proposed Operating and Capital Improvement Program Budget for the fiscal year beginning July 1, 2019 and ending June 30, 2020.

Attached is the draft of the "Notice to Public Hearing" to be published prior to the hearing date.

Respectfully submitted,

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

Attachment"

DISCUSSION:

Chair Andaya asked for clarification regarding the Workshop Meeting scheduled for May 13, 2019, and the Public Hearing and Regular Meeting scheduled for May 28, 2019.

Manager Lau explained that there is an Operating and Capital Improvement Program budget meeting held annually. Approval is to authorize a Public Hearing to be held on May 28, 2019, at 2:00 PM, prior to the Regular Board meeting. Mr. Lau continued that the purpose of the Public Hearing is to allow the public to hear the BWS proposed Fiscal Year 2019-2020 Operating and Capital Improvement Budget. At the close of the Public Hearing, if the Board so chooses, they can move to adopt the budget at the Regular Meeting.

Mr. Andaya asked if the Public Hearing is required by law. Mr. Lau concurred that it is required by law and that it occurs annually in May. He also said that there is a budget workshop that is held prior to the Public Hearing and Regular Meeting where a presentation is made to the Board Members; and at that time, the Board Members may ask questions; and they may address items for adjustments which will be reviewed at that time. The Division Heads will be present at the budget workshop meeting to answer any questions.

Board Member Ray Soon asked if the proposed budget could be sent to them before the May 13 meeting. Mr. Lau agreed to send a draft budget to the Board Members.

**MOTION TO
APPROVE A
PUBLIC
HEARING**

Chair Andaya called for a motion to approve Authorizing a Public Hearing to Consider the Proposed Fiscal Year 2019-2020 Operating and Capital Improvement Budget to be held on May 28, 2019, at 2:00 PM. Ross Sasamura and Jade Butay motioned and seconded respectively, and the motion was unanimously carried.

AUTHORIZING A PUBLIC HEARING TO CONSIDER THE PROPOSED FY 2019-2020 OPERATING AND CAPITAL IMPROVEMENT PROGRAM BUDGET WAS APPROVED ON APRIL 22, 2019			
	AYE	NO	COMMENT
BRYAN P. ANDAYA	X		
KAPUA SPROAT			ABSENT
KAY C. MATSUI			ABSENT
RAY C. SOON	X		
MAX J. SWORD	X		
ROSS S. SASAMURA	X		
JADE T. BUTAY	X		

DISCUSSION:

After the approval of the public hearing, discussion continued on the annual budget. Mr. Soon asked if Mr. Lau shares the budget with the Stakeholders' Advisory Group (SAG). Mr. Lau replied that the budget is not shared with the SAG because they now meet quarterly. Over the last four years, the SAG has advised BWS on the development of the Water Master Plan, water rates, and long-term financial plan.

Mr. Andaya announced that a stakeholder's meeting is scheduled soon. Mr. Lau concurred that the next SAG meeting is scheduled for this Thursday, April 25, 2019, at 4:00 PM, Hawaii Suites at the Blaisdell Center. Mr. Ebersold from CDM Smith confirmed the date and time. There will also be experts on climate change from the University of Hawaii, and Josh Stanbro from the Office of Climate Change, Sustainability and Resiliency. Mr. Usagawa will be presenting on the BWS Water Research Foundation report on climate adaptation and the impact that climate change will have on the BWS.

NOTICE OF PUBLIC HEARING

NOTICE IS HEREBY GIVEN that the BOARD OF WATER SUPPLY (BWS), CITY AND COUNTY OF HONOLULU, will hold a PUBLIC HEARING in the Board Room, Public Service Building, 630 South Beretania Street, on TUESDAY, MAY 28, 2019, at 2:00 p.m. or soon thereafter, where all interested persons shall be afforded the opportunity of being heard on the adoption of the Proposed Fiscal Year (FY) 2020 Operating and Capital Improvement Program Budget of the Board of Water Supply for the fiscal year beginning July 1, 2019 and ending June 30, 2020.

Information to be discussed at this public hearing is available at Room 319 of the Public Service Building, Board of Water Supply, 630 South Beretania Street. All comments on or suggested changes to the proposed FY 2020 Operating and Capital Improvement Program Budget of the Board of Water Supply should be filed in writing before the date of the public hearing or presented in person at the time of the hearing. Persons wishing to speak are requested to register by 1:00 p.m. with Luella Paekukui, 748-5176, by providing your name, phone number, and subject matter of testimony. Testimony is limited to three minutes and shall be presented by the registered speaker only. Any person requiring special assistance who plans to attend the public hearing, may contact Luella Paekukui at 748-5176, no later than May 21, 2019, so that appropriate accommodations can be provided.

BOARD OF WATER SUPPLY
CITY AND COUNTY OF HONOLULU

ITEM FOR INFORMATION NO. 1

"April 22, 2019

IMPLEMENTATION OF NEW WATER RATES Chair and Members
Board of Water Supply
City and County of Honolulu
Honolulu, Hawaii 96843

Chair and Members:

Subject: Update on the Implementation of New Water Rates

Ellen Kitamura, Deputy Manager, will present an update on the implementation of new water rates scheduled for July 1, 2019.

Respectfully submitted,

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

Attachments"

The foregoing was for information only.

DISCUSSION: Ellen Kitamura, Deputy Manager and Chief Engineer, presented the report.

Ms. Kitamura reported on the new methodology that would be used to create the transition bill from the old water rates to the new water rates in July 2019. The current methodology prorates the water usage and tiers. The new methodology would eliminate the proration and use the billing start date to determine if the old water rates or new water rates would be applied to the July transition bill.

Ms. Kitamura explained the components of the billing cycle, the new water rate schedule and a comparison of the single-family residential bills for the different tiers. Ms. Kitamura then explained the differences between the old and new methodology and the revenue considerations. With the new methodology of no proration, we expect to see a decrease in revenue of about \$200,000 for the July transition bills which is about 0.085% of the revenues collected in fiscal year 2018.

Ms. Kitamura explained that the reasons for moving to the new methodology is that it is easier to explain to the customers. Another benefit is that the customers will see all the new rates and charges in their August bill. Additionally, it is anticipated that less BWS staff resources will be needed to explain the changes in the bills to the customers. The information in the newsletters and FAQs will be easier to prepare and understand. We also surveyed other water utilities and determined that the no proration methodology is a common practice within the industry.

Mr. Soon confirmed that we projected a revenue loss using the new methodology. Ms. Kitamura concurred. Mr. Soon then asked if did we projected a cost savings in anticipation that less BWS resources would be required. Ms. Kitamura replied that this was not done.

Mr. Soon continued with another question noting that the beneficiaries here appear to be the people with bills in June whose billing starts in June and ends in July and asked if usage in July will be at the June water rate. Ms. Kitamura confirmed that it will. Mr. Soon asked if this would be the case for subsequent years.

Ms. Kitamura referred to Joe Cooper, Waterworks Controller, Finance Division, to continue with answering the questions. Mr. Cooper explained that the effect of delaying the implementation of the bills is essentially a delay of half a month. The delay will repeat each year, but it is not a cumulative effect. It is moving the effective start date back by two weeks.

Mr. Soon asked if the people who have start dates in June are annual beneficiaries. Mr. Cooper said that the people who have start dates in June could benefit every year. Mr. Lau added that we had a total of 170,000 customers.

Mr. Cooper went on to say that the start date may vary because the billing period varies from 26 to 34 days; for example, this year your start date may be June 29 and you would see the whole benefit of the June rate. However, in the next year, the start date may be July 1 because it can vary from month to month. There will only be a few people that fall on that cusp that could potentially see benefits. In reviewing the rates, the rate increases are really pretty small, and probably the biggest part of the rate increase is in the customer charge.

Mr. Soon requested further discussion next year when it comes around. Mr. Cooper concurred.

Mr. Soon recognizes that the BWS is saving on cost and he believes they are genuine costs. The shortfall is in the money raised. It is not in additional expenses since money is not being taken from the rate payers. Mr. Lau confirmed that it is not additional money from the rate payers.

Mr. Andaya raised a question about the percentage of rate payers that have July start dates who would not be able to see any benefit in this. Mr. Cooper stated that there are 20 cycles and 30 days in a month which would equate to about one-tenth of the population that would not benefit.

Mr. Andaya asked, in terms of getting the bills right with this new methodology and minimizing errors is a concern, will it be conducive to not having any bill errors. Mr. Cooper replied that the Information Technology Division will be calculating the bills correctly as they are currently testing, and the billing department and accounting staff have also been testing both the proration and the non-proration scenarios to make sure the bills are correct.

Update of the Implementation of New Water Rates

UWE KA LANI OLA KA HONUUA





Implementation of New Water Rates

- Water bills will be generated using a new methodology when the new Schedule of Rates and Charges are implemented on July 1, 2019.
- Current methodology prorates the water usage and tiers when the water bills transition from old rates to new rates.
- New methodology will eliminate proration and use the billing cycle start date to determine if the old water rates or new water rates will be used to generate the transitional water bill.



What is a Billing Cycle?

- 💧 Billing cycles are 26 – 34 days based on the meter reading schedule
- 💧 Meters are read daily throughout the month
- 💧 We have 170,000 meters to read each month
- 💧 A customer's billing cycle starts when the meter was last read
- 💧 July represents a transition month between the old and new water rates and charges



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



Board of Water Supply
City and County of Honolulu

Single Family Residential Water Rate Schedule

Single-Family Residential Water Rates, 2018–2022

Existing			Approved Rates, Effective Dates					
Tier	Gallons/ du/month	Rate	July 2018	Gallons/ du/month	July 2019	July 2020	July 2021	July 2022
EssN				0 to 2,000	\$3.79	\$3.91	\$4.17	\$4.46
1	0 to 13,000	\$4.42	\$4.42	2,001 to 6,000	\$4.46	\$4.60	\$4.90	\$5.25
2	13,001 to 30,000	\$5.33	\$5.33	6,001 to 30,000	\$5.06	\$5.20	\$5.50	\$5.85
3	More than 30,000	\$7.94	\$7.94	More than 30,000	\$8.46	\$8.60	\$8.90	\$9.25

EssN: Essential Needs – du: dwelling unit – Rates are in \$ per thousand gallons



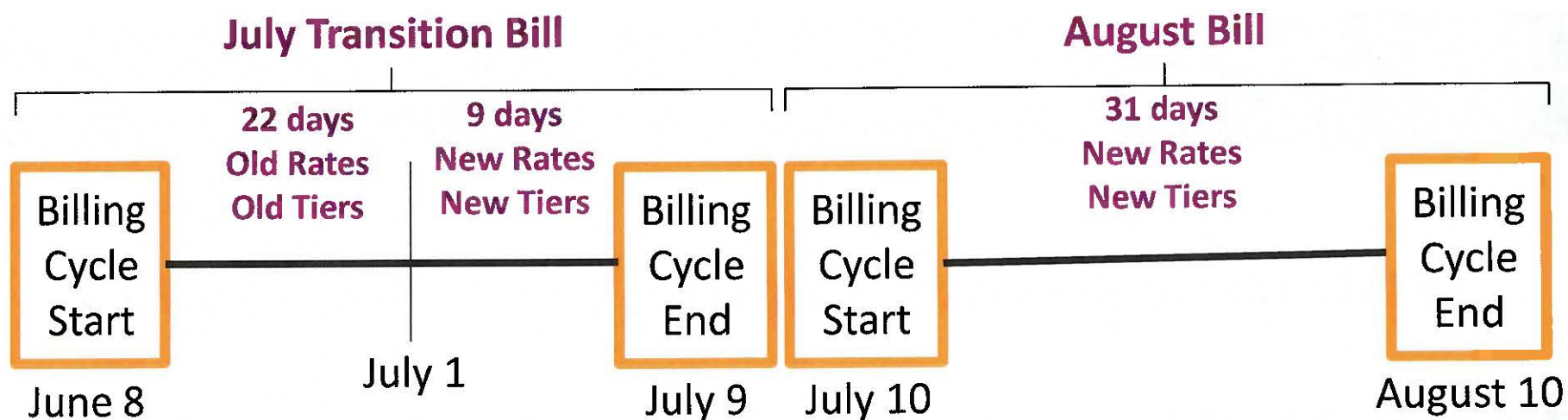
Comparing Bills Single Family Residential

Current Bill	Future Bill at Approved Rates				
	July 2018	July 2019	July 2020	July 2021	July 2022
Essential Needs Tier – The Low Water User (2,000 gallons/month)					
\$18.10	\$18.10	\$18.00	\$18.62	\$19.72	\$21.01
The Median Water User (6,000 gallon per month)					
\$35.78	\$35.78	\$35.84	\$37.02	\$39.32	\$42.01
The Average Water User (9,000 gallons/month)					
\$49.04	\$49.04	\$51.02	\$52.62	\$55.82	\$59.56
The High Water User (35,000 gallons per month)					
\$197.03	\$197.03	\$199.58	\$204.82	\$215.82	\$228.66



Current Methodology - Proration

- 💧 Meter read start date is in June and meter read end date is in July
- 💧 Water usage and tiers are prorated
 - Average daily usage in June charged at old water rate and tier structure
 - Average daily usage in July charged at new water rate and tier structure

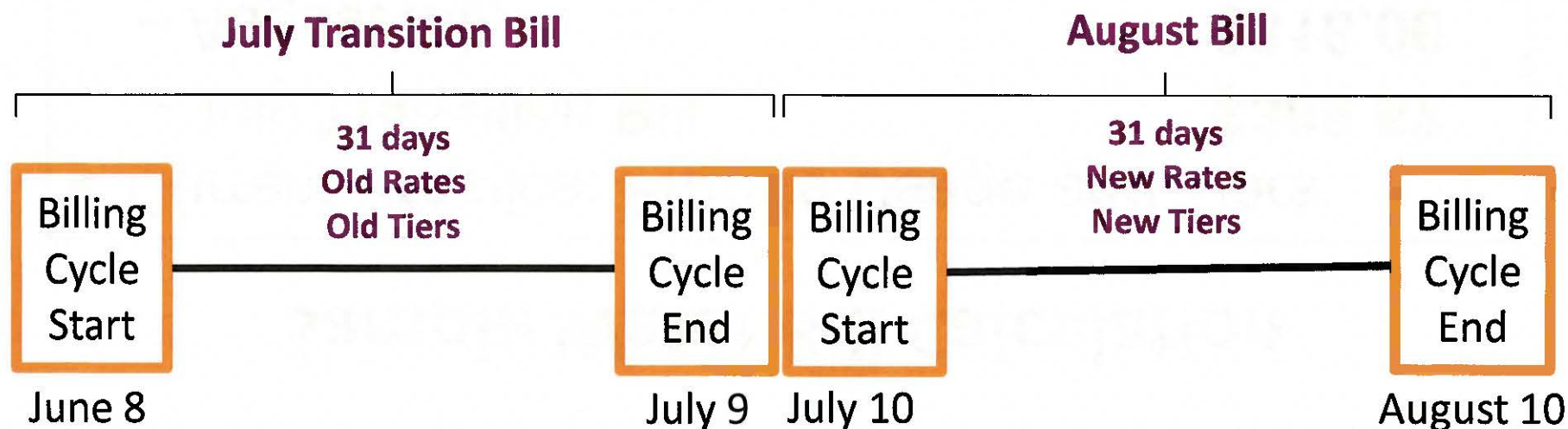


EXAMPLE



New Methodology – No Proration

- Water usage and tiers are not prorated
- Meter read start date in June: water bill is charged at old water rate
- Meter read start date in July: water bill is charged at new water rate



EXAMPLE



Sample Water Bill Calculation

- 💧 Current Practice: Prorate Usage and Tiers:
 - July Transition Bill: **\$309.57**
 - August Bill: **\$316.06**

- 💧 New Practice: Do not Prorate
 - July Transition Bill: **\$306.87**
 - August Bill: **\$316.06**

Usage: 50 kgals/month





Revenue Considerations Between Methodology

Month and Year	Current Methodology: Prorate Usage & Tiers	New Methodology: Do Not Prorate
July 2019	\$ 22,393,821	\$ 22,194,207
Revenue Difference		(199,614)

- The \$199,614 difference between the Current Methodology and New Methodology is the result of not prorating usage and tiers for the month of July.
- Revenue loss is about 0.085% of the total revenues collected in FY 2018



New Methodology – Benefits

- Easy to explain to customers
- Some customers may have lower July bill – i.e. charged at lower old rates
- Customers will see all new rates and charges in August bill
- Less BWS staff resources needed to explain bills to customers
- Informational newsletters and FAQs for new rates will be easier to prepare and understand
- CC&B system already set up to do this type of billing – i.e. no additional coding needed
- Can test and be ready to launch July 1, 2019
- Common practice in the industry (Albuquerque, El Paso, Denver, NYC)



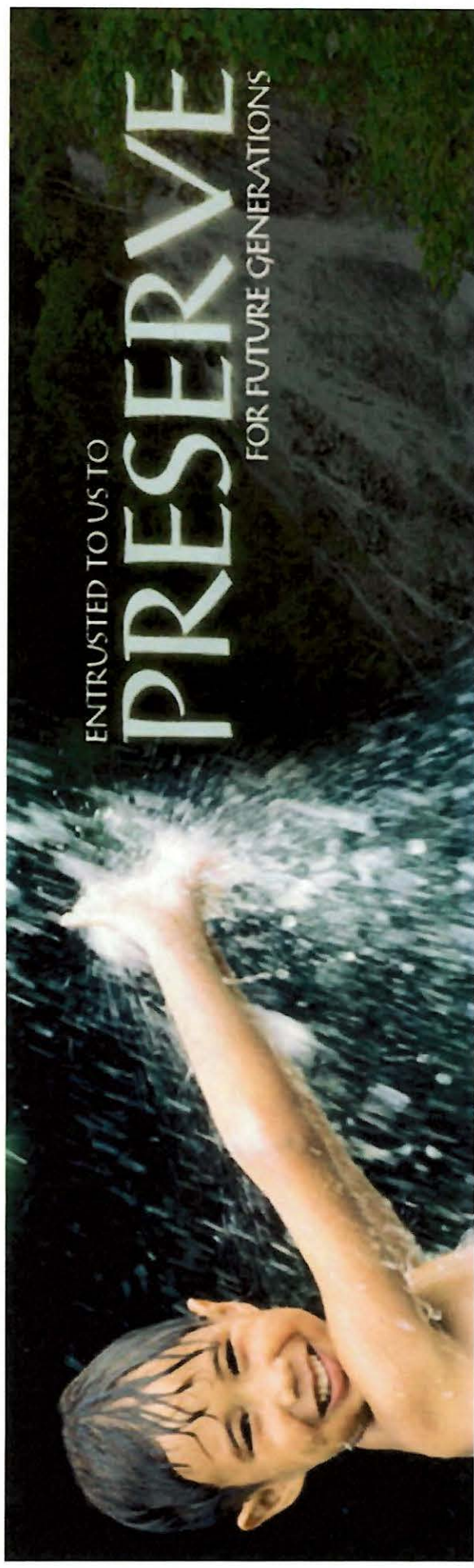
WATER FOR LIFE

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

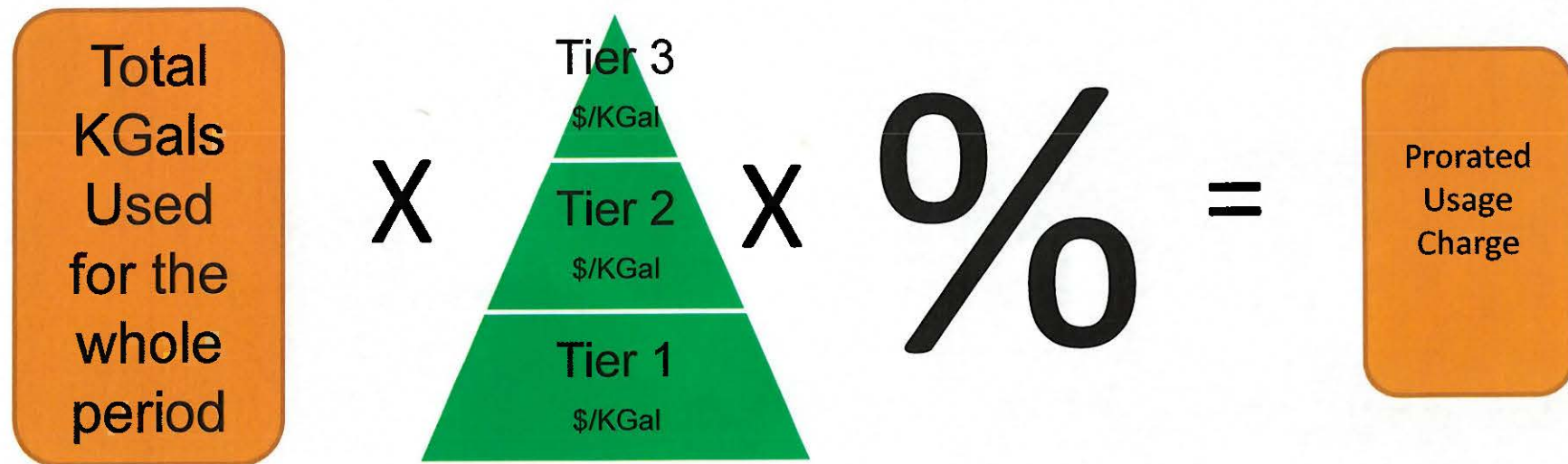


Board of Water Supply
City and County of Honolulu

Questions?



Current Methodology Proration of Quantity Charge



Quantity X Rates X Proportion of period (#days/total days)
= Prorated Usage Charge

Current Methodology: Prorate Usage and Tiers

Assumptions

Billing Cycle: 06/08/2019 to 07/09/2019 = 31 days

Monthly Consumption = 50 kgal

Days in June: 22		% of Billing Cycle: (22 days/31 days) = 71%		% of Usage: 50 kgal * 71% = 35.5 kgal		
Days in July: 9		% of Billing Cycle: (9 days/31 days) = 29%		% of Usage 50 kgal * 29% = 14.5 kgal		
June (Old Rate) – 22 Days Using 35.49 kgal						
Tier		Prorated Tier		Rate per kgal	Prorated Usage	Charge
Tier 1:	0 to 13 kgal	Tier 1:	0 to 9.2 kgal	\$4.42	9.2 kgal	\$40.66
Tier 2:	13 to 30 kgal	Tier 2:	9.3 to 21.3 kgal	\$5.33	12.1 kgal	\$64.49
Tier 3:	30+ kgal	Tier 3:	21.3+ kgal	\$7.94	14.2 kgal	\$112.75
June Total:					35.49 kgal	\$217.90
July (New Rate) – 9 Days Using 14.52 kgal						
Tier		Prorated Tier		Rate per kgal	Prorated Usage	Charge
EssN:	0 to 2 kgal	EssN:	0 to 0.6 kgal	\$3.79	0.6 kgal	\$2.27
Tier 2:	2 to 6 kgal	Tier 2:	0.7 to 1.7 kgal	\$4.46	1.1 kgal	\$4.91
Tier 3:	6 to 30 kgal	Tier 3:	1.8 to 8.7 kgal	\$5.06	7.0 kgal	\$35.42
Tier 4:	30+ kgal	Tier 4:	8.71+ kgal	\$8.46	5.8 kgal	\$49.07
July Total:					14.5 kgal	\$91.67
Totals may not add up due to rounding					Total Charges:	\$309.57

New Methodology: Do Not Prorate

Assumptions

Billing Cycle: 06/08/2019 to 07/09/2019 = 31 days

Monthly Consumption = 50 kgal

Starting Meter Read Date in June (Old Rate)

Tier	Prorated Tier	Rate per kgal	Usage	Charge
Tier 1: 0 to 13 kgal	NA	\$4.42	13.0 kgal	\$57.46
Tier 2: 13 to 30 kgal	NA	\$5.33	17.0 kgal	\$90.61
Tier 3: 30+ kgal	NA	\$7.94	20.0 kgal	\$158.80
Total:			50.0 kgal	\$306.87

Starting Meter Read Date in July (New Rate – For Comparison to Old Rate)

Tier	Prorated Tier	Rate per kgal	Usage	Charge
EssN: 0 to 2 kgal	NA	\$3.79	2.0 kgal	\$7.58
Tier 2: 2 to 6 kgal	NA	\$4.46	4.0 kgal	\$17.84
Tier 3: 6 to 30 kgal	NA	\$5.06	24.0 kgal	\$121.44
Tier 4: 31+ kgal	NA	\$8.46	20.0 kgal	\$169.20
Total:			50.0 kgal	\$316.06

Totals may not add up due to rounding

Revenue Considerations

- Revenue projections are based on the actual consumption and billing from FY2019
- Typically, consumption and billing are higher during the hotter and drier summer months and lower during the cooler and wetter winter months - revenue projections reflect this pattern
- Except July, revenue projections for both practices are the same
- The \$199,615 difference between the Current Practice and New Practice is the result of not prorating usage and tiers for the month of July
- Because it represents a lag in the rate implementation, this difference is deferred and not cumulative; in FY 2021, we will recover the revenue from the FY2020 rate increase, this deferral will occur for the rest of the rate increase schedule
- Both practices include the rate increases from August forward

ITEM FOR INFORMATION NO. 2

"April 22, 2019

FINANCIAL
UPDATE

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

Chair and Members:

Subject: Financial Update for the Quarter Ended March 31, 2019

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
- Current Quarter Statement of Revenues, Expenses and Change in Net Assets
- Balance Sheet
- Budget vs Actual Appropriation Budget – Total BWS Summary
- 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:

Joe Cooper, Waterworks Controller, Finance Division, gave the report.

Before Mr. Cooper began his presentation, Mr. Lau informed the Board that the written portion of the presentation is being distributed as hard copy because it was not included in the Boardpaq.

Chair Andaya asked for reasons why there are delays in awarding contracts. Mr. Cooper responded that the BWS tries to get the budget as close as possible. There are various reasons we are not on budget. Some large contracts were not executed or are pending. Timing is also an issue. An example is the recycled water in Honouliuli who bills BWS on a monthly basis of \$300,000 to \$400,000 per month. We just received their bill for December.

Mr. Lau added that it takes time to put the solicitation together before it can go out. Mr. Cooper said that sometimes it is the timing, too. Currently, they are working on issuing contracts and those are expected to go out before the end of the year. Generally, the gap is closed in the fourth quarter.

Mr. Lau reported that the challenges on the \$7 million difference on the personnel side continue to be trying to fill positions going through multiple lists of potential candidates and not finding the right people.

Budget vs. Actual
Revenue and Expense Totals
As of March 31, 2019

	YTD Actuals	YTD Budget	Favorable/ (Unfavorable) Variance
Revenues	176,268,000	178,526,000	(2,258,000)
Operating Expenses	(118,230,000)	(139,097,000)	20,867,000
Net Revenues (expenditures)	<u>58,038,000</u>	<u>39,429,000</u>	<u>18,609,000</u>

Board Of Water Supply
Statement of Revenues, Expenses And Change In Net Assets
As of March 31, 2019

Current Month Actual	% Revenue	Last Year Actual	% Revenue	Description	Year to Date Actual	% Revenue	Last Year to Date Actual	% Revenue	% Change
				REVENUE					
16,419,826.04	100.00	16,763,818.67	100.00	OPERATING REVENUE	172,421,245.67	100.00	179,105,727.58	100.00	3.73-
16,419,826.04	100.00	16,763,818.67	100.00	REVENUE	172,421,245.67	100.00	179,105,727.58	100.00	3.73-
				OPERATING EXPENSES					
2,991,974.51-	18.22	2,828,279.02-	16.87	LABOR COSTS	27,086,547.22-	15.71	26,975,459.40-	15.06	.41
2,271,858.44-	13.84	1,348,250.28-	8.04	SERVICES	17,649,982.28-	10.24	16,035,420.51-	8.95	10.07
346,289.25-	2.11	870,871.08-	5.19	SUPPLIES	3,437,109.01-	1.99	4,001,888.38-	2.23	14.11-
3,781.47-	.02	10,794.17-	.06	EDUCATION & TRAINING	79,090.38-	.05	103,544.30-	.06	23.62-
2,134,550.41-	13.00	2,109,504.09-	12.58	UTILITIES	17,746,593.54-	10.29	15,764,646.48-	8.80	12.57
141,061.31-	.86	282,816.54-	1.69	REPAIR AND MAINTENANCE	1,112,159.34-	.65	1,575,207.87-	.88	29.40-
1,671,608.53-	10.18	2,414,580.23-	14.40	MISC	15,305,553.40-	8.88	13,967,602.18-	7.80	9.58
1,800,183.39-	10.96	1,537,998.41-	9.17	RETIREMENT SYSTEM CONTRIBUTIO	15,674,705.61-	9.09	16,324,571.04-	9.11	3.98-
51,755.96	.32	21,866.35-	.13	MISC EMPLOYEES' BENEFITS	1,384,748.81-	.80	198,794.84-	.11	596.57
11,309,551.35-	68.88	11,424,960.17-	68.15	OPERATING EXPENSES	99,476,489.59-	57.69	94,947,135.00-	53.01	4.77
1,665,503.29-	10.14	1,324,684.75-	7.90	NON OPERATING REVENUE AND EXPE	1,580,209.04	.92	7,217,890.61-	4.03	121.89-
427,425.53	2.60	328,490.08	1.96	CONTRIBUTION IN AID	8,940,843.34	5.19	8,231,463.90	4.60	8.62
4,480,914.72-	27.29	3,068,607.86-	18.30	OTHER EXPENSES	36,704,575.24-	21.29	35,904,266.56-	20.05	2.23
608,717.79-	3.71	1,274,055.97	7.60	Change In Net Assets	46,761,233.22	27.12	49,267,899.31	27.51	5.09-

Board Of Water Supply
Balance Sheet
As of March 31, 2019

	*****	Amounts	*****	*****	Change	*****
Description	Current	Last Month End	Last Year End	This Month	This Year	
ASSETS						
CURRENT ASSETS	50,278,461.90	47,210,082.23	41,582,946.86	3,068,379.67	8,695,515.04	
RESTRICTED ASSETS	5,952,719.07	4,792,545.22	20,362,808.47	1,160,173.85	-14,410,089.40	
INVESTMENTS	431,398,415.17	435,396,710.82	414,037,548.00	-3,998,295.65	17,360,867.17	
OTHER ASSETS	14,519,516.72	14,546,100.42	16,590,675.08	-26,583.70	-2,071,158.36	
PROPERTY / PLANT	1,179,625,435.97	1,177,437,470.02	1,158,884,623.16	2,187,965.95	20,740,812.81	
DEFERRED OUTFLOWS OF RESOURCES	40,251,769.00	40,251,769.00	40,251,769.00	0.00	0.00	
TOTAL ASSETS	1,722,026,317.83	1,719,634,677.71	1,691,710,370.57	2,391,640.12	30,315,947.26	
LIABILITIES						
CURRENT LIABILITIES	18,577,067.91	16,186,128.14	33,834,409.77	2,390,939.77	-15,257,341.86	
OTHER LIABILITIES	34,953,241.08	35,096,077.94	35,908,085.96	-142,836.86	-954,844.88	
BONDS PAYABLE, NONCURRENT	272,373,894.46	271,621,639.46	272,606,993.68	752,255.00	-233,099.22	
NET PENSION LIABILITY	113,350,294.00	113,350,294.00	113,350,294.00	0.00	0.00	
NET OPEB LIABILITY	76,039,779.00	76,039,779.00	76,039,779.00	0.00	0.00	
DEFERRED INFLOWS OF RESOURCES	12,695,549.00	12,695,549.00	12,695,549.00	0.00	0.00	
LIABILITIES	527,989,825.45	524,989,467.54	544,435,111.41	3,000,357.91	-16,445,285.96	
NET ASSETS						
RETAINED EARNINGS	552,641,427.50	552,641,427.50	552,641,427.50	0.00	0.00	
FUND BALANCE	594,633,831.66	594,633,831.66	594,633,831.66	0.00	0.00	
RESERVE FOR ENCUMBRANCES	226,634,900.21	237,517,384.60	290,796,388.58	-10,882,484.39	-64,161,488.37	
CURRENT YEAR CHANGES TO FU	46,761,233.22	47,369,951.01		-608,717.79	46,761,233.22	
NET ASSETS	1,420,671,392.59	1,432,162,594.77	1,438,071,647.74	-11,491,202.18	-17,400,255.15	
TOTAL LIABILITIES AND NET ASSETS	1,948,661,218.04	1,957,152,062.31	1,982,506,759.15	-8,490,844.27	-33,845,541.11	

Budget vs Actual Appropriation Budget - Total BWS Summary

Page -

1

(\$000's)

CIFIS 19820-3021

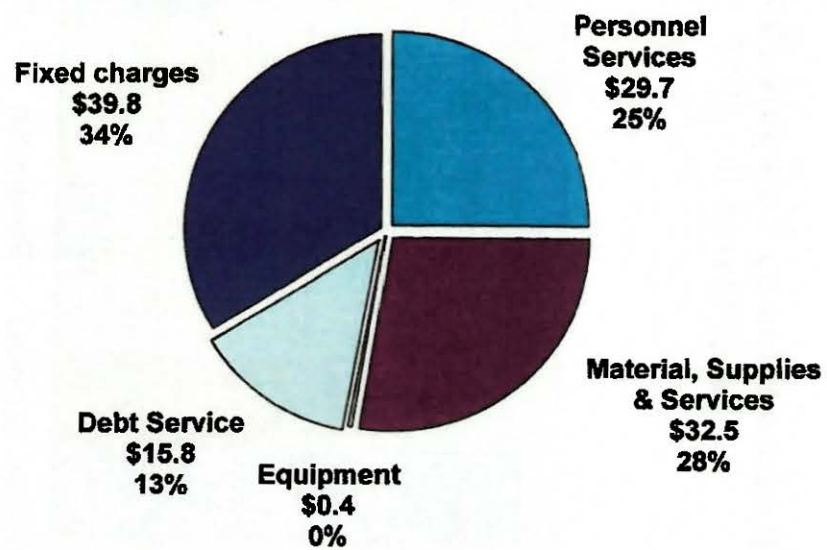
AS OF 3/31/2019

OPER UNIT ALL

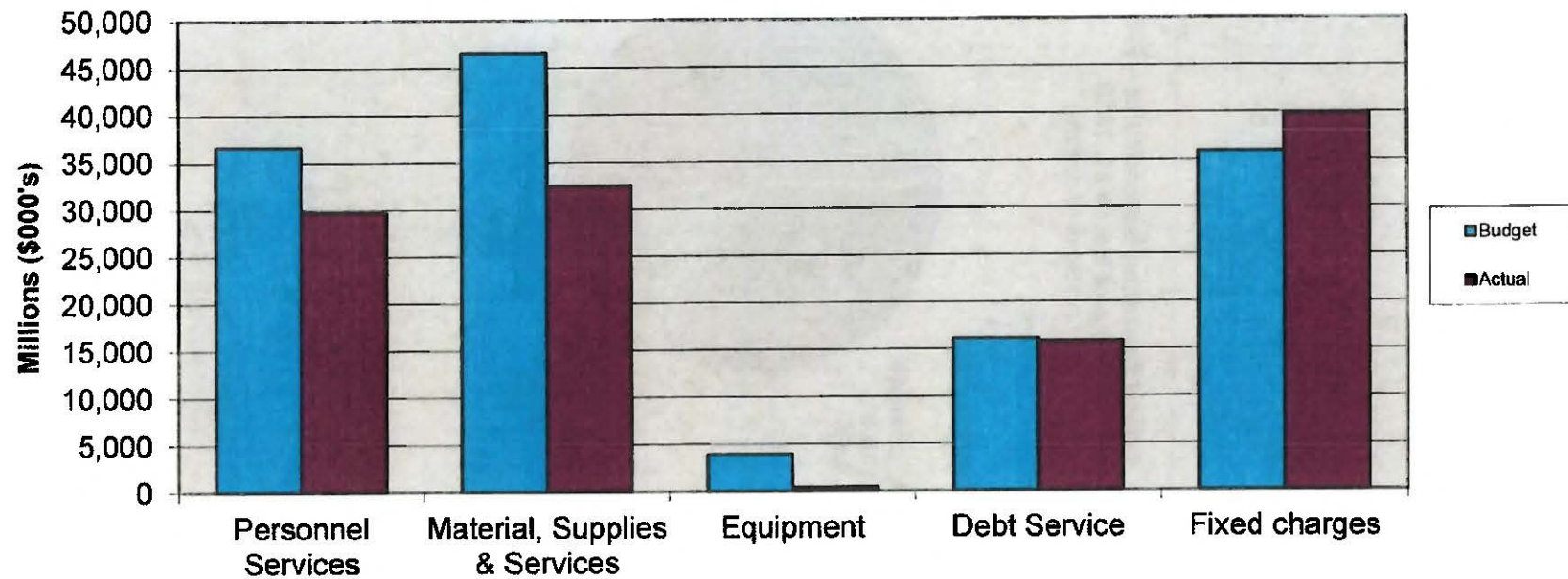
BUSINESS UNIT ALL

YTD-TO-DATE				Object Description	FOR THE FISCAL YEAR				
YTD Actuals	YTD Budget	Avail/ (Over)	%		Revenues/ Expend	Open Encumb	Annual Budget	Avail/ (Over)	%
<u>176,268</u>	<u>178,526</u>	<u>2,258</u>	<u>1.26</u>	<u>REVENUE</u>	<u>176,268</u>		<u>239,236</u>	<u>62,968</u>	<u>26.32</u>
OPERATING EXPENSES									
29,737	36,638	6,901	18.84	Personnel Services	29,737		48,939	19,202	39.24
MATERIALS AND SUPPLIES									
14,578	23,639	9,061	38.33	Services	10,100	4,478	32,571	17,993	55.24
8,071	11,096	3,025	27.26	Supplies	6,283	1,788	14,224	6,153	43.26
172	546	374	68.50	Education & Training	146	26	785	613	78.09
				Utilities					
1,183	2,167	984	45.41	Repairs & Maint	1,053	130	2,905	1,722	59.28
8,462	9,094	632	6.95	Misc	6,927	1,535	11,996	3,534	29.46
405	3,929	3,524	89.69	Equipment	270	135	5,365	4,960	92.45
15,780	16,116	336	2.08	Debt Service	15,780		21,657	5,877	27.14
FIXED CHARGES									
18,420	17,408	(1,012)	5.81-	Utilities	18,420		23,210	4,790	20.64
2,475	2,475			Case Fees	2,475		3,300	825	25.00
8,478	7,575	(903)	11.92-	Retirement System Contribution	8,478		10,100	1,622	16.06
10,469	8,414	(2,055)	24.42-	Misc Employees' Benefits	9,406	1,063	11,237	768	6.83
<u>118,230</u>	<u>139,097</u>	<u>20,867</u>	<u>15.00</u>	<u>TOTAL OPERATING EXPENDITURES</u>	<u>109,075</u>	<u>9,155</u>	<u>186,289</u>	<u>68,059</u>	<u>36.53</u>
<u>58,038</u>	<u>39,429</u>	<u>(18,609)</u>		<u>NET REVENUES (EXPENDITURES)</u>	<u>67,193</u>	<u>(9,155)</u>	<u>52,947</u>	<u>(5,091)</u>	

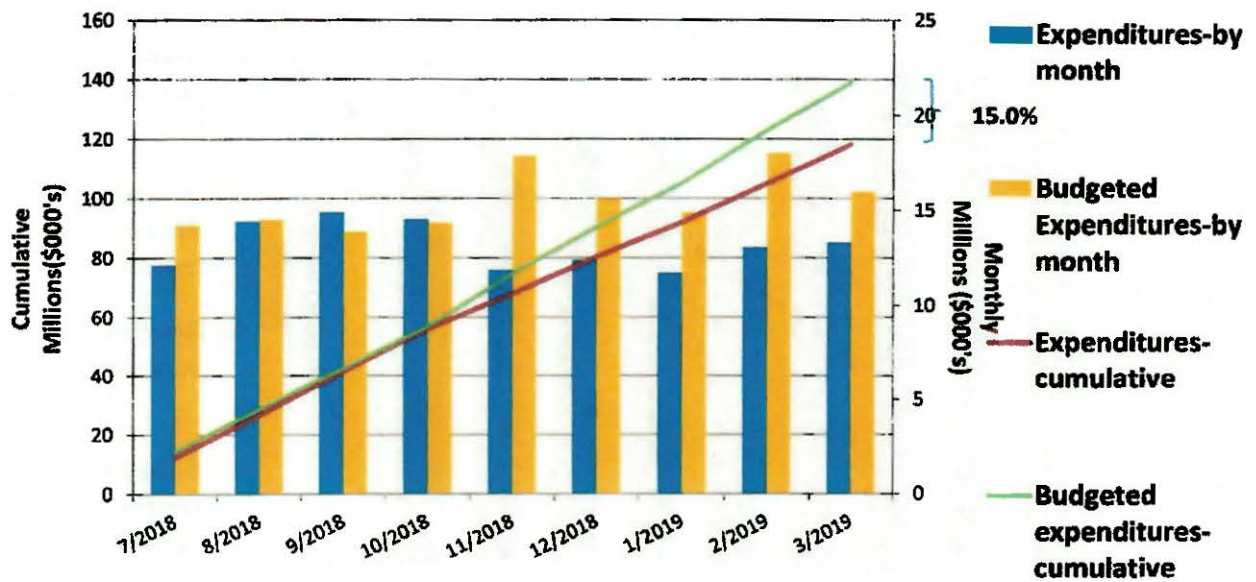
Total Operating Expenditures - \$118.2
As of March 31, 2019
(millions of dollars)



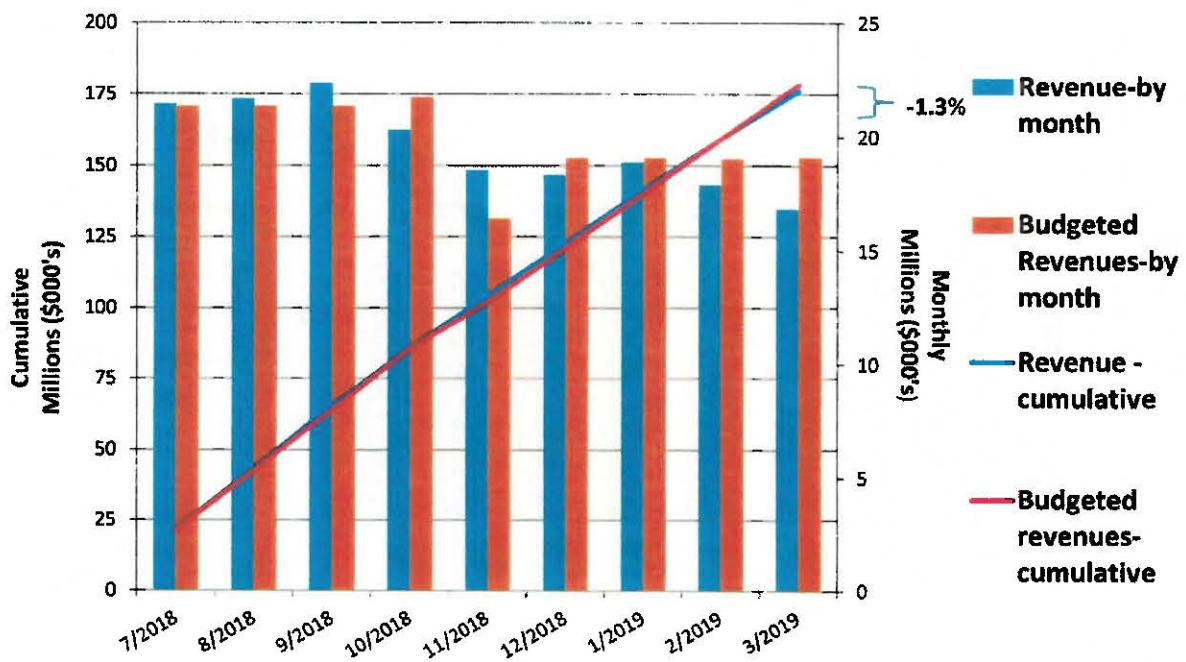
Operating Expenditures by Category (Budget vs. Actual)
As of March 31, 2019



BUDGETED OPERATING EXPENDITURES FY 2019



BUDGETED OPERATING REVENUES FY 2019



WATER FOR LIFE

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



Board of Water Supply
City and County of Honolulu

Financial Performance

July 2018 – March 2019



Budget to Actual July 2018 – March 2019

- Actual Revenue \$176 million vs.
Budgeted Revenue \$179 million
- Operating costs are \$118 million vs.
Budgeted costs of \$139 million
- Actual Net Revenue \$58 million vs.
Budgeted Net Revenue \$39 million



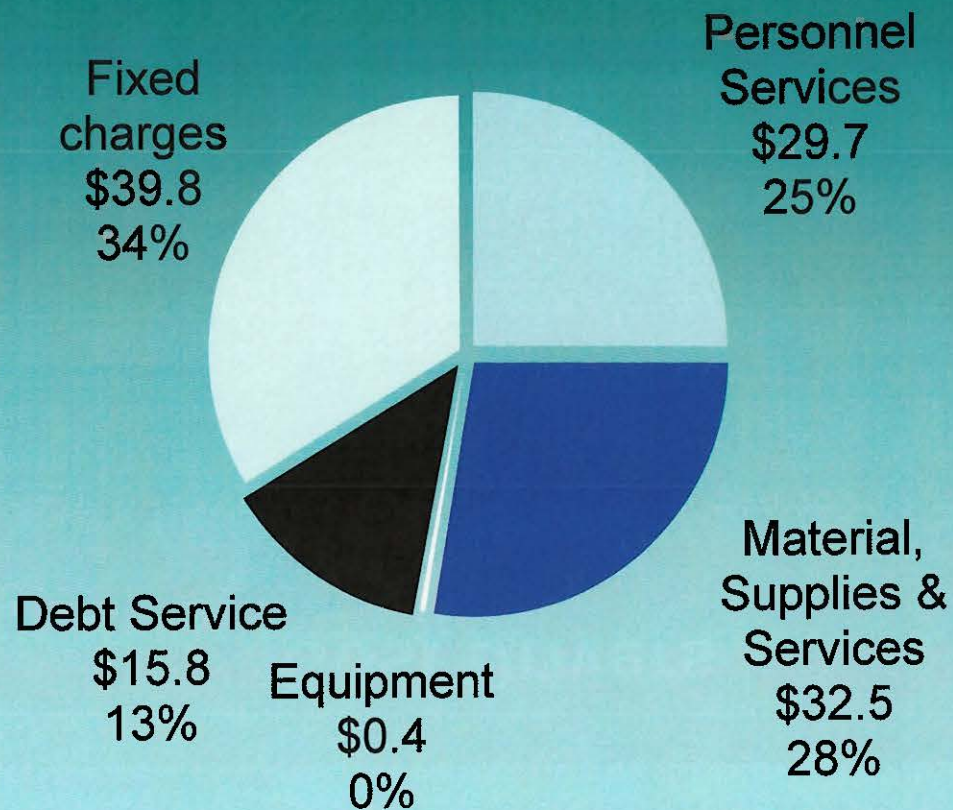
Cost Drivers

Year to Date March 2019

	Actual (millions)	Budget (millions)
• Personnel	\$30	\$37
• Services/Supplies	\$23	\$35
• Repairs & Misc.	\$10	\$11
• Equipment	\$ 0.4	\$ 4.0
• Utilities	\$ 18	\$ 17



Total Operating Expenditures - \$118.2 As of March 31, 2019 (millions of dollars)



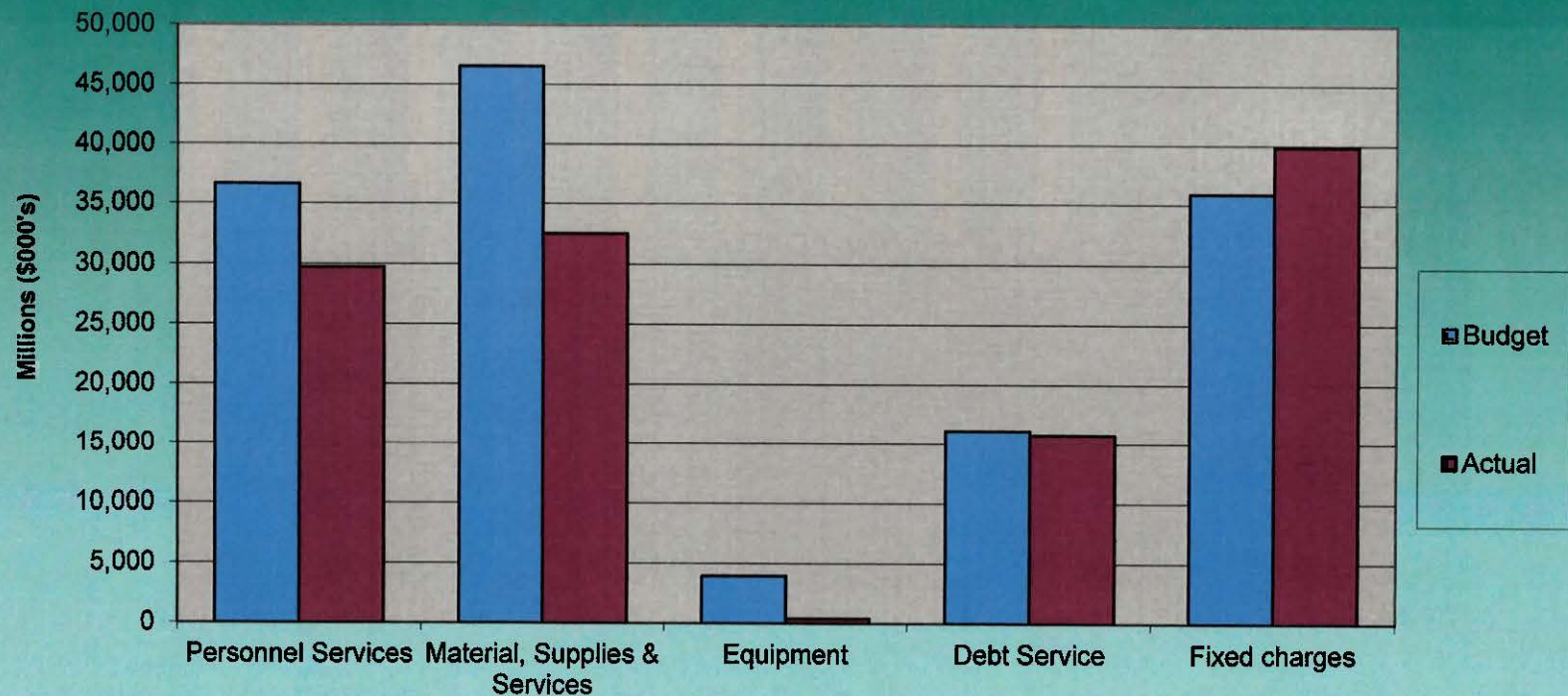
WATER FOR LIFE

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



Board of Water Supply
City and County of Honolulu

Operating Expenditures by Category (Budget vs. Actual) As of March 31, 2019



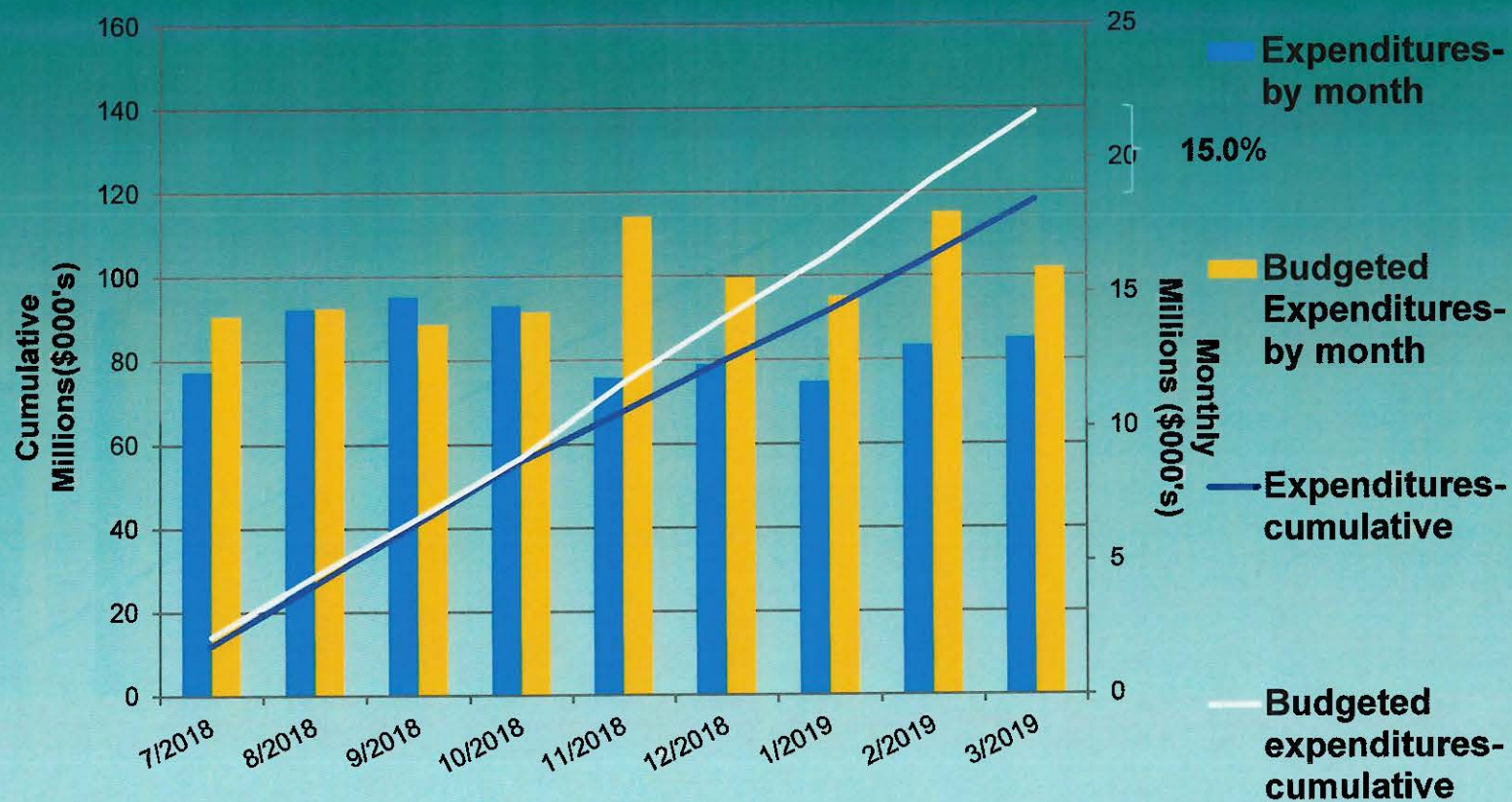
WATER FOR LIFE

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City and County of Honolulu

BUDGETED OPERATING EXPENDITURES FY 2019



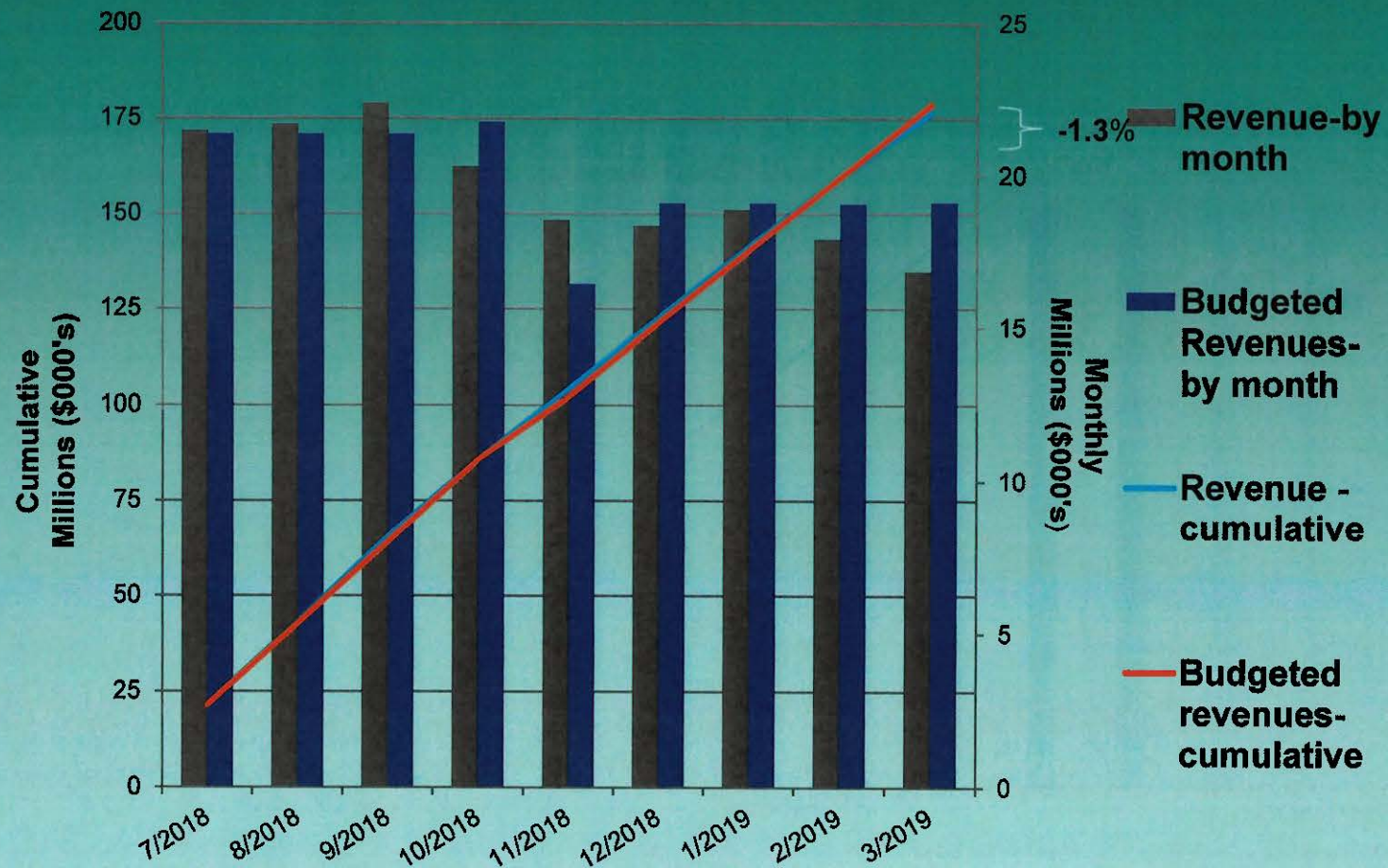
WATER FOR LIFE

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Board of Water Supply
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BUDGETED OPERATING REVENUES FY 2019



WATER FOR LIFE

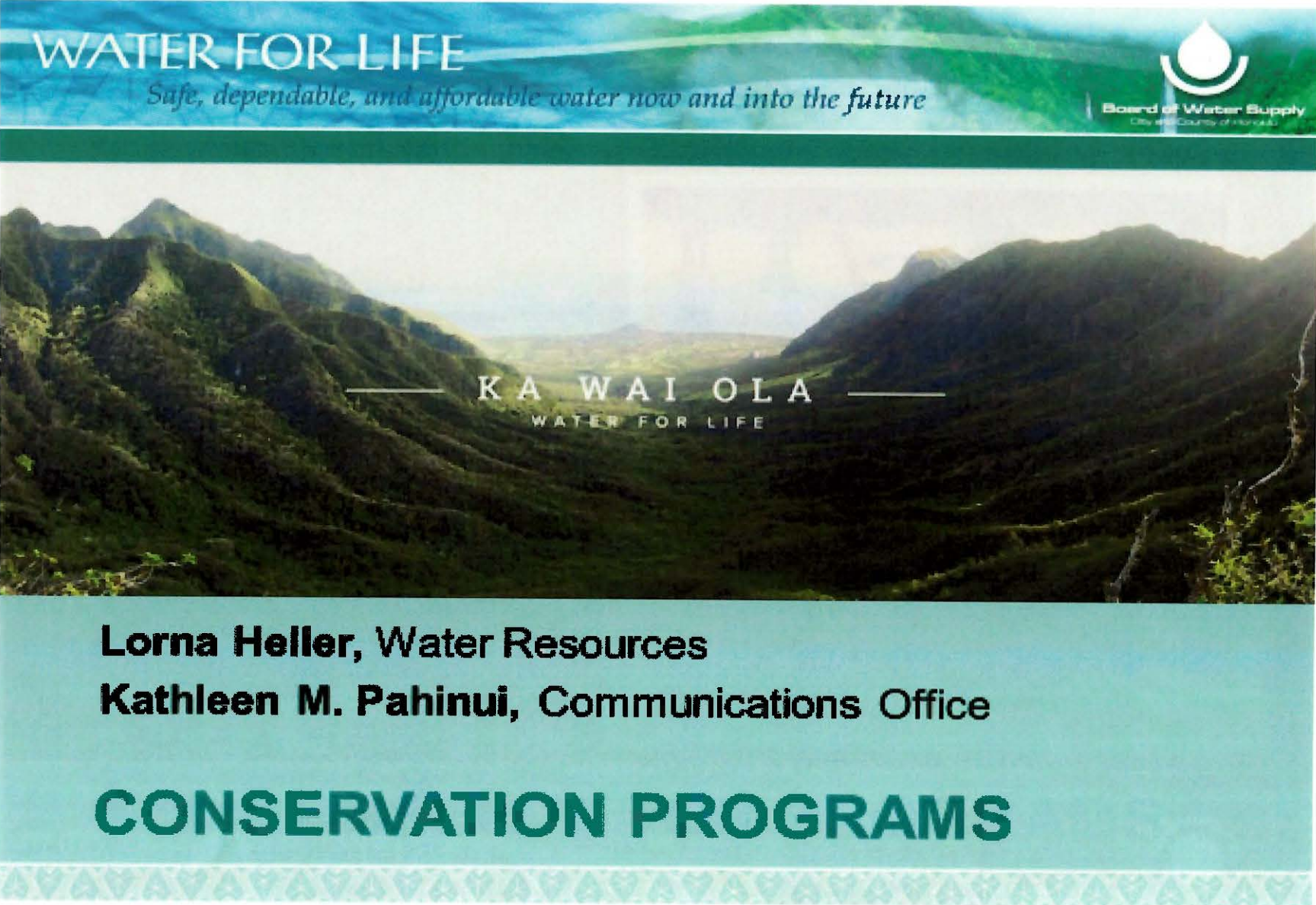
Safe, dependable, and affordable water now and into the future



Board of Water Supply
City and County of Honolulu

Questions
or
Comments

ITEM FOR INFORMATION NO. 3



WATER FOR LIFE
Safe, dependable, and affordable water now and into the future

Board of Water Supply
City and County of Honolulu

K A W A I O L A
WATER FOR LIFE

Lorna Heller, Water Resources
Kathleen M. Pahinui, Communications Office

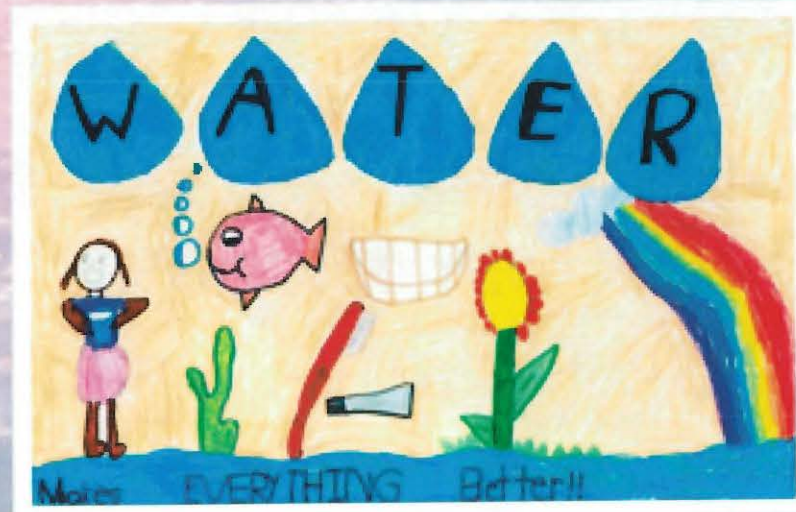
CONSERVATION PROGRAMS



Overview

- Water Sensible Program
- WaterSmart
- Rain Barrel Workshops
- Calendar Contest
- Events
- Tours
- Xeriscape Garden

December The Wonder of Water



FIRST PLACE, Kindergarten
Stacya Santos
St. Elizabeth School
Ms. Susanorita Lopez

Save money and water with the Board of Water Supply **Water Sensible Rebate Program!**

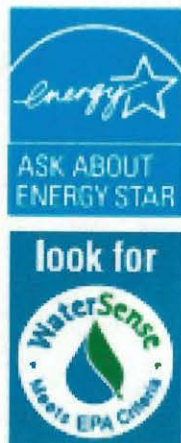
The Honolulu Board of Water Supply is working hard to preserve and protect our most essential resource—water!

Our Water Sensible Rebate Program is designed for:

- Consumers who plan to purchase a clothes washer
- Conservationists who would like to set up a rain barrel catchment system
- Landscapers interested in weather-based irrigation controllers
- Farmers, educators, or outdoor enthusiasts interested in commercial rain catchment systems
- Food service industries that use water

For more water-saving ideas for Oahu residents, visit boardofwatersupply.com/conservation.

For information on our rebate programs, visit boardofwatersupply.com/rebates.



Board of Water Supply

Create water savings by looking out for ENERGY STAR® or EPA WaterSense® labeled appliances and hardware.
Limited to Board of Water Supply account holders only.



Water Conservation Scorecard



Indicator	Metric	Goal	Baseline FY 2016	FY 2017	FY2018	FY2019	FY2020
Conservation	\$ budgeted for conservation	4% of CIP \$3.35M	\$0.89M ●	\$1.08M ●	\$1.50M ●	\$1.47M ●	\$2.08M ●
	Per capita consumption	< 145 gpcd (by 2040, starting at 155 gpcd in 2016)	155 gpcd ●				

● (miss by > 10% of goal)



Current Measures

- EnergyStar Clothes Washer Rebate
- Residential Rain Barrel Rebate
- Weather-Based Irrigation Controller Rebate
- Free Food-Service Incentives

THIS PRODUCT QUALIFIES FOR A
\$75 Rebate!

Get a New Water-Saving, Energy-Efficient Washer

Water Sensible

APPLICABLE ELIGIBLE: When purchased and installed, save water the equivalent of 1.5 tons

- New washer - high efficiency clothes washer up to 20 cubic feet per cycle
- Must be ENERGY STAR rated or better
- Must be installed and certified by a licensed plumber or electrician
- Must be installed and certified by a licensed plumber or electrician

Water Sensible is a program of the Board of Water Supply, City and County of Honolulu. For more information, visit www.bws.org/watersensible.

Board of Water Supply

THIS PRODUCT QUALIFIES FOR A
\$40 Rebate!

Save water: Get a rain catchment barrel!

Water Sensible

Eligible items:

- First-catchment rainwater storage
- Rainwater harvesting barrel
- Rainwater harvesting barrel
- Rainwater harvesting barrel
- Rainwater harvesting barrel
- Rainwater harvesting barrel
- Rainwater harvesting barrel
- Rainwater harvesting barrel

Water Sensible is a program of the Board of Water Supply, City and County of Honolulu. For more information, visit www.bws.org/watersensible.

Board of Water Supply

THIS PRODUCT QUALIFIES FOR UP TO A
\$100 Rebate!

Apply for a 50% discount (not to exceed \$100) on an EPA WaterSense® labeled Weather-Based Irrigation Controller

Water Sensible

- Must be a WeatherSense® labeled Weather-Based Irrigation Controller
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Water Sensible is a program of the Board of Water Supply, City and County of Honolulu. For more information, visit www.bws.org/watersensible.

Board of Water Supply

Water Sensible Dashboard March 2019

Honeywell



Rebate Table

Metric	Cumulative Clothes Washers*	Cumulative Rain Barrels*	Cumulative WBIC**	Monthly Clothes Washers	Monthly Residential Rain Barrels	Monthly WBIC
Applications Received	1864	32	0	189	3	0
Applications Processed	1629	28	0	208	3	0
Incentives	\$122,175	\$1,120	\$0	\$15,600	\$120	\$0
Gallons Saved/Day	27,849	169	0	3,556	18	0
Gallons Saved/Year	10,164,960	61,600	0	1,297,920	6,600	0
Lifetime Gallons Saved	142,309,440	1,232,000	0	18,170,880	132,000	0

*Program inception - May 2008

**WBIC inception - March 2019

Custom Incentives

Metric	Food Service			
	Cumulative Aerators*	Cumulative Pre-Rinse Nozzles*	Monthly Aerators	Monthly Pre-Rinse Nozzles
Quantity	22	6	19	2
Locations Served	14	6	8	2
Gallons Saved/Day	370	161	218	54
Gallons Saved/Year	134,904	58,866	79,716	19,622
Lifetime Gallons Saved	674,520	294,330	398,580	98,110

* Incentive inception - Jan 2013

Program Notes:

- The Weather-Based Irrigation Controller (WBIC) Rebate program launched March 1, 2019.
 - Initial staff training was conducted at participating distributors.
 - Signage and applications were placed at big box retailers and distributors.
 - Rebate information and the downloadable application are also available through the BWS website: <https://www.boardofwatersupply.com/conservation/watersensible/rebates>
- The Food Service Incentive program experienced a 54% increase in participation in March.
- WaterSmart concluded the pilot program to deliver welcome letters for residential and commercial account holders. Of the 32,962 welcome letters mailed to customers, 1,229 new accounts were created resulting in a 25% increase in participation. WaterSmart links and information are now being shared with existing Water Sensible participants via e-mail.



WATER CONSERVATION PROGRAM

Up To \$100 Rebate!

on an

WaterSense

Labeled Weather-Based Irrigation Controller!

For rebate forms, visit
www.boardofwatersupply.com/rebates

WATER FOR LIFE

Kū Wai Ola



Board of Water Supply
City and County of Honolulu

WaterSmart

My Daily

233

Gallons Per Day

Compare your
for this billing



Recommen



Avoid Big Charge

See more

I Want To



Apply



Check



Under

My WaterScore

Nice Work

Jan 24 - Feb 22

Nice work, WaterSaver.
Continue to use water wisely.

Who am I compared to?

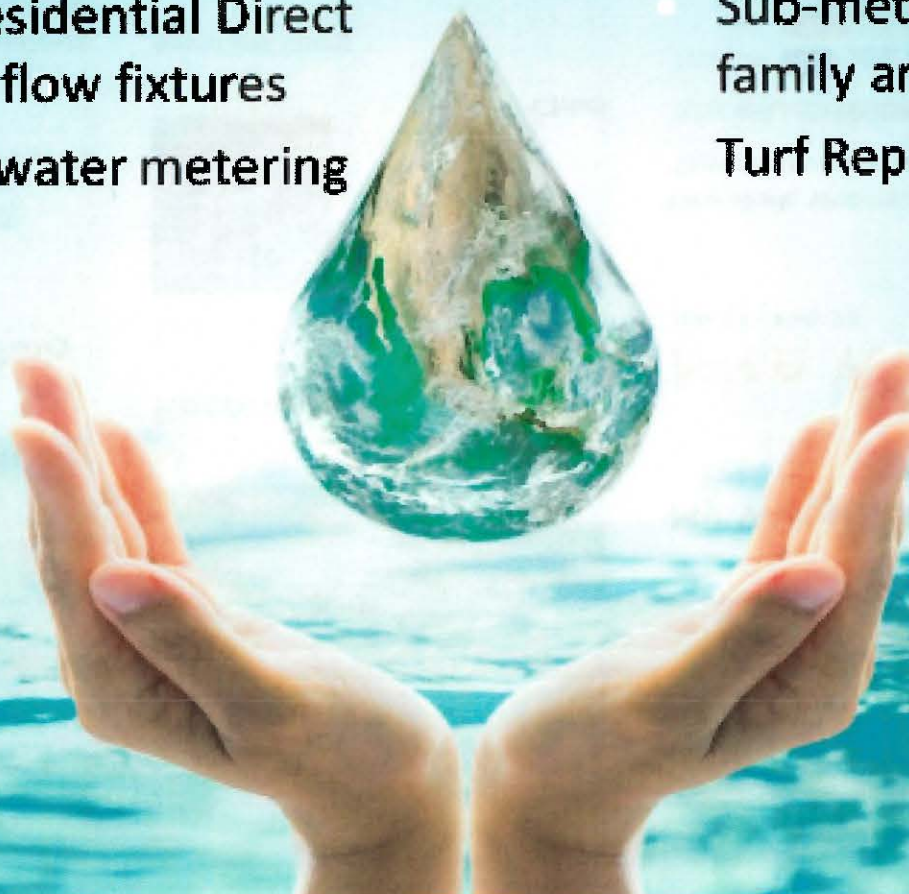


www.honolulu.watersmart.com



Future measures being evaluated

- **Multi-Unit Residential Direct**
Install of low flow fixtures
- **Smart home water metering**
device
- **Sub-meters for multi-**
family and farmers
Turf Replacement



WATER FOR L



Board of Water Supply
City and County of Honolulu

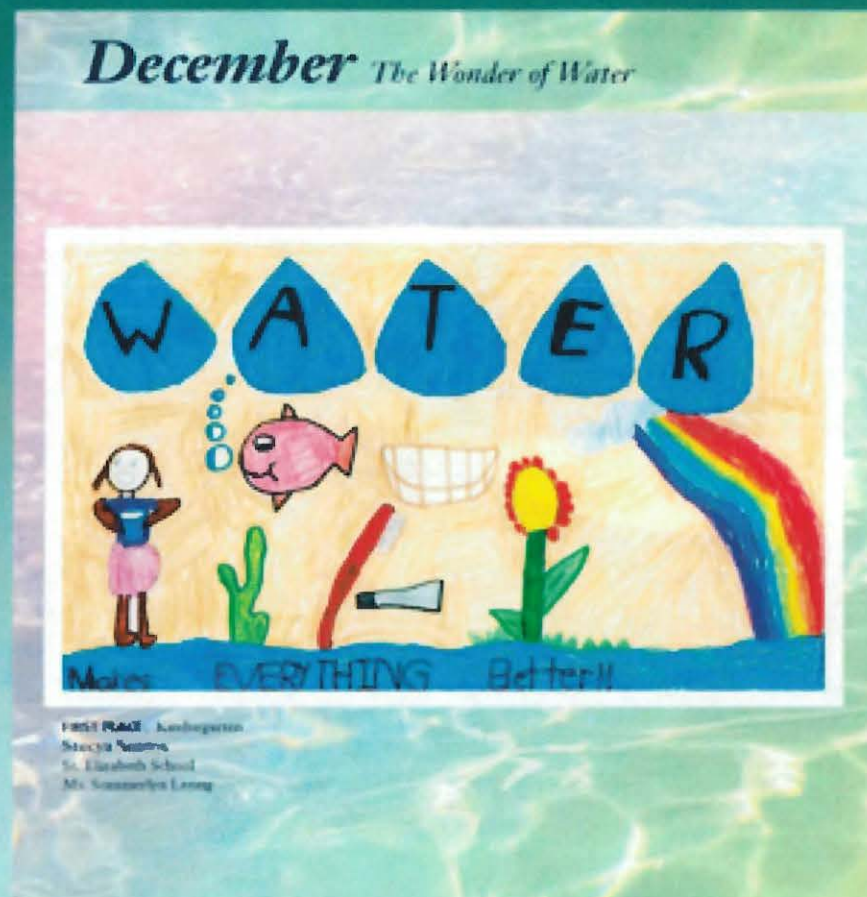
Rain barrel Workshops

2018/2019: 158 participants



Annual Calendar Contest

- Posters and Poems
- 2019 Theme: Do Your Part, Be Water Smart
- Number submitted:
 - Posters: 974
 - Poems: 442
- Number of schools participating: 51





Clings

- Print series of clings using contest posters
- Will be placed in City restrooms to remind the public about conserving water





Events

- Disaster Prep Fairs
- Project WET
- **Imagine a Day** without Water
- Detect-A-Leak Week
- Mauka to Makai
- 'Olelo Annual Youth Exchange
- Partner with ENV, DFM, DEM, Council Members, Mayor's Office, HECO
- 90th Anniversary





Tours

- Tours 2018: 80 (2,000 hosted)
- **BWS Tours**
 - Halawa Shaft
 - Waihee Tunnel
 - **Fred Ohrt Museum**
 - Honouliuli Recycling Plant
 - Nuuanu Reservoir #4
- **Students**
 - University of Hawaii
 - Public and Private schools at all grade levels
- **Elected Officials – Hawaii and abroad**





Xeriscape Garden

- Number Workshops each year: 28
- Participants: 588
- Friends of Halawa Xeriscape Garden
- Annual Plant Sale
- Garden revamp in FY 2021
- Outreach to promote use of xeriscape plants – malls, AOAOs, hotels



WATER FOR LIFE

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



Board of Water Supply
City and County of Honolulu

Mahalo!

ENTRUSTED TO US TO

PRESERVE

FOR FUTURE GENERATIONS

DISCUSSION:

Kathleen Elliott-Pahinui, Information Officer, Communications Office, and Lorna Heller, Civil Engineer VI, Water Conservation, Water Resources Division, gave the report.

Ms. Heller began the presentation with a report on the conservation programs such as the Water Sensible Program, WaterSmart, and rain barrel workshops. Ms. Elliott-Pahinui will cover calendar contests, events, tours that occur throughout the year, and the Xeriscape garden.

Mr. Soon referred back to the WaterSmart slide which he has seen before, but noted that he doesn't see programs about how people shouldn't water their yards in the morning because he sees it happening quite often. Ms. Heller mentioned that they will put up messages about that, and Ms. Elliott-Pahinui agreed.

Mr. Soon suggested having WaterSmart include notifying people to water their yards in the evening. Ms. Elliott-Pahinui said that WaterSmart does have tips on the website. Mr. Lau added that it is also on the BWS website. Ms. Elliott-Pahinui added further that it is noted on the BWS website that the number one tip is don't water between 9 a.m. and 5 p.m.

Ms. Elliott-Pahinui went on with her portion of the presentation covering Communications involvement with the Conservation Department in developing initiatives.

Ms. Elliott-Pahinui acknowledged Board Member Ross Sasamura and his team from the Storm Water Division of the Department of Facilities Management. They have worked together at several events. One event coming up at the end of May is the hotel and restaurant show. They are also working together on a video for rain barrels. She would like to bring the water conservation clings into Kapolei Hale, Kapalama Hale, and Honolulu Hale as well as working with the Department of Education.

Mr. Soon asked if the Communications staff goes out to talk to people about water conservation, like the use of rain barrels. Ms. Heller answered that rain barrel workshops are regularly scheduled at the Halawa Xeriscape Garden.

Mr. Lau stated that Communications regularly schedules tours and speaking engagements with schools, elected officials and other groups interested in conservation. He invited the Board Members to notify Ms. Elliott-Pahinui if they have a group who may be interested in water conservation. He added that BWS has a good partnership with Department of Facilities Management on the storm water management.

In regards to the rain barrel, Board Member Max Sword asked if there was an interest in using the water for toilets and other non-potable use in new homes. Mr. Lau responded that there were similar discussions for nonresidential or for high rise condominiums that could be used on the site.

Mr. Lau stated that BWS has been looking at those possibilities, and the Department of Health has recently reached out to BWS regarding ideas about on-site reuse of water, captured rainwater, or even wastewater and water condensations from air conditioning.

Mr. Lau suggested that BWS gets updates on plumbing codes and become more educated with all the new developments going on and see if it can be more widely used in the community. Mr. Sasamura added that the present code doesn't allow it to happen. Mr. Lau concluded that when people inquire about the availability of water, BWS has been pointing them to water conservation and efficiency to encourage them.

ITEM FOR INFORMATION NO. 4

"April 22, 2019

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 March 2019. The monthly production average for March 2019 was 132.51 million gallons per day.

The Board of Water Supply rainfall index for the month of March 2019 was 23 percent of normal; with a 5-month moving average of 79 percent. As of April 2, 2019, the Hawaii Drought Monitor shows abnormally dry conditions for all of Oahu, with moderate drought conditions on the leeward side of the island. The National Weather Service is forecasting below normal rainfall for April 2019.

Most monitoring wells are showing slightly decreasing trends, likely resulting from increased pumping because of the decreased rainfall during the last few weeks.

Respectfully submitted,

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

Attachments"

The foregoing was for information only.

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

Mr. Usagawa reported that since the water conservation program started in 1990, water usage is closer to 140-145 million gallons now compared to 175 million gallons in 1990.

Mr. Sword asked what the forecast would be if the coming months gets hotter. Mr. Usagawa replied that weather forecasts are fairly short-term, but climate change is a longer term over decades. Mr. Usagawa continued that with the expectation of additional greenhouse gases concentrations in the atmosphere occurring over decades, warming will continue to occur. It has been trending upward. Unless greenhouse gases are held in check, warming will continue which means as it gets hotter, people will use more water for irrigation; and it will affect rainfall. The expectations are for more

severe droughts and more severe flooding in the future. Mr. Usagawa concluded that BWS is monitoring the data. Mr. Sword was pleased to hear that they are up to date with climate change.

**PRODUCTION, HEAD AND RAINFALL REPORT
MONTH OF MARCH 2019**

POTABLE

STATION	MGD
HONOLULU (1)	
KULIOUOU	0.05
WAILUPE	0.11
AINA KOA	0.14
AINA KOA II	0.73
MANOA II	0.00
PALOLO	1.14
KAIMUKI HIGH	2.20
KAIMUKI LOW	2.84
WILDER	4.84
BERETANIA HIGH	3.74
BERETANIA LOW	4.08
KALIHI HIGH	2.34
KALIHI LOW	2.31
KAPALAMA	0.52
KALIHI SHAFT	7.98
MOANALUA	1.40
HALAWA SHAFT	4.94
KAAMILO	0.88
KALAUAO	6.58
PUNANANI	11.34
KAAHUMANU	0.25
HECO WAIJU	2.66
MANANA	0.23
WELLS SUBTOTAL:	61.32
MANOA TUNNEL	0.17
PALOLO TUNNEL	0.23
GRAVITY SUBTOTAL:	0.40
HONO. SUBTOTAL:	61.72

STATION	MGD
WINDWARD (2)	
WAIMANALO II	0.42
WAIMANALO III	0.00
KUOU I	1.41
KUOU II	0.09
KUOU III	0.75
LULUKU	0.97
HAIKU	0.00
IOLEKAA	0.00
KAHALUU	0.75
KAHANA	0.45
PUNALUU I	0.00
PUNALUU II	0.44
PUNALUU III	0.76
KALUANUI	0.29
MAAKUA	0.18
HAUULA	0.27
WELLS SUBTOTAL:	6.79
WAIM. TUNNELS I & II	0.00
WAIM. TUNNELS III&IV	0.19
WAIHEE INCL. WELLS	0.45
WAIHEE TUNNEL	5.40
LULUKU TUNNEL	0.12
HAIKU TUNNEL	0.94
KAHALUU TUNNEL	1.97
GRAVITY SUBTOTAL:	9.07
WIND. SUBTOTAL:	15.86

STATION	MGD
NORTH SHORE (3)	
KAHUKU	0.44
OPANA	0.03
WAIALEE I	0.45
WAIALEE II	0.47
HALEIWA	0.00
WAIALUA	1.42
N.SHORE SUBTOTAL:	2.81

STATION	MGD
MILILANI (4)	
MILILANI I	1.94
MILILANI II	0.00
MILILANI III	0.63
MILILANI IV	1.50
MILILANI SUBTOTAL:	4.07

STATION	MGD
WAIHAWA (5)	
WAIHAWA	1.58
WAIHAWA II	1.30
WAIHAWA SUBTOTAL:	2.87

STATION	MGD
PEARL CITY-HALAWA (6)	
HALAWA 277	0.60
HALAWA 550	0.00
AIEA	1.10
AIEA GULCH 497	0.35
AIEA GULCH 550	0.20
KAONOHII	0.97
WAIMALU I	0.00
NEWTOWN	1.03
WAIJU	0.68
PEARL CITY I	0.51
PEARL CITY II	1.00
PEARL CITY III	0.35
PEARL CITY SHAFT	0.91
PEARL CITY-HALAWA SUBTOTAL:	7.70

STATION	MGD
WAIHAWA-EWA (7)	
WAIPIO HTS.	0.22
WAIPIO HTS. I	0.34
WAIPIO HTS. II	0.14
WAIPIO HTS. III	1.22
WAIPAHU	5.76
WAIPAHU II	1.99
WAIPAHU III	1.57
WAIPAHU IV	2.19
KUNIA I	4.51
KUNIA II	1.87
KUNIA III	1.45
HOAEAE	4.62
HONOULIULI I	1.30
HONOULIULI II	6.89
MAKAKILO	0.30
WAIHAWA-EWA SUBTOTAL:	34.36

STATION	MGD
WAIANAE (8)	
MAKAHA I	0.17
MAKAHA II	0.05
MAKAHA III	0.12
MAKAHA V	0.10
MAKAHA VI	0.00
MAKAHA SHAFT	0.00
KAMAILE	0.00
WAIANAE I	0.22
WAIANAE II	0.25
WAIANAE III	0.64
WELLS SUBTOTAL:	1.56
WAI. C&C TUNNEL	1.40
WAI. PLANT. TUNNELS	0.16
GRAVITY SUBTOTAL:	1.56
WAIANAE SUBTOTAL:	3.12

NONPOTABLE

NONPOTABLE	MGD
KALAUAO SPRINGS	0.80
BARBERS POINT WELL	1.13
GLOVER TUNNEL NP	0.41
NONPOTABLE TOTAL:	2.34

RECYCLED WATER (FEBRUARY 2019)

RECYCLED WATER	MGD
HONOULIULI WRF R-1	6.13
HONOULIULI WRF RO	1.39
RECYCLED WATER TOTAL:	7.52

**PRODUCTION, HEAD AND RAINFALL REPORT
MONTH OF MARCH 2019**

PRODUCTION SUMMARIES

TOTAL WATER	MGD
PUMPAGE	121.48
GRAVITY	11.03
POTABLE TOTAL:	132.51
NONPOTABLE	2.34
RECYCLED WATER	7.52
TOTAL WATER:	142.37

CWRM PERMITTED USE AND BWS ASSESSED YIELDS FOR BWS POTABLE SOURCES				
WATER USE DISTRICTS		A PERMITTED USE/ BWS YLDS	B MAR 2019	C DIFF. A-B
1	HONOLULU	82.93	61.32	21.61
2	WINDWARD	25.02	10.02	15.00
3	NORTH SHORE	4.74	2.81	1.93
4	MILILANI	7.53	4.07	3.46
5	WAHIAWA	4.27	2.87	1.40
6	PEARL CITY-HALAWA	12.25	7.70	4.55
7	WAIPAHU-EWA	50.63	34.36	16.27
8	WAIANAE	4.34	1.56	2.78
TOTAL:		191.71	124.71	67.00

CWRM PERMITTED USE FOR BWS NONPOTABLE SOURCES				
WATER USE DISTRICTS		A PERMITTED USE	B MAR 2019	C DIFF. A-B
7	WAIPAHU-EWA (BARBERS POINT WELL)	1.00	1.13	-0.13
TOTAL:		1.00	1.13	-0.13

EFFECTIVE WATER DEMAND PER DISTRICT

IMPORT/EXPORT BETWEEN WATER USE DISTRICTS			
FROM	TO		MGD
2	1	WINDWARD EXPORT	1.15
7	8	BARBERS PT LB	6.59

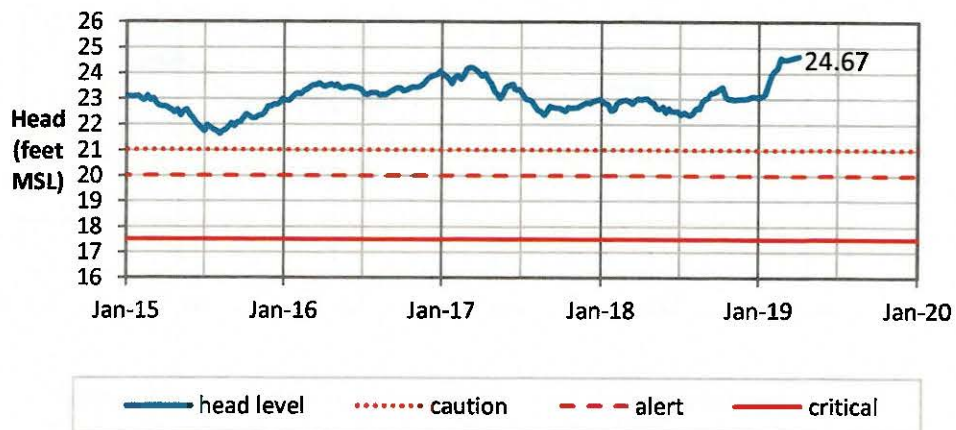
WATER USE DISTRICTS		SUBTOTAL	IMPORT	EXPORT	EFFECTIVE WATER DEMAND
1	HONOLULU	61.32	1.15	-	62.48
2	WINDWARD	10.02	-	1.15	8.86
3	NORTH SHORE	2.81	-	-	2.81
4	MILILANI	4.07	-	-	4.07
5	WAHIAWA	2.87	-	-	2.87
6	PEARL CITY-HALAWA	7.70	-	-	7.70
7	WAIPAHU-EWA	34.36	-	6.59	27.77
8	WAIANAE	1.56	6.59	-	8.15
TOTAL:		124.71	7.74	7.74	124.71

Weekly Head Report

Kaimuki 04/05/19



Beretania 04/09/19

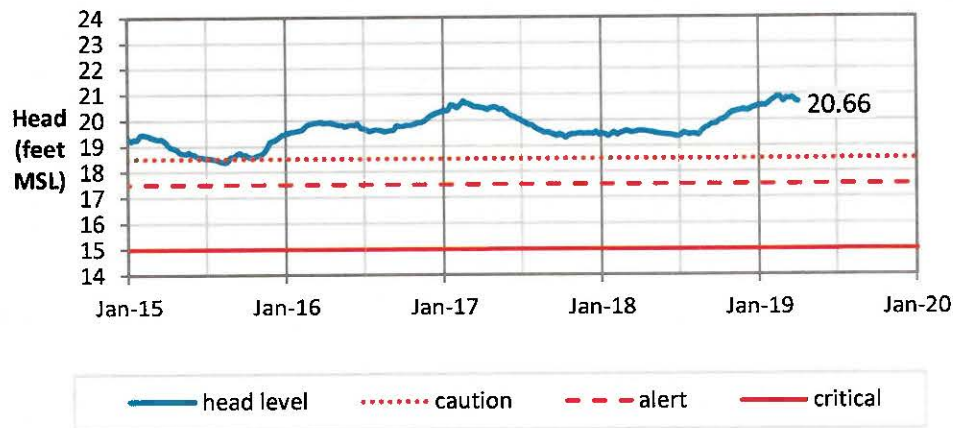


Kalihi 04/07/19

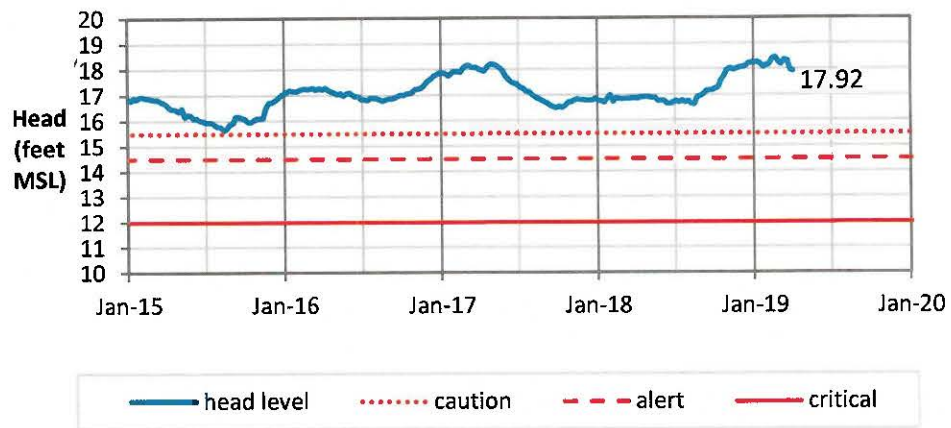


Weekly Head Report

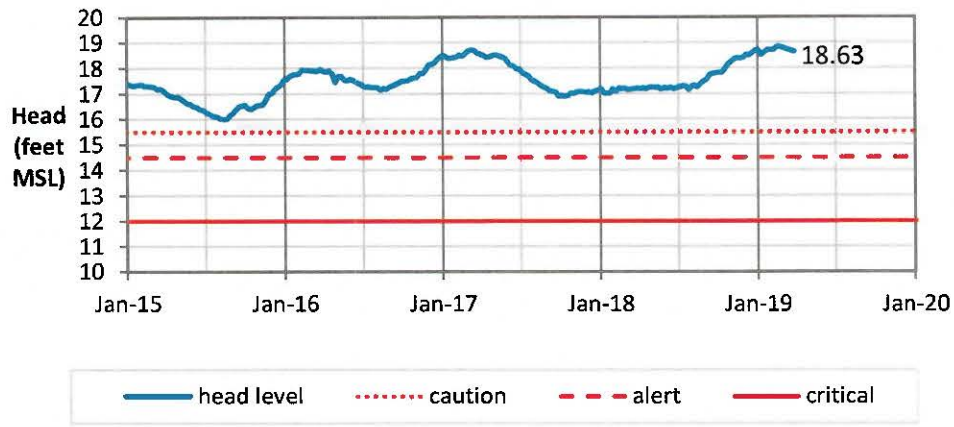
Moanalua 04/08/19



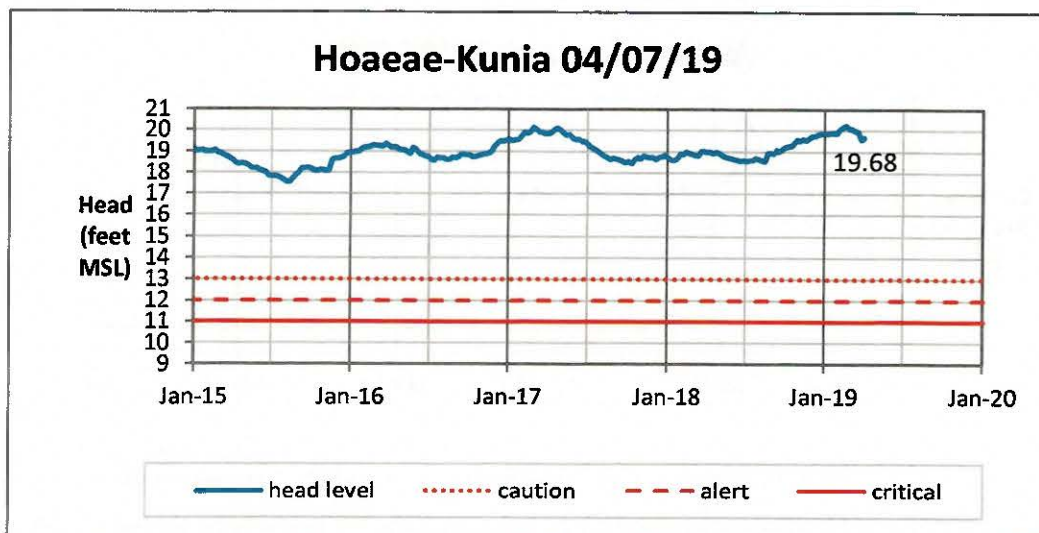
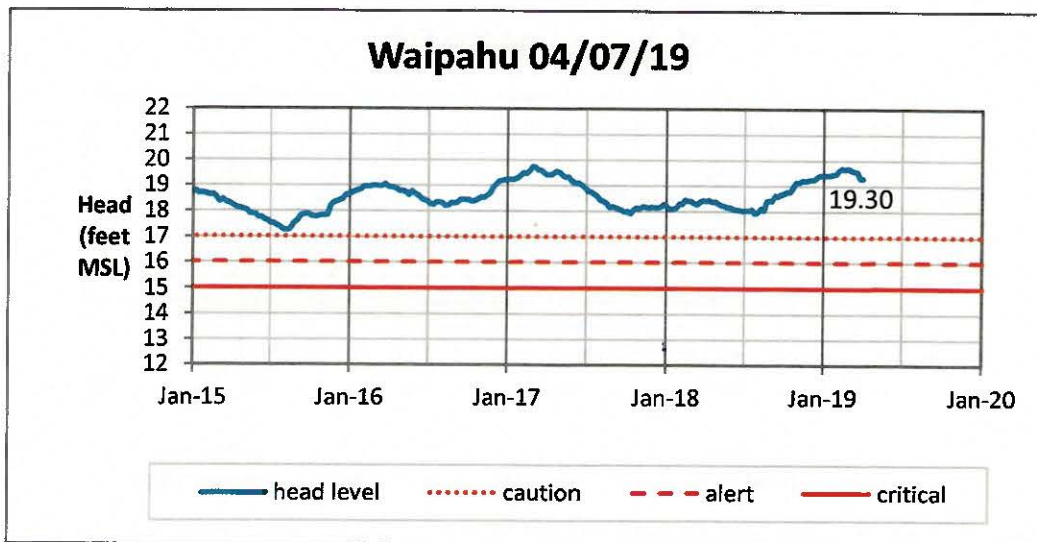
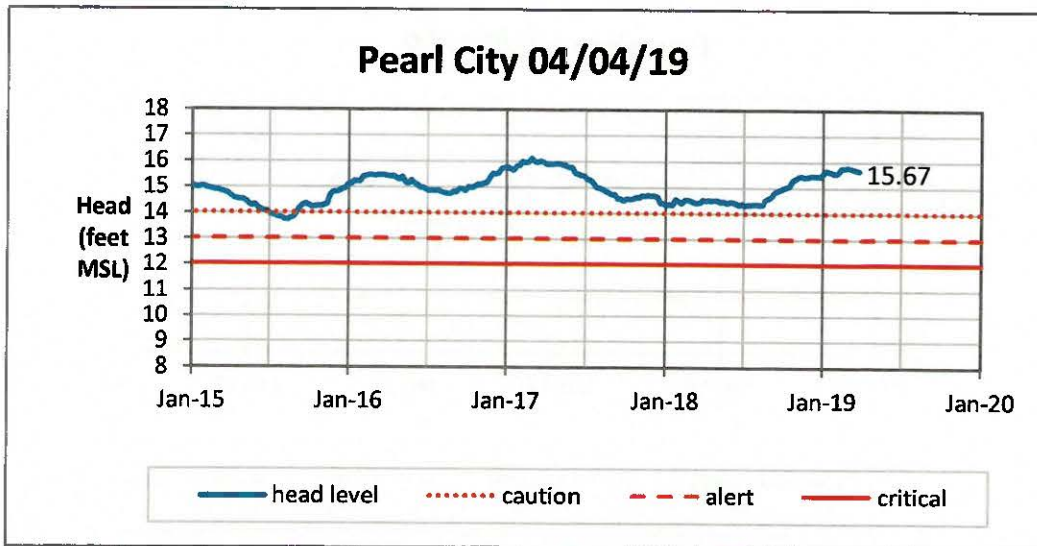
Halawa 04/07/19



Kalauao 04/04/19

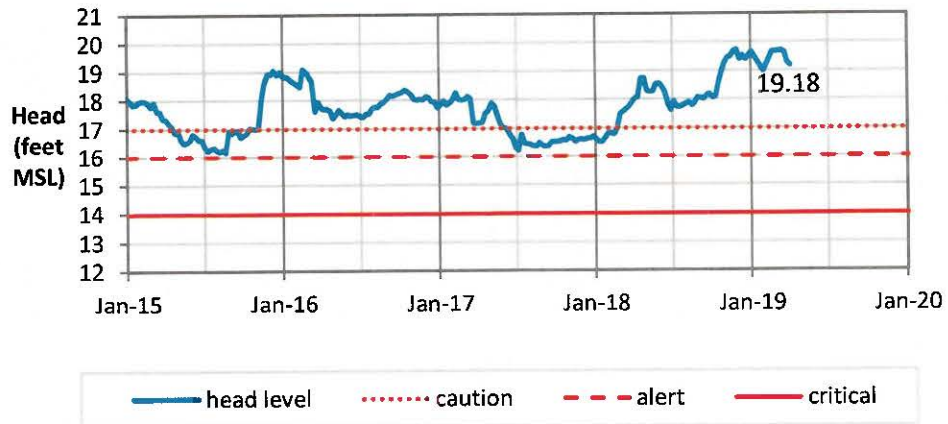


Weekly Head Report

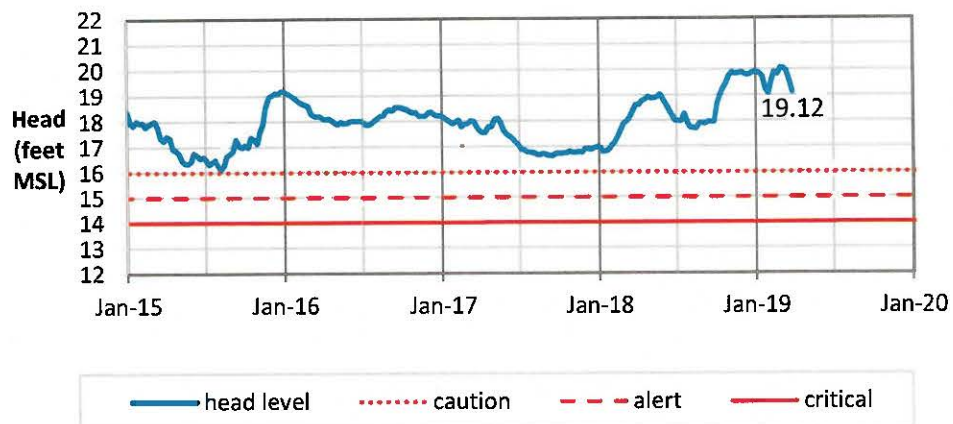


Weekly Head Report

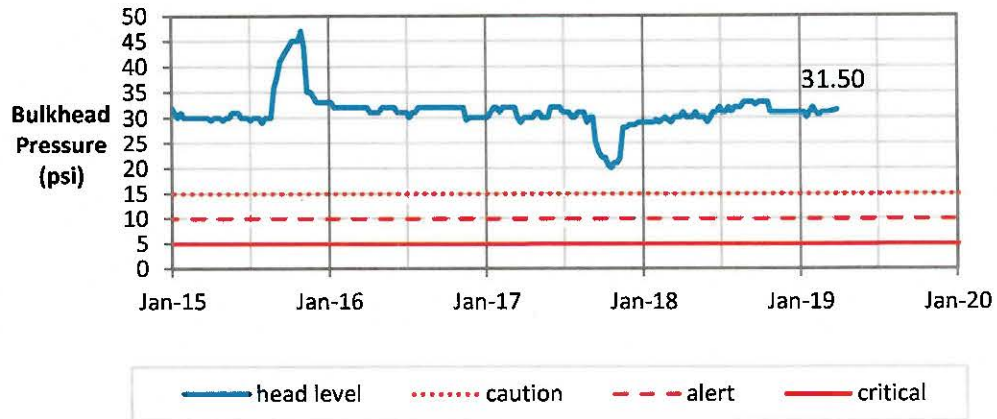
Punaluu 04/07/19



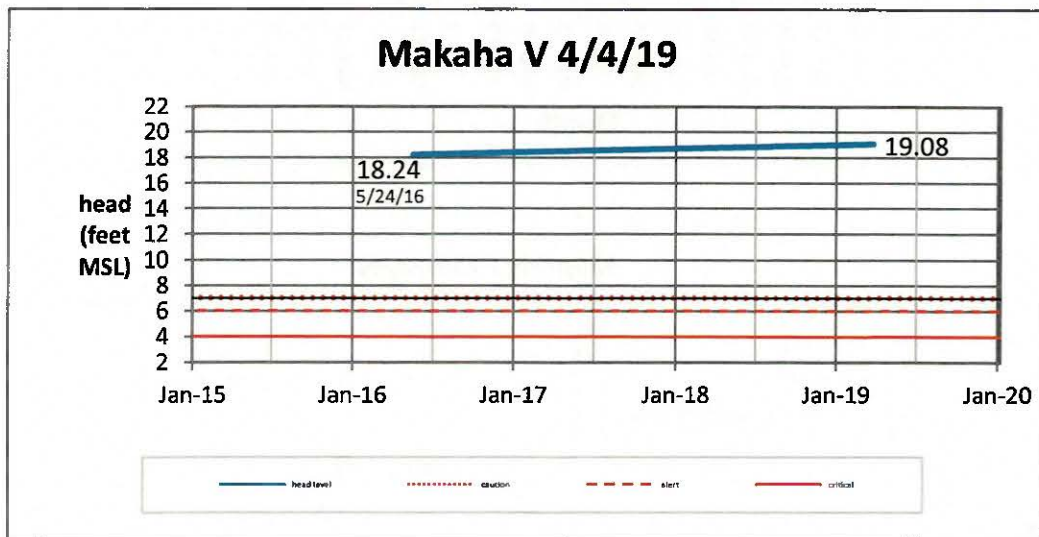
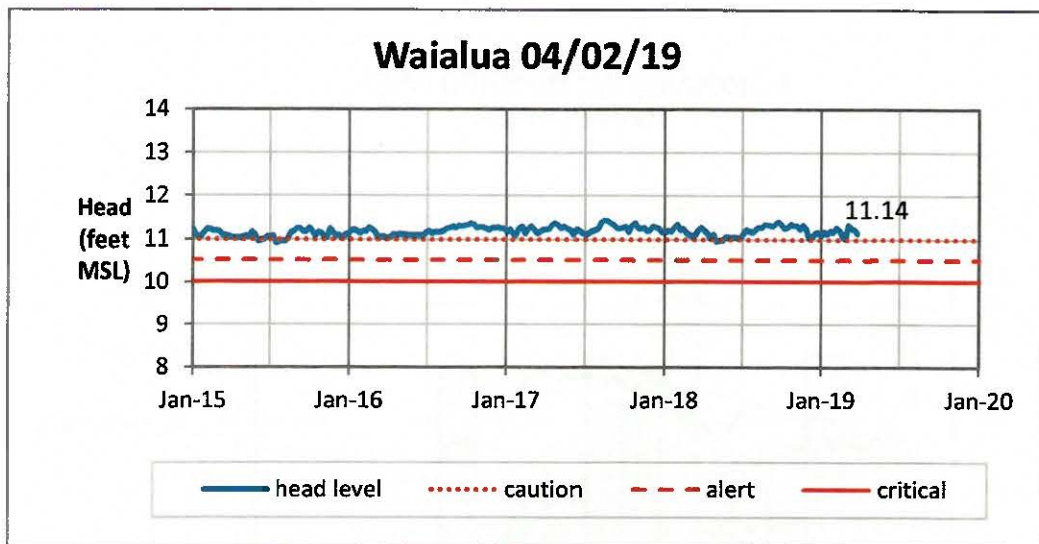
Kaluanui 04/02/19

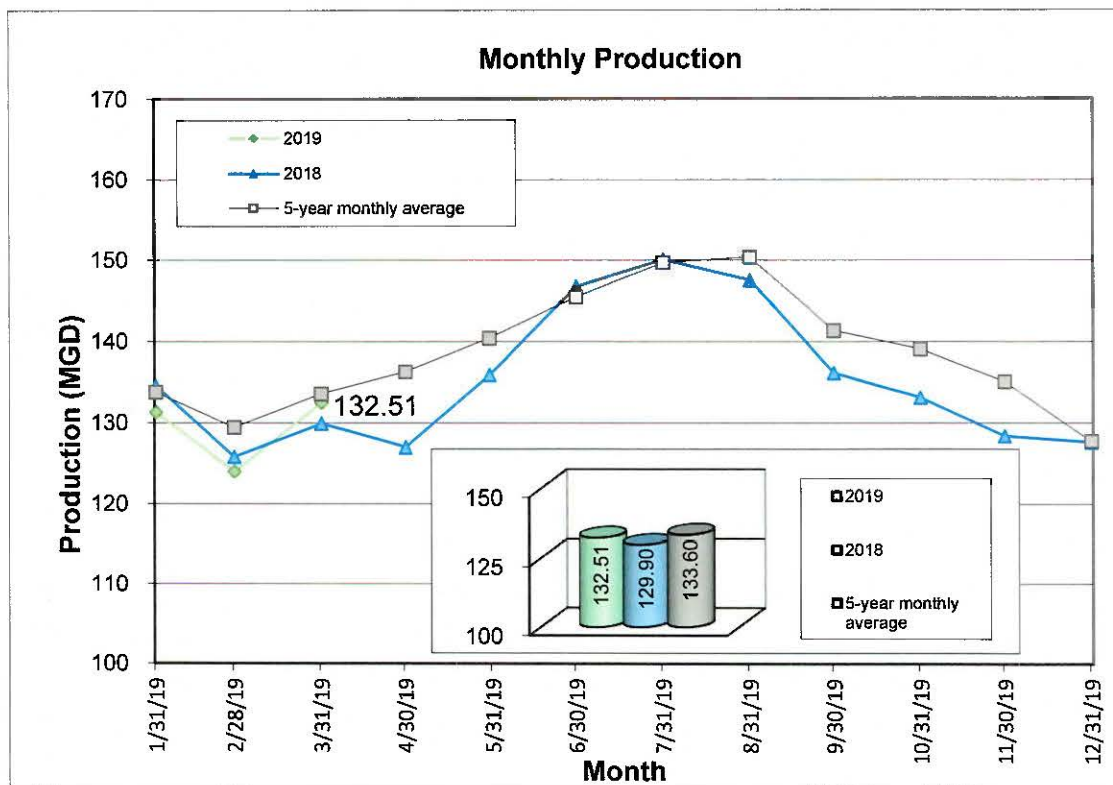
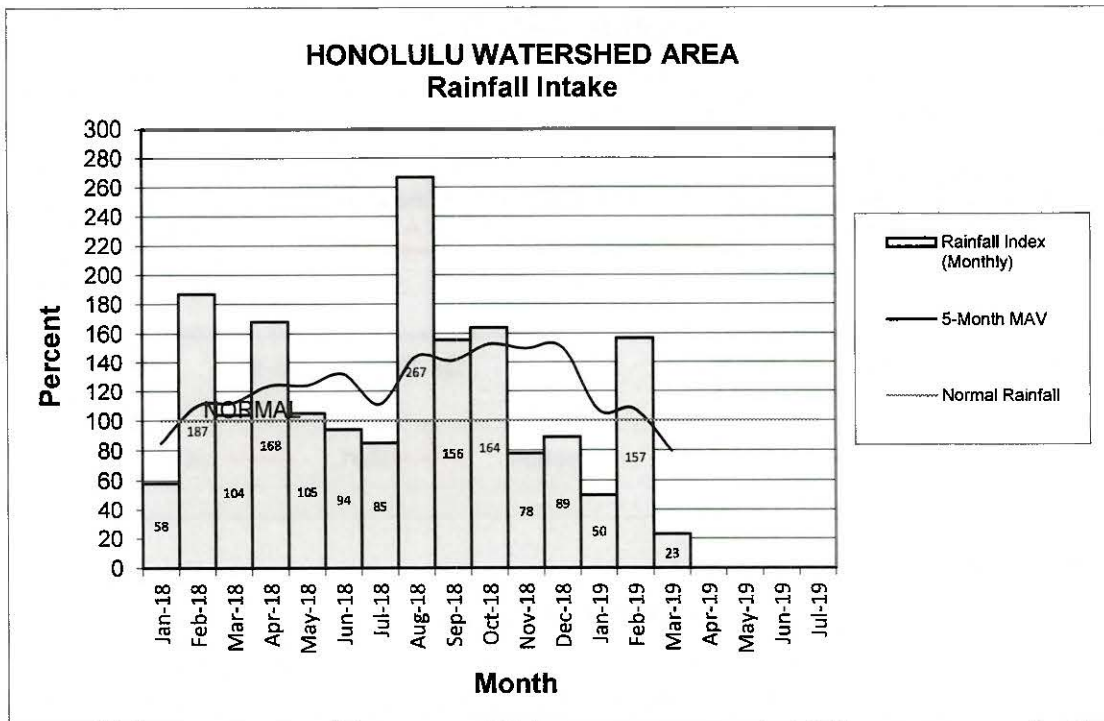


Waihee Tunnel 04/03/19



Weekly Head Report





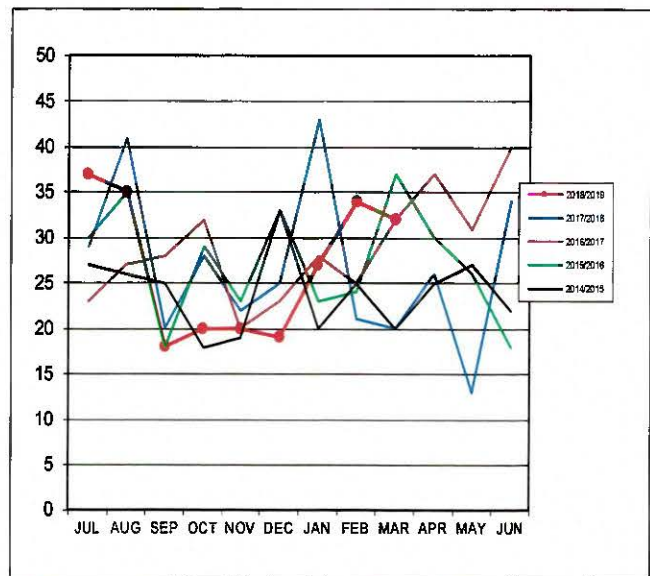
ITEM FOR INFORMATION NO. 5

WATER MAIN REPAIR REPORT

for March 2019

	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	Total
2018/2019	37	35	18	20	20	19	27	34	32				242
2017/2018	29	41	20	28	22	25	43	21	20	26	13	34	322
2016/2017	23	27	28	32	20	23	28	25	32	37	31	40	346
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

Date	Address	Size (in)	Pipe Type
3/1/2019	143 Meleana Pl, Honolulu	4	CI
3/2/2019	16 Nakele St, Honolulu	6	CI
3/5/2019	146 Hekili St, Kailua	8	AC
3/6/2019	2056 Manoa Rd, Honolulu	8	CI
3/8/2019	1630 Ala Mahina Pl, Honolulu	8	CI
3/8/2019	84-767 Upena St, Waianae	8	PVC
3/9/2019	1708 Hoohulu St, Pearl City	8	CI
3/9/2019	2244 Kalakaua Ave, Honolulu	6	CI
3/10/2019	87-140 Maaloa St, Waianae	8	CI
3/11/2019	94-392 Kahuanani St, Waipahu	8	CI
3/11/2019	1470 Humuwili Pl, Kailua	8	CI
3/11/2019	834 Aalapapa Dr, Kailua	12	PVC
3/12/2019	47-697 Alawiki St, Kaneohe	8	DI
3/12/2019	109 Aala Dr, Kailua	8	PVC
3/13/2019	94-210 Hanawai Circle, Waipahu	8	CI
3/14/2019	87-992 Hakimo Rd, Waianae	8	DI
3/14/2019	2296 Waiomao Rd, Honolulu	8	CI
3/15/2019	92-318 Nohona Pl, Kapolei	8	CI
3/15/2019	3941 Pahoa Ave, Honolulu	4	CI
3/17/2019	1304 Loko Dr, Wahiawa	6	CI
3/18/2019	49-205 Kamehameha Hwy, Kaneohe	6	CI
3/20/2019	1219 Nakuina St, Honolulu	6	DI
3/20/2019	325 Keaniani St, Kailua	6	CI
3/21/2019	42 Aikahi Loop, Kailua	12	AC
3/22/2019	53-484 Haleaha Rd, Hauula	30	CC
3/22/2019	53-484 Haleaha Rd, Hauula	12	AC
3/23/2019	99-420 Aiealani Pl, Aiea	8	CI
3/24/2019	54-22 Kamehameha Hwy, Hauula	12	CI
3/24/2019	59-249 Ke Nui Rd, Haleiwa	8	PVC
3/29/2019	45-027 Lilipuna Pl,	8	PVC
3/31/2019	629 Piikoi St, Honolulu	8	CI
3/31/2019	1777 Kanapuu Dr, Kailua	8	DI



11 miles of pipeline was surveyed by the Leak Detection Team in the month of March.

DISCUSSION:

Glenn Ah Yat, Water Service Supervisor IV, Field Operations Division, presented the report for Program Administrator, Mike Fuke.

Mr. Ah Yat reported that there was one significant main break that occurred in Punaluu on Haleaha Road. The size was significant but the amount of people affected was minimal. Mr. Lau added that the Windward Community conserved water while the pipeline was being repaired and was very cooperative including the Kaneohe Marine Corps Naval Air Station.

Mr. Soon asked if data is kept on how long it takes to repair the leaks. Mr. Soon understood that it would depend on the size of the line and requested that at the next meeting this information be presented including the averages. Mr. Ah Yat concurred.

ITEM FOR INFORMATION NO. 6

"April 22, 2019

AGENDA TOPICS
FOR FUTURE
BOARD
MEETINGS

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

Chair and Members:

Subject: Agenda 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.

Respectfully submitted,

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

The foregoing was for information only.

DISCUSSION:

Ernest Lau, Manager and Chief Engineer, asked the Board Members if they had any topics they would like to have discussed or matters to put on the agenda to comply with the Sunshine Law requirements. Mr. Lau welcomed suggestions at this time. The Board Members may call him and he will discuss it with Chair Andaya. Mr. Lau meets with Chair Andaya two weeks prior to the Board meeting to review the agenda. Mr. Lau shared that the next item coming up is the operating and capital improvement budgets for next year. In May, there will be the Workshop Meeting and the Regular Board Meeting.

Mr. Soon suggested a report on the status of watershed management. In addition, he would like to hear more about Stairway to Heaven or Haiku stairs.

Mr. Lau suggested adding improvement of the management of the watershed.

Mr. Sword would like to hear about any project going on as well as future projects. Mr. Lau agreed to identify the current and potential future projects.

Mr. Andaya suggested updates on the real estate redevelopment/campus redevelopment.

Mr. Lau thanked the Board Members for their suggestions of topics for future Board meetings.

**MOTION TO
RECESS INTO
EXECUTIVE
SESSION**

Upon unanimously approved motion, the Board recessed into Executive Session Pursuant to [HRS §92-5(a)(2)] at 3:00 p.m. to Consider Issues Pertaining to Matters Posted for Discussion at an Executive Session

**OPEN
SESSION**

The Board reconvened in Open Session at 3:12 p.m.

**MOTION TO
ADJOURN**

There being no further business Chair Andaya at 3:14 p.m. called for a motion to adjourn the Open Session. Max Sword so moved; seconded by Ray Soon and unanimously carried.

Respectfully submitted,


GERRENE YUKUNO

APPROVED:

THE MINUTES OF THE REGULAR MEETING ON APRIL 22, 2019 WERE APPROVED AT THE MAY 28, 2019 BOARD MEETING			
	AYE	NO	COMMENT
BRYAN P. ANDAYA	X		
KAPUA SPROAT	X		
KAY C. MATSUI			ABSENT
RAY C. SOON			ABSENT
MAX J. SWORD			ABSENT
ROSS S. SASAMURA	X		
JADE T. BUTAY	X		


BRYAN P. ANDAYA
Chair of the Board

MAY 28 2019

Date