

# MINUTES

## SPECIAL MEETING OF THE BOARD OF WATER SUPPLY

May 8, 2017

At 2:00 PM on May 8, 2017 in the Board Room of the Public Service Building at 630 South Beretania Street, Honolulu, Hawaii, Board Chair Andaya called to order the Special Meeting.

Present: Bryan P. Andaya, Chair  
Adam C. Wong, Vice Chair  
David C. Hulihee  
Kapua Sproat  
Kay C. Matsui  
Ross S. Sasamura

Also Present: Ernest Lau, Manager and Chief Engineer  
Ellen Kitamura, Deputy Manager and Chief Engineer  
Erwin Kawata  
Jason Takaki  
Jonathan Suzuki  
Mike Matsuo  
Kathleen Pahinui  
Jennifer Elflein  
Henderson Nuuhiwa  
Kevin Ihu  
Barry Usagawa  
Teri Akana  
Stuart Wong  
Marc Chun  
Joe Cooper  
Robert Morita  
Mike Domion  
Mike Fuke  
Scot Muraoka  
Tracy Burgo

Others Present: Jeff Lau, Deputy Corporation Counsel  
Jessica Wong, Deputy Corporation Counsel  
Carl Lundin, CDM Smith  
Audrey Harris, CDM Smith

Absent: Ford N. Fuchigami

Chair Andaya announced that this is a Special Board Meeting to hold a budget workshop and as a courtesy, he informed the Board Members that someone will be taking pictures during the meeting.

"May 8, 2017

ADOPTION OF  
RESOLUTION  
NO. 873, 2017

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

Chair and Members:

Subject: Adoption of Resolution No. 873, 2017, Adopting the  
Board of Water Supply Debt and Working Capital  
Management Policies

One of the strategic objectives of the Board of Water Supply's 2018 – 2022 Strategic Plan, adopted by the Board at their April 24, 2017 meeting, is to "develop and implement short and long term financial plans and policies."

The current financial policies were approved by the Board on September 27, 2004. After researching best practices at other water utilities and getting public comment through our Stakeholder Advisory Group, we have revised these policies and organized them into a framework of four major Debt and Working Capital Management Policies: 1) Fund Balance/Working Capital, 2) Purposes and Use of Debt, 3) Debt to Net Asset Ratio, and 4) Debt Service Coverage Ratio. These policies will be a foundation for the development of our financial plan and water rate study.

We respectfully recommend that the Board adopt the Board of Water Supply Debt and Working Capital Management Policies.

Respectfully submitted,

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

Attachments"

DISCUSSION:

Manager Lau explained that one of the objectives in the 2018-2022 BWS Strategic Plan adopted by the Board in April 2017, was to develop and implement short and long term financial plans and policies. There are current policies in place that were adopted by the then Board in 2004, and Mr. Joe Cooper, Waterworks Controller, will give a presentation on proposed updates to those policies.

Mr. Cooper gave the presentation. Following the presentation, Vice Chair Wong asked if any of these policy changes will affect rate increases.

Mr. Cooper replied no, and added that issuing debt to fund capital projects may actually help to moderate rate increases since it helps to mitigate spikes in capital spending for large project expenditures.

Board Member Sproat asked how the proposed policy would be impacted by the Mayor's request made at April's Board Meeting to waive certain fees for affordable housing units. Mr. Cooper replied that the Water System Facilities Charges, which is part of the rate making and cost of service analysis study that BWS is currently working on, may be impacted. The Mayor's request would not directly affect cash on hand. Mr. Lau added that these policies would allow BWS more flexibility to subsidize affordable housing units for a period of time and that bonds could be floated to make up the difference in the short term.

Mr. Andaya asked if BWS currently maintains 45 days cash on hand for working capital and if the proposal is to maintain 180 days cash on hand. Mr. Cooper replied yes. Mr. Andaya asked how much cash on hand does BWS currently have. Mr. Cooper replied that it varies from month to month, but currently there's about 160 days cash on hand.

MOTION TO  
ADOPT  
RESOLUTION  
NO. 873, 2017

Adam Wong motioned to adopt Resolution No. 873, 2017, Adopting the Board of Water Supply Debt and Working Capital Management Policies. The motion was seconded by Kapua Sproat and unanimously carried.

DISCUSSION:

Mr. Andaya thanked the Stakeholder Advisory Group for being a sounding board for these policies and acknowledged the extensive research that went into researching policies from other water systems around the country. Mr. Andaya also thanked the Board members for attending today's meeting to approve this policy.

BOARD OF WATER SUPPLY  
CITY AND COUNTY OF HONOLULU

RESOLUTION NO. 873, 2017

**RESOLUTION ADOPTING THE BOARD OF WATER SUPPLY  
DEBT AND WORKING CAPITAL MANAGEMENT POLICIES**

WHEREAS, the Board of Water Supply, City and County of Honolulu takes to heart and is committed to its vision of “Ka Wai Ola – Water for Life”, which captures the critical need of water as the basis of life; and

WHEREAS, the Board of Water Supply’s mission is to provide safe, dependable, and affordable water to our customers now and into the future; and

WHEREAS, the Debt and Working Capital Management Policies provide the financial framework to support the Board of Water Supply’s 30-year Water Master Plan adopted by the Board of Directors on October 24, 2016, and the Board of Water Supply’s 2018 – 2022 Strategic Plan adopted by the Board of Directors on April 24, 2017; now, therefore,

BE IT RESOLVED by the Members of the Board of Water Supply, City and County of Honolulu, that the Board of Water Supply Debt and Working Capital Management Policies be adopted to provide financial guidance for the Department.

ADOPTED:

  
BRYAN P. ANDAYA  
Chair

Honolulu, Hawaii  
May 8, 2017

RESOLUTION NO. 873, 2017, ADOPTING THE BOARD OF WATER SUPPLY DEBT AND WORKING CAPITAL MANAGEMENT POLICIES, ADOPTED ON MAY 8, 2017			
	AYE	NO	COMMENT
BRYAN P. ANDAYA	X		
ADAM C. WONG	X		
DAVID C. HULIHEE	X		
KAPUA SPROAT	X		
KAY C. MATSUI	X		
ROSS S. SASAMURA	X		
FORD N. FUCHIGAMI			ABSENT

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**Board of Water Supply**  
City and County of Honolulu

# **Debt and Working Capital Management Policies**

**May 8, 2017**



# Proposed Updated Policy Framework

1. **Fund balance / working capital**

Amount of Cash on Hand

2. **Purposes and uses of debt**

When and Why to Borrow

3. **Debt to net assets ratio**

How Much can be Borrowed

4. **Debt service coverage ratio**

Ability to Make Loan Payments

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



## Current

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



## Draft

- Target 180 days, never less than 60 days
- Exclude annual debt service (for consistency)
- Achieve gradually over 10 years to minimize rate impacts
- Supplement cash with other cost-effective financial tools, e.g. insurance, lines of credit, commercial paper
- >180 days may be re-programmed to fund CIP

## 2. Purposes and Uses of Debt (When and Why to Borrow)



### Current

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



### Draft

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

### 3. Debt to Net Assets Ratio (How Much Can be Borrowed)



#### Current

- 40% to 50% debt to net assets ratio



#### Draft

- No more than 50% debt to net assets ratio

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



### Current

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



### Draft

- 1.7x senior annual debt service
- 1.6x total annual debt service “all in”

# WATER FOR LIFE

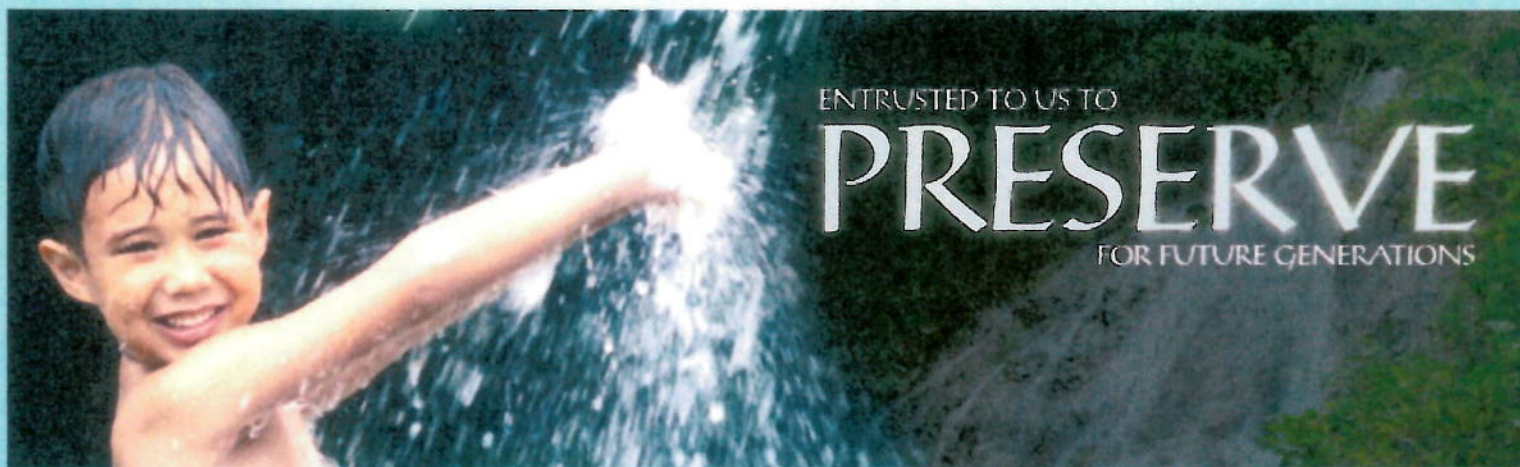
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Board of Water Supply  
City and County of Honolulu

**Mahalo!**

**Questions & Answers**



## Board of Water Supply

### Debt and Working Capital Management Policies

**Purpose:** The financial policies are developed to ensure the financial integrity of the Board of Water Supply, support strong credit ratings, reduce and mitigate rate increases in the future and to support the Board of Water Supply's long range financial planning objectives.

#### 1. Working Capital

- a. Description. Working Capital (also called Uncommitted Operating Fund Balance) is needed to ensure the Board of Water Supply's ongoing ability to fund operating and maintenance expenses, debt service and construction payments in a timely manner. Sufficient funds should be committed to enable the Board of Water Supply to reliably meet its obligations, accounting for differences between when costs are incurred and revenues are received. Working Capital should be sufficient to cover contingencies, including disasters and other unforeseen events. Finally, Working Capital should provide sufficient flexibility and strength to support the Board of Water Supply's credit rating objectives.
- b. Working Capital Target. The Board of Water Supply's objective will be to maintain 180 days cash on hand, where days cash on hand is defined as the number of days of operating expenses that could be covered by Working Capital (exclusive of those funds committed to capital projects or construction contracts). The 180 days cash target is to provide funds for unplanned events such as disaster recovery and rate stabilization. The 180 days cash target is intended to be achieved gradually over an approximately 10-year period, from the adoption of this policy, in order to minimize rate impacts. The Board of Water Supply will maintain a minimum of 60 days cash on hand. The Board of Water Supply may use financial tools such as cost-effective lines of credit, commercial paper, and insurance for use in emergencies and natural disaster recovery to supplement cash and investments to provide financial capacity of more than 180 days cash on hand.
- c. Working Capital greater than 180 days may be re-programmed to fund long-term capital projects in future years.

#### 2. Purposes and Use of Debt

- a. Description. Debt may be issued as fixed or variable-rate obligations, and may be used to finance long-term capital projects. The Board of Water Supply may incur debt through state or federal programs such as the State Revolving Fund

(SRF) and Water Infrastructure Finance and Investment Act (WIFIA), by issuing debt in the public market, or through a private placement or direct borrowing.

- b. Use of Debt. The Board of Water Supply will issue debt to fund long-lived capital projects. By issuing debt to fund capital projects, the Board of Water Supply can better align the costs (through annual debt service payments) with the effective useful life of a facility or project, more effectively allocating the cost of facilities to those customers who benefit from the facilities over time. In addition, the use of debt is a valuable tool to mitigate spikes in capital spending resulting from large project expenditures, helping to reduce needed rate increases.

The longest maturity of any debt issuance will be no longer than the expected useful life of the facility to be constructed. Debt will be issued in compliance with all tax and other federal and state regulations.

Short-term debt may be issued from time to time to fund projects in anticipation of a future long-term bond issue (e.g., a Bond Anticipation Note) or future revenues (e.g., Revenue Anticipation Note). The Board of Water Supply may also utilize revolving credit loans, commercial paper, or similar programs to provide interim construction financing in anticipation of future long-term bond issues, revenue inflow, or to provide funding during unplanned events such as natural disasters as described under Working Capital.

- c. Debt Structure. The Board of Water Supply will use a mix of fixed and variable rate debt that is expected to yield the lowest cost of borrowing, but will limit the percent of variable rate debt to no more than 20% of outstanding debt. The Board of Water Supply may issue debt on either a senior lien or a subordinate lien. Senior lien debt will have the highest claim on Net Revenues, followed by subordinate lien debt.

### **3. Debt to Net Asset Ratio**

- a. Description. The debt to net asset ratio is a measure of financial leverage, and is defined as the ratio of total outstanding debt, including SRF loans and any other borrowing (including both senior and subordinate debt) to net assets.
- b. Debt to Net Asset Ratio Target. To ensure financial flexibility in the future, as well as maintain strong credit ratings, the Board of Water Supply will target a Debt to Net Asset Ratio of no more than 50%.

### **4. Debt Service Coverage Ratio**

- a. Description. The Debt Service Coverage Ratio is a measure of financial margin or the amount of funds available to pay debt service, including all borrowings such

as SRF loans, after paying for all operating and maintenance expenses. It is computed as the ratio of net revenues (total revenues less operating and maintenance expenses, plus depreciation) to annual debt service.

- b. Debt Service Coverage Target. The Board of Water Supply may issue debt on either of its senior or subordinate liens. As the senior lien has the first claim on Net Revenues, the Board of Water Supply will maintain a Debt Service Coverage Ratio on senior lien debt equal to or greater than 1.7, with an “all-in” (that is, a Debt Service Coverage Ratio equal to Net Revenues divided by all outstanding debt, regardless of lien) equal to or greater than 1.6.

## ITEM FOR INFORMATION NO. 1

Manager Lau informed the Board that staff will present the proposed Budget for Fiscal Year (FY) 2018 and are seeking the Board Members' input. A public hearing will be held at the May 22 Board meeting and the Board will be asked to take action to adopt the proposed Budget. Mr. Lau stated that it's important the Budget be approved before June 30, so the BWS can continue to operate. Robert Morita, Executive Support Office Executive Assistant, Barry Usagawa, Water Resources Division Program Administrator, and Jason Takaki, Capital Projects Division Program Administrator will give a presentation.

Mr. Morita opened the presentation and Mr. Usagawa continued with the main break pipeline replacement overview. Mr. Usagawa stated that the average rate of pipeline replacement goal is 1 percent or 21 miles per year, which assumes a 100 year lifespan of pipeline. He stated that the American Water Works Association's (AWWA) benchmarking study of 2012 modeled a 1.2 percent amount. Mr. Usagawa said that currently BWS replaces 6 miles of pipeline per year so the question is how to increase it to 21 miles. He discussed pipeline risk scores and main break analysis.

Ms. Sproat asked if AWWA is saying that BWS's target should be a 100 year lifespan. Mr. Usagawa responded yes. Ms. Sproat asked if the projection for 100 years is based on new technology and better pipes because corrosion is a factor in Hawaii. Mr. Lau explained that plastic pipes are being used since it doesn't corrode. He said that there were challenges with PVC pipes failing earlier than expected, but there are some cast iron pipes that are 100 years old or close to it, in the system still in service.

Mr. Usagawa continued by showing a graph that illustrates how many main breaks the system would experience depending on which of five scenarios were selected. He explained all five scenarios and mentioned that scenario 3 would reduce the main breaks to the lowest level (less than 250 per year), but is the most aggressive - most difficult to implement, would place great stress on staff's capability, and the most costly. He stated that the Stakeholder Advisory Group (SAG) and the financial planning consultants were going to model the top three scenarios and did not recommend scenarios 1 (keeping it status quo) and 3.

Mr. Andaya asked if scenario 3 will not even be considered, or if they would model it for comparison. Mr. Lau called on Mr. Carl Lundin of CDM Smith who explained that scenario 3 would involve about a 50 percent rate increase over 10 years, so they didn't plan on modeling it. Mr. Lau stated that BWS will explore scenario 3 if the Board wishes.

Mr. Wong expressed his concern of the SAG making decisions to take things off the table before the Board has any knowledge of it. Mr. Lau stated that this is the reason for today's workshop and the updates given to the Board each month after the SAG meetings, to give the Board opportunities to provide their feedback. Mr. Lau agrees that the SAG is an important part of BWS's efforts, however, they are an advisory group and it's the Board's responsibility to ultimately make the final decisions and to give the Department direction on what should and shouldn't be considered.

Board Member Sasamura asked if scenario 3 targets replacement of transmission lines or replacement of other criteria such as age of the pipeline. Mr. Usagawa replied that it targets the highest priority risks shown in the previous slide. It's a matter of how much pipes to replace and in what timeframe.

Mr. Sasamura inquired about material specifications for replacement pipes. He asked if there are specific specifications for cast iron pipes and if it matters what country manufactures these pipes. Mr. Lau replied that cast iron pipe is no longer made so the new product is ductile iron. To help moderate corrosion, the manufacturers use a cathodic protection technique. Mr. Lau said that staff had discussion about placing a zinc anode bag in the trench where the main break repair was to help protect at least that segment of pipe. Mr. Usagawa added that specific materials should be used for special applications like freeway crossings and inundated areas for sea level rise.

Ms. Sproat stated that Mr. Lundin mentioned the rate increase for scenario 3 was about 50 percent and asked if he remembers what it would be for scenarios 2, 4, and 5. Mr. Lundin said he believes it was 9 percent, 16 percent and 19 percent, respectively, but he will get the actual numbers to the Board. He clarified that these percentages are not annual, but are over the 10 years. Mr. Lau cautioned the Board that these are very rough estimates until a more detailed cost of service study and rate making analysis is done. Mr. Andaya stated that it seems the Board would like further detail on scenario 3.

Mr. Wong gave some history about the time the Board adopted the prior rate increases. He said that the rate increase was 50 percent over five years, replacing about three miles of pipe per year. He stated that the constraints back then, and now, is how much the public is willing to absorb for the rate increase and the major constraint is the staff's ability to execute the projects. He asked if this constraint has been removed in order to replace 21 miles of pipe per year. Mr. Lau stated that it's a work in progress, and that the Capital Projects Division will give their update at the next Board Meeting and will give an update on what BWS is doing to build more capacity. Mr. Lau explained that it's been challenging to execute all of the projects, but he feels BWS has made progress.

Deputy Manager Kitamura added that to ramp up capacity, the Capital Projects Division hired someone to help in both the construction and design areas to improve processes. As far as staffing, BWS implemented a program two years ago to hire lower level construction aides, needing only minimum requirements to qualify. They are trained and have the ability to be reallocated to assistant construction inspectors after a year, if progress is shown. BWS is also hiring more engineers.

Mr. Lau said that Mr. Wong hit an important point about having the capacity to deliver the projects. BWS wants to be sure the rate increases the customers need to incur for the capital program do not exceed the costs of the projects that BWS has the ability to execute.

Mr. Wong stated that this is a way better process provided to the Board than six years ago, and he expressed his appreciation for the planning that has gone into this to keep the Board way more informed. He thanked everyone for a good job. Mr. Lau said that it's been a team effort with the staff and consultants and thanked the Board for their support. Mr. Andaya thanked Mr. Wong for the historical background.

Mr. Usagawa noted that there's a sector of the public that has been asking what it will take to get the main breaks down, so modeling scenario 3 makes sense in terms of cost, but since there's been a decreasing trend of main breaks, the question could be why there would be a need to ramp up so quickly.

Mr. Lau conveyed that while the focus is largely on the Capital Projects Division because it does the design and construction of the water system improvements, it is an organizational effort with the support of the other divisions and offices.

Mr. Morita continued with the presentation on the operating budget. Following his presentation, Mr. Wong asked if BWS is hopeful to fill all of the funded vacant positions. Mr. Morita said they are hopeful and explained that they went to each division, showed them the list of vacancies and asked when they anticipate filling them. By doing this process, they reduced the salary amounts from FY 2017. Mr. Wong asked if by doing this, will BWS be on budget. Mr. Morita replied that it will be better, and they will be better able to follow up with the divisions with this documentation. Mr. Lau added that this is an evolving process and they'll see how they perform in FY 2018 and tighten up more in FY 2019 if necessary.

Mr. Takaki gave the presentation on the Capital Improvement Program Budget. Following his presentation, Ms. Sproat asked how the State Revolving Fund (SRF) would be impacted by cuts to the State Department of Health (DOH) as a result of reduced federal funding from the U.S. Environmental Protection Agency (EPA). Mr. Lau replied that it remains to be seen because the EPA is going through a budget reduction and a number of positions at the DOH are federally funded. Ms. Kitamura added that BWS's strategy to take advantage of the SRF is to designate projects in the budget as SRF eligible and ensure all requirements are fulfilled for the projects to be SRF eligible. BWS can then pay for the projects through the operating budget, proceed with the projects, then submit invoices to DOH and receive reimbursement.

Mr. Morita added a comment to his response to Mr. Wong regarding salaries. He stated that what is not built into the budget is settlements from the Hawaii Government Employees Association (arbitration awards), so any increased salaries for FY 2018 will come from the bottom line salaries allotted in the budget. Mr. Morita stated that he is 100 percent confident that those costs can be covered. Mr. Wong congratulated everyone.

Mr. Morita concluded the presentation. Mr. Wong asked if the rail construction has diminished BWS's ability to serve its mission. Mr. Lau responded that rail is the largest capital improvement program for the entire state of Hawaii and it involves a lot of contractors, but Mr. Lau does not know if that is having impact on construction bids. Mr. Lau does know that rail will add a lot of workload to BWS like reviewing of drawings, utility relocations, etc. Also, HART has not offered to help defray costs related to the rail project, so BWS will have to absorb the costs. Mr. Morita stated that they are seeing a slight increase in the number of bidders coming in.

Mr. Andaya commented that he is very pleased with the BWS staff and for placing emphasis on infrastructure, especially reducing main breaks, and also for the upgrades to the MXU units that read the meters to prevent problems that occurred in the past. Mr. Andaya also stated that the Board and Department will work together to get the budget implemented.

There were no further questions by the Board. Mr. Lau thanked the Board and the staff.

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City and County of Honolulu

# **FY 2018 Budget Workshop**



**Board of Water Supply**  
**May 8, 2017**



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# Agenda

- Opening Remarks
- The Big Picture
- Operating Budget
- Capital Improvement Program Budget
- Summary



## The Big Picture

- The Water Master Plan provides a comprehensive understanding of Oahu's water supplies, water needs and the water system.
- Meeting the goals of the plan will be challenging as the level of investment will need to increase as the infrastructure ages.



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# **Main Break Pipeline Replacement Overview**



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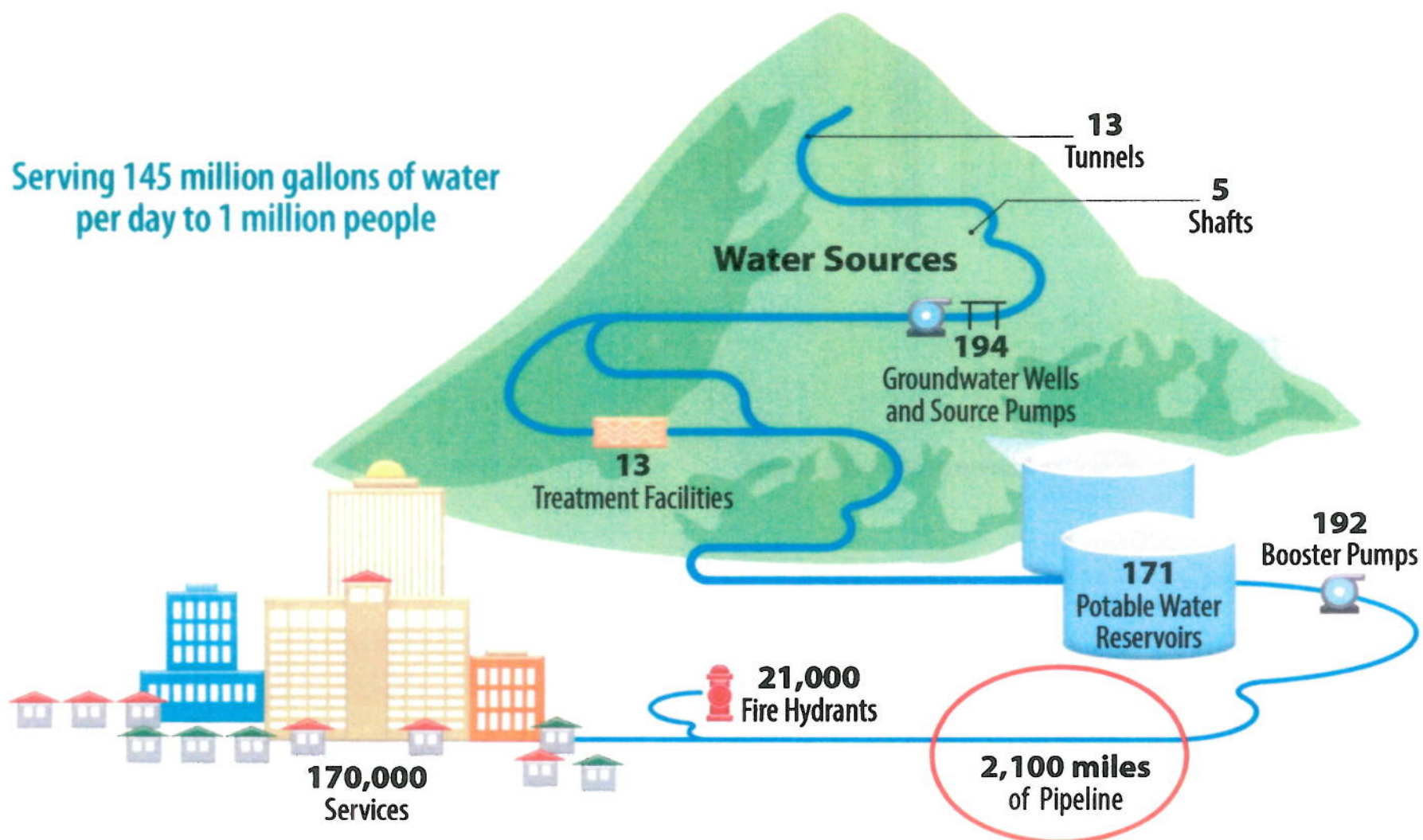
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## The BWS Water System is Large and Complex

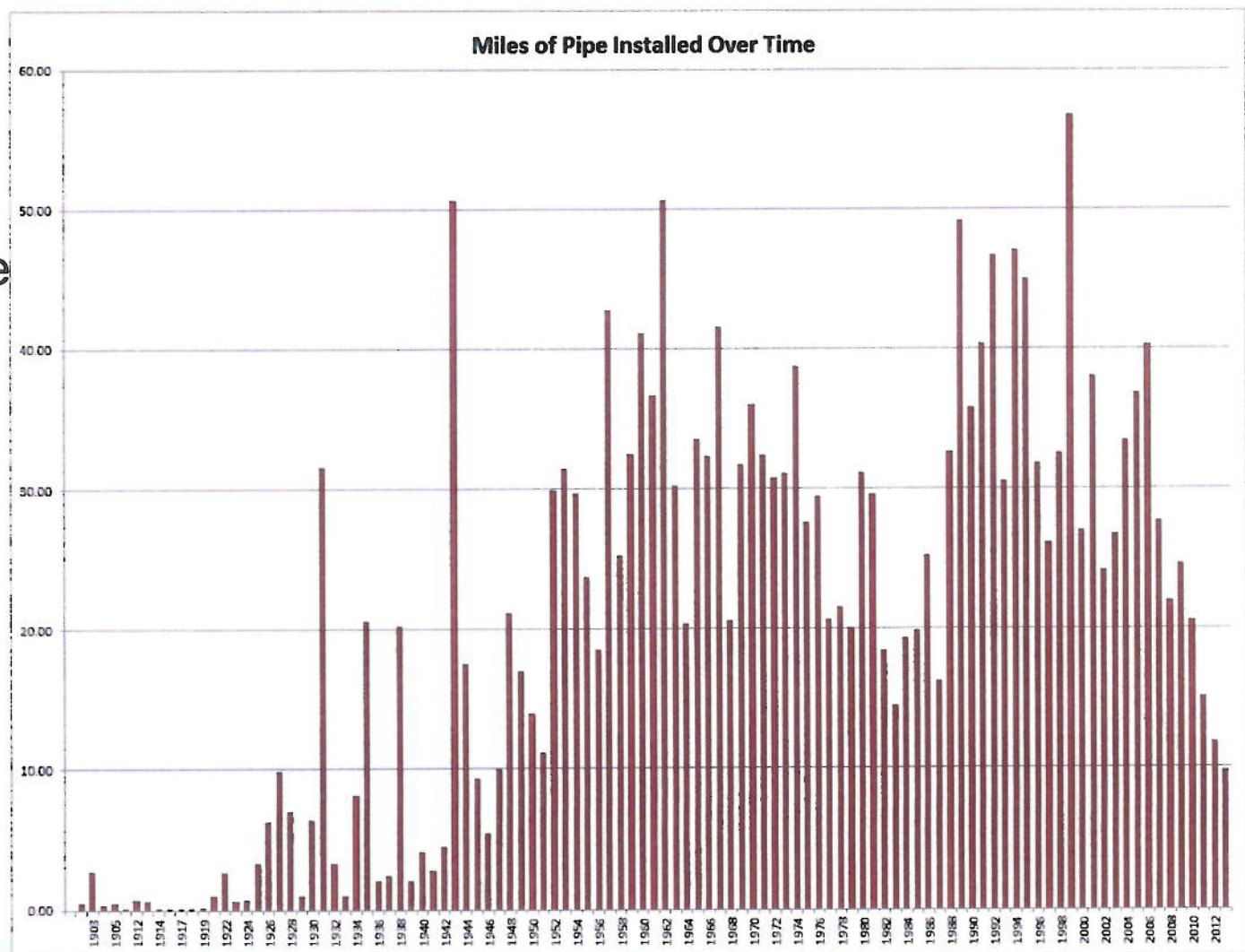
Serving 145 million gallons of water  
per day to 1 million people





## BWS Pipeline Build-Out History 1900-Today

- BWS installed pipe by date and miles
- Mixture of pipe materials
- Average pipe age is 40 years



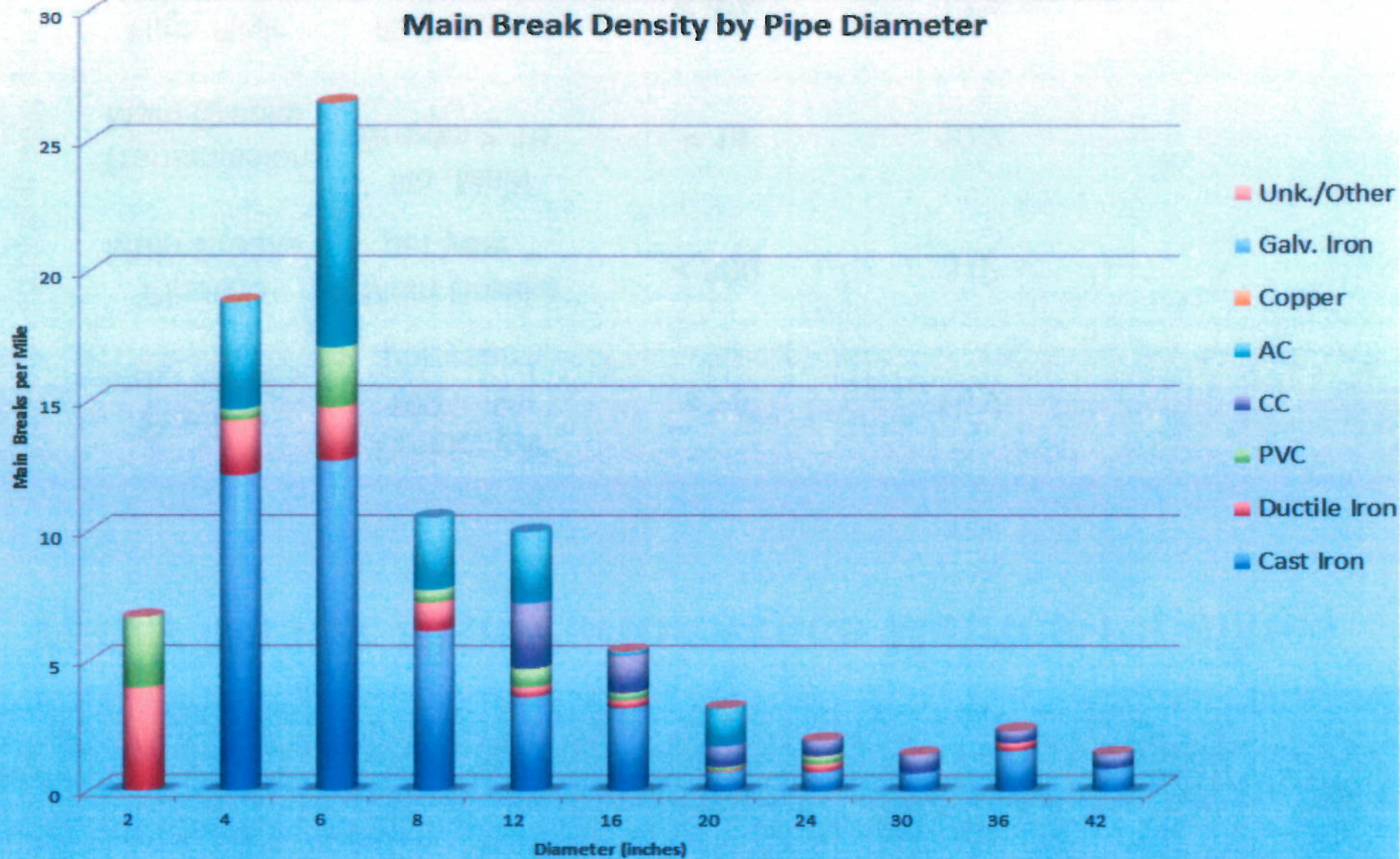
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## Main Break Density by Pipe Diameter





## Water Master Plan Performance Metrics-Pipelines

Indicator	Metric	Goal	Actual (2016)	Performance
Pipeline Main Breaks	Breaks per 100 miles per year *	< 15	15.2	●
Pipeline Main Breaks	Main Breaks per year *	< 300	312	●
Transmission Main Breaks	No. Main Breaks $\geq 16"$ *	< 14	10.7	●
High Risk Pipelines	Risk Score > 400	< 5%	12%	●
Pipeline R&R	Miles of Pipe Renewed *	21	10	●

How much pipe should be replaced?

\*(3 yr avg)



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## Current Outlook

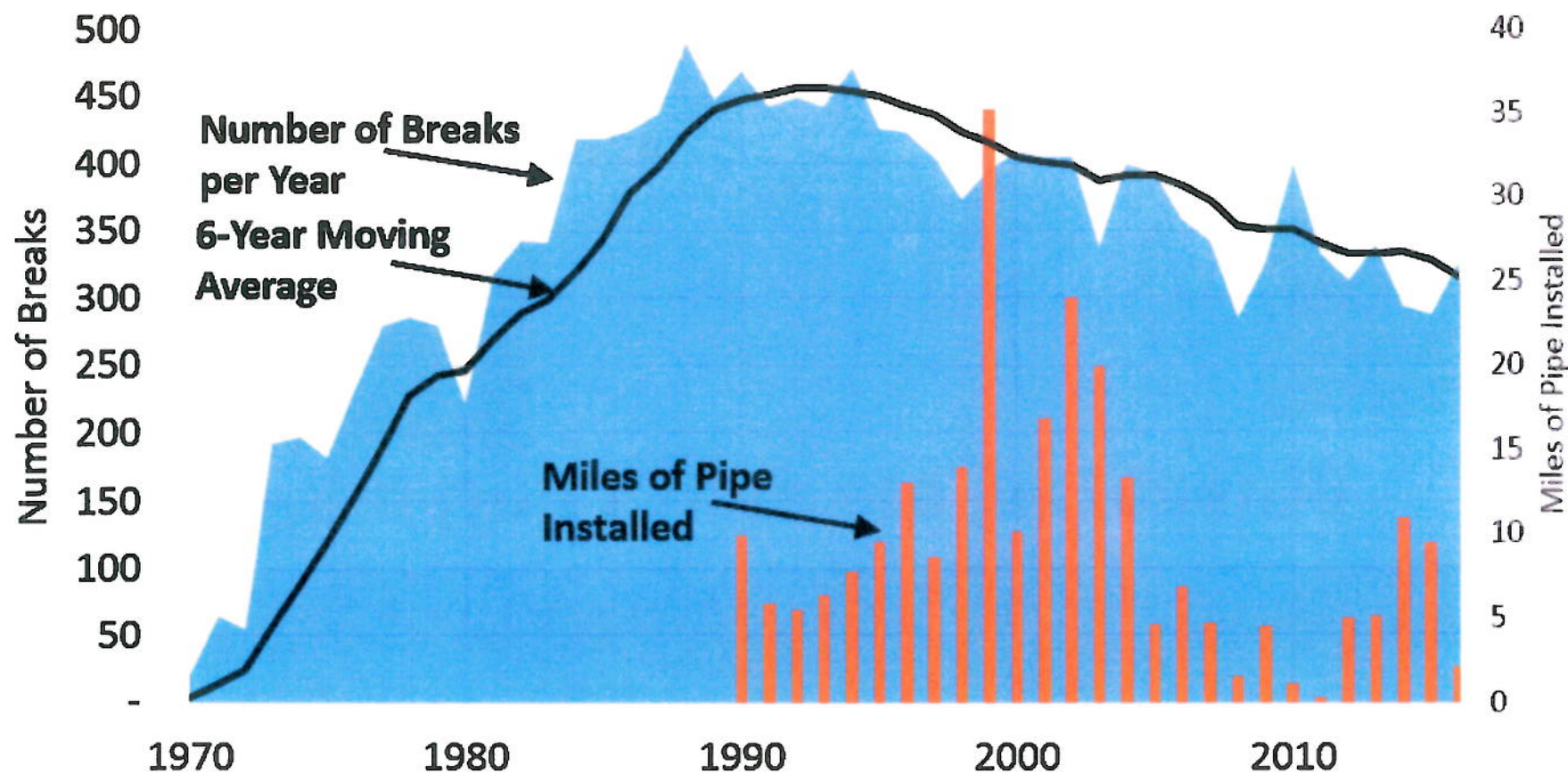
**312 Breaks**  
(3 yr avg)

**Trend**

**On Par ✓**  
(AWWA Guidance)

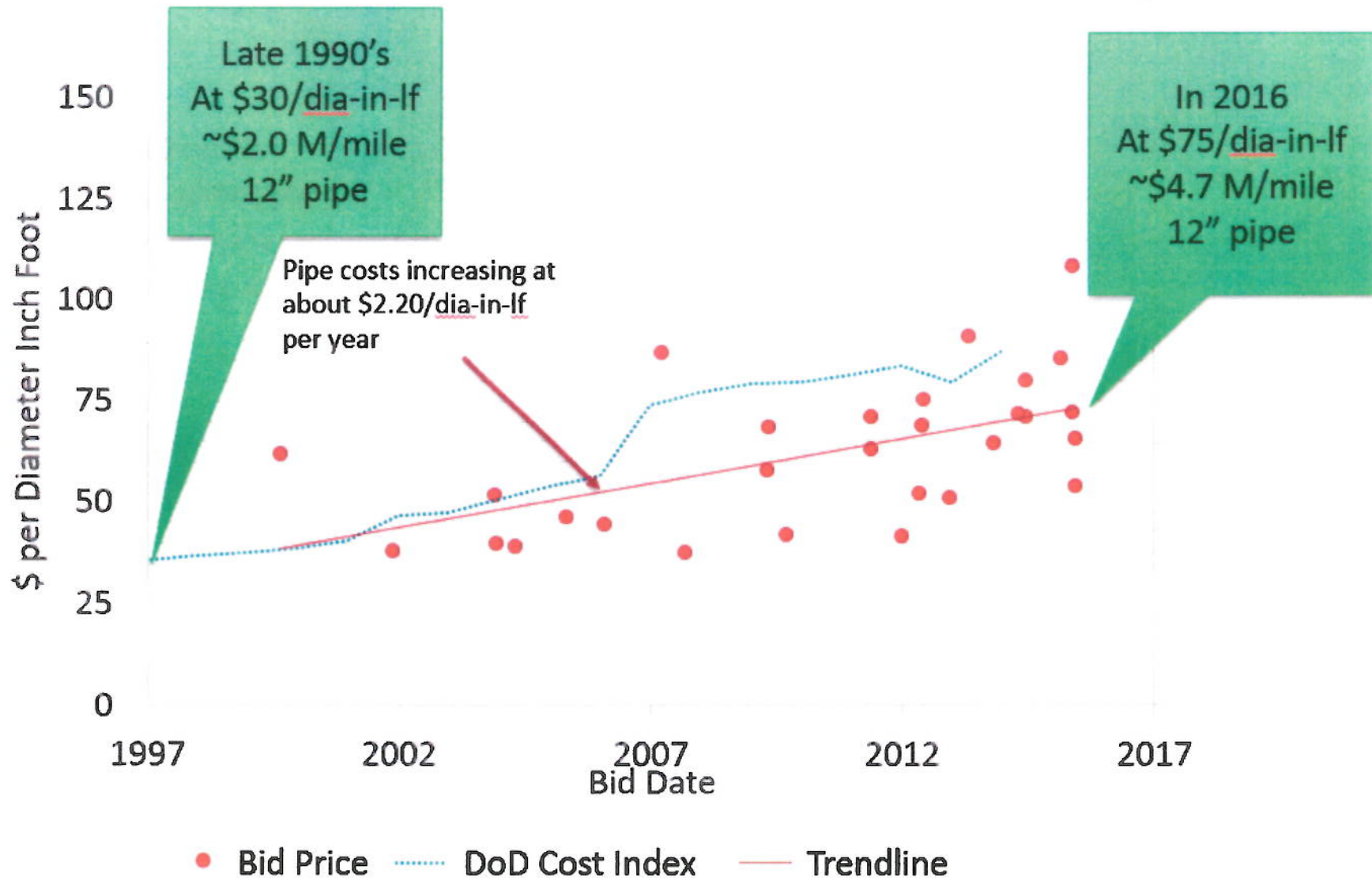
**40 Years**  
(avg pipe age)

**R&R Rate**  
(Below AWWA Guidance)





## Pipe Unit Costs are Increasing





## The Average Rate of Pipeline Replacement Goal is 1% or 21 miles/year

100 Year Lifespan

1.0% (20.6 mi/yr)

AWWA Benchmarking 2012

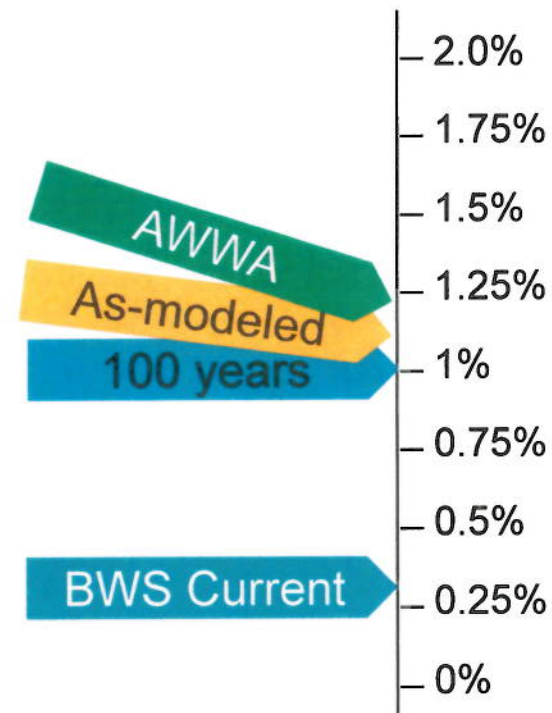
median 1.2% (24.7 mi/yr)

BWS As-Modeled Lifespan

1.1% (21.9 mi/yr)

BWS Current Rate

0.3% (6 mi/yr)



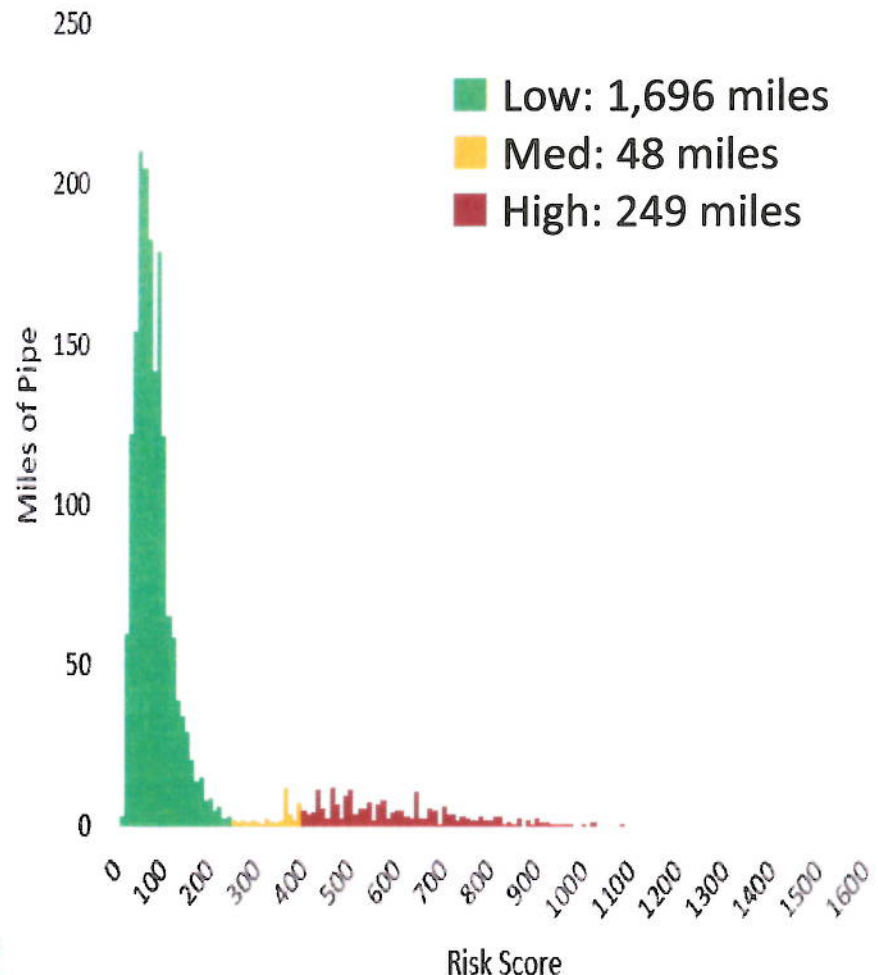


## CapPlan Pipeline Risk Scores

Which pipes should be replaced?

- Range from 13 to 1,666
- Low < 250, High > 400
- Value is based on scores for criteria developed specific to BWS
- If the high risk pipelines were replaced, main breaks will decrease
- How long will it take to replace the ~10% or 249 miles of high risk pipelines

Risk Histogram (10 pt buckets)



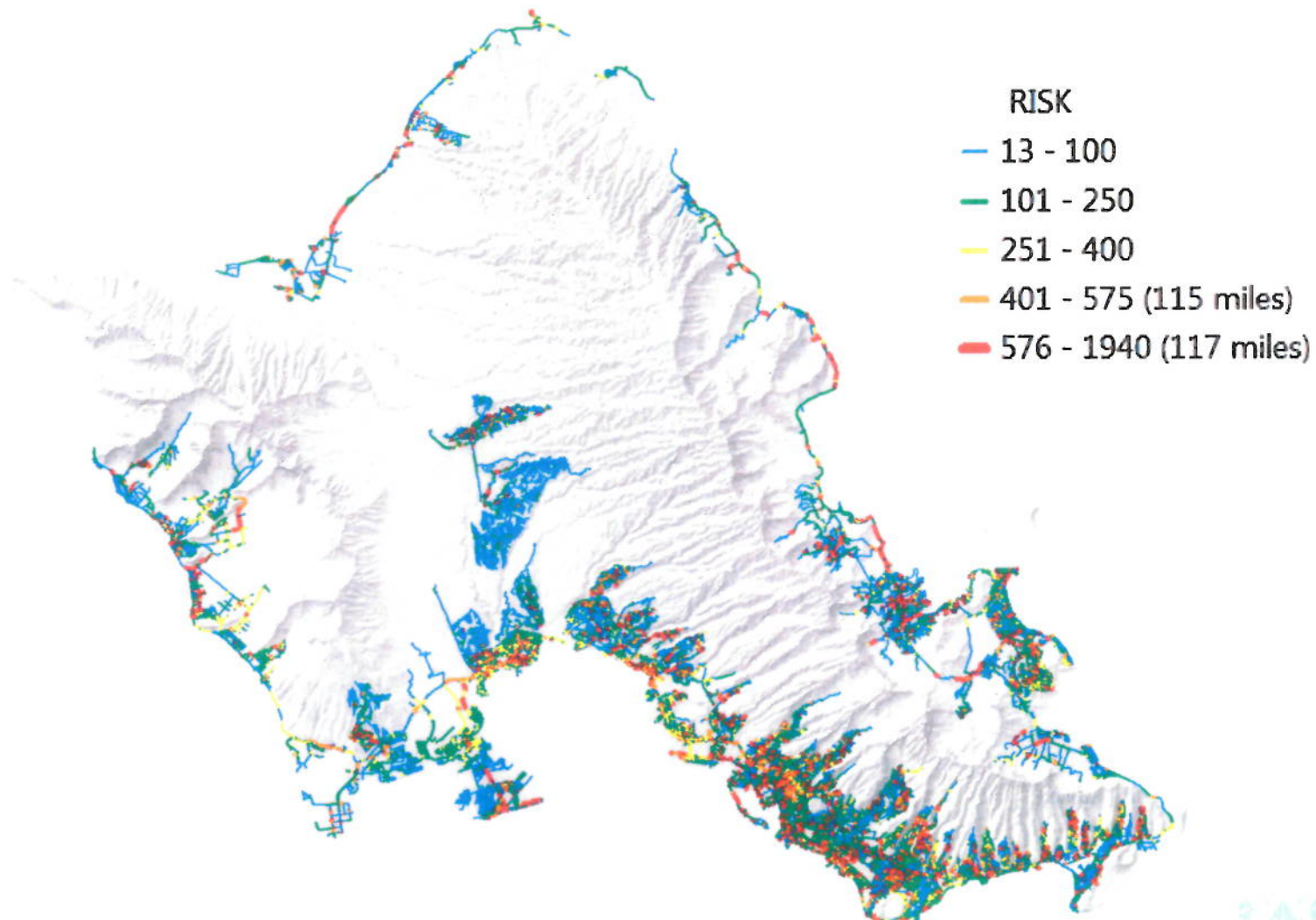
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## Pipeline Risk Scores Island-wide





## Goal of Projections

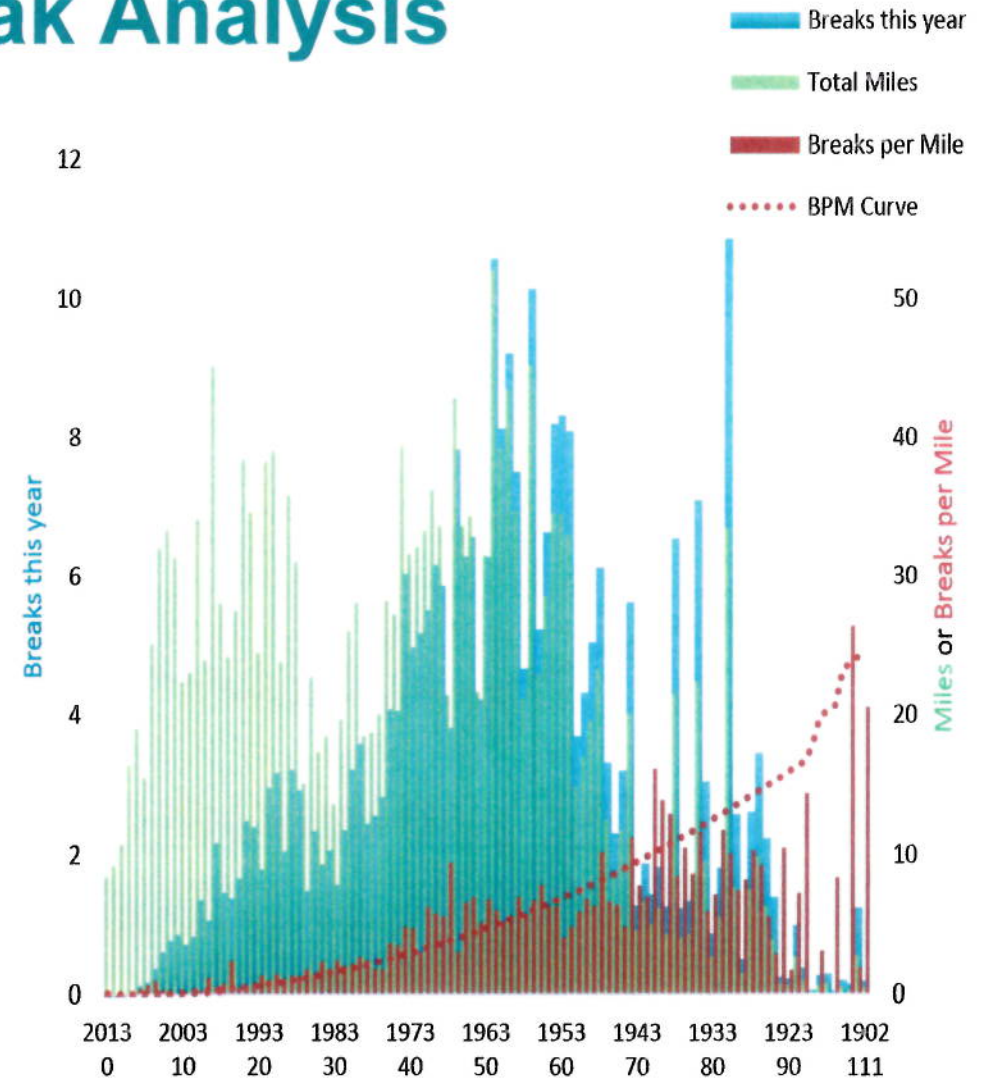
- Forecast main breaks for various financial planning scenarios
- Understand the effect of pipeline replacement rate (and thus CIP \$) on break rate
- Utilize BWS data rather than industry-estimated design lives





## Main Break Analysis

- Keeping breaks under control
  - Using BWS break data, made simple model looking only at pipe age.
  - Slope of curve equals break rate for pipe of that age.
  - Using this equation, project break rates into the future under various scenarios.



How much pipe should be replaced?



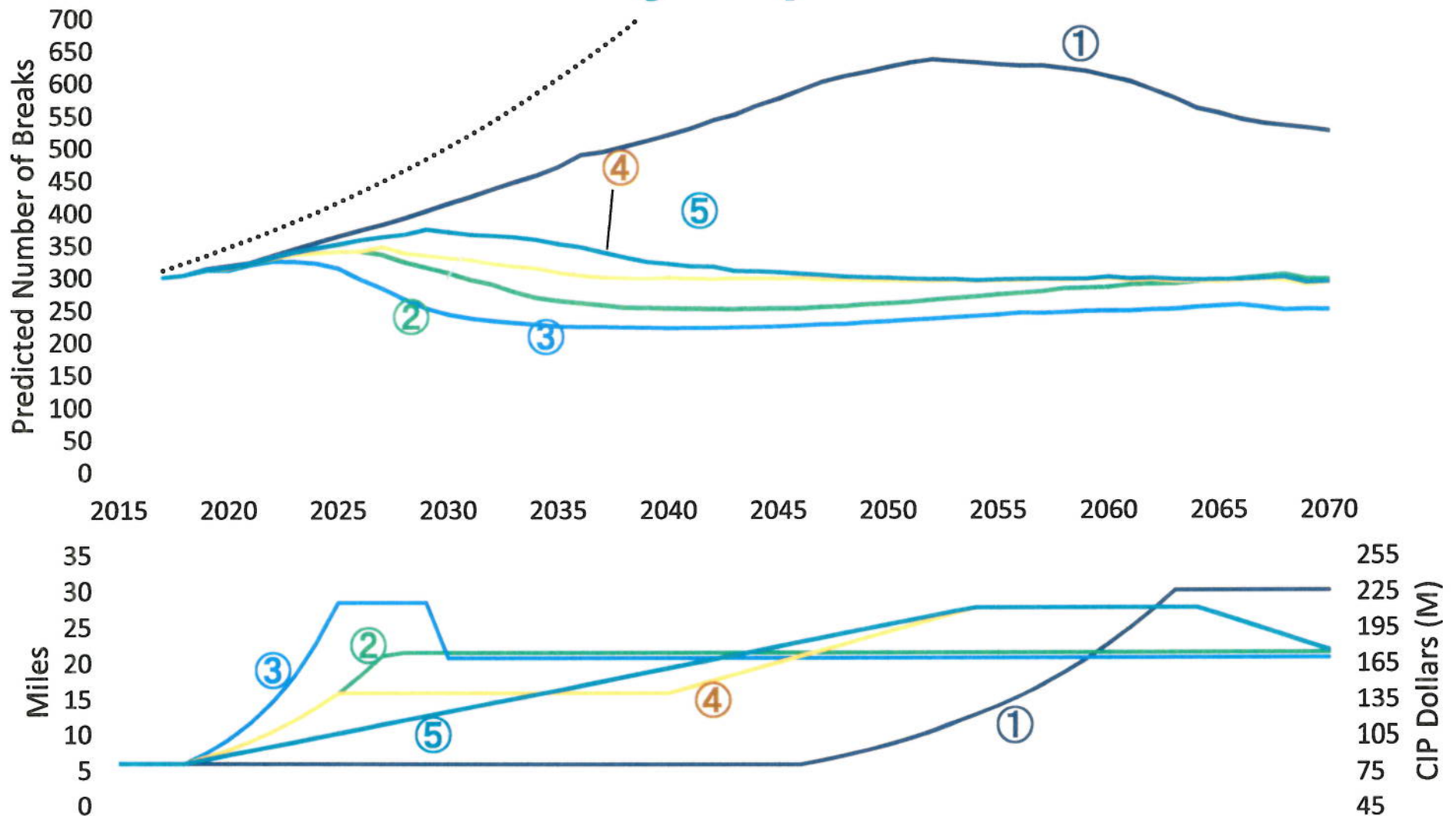
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## Break Prediction by Replacement Scenario



① Status Quo ② Ramp up to 21+ Miles ③ Reduce Main Breaks ④ Target 300 Main Breaks ⑤ Slow Ramp-up

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# **FY 2018 Operating Budget**



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## Operating Fund Revenue Expenditure Summary

(millions of dollars)

	FY 2017	FY 2018	Change	
	<u>Adopted</u>	<u>Proposed</u>	<u>\$ Mil.</u>	<u>%</u>
Revenues	\$230.8	\$236.5	\$5.7	2.5%
Total Operating Expenditures	\$210.9	\$191.5	\$-19.4	-9.2%





## Operating Fund Resources and Expenditures

(millions of dollars)

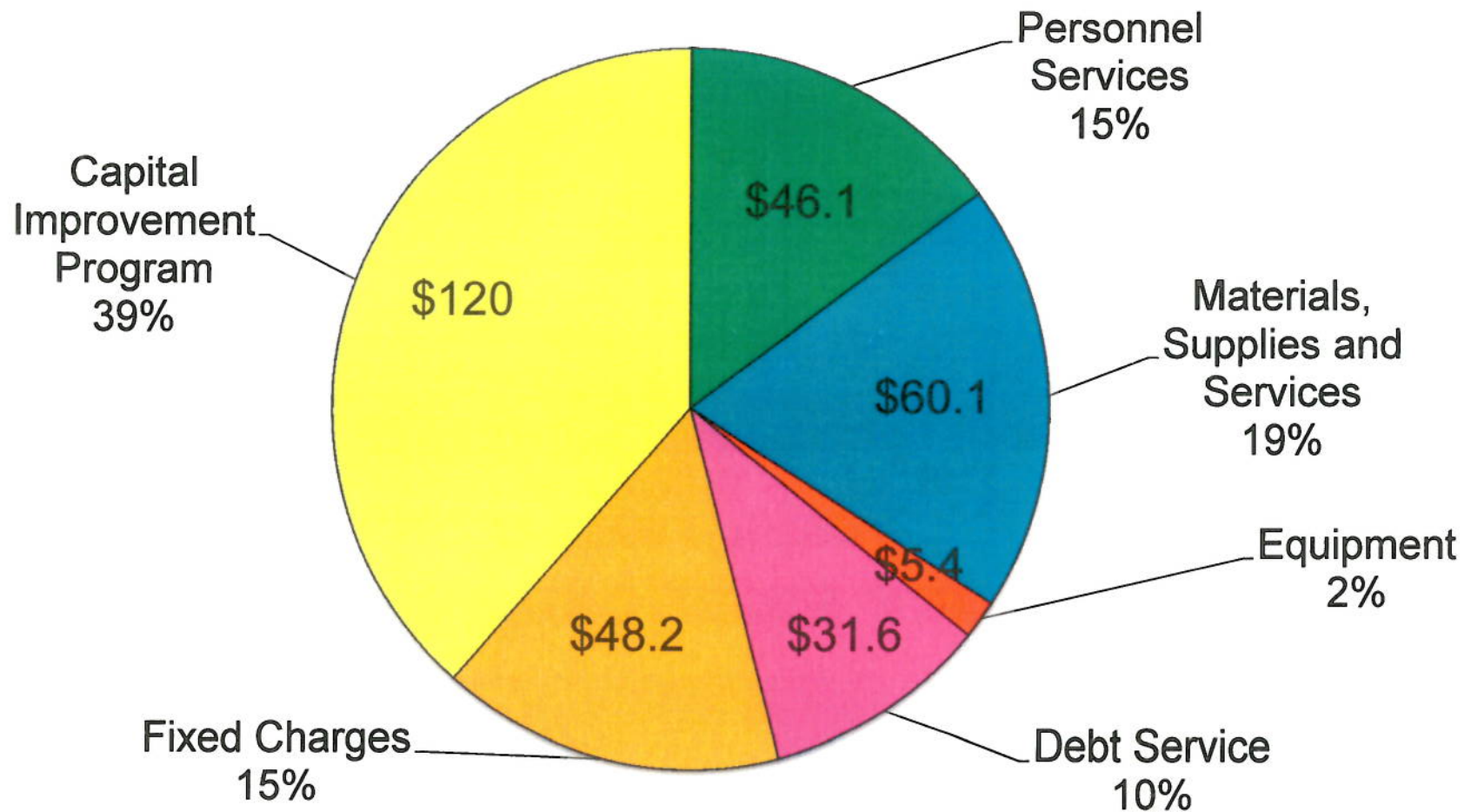
	FY 2016	FY 2017	FY 2018
	Actual	Estimated Actual	Budget
<b>Beginning Balance</b>	<b>\$ 76.9</b>	<b>\$110.3</b>	<b>\$ 107.7</b>
Revenues	239.3	235.4	236.5
Lapses/ Adjustments	5.3	6.4	-
<b>Total Resources</b>	<b>321.4</b>	<b>352.1</b>	<b>344.3</b>
Operating Expenditures	152.3	170.0	191.5
Capital Improvement Program	58.8	74.4	119.9
<b>Total Expenditures</b>	<b>211.1</b>	<b>244.4</b>	<b>311.4</b>
<b>Ending Balance</b>	<b>110.3</b>	<b>\$107.7</b>	<b>\$ 32.8</b>





## Operating Budget Expenditures for FY 2018

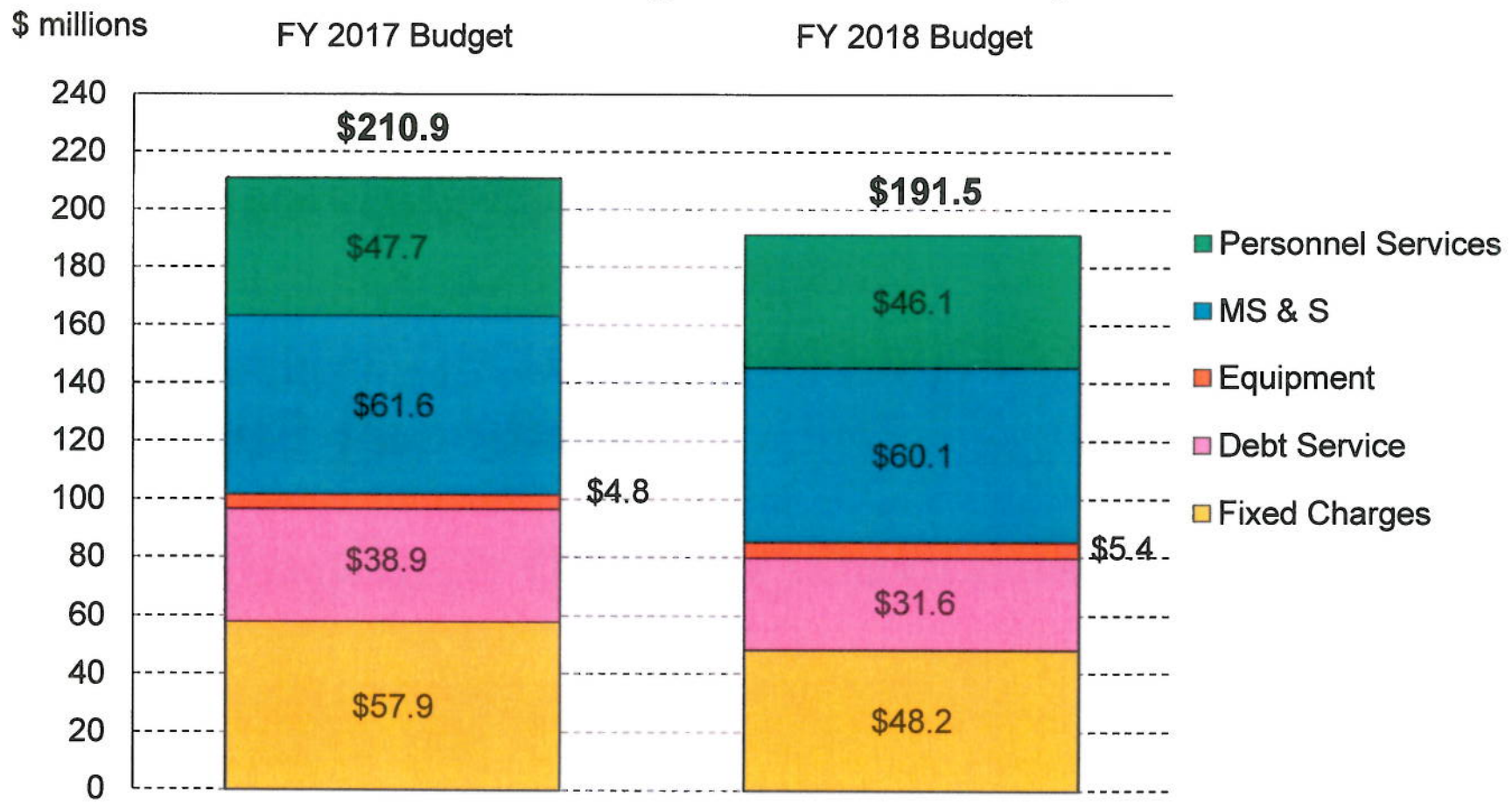
Total budget = \$311.4 million





## Operating Budget Expenditures

### FY 2017 Budget vs. FY 2018 Budget





## Highlights of the Operating Budget

### Operating Expenses:

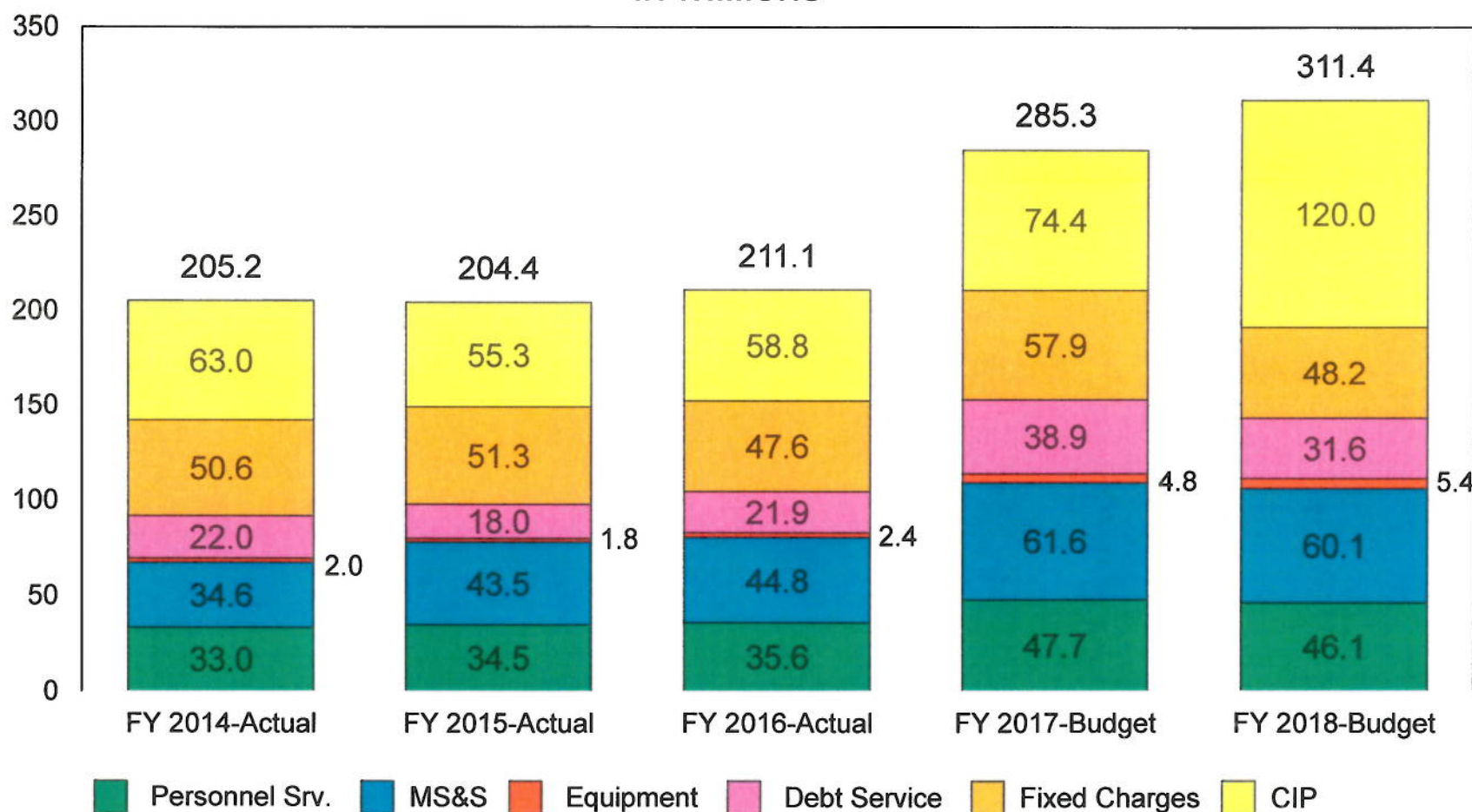
- \$8.2 million decrease in electricity costs (from \$30.1 million to \$21.9 million)
- \$3 million reduction for Other Post-Employment Benefits (OPEB) contributions (from \$6 million to \$3 million)
- \$1.9 million decrease in the purchase of meters
- Majority of funding for AMR in the operating budget moved to the CIP





## Operating Fund Expenditures

in millions





## Revenues

- Water sales are projected to be relatively flat over FY 2017 Budget-Estimated.

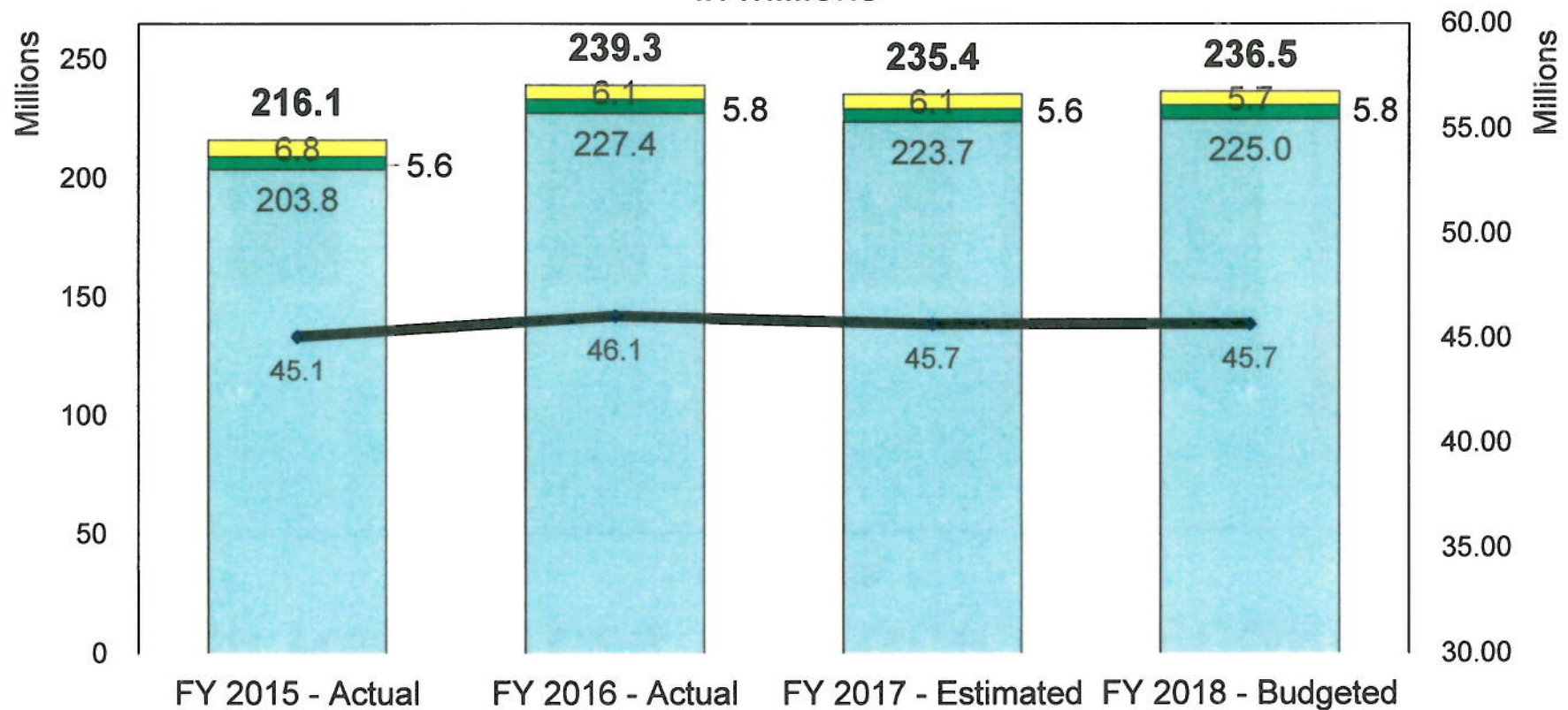
The FY 2018 projection is primarily due to stable potable water consumption in the near term.





## Operating Fund Revenue

in millions



■ Metered Sales - Potable & Non-Potable  
■ Other Revenues

■ Metered Sales - Recycled  
—●— BILLED CONSUMPTION (kgal)



# WATER FOR LIFE

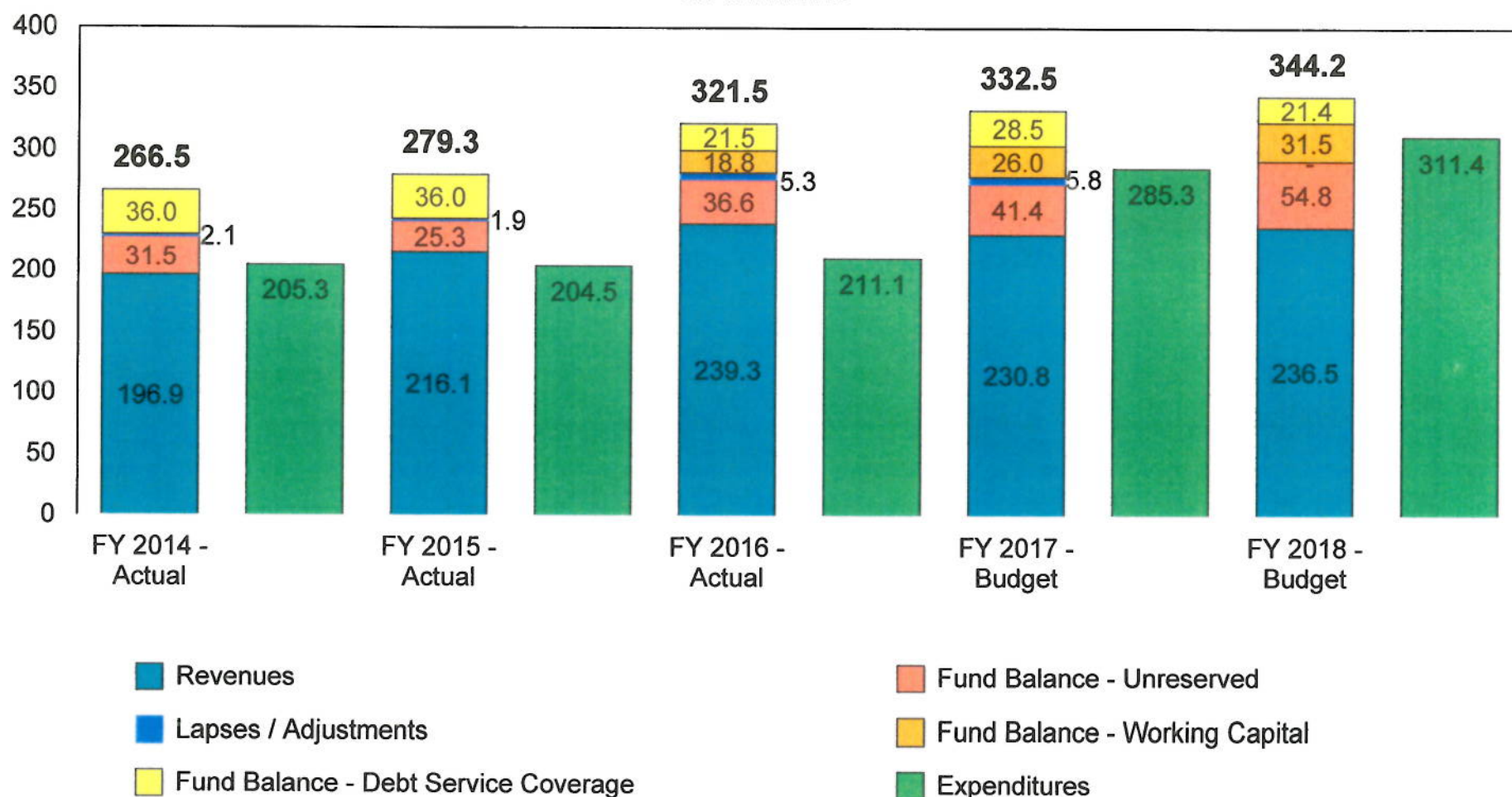
*Safe, dependable, and affordable water now and into the future*



Board of Water Supply  
City and County of Honolulu

## Total Resources vs. Total Expenditures

in millions





## Debt Service

- \$7.2 million decrease in debt service payments in FY 2017, \$16 million in SRF loans was retired and in FY 2018 only \$9.8 million is planned to be retired

This will provide greater borrowing capacity to utilize current SRF loans that are currently charging zero percent interest and one percent administrative fees.



**WATER FOR LIFE**

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



**Board of Water Supply**  
City and County of Honolulu

U W E   K A   L A N I   O L A   K A   H O N U A

**FY 2018**

# **Capital Improvement Program Budget**



**WATER FOR LIFE**

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



Board of Water Supply  
City and County of Honolulu

## **FY18 CIP**

- Supports the BWS mission of **Water For Life: Safe, dependable and affordable water now and into the future**
- Aligned with the BWS Strategic Plan 2018-2022, Divisions' Goals & Objectives and the Six-Year Capital Improvement Program



**WATER FOR LIFE**

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



Board of Water Supply  
City and County of Honolulu

# Program Categories

Research and Development

Renewal and Replacement

Capacity Expansion

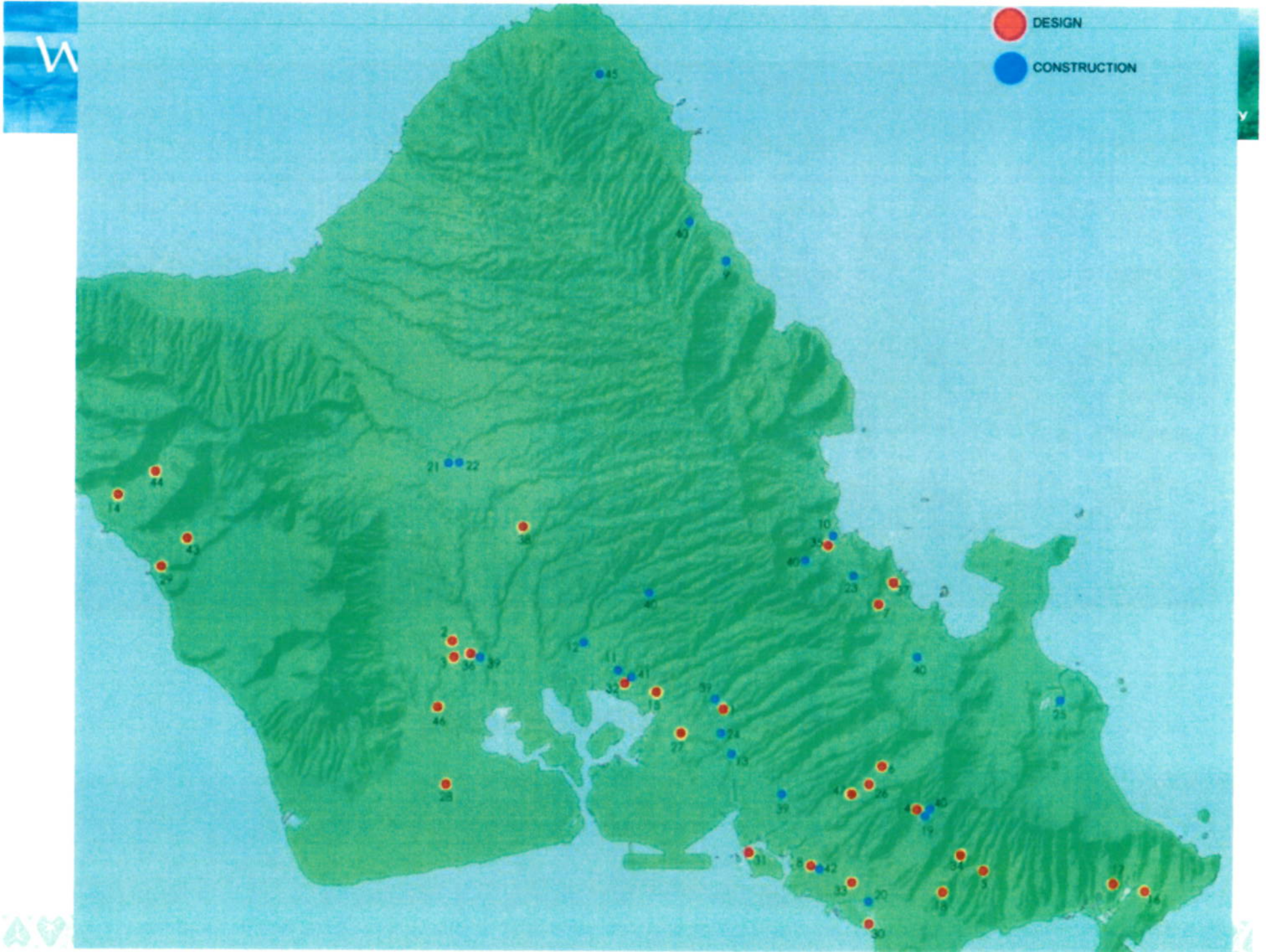




## Capital Improvement Program Budget FY 2018

	Categories	Operating Fund	Operating Fund (SRF Eligible)	Special Expendable Fund	Reserve Release Fund	Total
I.	Research & Development	\$ 5,525,000				\$ 5,525,000
II.	Renewal & Replacement	53,708,000	30,962,700		737,300	85,408,000
III.	Capacity Expansion	585,000		21,250,000		21,835,000
	Sub-Total	59,818,000	30,962,700	21,250,000	737,300	112,768,000
	Adjustment	24,542,795	4,644,405	2,385,000		31,572,200
	Total	\$ 84,360,795	\$ 35,607,105	\$ 23,635,000	\$ 737,300	\$ 144,340,200







## Project Category Highlights

### Research and Development (\$5.5 million)

- Beretania Site Master Plan
- Construction Management for Various BWS Construction Projects
- Project Management for Various BWS Projects
- Nuuanu Hydro-Electric and Managed Aquifer Recovery Study and Environmental Assessment





## Project Category Highlights

### Renewal and Replacement (\$85.4 million)

- Waihee Line Booster Renovation
- Punanani Wells System Improvements
- Pearl City Wells II System Improvements
- Moanalua Wells: Replacement of Pump No. 1
- Pump Renewal and Replacement





## Project Category Highlights

### Renewal and Replacement (continued)

- Water Meter Transponder Replacement – Phase I
- Facility Repair and Renovation
- Beretania Engineering Building Window Replacement
- Security Enhancements for BWS Corporation Yards
- Waimalu Wells I Site Drainage Improvements





## Project Category Highlights

### Renewal and Replacement (continued)

- Water Main Replacement
  - Pipeline tunnel rehabilitation – Moanalua and Quarry Tunnels
  - Main replacement construction in Moiliili, Manoa, and Kaneohe
  - Main replacement design in Waikiki, Sand Island, Nuuanu, Moanalua, Foster Village, Pearl City, Kaneohe, Kapolei, and Waianae





## Project Category Highlights

### Capacity Expansion (\$21.8 million)

- Ewa Shaft Tunnel Improvements
- Kahuku Wells Unit No. 3
- Pacific Heights Booster No. 1

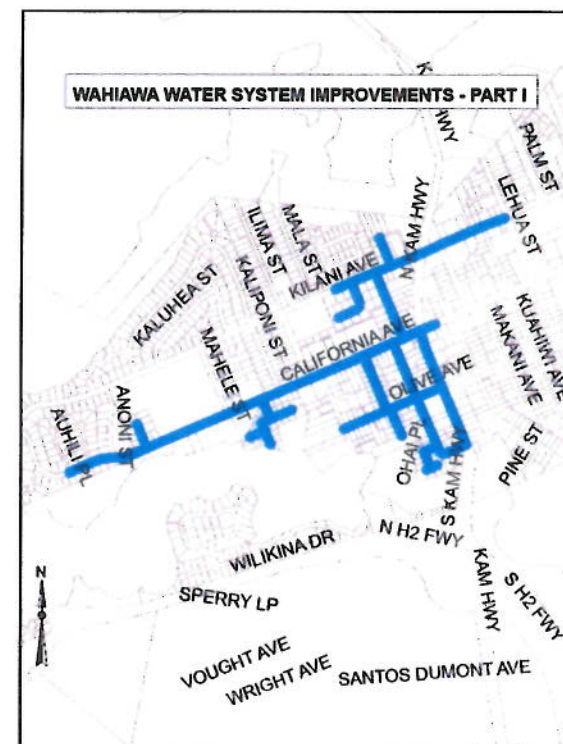
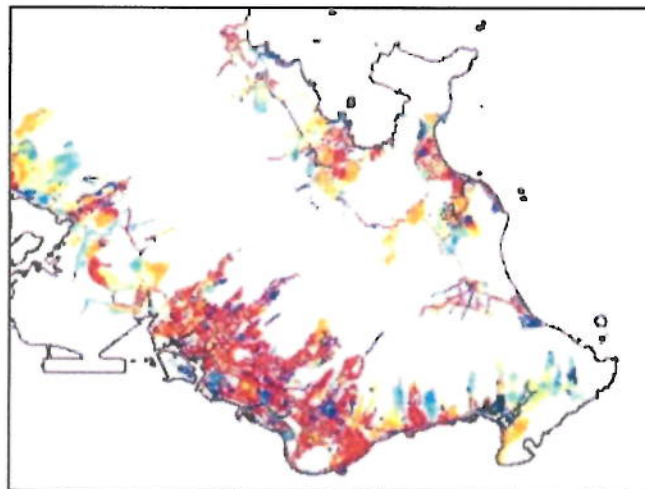




## Project Category Highlights

### Capacity Expansion (continued)

- Water main upsizing
  - Wahiawa Water System Improvements, Part IA
  - Wahiawa Water System Improvements, Part III

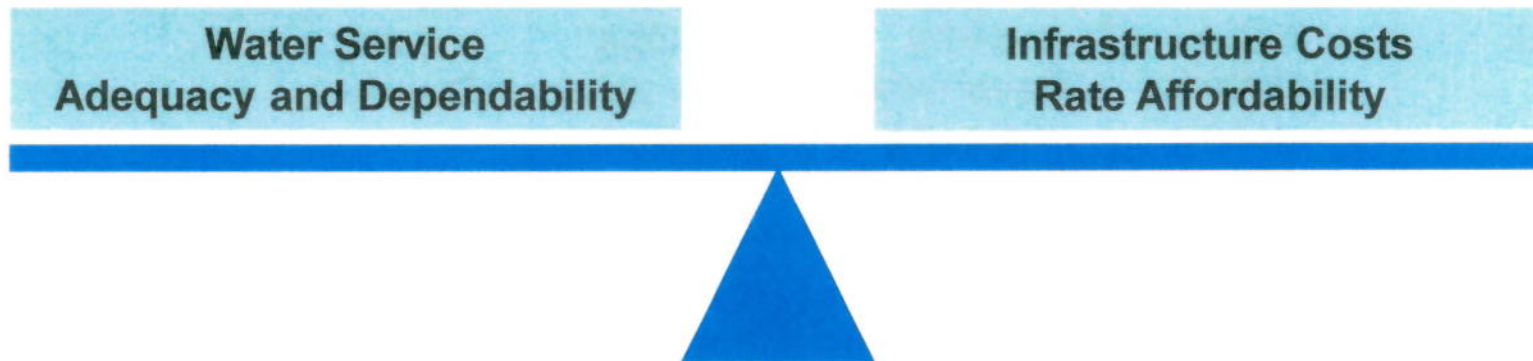


# WATER FOR LIFE

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



Board of Water Supply  
City and County of Honolulu



# WATER FOR LIFE

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



Board of Water Supply  
City and County of Honolulu

## FY 2018 Operating and Capital Improvement Program Budget Summary

	Operating Fund	Operating Fund – SRF Eligible	Special Expendable Fund	Reserve Release Fund	Total
Operating Budget	\$191,468.692	---	---	---	\$191,468,692
Capital Improvement Program Budget	\$84,360,795	\$35,607,105	\$23,635,000	\$737,300	\$144,340,200
Total	\$275,829,487	\$35,607,105	\$23,635,000	\$737,300	\$335,808,892



# **BOARD OF WATER SUPPLY**

City and County of Honolulu  
Honolulu, Hawaii



## **2018 BUDGET**

For the Fiscal Year Beginning July 1, 2017 and  
Ending June 30, 2018

**BOARD OF WATER SUPPLY  
City and County of Honolulu**

**OPERATING AND CAPITAL IMPROVEMENT PROGRAM BUDGET  
For the Fiscal Year Beginning July 1, 2017 and Ending June 30, 2018**

**BOARD MEMBERS**

Bryan P. Andaya, Chair

Adam C. Wong, Vice-Chair

David C. Hulihee, Member

Kapua Sproat, Member

Kay C. Matsui, Member

Ross S. Sasamura, Ex-Officio

Ford N. Fuchigami, Ex-Officio

SUBMITTED BY:

APPROVED:

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

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BRYAN P. ANDAYA, Chair  
May 22, 2017

May 22, 2017

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

Chair and Members:

In accordance with Section 7-106(i), Revised Charter of the City and County of Honolulu, we submit for your review and approval the proposed Operating and Capital Improvement Program Budget for fiscal year July 1, 2017 to June 30, 2018.

### **FINANCIAL PLAN**

The proposed Operating Budget for FY 2018 is based upon total operating fund resources of \$344.3 million, to be derived from operating revenues of \$236.6 million and an estimated carryover balance from FY 2017 of \$107.7 million. The carryover balance results from the estimated operating fund balance that is unappropriated. The unappropriated fund balance is composed of a minimum fund reserve required to maintain its recommended debt service coverage of \$30.3 million, working capital amount of \$31.5 million, and an unreserved fund balance of \$45.9 million. The proposed operating fund expenditure allocations are \$191.5 million for operating expenses and \$119.9 million for the Capital Improvement Program (CIP) Budget. A projected ending balance of \$32.8 million will be unappropriated.

The proposed CIP budget totals \$144.3 million and is funded by \$120 million from the Operating Fund; \$23.6 million from the Special Expendable Fund; and \$737 thousand from the Reserve Release Fund. Of the \$120 million in Operating Funds proposed for the CIP, \$35.6 million is eligible for participation in the State of Hawaii, Department of Health State Revolving Fund (SRF) loan program. The SRF loan program currently offers zero interest rate loans and low administrative fees.

## **PART I. OPERATING BUDGET**

Following are summaries of the proposed revenues and expenditures for the next fiscal year as well as the corresponding figures for the preceding two fiscal years.

### **A. REVENUES**

For FY 2018, we are projecting total revenues of \$236.5 million; which is \$5.7 million or 2.5 percent more than total revenues budgeted for FY 2017. No water rate increases are programmed for FY 2018 and the 2.5 percent increase in revenue is due to increasing trend in metered sales revenue.

<u>Revenue Sources</u>	<u>FY 2016 Actual</u>	<u>FY 2017 Budgeted</u>	<u>FY 2018 Budgeted</u>	<u>Percent Change FY 2018 Over FY 2017</u>
Metered Sales:				
Potable and Non-Potable Water	227,382,000	220,000,000	225,000,000	2.3%
Recycled Water	5,806,000	5,606,000	5,809,500	3.6%
Other Revenues	<u>6,079,000</u>	<u>5,196,000</u>	<u>5,740,000</u>	<u>10.5%</u>
Total Revenues	<u>239,267,000</u>	<u>230,802,000</u>	<u>236,549,500</u>	<u>2.5%</u>

### **Metered Sales – Potable Water and Non-Potable**

Potable and non-potable water sales are projected to increase by \$5 million or 2.3 percent over the FY 2017 budget amount to \$225 million. This increase is primarily due to an increasing trend in potable water consumption due to population growth, current billing trends and a conservative revenue estimate in the FY 2018 budget.

### **Metered Sales – Recycled Water**

Recycled water sales at \$5.8 million is projected to increase by 3.6 percent when compared to the FY 2017 budgeted amounts due to projected increased usage.

### **Other Revenues**

Other Revenues of \$5.7 million will be \$544 thousand higher than the FY 2017 budget amount due to an anticipated increase in interest income of \$400 thousand. Interest income is interest revenue earned on the Board's investments. Anticipated increases are also expected in Ocean Cooling Revenue. Other Revenues category is comprised of sources such as interest income on investments, ocean cooling revenues, automatic fire sprinkler charges, rental income, and miscellaneous billing charges.

### **B. EXPENDITURES**

The proposed total operating fund expenditures for FY 2018 are budgeted at \$311.4 million. This represents an increase of \$26.1 million, or 9.2 percent more than the amount budgeted for the current fiscal year. This change is primarily attributable to an increase in funding for the Capital Improvement Program of \$45.6 million and an increase in funding for equipment of \$621 thousand. These increases are offset by a decrease in funding the department's fixed charges of \$9.8 million; a decrease in funding the department's debt service of \$7.2 million; a decrease in funding for personnel services of \$1.6 million and a decrease in funding for materials, supplies and services of \$1.5 million.

Highlights of the proposed Operating Budget for FY 2018 are presented following the next table.

### **Summary of Proposed Operating Budget, by Major Cost Categories**

<u>Major Cost Category</u>	FY 2016 Actual	FY 2017 Budgeted	FY 2018 Budgeted	<u>FY 2018 Over FY 2017</u>	
				Amount	Percent
Personnel Services	35,594,802	47,686,232	46,116,429	(1,569,803)	-3.3%
Materials, Supplies & Services	44,814,150	61,633,544	60,109,943	(1,523,601)	-2.5%
Equipment	2,375,867	4,807,000	5,428,320	621,320	12.9%
Debt Service	21,884,855	38,865,000	31,648,000	(7,217,000)	-18.6%
Fixed Charges	47,596,013	57,918,000	48,166,000	(9,752,000)	-16.8%
Total Operating Expenditures	152,265,687	210,909,776	191,468,692	(19,441,084)	-9.2%
Transfer to CIP	58,785,473	74,396,800	119,967,900	45,571,100	61.3%
Total Expenditures	211,051,160	285,306,576	311,436,592	26,130,016	9.2%

### **Personnel Services**

The proposed personnel services budget of \$46.1 million is \$1.6 million or 3.3 percent less than personnel services budgeted for the current year. This decrease is primarily due to the partial year funding of several vacant positions. The partial year funding of positions will more accurately reflect when the positions are projected to be filled.

The proposed operating budget includes the creation of 21 positions that are needed to undertake new initiatives and implement a more aggressive capital improvement program. These new positions are being offset by the reallocation or abolishment of existing positions, which are no longer needed, to avoid growing the authorized headcount unnecessarily.

**Positions Requested**

Division	Position Title
Capital Projects	Civil Engineer I
Capital Projects	Civil Engineer I
Capital Projects	Civil Engineer I
Capital Projects	Civil Engineer IV
Capital Projects	Construction Inspect Aide
Capital Projects	Construction Inspect Aide
Capital Projects	Construction Inspect Aide
Capital Projects	Construction Inspect Aide
Capital Projects	Engineering Support Tech I
Capital Projects	Engineering Support Tech I
Capital Projects	Electrical Engineer IV
Capital Projects	Civil Engineer III
Capital Projects	Mechanical Engineer IV
Exec Support Office	Insurance and Claims Asst II
Exec Support Office	Senior Clerk-Typist
Exec Support Office	Procure & Specif Spec V
Water Quality	Water Microbiologist I
Water Quality	Laboratory Technician II
Water Resources	Hydrologist-Geologist I
Human Resources	Human Resources Spec IV
Communications	Information Specialist II

**Offsetting Positions**

Pos No	Division	Position Title
BW626	Water Systems	Plant Equipment Machinist
BW633	Water Systems	Sr Plt Elec/Elec Equip Repair
BW649	Water Systems	Telemeter & Supv Cntrl Tech II
BW656	Water Systems	Sr Plt Elec/Elec Equip Repair
BW659	Water Systems	Plt Elec/Elec Equip Repairer
BW664	Water Systems	Water Plant Maint Mech
BW665	Water Systems	Sr Plt Elec/Elec Equip Repair
BW733	Water Systems	Telemeter & Supv Ctrl Tech I
BW860	Water Systems	Telemeter & Supv Ctrl Tech II
BW703	Water Systems	Water Plant Maint Mech
BW724	Field Ops	Lead MSW III
BW782	Field Ops	Mason
BW525	Field Ops	Scheduler
BW725	Field Ops	MSW III
BW710	Field Ops	Lead Water Meter Mechanic
BW715	Field Ops	Lead Water Meter Mechanic
BW716	Field Ops	Trade Apprentice I
BW850	Field Ops	Water Meter Mechanic
BW802	Field Ops	Scheduler
BW332	Customer Care	Clerk-Typist
BW385	Customer Care	Clerk-Typist

### **Materials, Supplies and Services (MS&S)**

The proposed MS&S budget of \$60.1 million is \$1.5 million or 2.5 percent less than the expenditures budgeted for the current year. This is primarily due to a decrease in funding for the purchase of meters of \$1.9 million and a decrease in funding for the Automatic Meter Reading (AMR) program of \$1.6 million. These decreases are offset by increases in the Red Hill groundwater study and Administrative Order of Consent project of \$1 million. Funding is also being programmed for a lead contamination site assessment study \$500 thousand and additional funds are also being budgeted for the implementation of the Water Conservation Plan of \$350 thousand.

### **Equipment**

The proposed equipment budget of \$5.4 million is \$621 thousand or 12.9 percent more than the amount budgeted in FY 2017. This change is due to an increased number of replacements and additions to the BWS vehicle and equipment fleet. Fleet replacements are based on a criteria of age and mileage in order to minimize future maintenance costs.

### **Debt Service**

The total debt service requirement for FY 2018 is \$31.6 million, which is \$7.2 million or 18.6 percent less than the amount budgeted in FY 2017. In FY 2017, the amount of SRF loans to be retired was \$16 million and in FY 2018, the department plans to retire \$9.8 million in SRF loans.

### **Fixed Charges**

The proposed fixed charges budget of \$48.2 million is \$9.8 million, or 16.8 percent less than the amount budgeted for the current year. This decrease is due to fewer funds budgeted for electricity costs in powering the department's pumping stations, reservoirs and facilities \$8.2 million and a decrease in contributions to the State of Hawaii OPEB account \$3 million. These decreases are offset by an increase in funding to the State ERS plan \$2 million.

## **PART II. CAPITAL IMPROVEMENT PROGRAM (CIP) BUDGET**

A CIP budget of \$144.3 million is proposed for FY 2018 to be funded as follows: Operating Fund -- \$119.9 million; Special Expendable Fund --

\$23.6 million; and the Reserve Release Fund -- \$737 thousand. Of the \$143.3 million in CIP projects that will be funded through the various funds; \$35.6 million is eligible for participation in the State Department of Health's State Revolving Fund (SRF) loan program. The SRF loan program currently offers zero interest rate loans with low administrative fees.

Highlights of the proposed CIP for next year include funds for research and development (\$5.5 million), the renewal and replacement of various BWS pipelines, facilities and pumping stations (\$85.4 million), and capacity expansion (\$21.8 million).

The CIP cost categories and project descriptions are summarized starting on page CIP-1.

Respectfully submitted,

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



# SUMMARY OF ALL FUNDS

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OPERATING BUDGET

CAPITAL IMPROVEMENT  
PROGRAM BUDGET

**Board of Water Supply  
Summary of All Funds  
Fiscal Year 2018**

	<u>Operating Fund</u>	<u>Operating Fund - SRF Eligible</u>	<u>Special Expendable Fund</u>	<u>Reserve Release Fund</u>	<u>Total All Funds by Program</u>
Operating Budget	191,468,692	-	-		191,468,692
Capital Improvement Program	<u>84,360,795</u>	<u>35,607,105</u>	<u>23,635,000</u>	<u>737,300</u>	<u>144,340,200</u>
Total by Fund	<u><u>275,829,487</u></u>	<u><u>35,607,105</u></u>	<u><u>23,635,000</u></u>	<u><u>737,300</u></u>	<u><u>335,808,892</u></u>

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**BOARD OF WATER SUPPLY  
OPERATING AND CAPITAL IMPROVEMENT PROGRAM BUDGET  
FISCAL YEAR 2018  
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**II. CAPITAL IMPROVEMENT PROGRAM (CIP) BUDGET**

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**Board of Water Supply**  
**Operating Budget Fiscal**  
**Year 2018**

**Department Summary**

<b>Resources and Expenditures</b>	<b>FY2016 Actual</b>	<b>FY2017 Adopted Budget</b>	<b>FY2018 Proposed Budget</b>
Beginning Balance	76,874,000	95,914,171	107,722,490
Revenues	239,267,000	230,802,000	236,549,500
Lapses/Adjustments	5,276,874	5,832,003	0
<b>Total Resources</b>	<b>321,417,874</b>	<b>332,548,174</b>	<b>344,271,990</b>
Operating Expenditures	152,265,687	210,909,776	191,468,692
Capital Program	58,785,473	74,396,800	119,967,900
<b>Total Expenditures</b>	<b>211,051,160</b>	<b>285,306,576</b>	<b>311,436,592</b>
<b>Ending Balance</b>	<b>110,366,714</b>	<b>47,241,598</b>	<b>32,835,398</b>

**Board of Water Supply**  
**Operating Budget Revenues**  
**Fiscal Year 2018**

**Department Summary**

<b>Revenues</b>	<b>FY2016 Actual</b>	<b>FY2017 Adopted Budget</b>	<b>FY2018 Proposed Budget</b>
Metered Revenue - Potable Water	227,382,000	220,000,000	225,000,000
Metered Revenue - Recycled Water (R-1)	3,284,000	3,254,600	3,288,700
Metered Revenue - Recycled Water (RO)	2,522,000	2,351,400	2,520,800
Private Fire Protection	760,000	700,000	700,000
Ocean Cooling Revenues	1,309,000	931,000	1,200,000
Other Water Revenues	400,000	375,000	375,000
Revenues from Water Service Installations	548,000	600,000	550,000
Revenues from Merchandising & Jobbing (M&J)	262,000	200,000	200,000
Interest Income - Operating	2,492,000	2,000,000	2,400,000
Miscellaneous Non-Operating Revenue	123,000	200,000	125,000
Non-Operating Rental Income	185,000	190,000	190,000
<b>Total</b>	<b>239,267,000</b>	<b>230,802,000</b>	<b>236,549,500</b>

**Board of Water Supply**  
**Operating Budget Revenues**  
**Fiscal Year 2018**

**Department Summary**

<b>Expenditure Classification</b>	<b>FY2016 Actual</b>	<b>FY2017 Adopted Budget</b>	<b>FY2018 Proposed Budget</b>
Personnel Services	35,594,802	47,686,232	46,116,429
Materials, Supplies and Services	44,814,150	61,633,544	60,109,943
Equipment	2,375,867	4,807,000	5,428,320
Departmental Fixed Charges	47,596,013	57,918,000	48,166,000
Debt Service	21,884,855	38,865,000	31,648,000
<b>Operating Expenditures</b>	<b>152,265,687</b>	<b>210,909,776</b>	<b>191,468,692</b>
Transfer to Capital Improvement Program	58,785,473	74,396,800	119,967,900
<b>Total Expenditures</b>	<b>211,051,160</b>	<b>285,306,576</b>	<b>311,436,592</b>

**Board of Water Supply**  
**Operating Budget Expenditures**  
**Fiscal Year 2018**

**Department Summary by Division/Office**

<b>Expenditure Classification (Personnel Services, Materials, Supplies and Services, and Equipment)</b>	<b>FY2016 Actual</b>	<b>FY2017 Adopted Budget</b>	<b>FY2018 Proposed Budget</b>
Manager's Office	1,058,610	1,099,371	925,640
Executive Support Office	4,482,708	8,439,280	8,981,021
Communications Office	801,444	1,167,100	1,158,310
Ocean Cooling	366,434	646,600	618,800
Human Resources Office	1,991,005	789,090	703,795
Water Quality	2,157,153	4,155,220	5,707,580
Customer Care	4,336,161	5,540,600	6,162,000
Land	617,913	750,880	737,900
Water Resources	7,833,571	10,619,501	11,796,008
Field Operations	23,233,158	35,459,250	30,966,630
Capital Projects	6,292,691	5,910,550	6,640,700
Water System Operations	12,823,012	19,378,374	19,005,450
Information Technology	8,980,441	13,970,560	13,174,018
Finance	7,810,518	6,200,400	5,076,840
<b>Total of Divisions and Offices</b>	<b>82,784,819</b>	<b>114,126,776</b>	<b>111,654,692</b>
Departmental Fixed Charges	47,596,013	57,918,000	48,166,000
Debt Service	21,884,855	38,865,000	31,648,000
<b>Total Operating Expenditures</b>	<b>152,265,687</b>	<b>210,909,776</b>	<b>191,468,692</b>

**Board of Water Supply  
Expenses by Account Type  
Fiscal Year 2018**

**Department Summary by Division/Office**

<b>Division and Offices</b>	<b>Personnel Services</b>	<b>Materials, Supplies, and Services</b>	<b>Equipment</b>	<b>Debt Service and Dept Fixed Charges</b>	<b>FY2018 Proposed Budget</b>
Manager's Office	586,200	339,440	0	0	925,640
Executive Support Office	1,232,900	7,748,121	0	0	8,981,021
Communications Office	823,740	334,570	0	0	1,158,310
Ocean Cooling	220,000	398,800	0	0	618,800
Human Resources Office	558,700	145,095	0	0	703,795
Water Quality	1,409,700	4,247,880	50,000	0	5,707,580
Customer Care	4,803,100	1,338,900	20,000	0	6,162,000
Land	303,000	434,900	0	0	737,900
Water Resources	2,307,089	9,384,639	104,280	0	11,796,008
Field Operations	15,831,800	15,075,590	59,240	0	30,966,630
Capital Projects	5,596,500	1,023,200	21,000	0	6,640,700
Water System Operations	6,113,200	8,119,450	4,772,800	0	19,005,450
Information Technology	3,329,700	9,494,318	350,000	0	13,174,018
Finance	3,000,800	2,025,040	51,000	0	5,076,840
<b>Total:</b>	<b>46,116,429</b>	<b>60,109,943</b>	<b>5,428,320</b>	<b>0</b>	<b>111,654,692</b>
Fixed Charges and Debt Service	0	0	0	79,814,000	79,814,000
<b>Grand Total</b>	<b>46,116,429</b>	<b>60,109,943</b>	<b>5,428,320</b>	<b>79,814,000</b>	<b>191,468,692</b>

**Board of Water Supply**  
**Operating Budget - Debt Service**  
**Fiscal Year 2018**

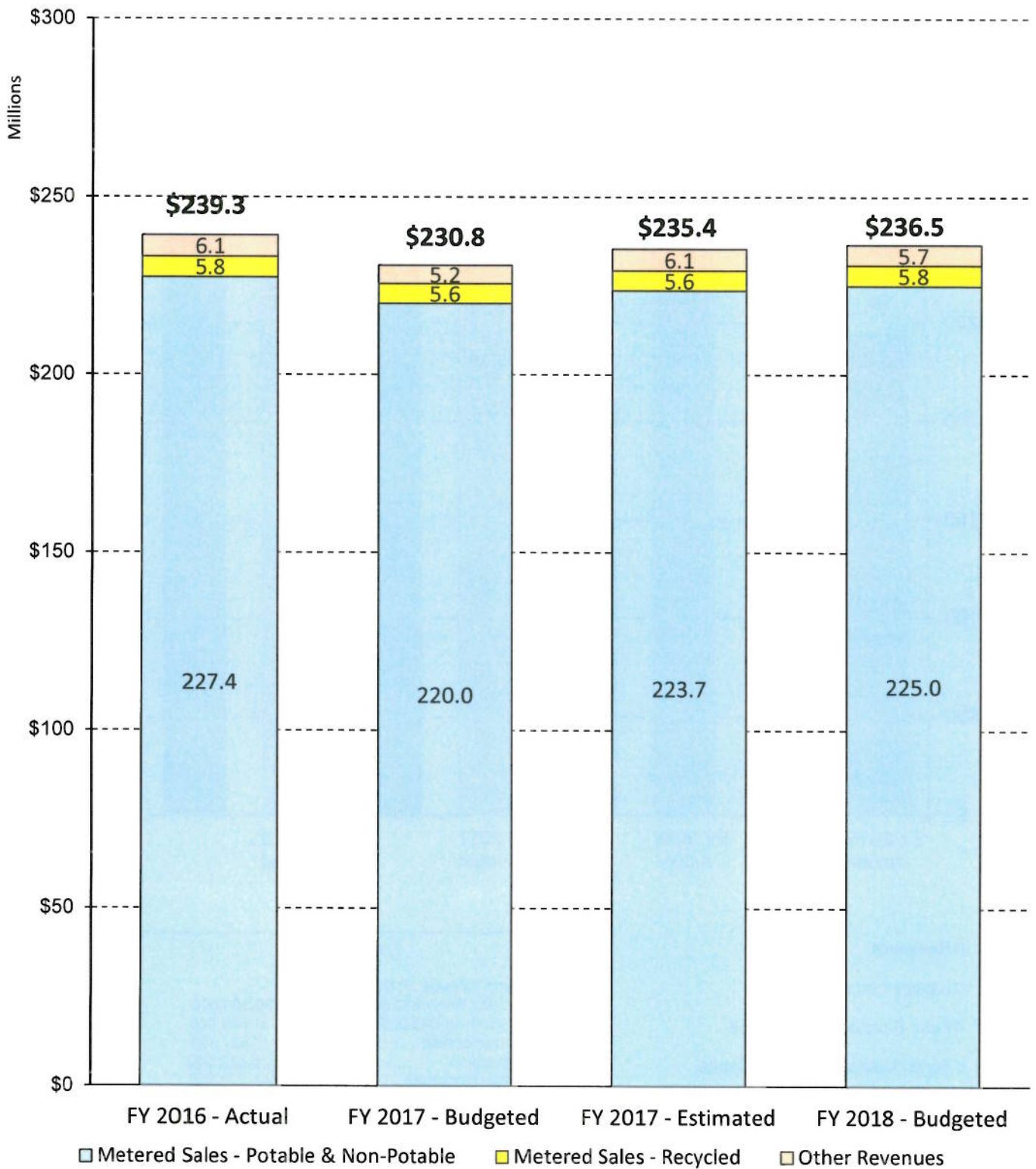
DEBT SERVICE

ISSUE	FY 2016 Actual	FY 2017 Budget	FY 2018 Budget
Water System Revenue Bonds:			
Series 2006	6,699,038	-	-
Series 2012A	4,745,125	4,747,000	7,708,000
Series 2014 A & B	6,446,546	13,041,000	10,137,000
Debt Service - Bonds Payable	17,890,709	17,788,000	17,845,000
Notes Payable:			
SRF Loans	3,994,146	5,077,000	4,047,000
SRF Loan retirement	-	16,000,000	9,756,000
Debt Service - Notes Payable	3,994,146	21,077,000	13,803,000
	21,884,855	38,865,000	31,648,000

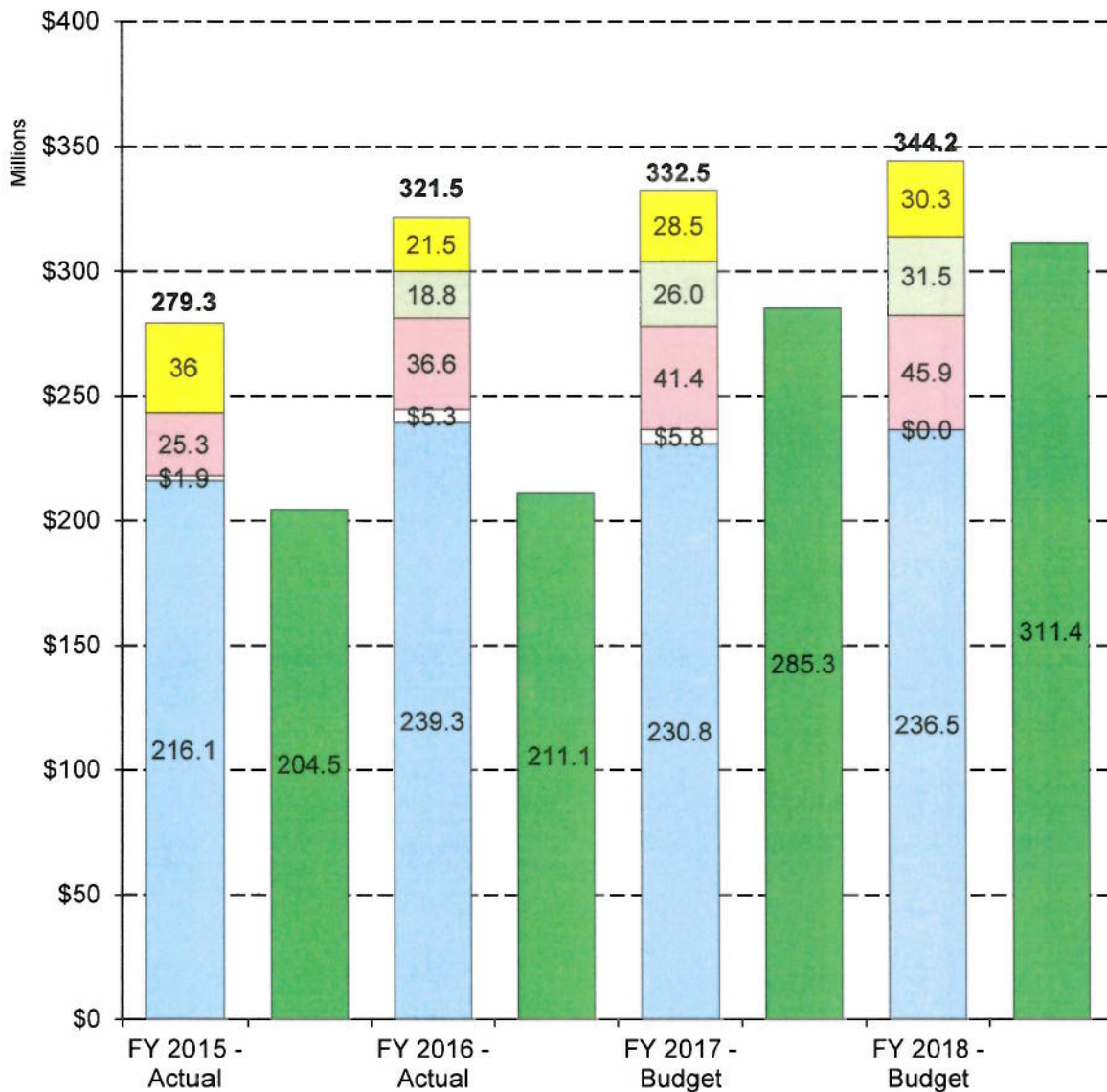
Bond Issues:				
<u>Year Issued</u>		<u>Amount</u>	<u>Year Expires</u>	<u>Years</u>
2006	\$	213,805,000	2036	30
2012A	\$	85,195,000	2033	21
2014A	\$	101,655,000	2036	22
2014B	\$	43,330,000	2031	17

(1) 2006 Revenue Bonds extinguished in FY 2016

**BOARD OF WATER SUPPLY  
OPERATING FUND REVENUES  
FISCAL YEAR 2018**



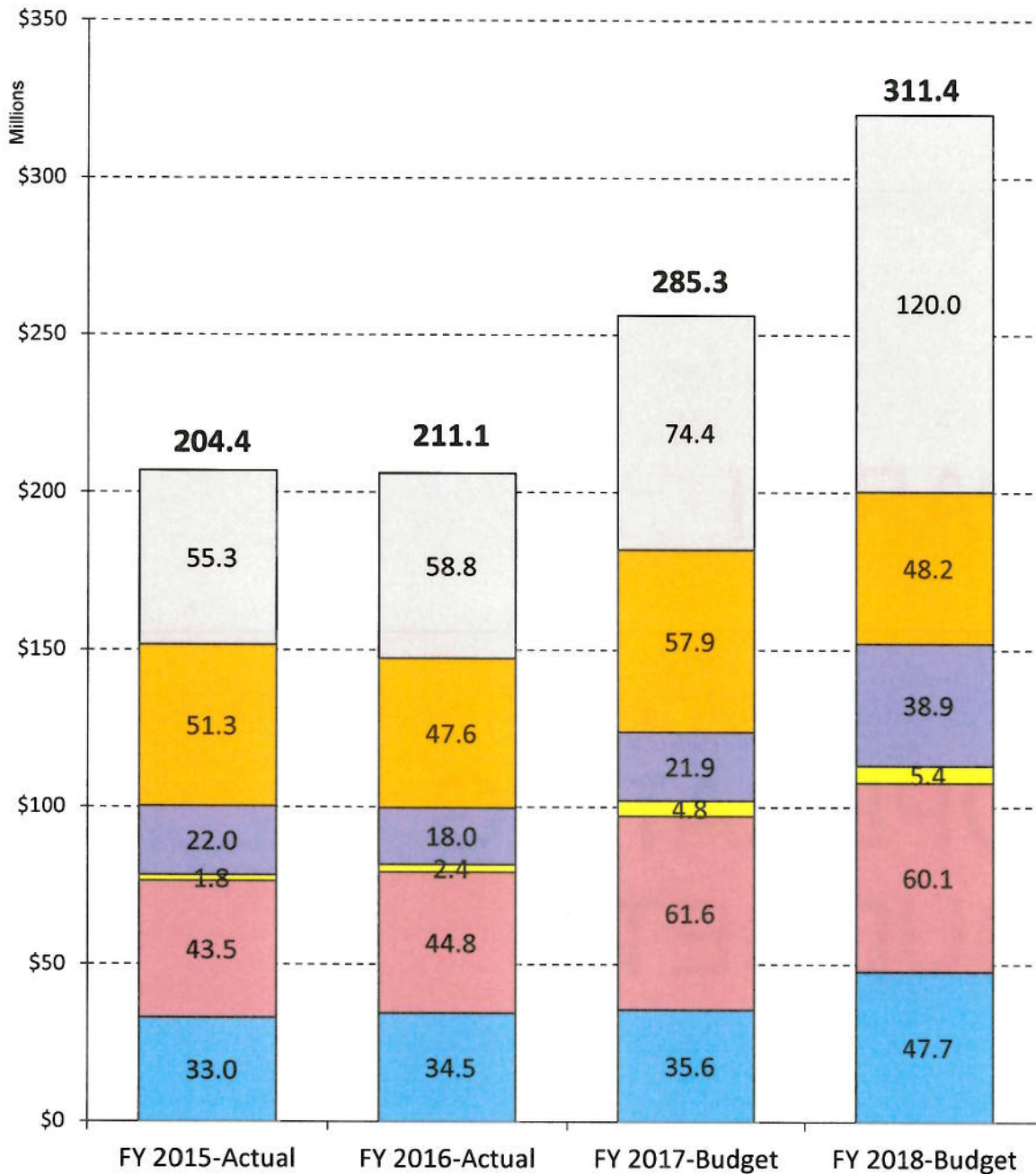
**BOARD OF WATER SUPPLY  
TOTAL RESOURCES VS. TOTAL EXPENDITURES  
FISCAL YEAR 2018**



- Revenues
- Lapses / Adjustments
- Fund Balance - Unreserved
- Fund Balance - Working Capital
- Fund Balance - Debt Service Coverage
- Expenditures

Fiscal Year 2018	
Fund Balance 7/1/2017	
Debt Service Coverage	\$30,300,000
Working Capital Reserve	31,500,000
Unreserved	45,922,490
Revenues	<u>236,549,500</u>
Total Resources	\$344,271,990
Total Expenditures	<u>-311,436,592</u>
Fund Balance 6/30/2018	<u>\$ 32,835,398</u>

**BOARD OF WATER SUPPLY  
OPERATING BUDGET EXPENDITURES (INCLUDING CIP)  
FISCAL YEAR 2018**



- Personnel Srv.
- Equipment
- Fixed Charges
- MS&S
- Debt Service
- CIP

Fiscal Year 2018	
CIP	\$ 119,967,900
Fixed Charges	48,166,000
Debt Service	31,648,000
Equipment	5,428,320
MS&S	60,109,943
Personnel Svcs.	46,116,429
<b>Total</b>	<b>\$311,436,592</b>



PART I

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**OPERATING  
BUDGET**

**Board of Water Supply  
Operating Budget  
Fiscal Year 2018**

**OMCE - Manager's Office**

**Section's Activity**

The Manager and Chief Engineer is the executive head of the Board of Water Supply who administers the affairs of the department in accordance with policies and regulations adopted by the Board and the provisions of the City Charter.

Account	FY2016 Actual	FY2016 Adopted Budget	FY2017 Adopted Budget	FY2018 Proposed Budget	Change
4110 - Salaries & Wages	641,162	742,484	763,700	586,200	(177,500)
4130 - Miscellaneous (Payroll)	1,692	0	0	0	0
<b>Personnel Services</b>	<b>642,854</b>	<b>742,484</b>	<b>763,700</b>	<b>586,200</b>	<b>(177,500)</b>
4160 - Meals; Mileage & Uniform Allowances	10	0	0	0	0
4250 - Other Contractual Services	54,097	3,540	5,700	4,200	(1,500)
4255 - Other Services	8,543	42,836	56,773	57,000	227
4260 - Advertising & Publication of Notices	0	500	500	500	0
4265 - Printing	833	1,000	1,000	1,000	0
4270 - Professional Services	30,915	155,000	35,000	35,000	0
4430 - Miscellaneous Supplies	3,570	5,000	5,000	5,000	0
4460 - Other Materials & Supplies	8,744	13,400	13,000	15,000	2,000
4500 - Education and Training	60	1,000	0	0	0
4720 - Conference Travel & Expenses	17,276	45,781	36,748	38,240	1,492
4815 - Repair & Maint - Equipment	1,299	3,000	3,000	3,000	0
4910 - Miscellaneous Fees & Registration	285,444	170,433	178,950	175,500	(3,450)
8050 - Equipment (under \$5,000)	4,964	2,500	0	5,000	5,000
<b>Materials, Supplies and Services</b>	<b>415,756</b>	<b>443,990</b>	<b>335,671</b>	<b>339,440</b>	<b>3,769</b>
<b>Total Manager's Office</b>	<b>1,058,610</b>	<b>1,186,474</b>	<b>1,099,371</b>	<b>925,640</b>	<b>(173,731)</b>

**Budget Highlights**

**Board of Water Supply  
Operating Budget  
Fiscal Year 2018**

**ESO - Executive Support Office**

**Division/Office's Activity**

The Executive Support Office is responsible for the development of the annual departmental operating budget ; ensures that procurement of all goods and services and construction are in compliance with Hawaii Revised Statutes (HRS)103D; administers the department's safety, risk management, and security programs.

Account	FY2016 Actual	FY2016 Adopted Budget	FY2017 Adopted Budget	FY2018 Proposed Budget	Change
4110 - Salaries & Wages	869,900	1,061,087	1,255,900	1,214,400	(41,500)
4120 - Overtime	14,724	4,068	27,540	18,500	(9,040)
4130 - Miscellaneous (Payroll)	547	0	0	0	0
<b>Personnel Services</b>	<b>885,171</b>	<b>1,065,155</b>	<b>1,283,440</b>	<b>1,232,900</b>	<b>(50,540)</b>
4160 - Meals; Mileage & Uniform Allowances	2,316	2,700	5,540	3,700	(1,840)
4250 - Other Contractual Services	2,105,077	1,207,320	2,204,000	39,190	(2,164,810)
4260 - Advertising & Publication of Notices	1,035	0	0	300	300
4265 - Printing	495	3,500	2,500	2,500	0
4270 - Professional Services	527,005	1,700,000	1,000,000	3,887,143	2,887,143
4275 - Medical & Surgical Services	0	0	1,000,000	0	(1,000,000)
4410 - Gasoline	303	0	0	0	0
4430 - Miscellaneous Supplies	8,920	12,110	10,489	9,788	(701)
4460 - Other Materials & Supplies	12,477	9,704	26,386	90,000	63,614
4480 - Postage	7	400	200	200	0
4500 - Education and Training	445	12,000	6,500	6,000	(500)
4720 - Conference Travel & Expenses	4,626	18,500	7,000	19,000	12,000
4805 - Repair & Maint - Structures	36,766	100,000	100,000	500,000	400,000
4815 - Repair & Maint - Equipment	49,722	75,000	75,000	0	(75,000)
4910 - Miscellaneous Fees & Registration	5,750	5,000	3,160	2,300	(860)
4915 - Miscellaneous Financial Expenses	0	0	1,000	0	(1,000)
5700 - Insurance	0	1,200,000	1,200,000	800,000	(400,000)
6340 - Workers Compensation Benefits	0	0	500,000	1,340,000	840,000
6350 - Claims for Pers Injuries & Prop Damage	820,077	800,000	1,000,000	1,000,000	0
8050 - Equipment (under \$5,000)	15,436	33,825	14,065	48,000	33,935
<b>Materials, Supplies and Services</b>	<b>3,590,456</b>	<b>5,180,059</b>	<b>7,155,840</b>	<b>7,748,121</b>	<b>592,281</b>
1270 - General Plant & Equip (over \$5,000)	7,080	295,400	0	0	0
<b>Equipment</b>	<b>7,080</b>	<b>295,400</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>Total ESO - Executive Support Office</b>	<b>4,482,708</b>	<b>6,540,614</b>	<b>8,439,280</b>	<b>8,981,021</b>	<b>541,741</b>

Notes

**Board of Water Supply  
Operating Budget  
Fiscal Year 2018**

**ESO - Executive Support Office**

**5105 - Executive Support Office**

**Section's Activity**

The Executive Support Office (ESO) administers and manages programs in areas such as budget, position management, reorganization, procurement, security, risk management and safety.

Account	FY2016 Actual	FY2016 Adopted Budget	FY2017 Adopted Budget	FY2018 Proposed Budget	Change
4110 - Salaries & Wages	174,242	146,957	175,900	200,100	24,200
4120 - Overtime	596	0	500	1,000	500
4130 - Miscellaneous (Payroll)	547	0	0	0	0
<b>Personnel Services</b>	<b>175,385</b>	<b>146,957</b>	<b>176,400</b>	<b>201,100</b>	<b>24,700</b>
4160 - Meals; Mileage & Uniform Allowances	172	0	0	0	0
4250 - Other Contractual Services	286,813	300,000	0	0	0
4265 - Printing	495	0	0	1,000	1,000
4270 - Professional Services	0	0	0	135,143	135,143
4410 - Gasoline	303	0	0	0	0
4430 - Miscellaneous Supplies	6,135	4,500	4,440	7,788	3,348
4460 - Other Materials & Supplies	164	0	0	0	0
4480 - Postage	7	0	0	0	0
4500 - Education and Training	0	1,000	1,500	1,000	(500)
4720 - Conference Travel & Expenses	971	8,000	0	0	0
4910 - Miscellaneous Fees & Registration	850	1,000	1,000	1,000	0
4915 - Miscellaneous Financial Expenses	0	0	1,000	0	(1,000)
8050 - Equipment (under \$5,000)	624	0	2,500	0	(2,500)
<b>Materials, Supplies and Services</b>	<b>296,535</b>	<b>314,500</b>	<b>10,440</b>	<b>145,931</b>	<b>135,491</b>
1270 - General Plant & Equip (over \$5,000)	0	295,400	0	0	0
<b>Equipment</b>	<b>0</b>	<b>295,400</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>Total Executive Support Office</b>	<b>471,920</b>	<b>756,857</b>	<b>186,840</b>	<b>347,031</b>	<b>160,191</b>

**Budget Highlights**

Salaries increased due to the addition of a personal services contract for staff augmentation to update and further develop the department's emergency response plan and incident actions plans. These plans are necessary to ensure proper guidance during emergencies and natural disasters.

**Board of Water Supply  
Operating Budget  
Fiscal Year 2018**

**ESO - Executive Support Office**

**5110 - Risk Management**

**Section's Activity**

The Risk Management section provides risk management services that ensure the business and operational exposures of the BWS are covered through either insurance or self-retention policies. Oversees the department's workers' compensation program. Additionally, the section ensures the safety and well-being of our employees through a comprehensive safety program and return-to-work program.

Account	FY2016 Actual	FY2016 Adopted Budget	FY2017 Adopted Budget	FY2018 Proposed Budget	Change
4110 - Salaries & Wages	152,800	242,700	321,300	309,700	(11,600)
4120 - Overtime	3,386	0	3,500	3,500	0
<b>Personnel Services</b>	<b>156,186</b>	<b>242,700</b>	<b>324,800</b>	<b>313,200</b>	<b>(11,600)</b>
4160 - Meals; Mileage & Uniform Allowances	864	1,200	1,200	1,200	0
4250 - Other Contractual Services	1,749	0	0	34,390	34,390
4270 - Professional Services	527,005	1,700,000	1,000,000	1,152,000	152,000
4275 - Medical & Surgical Services	0	0	1,000,000	0	(1,000,000)
4430 - Miscellaneous Supplies	389	4,000	2,000	0	(2,000)
4460 - Other Materials & Supplies	11,611	4,000	4,000	0	(4,000)
4500 - Education and Training	0	4,000	0	4,500	4,500
4720 - Conference Travel & Expenses	3,275	8,000	4,000	12,000	8,000
4910 - Miscellaneous Fees & Registration	4,900	4,000	2,000	1,100	(900)
5700 - Insurance	0	1,200,000	1,200,000	800,000	(400,000)
6340 - Workers Compensation Benefits	0	0	500,000	1,340,000	840,000
6350 - Claims for Pers Injuries & Prop Damage	820,077	800,000	1,000,000	1,000,000	0
8050 - Equipment (under \$5,000)	14,387	15,500	2,500	23,000	20,500
<b>Materials, Supplies and Services</b>	<b>1,384,258</b>	<b>3,740,700</b>	<b>4,715,700</b>	<b>4,368,190</b>	<b>(347,510)</b>
<b>Total Risk Management</b>	<b>1,540,444</b>	<b>3,983,400</b>	<b>5,040,500</b>	<b>4,681,390</b>	<b>(359,110)</b>

**Budget Highlights**

Professional Services for to engage outside legal counsel for claims that the Corporation Counsel is unable to defend. Also included are workers' compensation management fees and subrosa services. Workers' compensation payments of \$1.3 million and \$1 million for legal services.

**Board of Water Supply  
Operating Budget  
Fiscal Year 2018**

**ESO - Executive Support Office**

**5120 - Security Office**

**Section's Activity**

Security section develops, coordinates, and maintains security measures and systems to protect BWS employees and facilities. It conducts vulnerability assessments, installs detection systems, and develops emergency response plans. It oversees the development and installation of security enhancements and equipment for BWS facilities. It monitors facilities from the central security center through the use of security guards, cameras, sensor alarms, and ID cards. The unit coordinates protective activities with external agencies such as the Honolulu Police and Fire Departments, State Civil Defense and Honolulu Department of Emergency Services, and other Homeland Security organizations.

Account	FY2016 Actual	FY2016 Adopted Budget	FY2017 Adopted Budget	FY2018 Proposed Budget	Change
4110 - Salaries & Wages	208,422	186,774	295,300	228,300	(67,000)
4120 - Overtime	4,975	4,068	21,040	10,000	(11,040)
<b>Personnel Services</b>	<b>213,397</b>	<b>190,842</b>	<b>316,340</b>	<b>238,300</b>	<b>(78,040)</b>
4160 - Meals; Mileage & Uniform Allowances	954	1,500	4,340	2,500	(1,840)
4250 - Other Contractual Services	1,816,514	907,320	2,204,000	4,800	(2,199,200)
4270 - Professional Services	0	0	0	2,600,000	2,600,000
4430 - Miscellaneous Supplies	2,060	1,610	2,049	2,000	(49)
4460 - Other Materials & Supplies	697	5,704	22,386	90,000	67,614
4500 - Education and Training	445	3,000	3,000	500	(2,500)
4720 - Conference Travel & Expenses	190	2,000	3,000	0	(3,000)
4805 - Repair & Maint - Structures	36,766	100,000	100,000	500,000	400,000
4815 - Repair & Maint - Equipment	49,722	75,000	75,000	0	(75,000)
8050 - Equipment (under \$5,000)	0	15,825	6,765	17,000	10,235
<b>Materials, Supplies and Services</b>	<b>1,907,349</b>	<b>1,111,959</b>	<b>2,420,540</b>	<b>3,216,800</b>	<b>796,260</b>
1270 - General Plant & Equip (over \$5,000)	7,080	0	0	0	0
<b>Equipment</b>	<b>7,080</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>Total Security Office</b>	<b>2,127,826</b>	<b>1,302,801</b>	<b>2,736,880</b>	<b>3,455,100</b>	<b>718,220</b>

**Budget Highlights**

Other Contractual Services includes \$1.1 million for security guard services at BWS facilities and \$1.5 million for the electronic and camera monitoring system maintenance contract.

**Board of Water Supply  
Operating Budget  
Fiscal Year 2018**

**ESO - Executive Support Office**

**5125 - Management and Budget**

**Section's Activity**

The Management and Budget section is responsible for the development and execution of the annual operating budget. Develops water and other revenue projections and conducts various revenue, budgetary, financial and statistical studies of the department.

Account	FY2016 Actual	FY2016 Adopted Budget	FY2017 Adopted Budget	FY2018 Proposed Budget	Change
4110 - Salaries & Wages	84,230	219,504	196,900	174,300	(22,600)
4120 - Overtime	5,767	0	2,500	4,000	1,500
<b>Personnel Services</b>	<b>89,997</b>	<b>219,504</b>	<b>199,400</b>	<b>178,300</b>	<b>(21,100)</b>
4160 - Meals; Mileage & Uniform Allowances	310	0	0	0	0
4250 - Other Contractual Services	0	0	0	0	0
4260 - Advertising & Publication of Notices	282	0	0	300	300
4265 - Printing	0	3,500	2,500	1,500	(1,000)
4430 - Miscellaneous Supplies	0	0	0	0	0
4720 - Conference Travel & Expenses	0	500	0	0	0
4910 - Miscellaneous Fees & Registration	0	0	160	200	40
8050 - Equipment (under \$5,000)	0	2,500	2,300	3,000	700
<b>Materials, Supplies and Services</b>	<b>592</b>	<b>6,500</b>	<b>4,960</b>	<b>5,000</b>	<b>40</b>
<b>Total Management and Budget</b>	<b>90,589</b>	<b>226,004</b>	<b>204,360</b>	<b>183,300</b>	<b>(21,060)</b>

**Budget Highlights**

No significant changes to the budget.

**Board of Water Supply  
Operating Budget  
Fiscal Year 2018**

**ESO - Executive Support Office**

**5140 - Procurement**

**Section's Activity**

The Procurement section assists all BWS divisions and offices with the procurement of construction, goods, services, and professional services and to ensure that such procurements are conducted in accordance with Hawaii Revised Statutes Chapter 103D and the Hawaii Administrative Rules.

Account	FY2016 Actual	FY2016 Adopted Budget	FY2017 Adopted Budget	FY2018 Proposed Budget	Change
4110 - Salaries & Wages	250,207	265,152	266,500	302,000	35,500
<b>Personnel Services</b>	<b>250,207</b>	<b>265,152</b>	<b>266,500</b>	<b>302,000</b>	<b>35,500</b>
4160 - Meals; Mileage & Uniform Allowances	16	0	0	0	0
4260 - Advertising & Publication of Notices	752	0	0	0	0
4430 - Miscellaneous Supplies	335	2,000	2,000	0	(2,000)
4460 - Other Materials & Supplies	6	0	0	0	0
4480 - Postage	0	400	200	200	0
4500 - Education and Training	0	4,000	2,000	0	(2,000)
4720 - Conference Travel & Expenses	190	0	0	7,000	7,000
8050 - Equipment (under \$5,000)	425	0	0	5,000	5,000
<b>Materials, Supplies and Services</b>	<b>1,723</b>	<b>6,400</b>	<b>4,200</b>	<b>12,200</b>	<b>8,000</b>
<b>Total Procurement Section</b>	<b>251,930</b>	<b>271,552</b>	<b>270,700</b>	<b>314,200</b>	<b>43,500</b>

**Budget Highlights**

Funding includes one Procurement and Specifications Specialist and one Clerk to provide the needed resources to process the anticipated increase in capital projects. Added training funds for attending the NIGP annual conference.

**Board of Water Supply  
Operating Budget  
Fiscal Year 2018**

**COMM - Communications Office**

**Section's Activity**

The Communications Office develops departmental policies and programs for strategic internal and external communications, including: community relations, water education and public information, including news releases, speeches, bulletins, advertisements, public service announcements, brochures, annual and special reports; notifies news media of water emergencies; coordinates and maintains effective media communications programs for the department; receives, processes and resolves complaints; develops and produces the employee newsletter; conducts orientations and manages the department's water education and facility tour program; coordinates community affairs programs and special events; and provides executive level strategic communications counsel and assistance to the Board, Manager, and departmental units in public affairs matters.

Account	FY2016 Actual	FY2016 Adopted Budget	FY2017 Adopted Budget	FY2018 Proposed Budget	Change
4110 - Salaries & Wages	585,184	653,424	698,400	732,300	33,900
4120 - Overtime	18,353	28,600	27,600	34,740	7,140
4130 - Miscellaneous (Payroll)	3,790	33,700	50,800	56,700	5,900
<b>Personnel Services</b>	<b>607,327</b>	<b>715,724</b>	<b>776,800</b>	<b>823,740</b>	<b>46,940</b>
4160 - Meals; Mileage & Uniform Allowances	445	600	400	870	470
4250 - Other Contractual Services	40,019	247,400	257,200	207,900	(49,300)
4251 - Software Licenses and Maintenance	0	0	0	3,500	3,500
4260 - Advertising & Publication of Notices	120,000	3,000	14,000	10,500	(3,500)
4265 - Printing	14,491	66,050	53,000	33,000	(20,000)
4430 - Miscellaneous Supplies	2,928	3,100	3,200	3,500	300
4460 - Other Materials & Supplies	11,661	35,900	29,900	29,900	0
4480 - Postage	308	500	15,400	15,400	0
4500 - Education and Training	0	9,500	2,500	4,500	2,000
4720 - Conference Travel & Expenses	570	200	7,000	5,000	(2,000)
4815 - Repair & Maint - Equipment	0	750	700	700	0
4910 - Miscellaneous Fees & Registration	249	400	1,000	14,800	13,800
8050 - Equipment (under \$5,000)	3,446	7,000	6,000	5,000	(1,000)
<b>Materials, Supplies and Services</b>	<b>194,117</b>	<b>374,400</b>	<b>390,300</b>	<b>334,570</b>	<b>(55,730)</b>
<b>Total Communications Office</b>	<b>801,444</b>	<b>1,090,124</b>	<b>1,167,100</b>	<b>1,158,310</b>	<b>(8,790)</b>

**Budget Highlights**

**Board of Water Supply  
Operating Budget  
Fiscal Year 2018**

**OC - Ocean Cooling**

**Section's Activity**

The Ocean Cooling Program is responsible under a 20-year contract, for the operation and maintenance of the seawater cooling facility at the University of Hawaii John A. Burns School of Medicine in Kakaako. The use of cold seawater for building cooling conserves potable water and energy that would otherwise be used in conventional mechanical cooling systems.

Account	FY2016 Actual	FY2016 Adopted Budget	FY2017 Adopted Budget	FY2018 Proposed Budget	Change
4110 - Salaries & Wages	220,008	220,008	220,000	220,000	0
<b>Personnel Services</b>	<b>220,008</b>	<b>220,008</b>	<b>220,000</b>	<b>220,000</b>	<b>0</b>
4250 - Other Contractual Services	1,065	0	0	0	0
4430 - Miscellaneous Supplies	226	800	800	800	0
4460 - Other Materials & Supplies	0	0	30,000	30,000	0
4470 - Parts and Accessories	0	0	5,000	5,000	0
4815 - Repair & Maint - Equipment	145,136	427,000	390,800	363,000	(27,800)
<b>Materials, Supplies and Services</b>	<b>146,426</b>	<b>427,800</b>	<b>426,600</b>	<b>398,800</b>	<b>(27,800)</b>
<b>Total Ocean Cooling</b>	<b>366,434</b>	<b>647,808</b>	<b>646,600</b>	<b>618,800</b>	<b>(27,800)</b>

**Budget Highlights**

Ocean Cooling

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**HRO - Human Resources Office**

**Section's Activity**

The BWS Human Resources Office administers and manages BWS human resources programs in areas including recruitment, examination, and selection, employee benefits, transactions and personnel record maintenance, labor relations, performance evaluation, classification and compensation, and staff development. In addition, BWS HRO provides staff support for position management and review of reorganizations.

Account	FY2016 Actual	FY2016 Adopted Budget	FY2017 Adopted Budget	FY2018 Proposed Budget	Change
4110 - Salaries & Wages	541,900	584,820	588,500	552,700	(35,800)
4120 - Overtime	105	3,000	3,000	6,000	3,000
4130 - Miscellaneous (Payroll)	0	1,400	38,500	0	(38,500)
<b>Personnel Services</b>	<b>542,005</b>	<b>589,220</b>	<b>630,000</b>	<b>558,700</b>	<b>(71,300)</b>
4160 - Meals; Mileage & Uniform Allowances	20	200	200	200	0
4250 - Other Contractual Services	17,022	63,400	40,000	43,000	3,000
4260 - Advertising & Publication of Notices	249	2,100	5,000	5,000	0
4270 - Professional Services	132,618	123,800	0	0	0
4275 - Medical & Surgical Services	503,856	604,800	0	0	0
4430 - Miscellaneous Supplies	903	2,400	2,400	4,500	2,100
4460 - Other Materials & Supplies	1,000	5,000	5,500	5,000	(500)
4480 - Postage	69	0	100	100	0
4500 - Education and Training	14,514	50,300	83,200	71,200	(12,000)
4720 - Conference Travel & Expenses	1,880	9,500	3,890	13,320	9,430
4815 - Repair & Maint - Equipment	711	1,000	1,500	1,500	0
4910 - Miscellaneous Fees & Registration	175	400	300	275	(25)
6340 - Workers Compensation Benefits	775,984	828,000	0	0	0
8050 - Equipment (under \$5,000)	0	0	5,000	1,000	(4,000)
<b>Materials, Supplies and Services</b>	<b>1,449,000</b>	<b>1,690,900</b>	<b>147,090</b>	<b>145,095</b>	<b>(1,995)</b>
1270 - General Plant & Equip (over \$5,000)	0	0	12,000	0	(12,000)
<b>Equipment</b>	<b>0</b>	<b>0</b>	<b>12,000</b>	<b>0</b>	<b>(12,000)</b>
<b>Total Human Resources Office</b>	<b>1,991,005</b>	<b>2,280,120</b>	<b>789,090</b>	<b>703,795</b>	<b>(85,295)</b>

**Budget Highlights**

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**WQ - Water Quality**

**Division/Office's Activity**

The Water Quality Division ensures the department's compliance with all federal and state drinking water regulations and environmental laws, rules and regulations and manages special water quality studies.

Account	FY2016 Actual	FY2016 Adopted Budget	FY2017 Adopted Budget	FY2018 Proposed Budget	Change
4110 - Salaries & Wages	1,150,240	1,352,522	1,304,500	1,364,700	60,200
4120 - Overtime	107,735	85,200	90,000	45,000	(45,000)
4130 - Miscellaneous (Payroll)	0	0	0	0	0
<b>Personnel Services</b>	<b>1,257,975</b>	<b>1,437,722</b>	<b>1,394,500</b>	<b>1,409,700</b>	<b>15,200</b>
4160 - Meals; Mileage & Uniform Allowances	6,125	6,000	5,600	4,000	(1,600)
4240 - Manhole Raising	1,100	0	0	0	0
4250 - Other Contractual Services	717,468	951,730	1,079,900	1,063,900	(16,000)
4251 - Software Licenses and Maintenance	0	0	85,000	85,000	0
4270 - Professional Services	0	0	1,406,500	2,900,000	1,493,500
4430 - Miscellaneous Supplies	260	500	820	1,820	1,000
4460 - Other Materials & Supplies	77,927	60,000	79,300	74,300	(5,000)
4500 - Education and Training	1,095	9,200	22,300	23,260	960
4720 - Conference Travel & Expenses	7,134	21,300	22,700	39,000	16,300
4815 - Repair & Maint - Equipment	2,072	9,500	9,500	34,000	24,500
4910 - Miscellaneous Fees & Registration	5,692	9,400	10,100	14,200	4,100
8050 - Equipment (under \$5,000)	2,173	8,400	11,800	8,400	(3,400)
<b>Materials, Supplies and Services</b>	<b>821,045</b>	<b>1,076,030</b>	<b>2,733,520</b>	<b>4,247,880</b>	<b>1,514,360</b>
1270 - General Plant & Equip (over \$5,000)	78,133	81,100	27,200	50,000	22,800
<b>Equipment</b>	<b>78,133</b>	<b>81,100</b>	<b>27,200</b>	<b>50,000</b>	<b>22,800</b>
<b>Total WQ - Water Quality</b>	<b>2,157,153</b>	<b>2,594,852</b>	<b>4,155,220</b>	<b>5,707,580</b>	<b>1,552,360</b>

**Notes**

Water Quality Division

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**WQ - Water Quality**

**5250 - Water Quality Administration**

**Section's Activity**

Administers the department's compliance with all safe drinking water regulations, environmental laws, rules and regulations.

Account	FY2016 Actual	FY2016 Adopted Budget	FY2017 Adopted Budget	FY2018 Proposed Budget	Change
4110 - Salaries & Wages	164,908	400,790	367,900	383,900	16,000
4120 - Overtime	156	0	0	0	0
<b>Personnel Services</b>	<b>165,064</b>	<b>400,790</b>	<b>367,900</b>	<b>383,900</b>	<b>16,000</b>
4160 - Meals; Mileage & Uniform Allowances	10	0	0	0	0
4250 - Other Contractual Services	133,737	185,500	290,500	215,500	(75,000)
4270 - Professional Services	0	0	1,400,000	2,900,000	1,500,000
4430 - Miscellaneous Supplies	243	500	500	0	(500)
4460 - Other Materials & Supplies	0	300	300	300	0
4500 - Education and Training	0	200	20,600	20,600	0
4720 - Conference Travel & Expenses	3,653	9,900	13,900	27,700	13,800
4815 - Repair & Maint - Equipment	0	500	500	0	(500)
4910 - Miscellaneous Fees & Registration	0	1,500	1,500	1,500	0
<b>Materials, Supplies and Services</b>	<b>137,643</b>	<b>198,400</b>	<b>1,727,800</b>	<b>3,165,600</b>	<b>1,437,800</b>
<b>Total Water Quality Administration</b>	<b>302,707</b>	<b>599,190</b>	<b>2,095,700</b>	<b>3,549,500</b>	<b>1,453,800</b>

**Budget Highlights**

The Water Quality Division Administration is requesting an additional \$1,000,000 over the previous year for its Red Hill groundwater study to keep pace with higher than anticipated workload demands for specialized consulting support services to assist the department in discussions with the Navy and regulatory agencies under the Red Hill Administrative Order on Consent (AOC). The FY 18 budget will also fund environmental assessment studies of various BWS pipeline easements for hazardous chemicals and wastes required under Hawaii Department of Health regulations.

The division is also requesting an additional \$100,000 in other Contractual Services for continued work to develop a test method to detect low level petroleum contaminants in drinking water and a source water protection program.

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**WQ - Water Quality**

**5251 - Chemical Laboratory**

**Section's Activity**

The Chemical Laboratory performs required water quality testing and monitoring to conform to federal and state regulations; monitors proposed rules for departmental impact. Supports the department's operational testing requirements and special water quality studies.

Account	FY2016 Actual	FY2016 Adopted Budget	FY2017 Adopted Budget	FY2018 Proposed Budget	Change
4110 - Salaries & Wages	501,048	555,648	527,400	530,600	3,200
4120 - Overtime	25,621	25,200	30,000	25,000	(5,000)
4130 - Miscellaneous (Payroll)	0	0	0	0	0
<b>Personnel Services</b>	<b>526,669</b>	<b>580,848</b>	<b>557,400</b>	<b>555,600</b>	<b>(1,800)</b>
4160 - Meals; Mileage & Uniform Allowances	893	3,600	3,600	2,000	(1,600)
4240 - Manhole Raising	1,100	0	0	0	0
4250 - Other Contractual Services	407,285	624,830	648,200	708,300	60,100
4270 - Professional Services	0	0	6,500	0	(6,500)
4430 - Miscellaneous Supplies	17	0	320	1,820	1,500
4460 - Other Materials & Supplies	22,268	5,700	25,000	20,000	(5,000)
4500 - Education and Training	435	8,000	500	500	0
4720 - Conference Travel & Expenses	0	0	1,800	3,000	1,200
4815 - Repair & Maint - Equipment	0	5,000	5,000	30,000	25,000
4910 - Miscellaneous Fees & Registration	2,730	2,900	3,800	6,800	3,000
8050 - Equipment (under \$5,000)	2,173	3,000	8,800	5,000	(3,800)
<b>Materials, Supplies and Services</b>	<b>436,900</b>	<b>653,030</b>	<b>703,520</b>	<b>777,420</b>	<b>73,900</b>
1270 - General Plant & Equip (over \$5,000)	72,238	75,000	11,200	50,000	38,800
<b>Equipment</b>	<b>72,238</b>	<b>75,000</b>	<b>11,200</b>	<b>50,000</b>	<b>38,800</b>
<b>Total Chemical Laboratory</b>	<b>1,035,807</b>	<b>1,308,878</b>	<b>1,272,120</b>	<b>1,383,020</b>	<b>110,900</b>

**Budget Highlights**

Chemical Laboratory

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**WQ - Water Quality**

**5252 - Microbiological Laboratory**

**Section's Activity**

The Microbiological Laboratory performs the required bacteriological water quality testing and monitoring to conform to federal and state regulations; monitors proposed rules for departmental impact. Supports the department's operational testing requirements and special water quality studies

Account	FY2016 Actual	FY2016 Adopted Budget	FY2017 Adopted Budget	FY2018 Proposed Budget	Change
4110 - Salaries & Wages	484,285	396,084	409,200	450,200	41,000
4120 - Overtime	81,958	60,000	60,000	20,000	(40,000)
<b>Personnel Services</b>	<b>566,242</b>	<b>456,084</b>	<b>469,200</b>	<b>470,200</b>	<b>1,000</b>
4160 - Meals; Mileage & Uniform Allowances	5,222	2,400	2,000	2,000	0
4250 - Other Contractual Services	176,446	141,400	141,200	140,100	(1,100)
4251 - Software Licenses and Maintenance	0	0	85,000	85,000	0
4460 - Other Materials & Supplies	55,659	54,000	54,000	54,000	0
4500 - Education and Training	660	1,000	1,200	2,160	960
4720 - Conference Travel & Expenses	3,481	11,400	7,000	8,300	1,300
4815 - Repair & Maint - Equipment	2,072	4,000	4,000	4,000	0
4910 - Miscellaneous Fees & Registration	2,962	5,000	4,800	5,900	1,100
8050 - Equipment (under \$5,000)	0	5,400	3,000	3,400	400
<b>Materials, Supplies and Services</b>	<b>246,501</b>	<b>224,600</b>	<b>302,200</b>	<b>304,860</b>	<b>2,660</b>
1270 - General Plant & Equip (over \$5,000)	5,895	6,100	16,000	0	(16,000)
<b>Equipment</b>	<b>5,895</b>	<b>6,100</b>	<b>16,000</b>	<b>0</b>	<b>(16,000)</b>
<b>Total Microbiological Laboratory</b>	<b>818,639</b>	<b>686,784</b>	<b>787,400</b>	<b>775,060</b>	<b>(12,340)</b>

**Budget Highlights**

Microbiological Laboratory

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**CC - Customer Care**

**Division/Office's Activity**

The Customer Care Division handles contacts with customers; prepares applications and contracts for water service; designs service connections; and maintains accounts receivable; investigates consumers' service problems; and collects water and sewer bills. It is responsible for reviewing development construction plans, specifications, and reports for conformity with BWS standards; reviewing requests concerning the availability of water; and administering rules and regulations on cross-connection control and environmental requirements.

Account	FY2016 Actual	FY2016 Adopted Budget	FY2017 Adopted Budget	FY2018 Proposed Budget	Change
4110 - Salaries & Wages	3,410,559	4,041,655	4,098,400	4,358,200	259,800
4120 - Overtime	239,206	262,896	243,000	317,200	74,200
4130 - Miscellaneous (Payroll)	78,617	100,896	94,000	127,700	33,700
<b>Personnel Services</b>	<b>3,728,383</b>	<b>4,405,447</b>	<b>4,435,400</b>	<b>4,803,100</b>	<b>367,700</b>
4160 - Meals; Mileage & Uniform Allowances	16,040	15,825	21,100	25,100	4,000
4220 - Collection Fees	328,368	468,000	701,000	901,200	200,200
4250 - Other Contractual Services	32,483	347,300	98,400	141,700	43,300
4267 - Printed forms	0	1,500	1,500	4,400	2,900
4410 - Gasoline	13	0	0	0	0
4430 - Miscellaneous Supplies	11,186	6,750	12,000	21,100	9,100
4440 - Motor Vehicle Parts & Accessories	9	0	0	0	0
4460 - Other Materials & Supplies	30,057	77,348	45,700	80,200	34,500
4500 - Education and Training	5,220	34,800	41,400	48,900	7,500
4720 - Conference Travel & Expenses	3,630	9,560	9,400	6,000	(3,400)
4815 - Repair & Maint - Equipment	89,099	145,009	85,700	27,900	(57,800)
4910 - Miscellaneous Fees & Registration	0	1,900	6,300	5,900	(400)
8050 - Equipment (under \$5,000)	91,673	48,487	82,700	76,500	(6,200)
<b>Materials, Supplies and Services</b>	<b>607,779</b>	<b>1,156,479</b>	<b>1,105,200</b>	<b>1,338,900</b>	<b>233,700</b>
1270 - General Plant & Equip (over \$5,000)	0	20,000	0	20,000	20,000
<b>Equipment</b>	<b>0</b>	<b>20,000</b>	<b>0</b>	<b>20,000</b>	<b>20,000</b>
<b>Total CC - Customer Care</b>	<b>4,336,161</b>	<b>5,581,926</b>	<b>5,540,600</b>	<b>6,162,000</b>	<b>621,400</b>

**Notes**

Customer Care Division

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**CC - Customer Care**

**5300 - Customer Care Administration**

**Section's Activity**

Administers the affairs of the Customer Care Administration Section; provides clerical support to sections.

Account	FY2016 Actual	FY2016 Adopted Budget	FY2017 Adopted Budget	FY2018 Proposed Budget	Change
4110 - Salaries & Wages	276,347	353,424	324,500	348,500	24,000
4120 - Overtime	5	0	10,000	1,000	(9,000)
<b>Personnel Services</b>	<b>276,352</b>	<b>353,424</b>	<b>334,500</b>	<b>349,500</b>	<b>15,000</b>
4250 - Other Contractual Services	1,289	260,200	70,000	83,000	13,000
4430 - Miscellaneous Supplies	6,503	5,000	12,000	15,000	3,000
4460 - Other Materials & Supplies	3,461	6,000	0	0	0
4500 - Education and Training	5,220	34,800	41,400	35,000	(6,400)
4720 - Conference Travel & Expenses	3,630	9,560	9,400	6,000	(3,400)
4815 - Repair & Maint - Equipment	0	1,200	0	0	0
4910 - Miscellaneous Fees & Registration	0	300	4,500	500	(4,000)
8050 - Equipment (under \$5,000)	27,896	1,000	28,800	5,000	(23,800)
<b>Materials, Supplies and Services</b>	<b>47,999</b>	<b>318,060</b>	<b>166,100</b>	<b>144,500</b>	<b>(21,600)</b>
<b>Total Customer Care Administration</b>	<b>324,351</b>	<b>671,484</b>	<b>500,600</b>	<b>494,000</b>	<b>(6,600)</b>

**Budget Highlights**

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**CC - Customer Care**

**5310 - Collection and Credit**

**Section's Activity**

The Collection and Credit Section formulates and establishes collection and credit practices and procedures; maintains the cashing service for payment of water and sewer bills; processes payments made by mail and through charge cards, E-bill, automatic bill payment, and satellite City Halls; maintains records of delinquent and inactive accounts; performs all field collection and customer service work required to maintain an effective billing and collection program.

Account	FY2016 Actual	FY2016 Adopted Budget	FY2017 Adopted Budget	FY2018 Proposed Budget	Change
4110 - Salaries & Wages	545,860	741,792	825,700	790,300	(35,400)
4120 - Overtime	1,741	2,976	5,000	7,200	2,200
4130 - Miscellaneous (Payroll)	52,286	4,896	20,800	61,600	40,800
<b>Personnel Services</b>	<b>599,886</b>	<b>749,664</b>	<b>851,500</b>	<b>859,100</b>	<b>7,600</b>
4160 - Meals; Mileage & Uniform Allowances	1,186	0	2,050	2,800	750
4220 - Collection Fees	328,368	468,000	701,000	901,200	200,200
4250 - Other Contractual Services	6,920	68,100	8,400	42,700	34,300
4267 - Printed forms	0	1,500	1,500	4,400	2,900
4410 - Gasoline	13	0	0	0	0
4430 - Miscellaneous Supplies	2,485	500	0	3,600	3,600
4460 - Other Materials & Supplies	646	800	3,000	0	(3,000)
4500 - Education and Training	0	0	0	5,400	5,400
4815 - Repair & Maint - Equipment	0	2,000	3,000	5,400	2,400
8050 - Equipment (under \$5,000)	0	1,500	2,400	8,500	6,100
<b>Materials, Supplies and Services</b>	<b>339,617</b>	<b>542,400</b>	<b>721,350</b>	<b>974,000</b>	<b>252,650</b>
<b>Total Collection and Credit</b>	<b>939,504</b>	<b>1,292,064</b>	<b>1,572,850</b>	<b>1,833,100</b>	<b>260,250</b>

**Budget Highlights**

Collection fees are \$200,200 (28.6%) more than FY 2017 due to the continued increases in automatic bill payment charges (\$19,200), credit card payment processing fees (\$140,000), lockbox services (\$26,000) and collection agency fees (\$15,000).

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**CC - Customer Care**

**5320 - Service Engineering**

**Section's Activity**

The Service Engineering Section receives and processes applications for new water service and for relocating or altering water service facilities; renews and approves building permit applications for various types of developments; designs service connections, reviews development and construction plans for water service facilities, maintains maps and records of water distribution and service facilities; performs drafting work for the division; conducts special water service studies; administers water system facilities charges.

Account	FY2016 Actual	FY2016 Adopted Budget	FY2017 Adopted Budget	FY2018 Proposed Budget	Change
4110 - Salaries & Wages	357,568	463,891	447,100	408,000	(39,100)
4120 - Overtime	2,247	6,000	6,000	6,000	0
4130 - Miscellaneous (Payroll)	0	45,000	10,900	10,900	0
<b>Personnel Services</b>	<b>359,814</b>	<b>514,891</b>	<b>464,000</b>	<b>424,900</b>	<b>(39,100)</b>
4160 - Meals; Mileage & Uniform Allowances	319	325	800	800	0
4250 - Other Contractual Services	213	1,000	0	0	0
4460 - Other Materials & Supplies	6	1,200	1,200	1,200	0
8050 - Equipment (under \$5,000)	0	400	0	0	0
<b>Materials, Supplies and Services</b>	<b>538</b>	<b>2,925</b>	<b>2,000</b>	<b>2,000</b>	<b>0</b>
<b>Total Service Engineering</b>	<b>360,353</b>	<b>517,816</b>	<b>466,000</b>	<b>426,900</b>	<b>(39,100)</b>

**Budget Highlights**

Service Engineering Section

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**CC - Customer Care**

**5325 - Cross-Connection Control**

**Section's Activity**

The Cross-Connection Control Section manages and implements the Department's Cross-Connection Control Program; reviews construction plans for cross-connection control requirements; conducts agricultural rate inspections; inspects backflow prevention assembly installations; administers the annual backflow prevention assembly testing program; conducts the backflow prevention assembly tester training course; tests and maintains the Department's backflow prevention assemblies; performs public outreach/education on cross-connection control and backflow prevention.

Account	FY2016 Actual	FY2016 Adopted Budget	FY2017 Adopted Budget	FY2018 Proposed Budget	Change
4110 - Salaries & Wages	185,173	334,512	299,600	327,600	28,000
4120 - Overtime	39,546	3,600	10,000	50,000	40,000
4130 - Miscellaneous (Payroll)	15,702	0	200	200	0
<b>Personnel Services</b>	<b>240,421</b>	<b>338,112</b>	<b>309,800</b>	<b>377,800</b>	<b>68,000</b>
4160 - Meals; Mileage & Uniform Allowances	780	500	1,250	3,500	2,250
4250 - Other Contractual Services	1,649	0	0	0	0
4430 - Miscellaneous Supplies	2,005	450	0	0	0
4460 - Other Materials & Supplies	22,723	65,348	36,700	74,000	37,300
4815 - Repair & Maint - Equipment	88,551	133,809	76,700	16,500	(60,200)
4910 - Miscellaneous Fees & Registration	0	1,000	1,800	3,400	1,600
8050 - Equipment (under \$5,000)	13,393	13,487	18,500	25,400	6,900
<b>Materials, Supplies and Services</b>	<b>129,101</b>	<b>214,594</b>	<b>134,950</b>	<b>122,800</b>	<b>(12,150)</b>
<b>Total Cross-Connection Control</b>	<b>369,522</b>	<b>552,706</b>	<b>444,750</b>	<b>500,600</b>	<b>55,850</b>

**Budget Highlights**

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**CC - Customer Care**

**5330 - Customer Service and Records**

**Section's Activity**

Customer Service and Records Section services customers' applications requiring reestablishment, discontinuance or transfer of services; maintains customer records for billing purposes; initiates field investigations; reviews governmental agency water service contracts; prepares statistical reports on services and handles inquiries and complaints regarding BWS operations, policies, rates and high water bills. Assists other BWS personnel in other divisions with information, statistics, and status of accounts via computer terminals and services files.

Account	FY2016 Actual	FY2016 Adopted Budget	FY2017 Adopted Budget	FY2018 Proposed Budget	Change
4110 - Salaries & Wages	798,232	1,046,928	1,094,400	1,292,500	198,100
4120 - Overtime	11,210	10,320	12,000	13,000	1,000
4130 - Miscellaneous (Payroll)	888	0	0	0	0
<b>Personnel Services</b>	<b>810,329</b>	<b>1,057,248</b>	<b>1,106,400</b>	<b>1,305,500</b>	<b>199,100</b>
4160 - Meals; Mileage & Uniform Allowances	46	0	0	0	0
4250 - Other Contractual Services	1,472	0	0	0	0
4430 - Miscellaneous Supplies	9	400	0	2,500	2,500
4460 - Other Materials & Supplies	18	0	0	0	0
4500 - Education and Training	0	0	0	8,500	8,500
8050 - Equipment (under \$5,000)	0	2,400	2,400	7,600	5,200
<b>Materials, Supplies and Services</b>	<b>1,545</b>	<b>2,800</b>	<b>2,400</b>	<b>18,600</b>	<b>16,200</b>
<b>Total Customer Service and Records</b>	<b>811,875</b>	<b>1,060,048</b>	<b>1,108,800</b>	<b>1,324,100</b>	<b>215,300</b>

**Budget Highlights**

Customer Service and Records Section

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**CC - Customer Care**

**5350 - Investigation**

**Section's Activity**

The Investigation Section investigates and determines causes of abnormalities, interruptions and reductions in water supply; investigates consumer complaints; locates underground piping systems; locates leaks; inspects water services for conformance to the department's rules and regulations; and obtains field data on water services.

Account	FY2016 Actual	FY2016 Adopted Budget	FY2017 Adopted Budget	FY2018 Proposed Budget	Change
4110 - Salaries & Wages	1,247,380	1,101,108	1,107,100	1,191,300	84,200
4120 - Overtime	184,458	240,000	200,000	240,000	40,000
4130 - Miscellaneous (Payroll)	9,741	51,000	62,100	55,000	(7,100)
<b>Personnel Services</b>	<b>1,441,579</b>	<b>1,392,108</b>	<b>1,369,200</b>	<b>1,486,300</b>	<b>117,100</b>
4160 - Meals; Mileage & Uniform Allowances	13,709	15,000	17,000	18,000	1,000
4250 - Other Contractual Services	20,940	18,000	20,000	16,000	(4,000)
4430 - Miscellaneous Supplies	184	400	0	0	0
4440 - Motor Vehicle Parts & Accessories	9	0	0	0	0
4460 - Other Materials & Supplies	3,203	4,000	4,800	5,000	200
4815 - Repair & Maint - Equipment	548	8,000	6,000	6,000	0
4910 - Miscellaneous Fees & Registration	0	600	0	2,000	2,000
8050 - Equipment (under \$5,000)	50,384	29,700	30,600	30,000	(600)
<b>Materials, Supplies and Services</b>	<b>88,977</b>	<b>75,700</b>	<b>78,400</b>	<b>77,000</b>	<b>(1,400)</b>
1270 - General Plant & Equip (over \$5,000)	0	20,000	0	20,000	20,000
<b>Equipment</b>	<b>0</b>	<b>20,000</b>	<b>0</b>	<b>20,000</b>	<b>20,000</b>
<b>Total Investigation</b>	<b>1,530,556</b>	<b>1,487,808</b>	<b>1,447,600</b>	<b>1,583,300</b>	<b>135,700</b>

**Budget Highlights**

Investigation Section

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**LAND - Land**

**Section's Activity**

The Land Division is responsible for acquiring real property and real property interests by purchase, eminent domain, license, lease or otherwise, conducts title searches; prepares or secures surveys, maps and descriptions for real property transactions; makes and/or contracts for land appraisals and analyzes those prepared by others; contracts and negotiates with private parties and government agencies to acquire real property and real property interests; prepares, checks and processes deeds, grants of easement, licenses, leases, agreements and other documents through to final execution and recordation; manages all real property and real property interests under the jurisdiction of the department, including recommendations on land use policies and carrying out the disposition of real property and real property interests, licenses, leases, etc.; and keeps abreast of laws and court decisions affecting real property rights and values.

Account	FY2016 Actual	FY2016 Adopted Budget	FY2017 Adopted Budget	FY2018 Proposed Budget	Change
4110 - Salaries & Wages	289,817	285,936	282,900	280,900	(2,000)
4120 - Overtime	13,362	16,800	17,500	18,400	900
4130 - Miscellaneous (Payroll)	0	7,200	3,700	3,700	0
<b>Personnel Services</b>	<b>303,179</b>	<b>309,936</b>	<b>304,100</b>	<b>303,000</b>	<b>(1,100)</b>
4160 - Meals; Mileage & Uniform Allowances	230	480	480	500	20
4210 - Appraisals; Title Searches & Related Costs	297,698	420,500	420,500	390,500	(30,000)
4250 - Other Contractual Services	756	720	900	23,900	23,000
4430 - Miscellaneous Supplies	461	600	600	600	0
4460 - Other Materials & Supplies	80	0	0	0	0
4480 - Postage	94	200	100	200	100
4720 - Conference Travel & Expenses	0	0	5,000	0	(5,000)
4815 - Repair & Maint - Equipment	0	320	0	0	0
4910 - Miscellaneous Fees & Registration	15,415	19,200	19,200	19,200	0
<b>Materials, Supplies and Services</b>	<b>314,735</b>	<b>442,020</b>	<b>446,780</b>	<b>434,900</b>	<b>(11,880)</b>
<b>Total Land</b>	<b>617,913</b>	<b>751,956</b>	<b>750,880</b>	<b>737,900</b>	<b>(12,980)</b>

**Budget Highlights**

APPRAISALS, TITLE SEARCHES AND RELATED COSTS provides funding primarily for real property appraisals, title searches and land surveying that is needed to acquire or manage the department's real property assets. The need for these services is not constant and changes from fiscal year to fiscal year, depending on the capital needs of the department.

MISCELLANEOUS FEES & REGISTRATION provides funds to pay the State the Dam & Reservoir Safety Program annual fees for regulated dams in Nuuanu and Makaha that are under the department's jurisdiction and to pay the Hawaii Community Development Authority the annual utility assessment fee for property in Kalaeloa (former Barbers Point Naval Air Station) that was obtained via public benefit conveyance from the U.S. Department of the Navy.

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**WR - Water Resources**

**Division/Office's Activity**

The Water Resources Division administers and coordinates long range planning and the capital program; conducts continuous hydrologic and geologic monitoring; conducts hydraulic water system analysis for infrastructure improvements and operational efficiency; administers and coordinates the review of development related proposals for the availability of water and water system adequacy; and administers the water conservation and recycled water programs.

Account	FY2016 Actual	FY2016 Adopted Budget	FY2017 Adopted Budget	FY2018 Proposed Budget	Change
4110 - Salaries & Wages	1,881,794	2,227,769	2,321,800	2,137,700	(184,100)
4120 - Overtime	39,984	60,829	72,892	112,374	39,482
4130 - Miscellaneous (Payroll)	2,969	62,297	29,800	57,015	27,215
<b>Personnel Services</b>	<b>1,924,747</b>	<b>2,350,895</b>	<b>2,424,492</b>	<b>2,307,089</b>	<b>(117,403)</b>
4160 - Meals; Mileage & Uniform Allowances	920	600	2,000	2,430	430
4250 - Other Contractual Services	1,573,192	1,285,580	950,129	1,457,730	507,601
4255 - Other Services	68,607	237,700	547,018	548,840	1,822
4260 - Advertising & Publication of Notices	1,505	0	0	0	0
4265 - Printing	0	500	800	800	0
4270 - Professional Services	150,000	150,000	150,000	800,000	650,000
4430 - Miscellaneous Supplies	6,162	10,000	10,000	10,000	0
4460 - Other Materials & Supplies	26,619	21,500	26,860	45,400	18,540
4480 - Postage	0	480	480	480	0
4500 - Education and Training	9,347	16,169	28,300	16,300	(12,000)
4680 - Telephone	1,888	12,660	12,660	12,660	0
4720 - Conference Travel & Expenses	21,325	35,350	50,415	64,680	14,265
4810 - Repair & Maint - Recycled Water Plt	496,355	620,990	732,016	1,275,644	543,628
4815 - Repair & Maint - Equipment	1,272	14,900	25,900	31,900	6,000
4910 - Miscellaneous Fees & Registration	1,000	1,000	1,200	1,200	0
4920 - Non-Potable Water Trtmtnt Plt Costs	3,384,331	5,507,800	5,365,331	4,668,725	(696,606)
4940 - US Geol Surv (USGS) CoOp Invest	154,978	160,000	60,000	232,000	172,000
8050 - Equipment (under \$5,000)	11,323	23,000	62,900	215,850	152,950
<b>Materials, Supplies and Services</b>	<b>5,908,824</b>	<b>8,098,229</b>	<b>8,026,009</b>	<b>9,384,639</b>	<b>1,358,630</b>
1270 - General Plant & Equip (over \$5,000)	0	40,000	169,000	104,280	(64,720)
<b>Equipment</b>	<b>0</b>	<b>40,000</b>	<b>169,000</b>	<b>104,280</b>	<b>(64,720)</b>
<b>Total WR - Water Resources</b>	<b>7,833,571</b>	<b>10,489,124</b>	<b>10,619,501</b>	<b>11,796,008</b>	<b>1,176,507</b>

**Notes**

Water Resources Division

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**WR - Water Resources**

**5450 - Water Resources Administration**

**Section's Activity**

The Water Resources Administration Section coordinates and directs the activities of the Division to meet the departmental requirements for water system and water resources management and development, conservation and protection; advises and keeps management informed on water resources and administers the pertinent rules and regulations.

Account	FY2016 Actual	FY2016 Adopted Budget	FY2017 Adopted Budget	FY2018 Proposed Budget	Change
4110 - Salaries & Wages	324,545	353,398	352,100	361,300	9,200
4120 - Overtime	0	0	2,000	2,000	0
<b>Personnel Services</b>	<b>324,545</b>	<b>353,398</b>	<b>354,100</b>	<b>363,300</b>	<b>9,200</b>
4160 - Meals; Mileage & Uniform Allowances	63	0	500	0	(500)
4250 - Other Contractual Services	588,222	500,000	500,000	920,000	420,000
4260 - Advertising & Publication of Notices	1,505	0	0	0	0
4430 - Miscellaneous Supplies	5,853	10,000	10,000	10,000	0
4460 - Other Materials & Supplies	18	0	6,500	0	(6,500)
4500 - Education and Training	0	0	0	0	0
4680 - Telephone	0	660	660	660	0
4720 - Conference Travel & Expenses	1,377	1,300	3,390	4,200	810
4815 - Repair & Maint - Equipment	83	500	500	500	0
4910 - Miscellaneous Fees & Registration	1,000	0	0	0	0
<b>Materials, Supplies and Services</b>	<b>598,120</b>	<b>512,460</b>	<b>521,550</b>	<b>935,360</b>	<b>413,810</b>
<b>Total Water Resources Administration</b>	<b>922,664</b>	<b>865,858</b>	<b>875,650</b>	<b>1,298,660</b>	<b>423,010</b>

**Budget Highlights**

Other Contractual Services of \$920,000 will meet the requirements of preparing a county water use and development plan per the State of Hawaii Water Code and County of Honolulu ordinance, and other Water Resources Research Studies.

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**WR - Water Resources**

**5470 - Water System Planning**

**Section's Activity**

The Water Systems Planning Section supports the functions of the Water Resources Division and other divisions by analyzing the feasibility of proposed capital projects and water system improvements using computer hydraulic models; verifying source contribution for the annual Consumer Confidence Report; developing specialized computer hydraulic models and analyzing operational scenarios; implementing/ assisting with the investigation and resolution of customer complaints of inadequate water service; coordinating the acquisition and evaluation of private water systems; and gathering real-time operational data for analysis and evaluation

Account	FY2016 Actual	FY2016 Adopted Budget	FY2017 Adopted Budget	FY2018 Proposed Budget	Change
4110 - Salaries & Wages	251,730	336,932	313,900	291,000	(22,900)
4120 - Overtime	2,454	7,944	8,549	8,000	(549)
4130 - Miscellaneous (Payroll)	1,986	20,316	9,600	9,600	C
<b>Personnel Services</b>	<b>256,171</b>	<b>365,192</b>	<b>332,049</b>	<b>308,600</b>	<b>(23,449)</b>
4160 - Meals; Mileage & Uniform Allowances	10	0	0	880	880
4250 - Other Contractual Services	480	480	480	480	C
4460 - Other Materials & Supplies	1,866	1,500	1,500	1,500	C
4480 - Postage	0	480	480	480	C
4500 - Education and Training	8,719	8,190	8,460	9,060	600
4720 - Conference Travel & Expenses	2,341	9,490	11,450	12,930	1,480
4815 - Repair & Maint - Equipment	1,190	7,400	7,400	7,400	C
8050 - Equipment (under \$5,000)	0	0	20,400	0	(20,400)
<b>Materials, Supplies and Services</b>	<b>14,606</b>	<b>27,540</b>	<b>50,170</b>	<b>32,730</b>	<b>(17,440)</b>
1270 - General Plant & Equip (over \$5,000)	0	0	0	15,780	15,780
<b>Equipment</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>15,780</b>	<b>15,780</b>
<b>Total Water System Planning</b>	<b>270,776</b>	<b>392,732</b>	<b>382,219</b>	<b>357,110</b>	<b>(25,109)</b>

**Budget Highlights**

The Equipment budget of \$15,780 is to 1) complete the update the office layout to create a work environment more conducive to analysis, collaboration and training; and 2) purchase two more wireless pressure recorders that allow analysis, and ultimate prevention, of pressure anomalies in the water distribution system.

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**WR - Water Resources**

**5472 - Water Conservation**

**Section's Activity**

Directs the water conservation activities of the department; Conducts the planning, engineering, research, development, and implementation of the department's external (demand-side) and internal (infrastructure) conservation programs, including water facilities energy conservation and efficiency programs and recycled and other nonpotable water programs.

Account	FY2016 Actual	FY2016 Adopted Budget	FY2017 Adopted Budget	FY2018 Proposed Budget	Change
4110 - Salaries & Wages	321,472	455,368	539,400	426,100	(113,300)
4120 - Overtime	7,405	9,888	13,250	50,000	36,750
4130 - Miscellaneous (Payroll)	983	22,788	6,400	6,800	400
<b>Personnel Services</b>	<b>329,860</b>	<b>488,044</b>	<b>559,050</b>	<b>482,900</b>	<b>(76,150)</b>
4160 - Meals; Mileage & Uniform Allowances	316	0	600	650	50
4250 - Other Contractual Services	225,000	200,000	200,000	0	(200,000)
4255 - Other Services	0	20,000	35,000	35,000	0
4270 - Professional Services	150,000	150,000	150,000	800,000	650,000
4430 - Miscellaneous Supplies	0	0	0	0	0
4460 - Other Materials & Supplies	12,807	14,200	9,810	20,450	10,640
4480 - Postage	0	0	0	0	0
4500 - Education and Training	0	2,000	5,400	0	(5,400)
4720 - Conference Travel & Expenses	6,883	11,850	15,540	23,000	7,460
8050 - Equipment (under \$5,000)	0	0	2,500	140,000	137,500
<b>Materials, Supplies and Services</b>	<b>395,005</b>	<b>398,050</b>	<b>418,850</b>	<b>1,019,100</b>	<b>600,250</b>
1270 - General Plant & Equip (over \$5,000)	0	0	100,000	0	(100,000)
<b>Equipment</b>	<b>0</b>	<b>0</b>	<b>100,000</b>	<b>0</b>	<b>(100,000)</b>
<b>Total Water Conservation</b>	<b>724,866</b>	<b>886,094</b>	<b>1,077,900</b>	<b>1,502,000</b>	<b>424,100</b>

**Budget Highlights**

For Water Conservation, the \$350,000 is being dedicated to implementation of water conservation programs developed by previous studies. In addition, \$35,000 is being earmarked for a pilot "Watersmart" program aimed at reducing customer usage via a localized peer comparison strategy. Also, \$150,000 is being used to further development of practices and procedures for corrosion protection of the water mains.

For Energy Conservation, the branch continues to administer the 20 year Energy Savings Performance Contracting project necessitating the continued hiring of an additional person with expertise in ESPC projects. In addition, \$300,000 is being budgeted to evaluate the viability of a PV-Battery system to run pump stations.

For Recycled Water, the branch is revamping the administration of the Recycled Water System program including increasing the documentation of the physical assets and doing detailed asset assessments in the field. The biggest budget impact is an increase of \$140,000 to purchase leak detection equipment for deployment throughout the recycled water system to ensure that leaks can be found and fixed before it becomes a potential main break.

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**WR - Water Resources**

**5475 - Recycled Water**

**Section's Activity**

The Recycled Water Program is responsible for the treatment and distribution of recycled water for beneficial reuse island-wide; the construction, acquisition, and operation of recycled water treatment and distribution infrastructure; long-term service and support agreements with large water users; and to conduct research and provide public outreach to promote acceptance of recycled water.

Account	FY2016 Actual	FY2016 Adopted Budget	FY2017 Adopted Budget	FY2018 Proposed Budget	Change
4250 - Other Contractual Services	143,999	112,800	120,000	144,000	24,000
4265 - Printing	0	200	200	200	0
4460 - Other Materials & Supplies	1,538	1,400	1,400	400	(1,000)
4810 - Repair & Maint - Recycled Water Pit	496,355	620,990	732,016	1,275,644	543,628
4920 - Non-Potable Water Trtmnt Pit Costs	3,384,331	5,507,800	5,365,331	4,668,725	(696,606)
8050 - Equipment (under \$5,000)	11,323	400	0	0	0
<b>Materials, Supplies and Services</b>	<b>4,037,547</b>	<b>6,243,590</b>	<b>6,218,947</b>	<b>6,088,969</b>	<b>(129,978)</b>
<b>Total Recycled Water</b>	<b>4,037,547</b>	<b>6,243,590</b>	<b>6,218,947</b>	<b>6,088,969</b>	<b>(129,978)</b>

**Budget Highlights**

This budget is to keep the Honouliuli Water Recycling Facility operational and operating efficiently. The overall budget decrease is largely attributed to estimating lower energy related costs than previously estimated.

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**WR - Water Resources**

**5480 - Hydrology-Geology**

**Section's Activity**

The Hydrology-Geology Section is responsible for water resource monitoring and evaluation. The section collects and analyzes hydrologic and geologic data to manage resources, to identify new sources, to determine capacity of groundwater resources and aquifer properties. Plans and specifications are prepared for the drilling, testing, and sealing of wells of varying utility. The data collection unit collects rainfall, production and water level data, and conducts geophysical well profiles. These compiled data as well as hydrologic advice provided by staff is given to other sections, units, agencies and the public as requested. The data is used for the preparation of source development and management reports and studies. Watershed related programs and activities are administered through the watershed coordinator

Account	FY2016 Actual	FY2016 Adopted Budget	FY2017 Adopted Budget	FY2018 Proposed Budget	Change
4110 - Salaries & Wages	442,342	451,716	495,800	408,000	(87,800)
4120 - Overtime	21,175	25,717	32,604	33,994	1,390
4130 - Miscellaneous (Payroll)	0	2,014	2,400	28,015	25,615
<b>Personnel Services</b>	<b>463,518</b>	<b>479,447</b>	<b>530,804</b>	<b>470,009</b>	<b>(60,795)</b>
4160 - Meals; Mileage & Uniform Allowances	333	300	600	600	0
4250 - Other Contractual Services	615,491	471,800	129,149	392,750	263,601
4255 - Other Services	68,607	217,700	512,018	513,840	1,822
4265 - Printing	0	300	600	600	0
4430 - Miscellaneous Supplies	240	0	0	0	0
4460 - Other Materials & Supplies	10,288	3,750	6,600	22,000	15,400
4500 - Education and Training	628	2,829	12,800	6,400	(6,400)
4680 - Telephone	1,888	12,000	12,000	12,000	0
4720 - Conference Travel & Expenses	6,655	8,410	9,310	10,400	1,090
4815 - Repair & Maint - Equipment	0	7,000	18,000	24,000	6,000
4910 - Miscellaneous Fees & Registration	0	1,000	1,200	1,200	0
4940 - US Geol Surv (USGS) CoOp Invest	154,978	160,000	60,000	232,000	172,000
8050 - Equipment (under \$5,000)	0	20,000	40,000	75,500	35,500
<b>Materials, Supplies and Services</b>	<b>859,109</b>	<b>905,089</b>	<b>802,277</b>	<b>1,291,290</b>	<b>489,013</b>
1270 - General Plant & Equip (over \$5,000)	0	40,000	69,000	85,000	16,000
<b>Equipment</b>	<b>0</b>	<b>40,000</b>	<b>69,000</b>	<b>85,000</b>	<b>16,000</b>
<b>Total Hydrology-Geology</b>	<b>1,322,626</b>	<b>1,424,536</b>	<b>1,402,081</b>	<b>1,846,299</b>	<b>444,218</b>

**Budget Highlights**

The overall Hydrology-Geology budget shows an increase over last year primarily because of 1) additional studies of the transpiration characteristics of the native and invaded mesic forests; 2) a benchmark elevation survey of the monitoring wells used to determine the health of the aquifer; and 3) an increase in the USGS CoOp Investment to support a groundwater modeling effort for a critical aquifer.

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**WR - Water Resources**

**5490 - Project Review**

**Section's Activity**

The Project Review Section reviews all requests concerning the availability of water; reviews all water master plans of private and public developments; provides system pressure and flow data; evaluates existing system facilities to ascertain capacities required to support proposed private and public developments; and maintains the files of outstanding water commitments

Account	FY2016 Actual	FY2016 Adopted Budget	FY2017 Adopted Budget	FY2018 Proposed Budget	Change
4110 - Salaries & Wages	184,634	242,943	232,700	247,600	14,900
4120 - Overtime	560	4,800	4,800	3,600	(1,200)
4130 - Miscellaneous (Payroll)	0	3,097	0	800	800
<b>Personnel Services</b>	<b>185,194</b>	<b>250,840</b>	<b>237,500</b>	<b>252,000</b>	<b>14,500</b>
4160 - Meals; Mileage & Uniform Allowances	0	0	0	0	0
4430 - Miscellaneous Supplies	0	0	0	0	0
4460 - Other Materials & Supplies	0	0	400	400	0
4500 - Education and Training	0	750	800	0	(800)
4720 - Conference Travel & Expenses	2,130	1,700	4,210	4,450	240
8050 - Equipment (under \$5,000)	0	1,500	0	0	0
<b>Materials, Supplies and Services</b>	<b>2,130</b>	<b>3,950</b>	<b>5,410</b>	<b>4,850</b>	<b>(560)</b>
1270 - General Plant & Equip (over \$5,000)	0	0	0	3,500	3,500
<b>Equipment</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>3,500</b>	<b>3,500</b>
<b>Total Project Review</b>	<b>187,324</b>	<b>254,790</b>	<b>242,910</b>	<b>260,350</b>	<b>17,440</b>

**Budget Highlights**

Project Review

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**WR - Water Resources**

**5495 - Long Range Planning**

**Section's Activity**

The Long-Range Planning Section develops master and long-range plans for water system improvements to meet departmental goals and objectives; prepares population projections and estimates of future water requirements; and prepares, prioritizes, and justifies related Capital Program projects.

Account	FY2016 Actual	FY2016 Adopted Budget	FY2017 Adopted Budget	FY2018 Proposed Budget	Change
4110 - Salaries & Wages	357,071	387,412	387,900	403,700	15,800
4120 - Overtime	8,389	12,480	11,689	14,780	3,091
4130 - Miscellaneous (Payroll)	0	14,082	11,400	11,800	400
<b>Personnel Services</b>	<b>365,460</b>	<b>413,974</b>	<b>410,989</b>	<b>430,280</b>	<b>19,291</b>
4160 - Meals; Mileage & Uniform Allowances	197	300	300	300	0
4250 - Other Contractual Services	0	500	500	500	0
4430 - Miscellaneous Supplies	69	0	0	0	0
4460 - Other Materials & Supplies	102	650	650	650	0
4500 - Education and Training	0	2,400	840	840	0
4720 - Conference Travel & Expenses	1,940	2,600	6,515	9,700	3,185
8050 - Equipment (under \$5,000)	0	1,100	0	350	350
<b>Materials, Supplies and Services</b>	<b>2,308</b>	<b>7,550</b>	<b>8,805</b>	<b>12,340</b>	<b>3,535</b>
<b>Total Long Range Planning</b>	<b>367,768</b>	<b>421,524</b>	<b>419,794</b>	<b>442,620</b>	<b>22,826</b>

**Budget Highlights**

Long Range Planning

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**FO - Field Operations**

**Division/Office's Activity**

The Field Operations Division is responsible for the maintenance of all waterworks facilities, including all pipelines, valves, fire hydrants, meters, AMR components and corporation yards; maintaining all grounds; installing, maintaining, and repairing service connections; maintaining office buildings and physical control of the storerooms and storage yards.

Account	FY2016 Actual	FY2016 Adopted Budget	FY2017 Adopted Budget	FY2018 Proposed Budget	Change
4110 - Salaries & Wages	9,571,961	13,858,006	13,669,800	13,049,500	(620,300)
4120 - Overtime	1,307,499	1,617,600	1,629,600	1,598,000	(31,600)
4130 - Miscellaneous (Payroll)	440,008	895,000	1,051,100	1,184,300	133,200
<b>Personnel Services</b>	<b>11,319,467</b>	<b>16,370,606</b>	<b>16,350,500</b>	<b>15,831,800</b>	<b>(518,700)</b>
1110 - Materials & Supplies (Storeroom)	1,715,617	2,000,000	1,800,000	1,800,000	C
1120 - Meters (Storeroom)	831,399	2,400,000	4,297,000	2,400,000	(1,897,000)
1125 - AMR Materials & Supplies (Storeroom)	2,586,050	2,400,000	3,600,000	2,000,000	(1,600,000)
4160 - Meals; Mileage & Uniform Allowances	84,307	115,200	123,600	124,600	1,000
4230 - Emergency & Contracted Road Repairs	4,744,263	3,500,000	6,000,000	6,000,000	C
4250 - Other Contractual Services	532,892	917,100	890,100	893,100	3,000
4270 - Professional Services	0	0	450,000	25,000	(425,000)
4280 - Refuse Collection & Disposal	443,970	550,000	550,000	550,000	C
4420 - Hauling Charges	17,249	36,000	36,000	160,000	124,000
4430 - Miscellaneous Supplies	8,575	9,600	9,600	10,000	400
4460 - Other Materials & Supplies	298,549	320,400	352,400	313,000	(39,400)
4470 - Parts and Accessories	0	2,400	2,400	2,400	C
4500 - Education and Training	11,478	30,000	30,000	30,000	C
4720 - Conference Travel & Expenses	12,380	12,000	36,000	46,000	10,000
4805 - Repair & Maint - Structures	9,794	67,000	60,000	60,000	C
4815 - Repair & Maint - Equipment	31,493	31,200	48,200	48,100	(100)
4820 - Repair & Maint - Distribution	14,420	0	0	0	C
4920 - Non-Potable Water Trtmnt Plt Costs	0	60,000	200,000	0	(200,000)
4923 - Store Materials & Expense	501,910	500,000	500,000	500,000	C
8050 - Equipment (under \$5,000)	69,344	119,100	103,450	113,390	9,940
<b>Materials, Supplies and Services</b>	<b>11,913,690</b>	<b>13,070,000</b>	<b>19,088,750</b>	<b>15,075,590</b>	<b>(4,013,160)</b>
1270 - General Plant & Equip (over \$5,000)	0	0	20,000	59,240	39,240
<b>Equipment</b>	<b>0</b>	<b>0</b>	<b>20,000</b>	<b>59,240</b>	<b>39,240</b>
<b>Total FO - Field Operations</b>	<b>23,233,158</b>	<b>29,440,606</b>	<b>35,459,250</b>	<b>30,966,630</b>	<b>(4,492,620)</b>

**Notes**

Field Operations Division

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**FO - Field Operations**

**5500 - Field Operations Administration**

**Section's Activity**

Administers the affairs of the Field Operations Division.

Account	FY2016 Actual	FY2016 Adopted Budget	FY2017 Adopted Budget	FY2018 Proposed Budget	Change
4110 - Salaries & Wages	679,705	726,573	760,300	699,100	(61,200)
4120 - Overtime	3,900	4,800	12,000	12,000	0
4130 - Miscellaneous (Payroll)	0	87,000	94,200	77,200	(17,000)
<b>Personnel Services</b>	<b>683,605</b>	<b>818,373</b>	<b>866,500</b>	<b>788,300</b>	<b>(78,200)</b>
4160 - Meals; Mileage & Uniform Allowances	102	0	6,000	6,000	0
4250 - Other Contractual Services	43,255	160,000	160,000	160,000	0
4270 - Professional Services	0	0	450,000	25,000	(425,000)
4460 - Other Materials & Supplies	196	6,000	12,000	12,000	0
4500 - Education and Training	11,401	30,000	30,000	30,000	0
4720 - Conference Travel & Expenses	12,380	12,000	36,000	46,000	10,000
4815 - Repair & Maint - Equipment	0	0	10,000	10,000	0
8050 - Equipment (under \$5,000)	0	0	0	4,000	4,000
<b>Materials, Supplies and Services</b>	<b>67,333</b>	<b>208,000</b>	<b>704,000</b>	<b>293,000</b>	<b>(411,000)</b>
1270 - General Plant & Equip (over \$5,000)	0	0	0	51,940	51,940
<b>Equipment</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>51,940</b>	<b>51,940</b>
<b>Total Field Operations Administration</b>	<b>750,938</b>	<b>1,026,373</b>	<b>1,570,500</b>	<b>1,133,240</b>	<b>(437,260)</b>

**Budget Highlights**

4250 – Special duty police for traffic control; 4500 – DSO/CEU classes.  
4815 – Leak detection equipment repair.

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**FO - Field Operations**

**5510 - Distribution Branch Administration**

**Section's Activity**

The Distribution Branch directs and coordinates the activities pertaining to maintenance of pipelines, appurtenances, buildings and corporation yards; coordinates and directs the maintenance of grounds; provides clerical support to sections of the division branch.

Account	FY2016 Actual	FY2016 Adopted Budget	FY2017 Adopted Budget	FY2018 Proposed Budget	Change
4110 - Salaries & Wages	204,489	295,129	419,400	264,400	(155,000)
4120 - Overtime	550	2,400	2,400	2,400	0
4130 - Miscellaneous (Payroll)	0	0	0	10,000	10,000
<b>Personnel Services</b>	<b>205,039</b>	<b>297,529</b>	<b>421,800</b>	<b>276,800</b>	<b>(145,000)</b>
4160 - Meals; Mileage & Uniform Allowances	30	0	0	0	0
4230 - Emergency & Contracted Road Repairs	4,744,263	3,500,000	6,000,000	6,000,000	0
4250 - Other Contractual Services	0	2,400	2,400	2,400	0
4430 - Miscellaneous Supplies	8,493	9,600	9,600	10,000	400
4460 - Other Materials & Supplies	517	0	0	0	0
4815 - Repair & Maint - Equipment	58	0	0	0	0
<b>Materials, Supplies and Services</b>	<b>4,753,361</b>	<b>3,512,000</b>	<b>6,012,000</b>	<b>6,012,400</b>	<b>400</b>
<b>Total Distribution Branch Administration</b>	<b>4,958,399</b>	<b>3,809,529</b>	<b>6,433,800</b>	<b>6,289,200</b>	<b>(144,600)</b>

**Budget Highlights**

Emergency & Contract Road Repairs – For City and State road repairs for BWS excavations.

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**FO - Field Operations**

**5520 - Administration Unit**

**Section's Activity**

The Maintenance Section (5520 – Administration Unit, 5521 – Hydrant & Valves Unit, and 5522 – Grounds and Landscaping Unit) installs, operates and maintains valves, hydrants and appurtenances, disinfects reservoirs and mains, conducts tapping and pipe cutting operations, maintains the metropolitan gravity system, corporation yards, grounds and landscaped areas; conducts inspections of the distribution system and facilities.

Account	FY2016 Actual	FY2016 Adopted Budget	FY2017 Adopted Budget	FY2018 Proposed Budget	Change
4110 - Salaries & Wages	137,388	64,668	68,900	186,900	118,000
4120 - Overtime	11,069	0	0	2,400	2,400
4130 - Miscellaneous (Payroll)	3,804	0	13,200	28,800	15,600
<b>Personnel Services</b>	<b>152,260</b>	<b>64,668</b>	<b>82,100</b>	<b>218,100</b>	<b>136,000</b>
4160 - Meals; Mileage & Uniform Allowances	1,496	0	0	0	0
4250 - Other Contractual Services	313,476	0	0	0	0
4280 - Refuse Collection & Disposal	443,970	550,000	550,000	550,000	0
4460 - Other Materials & Supplies	1,269	0	0	0	0
4820 - Repair & Maint - Distribution	14,420	0	0	0	0
8050 - Equipment (under \$5,000)	8,204	0	0	0	0
<b>Materials, Supplies and Services</b>	<b>782,835</b>	<b>550,000</b>	<b>550,000</b>	<b>550,000</b>	<b>0</b>
<b>Total Maintenance Section</b>	<b>935,095</b>	<b>614,668</b>	<b>632,100</b>	<b>768,100</b>	<b>136,000</b>

**Budget Highlights**

4280 - Refuse Collection & Disposal – Includes PVT Landfill disposal fees.

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**FO - Field Operations**

**5521 - Hydrants and Valves**

**Section's Activity**

Account	FY2016 Actual	FY2016 Adopted Budget	FY2017 Adopted Budget	FY2018 Proposed Budget	Change
4110 - Salaries & Wages	1,078,499	1,586,160	1,672,700	1,584,800	(87,900)
4120 - Overtime	135,226	180,000	160,000	160,000	0
4130 - Miscellaneous (Payroll)	86,775	122,000	174,800	141,800	(33,000)
<b>Personnel Services</b>	<b>1,300,500</b>	<b>1,888,160</b>	<b>2,007,500</b>	<b>1,886,600</b>	<b>(120,900)</b>
4160 - Meals; Mileage & Uniform Allowances	10,482	10,800	10,800	10,800	0
4250 - Other Contractual Services	1,948	0	0	0	0
4460 - Other Materials & Supplies	26,275	48,000	48,000	35,000	(13,000)
4805 - Repair & Maint - Structures	832	0	0	0	0
4815 - Repair & Maint - Equipment	5,774	4,800	4,800	4,800	0
8050 - Equipment (under \$5,000)	0	21,900	16,000	22,350	6,350
<b>Materials, Supplies and Services</b>	<b>45,311</b>	<b>85,500</b>	<b>79,600</b>	<b>72,950</b>	<b>(6,650)</b>
<b>Total Maintenance Section</b>	<b>1,345,812</b>	<b>1,973,660</b>	<b>2,087,100</b>	<b>1,959,550</b>	<b>(127,550)</b>

**Budget Highlights**

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**FO - Field Operations**

**5522 - Grounds and Landscaping**

**Section's Activity**

4250 - Other Contractual Services – Tree trimming, maintenance at Nuuanu Open Reservoirs Nos. 1 and 4, Mauna Olu Fire Break, and Mauna Olu 530 Non-Potable Reservoir

Account	FY2016 Actual	FY2016 Adopted Budget	FY2017 Adopted Budget	FY2018 Proposed Budget	Change
4110 - Salaries & Wages	774,943	1,062,252	1,094,500	1,051,700	(42,800)
4120 - Overtime	52,952	48,000	60,000	60,000	0
4130 - Miscellaneous (Payroll)	8,447	26,400	26,400	55,000	28,600
<b>Personnel Services</b>	<b>836,342</b>	<b>1,136,652</b>	<b>1,180,900</b>	<b>1,166,700</b>	<b>(14,200)</b>
4160 - Meals; Mileage & Uniform Allowances	4,048	6,000	6,000	6,000	0
4250 - Other Contractual Services	83,522	600,000	600,000	600,000	0
4460 - Other Materials & Supplies	42,739	60,000	60,000	60,000	0
4815 - Repair & Maint - Equipment	4,756	4,800	4,800	4,800	0
8050 - Equipment (under \$5,000)	8,311	12,300	8,900	8,170	(730)
<b>Materials, Supplies and Services</b>	<b>143,375</b>	<b>683,100</b>	<b>679,700</b>	<b>678,970</b>	<b>(730)</b>
1270 - General Plant & Equip (over \$5,000)	0	0	20,000	0	(20,000)
<b>Equipment</b>	<b>0</b>	<b>0</b>	<b>20,000</b>	<b>0</b>	<b>(20,000)</b>
<b>Total Maintenance Section</b>	<b>979,717</b>	<b>1,819,752</b>	<b>1,880,600</b>	<b>1,845,670</b>	<b>(34,930)</b>

**Budget Highlights**

4250 - Other Contractual Services

- tree trimming, maintenance at Nuuanu Open Reservoirs Nos. 1 and 4, Mauna Olu Fire Break and Mauna Olu 530 non-potable Reservoir

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**FO - Field Operations**

**5530 - Construction**

**Section's Activity**

The Construction Section conducts all major emergency repair operations involving water mains, reservoirs and appurtenances ; constructs pipelines and appurtenances and miscellaneous projects; conducts all carpentry, masonry and heavy equipment operations.

Account	FY2016 Actual	FY2016 Adopted Budget	FY2017 Adopted Budget	FY2018 Proposed Budget	Change
4110 - Salaries & Wages	1,448,867	2,265,900	2,299,700	2,191,100	(108,600)
4120 - Overtime	372,867	600,000	500,000	450,000	(50,000)
4130 - Miscellaneous (Payroll)	68,427	173,000	212,600	265,800	53,200
<b>Personnel Services</b>	<b>1,890,162</b>	<b>3,038,900</b>	<b>3,012,300</b>	<b>2,906,900</b>	<b>(105,400)</b>
4160 - Meals; Mileage & Uniform Allowances	20,761	36,000	36,000	36,000	0
4250 - Other Contractual Services	28,046	48,000	48,000	48,000	0
4460 - Other Materials & Supplies	97,190	36,000	48,000	48,000	0
4500 - Education and Training	78	0	0	0	0
4805 - Repair & Maint - Structures	8,962	36,000	36,000	50,000	14,000
4815 - Repair & Maint - Equipment	884	0	0	0	0
8050 - Equipment (under \$5,000)	4,558	14,700	15,800	8,650	(7,150)
<b>Materials, Supplies and Services</b>	<b>160,479</b>	<b>170,700</b>	<b>183,800</b>	<b>190,650</b>	<b>6,850</b>
<b>Total Construction</b>	<b>2,050,641</b>	<b>3,209,600</b>	<b>3,196,100</b>	<b>3,097,550</b>	<b>(98,550)</b>

**Budget Highlights**

4805 - Repair & Maintenance - Structures: Repair structures to meet Sanitary Survey requirements.

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**FO - Field Operations**

**5540 - Administration Section**

**Section's Activity**

Administers the affairs of the Suburban Field Services Branch. Directs and coordinates the activities pertaining to maintenance of pipelines and appurtenances, building and corporation yards, coordinates and directs the maintenance of grounds, provides clerical support to sections of the branch (5541 – Manana, 5542 – Wahiawa, 5543 – Waianae, and 5560 Windward).

Account	FY2016 Actual	FY2016 Adopted Budget	FY2017 Adopted Budget	FY2018 Proposed Budget	Change
4110 - Salaries & Wages	71,007	157,920	149,700	134,000	(15,700)
4120 - Overtime	326	1,200	0	0	0
<b>Personnel Services</b>	<b>71,332</b>	<b>159,120</b>	<b>149,700</b>	<b>134,000</b>	<b>(15,700)</b>
4160 - Meals; Mileage & Uniform Allowances	847	0	0	0	0
4250 - Other Contractual Services	449	0	0	0	0
4430 - Miscellaneous Supplies	0	0	0	0	0
4460 - Other Materials & Supplies	880	0	0	0	0
4720 - Conference Travel & Expenses	0	0	0	0	0
8050 - Equipment (under \$5,000)	37,039	0	0	0	0
<b>Materials, Supplies and Services</b>	<b>39,215</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>Total Suburban Field Services Branch</b>	<b>110,547</b>	<b>159,120</b>	<b>149,700</b>	<b>134,000</b>	<b>(15,700)</b>

**Budget Highlights**

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**FO - Field Operations**

**5541 - Manana Section**

**Section's Activity**

Maintains the water distribution system, appurtenances within the Manana Section including all mains, valves, service connections, and hydrants; and repairs to reservoirs and buildings, and grounds maintenance.

Account	FY2016 Actual	FY2016 Adopted Budget	FY2017 Adopted Budget	FY2018 Proposed Budget	Change
4110 - Salaries & Wages	1,352,377	1,923,288	1,899,900	1,949,300	49,400
4120 - Overtime	264,001	264,000	264,000	265,000	1,000
4130 - Miscellaneous (Payroll)	46,625	94,000	133,600	164,400	30,800
<b>Personnel Services</b>	<b>1,663,004</b>	<b>2,281,288</b>	<b>2,297,500</b>	<b>2,378,700</b>	<b>81,200</b>
4160 - Meals; Mileage & Uniform Allowances	15,345	20,400	20,400	20,400	0
4250 - Other Contractual Services	20,555	41,600	41,600	41,600	0
4460 - Other Materials & Supplies	35,488	42,000	42,000	30,000	(12,000)
4805 - Repair & Maint - Structures	0	7,000	0	0	0
4815 - Repair & Maint - Equipment	2,738	6,000	6,000	6,000	0
8050 - Equipment (under \$5,000)	1,138	26,600	12,800	11,770	(1,030)
<b>Materials, Supplies and Services</b>	<b>75,264</b>	<b>143,600</b>	<b>122,800</b>	<b>109,770</b>	<b>(13,030)</b>
<b>Total Suburban Field Services Branch</b>	<b>1,738,268</b>	<b>2,424,888</b>	<b>2,420,300</b>	<b>2,488,470</b>	<b>68,170</b>

**Budget Highlights**

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**FO - Field Operations**

**5542 - Wahiawa Section**

**Section's Activity**

Maintains the water distribution system, appurtenances within the Wahiawa Section including all mains, valves, service connections, and hydrants; and repairs to reservoirs and buildings.

Account	FY2016 Actual	FY2016 Adopted Budget	FY2017 Adopted Budget	FY2018 Proposed Budget	Change
4110 - Salaries & Wages	570,130	714,864	561,400	646,400	85,000
4120 - Overtime	123,213	120,000	120,000	120,000	0
4130 - Miscellaneous (Payroll)	18,863	69,000	53,200	66,400	13,200
<b>Personnel Services</b>	<b>712,206</b>	<b>903,864</b>	<b>734,600</b>	<b>832,800</b>	<b>98,200</b>
4160 - Meals; Mileage & Uniform Allowances	5,986	9,000	9,000	9,000	0
4250 - Other Contractual Services	891	700	700	700	0
4460 - Other Materials & Supplies	5,746	6,000	8,000	8,000	0
4815 - Repair & Maint - Equipment	1,234	0	2,000	2,000	0
8050 - Equipment (under \$5,000)	0	14,800	5,100	13,300	8,200
<b>Materials, Supplies and Services</b>	<b>13,857</b>	<b>30,500</b>	<b>24,800</b>	<b>33,000</b>	<b>8,200</b>
<b>Total Suburban Field Services Branch</b>	<b>726,063</b>	<b>934,364</b>	<b>759,400</b>	<b>865,800</b>	<b>106,400</b>

**Budget Highlights**

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**FO - Field Operations**

**5543 - Waianae Section**

**Section's Activity**

Maintains the water distribution system, appurtenances within the Waianae Section including all mains, valves, service connections, hydrants and repairs to reservoirs and buildings.

Account	FY2016 Actual	FY2016 Adopted Budget	FY2017 Adopted Budget	FY2018 Proposed Budget	Change
4110 - Salaries & Wages	490,455	710,076	668,000	670,600	2,600
4120 - Overtime	133,221	168,000	168,000	168,000	0
4130 - Miscellaneous (Payroll)	42,652	55,000	53,200	78,200	25,000
<b>Personnel Services</b>	<b>666,328</b>	<b>933,076</b>	<b>889,200</b>	<b>916,800</b>	<b>27,600</b>
4160 - Meals; Mileage & Uniform Allowances	6,286	9,000	9,000	9,000	0
4250 - Other Contractual Services	4,252	700	700	700	0
4460 - Other Materials & Supplies	1,863	6,000	6,000	6,000	0
4815 - Repair & Maint - Equipment	480	0	2,000	2,000	2,000
8050 - Equipment (under \$5,000)	0	15,100	1,100	9,600	8,500
<b>Materials, Supplies and Services</b>	<b>12,881</b>	<b>30,800</b>	<b>18,800</b>	<b>27,300</b>	<b>8,500</b>
<b>Total Suburban Field Services Branch</b>	<b>679,208</b>	<b>963,876</b>	<b>908,000</b>	<b>944,100</b>	<b>36,100</b>

**Budget Highlights**

Waianae Section

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**FO - Field Operations**

**5550 - District Services**

**Section's Activity**

Account	FY2016 Actual	FY2016 Adopted Budget	FY2017 Adopted Budget	FY2018 Proposed Budget	Change
4110 - Salaries & Wages	35,727	36,936	38,200	0	(38,200)
4120 - Overtime	0	1,200	1,200	0	(1,200)
4130 - Miscellaneous (Payroll)	243	0	0	0	0
<b>Personnel Services</b>	<b>35,970</b>	<b>38,136</b>	<b>39,400</b>	<b>0</b>	<b>(39,400)</b>
4160 - Meals; Mileage & Uniform Allowances	100	0	0	0	0
4250 - Other Contractual Services	17,955	12,000	12,000	0	(12,000)
4280 - Refuse Collection & Disposal	0	0	0	0	0
4460 - Other Materials & Supplies	8	0	0	0	0
8050 - Equipment (under \$5,000)	1,634	0	0	0	0
<b>Materials, Supplies and Services</b>	<b>19,697</b>	<b>12,000</b>	<b>12,000</b>	<b>0</b>	<b>(12,000)</b>
<b>Total Services Section</b>	<b>55,667</b>	<b>50,136</b>	<b>51,400</b>	<b>0</b>	<b>(51,400)</b>

**Budget Highlights**

Personnel and activities were incorporated with 5553 - Building Maintenance.

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**FO - Field Operations**

**5551 - Service Connections**

**Section's Activity**

Service Connections installs new service connections and meters; and maintains, repairs, and renews service connections.

Account	FY2016 Actual	FY2016 Adopted Budget	FY2017 Adopted Budget	FY2018 Proposed Budget	Change
4110 - Salaries & Wages	261,983	783,300	395,700	418,700	23,000
4120 - Overtime	58,236	84,000	84,000	84,000	0
4130 - Miscellaneous (Payroll)	68,836	62,000	62,000	62,000	0
<b>Personnel Services</b>	<b>389,055</b>	<b>929,300</b>	<b>541,700</b>	<b>564,700</b>	<b>23,000</b>
4160 - Meals; Mileage & Uniform Allowances	3,664	6,000	6,000	6,000	0
4250 - Other Contractual Services	687	0	0	0	0
<b>Materials, Supplies and Services</b>	<b>4,351</b>	<b>6,000</b>	<b>6,000</b>	<b>6,000</b>	<b>0</b>
<b>Total Services Section</b>	<b>393,406</b>	<b>935,300</b>	<b>547,700</b>	<b>570,700</b>	<b>23,000</b>

**Budget Highlights**

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**FO - Field Operations**

**5552 - Meter Maintenance**

**Section's Activity**

The Meter Maintenance Section operates and maintains the meter shop for testing and repairing meters; conducts annual meter and AMR maintenance program; inspects and performs large meter performance tests; repairs or replaces large meters; reviews and evaluates meter technical data; performs meter mastering to optimize meter type, size, and to diagnose problems; and installs and removes temporary fire hydrant meter assemblies.

Account	FY2016 Actual	FY2016 Adopted Budget	FY2017 Adopted Budget	FY2018 Proposed Budget	Change
4110 - Salaries & Wages	708,914	1,163,673	1,349,000	1,058,300	(290,700)
4120 - Overtime	7,098	12,000	120,000	120,000	0
4130 - Miscellaneous (Payroll)	0	20,000	20,000	20,000	0
<b>Personnel Services</b>	<b>716,012</b>	<b>1,195,673</b>	<b>1,489,000</b>	<b>1,198,300</b>	<b>(290,700)</b>
1120 - Meters (Storeroom)	831,399	2,400,000	4,297,000	2,400,000	(1,897,000)
1125 - AMR Materials & Supplies (Storeroom)	2,586,050	2,400,000	3,600,000	2,000,000	(1,600,000)
4160 - Meals; Mileage & Uniform Allowances	704	0	2,400	3,000	600
4250 - Other Contractual Services	6,933	50,000	22,000	22,000	0
4430 - Miscellaneous Supplies	82	0	0	0	0
4460 - Other Materials & Supplies	27,663	12,000	24,000	24,000	0
4470 - Parts and Accessories	0	2,400	2,400	2,400	0
4815 - Repair & Maint - Equipment	14,253	12,000	15,000	15,000	0
8050 - Equipment (under \$5,000)	1,074	4,200	28,150	19,840	(8,310)
<b>Materials, Supplies and Services</b>	<b>3,468,158</b>	<b>4,880,600</b>	<b>7,990,950</b>	<b>4,486,240</b>	<b>(3,504,710)</b>
1270 - General Plant & Equip (over \$5,000)	0	0	0	7,300	7,300
<b>Equipment</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>7,300</b>	<b>7,300</b>
<b>Total Meter Maintenance</b>	<b>4,184,170</b>	<b>6,076,273</b>	<b>9,479,950</b>	<b>5,691,840</b>	<b>(3,788,110)</b>

**Budget Highlights**

1120 - Meters (Storeroom) – Reduced due to priority placed on MXU replacement program.

1125 - AMR Materials & Supplies (Storeroom) – New and replacement parts for Automated Meter Reading (AMR) system. Reduced due to MXU replacement program being CIP funded.

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**FO - Field Operations**

**5553 - Building Maintenance**

**Section's Activity**

Maintains Beretania Complex buildings, Kalihi Office buildings, and Kalihi Museum."

Account	FY2016 Actual	FY2016 Adopted Budget	FY2017 Adopted Budget	FY2018 Proposed Budget	Change
4110 - Salaries & Wages	337,793	391,152	404,900	444,500	39,600
4120 - Overtime	4,294	6,000	12,000	13,200	1,200
4130 - Miscellaneous (Payroll)	0	16,400	6,000	6,000	0
<b>Personnel Services</b>	<b>342,087</b>	<b>413,552</b>	<b>422,900</b>	<b>463,700</b>	<b>40,800</b>
4160 - Meals; Mileage & Uniform Allowances	886	2,400	2,400	2,400	0
4250 - Other Contractual Services	0	0	0	12,000	12,000
4460 - Other Materials & Supplies	0	6,000	6,000	6,000	0
4805 - Repair & Maint - Structures	0	24,000	24,000	10,000	(14,000)
4815 - Repair & Maint - Equipment	0	0	0	0	0
8050 - Equipment (under \$5,000)	0	3,800	2,000	0	(2,000)
<b>Materials, Supplies and Services</b>	<b>886</b>	<b>36,200</b>	<b>34,400</b>	<b>30,400</b>	<b>(4,000)</b>
<b>Total Services Section</b>	<b>342,973</b>	<b>449,752</b>	<b>457,300</b>	<b>494,100</b>	<b>36,800</b>

**Budget Highlights**

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**FO - Field Operations**

**5560 - Windward Branch**

**Section's Activity**

Maintains the water distribution system, appurtenances and grounds within the Windward Section including all mains, valves and hydrants; repairs and installs service connections and repairs reservoirs and buildings.

Account	FY2016 Actual	FY2016 Adopted Budget	FY2017 Adopted Budget	FY2018 Proposed Budget	Change
4110 - Salaries & Wages	1,148,334	1,646,296	1,540,000	1,438,600	(101,400)
4120 - Overtime	134,482	120,000	120,000	135,000	15,000
4130 - Miscellaneous (Payroll)	95,335	150,000	176,400	184,400	8,000
<b>Personnel Services</b>	<b>1,378,151</b>	<b>1,916,296</b>	<b>1,836,400</b>	<b>1,758,000</b>	<b>(78,400)</b>
4160 - Meals; Mileage & Uniform Allowances	9,999	12,000	12,000	12,000	0
4250 - Other Contractual Services	7,807	1,700	2,700	5,700	3,000
4460 - Other Materials & Supplies	15,580	14,400	14,400	14,000	(400)
4815 - Repair & Maint - Equipment	1,315	3,600	3,600	3,500	(100)
8050 - Equipment (under \$5,000)	3,250	5,700	7,600	5,650	(1,950)
<b>Materials, Supplies and Services</b>	<b>37,950</b>	<b>37,400</b>	<b>40,300</b>	<b>40,850</b>	<b>550</b>
<b>Total Windward Branch</b>	<b>1,416,101</b>	<b>1,953,696</b>	<b>1,876,700</b>	<b>1,798,850</b>	<b>(77,850)</b>

**Budget Highlights**

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**FO - Field Operations**

**5585 - Procurement and Supply Unit**

**Section's Activity**

The Supply Section is responsible for physical control of the storerooms and storage yards; coordinates and processes the annual materials contract and stores and disposes of scrap and surplus materials.

Account	FY2016 Actual	FY2016 Adopted Budget	FY2017 Adopted Budget	FY2018 Proposed Budget	Change
4110 - Salaries & Wages	271,350	329,820	347,500	311,100	(36,400)
4120 - Overtime	6,065	6,000	6,000	6,000	0
4130 - Miscellaneous (Payroll)	0	20,200	25,500	24,300	(1,200)
<b>Personnel Services</b>	<b>277,414</b>	<b>356,020</b>	<b>379,000</b>	<b>341,400</b>	<b>(37,600)</b>
1110 - Materials & Supplies (Storeroom)	1,715,617	2,000,000	1,800,000	1,800,000	0
4160 - Meals; Mileage & Uniform Allowances	3,572	3,600	3,600	4,000	400
4250 - Other Contractual Services	3,117	0	0	0	0
4420 - Hauling Charges	17,249	36,000	36,000	160,000	124,000
4430 - Miscellaneous Supplies	0	0	0	0	0
4460 - Other Materials & Supplies	43,136	84,000	84,000	70,000	(14,000)
4920 - Non-Potable Water Trtmt Plt Costs	0	60,000	200,000	0	(200,000)
4923 - Store Materials & Expense	501,910	500,000	500,000	500,000	0
8050 - Equipment (under \$5,000)	4,136	0	6,000	10,060	4,060
<b>Materials, Supplies and Services</b>	<b>2,288,737</b>	<b>2,683,600</b>	<b>2,629,600</b>	<b>2,544,060</b>	<b>(85,540)</b>
<b>Total Procurement and Supply</b>	<b>2,566,151</b>	<b>3,039,620</b>	<b>3,008,600</b>	<b>2,885,460</b>	<b>(123,140)</b>

**Budget Highlights**

"4420 - Hauling Charges: Delivery of base course and cold mix to Kalihi and Manana.  
4923 - Store Materials & Expense - For base course and cold mix."

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**CP - Capital Projects**

**Division/Office's Activity**

The Capital Projects Division develops and directs engineering policy and programs to carry out the Department's mission, vision, goals and objectives; formulates and implements the annual Capital Improvement Program budget; develops, implements and maintains programs to address water infrastructure needs; ensures all improvements to the municipal water system are designed and constructed in compliance with the Department's standards and policies; coordinates construction schedules and requirements between operational units and external entities; and provides advisory services to other units and staff services for executive decision-making.

Account	FY2016 Actual	FY2016 Adopted Budget	FY2017 Adopted Budget	FY2018 Proposed Budget	Change
4110 - Salaries & Wages	3,892,500	4,367,720	4,430,900	4,667,400	236,500
4120 - Overtime	355,711	340,200	367,000	435,100	68,100
4130 - Miscellaneous (Payroll)	4,729	124,000	243,400	494,000	250,600
<b>Personnel Services</b>	<b>4,252,940</b>	<b>4,831,920</b>	<b>5,041,300</b>	<b>5,596,500</b>	<b>555,200</b>
4160 - Meals; Mileage & Uniform Allowances	14,732	19,800	23,200	23,300	100
4250 - Other Contractual Services	1,389,925	1,990,000	755,000	900,000	145,000
4260 - Advertising & Publication of Notices	2,869	2,000	2,000	5,000	3,000
4270 - Professional Services	600,000	600,000	0	0	0
4430 - Miscellaneous Supplies	4,527	6,700	7,000	8,400	1,400
4460 - Other Materials & Supplies	4,452	4,800	5,800	8,500	2,700
4500 - Education and Training	3,089	18,700	20,200	23,800	3,600
4720 - Conference Travel & Expenses	6,971	9,500	14,000	18,000	4,000
4815 - Repair & Maint - Equipment	9,447	10,600	9,600	5,000	(4,600)
4910 - Miscellaneous Fees & Registration	140	23,000	23,350	23,000	(350)
8050 - Equipment (under \$5,000)	3,599	750	9,100	8,200	(900)
<b>Materials, Supplies and Services</b>	<b>2,039,751</b>	<b>2,685,850</b>	<b>869,250</b>	<b>1,023,200</b>	<b>153,950</b>
1270 - General Plant & Equip (over \$5,000)	0	0	0	21,000	21,000
<b>Equipment</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>21,000</b>	<b>21,000</b>
<b>Total CP - Capital Projects</b>	<b>6,292,691</b>	<b>7,517,770</b>	<b>5,910,550</b>	<b>6,640,700</b>	<b>730,150</b>

Notes

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**CP - Capital Projects**

**5565 - Administration**

**Section's Activity**

Engineering Administration develops and directs programs involving the planning, design, inspection and execution of all projects that are incorporated into the public water system

Account	FY2016 Actual	FY2016 Adopted Budget	FY2017 Adopted Budget	FY2018 Proposed Budget	Change
4110 - Salaries & Wages	447,430	514,323	500,100	526,400	26,300
4120 - Overtime	24	0	0	0	0
4130 - Miscellaneous (Payroll)	0	0	6,000	56,100	50,100
<b>Personnel Services</b>	<b>447,454</b>	<b>514,323</b>	<b>506,100</b>	<b>582,500</b>	<b>76,400</b>
4160 - Meals; Mileage & Uniform Allowances	0	200	200	0	(200)
4250 - Other Contractual Services	20,280	1,200,000	600,000	600,000	0
4260 - Advertising & Publication of Notices	2,281	2,000	2,000	5,000	3,000
4270 - Professional Services	0	0	0	0	0
4430 - Miscellaneous Supplies	2,782	2,500	2,500	2,500	0
4500 - Education and Training	2,400	1,000	3,400	3,400	0
4720 - Conference Travel & Expenses	1,856	2,500	3,300	4,800	1,500
4815 - Repair & Maint - Equipment	1,059	2,000	500	1,000	500
4910 - Miscellaneous Fees & Registration	0	22,500	22,850	22,500	(350)
8050 - Equipment (under \$5,000)	0	0	3,000	0	(3,000)
<b>Materials, Supplies and Services</b>	<b>30,658</b>	<b>1,232,700</b>	<b>637,750</b>	<b>639,200</b>	<b>1,450</b>
1270 - General Plant & Equip (over \$5,000)	0	0	0	0	0
<b>Equipment</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>Total Administration</b>	<b>478,112</b>	<b>1,747,023</b>	<b>1,143,850</b>	<b>1,221,700</b>	<b>77,850</b>

**Budget Highlights**

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**CP - Capital Projects**

**5570 - Design & Plans Review**

**Section's Activity**

The Design and Plans Review Branch formulates design and construction projects to address the needs of the Department; prepares and reviews plans, specifications, and cost estimates; coordinates and secures all necessary project approvals, permits and clearances for modifications or extensions to the municipal water system; and reviews all public and private construction plans for conformance with the Department's standards and policies and approved water master plans

Account	FY2016 Actual	FY2016 Adopted Budget	FY2017 Adopted Budget	FY2018 Proposed Budget	Change
4110 - Salaries & Wages	724,858	876,336	819,000	871,800	52,800
4120 - Overtime	95,904	84,000	84,000	90,000	6,000
4130 - Miscellaneous (Payroll)	2,437	3,000	58,200	60,000	1,800
<b>Personnel Services</b>	<b>823,199</b>	<b>963,336</b>	<b>961,200</b>	<b>1,021,800</b>	<b>60,600</b>
4160 - Meals; Mileage & Uniform Allowances	3,362	3,000	4,000	4,000	0
4260 - Advertising & Publication of Notices	588	0	0	0	0
4270 - Professional Services	0	0	0	0	0
4430 - Miscellaneous Supplies	24	0	0	0	0
4460 - Other Materials & Supplies	532	3,000	600	2,000	1,400
4500 - Education and Training	0	6,200	6,200	6,200	0
4720 - Conference Travel & Expenses	2,080	2,500	2,500	2,800	300
8050 - Equipment (under \$5,000)	0	0	3,800	5,800	2,000
<b>Materials, Supplies and Services</b>	<b>6,586</b>	<b>14,700</b>	<b>17,100</b>	<b>20,800</b>	<b>3,700</b>
1270 - General Plant & Equip (over \$5,000)	0	0	0	0	0
<b>Equipment</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>Total Design &amp; Plans Review</b>	<b>829,784</b>	<b>978,036</b>	<b>978,300</b>	<b>1,042,600</b>	<b>64,300</b>

**Budget Highlights**

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**CP - Capital Projects**

**5575 - Construction**

**Section's Activity**

The Construction Branch administers the Department's construction contracts; plans and coordinates construction schedules; oversees all construction activities associated with projects that impact BWS facilities and assets; and ensures all construction, whether by the BWS or by other public and private interests, is completed in accordance with approved construction and accepted engineering practices in accordance with the Department's standards and policies, and approved construction plans and specifications

Account	FY2016 Actual	FY2016 Adopted Budget	FY2017 Adopted Budget	FY2018 Proposed Budget	Change
4110 - Salaries & Wages	1,829,043	1,981,658	1,936,100	2,020,400	84,300
4120 - Overtime	258,715	252,000	280,000	340,000	60,000
4130 - Miscellaneous (Payroll)	2,292	121,000	92,900	317,100	224,200
<b>Personnel Services</b>	<b>2,090,049</b>	<b>2,354,658</b>	<b>2,309,000</b>	<b>2,677,500</b>	<b>368,500</b>
4160 - Meals; Mileage & Uniform Allowances	11,350	16,500	18,900	19,000	100
4250 - Other Contractual Services	1,321,844	660,000	30,000	30,000	0
4270 - Professional Services	0	0	0	0	0
4430 - Miscellaneous Supplies	187	0	300	500	200
4460 - Other Materials & Supplies	3,344	0	4,000	6,500	2,500
4500 - Education and Training	689	6,000	6,400	6,400	0
4720 - Conference Travel & Expenses	2,755	4,000	7,200	7,200	0
4910 - Miscellaneous Fees & Registration	140	500	500	500	0
8050 - Equipment (under \$5,000)	3,599	0	300	0	(300)
<b>Materials, Supplies and Services</b>	<b>1,343,907</b>	<b>687,000</b>	<b>67,600</b>	<b>70,100</b>	<b>2,500</b>
1270 - General Plant & Equip (over \$5,000)	0	0	0	0	0
<b>Equipment</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>Total Construction</b>	<b>3,433,957</b>	<b>3,041,658</b>	<b>2,376,600</b>	<b>2,747,600</b>	<b>371,000</b>

**Budget Highlights**

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**CP - Capital Projects**

**5580 - Support**

**Section's Activity**

The Engineering Support Branch formulates the Department's annual Capital Improvement Program budget; prepares and administers agreements with public agencies and private developers; prepares and reviews plans, specifications, cost estimates and other necessary documents, and coordinates and secures all necessary project approvals, permits and clearances for the Department's facility repair and replacement construction projects; develops and implements programs for facility renovations, asset replacement, and fire protection improvement; provides technical research, assistance, expertise and advice throughout the Department; and develops and maintains the Department's water system standards and conducts research and product trials to evaluate new materials and equipment.

Account	FY2016 Actual	FY2016 Adopted Budget	FY2017 Adopted Budget	FY2018 Proposed Budget	Change
4110 - Salaries & Wages	455,025	506,232	672,300	664,500	(7,800)
4120 - Overtime	487	3,000	3,000	3,000	0
4130 - Miscellaneous (Payroll)	0	0	47,100	26,500	(20,600)
<b>Personnel Services</b>	<b>455,511</b>	<b>509,232</b>	<b>722,400</b>	<b>694,000</b>	<b>(28,400)</b>
4160 - Meals; Mileage & Uniform Allowances	0	100	100	100	0
4250 - Other Contractual Services	8,101	25,000	20,000	10,000	(10,000)
4270 - Professional Services	600,000	600,000	0	0	0
4430 - Miscellaneous Supplies	1,535	4,200	4,200	4,200	0
4460 - Other Materials & Supplies	476	0	0	0	0
4500 - Education and Training	0	2,500	2,400	6,000	3,600
4720 - Conference Travel & Expenses	0	500	500	600	100
4815 - Repair & Maint - Equipment	8,388	8,600	9,100	4,000	(5,100)
8050 - Equipment (under \$5,000)	0	0	500	1,400	900
<b>Materials, Supplies and Services</b>	<b>618,500</b>	<b>640,900</b>	<b>36,800</b>	<b>26,300</b>	<b>(10,500)</b>
1270 - General Plant & Equip (over \$5,000)	0	0	0	0	0
<b>Equipment</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>Total Support</b>	<b>1,074,012</b>	<b>1,150,132</b>	<b>759,200</b>	<b>720,300</b>	<b>(38,900)</b>

**Budget Highlights**

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**CP - Capital Projects**

**5582 - Mechanical and Electrical**

**Section's Activity**

The Mechanical and Electrical Engineering Branch oversees the design and installation of mechanical and electrical equipment and systems throughout the municipal water system; prepares plans, specifications, and cost estimates and coordinates and secures all necessary project approvals, permits and clearances for the construction of electrical and mechanical system installations and pump and motor repairs, renewals and replacement work in accordance with the Department's requirements; provides technical assistance and conducts field inspections, troubleshooting, pilot testing, and final acceptance inspections of mechanical and electrical components; monitors, evaluates, incorporates, and optimizes BWS equipment standards; and provides technical assistance, expertise, and advice on daily operation of pump and power facilities, equipment renewal and upgrade programs, continuity of service, and maintenance.

Account	FY2016 Actual	FY2016 Adopted Budget	FY2017 Adopted Budget	FY2018 Proposed Budget	Change
4110 - Salaries & Wages	436,145	489,171	503,400	584,300	80,900
4120 - Overtime	582	1,200	0	2,100	2,100
4130 - Miscellaneous (Payroll)	0	0	39,200	34,300	(4,900)
<b>Personnel Services</b>	<b>436,727</b>	<b>490,371</b>	<b>542,600</b>	<b>620,700</b>	<b>78,100</b>
4160 - Meals; Mileage & Uniform Allowances	20	0	0	200	200
4250 - Other Contractual Services	39,700	105,000	105,000	260,000	155,000
4270 - Professional Services	0	0	0	0	0
4430 - Miscellaneous Supplies	0	0	0	1,200	1,200
4460 - Other Materials & Supplies	100	1,800	1,200	0	(1,200)
4500 - Education and Training	0	3,000	1,800	1,800	0
4720 - Conference Travel & Expenses	280	0	500	2,600	2,100
8050 - Equipment (under \$5,000)	0	750	1,500	1,000	(500)
<b>Materials, Supplies and Services</b>	<b>40,100</b>	<b>110,550</b>	<b>110,000</b>	<b>266,800</b>	<b>156,800</b>
1270 - General Plant & Equip (over \$5,000)	0	0	0	21,000	21,000
<b>Equipment</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>21,000</b>	<b>21,000</b>
<b>Total Mechanical and Electrical</b>	<b>476,827</b>	<b>600,921</b>	<b>652,600</b>	<b>908,500</b>	<b>255,900</b>

**Budget Highlights**

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**WSO - Water System Operations**

**Division/Office's Activity**

The Water System Operations Division is responsible for the operations and maintenance of pumping and water treatment plant equipment, plant facilities, and communications and electronic control systems. It maintains a 24-hour watch over the department's island-wide water systems and departmental electrical and emergency power supply systems. The unit also purchases, maintains, and repairs the department's vehicles and construction equipment.

Account	FY2016 Actual	FY2016 Adopted Budget	FY2017 Adopted Budget	FY2018 Proposed Budget	Change
4620 - Electricity	0	0	0	0	0
<b>Departmental Fixed Charges</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
4110 - Salaries & Wages	4,384,430	6,254,173	6,592,400	5,428,200	(1,164,200)
4120 - Overtime	445,640	542,800	577,000	579,200	2,200
4130 - Miscellaneous (Payroll)	50,884	111,600	83,800	105,800	22,000
<b>Personnel Services</b>	<b>4,880,954</b>	<b>6,908,573</b>	<b>7,253,200</b>	<b>6,113,200</b>	<b>(1,140,000)</b>
4160 - Meals; Mileage & Uniform Allowances	23,184	35,500	33,524	35,350	1,826
4250 - Other Contractual Services	277,578	295,200	313,400	312,500	(900)
4251 - Software Licenses and Maintenance	0	0	3,800	50,000	46,200
4267 - Printed forms	0	100	100	100	0
4270 - Professional Services	0	840,000	600,000	720,000	120,000
4410 - Gasoline	502,184	990,000	910,000	823,200	(86,800)
4430 - Miscellaneous Supplies	4,529	11,000	11,000	8,500	(2,500)
4440 - Motor Vehicle Parts & Accessories	433,867	432,000	452,000	452,000	0
4460 - Other Materials & Supplies	2,596,813	2,698,500	2,855,100	2,830,900	(24,200)
4470 - Parts and Accessories	823,521	524,400	716,400	646,400	(70,000)
4500 - Education and Training	14,498	79,600	52,700	50,900	(1,800)
4670 - Telemetering	225,827	240,000	240,000	240,000	0
4720 - Conference Travel & Expenses	1,028	15,800	17,100	14,100	(3,000)
4805 - Repair & Maint - Structures	36,328	52,000	52,000	52,000	0
4815 - Repair & Maint - Equipment	820,373	1,165,200	1,131,000	1,034,800	(96,200)
4910 - Miscellaneous Fees & Registration	4,789	5,100	8,900	6,500	(2,400)
8050 - Equipment (under \$5,000)	306,209	731,500	676,950	842,200	165,250
<b>Materials, Supplies and Services</b>	<b>6,070,726</b>	<b>8,115,900</b>	<b>8,073,974</b>	<b>8,119,450</b>	<b>45,476</b>
1270 - General Plant & Equip (over \$5,000)	1,871,332	2,560,100	4,051,200	4,772,800	721,600
<b>Equipment</b>	<b>1,871,332</b>	<b>2,560,100</b>	<b>4,051,200</b>	<b>4,772,800</b>	<b>721,600</b>
<b>Total WSO - Water System Operations</b>	<b>12,823,012</b>	<b>17,584,573</b>	<b>19,378,374</b>	<b>19,005,450</b>	<b>(372,924)</b>

**Notes**

Water System Operations Division

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**WSO - Water System Operations**

**5600 - Operations Administration**

**Section's Activity**

Administers the affairs of the Water System Operations Division; provides engineering and clerical support to sections within the unit.

Account	FY2016 Actual	FY2016 Adopted Budget	FY2017 Adopted Budget	FY2018 Proposed Budget	Change
4110 - Salaries & Wages	372,674	361,345	508,500	378,500	(130,000)
4120 - Overtime	12,643	2,400	5,000	7,200	2,200
4130 - Miscellaneous (Payroll)	2,763	19,900	18,900	15,300	(3,600)
<b>Personnel Services</b>	<b>388,079</b>	<b>383,645</b>	<b>532,400</b>	<b>401,000</b>	<b>(131,400)</b>
4160 - Meals; Mileage & Uniform Allowances	846	300	600	600	0
4250 - Other Contractual Services	15,975	18,000	18,000	18,000	0
4251 - Software Licenses and Maintenance	0	0	0	46,000	46,000
4270 - Professional Services	0	840,000	600,000	720,000	120,000
4410 - Gasoline	0	0	0	0	0
4430 - Miscellaneous Supplies	3,708	4,800	4,800	4,800	0
4460 - Other Materials & Supplies	1,031	0	0	0	0
4500 - Education and Training	465	2,300	2,300	1,700	(600)
4720 - Conference Travel & Expenses	838	3,000	3,900	2,900	(1,000)
4910 - Miscellaneous Fees & Registration	1,081	600	600	600	0
8050 - Equipment (under \$5,000)	0	0	1,000	0	(1,000)
<b>Materials, Supplies and Services</b>	<b>23,944</b>	<b>869,000</b>	<b>631,200</b>	<b>794,600</b>	<b>163,400</b>
<b>Total Operations Administration</b>	<b>412,023</b>	<b>1,252,645</b>	<b>1,163,600</b>	<b>1,195,600</b>	<b>32,000</b>

**Budget Highlights**

A/C 4251 - cost to purchase and one year maintenance for a small, simplified computerized maintenance management system for Water Systems Operations

A/C 4270 - increase budget needed for next phase of instrumentation and controls project

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**WSO - Water System Operations**

**5610 - Plant Operations**

**Section's Activity**

The Pumps Section operates, maintains, repairs and installs equipment of the pumping systems consisting of electrical pumping plants, booster pumping stations, water treatment plants, hydraulic turbine pumping units, water treatment stations, reservoirs, reservoir altitude valves, in-line check and hydraulically-operated butterfly valves and pressure-regulating valves, aerators, meters and gauges, repair shops, buildings and structures, air conditioners, exhaust blowers and fans, auxiliary pumping and water treatment equipment; regulates the water supply within the water distribution systems through the use of a variety of mechanically and electrically-operated supervisory controls; operates the department's after-hour control center; maintains a 24-hour watch over department's island-wide water system.

Account	FY2016 Actual	FY2016 Adopted Budget	FY2017 Adopted Budget	FY2018 Proposed Budget	Change
4620 - Electricity	0	0	0	0	0
<b>Departmental Fixed Charges</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
4110 - Salaries & Wages	76,810	234,792	218,800	208,700	(10,100)
4120 - Overtime	3,050	9,000	9,000	9,000	0
4130 - Miscellaneous (Payroll)	0	1,200	1,200	1,200	0
<b>Personnel Services</b>	<b>79,860</b>	<b>244,992</b>	<b>229,000</b>	<b>218,900</b>	<b>(10,100)</b>
4160 - Meals; Mileage & Uniform Allowances	26	300	300	300	0
4250 - Other Contractual Services	13,548	3,600	10,000	4,800	(5,200)
4430 - Miscellaneous Supplies	0	5,000	5,000	2,500	(2,500)
4460 - Other Materials & Supplies	2,447,634	2,409,400	2,620,000	2,573,000	(47,000)
4470 - Parts and Accessories	44,716	0	0	0	0
4500 - Education and Training	255	900	1,600	1,600	0
4720 - Conference Travel & Expenses	190	1,500	1,300	1,200	(100)
4805 - Repair & Maint - Structures	31,589	48,000	48,000	48,000	0
4815 - Repair & Maint - Equipment	734,931	888,400	854,000	821,800	(32,200)
4910 - Miscellaneous Fees & Registration	570	2,400	5,400	3,000	(2,400)
8050 - Equipment (under \$5,000)	12,778	61,000	82,000	52,000	(30,000)
<b>Materials, Supplies and Services</b>	<b>3,286,238</b>	<b>3,420,500</b>	<b>3,627,600</b>	<b>3,508,200</b>	<b>(119,400)</b>
1270 - General Plant & Equip (over \$5,000)	0	140,000	140,000	100,000	(40,000)
<b>Equipment</b>	<b>0</b>	<b>140,000</b>	<b>140,000</b>	<b>100,000</b>	<b>(40,000)</b>
<b>Total Plant Operations</b>	<b>3,366,097</b>	<b>3,805,492</b>	<b>3,996,600</b>	<b>3,827,100</b>	<b>(169,500)</b>

**Budget Highlights**

4460 - slight decrease due to lower estimate of granular activated carbon required. 4815 - slight decrease due to reduction in switch gear maintenance required.

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**WSO - Water System Operations**

**5611 - District 1 Leeward West Section**

**Section's Activity**

District 1 consists of the stations on the leeward side of the island from Waipahu to Makaha. Granular activated carbon filtration plants are located at Hoaeae Wells; Waipahu Wells I, II, III, and IV; Kunia Wells I and II; and Waipio Heights Wells III.

Account	FY2016 Actual	FY2016 Adopted Budget	FY2017 Adopted Budget	FY2018 Proposed Budget	Change
4110 - Salaries & Wages	415,653	616,924	635,000	522,500	(112,500)
4120 - Overtime	133,891	100,000	120,000	144,000	24,000
4130 - Miscellaneous (Payroll)	0	6,000	6,000	6,000	0
<b>Personnel Services</b>	<b>549,544</b>	<b>722,924</b>	<b>761,000</b>	<b>672,500</b>	<b>(88,500)</b>
4160 - Meals; Mileage & Uniform Allowances	6,812	6,200	6,588	7,000	412
4460 - Other Materials & Supplies	28,031	39,600	33,800	34,000	200
4470 - Parts and Accessories	146,236	110,000	212,400	212,400	0
4500 - Education and Training	0	9,600	4,800	4,800	0
4720 - Conference Travel & Expenses	0	1,500	1,800	1,200	(600)
4815 - Repair & Maint - Equipment	0	12,000	12,000	12,000	0
8050 - Equipment (under \$5,000)	31,473	72,700	66,300	87,000	20,700
<b>Materials, Supplies and Services</b>	<b>212,552</b>	<b>251,600</b>	<b>337,688</b>	<b>358,400</b>	<b>20,712</b>
1270 - General Plant & Equip (over \$5,000)	0	36,000	160,000	120,000	(40,000)
<b>Equipment</b>	<b>0</b>	<b>36,000</b>	<b>160,000</b>	<b>120,000</b>	<b>(40,000)</b>
<b>Total District 1 Leeward West Section</b>	<b>762,096</b>	<b>1,010,524</b>	<b>1,258,688</b>	<b>1,150,900</b>	<b>(107,788)</b>

**Budget Highlights**

1270 - less three way valves need replacement at GAC facilities

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**WSO - Water System Operations**

**5612 - District 2 Central/Windward Section**

**Section's Activity**

District 2 consists of the stations on the windward, central, and north shore areas of the island from Waimanalo to Kahuku to Mokuleia to Mililani. Granular activated carbon filtration plants are located at Waialua Wells; Haleiwa Wells; and Mililani Wells I and III.

Account	FY2016 Actual	FY2016 Adopted Budget	FY2017 Adopted Budget	FY2018 Proposed Budget	Change
4110 - Salaries & Wages	386,737	567,576	577,800	585,100	7,300
4120 - Overtime	66,986	132,000	110,000	90,000	(20,000)
4130 - Miscellaneous (Payroll)	7,523	12,000	6,000	31,600	25,600
<b>Personnel Services</b>	<b>461,246</b>	<b>711,576</b>	<b>693,800</b>	<b>706,700</b>	<b>12,900</b>
4160 - Meals; Mileage & Uniform Allowances	4,183	7,400	5,688	6,100	412
4460 - Other Materials & Supplies	7,782	44,800	40,000	38,000	(2,000)
4470 - Parts and Accessories	106,623	80,000	90,000	72,000	(18,000)
4500 - Education and Training	2,980	9,600	4,800	4,800	0
4720 - Conference Travel & Expenses	0	1,500	1,800	1,200	(600)
4815 - Repair & Maint - Equipment	0	68,000	62,000	37,000	(25,000)
8050 - Equipment (under \$5,000)	7,438	79,500	62,800	65,300	2,500
<b>Materials, Supplies and Services</b>	<b>129,005</b>	<b>290,800</b>	<b>267,088</b>	<b>224,400</b>	<b>(42,688)</b>
1270 - General Plant & Equip (over \$5,000)	0	10,000	0	10,000	10,000
<b>Equipment</b>	<b>0</b>	<b>10,000</b>	<b>0</b>	<b>10,000</b>	<b>10,000</b>
<b>Total District 2 Central/Windward Section</b>	<b>590,251</b>	<b>1,012,376</b>	<b>960,888</b>	<b>941,100</b>	<b>(19,788)</b>

**Budget Highlights**

Pumps - District 2 Central Windward Section overall - less major repair work anticipated for this District.

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**WSO - Water System Operations**

**5613 - District 3 Metropolitan Section**

**Section's Activity**

District 3 consists of the stations in Metropolitan Honolulu from Kalihi to Makapuu.

Account	FY2016 Actual	FY2016 Adopted Budget	FY2017 Adopted Budget	FY2018 Proposed Budget	Change
4110 - Salaries & Wages	362,574	564,540	580,000	496,000	(84,000)
4120 - Overtime	27,434	60,000	60,000	60,000	0
4130 - Miscellaneous (Payroll)	0	6,000	6,000	6,000	0
<b>Personnel Services</b>	<b>390,008</b>	<b>630,540</b>	<b>646,000</b>	<b>562,000</b>	<b>(84,000)</b>
4160 - Meals; Mileage & Uniform Allowances	1,655	3,300	3,396	3,300	(96)
4410 - Gasoline	0	0	0	0	0
4460 - Other Materials & Supplies	3,485	17,900	17,900	17,900	0
4470 - Parts and Accessories	88,571	100,000	100,000	100,000	0
4500 - Education and Training	0	9,600	4,800	4,800	0
4720 - Conference Travel & Expenses	0	1,500	1,800	1,200	(600)
4815 - Repair & Maint - Equipment	6,539	27,000	27,000	12,000	(15,000)
8050 - Equipment (under \$5,000)	20,492	42,500	14,500	37,200	22,700
<b>Materials, Supplies and Services</b>	<b>120,743</b>	<b>201,800</b>	<b>169,396</b>	<b>176,400</b>	<b>7,004</b>
1270 - General Plant & Equip (over \$5,000)	0	50,000	25,000	30,000	5,000
<b>Equipment</b>	<b>0</b>	<b>50,000</b>	<b>25,000</b>	<b>30,000</b>	<b>5,000</b>
<b>Total District 3 Metropolitan Section</b>	<b>510,750</b>	<b>882,340</b>	<b>840,396</b>	<b>768,400</b>	<b>(71,996)</b>

**Budget Highlights**

Pumps - District 3 Metropolitan Section

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**WSO - Water System Operations**

**5614 - District 4 Leeward East Section**

**Section's Activity**

District 4 consists of the stations from Kalihi to Pearl City.

Account	FY2016 Actual	FY2016 Adopted Budget	FY2017 Adopted Budget	FY2018 Proposed Budget	Change
4110 - Salaries & Wages	407,027	568,512	580,000	593,400	13,400
4120 - Overtime	27,364	56,400	56,000	40,000	(16,000)
4130 - Miscellaneous (Payroll)	9,023	4,800	4,800	4,800	0
<b>Personnel Services</b>	<b>443,415</b>	<b>629,712</b>	<b>640,800</b>	<b>638,200</b>	<b>(2,600)</b>
4160 - Meals; Mileage & Uniform Allowances	1,800	5,600	4,616	5,650	1,034
4460 - Other Materials & Supplies	4,645	26,000	22,500	20,100	(2,400)
4470 - Parts and Accessories	158,786	74,000	74,000	70,000	(4,000)
4500 - Education and Training	540	9,600	4,800	4,800	0
4670 - Telemetering	0	0	0	0	0
4720 - Conference Travel & Expenses	0	1,500	1,800	1,200	(600)
4805 - Repair & Maint - Structures	314	0	0	0	0
4815 - Repair & Maint - Equipment	2,600	18,000	18,000	12,000	(6,000)
8050 - Equipment (under \$5,000)	0	56,100	53,300	80,500	27,200
<b>Materials, Supplies and Services</b>	<b>168,684</b>	<b>190,800</b>	<b>179,016</b>	<b>194,250</b>	<b>15,234</b>
1270 - General Plant & Equip (over \$5,000)	0	0	14,300	0	(14,300)
<b>Equipment</b>	<b>0</b>	<b>0</b>	<b>14,300</b>	<b>0</b>	<b>(14,300)</b>
<b>Total District 4 Leeward East Section</b>	<b>612,099</b>	<b>820,512</b>	<b>834,116</b>	<b>832,450</b>	<b>(1,666)</b>

**Budget Highlights**

Pumps - District 4 Leeward East Section

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**WSO - Water System Operations**

**5615 - Control Center**

**Section's Activity**

Operates the department's island-wide water system on a 24/7 basis. Is responsible for maintaining proper system pressure and levels to meet the needs of our customers. Due to its round-the-clock operation, the Control Center has the responsibility of being the point of contact for the public outside of BWVS regular working hours.

Account	FY2016 Actual	FY2016 Adopted Budget	FY2017 Adopted Budget	FY2018 Proposed Budget	Change
4110 - Salaries & Wages	483,371	635,592	655,300	631,800	(23,500)
4120 - Overtime	122,333	110,000	120,000	120,000	0
4130 - Miscellaneous (Payroll)	0	4,000	4,000	4,000	0
<b>Personnel Services</b>	<b>605,703</b>	<b>749,592</b>	<b>779,300</b>	<b>755,800</b>	<b>(23,500)</b>
4160 - Meals; Mileage & Uniform Allowances	5,111	6,000	6,000	6,000	0
4500 - Education and Training	4,545	9,600	4,800	4,800	0
4720 - Conference Travel & Expenses	0	1,500	1,800	1,200	(600)
8050 - Equipment (under \$5,000)	0	3,000	1,800	1,800	0
<b>Materials, Supplies and Services</b>	<b>9,656</b>	<b>20,100</b>	<b>14,400</b>	<b>13,800</b>	<b>(600)</b>
<b>Total Control Center</b>	<b>615,359</b>	<b>769,692</b>	<b>793,700</b>	<b>769,600</b>	<b>(24,100)</b>

**Budget Highlights**

Pumps - Control Center Unit

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**WSO - Water System Operations**

**5616 - Technical Services**

**Section's Activity**

The Pumps and Technical Services Section operates, maintains, repairs, and installs air conditioners, exhaust blowers, fans, and electrical power at Beretania and the five outlying base yards; and maintains flow tubes.

Account	FY2016 Actual	FY2016 Adopted Budget	FY2017 Adopted Budget	FY2018 Proposed Budget	Change
4110 - Salaries & Wages	542,513	801,893	989,100	394,600	(594,500)
4120 - Overtime	27,401	24,000	48,000	60,000	12,000
4130 - Miscellaneous (Payroll)	678	28,800	4,800	4,800	0
<b>Personnel Services</b>	<b>570,592</b>	<b>854,693</b>	<b>1,041,900</b>	<b>459,400</b>	<b>(582,500)</b>
4160 - Meals; Mileage & Uniform Allowances	1,378	2,600	2,496	2,600	104
4250 - Other Contractual Services	5,402	0	0	0	0
4460 - Other Materials & Supplies	4,627	60,000	12,000	36,000	24,000
4470 - Parts and Accessories	69,493	40,000	108,000	60,000	(48,000)
4500 - Education and Training	500	9,600	4,800	4,800	0
4720 - Conference Travel & Expenses	0	1,500	1,800	1,200	(600)
4815 - Repair & Maint - Equipment	89	54,000	54,000	36,000	(18,000)
8050 - Equipment (under \$5,000)	13,593	61,400	45,900	123,900	78,000
<b>Materials, Supplies and Services</b>	<b>95,082</b>	<b>229,100</b>	<b>228,996</b>	<b>264,500</b>	<b>35,504</b>
1270 - General Plant & Equip (over \$5,000)	0	55,000	80,000	45,000	(35,000)
<b>Equipment</b>	<b>0</b>	<b>55,000</b>	<b>80,000</b>	<b>45,000</b>	<b>(35,000)</b>
<b>Total Technical Services</b>	<b>665,675</b>	<b>1,138,793</b>	<b>1,350,896</b>	<b>768,900</b>	<b>(581,996)</b>

**Budget Highlights**

8050 - increased because the Technical Services section will be installing new instrumentation and new chlorination systems as part of an island wide modernization and standardization effort.

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**WSO - Water System Operations**

**5620 - Telecommunications**

**Section's Activity**

The Telecommunications Section plans, modifies, adapts, installs, operates, maintains and repairs telecommunications equipment used in radio, microwave, supervisory control and telemetry networks covering the water distribution and pumping systems of the department, and industrial electronic equipment used in the operation of electrical pumping plants and underground pipe locating devices; designs multifunction telemetry and supervisory control systems and mobile radio systems.

Account	FY2016 Actual	FY2016 Adopted Budget	FY2017 Adopted Budget	FY2018 Proposed Budget	Change
4110 - Salaries & Wages	237,476	623,748	573,200	322,600	(250,600)
4120 - Overtime	11,713	36,000	36,000	36,000	0
4130 - Miscellaneous (Payroll)	30,897	12,000	15,200	15,200	0
<b>Personnel Services</b>	<b>280,085</b>	<b>671,748</b>	<b>624,400</b>	<b>373,800</b>	<b>(250,600)</b>
4160 - Meals; Mileage & Uniform Allowances	716	2,000	2,040	2,000	(40)
4250 - Other Contractual Services	82,872	102,000	102,000	102,000	0
4460 - Other Materials & Supplies	1,679	12,000	14,000	12,000	(2,000)
4470 - Parts and Accessories	162,886	72,000	72,000	72,000	0
4500 - Education and Training	1,782	2,400	2,400	2,400	0
4670 - Telemetry	225,827	240,000	240,000	240,000	0
4720 - Conference Travel & Expenses	0	1,500	1,100	1,200	100
4815 - Repair & Maint - Equipment	3,870	24,000	24,000	24,000	0
4910 - Miscellaneous Fees & Registration	210	0	0	0	0
8050 - Equipment (under \$5,000)	205,126	343,000	343,050	387,000	43,950
<b>Materials, Supplies and Services</b>	<b>684,968</b>	<b>798,900</b>	<b>800,590</b>	<b>842,600</b>	<b>42,010</b>
1270 - General Plant & Equip (over \$5,000)	0	192,000	189,000	303,000	114,000
<b>Equipment</b>	<b>0</b>	<b>192,000</b>	<b>189,000</b>	<b>303,000</b>	<b>114,000</b>
<b>Total Telecommunications</b>	<b>965,054</b>	<b>1,662,648</b>	<b>1,613,990</b>	<b>1,519,400</b>	<b>(94,590)</b>

**Budget Highlights**

1270 & 8050 - increase in budget due to ramping up implementation of equipment to utilize IT's wireless backbone for communications to pumping stations.

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**WSO - Water System Operations**

**5660 - Automotive**

**Section's Activity**

The Automotive Section operates the maintenance and repair shops; prepares plans and specifications for the purchase of vehicles and special construction equipment; maintains and repairs vehicles, construction and special equipment; disposes of retired fleet equipment; maintains and constructs special tools and equipment; conducts research work in the automotive field.

Account	FY2016 Actual	FY2016 Adopted Budget	FY2017 Adopted Budget	FY2018 Proposed Budget	Change
4110 - Salaries & Wages	1,099,596	1,279,250	1,274,700	1,295,000	20,300
4120 - Overtime	12,826	13,000	13,000	13,000	0
4130 - Miscellaneous (Payroll)	0	16,900	16,900	16,900	0
<b>Personnel Services</b>	<b>1,112,422</b>	<b>1,309,150</b>	<b>1,304,600</b>	<b>1,324,900</b>	<b>20,300</b>
4160 - Meals; Mileage & Uniform Allowances	658	1,800	1,800	1,800	0
4250 - Other Contractual Services	159,780	171,600	183,400	187,700	4,300
4251 - Software Licenses and Maintenance	0	0	3,800	4,000	200
4267 - Printed forms	0	100	100	100	0
4410 - Gasoline	502,184	990,000	910,000	823,200	(86,800)
4430 - Miscellaneous Supplies	820	1,200	1,200	1,200	0
4440 - Motor Vehicle Parts & Accessories	433,867	432,000	452,000	452,000	0
4460 - Other Materials & Supplies	97,900	88,800	94,900	99,900	5,000
4470 - Parts and Accessories	46,209	48,400	60,000	60,000	0
4500 - Education and Training	3,430	16,400	17,600	16,400	(1,200)
4720 - Conference Travel & Expenses	0	800	0	1,600	1,600
4805 - Repair & Maint - Structures	4,425	4,000	4,000	4,000	0
4815 - Repair & Maint - Equipment	72,344	73,800	80,000	80,000	0
4910 - Miscellaneous Fees & Registration	2,928	2,100	2,900	2,900	0
8050 - Equipment (under \$5,000)	15,309	12,300	6,300	7,500	1,200
<b>Materials, Supplies and Services</b>	<b>1,339,853</b>	<b>1,843,300</b>	<b>1,818,000</b>	<b>1,742,300</b>	<b>(75,700)</b>
1270 - General Plant & Equip (over \$5,000)	1,871,332	2,077,100	3,442,900	4,164,800	721,900
<b>Equipment</b>	<b>1,871,332</b>	<b>2,077,100</b>	<b>3,442,900</b>	<b>4,164,800</b>	<b>721,900</b>
<b>Total Automotive</b>	<b>4,323,607</b>	<b>5,229,550</b>	<b>6,565,500</b>	<b>7,232,000</b>	<b>666,500</b>

**Budget Highlights**

The increase in the general plant equipment budget is because there were 39 vehicles that were scheduled for replacement in FY2017 and there are 41 vehicles scheduled for replacement in FY2018. There are also ten sports utility vehicles, one hydraulic lift trailer, and one landscape trailer being proposed as new additions to the fleet in anticipation of a workforce expansion in FY2018.

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**IT - Information Technology**

**Division/Office's Activity**

The Information Technology Division designs, develops, maintains, and supports BWS databases; software systems; server/workstation/mobile hardware and software; wired/wireless networks, voice/video and call center systems.

Account	FY2016 Actual	FY2016 Adopted Budget	FY2017 Adopted Budget	FY2018 Proposed Budget	Change
4110 - Salaries & Wages	2,621,660	3,525,392	3,285,400	3,031,400	(254,000)
4120 - Overtime	199,704	279,600	284,000	254,500	(29,500)
4130 - Miscellaneous (Payroll)	0	62,772	41,300	43,800	2,500
<b>Personnel Services</b>	<b>2,821,364</b>	<b>3,867,764</b>	<b>3,610,700</b>	<b>3,329,700</b>	<b>(281,000)</b>
4160 - Meals; Mileage & Uniform Allowances	1,079	3,600	3,600	3,600	0
4250 - Other Contractual Services	2,748,503	5,508,300	5,024,956	5,287,900	262,944
4251 - Software Licenses and Maintenance	1,880,452	1,813,350	2,476,866	2,223,648	(253,218)
4260 - Advertising & Publication of Notices	208	0	0	0	0
4265 - Printing	3,242	5,000	0	0	0
4270 - Professional Services	3,695	0	0	0	0
4410 - Gasoline	20	0	0	0	0
4430 - Miscellaneous Supplies	5,377	6,500	5,600	5,000	(600)
4460 - Other Materials & Supplies	108,796	109,210	111,100	114,300	3,200
4470 - Parts and Accessories	17,973	13,200	10,400	24,000	13,600
4480 - Postage	333,398	1,120,800	1,000,000	700,000	(300,000)
4500 - Education and Training	95,079	139,400	277,450	157,600	(119,850)
4650 - Security Camera - Cable Line Services	70,302	0	0	0	0
4720 - Conference Travel & Expenses	21,394	57,115	85,915	76,600	(9,315)
4815 - Repair & Maint - Equipment	80,952	204,500	243,350	267,450	24,100
4910 - Miscellaneous Fees & Registration	0	200	500	500	0
8050 - Equipment (under \$5,000)	377,405	383,400	700,123	633,720	(66,403)
<b>Materials, Supplies and Services</b>	<b>5,747,876</b>	<b>9,364,575</b>	<b>9,939,860</b>	<b>9,494,318</b>	<b>(445,542)</b>
1270 - General Plant & Equip (over \$5,000)	411,200	414,900	420,000	350,000	(70,000)
<b>Equipment</b>	<b>411,200</b>	<b>414,900</b>	<b>420,000</b>	<b>350,000</b>	<b>(70,000)</b>
<b>Total IT - Information Technology</b>	<b>8,980,441</b>	<b>13,647,239</b>	<b>13,970,560</b>	<b>13,174,018</b>	<b>(796,542)</b>

**Notes**

Information Technology Division

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**IT - Information Technology**

**5805 - IT Administration**

**Section's Activity**

The Administration Section provides strategic planning, technology management, policy direction, cyber security program management and administrative support services for the Information Technology Division

Account	FY2016 Actual	FY2016 Adopted Budget	FY2017 Adopted Budget	FY2018 Proposed Budget	Change
4110 - Salaries & Wages	307,755	398,852	407,700	391,400	(16,300)
4130 - Miscellaneous (Payroll)	0	0	0	0	0
<b>Personnel Services</b>	<b>307,755</b>	<b>398,852</b>	<b>407,700</b>	<b>391,400</b>	<b>(16,300)</b>
4250 - Other Contractual Services	126,617	150,000	250,000	475,000	225,000
4251 - Software Licenses and Maintenance	0	0	25,000	0	(25,000)
4260 - Advertising & Publication of Notices	208	0	0	0	0
4430 - Miscellaneous Supplies	759	1,200	1,200	1,200	0
4460 - Other Materials & Supplies	2,642	3,600	3,600	3,600	0
4500 - Education and Training	290	1,600	16,800	1,600	(15,200)
4720 - Conference Travel & Expenses	13,018	14,465	31,715	18,500	(13,215)
4910 - Miscellaneous Fees & Registration	0	200	500	500	0
8050 - Equipment (under \$5,000)	6,403	15,000	0	0	0
<b>Materials, Supplies and Services</b>	<b>149,938</b>	<b>186,065</b>	<b>328,815</b>	<b>500,400</b>	<b>171,585</b>
<b>Total IT Administration</b>	<b>457,693</b>	<b>584,917</b>	<b>736,515</b>	<b>891,800</b>	<b>155,285</b>

**Budget Highlights**

Other Contractual Services increased from FY 2017 to meet the expected need for consultant services to assist ITD with O&M of the BWS cyber security program over the next 2-3 year period

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**IT - Information Technology**

**5820 - Application Systems Development**

**Section's Activity**

The Application Systems Development Section is responsible for providing application and data management services for all enterprise systems of the department including, customer information system, water and sewer billings, financial/HR (payroll, accounts payable and cost accounting, time tracking, etc.), laboratory information, asset maintenance and workforce management

Account	FY2016 Actual	FY2016 Adopted Budget	FY2017 Adopted Budget	FY2018 Proposed Budget	Change
4110 - Salaries & Wages	577,488	978,804	958,200	907,200	(51,000)
4120 - Overtime	137,776	222,000	222,000	172,500	(49,500)
4130 - Miscellaneous (Payroll)	0	42,000	24,000	24,000	0
<b>Personnel Services</b>	<b>715,263</b>	<b>1,242,804</b>	<b>1,204,200</b>	<b>1,103,700</b>	<b>(100,500)</b>
4160 - Meals; Mileage & Uniform Allowances	595	3,600	3,600	3,600	0
4250 - Other Contractual Services	538,104	3,000,800	2,400,800	1,900,800	(500,000)
4251 - Software Licenses and Maintenance	928,418	980,700	1,056,400	1,130,000	73,600
4270 - Professional Services	3,695	0	0	0	0
4430 - Miscellaneous Supplies	577	1,200	1,200	1,200	0
4460 - Other Materials & Supplies	407	0	0	0	0
4500 - Education and Training	2,694	60,000	188,300	88,300	(100,000)
4720 - Conference Travel & Expenses	1,250	15,900	15,900	13,100	(2,800)
<b>Materials, Supplies and Services</b>	<b>1,475,739</b>	<b>4,062,200</b>	<b>3,666,200</b>	<b>3,137,000</b>	<b>(529,200)</b>
<b>Total Application Systems Development</b>	<b>2,191,002</b>	<b>5,305,004</b>	<b>4,870,400</b>	<b>4,240,700</b>	<b>(629,700)</b>

**Budget Highlights**

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**IT - Information Technology**

**5830 - Computer Operations**

**Section's Activity**

The Operations Support Branch is responsible for planning, scheduling, administrating and coordinating the department's network and computer services operations (machine processing), and infrastructure operations, update and maintenance. Included in this is wired, wireless network devices/services, servers, workstations and mobile devices, cloud based services, etc.

Account	FY2016 Actual	FY2016 Adopted Budget	FY2017 Adopted Budget	FY2018 Proposed Budget	Change
4110 - Salaries & Wages	1,139,311	1,465,776	1,116,800	1,078,800	(38,000)
4120 - Overtime	55,934	54,000	58,000	78,000	20,000
<b>Personnel Services</b>	<b>1,195,244</b>	<b>1,519,776</b>	<b>1,174,800</b>	<b>1,156,800</b>	<b>(18,000)</b>
4160 - Meals; Mileage & Uniform Allowances	330	0	0	0	0
4250 - Other Contractual Services	1,529,788	1,807,500	1,824,156	2,362,100	537,944
4251 - Software Licenses and Maintenance	612,200	599,100	1,143,866	856,748	(287,118)
4410 - Gasoline	20	0	0	0	0
4430 - Miscellaneous Supplies	3,740	3,600	2,700	2,100	(600)
4460 - Other Materials & Supplies	104,499	104,400	106,300	109,500	3,200
4470 - Parts and Accessories	17,973	13,200	10,400	24,000	13,600
4480 - Postage	333,398	1,120,800	1,000,000	700,000	(300,000)
4500 - Education and Training	89,513	69,300	57,350	52,700	(4,650)
4650 - Security Camera - Cable Line Services	70,302	0	0	0	0
4720 - Conference Travel & Expenses	0	0	11,500	17,500	6,000
4815 - Repair & Maint - Equipment	80,952	197,700	239,250	262,850	23,600
8050 - Equipment (under \$5,000)	371,002	361,300	696,823	630,420	(66,403)
<b>Materials, Supplies and Services</b>	<b>3,213,717</b>	<b>4,276,900</b>	<b>5,092,345</b>	<b>5,017,918</b>	<b>(74,427)</b>
1270 - General Plant & Equip (over \$5,000)	411,200	414,900	410,000	335,000	(75,000)
<b>Equipment</b>	<b>411,200</b>	<b>414,900</b>	<b>410,000</b>	<b>335,000</b>	<b>(75,000)</b>
<b>Total Operations Support</b>	<b>4,820,162</b>	<b>6,211,576</b>	<b>6,677,145</b>	<b>6,509,718</b>	<b>(167,427)</b>

**Budget Highlights**

Majority of the change in 4250 is due to a \$300,000 increase in anticipated costs to support the wireless network (equipment replacement, upgrades and repair), \$90,000 for a network readiness assessment on our wireless network in preparation for SCADA analog to digital upgrade, and \$75,000 identified for design and consulting support of our VMWare NXs and vRealize systems

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**IT - Information Technology**

**5835 - Technical Projects**

**Section's Activity**

The Technical Engineering Projects (TEP) Branch plans, designs, installs, implements, manages, maintains and supports Board of Water Supply (BWS) Geographic Information System and spatial database. TEP also manages and maintains the BWS hydraulic models for currency and accuracy, in conjunction with Water Resources.

Account	FY2016 Actual	FY2016 Adopted Budget	FY2017 Adopted Budget	FY2018 Proposed Budget	Change
4110 - Salaries & Wages	597,107	681,960	802,700	654,000	(148,700)
4120 - Overtime	5,995	3,600	4,000	4,000	0
4130 - Miscellaneous (Payroll)	0	20,772	17,300	19,800	2,500
<b>Personnel Services</b>	<b>603,102</b>	<b>706,332</b>	<b>824,000</b>	<b>677,800</b>	<b>(146,200)</b>
4160 - Meals; Mileage & Uniform Allowances	154	0	0	0	0
4250 - Other Contractual Services	553,994	550,000	550,000	550,000	0
4251 - Software Licenses and Maintenance	339,835	233,550	251,600	236,900	(14,700)
4265 - Printing	3,242	5,000	0	0	0
4430 - Miscellaneous Supplies	302	500	500	500	0
4460 - Other Materials & Supplies	1,248	1,210	1,200	1,200	0
4500 - Education and Training	2,582	8,500	15,000	15,000	0
4720 - Conference Travel & Expenses	7,126	26,750	26,800	27,500	700
4815 - Repair & Maint - Equipment	0	6,800	4,100	4,600	500
8050 - Equipment (under \$5,000)	0	7,100	3,300	3,300	0
<b>Materials, Supplies and Services</b>	<b>908,482</b>	<b>839,410</b>	<b>852,500</b>	<b>839,000</b>	<b>(13,500)</b>
1270 - General Plant & Equip (over \$5,000)	0	0	10,000	15,000	5,000
<b>Equipment</b>	<b>0</b>	<b>0</b>	<b>10,000</b>	<b>15,000</b>	<b>5,000</b>
<b>Total Technical Engineering Projects</b>	<b>1,511,584</b>	<b>1,545,742</b>	<b>1,686,500</b>	<b>1,531,800</b>	<b>(154,700)</b>

**Budget Highlights**

Technical Engineering Projects Branch

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**FIN - Finance**

**Division/Office's Activity**

The Finance Division is responsible for controlling and directing the financial accounting activities of the department. Activities include conducting financial studies; administering long-term bonded debt programs and bond sales; assisting in controlling budgeted expenditures; and administering the general accounting systems including cost accounting, payroll, leave records, and accounts payable.

Account	FY2016 Actual	FY2016 Adopted Budget	FY2017 Adopted Budget	FY2018 Proposed Budget	Change
4110 - Salaries & Wages	2,015,534	2,661,888	2,770,200	2,606,900	(163,300)
4120 - Overtime	157,382	271,900	279,600	270,700	(8,900)
4130 - Miscellaneous (Payroll)	35,510	40,821	148,300	123,200	(25,100)
<b>Personnel Services</b>	<b>2,208,427</b>	<b>2,974,609</b>	<b>3,198,100</b>	<b>3,000,800</b>	<b>(197,300)</b>
4160 - Meals; Mileage & Uniform Allowances	12,473	7,500	11,600	12,800	1,200
4220 - Collection Fees	463	0	0	400	400
4250 - Other Contractual Services	8,582	7,000	41,000	9,100	(31,900)
4260 - Advertising & Publication of Notices	0	1,000	1,000	0	(1,000)
4267 - Printed forms	3,846	4,000	0	3,000	3,000
4270 - Professional Services	355,943	1,189,800	1,409,500	976,500	(433,000)
4410 - Gasoline	10	0	0	0	0
4430 - Miscellaneous Supplies	15,461	7,500	10,000	11,000	1,000
4460 - Other Materials & Supplies	5,242	4,000	6,000	5,200	(800)
4480 - Postage	9,668	17,000	17,000	15,000	(2,000)
4500 - Education and Training	4,728	12,250	13,200	6,500	(6,700)
4720 - Conference Travel & Expenses	3,743	3,200	8,900	10,300	1,400
4815 - Repair & Maint - Equipment	3,948	2,500	4,000	4,000	0
4910 - Miscellaneous Fees & Registration	815	4,000	4,200	1,640	(2,560)
4915 - Miscellaneous Financial Expenses	5,167,263	1,276,500	1,340,000	937,500	(402,500)
8050 - Equipment (under \$5,000)	1,784	29,450	28,300	32,100	3,800
<b>Materials, Supplies and Services</b>	<b>5,593,969</b>	<b>2,565,700</b>	<b>2,894,700</b>	<b>2,025,040</b>	<b>(869,660)</b>
1270 - General Plant & Equip (over \$5,000)	8,122	35,000	107,600	51,000	(56,600)
<b>Equipment</b>	<b>8,122</b>	<b>35,000</b>	<b>107,600</b>	<b>51,000</b>	<b>(56,600)</b>
<b>Total FIN - Finance</b>	<b>7,810,518</b>	<b>5,575,309</b>	<b>6,200,400</b>	<b>5,076,840</b>	<b>(1,123,560)</b>

Notes

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**FIN - Finance**

**5900 - Finance Administration**

**Section's Activity**

Develop, provide and manage budget, financial and administrative support services to all levels of the department.

Account	FY2016 Actual	FY2016 Adopted Budget	FY2017 Adopted Budget	FY2018 Proposed Budget	Change
4110 - Salaries & Wages	352,201	326,100	325,200	345,600	20,400
4120 - Overtime	6	0	100	500	400
<b>Personnel Services</b>	<b>352,206</b>	<b>326,100</b>	<b>325,300</b>	<b>346,100</b>	<b>20,800</b>
4250 - Other Contractual Services	644	1,000	5,000	1,000	(4,000)
4260 - Advertising & Publication of Notices	0	1,000	1,000	0	(1,000)
4267 - Printed forms	1,362	0	0	0	0
4270 - Professional Services	192,500	331,800	664,500	176,500	(488,000)
4430 - Miscellaneous Supplies	13,060	6,000	9,000	10,000	1,000
4460 - Other Materials & Supplies	86	0	0	0	0
4480 - Postage	0	2,000	2,000	0	(2,000)
4500 - Education and Training	2,757	2,000	3,200	3,000	(200)
4720 - Conference Travel & Expenses	3,743	3,200	8,900	7,800	(1,100)
4815 - Repair & Maint - Equipment	1,324	1,000	1,000	1,000	0
4910 - Miscellaneous Fees & Registration	710	4,000	4,200	320	(3,880)
4915 - Miscellaneous Financial Expenses	0	0	0	0	0
8050 - Equipment (under \$5,000)	760	1,000	1,000	2,000	1,000
<b>Materials, Supplies and Services</b>	<b>216,944</b>	<b>353,000</b>	<b>699,800</b>	<b>201,620</b>	<b>(498,180)</b>
<b>Total Finance Administration</b>	<b>569,150</b>	<b>679,100</b>	<b>1,025,100</b>	<b>547,720</b>	<b>(477,380)</b>

**Budget Highlights**

The decrease to Professional services was due to a one time contract for a peer review of the rate study.

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**FIN - Finance**

**5910 - Treasury**

**Section's Activity**

The Treasury Section administers and manages the long term bonded debt and federal loan programs; obtains other long term and short term financing as necessary; manages the department's cash flows; and administers and oversees the management of the department's investment program.

Account	FY2016 Actual	FY2016 Adopted Budget	FY2017 Adopted Budget	FY2018 Proposed Budget	Change
4110 - Salaries & Wages	162,258	149,712	231,600	175,300	(56,300)
4120 - Overtime	4,398	10,800	10,800	5,000	(5,800)
<b>Personnel Services</b>	<b>166,656</b>	<b>160,512</b>	<b>242,400</b>	<b>180,300</b>	<b>(62,100)</b>
4160 - Meals; Mileage & Uniform Allowances	230	500	500	500	0
4270 - Professional Services	163,443	858,000	745,000	800,000	55,000
4460 - Other Materials & Supplies	24	0	0	200	200
4720 - Conference Travel & Expenses	0	0	0	2,000	2,000
4910 - Miscellaneous Fees & Registration	0	0	0	320	320
4915 - Miscellaneous Financial Expenses	5,165,763	1,255,000	1,340,000	936,000	(404,000)
<b>Materials, Supplies and Services</b>	<b>5,329,459</b>	<b>2,113,500</b>	<b>2,085,500</b>	<b>1,739,020</b>	<b>(346,480)</b>
<b>Total Treasury</b>	<b>5,496,115</b>	<b>2,274,012</b>	<b>2,327,900</b>	<b>1,919,320</b>	<b>(408,580)</b>

**Budget Highlights**

The decrease in Miscellaneous Financial Expenses is due to the early retirement of higher rate SRF loans in FY 2017.

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**FIN - Finance**

**5915 - Rev & Cust Accounting Section**

**Section's Activity**

The Revenue and Customer Accounting Section conducts the department's billing operations and related functions which include meter reading, Pre-auditing of consumer accounts, part-rate billing, maintaining consumer records, maintaining accounts receivable and keeping special fund accounts; maintains revenue accounting and statistical reports.

Account	FY2016 Actual	FY2016 Adopted Budget	FY2017 Adopted Budget	FY2018 Proposed Budget	Change
4110 - Salaries & Wages	955,036	1,279,524	1,327,900	1,189,000	(138,900)
4120 - Overtime	149,688	245,000	245,000	245,000	0
4130 - Miscellaneous (Payroll)	9,040	15,988	51,700	0	(51,700)
<b>Personnel Services</b>	<b>1,113,764</b>	<b>1,540,512</b>	<b>1,624,600</b>	<b>1,434,000</b>	<b>(190,600)</b>
4160 - Meals; Mileage & Uniform Allowances	12,153	6,000	11,000	12,000	1,000
4250 - Other Contractual Services	7,938	6,000	36,000	8,100	(27,900)
4410 - Gasoline	10	0	0	0	0
4430 - Miscellaneous Supplies	2,401	1,000	1,000	1,000	0
4460 - Other Materials & Supplies	5,109	4,000	4,000	4,000	0
4480 - Postage	9,668	15,000	15,000	15,000	0
4500 - Education and Training	0	1,000	1,000	1,000	0
4815 - Repair & Maint - Equipment	2,329	1,000	3,000	3,000	0
8050 - Equipment (under \$5,000)	0	23,500	22,500	24,100	1,600
<b>Materials, Supplies and Services</b>	<b>39,608</b>	<b>57,500</b>	<b>93,500</b>	<b>68,200</b>	<b>(25,300)</b>
1270 - General Plant & Equip (over \$5,000)	8,122	35,000	107,600	51,000	(56,600)
<b>Equipment</b>	<b>8,122</b>	<b>35,000</b>	<b>107,600</b>	<b>51,000</b>	<b>(56,600)</b>
<b>Total Rev</b>	<b>1,161,494</b>	<b>1,633,012</b>	<b>1,825,700</b>	<b>1,553,200</b>	<b>(272,500)</b>

**Budget Highlights**

no significant changes to the budget

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**FIN - Finance**

**5930 - General Accounting**

**Section's Activity**

The General Accounting Section directs and coordinates the development, functional effectiveness and maintenance of accounting systems, records, procedures and reports to ensure the acquisition of valid and consistent data for use in planning and budgeting, performance control and evaluation, managerial decisions and reporting requirements; prepares monthly financial and statistical reports and studies; prepares payrolls and maintains leave records; audits and processes disbursement vouchers; maintains all property records and depreciation schedules; coordinates annual physical inventory of utility plant and prepares annual listing as required by City Charter; prepares and analyzes special reports and studies.

Account	FY2016 Actual	FY2016 Adopted Budget	FY2017 Adopted Budget	FY2018 Proposed Budget	Change
4110 - Salaries & Wages	497,214	641,160	617,200	604,000	(13,200)
4120 - Overtime	2,926	16,100	20,700	16,200	(4,500)
4130 - Miscellaneous (Payroll)	11,797	24,833	96,600	73,200	(23,400)
<b>Personnel Services</b>	<b>511,937</b>	<b>682,093</b>	<b>734,500</b>	<b>693,400</b>	<b>(41,100)</b>
4160 - Meals; Mileage & Uniform Allowances	90	1,000	100	300	200
4220 - Collection Fees	463	0	0	400	400
4250 - Other Contractual Services	0	0	0	0	0
4267 - Printed forms	2,485	4,000	0	3,000	3,000
4430 - Miscellaneous Supplies	0	500	0	0	0
4460 - Other Materials & Supplies	17	0	0	0	0
4500 - Education and Training	1,972	1,000	1,000	500	(500)
4720 - Conference Travel & Expenses	0	0	0	500	500
4815 - Repair & Maint - Equipment	296	500	0	0	0
4910 - Miscellaneous Fees & Registration	105	0	0	1,000	1,000
4915 - Miscellaneous Financial Expenses	1,500	21,500	0	1,500	1,500
8050 - Equipment (under \$5,000)	1,024	4,950	4,800	2,500	(2,300)
<b>Materials, Supplies and Services</b>	<b>7,952</b>	<b>33,450</b>	<b>5,900</b>	<b>9,700</b>	<b>3,800</b>
<b>Total General Accounting</b>	<b>519,889</b>	<b>715,543</b>	<b>740,400</b>	<b>703,100</b>	<b>(37,300)</b>

**Budget Highlights**

No significant changes to the budget.

**Board of Water Supply  
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**FIN - Finance**

**5940 - Fiscal Services**

**Section's Activity**

The Fiscal Services Branch is responsible for reporting on budgetary, encumbrance and financial activities within the department. This branch records and reconciles all contract and claims encumbrances with the City annually at fiscal year-end; controls, edits and monitors reports on encumbrances extensions, insufficient funds and accounts payable; Fiscal Services maintains and coordinates an on-line vendor table (data file) for approximately 50,000 vendors for field and central use. This branch assigns vendor codes for all payment documents for timely and accurate payment processing. The administration of the purchasing card program for the procurement of goods and services is also a part of this branch's responsibilities. Fiscal Services designs hard copy and electronic encumbrance liquidation and payment forms for departmental use and submittal to Accounts Payable.

Account	FY2016 Actual	FY2016 Adopted Budget	FY2017 Adopted Budget	FY2018 Proposed Budget	Change
4110 - Salaries & Wages	22,332	209,628	202,600	226,100	23,500
4120 - Overtime	364	0	1,500	2,000	500
4130 - Miscellaneous (Payroll)	2,039	0	0	50,000	50,000
<b>Personnel Services</b>	<b>24,735</b>	<b>209,628</b>	<b>204,100</b>	<b>278,100</b>	<b>74,000</b>
4460 - Other Materials & Supplies	6	0	2,000	1,000	(1,000)
8050 - Equipment (under \$5,000)	0	0	0	3,500	3,500
<b>Materials, Supplies and Services</b>	<b>6</b>	<b>0</b>	<b>2,000</b>	<b>4,500</b>	<b>2,500</b>
<b>Total Fiscal Services</b>	<b>24,741</b>	<b>209,628</b>	<b>206,100</b>	<b>282,600</b>	<b>76,500</b>

**Budget Highlights**

No significant changes to the budget.

**Board of Water Supply  
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Fiscal Year 2018**

**FIN - Finance**

**5950 - Systems Accounting**

**Section's Activity**

This System Accounting section is responsible for the planning, coordination, modification and administration of the financial management system for the BWS. This section spearheads initiatives and projects to troubleshoot the organization's financial systems.

Account	FY2016 Actual	FY2016 Adopted Budget	FY2017 Adopted Budget	FY2018 Proposed Budget	Change
4110 - Salaries & Wages	26,494	55,764	65,700	66,900	1,200
4120 - Overtime	0	0	1,500	2,000	500
4130 - Miscellaneous (Payroll)	12,634	0	0	0	0
<b>Personnel Services</b>	<b>39,128</b>	<b>55,764</b>	<b>67,200</b>	<b>68,900</b>	<b>1,700</b>
4500 - Education and Training	0	8,250	8,000	2,000	(6,000)
<b>Materials, Supplies and Services</b>	<b>0</b>	<b>8,250</b>	<b>8,000</b>	<b>2,000</b>	<b>(6,000)</b>
<b>Total Systems Accounting</b>	<b>39,128</b>	<b>64,014</b>	<b>75,200</b>	<b>70,900</b>	<b>(4,300)</b>

**Budget Highlights**

No significant changes to the budget.

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**FC - Fixed Charges and Debt Service**

**Section's Activity**

The activity represents fixed charges and non-divisional expenditures of a general nature not related to any divisional budget.

Account	FY2016 Actual	FY2016 Adopted Budget	FY2017 Adopted Budget	FY2018 Proposed Budget	Change
4610 - Electric Power - Water Distrib Fac	19,157,199	30,000,000	28,500,000	21,000,000	(7,500,000)
4620 - Electricity	759,163	1,700,000	1,614,000	900,000	(714,000)
4660 - Wastewater Service Charges	102,591	112,800	112,800	110,000	(2,800)
5600 - Central Admin Service Exp (CASE) Fees	3,300,000	3,300,000	3,300,000	3,300,000	0
6010 - Employee Retirement Sys (ERS)	7,794,987	5,700,000	6,000,000	8,000,000	2,000,000
6020 - FICA Contributions	2,517,000	2,760,000	2,700,000	2,800,000	100,000
6100 - Health Benefits - Employees	2,682,998	3,000,000	3,336,000	3,300,000	(36,000)
6200 - Health Benefits - Retirees	4,871,361	5,712,000	6,300,000	5,700,000	(600,000)
6250 - Other Post-Emplymnt Ben (OPEB)	6,410,714	6,400,000	6,000,000	3,000,000	(3,000,000)
6320 - Unemployment Insurance Benefits	0	55,000	55,200	56,000	800
<b>Departmental Fixed Charges</b>	<b>47,596,013</b>	<b>58,739,800</b>	<b>57,918,000</b>	<b>48,166,000</b>	<b>(9,752,000)</b>
1810 - Bonds Payable	11,999,361	13,288,000	29,252,000	8,550,000	(20,702,000)
1820 - Notes Payable - State Revolving Funds (SRF)	0	0	0	13,647,000	13,647,000
7071 - Bond Interest	9,885,494	10,023,000	9,613,000	9,451,000	(162,000)
<b>Debt Service</b>	<b>21,884,855</b>	<b>23,311,000</b>	<b>38,865,000</b>	<b>31,648,000</b>	<b>(7,217,000)</b>
<b>Total Fixed Charges and Debt Service</b>	<b>69,480,868</b>	<b>82,050,800</b>	<b>96,783,000</b>	<b>79,814,000</b>	<b>(16,969,000)</b>

**Budget Highlights**

Fixed Charges and Debt Service



## PART II

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# CAPITAL IMPROVEMENT PROGRAM BUDGET

Board of Water Supply  
Capital Improvement Program Budget  
FY 2018

Summary by Categories	Operating Fund	Operating Fund - SRF Eligible	Special Expendable Fund	Reserve Release Fund	Total
I - Research and Development	5,525,000	-	-	-	5,525,000
II - Renewal and Replacement					
A. Pumps	4,475,000	19,962,700	-	737,300	25,175,000
B. Reservoirs	500,000	-	-	-	500,000
C. Pipeline	8,255,000	11,000,000	-	-	19,255,000
D. Treatment	1,200,000	-	-	-	1,200,000
E. Facilities	39,278,000	-	-	-	39,278,000
Category II - Sub-Total	53,708,000	30,962,700	-	737,300	85,408,000
III - Capacity Expansion					
A. Pumps	-	-	7,000,000	-	7,000,000
B. Reservoirs	-	-	350,000	-	350,000
C. Pipeline	-	-	13,900,000	-	13,900,000
D. Treatment	-	-	-	-	-
E. Facilities	585,000	-	-	-	585,000
Category III - Sub-Total	585,000	-	21,250,000	-	21,835,000
Total Categories I - III	59,818,000	30,962,700	21,250,000	737,300	112,768,000
Construction Cost Index Adjustment	4,542,795	4,644,405	2,385,000	-	11,572,200
Contract Adjustment Account	20,000,000	-	-	-	20,000,000
FY18 Capital Program Total	84,360,795	35,607,105	23,635,000	737,300	144,340,200

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Project No.	Project Title	Description	Type	Operating Fund	Operating Fund - SRF Eligible	Special Expendable Fund	Reserve Release Fund	Total
<b>I. Research and Development</b>								
1.	<b>Halawa Shaft and Moanalua Wells Alternatives Study</b>	Conduct Engineering Feasibility Study to evaluate alternatives if Halawa Shaft and Moanalua Wells must be taken offline.	P&E	500,000	-	-	-	500,000
2.	<b>Kunia Wells IV Exploratory Wells Environmental Assessment</b>	Prepare Environmental Assessment for four (4) exploratory wells for Kunia Wells IV at two alternative sites (TMK 9-2-001:014 and TMK 9-4-003:010).	P&E	300,000	-	-	-	300,000
3.	<b>Kunia Wells II Treatment Study</b>	Conduct Engineering Feasibility Study to determine the best available technology to address Cr6 from Kunia Wells II (TMK: 9-4-157:099).	P&E	500,000	-	-	-	500,000
4.	<b>Waipahu-Waiawa Exploratory Wells Environmental Assessment</b>	Prepare Environmental Assessment for exploratory wells within the Waipahu-Waiawa aquifer.	P&E	100,000	-	-	-	100,000
5.	<b>Manoa Well II Exploratory Well Environmental Assessment</b>	Prepare Environmental Assessment for a second exploratory/production well at existing Manoa Well II Station (TMK: 2-9-054:033).	P&E	125,000	-	-	-	125,000
6.	<b>Waialae Nui Well Test</b>	Survey, videolog, clean and clear, test pump and sample well.	P&E	250,000	-	-	-	250,000
7.	<b>Nuuanu Hydro-Electric and Managed Aquifer Recovery Study and Environmental Assessment</b>	Prepare Preliminary Engineering Study and Environmental Assessment for hydro-electric generation and managed aquifer recharge for Nuuanu Reservoir Nos. 1 and 4.	P&E	600,000	-	-	-	600,000
8.	<b>Ahuimanu Cross Country 16-inch Main Replacement Environmental Assessment</b>	Prepare Environmental Assessment to replace Ahuimanu cross-country main with new 16-inch main and appurtenances along Kahekili Highway, from Ahuimanu Place to Keaahala Road - approx. 14,000 lin. ft.	P&E	150,000	-	-	-	150,000

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Project No.	Project Title	Description	Type	Operating Fund	Operating Fund - SRF Eligible	Special Expendable Fund	Reserve Release Fund	Total
9.	<b>Beretania Site Master Plan</b>	Prepare an Environmental Impact Statement for redevelopment options; help analyze development proposals and provide technical assistance with implementation of selected redevelopment option.	P&E	1,000,000	-	-	-	1,000,000
10.	<b>Construction Management For Various BWS Construction Projects</b>	Provide construction management and training services for selected BWS construction projects.	P&E	1,000,000	-	-	-	1,000,000
11.	<b>Project Management For Various BWS Projects</b>	Provide project management , engineering and training services for selected BWS projects.	P&E	1,000,000	-	-	-	1,000,000
<b>Total Category I - Research and Development</b>				<b>5,525,000</b>	-	-	-	<b>5,525,000</b>

Board of Water Supply  
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Project No.	Project Title	Description	Type	Operating Fund	Operating Fund - SRF Eligible	Special Expendable Fund	Reserve Release Fund	Total
<b>II. Renewal and Replacement</b>								
<b>A. Pumps</b>								
<b>12. Punaluu Wells II Renovation</b>		Provide new pumping unit at well no. 6. Provide new aboveground/underground piping, valves, wiring, and appurtenances at wells no. 1, 2, 3, 5, and 6. Provide new surge anticipating valve at wells no. 1, 3, and 6. Replace sodium hypochlorite system. Replace all existing motor controls with new soft starters. Provide new telemetering and supervisory control equipment in new SCADA cabinet with new UPS system. Renovate existing control building.	Const	-	7,500,000	-	-	7,500,000
<b>13. Waihee Line Booster Renovation</b>		Remove all eight (8) booster pumps including pumps, motors, piping, valves, concrete supports, gauges, and all electrical components. Install new free flow lines including piping, control valves, flow tubes, and appurtenant electrical equipment. Install new backfeed line connecting Waihee and Punaluu systems.	Const	-	4,000,000	-	-	4,000,000
<b>14. Punanani Wells System Improvements</b>		Replace HECO service equipment including switchboards, transformer, primary metering, wiring and associated components. Replace MCC including power distribution equipment, motor controllers, gauge boards, power cables, control wiring, and associated components. Replace interior and exterior lights, switches and associated wiring. Mechanical work for six (6) wells includes replacing above ground piping and appurtenant equipment, butterfly isolation valve, air release valve, and flow switch. Remove and replace existing diaphragm operated ball valve with new Hy-Check Valve. Replace station flow tube with new venturi. Replace compressor, chlorination system, and drain lines. Patch and paint building interior and exterior including all new installations and miscellaneous architectural work.	Const	-	4,000,000	-	-	4,000,000

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Project No.	Project Title	Description	Type	Operating Fund	Operating Fund - SRF Eligible	Special Expendable Fund	Reserve Release Fund	Total
15.	<b>Pearl City Wells II System Improvements</b>	Replace well pumps and install new check valves and power-check pump control valves for well nos. 1, 2, & 3. Replace chlorination system.	Const	-	3,200,000	-	-	3,200,000
16.	<b>Moanalua Wells: Replacement of Pump No. 1</b>	Replace Pumping Unit No. 1 and aboveground piping for all three pumping units. Replace motor control center (MCC) with new soft start MCC. Provide temporary service. Replace control wires, junction boxes, conduits, disconnect switch, and mounts. Provide new security and sound attenuating wall.	Const	-	1,262,700	-	737,300	2,000,000
17.	<b>Pump Renewal and Replacement</b>	Renewal and replacement of various BWS pumps and plant facilities.	Const	3,100,000	-	-	-	3,100,000
18.	<b>Makaha Shaft Renovation</b>	Complete replacement of all components for the Makaha Shaft Pump Station.	P&E	700,000	-	-	-	700,000
19.	<b>Kaamilo Booster and Kaamilo Wells Renovation</b>	Replace well pump No. 1 MCC and motor starter, and relocate MCC inside the existing building. Replace telecommunication/ instrumentation box and install disconnect switch at the well pump. Replace isolation valve at reservoir. Cap well No. 2. Eliminate drop ceiling in building and relocate lighting to concrete ceiling.	P&E	200,000	-	-	-	200,000
20.	<b>Kamiloiki Booster No. 1 MCC Replacement</b>	Replace MCC including all motor starters with soft starters.	P&E	175,000	-	-	-	175,000
21.	<b>Mariner's Ridge Booster No. 2 Renovation</b>	Replace MCC including all of the motor starters, install pressure switches outside of the new MCC, recoat pumps, and reroute the pressure transmitter wiring through a dedicated conduit. Eliminate drop ceiling in building and relocate lighting to concrete ceiling. Replace transformer.	P&E	200,000	-	-	-	200,000
22.	<b>Pump Renewal and Replacement</b>	Renewal and replacement of various BWS pumps and plant facilities.	P&E	100,000	-	-	-	100,000
<b>Pumps Total</b>				<b>4,475,000</b>	<b>19,962,700</b>	<b>-</b>	<b>737,300</b>	<b>25,175,000</b>

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Project No.	Project Title	Description	Type	Operating Fund	Operating Fund - SRF Eligible	Special Expendable Fund	Reserve Release Fund	Total
<b>B. Reservoirs</b>								
23.	<b>Wilhelmina Rise 811 Reservoir Replacement</b>	Replace existing 0.43 MG reservoir and appurtenances.	P&E	500,000	-	-	-	500,000
<b>Reservoirs Total</b>				<b>500,000</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>500,000</b>
<b>C. Pipelines</b>								
24.	<b>Manoa Estates Water System Improvements</b>	Install 12-inch mains and appurtenances along Kumu Street, from Kumulani Street to Oahu Avenue; along Oahu Avenue, from Kumu Street to Manoa Road; and along Pawaina Street, from Manoa Road to Pinao Street - approx. 3,700 lin. ft. Install 4-inch mains and appurtenance along Manoa Estates Road, from FH M06169 to the last service - approx. 450 lin. ft. Abandon approx. 700 lin. ft. of cross-country main.	Const	3,080,000	-	-	-	3,080,000
25.	<b>Moiliili Water System Improvements, Part IV</b>	Install 8-inch mains and appurtenances along University Avenue, from Kapiolani Boulevard to Hihiwai Street; along Hihiwai Street, from University Avenue to Kamoku Street; along Lauiki Street, from Hihiwai Street to Kamoku Street; and along Kamoku Street, from Hihiwai Street to Kapiolani Boulevard - approx. 4,030 lin. ft.	Const	-	3,500,000	-	-	3,500,000
26.	<b>Hui Ulili Street: 12-Inch and 8-Inch Mains</b>	Install 12-inch and 8-inch mains and appurtenances along Hui Ulili Street, from Hui Kelu Street to Hui Oi Street - approx. 2,750 lin. ft.	Const	1,700,000	-	-	-	1,700,000
27.	<b>Rehabilitation of Pipeline Tunnels: Moanalua and Quarry Tunnels</b>	Repair shotcrete lining, pipe supports, concrete wall, headwalls, and entry gates, replace existing lighting system, provide protective exterior coating for pipes, repair cracked pipe section at the Moanalua Tunnel, and replace chain link fence with expanded metal fencing at the South Portal of the Quarry Tunnel.	Const		7,500,000	-	-	7,500,000

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Project No.	Project Title	Description	Type	Operating Fund	Operating Fund - SRF Eligible	Special Expendable Fund	Reserve Release Fund	Total
28.	<b>Keolu Bridge Pipe Hanger Replacement</b>	Replace pipe hangers and appurtenances along Keolu Bridge.	Const	65,000	-	-	-	65,000
29.	<b>Water Main Installation &amp; Replacement</b>	Install and replace water mains at various locations.	Const	100,000	-	-	-	100,000
30.	<b>Puiwa Road 12-Inch and Dowsett Avenue 8-Inch Mains</b>	Install 12-inch mains and appurtenances along Puiwa Road, from 24 Puiwa Road to Puiwa Lane - approx. 500 lin. ft. Install 8-Inch mains and appurtenances along Dowsett Avenue, from fire hydrant M03678 to Alika Avenue - approx. 1,000 lin. ft. Install 4-inch and 2-1/2 inch mains and appurtenances along the lane near 3964 Old Pali Road, from Old Pali Road to end - approx. 510 lin. ft.	P&E	210,000	-	-	-	210,000
31.	<b>Halupa Street 12-Inch Main</b>	Install 12-inch mains and appurtenances along Halupa Street, from Molehu Drive to Punihi Street - approx. 1,200 lin. ft.	P&E	140,000	-	-	-	140,000
32.	<b>Kapolei Parkway 12-Inch Main</b>	Install 12-inch mains and appurtenances along Kapolei Parkway, from Park Row to Kolowaka Drive - approx. 1,100 lin. ft.	P&E	130,000	-	-	-	130,000
33.	<b>McArthur Street 8-inch Main</b>	Install 8-inch mains and appurtenances along McArthur Street, from Mill Street to Waianae Valley Road - approx. 1,450 lin. ft.	P&E	160,000	-	-	-	160,000
34.	<b>Kuhio Avenue and Kaiulani Avenue Water System Improvements</b>	Install 16-inch mains and appurtenance along Kuhio Avenue, from Kalakaua Avenue to Kapahulu Avenue - approx. 6,170 lin. ft. Install 12-inch mains and appurtenances along Kaiulani Avenue, from Ala Wai Boulevard to Kalakaua Avenue - approx. 1,450 lin. ft. Install 8-inch mains and appurtenances along Kuhio Avenue, from Walina Street to Kaiulani Avenue - approx. 485 lin. ft.	P&E	960,000	-	-	-	960,000

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Project No.	Project Title	Description	Type	Operating Fund	Operating Fund - SRF Eligible	Special Expendable Fund	Reserve Release Fund	Total
35.	<b>Sand Island Water System Improvements</b>	Install 16-inch mains and appurtenance along Sand Island Access Road, from Auiki Street to Sand Island Parkway; and along Sand Island Parkway, from Sand Island Access Road to fire hydrant M07897 - approx. 6,780 lin. ft. Install 12-inch mains and appurtenances along Hookela Street, from Makepono Street to end - approx. 1,200 lin. ft. Reconnect or relocate existing meters within the container yard - approx. 1,795 lin. ft.	P&E	930,000	-	-	-	930,000
36.	<b>Moanalua Road 8-Inch Main, Waimalu Neighborhood Park Vicinity</b>	Install 8-Inch mains and appurtenances along Moanalua Road, from fire hydrant L00646 to Kaahele Road - approx. 580 lin. ft.	P&E	100,000	-	-	-	100,000
37.	<b>Beretania Street 12-Inch Blow-off Main</b>	Install 12-inch blow-off main and appurtenances at the intersection of Beretania Street and Kalakaua Avenue - approx. 30 lin. ft.	P&E	80,000	-	-	-	80,000
38.	<b>Waiomao Homestead Road 8-Inch Main</b>	Install 8-Inch mains and appurtenances along Waiomao Homestead Road, from Waiomao Road to Palolo Chlorinator - approx. 700 lin. ft.	P&E	110,000	-	-	-	110,000
39.	<b>Ahilama Road 8-Inch Main</b>	Install 8-Inch mains and appurtenances along Ahilama Road, from Mapele Road to 47-550 Ahilama Road - approx. 1,200 lin. ft.	P&E	190,000	-	-	-	190,000
40.	<b>Service Lateral Replacement at Various Locations</b>	Topographic Survey for the service lateral replacement at various locations.	P&E	100,000	-	-	-	100,000
41.	<b>Ahuimanu Cross Country Main Abandonment and System Improvements</b>	Install improvements to facilitate the abandonment of the Ahuimanu 16-inch cross-country main, including interconnection of the Kamehameha Highway 30-inch main (Windward 272) with the 16-inch main (Windward 500) at Long Bridge.	P&E	100,000	-	-	-	100,000
42.	<b>Water Main Installation &amp; Replacement</b>	Install and replace water mains at various locations.	P&E	100,000	-	-	-	100,000
<b>Pipelines Total</b>				<b>8,255,000</b>	<b>11,000,000</b>	<b>-</b>	<b>-</b>	<b>19,255,000</b>

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Project No.	Project Title	Description	Type	Operating Fund	Operating Fund - SRF Eligible	Special Expendable Fund	Reserve Release Fund	Total
<b>D. Treatment</b>								
43.	<b>GAC Facility Improvements</b>	Install improvements at select GAC facilities to extend use of existing systems.	Const	500,000	-	-	-	500,000
44.	<b>Mililani Wells I GAC Renovation</b>	Install four (4) new GAC units and replace the existing twelve (12) GAC units.	P&E	600,000	-	-	-	600,000
45.	<b>GAC Facility Improvements</b>	Install improvements at select GAC facilities to extend use of existing systems.	P&E	100,000	-	-	-	100,000
<b>Treatment Total</b>				<b>1,200,000</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>1,200,000</b>

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Project No.	Project Title	Description	Type	Operating Fund	Operating Fund - SRF Eligible	Special Expendable Fund	Reserve Release Fund	Total
<b>E. Facilities</b>								
46.	<b>Emergency Generators at Kalihi Yard and Shaft, Halawa Shaft, and Kunia Wells I</b>	Install permanent emergency power generation facilities at Kalihi Yard and Shaft, Halawa Shaft, and Kunia Wells I.	Const	7,700,000	-	-	-	7,700,000
47.	<b>Data Center Renovation</b>	Assess, design and construct layout changes to the Data Center room to more effectively utilize the floor space following decommissioning and removal of the DEC VAX. Repositioning/relocation of equipment racks, power and data conduits/cables, Halon system changes, and movement of existing, and construction of new walls/doors are included.	Const	150,000	-	-	-	150,000
48.	<b>Security Fencing at Various Locations</b>	Install expanded metal fencing at selected BWS facilities.	Const	1,100,000	-	-	-	1,100,000
49.	<b>Security Improvements at Various Locations</b>	Security improvements for fencing, doors and windows, locks and gates, concrete footings and pads, structures to protect external equipment, and vegetation setbacks and control at various BWS locations This appropriation includes funding for project management services for this project.	Const	1,268,000	-	-	-	1,268,000
50.	<b>Waimalu Wells I Site Drainage Improvements</b>	Install drainage improvements to minimize run-off from the well site.	Const	2,200,000	-	-	-	2,200,000
51.	<b>Beretania Engineering Building Window Replacement</b>	Replace leaking windows at the Engineering Building.	Const	2,000,000	-	-	-	2,000,000
52.	<b>Facility Repair and Renovation</b>	Repair, renovation, reroofing, fencing and repainting of selected BWS facilities.	Const	6,000,000	-	-	-	6,000,000

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Project No.	Project Title	Description	Type	Operating Fund	Operating Fund - SRF Eligible	Special Expendable Fund	Reserve Release Fund	Total
53.	<b>Piliuka PRV Replacement</b>	Replace and relocate PRVs, along Waianae Valley Road near fire hydrant L06812, to above ground within new building. Restore power, communications and supervisory controls.	P&E	200,000	-	-	-	200,000
54.	<b>Facility Repair and Renovation</b>	Repair, renovation, reroofing, fencing and repainting of selected BWS facilities.	P&E	400,000	-	-	-	400,000
55.	<b>Professional Services for BWS Projects</b>	Obtain services of archaeologists, botanists, environmental engineers, water quality labs, planners, government agencies and others.	P&E	300,000	-	-	-	300,000
56.	<b>Monitoring Well Assessment and Repair</b>	Provide well condition assessment and associated repair services for monitor wells.	P&E	60,000	-	-	-	60,000
57.	<b>WiFi Network Deployment</b>	Assess, design and implement WiFi networks to ensure coverage throughout Beretania facility, Heeia, Kalihi, Manana, Wahiawa and Waianae baseyards, inclusive of any new cabling, conduits and/or equipment.	P&E	150,000	-	-	-	150,000
58.	<b>Mauna Olu 530 Reservoir Improvements</b>	Install staff gauge, water level transducer and data logger, telemetry equipment and controls, and appurtenant utilities.	P&E	50,000	-	-	-	50,000
59.	<b>Water Meter Transponders Replacement - Phase I</b>	Replace existing water meter transponders (MXU) by furnishing and installing approximately 80,000 MXUs. The P&E funding for this project provides funding for CM services for this project.	Const P&E	17,200,000 500,000	- -	- -	- -	17,200,000 500,000
<b>Facilities Total</b>				<b>39,278,000</b>	-	-	-	<b>39,278,000</b>
<b>Total Category II - Renewal and Replacement</b>				<b>53,708,000</b>	<b>30,962,700</b>	-	<b>737,300</b>	<b>85,408,000</b>

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Project No.	Project Title	Description	Type	Operating Fund	Operating Fund - SRF Eligible	Special Expendable Fund	Reserve Release Fund	Total
<b>III. Capacity Expansion</b>								
<b>A. Pumps</b>								
60. Kahuku Wells Unit No. 3		Install one (1) 1.0 MGD pump, connections, emergency generator and pump building improvements at existing Kahuku Wells Station (TMK: 5-6-008:005).	Const	-	-	2,000,000	-	2,000,000
61. Pacific Heights Booster No. 1		Land acquisition for new Pacific Heights Booster No.1 to eliminate cross-country water main between Jack Lane and the Pacific Heights 578 Reservoir.	Land	-	-	2,000,000	-	2,000,000
62. Ewa Shaft Tunnel Improvements		Install bulkhead and grout curtains and relocate pumps along the tunnel. This appropriation includes funding for project management services for this project.	P&E	-	-	3,000,000	-	3,000,000
<b>Pumps Total</b>				-	-	<b>7,000,000</b>	-	<b>7,000,000</b>
<b>B. Reservoirs</b>								
63. Nuuanu 822 Reservoir Replacement, Booster No. 2 Replacement, 940 Reservoir and Booster No. 4 Environmental Assessment		Prepare Environmental Assessment, CDUP and PIM for the replacement 0.2 MG Nuuanu 822 Reservoir, replacement Nuuanu Booster No. 2, new Nuuanu Booster No. 4, new 60,000 gallon Nuuanu 940 Reservoir, and new 12-inch mains and appurtenances - approx. 10,350 lin. ft.	P&E	-	-	350,000	-	350,000
<b>Reservoirs Total</b>				-	-	<b>350,000</b>	-	<b>350,000</b>

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Project No.	Project Title	Description	Type	Operating Fund	Operating Fund - SRF Eligible	Special Expendable Fund	Reserve Release Fund	Total
<b>C. Pipelines</b>								
64. Wahiawa Water System Improvements, Part IA		Install 12-Inch mains and appurtenances along California Avenue, from Maalo Street to end of existing 12-inch main near fire hydrant C-532; and from end of existing 12-inch main 100 feet east of Cypress Avenue to Anoni Street – approx. 2,900 lin. ft. Install 8-inch mains and appurtenances along California Avenue, from Anoni Street to Auhili Place; along Kamehameha Highway, from California Avenue to Avocado Street; along Kilani Avenue, from Lehua Avenue to Holuku Place; along Koele Avenue, from California Avenue to Olive Avenue; along Kukui Street, from Kilani Avenue to California Avenue; along Lei Awapuhi Place, from California Avenue to fire hydrant C-190; along Longley Place, from Kilani Avenue to fire hydrant C-186; along Nihiwai Place, from Kilani Avenue to end; along Ohai Place, from Ohai Street to fire hydrant C-202; along Ohai Street, from California Avenue to Kamehameha Highway; and along Olive Avenue, from Kamehameha Highway to Cypress Avenue – approx. 8,000 lin. ft. Install 4-Inch mains and appurtenances along Kaalalo Street, from California Avenue to end; along Lei Aloalo Place, from Lei Awapuhi Place to end; along Lei Awapuhi Place, from fire hydrant-	Const			11,000,000	-	11,000,000
65. Wahiawa Water System Improvements, Part III		Install 8-inch mains and appurtenances along Uluwehi Street, from California Avenue to Walea Street; along Uluwehi Place, from Walea Street to end; along Hoolulu Road, from Uluwehi Street to Hoomaha Street; along Walea Street, from Uluwehi Street to Walea Uka Place; along Hoomaha Street, from California Avenue to Walea Street; and along Walea Uka Place, from Walea Street to end - approx. 4,620 lin. ft. Install 2-inch mains and appurtenances along Hoolulu Road extension, from Hoomaha Street to end - approx. 140 lin. ft.	Const		-	2,900,000	-	2,900,000
<b>Pipelines Total</b>				-	-	13,900,000	-	13,900,000


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Project No.	Project Title	Description	Type	Operating Fund	Operating Fund - SRF Eligible	Special Expendable Fund	Reserve Release Fund	Total
<b>D. Treatment</b>								
				-	-	-	-	-
	<b>Treatment Total</b>			-	-	-	-	-
<b>E. Facilities</b>								
66.	<b>Security Camera Systems</b>	Install computer network-based security camera systems (camera, lights, speakers and motion detectors) at critical pump stations and reservoirs.	Const	585,000	-	-	-	585,000
	<b>Facilities Total</b>			585,000	-	-	-	585,000
	<b>Total Category III - Capacity Expansion</b>			585,000	-	21,250,000	-	21,835,000
	<b>Total Categories I - III</b>			59,818,000	30,962,700	21,250,000	737,300	112,768,000
	<b>Construction Cost Index Adjustment</b>			4,542,795	4,644,405	2,385,000	-	11,572,200
	<b>Contract Adjustment Account</b>			20,000,000	-	-	-	20,000,000
	<b>FY 2018 Capital Improvement Program Total</b>			84,360,795	35,607,105	23,635,000	737,300	144,340,200

MOTION TO  
ADJOURN


There being no further business, Chair Andaya at 3:31 PM called for a motion to adjourn the Special Meeting. Adam Wong so moved; seconded by Kapua Sproat and unanimously carried.

Respectfully submitted,



LISA K. KIM

APPROVED:



BRYAN P. ANDAYA  
Chair of the Board

MAY 22 2017

Date

THE MINUTES OF THE SPECIAL MEETING ON MAY 8, 2017 WERE APPROVED AT THE MAY 22, 2017 BOARD MEETING			
	AYE	NO	COMMENT
BRYAN P. ANDAYA	X		
ADAM C. WONG			ABSENT
DAVID C. HULIHEE	X		
KAPUA SPROAT	X		
KAY C. MATSUI			ABSENT
ROSS S. SASAMURA	X		
FORD N. FUCHIGAMI			ABSENT