



**BOARD OF WATER SUPPLY
COUNTY OF MAUI**

200 SOUTH HIGH STREET
WAILUKU, MAUI, HAWAII 96793-2155
TELEPHONE (808) 270-7816 • FAX (808) 270-7951 • www.mauiwater.org

April 26, 2017

Ms. Lynn A. S. Araki-Regan
Budget Director, County of Maui
200 S. High Street
Wailuku, Maui, Hawaii 96793

APPROVED FOR TRANSMITTAL

Mayor Date 4/28/17

Honorable Alan M. Arakawa
Mayor
County of Maui
200 S. High Street
Wailuku, HI 96793

For Transmittal to:

Honorable G. Riki Hokama
Chair
Budget and Finance Committee
Maui County Council
200 S. High Street
Wailuku, HI 96793

Dear Chair Hokama:

SUBJECT: FISCAL YEAR ("FY") 2018 BUDGET (BF-1)

The Board of Water Supply (the Board) met on April 20, 2017 to review and comment on the Director of Water Supply's Status Update of the Department's FY2018 Operating and Capital Improvements Budget. Pursuant to your request of March 13, 2017, please find attached:

1. A copy of the Board of Water Supply's April 20, 2017 agenda.
2. The summary minutes of the Board of Water Supply's April 20th meeting with board member comments and the hard copy of the power point presentation of Department of Water Supply's Status Update on the FY2018 Budget.

"By Water All Things Find Life"



RECEIVED
2017 APR 28 AM 9:33
OFFICE OF THE
COUNTY COUNCIL

3. A copy of the Department of Water Supply's budget that was included in the Mayor's proposed budget for Fiscal Year 2018.

The Board has reviewed and discussed this matter at our April 20, 2017 meeting and supports the Department of Water Supply's FY2018 Budget as submitted to the Maui County Council in March 2017.

We thank you for the opportunity to assist the Budget and Finance Committee with Maui County's Fiscal Year 2018 Budget.

Sincerely,

A handwritten signature in black ink, appearing to read 'Anders Lyons', written in a cursive style.

Anders Lyons
Chair

attachments

copy w/o attachments

Dave Taylor, Director, Department of Water Supply
Edward S. Kushi, First Deputy Corporation Counsel

BOARD OF WATER SUPPLY, COUNTY OF MAUI
REGULAR MEETING

BOARD MEMBERS: Anders Lyons, Chair
R. Raymond Cabebe
Norman Franco
Shay Chan Hodges
Sylvia Ho
Cyrus Kodani
Zoltan Milaskey
Michael Nakashima
Thomas Watanabe

DATE: April 20, 2017

TIME: 9:00 a.m.

PLACE: Planning Department Conference Room
First Floor, Kalana Pakui Building
250 South High Street
Wailuku, Hawaii 96793

RECEIVED
2017 APR 12 AM 8:09
OFFICE OF THE
COUNTY CLERK

A G E N D A

I. CALL TO ORDER

II. ANNOUNCEMENT

A. Welcome New Board Members, Norman Franco and Mark Nishikawa

III. APPROVAL OF MINUTES

A. Minutes of March 16, 2017

IV. TESTIMONY FROM THE PUBLIC

All testimony shall be relevant to the meeting agenda's specific items.

(Continue)

The Board shall receive testimony first from persons whose testimony forms are submitted prior to the convening of the meeting. Three (3) minutes will be granted for each testimony item. At the discretion of the Board Chair, an additional minute may be granted to conclude testimony. An additional three (3) minutes on each testimony presentation may be granted to those who are unable to conclude their testimony in the originally allotted time period, after all testifiers have been heard.

V. OTHER BUSINESS

- A. Presentation and discussion of the Department of Water Supply's FY2018 Operating and Capital Improvements Budget
- B. Discussion on MCC 14.05, Subdivision Water System Requirements

VI. DIVISION REPORTS

- A. March Division Operational Reports (copies available upon request)
 - 1. Plant Operations
 - a. Monthly Source Reports
 - b. Monthly Report – March 2017
 - 2. Water Treatment Plants
 - a. Water Treatment Facilities Production Log
 - b. Water Treatment Monthly Report
 - 3. Water Resources and Planning
 - a. Groundwater Use – Maui for March 2017
 - b. Groundwater Use – Molokai for March 2017

VII. ELECTION OF CHAIR AND VICE CHAIR

- A. Nominations and Election of Board of Water Supply Chair
- B. Nominations and Election of Board of Water Supply Vice Chair

VIII. ADJOURN

Agenda items are subject to cancellation. For a confirmation of the meeting date and time, and for tentative scheduling of agenda items, please contact the Board of Water Supply secretary at 270-7304.

(Continue)

Board of Water Supply
Agenda – Regular Meeting
April 20, 2017

Oral or written testimony on any agenda item will be accepted. Written testimony must be submitted by delivering a legible copy to the Board of Water Supply secretary, 200 South High Street, Fifth Floor, Wailuku, Hawaii 96793-2155; or faxing to 808-270-7951, 24 hours prior to the meeting so copies can be provided to the Board members. If written testimony is submitted at the meeting, please provide 15 copies prior to the close of oral testimony.

Individuals who intend to attend the meeting who have special needs or require special accommodations that will assist in his or her successful participation in the meeting (e.g., large print, taped materials, sign-language interpreter, accessible parking, etc.), should call the Board of Water Supply secretary at least three working days prior to the meeting date.

Documents on file with the Board and which may include correspondence relating to the agenda items above, may be inspected prior to the meeting date. Photocopies may be ordered, subject to charges imposed by law (Maui County Code, Sec 2-64-010). Please contact the Board of Water Supply secretary to make arrangements for inspection or photocopying of documents.

Pursuant to HRS §92-5(a)(4), an executive session may be called in order for the board to consult with their attorney on questions and issues pertaining to the board's powers, duties, privileges, immunities, and liabilities.

BOARD OF WATER SUPPLY
COUNTY OF MAUI

REGULAR MEETING
MINUTES OF APRIL 20, 2017

The regular meeting of the Maui County Board of Water Supply was held at the Department of Planning Conference Room, 250 South High Street, Wailuku, Maui, on Thursday, April 20, 2017.

CALL TO ORDER

The meeting was called to order by Chair Lyons at 9:03 a.m.

ATTENDANCE

Members present: Anders Lyons, Chair
R. Raymond Cabebe
Shay Chan Hodges
Norman Franco
Michael Nakashima
Zoltan Milaskey
Thomas Watanabe

Staff present: David Taylor, Director
Gladys C. Baisa, Deputy Director
Helene Kau, Assistant Fiscal Officer
Edward Kushi, Jr., First Deputy Corporation Counsel
Gaye Hayashida, Commission Support Clerk

ANNOUNCEMENT

Welcome New Board Members, Norman Franco and Michael Nakashima

Chair Lyons welcomed the two new board members, Norman Franco and Michael Nakashima, to the Board of Water Supply. He asked that they go around and each person introduce themselves.

Michael Nakashima - has been working for a Maui contractor for the last 40 years. Though he is an engineer he is not licensed.

Ray Cabebe - lives in Kihei, works for Chris Hart & Partners and has been on this board for 3 years.

Anders Lyons - currently the chair of the BWS and has a consulting company that does project management.

Dave Taylor - Director of the Department of Water Supply.

Gladys Baisa - Deputy Director of the Department of Water Supply

Shay Chan Hodges - has been on this board of a year now. She writes grants for non-profits and works with startups in renewable energy.

Zoltan Milaskey - lives on the Westside, works in solar sustainability and has been on the board since late last year.

Norman Franco - is in real estate appraisal and in insurance. He has just left the Board of Ethics.

APPROVAL OF MINUTES

Minutes of March 16, 2017

Chair Lyons asked for a motion to approve the minutes of March 16, 2017.

Motion: Member Cabebe moved to approve the minutes of March 16, 2017

Second: Member Milaskey

Discussion: None

Vote: Unanimous. Motion carried. The minutes of March 16, 2017 were approved as submitted

TESTIMONY FROM THE PUBLIC

There was no public testimony.

OTHER BUSINESS

Presentation and discussion of the Department of Water Supply's FY2018 Operating and Capital Improvements Budget

Director Taylor gave a power point presentation on the Status Update of the Department's FY2018 Operating and Capital Improvements Budget. This presentation is identical to the presentation he gave to the County Council Budget and Finance Committee a month ago. A copy of the presentation is attached and made a part of these minutes.

Member Nakashima asked why have the total operating expenses gone down?

Director Taylor explained that a couple of years ago the Council established the Upcountry fund by taking money from the electrical budget. It was a one-time deal that didn't happen the next year.

The director continued by saying that the department raises rates to cover the increasing debt for construction costs that have already been successfully completed. The fact that they raise rates means that they have already completed the projects.

The main goal of the department is to provide safe drinking water to all the 36,000 water accounts. The second priority is reducing regular source outages for the customers.

Some big projects include control upgrades, a new well in West Maui, Upcountry booster pump upgrade. It is a mixture of replacements and new projects.

Member Chan Hodges asked how does Honolulu's current rates compare to Maui's current rates?

The director answered that it is a little higher but it's generally in the same ballpark.

In summary, Director Taylor stated that there have been a lot of accomplishments, and there will be future challenges. The department knows how to solve these problems but it is money that is the biggest obstacle.

At this time the regular meeting was recessed at 9:35 a.m. and reconvened at 9:38 a.m.

Member Chan Hodges asked if other water utilities have other ways to meet their needs without raising rates?

Director Taylor stated not really. All Water utilities are structured the same way and almost every water utility is self-funded. The people who are being served pay by either a monthly fee or through impact fees.

Member Franco asked what other areas can the department save money on?

The director answered that the department tries to save money all the time by replacing equipment with low energy equipment and doing preventative maintenance. He believes that in order to save money that have to spend money on preventative maintenance.

Member Cabebe asked why is there a \$13 million increase in operating expenses on slide 28?

Ms. Kau stated that she is not sure though it may be just a typo but she will get back to the board on this matter.

Chair Lyons proposed a response saying that the board reviewed the budget and he has asked the director to convey it to the mayor.

Mr. Kushi advised that it should be submitted directly to the Budget and Finance chair because it is past that point already.

Director Taylor suggested using the verbiage "the board supports the budget that the department submitted to the Council.

Motion: Member Cabebe moved to support the department's budget as submitted to the county council in March.

Second: Member Chan Hodges

Discussion: Member Milaskey asked if there is a slide from the presentation that shows what the propose rate increase is for Maui.

Director Taylor replied there is a rate schedule in the other packet (handout) the members have before them.

Vote: Unanimous. Motion carried.

ELECTION OF CHAIR AND VICE CHAIR

Nominations and Election of Board of Water Supply Chair

Motion: Member Cabebe nominated Anders Lyons for board chair.

Second: Member Chan Hodges

Discussion: Chair Lyons held off the voting so that the board members could vote for the chair and vice chair at the same time.

Nominations and Election of Board of Water Supply Vice Chair

Motion: Member Franco nominated Ray Cabebe for board vice chair.

Second: Member Chan Hodges

Discussion: Since there were no further nominations for chair and vice chair the nominations were closed.

Vote: Unanimous vote for Anders Lyons as chair and Ray Cabebe as vice chair. Both motions carried.

DIVISION REPORTS

March Division Operational Reports

The director had nothing further to report other than to say it has been an extraordinarily dry spring so a Stage 1 water shortage has been called for the Upcountry area. Even though it rained last week it was much less than normal for this time of the year. It is too early in the season to have it so dry for Upcountry. The department is monitoring the situation.

OTHER BUSINESS (continued)

Discussion on MCC 14.05, Subdivision Water System Requirements

This matter was deferred to the May meeting.

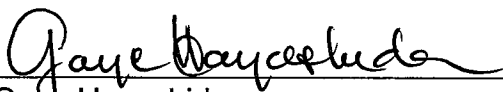
Receipt of Board Member request for agenda items to be place on future agendas

1. Switch to paperless for board members on some documents

ADJOURNMENT


There being no further business the meeting adjourned at 9:50 a.m.

Prepared by:



Gaye Hayashida
Commission Support Clerk

Approved for distribution:




David Taylor
Director

Department of Water Supply
County of Maui

Status Update

April 20, 2018
Board of Water Supply

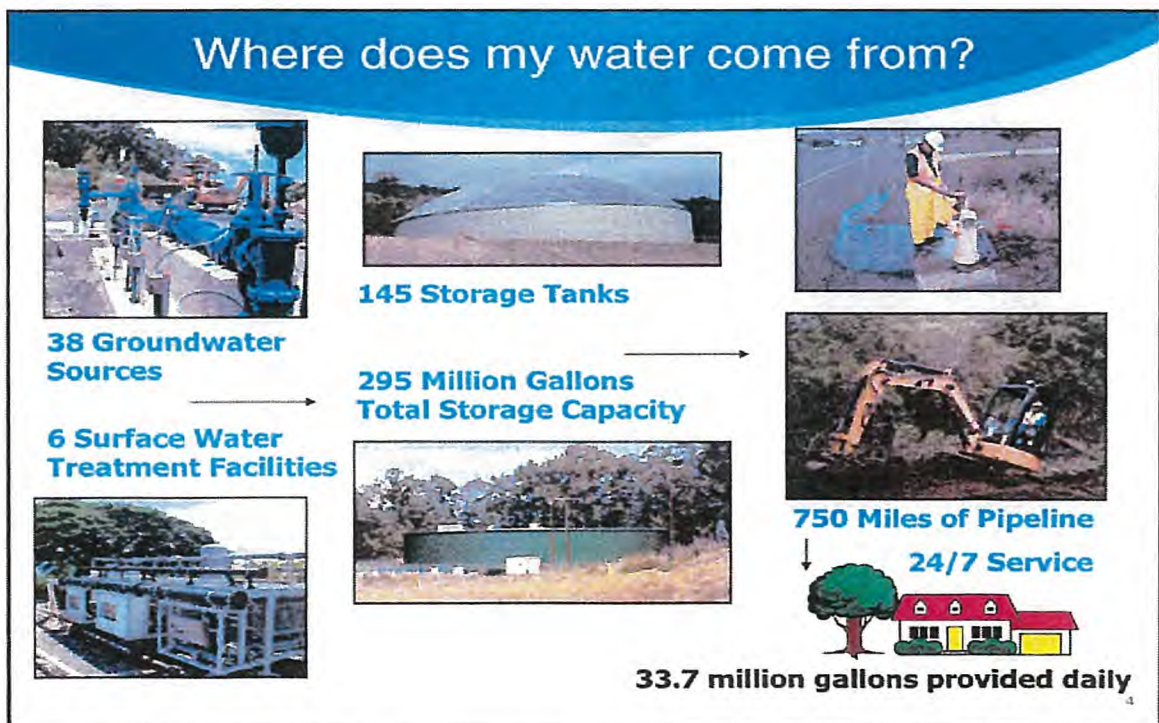
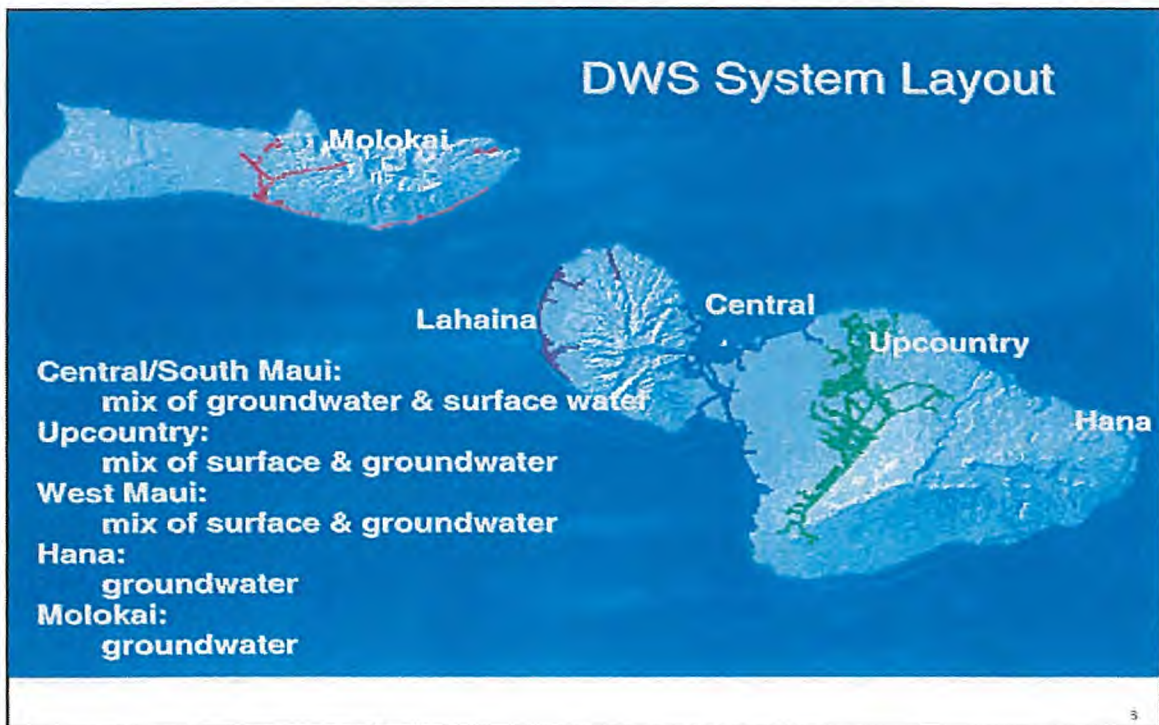
By Water All Things Find Life 

1

Agenda

- ◆ DWS System Overview
- ◆ Accomplishments
- ◆ DWS Fiscal Analysis
- ◆ Consequences of Failure
- ◆ Proposed Fiscal Year 2018 Budget

2



Accomplishments

Objectives	Indicators	Accomplishments
<ul style="list-style-type: none">• High quality water• Efficient resource use	<ul style="list-style-type: none">• High productivity• Regulatory compliance• Fiscal responsibility• Customer satisfaction	<ul style="list-style-type: none">★ More CIP (x2)★ Customer billings (x2)★ System evaluations★ Treatment plant maintenance (in-house)★ Leak Detection Program★ First water audit★ Comprehensive audits

5

DWS Operations “95%” Audited

- ★ **High Standards**
- ★ **No Major Findings**
- ✓ DOH Sanitary Surveys
- ✓ Lab audits - DOH, NELAP
- ✓ SRF – Operational
- ✓ SRF – Financial
- ✓ Financial audit
- ✓ DLNR Dam inspection

6

CIPs 2012-2017

Completed and Nearly Completed CIPs

- | | |
|---|--|
| <ul style="list-style-type: none"> • Hamakuapoko Well # 2 – 0.15 MG Tank • Ulupalakua Water Tank Replacement (NC) • Kamaole 0.5 Million Gallon Storage Tank Replacement • Wailuku Hts Booster Pump Replacements (Waiale & Kuikahi Sites) (NC) • Wailuku Well #1 Development • Maui Meadows #18 Booster Pump Improvements(NC) • Upcountry Phase 6 Booster Pump Improvements (3-site: Kula Kai, Middle Kimo Rd. & Upper Kimo Rd.) • Waiuku Well 'C' Potable Water Source (Hana) • Holokai Waterline Replacement (Haiku) (NC) • Back-up Emergency Generators for Well Sites (3 wells) • Piihola WTP Carbon Reduction – Granulated Activated Charcoal (GAC) Installation | <ul style="list-style-type: none"> • Pro-active • Increasing and improving source development and reliability • Efficient approach and execution • Striving to meet future challenges • Preventative Maintenance • Improving Water Quality |
|---|--|

7

CIPs 2012-2017

Complex Projects

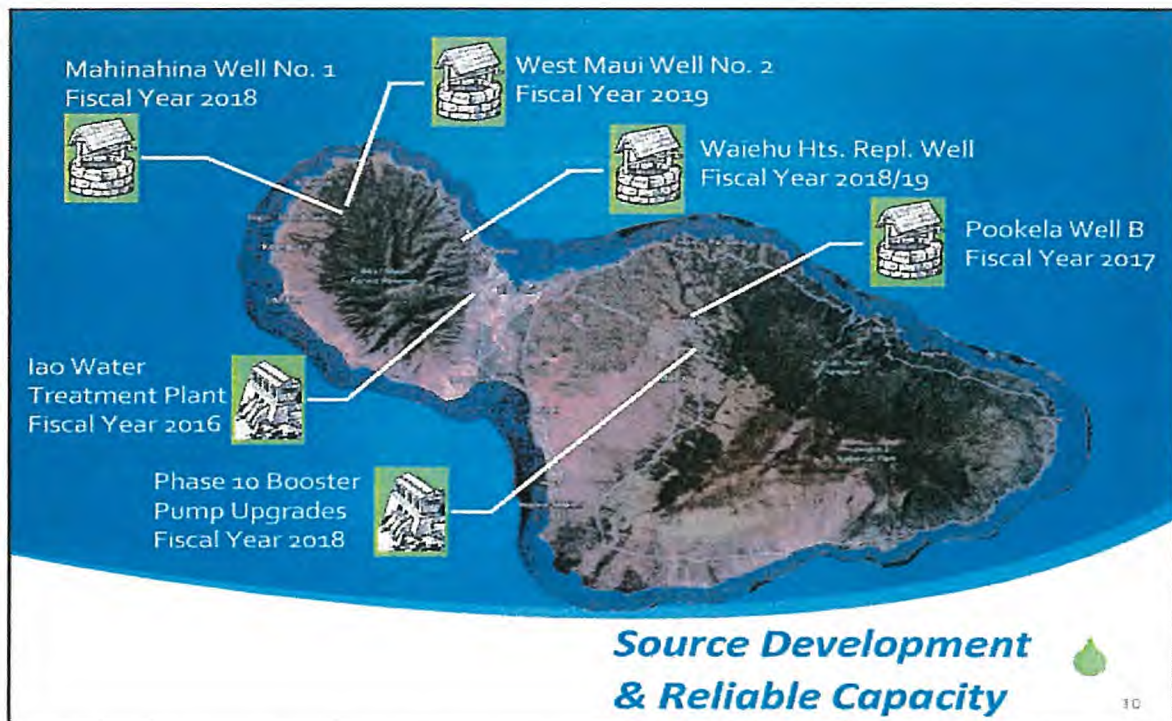
- | | |
|--|--|
| <ul style="list-style-type: none"> • Wells • Booster Pumps • Water Tanks • Water lines | <p>Tasks:</p> <ul style="list-style-type: none"> • Water Source & Reliability – well development, on-site generators for critical well sources • Maintenance and Upgrades making more Reliable – booster pump replacements, WTP Upgrades • Water Storage and Fire Protection – water tank and water line replacements & up-sizing |
|--|--|

8

CIPs 2012-2017

Completed and Nearly Completed CIPs	Funded	Status
• Hamakuapoko Well # 2 – 0.15 MG Tank	FY13	In Service Mar FY15
• Ulupalakua Water Tank Replacement (NC)	FY15	ETC Jun FY17
• Kamaole 0.5 Million Gallon Storage Tank Replacement	FY12	In Service Sept FY16
• Wailuku Hts Booster Pump Replacements (Waiale & Kuikahi Sites) (NC)	FY13	Kuikahi - In Service FY16 Waiale - ETC Jul FY17
• Wailuku Well #1 Development	FY12	In Service Jun FY16
• Maui Meadows #18 Booster Pump Improvements(NC)	FY13	ETC Jun FY17
• Upcountry Phase 6 Booster Pump Improvements (3-site: Kula Kai, Middle Kimo Rd. & Upper Kimo Rd.)	FY12	ETC Apr FY17
• Waiuku Well 'C' Potable Water Source (Hana)	FY13	In Service Dec FY16
• Holokai Waterline Replacement (Haiku) (NC)	FY16	In Service Mar FY17
• Back-up Emergency Generators for Well Sites (3 wells)	FY15	ETC April FY17
• Piihilo WTP Carbon Reduction -- Granulated Activated Charcoal (GAC) Installation	FY13	In Service Apr FY15

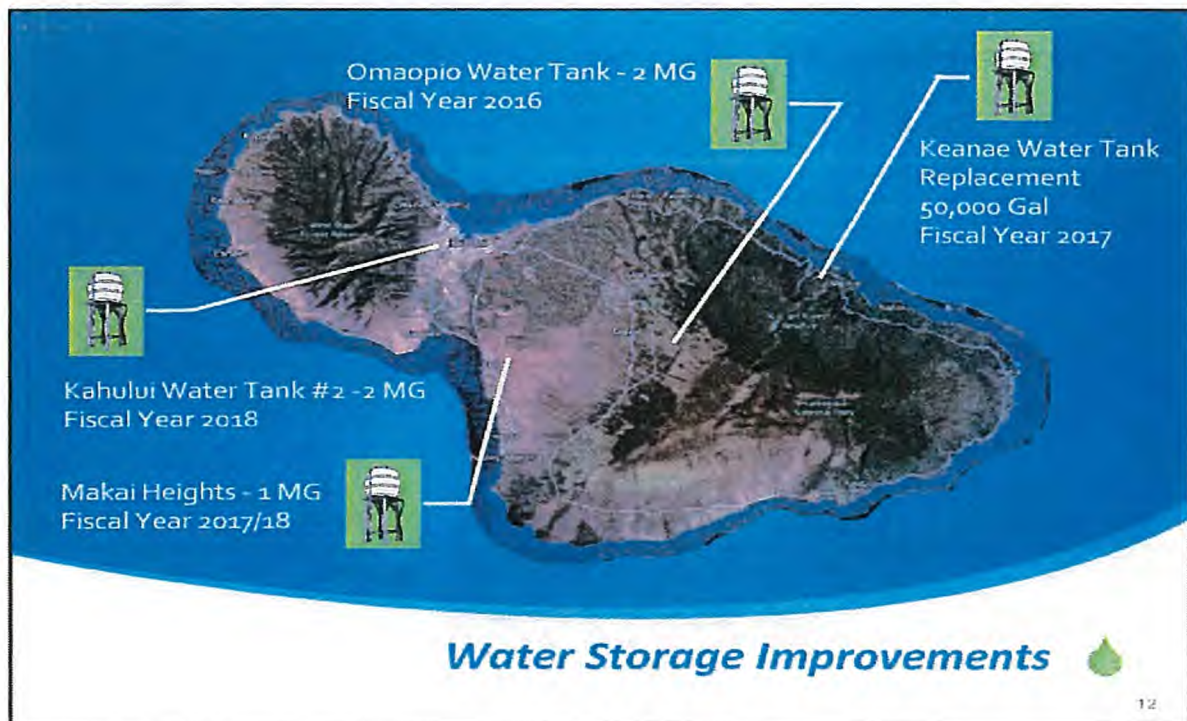
9



10

CIPs 2012-2017		
Source Development and Reliability	MGD	Estimated Increase MGD
West Maui		
•Mahinahina Well # 1	.75	1.75
•West Maui Well # 2	1.0	
Central Maui		
•Waiehu Hts Replacement Well	.50	1.5
•Iao WTP Increase Production from 1.7 to 3.2 MGD	1.5	
Upcountry Maui		
•Pookela Well "B" – Backup for Well "A"	1.3	0
•Phase 10 Booster Pump Station Upgrades (Improve Pump Station Reliability)		

11



CIPs 2012-2017

Water Storage Improvements	MGD	Status
•Omaopio Water Tank	2	ETC Mar FY18
•Keanae Water Tank	.05	Est. Build Sept FY17
•Kahului Water Tank #2	2	Est. Build Late FY17
•Makai Height Water Tank	2	In Contract for Design Est. Build Aug FY18

13

Kamaole Tank Replacement 0.5 MG

Fiscal Year 2012

Budget \$2.4 Million



Steel tank at end of service
life +80yrs

New tank is "glass-lined" steel
and in service Sept 2016

14

West Maui Well #2, Exploratory

Fiscal Year 2011

Budget \$1.36 Million



Exploratory well drilling completed with water quality and capacity testing ongoing

Design Phase FY17;
Build Phase FY19

Estimated Capacity
1MGD

15

Upcountry Phase 6 Pump Stations Upgrades

Fiscal Year 2012

Budget \$5.9 Million

HARRY FIELDS



KULA KAI



NAGAMATSU



Part of Upcountry Reliability

Replacing old booster pumps with newer efficient pumps and motors and advanced Motor Control Centers will increase the reliability of our Phase 6 BP Stations

ETC+In Service Apr FY17

16

Maui Meadows 18 Booster Pump Replacement

Fiscal Years 2013

Budget \$1.35 Million



Part of Central District

Replacing old booster pumps with newer efficient pumps and motors and advanced Motor Control Centers will increase the reliability of our Maui Meadows BP Stations

ETC+In Service Jun FY17

17

Haliimaile Tank Replacement

Fiscal Year 2013

Budget \$1.3 Million



A lot of our existing water tanks are becoming decrepit and nearing the end of their service life. Some tanks are also undersized due to growth in the area that the tank serves – DWS continues to schedule replacing these water tanks

ETC+In Service Jun FY16

18

Ulupalakua 100,000 gal Tank Replacement

Fiscal Year 2015

Budget \$1.3 Million



Another one of our existing water tanks that is past its service life. This existing tank is also undersized due to growth in the area the tank serves – DWS continues to schedule replacing these water tanks

ETC+In Service May FY17

19

Wakiu Well "C" Water Source Development - Hana

Fiscal Year 2014

Budget \$1.9 Million



Wakiu Well 'C' was constructed to replace Well "A" which was abandoned. It provides a back-up source for Well "B"

Thus, providing a "well" needed reliable backup water source for the Hana residents

Put into service – December 2016 – Final completion March 2017

Source capacity – 250-300,000 GPD

20

Iao Water Treatment Plant Upgrades

Fiscal Year 2016

Budget \$20.7 Million



Currently in construction

Excavation Work started in February 2017

Completion scheduled for October 2018

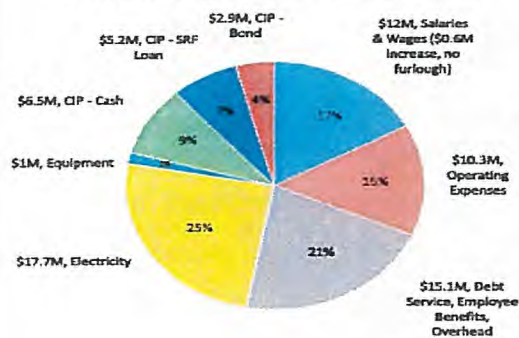
New WTP will increase in production from 1.7 MGD to 3.2 MGD

Thus, increasing our source and the Central District Reliability

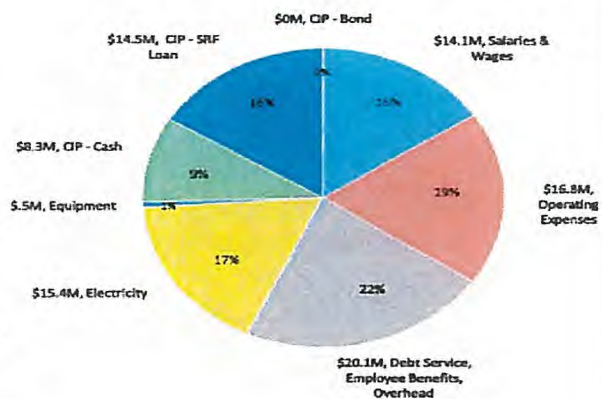
21

DWS Fiscal Year 2010 and 2017 Comparison

DWS Fiscal Year 2010 Budget (Total \$70.7M)

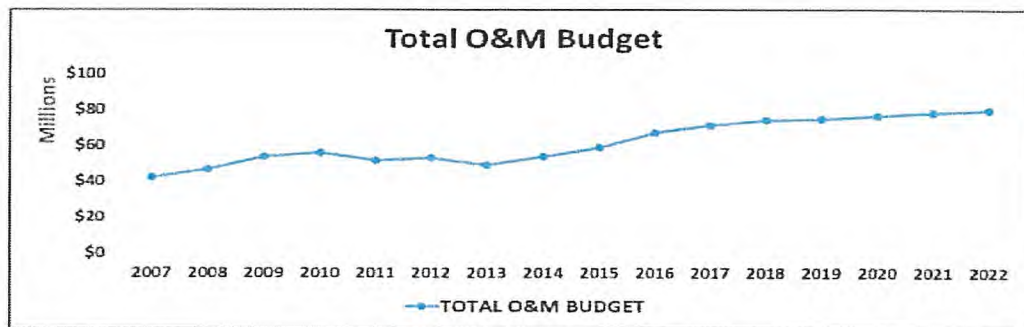


DWS Fiscal Year 2017 Budget (Total \$93.3M)



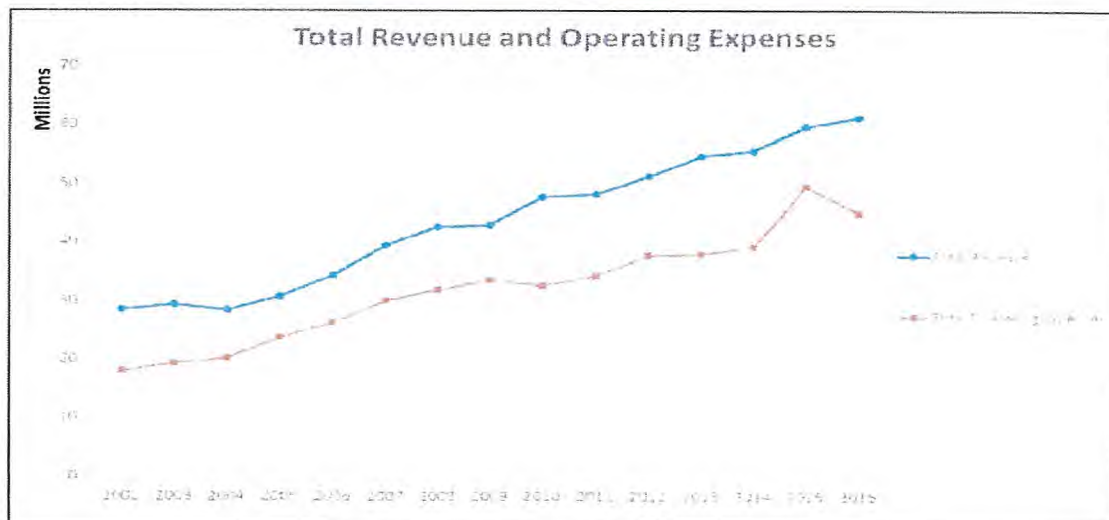
22

Total O&M Budget 2007-2022 Forecast



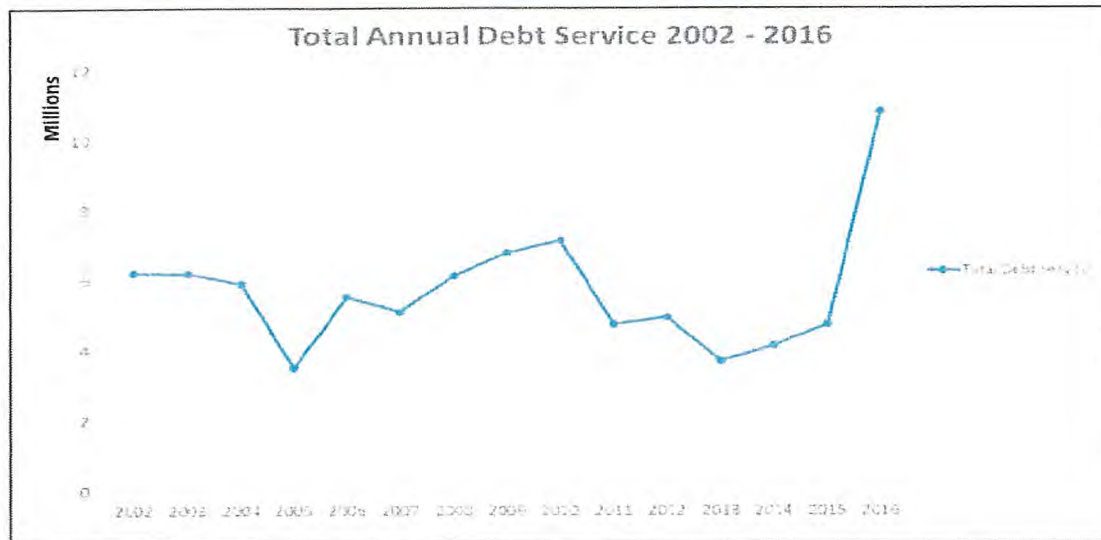
23

2002-2016 Total Revenue and Operating Expenses

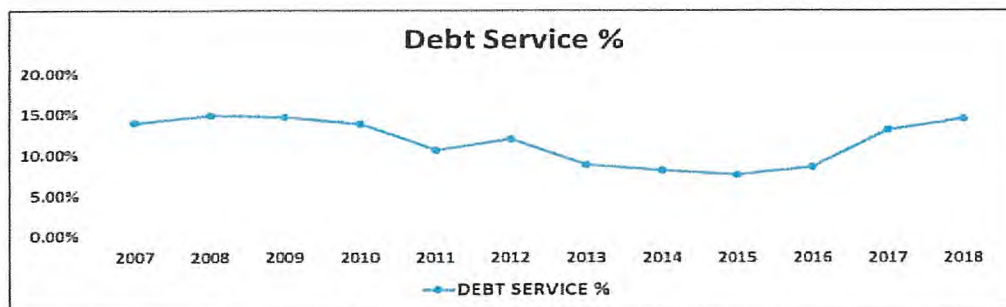


24

2002-2016 Total Debt Service



2002-2018 Debt Service %



Consequences of Failure

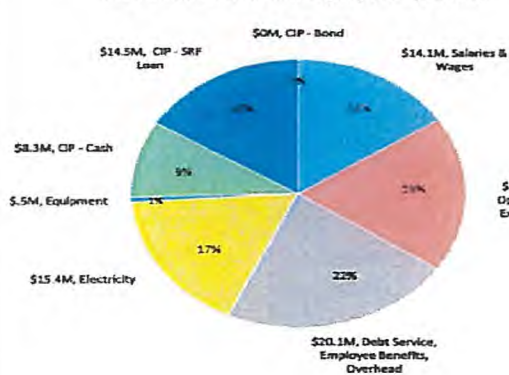
- Bad water (Flint, Michigan)
- Regular source outages (source)
- More frequent service interruptions
- Poor road repairs
- No new services



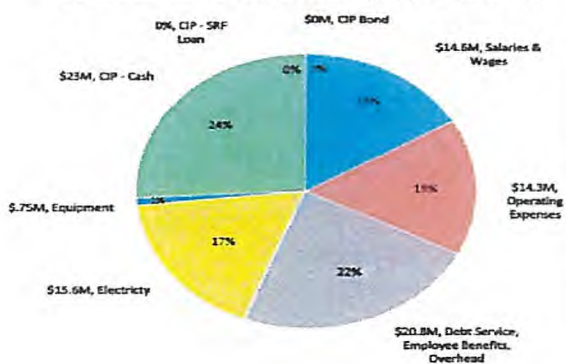
27

Fiscal Year 2017 vs Proposed 2018 Budget

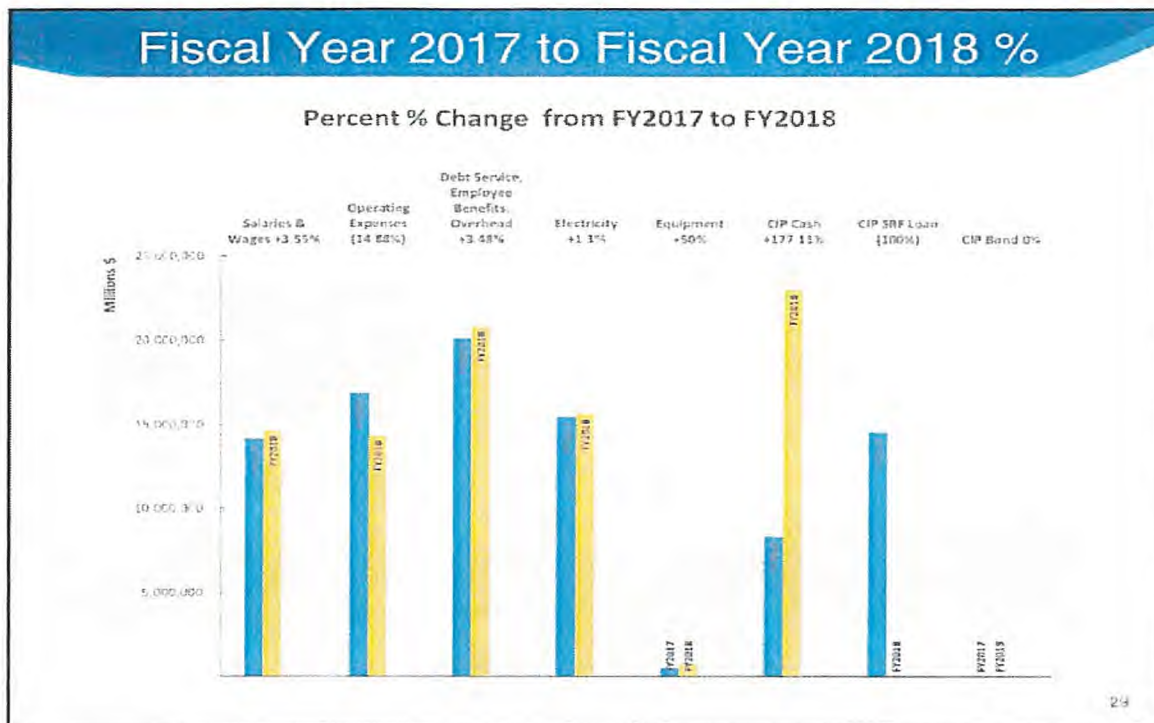
DWS Fiscal Year 2017 Budget (Total \$93.3M)



DWS Fiscal Year 2018 Proposed Budget (Total \$89.05M)



28



Proposed FY2018 Budget

Fiscal Year 2018

- Mahinahina WTP Controls Upgrade – \$1.5 Million
- Multiple Motor Control Center Replacements – \$2.0 Million
- Mahinahina Well #1 Development - \$10 Million
- Upcountry – Phase 10 Booster Pump Upgrades (3 Sites) \$8.0 Million
- Various Replacement & Safety Upgrades

30

Island Water Rate Comparison

Honolulu BWS

- Rate increase of 70% reflecting a 9.65% annual increase from 2012 to 2015



Kauai DOW

- Raised 5/8 meter fee 300% from \$4,600 to \$14,115



31

Summary

- ★ Accomplishments
- ★ Challenges
- ★ Opportunity

32



Department of Water Supply
County of Maui

Status Update

April 20, 2018
Board of Water Supply

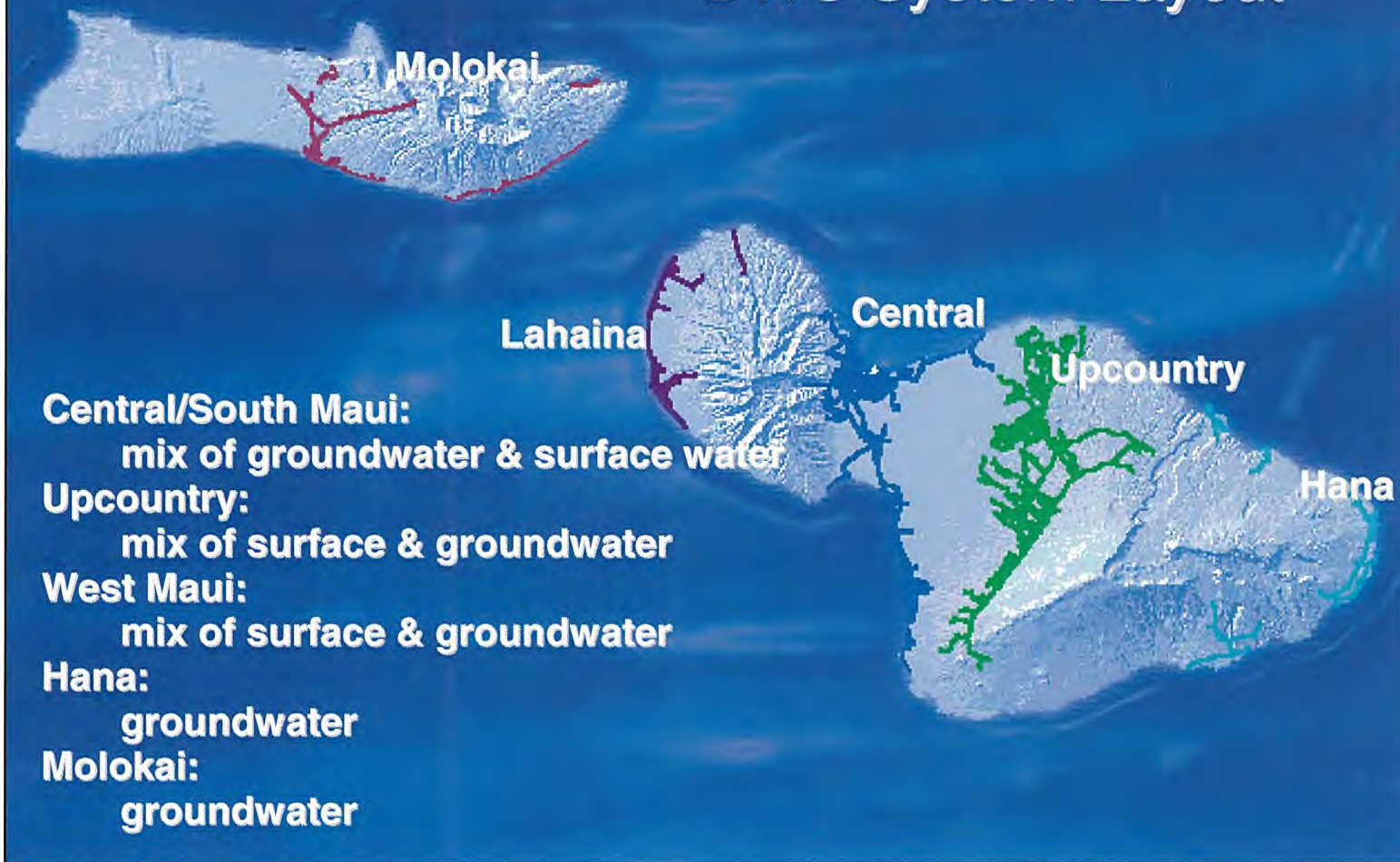
By Water All Things Find Life



Agenda

- ◆ **DWS System Overview**
- ◆ **Accomplishments**
- ◆ **DWS Fiscal Analysis**
- ◆ **Consequences of Failure**
- ◆ **Proposed Fiscal Year 2018 Budget**

DWS System Layout



Where does my water come from?



38 Groundwater Sources

6 Surface Water Treatment Facilities



145 Storage Tanks

**295 Million Gallons
Total Storage Capacity**



750 Miles of Pipeline

24/7 Service



33.7 million gallons provided daily

Accomplishments

Objectives	Indicators	Accomplishments
<ul style="list-style-type: none">• High quality water• Efficient resource use	<ul style="list-style-type: none">• High productivity• Regulatory compliance• Fiscal responsibility• Customer satisfaction	<ul style="list-style-type: none">★ More CIP (x2)★ Customer billings (x2)★ System evaluations★ Treatment plant maintenance (in-house)★ Leak Detection Program★ First water audit★ Comprehensive audits

DWS Operations “95%” Audited

★ High Standards

★ No Major Findings

- ✓ DOH Sanitary Surveys
- ✓ Lab audits - DOH, NELAP
- ✓ SRF – Operational
- ✓ SRF – Financial
- ✓ Financial audit
- ✓ DLNR Dam inspection

CIPs 2012-2017

Completed and Nearly Completed CIPs

- Hamakuapoko Well # 2 – 0.15 MG Tank
- Ulupalakua Water Tank Replacement (NC)
- Kamaole 0.5 Million Gallon Storage Tank Replacement
- Wailuku Hts Booster Pump Replacements (Waiale & Kuikahi Sites) (NC)
- Wailuku Well #1 Development
- Maui Meadows #18 Booster Pump Improvements(NC)
- Upcountry Phase 6 Booster Pump Improvements (3-site: Kula Kai, Middle Kimo Rd. & Upper Kimo Rd.)
- Wakiu Well 'C' Potable Water Source (Hana)
- Holokai Waterline Replacement (Haiku) (NC)
- Back-up Emergency Generators for Well Sites (3 wells)
- Piiholo WTP Carbon Reduction – Granulated Activated Charcoal (GAC) Installation

★ **Pro-active**

★ **Increasing and improving source development and reliability**

★ **Efficient approach and execution**

★ **Striving to meet future challenges**

★ **Preventative Maintenance**

★ **Improving Water Quality**

CIPs 2012-2017

Complex Projects

★ Wells

★ Booster Pumps

★ Water Tanks

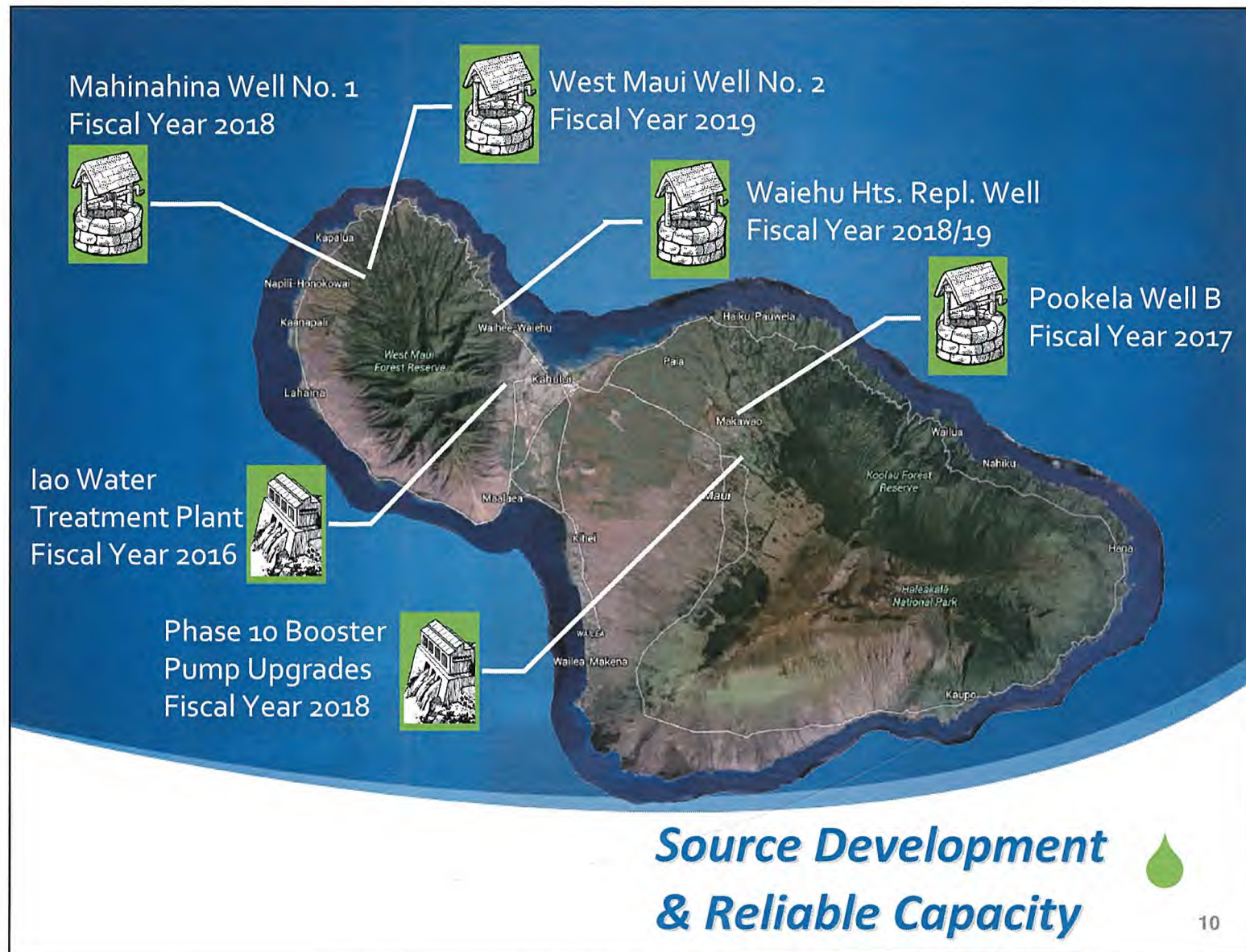
★ Water lines

Tasks:

- **Water Source & Reliability** – well development, on-site generators for critical well sources
- **Maintenance and Upgrades making more Reliable** – booster pump replacements, WTP Upgrades
- **Water Storage and Fire Protection** – water tank and water line replacements & up-sizing

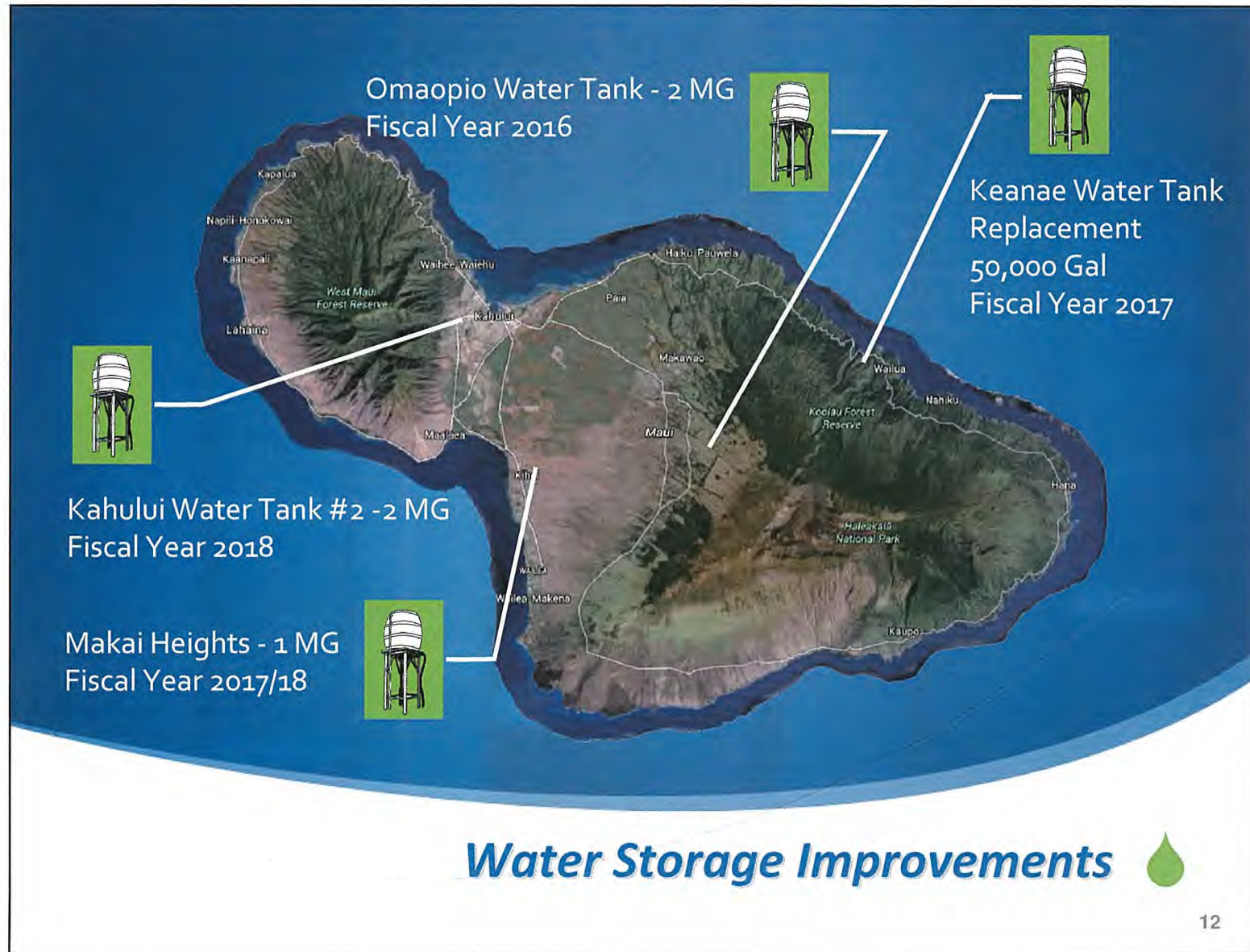
CIPs 2012-2017

Completed and Nearly Completed CIPs	Funded	Status
• Hamakuapoko Well # 2 – 0.15 MG Tank	FY13	In Service Mar FY15
• Ulupalakua Water Tank Replacement (NC)	FY15	ETC Jun FY17
• Kamaole 0.5 Million Gallon Storage Tank Replacement	FY12	In Service Sept FY16
• Wailuku Hts Booster Pump Replacements (Waiale & Kuikahi Sites) (NC)	FY13	Kuikahi - In Service FY16
• Wailuku Well #1 Development	FY12	Waiale - ETC Jul FY17
• Maui Meadows #18 Booster Pump Improvements(NC)	FY13	In Service Jun FY16
• Upcountry Phase 6 Booster Pump Improvements (3-site: Kula Kai, Middle Kimo Rd. & Upper Kimo Rd.)	FY12	ETC Jun FY17
• Wakiu Well 'C' Potable Water Source (Hana)	FY13	ETC Apr FY17
• Holokai Waterline Replacement (Haiku) (NC)	FY16	In Service Dec FY16
• Back-up Emergency Generators for Well Sites (3 wells)	FY15	In Service Mar FY17
• Piihola WTP Carbon Reduction – Granulated Activated Charcoal (GAC) Installation	FY13	ETC April FY17
		In Service Apr FY15



CIPs 2012-2017

Source Development and Reliability	MGD	Estimated Increase MGD
West Maui		
•Mahinahina Well # 1	.75	1.75
•West Maui Well # 2	1.0	
Central Maui		
•Waiehu Hts Replacement Well	.50	1.5
•Iao WTP Increase Production from 1.7 to 3.2 MGD	1.5	
Upcountry Maui		
•Pookela Well "B" – Backup for Well "A"	1.3	0
•Phase 10 Booster Pump Station Upgrades (Improve Pump Station Reliability)		



CIPs 2012-2017

Water Storage Improvements	MGD	Status
•Omaopio Water Tank	2	ETC Mar FY18
•Keanae Water Tank	.05	Est. Build Sept FY17
•Kahului Water Tank #2	2	Est. Build Late FY17
•Makai Height Water Tank	2	In Contract for Design Est. Build Aug FY18

Kamaole Tank Replacement 0.5 MG

Fiscal Year 2012

Budget \$2.4 Million



**Steel tank at end of service
life +80yrs**

**New tank is "glass-lined"
steel and in service Sept 2016**

West Maui Well #2, Exploratory

Fiscal Year 2011

Budget \$1.36 Million



**Exploratory well drilling
completed with water
quality and capacity
testing ongoing**

**Design Phase FY17;
Build Phase FY19**

**Estimated Capacity
1MGD**

Upcountry Phase 6 Pump Stations Upgrades

Fiscal Year 2012

Budget \$5.9 Million

HARRY FIELDS



KULA KAI



NAGAMATSU

Part of Upcountry Reliability

Replacing old booster pumps with newer efficient pumps and motors and advanced Motor Control Centers will increase the reliability of our Phase 6 BP Stations

ETC+In Service Apr FY17

Maui Meadows 18 Booster Pump Replacement

Fiscal Years 2013

Budget \$1.35 Million



Part of Central District

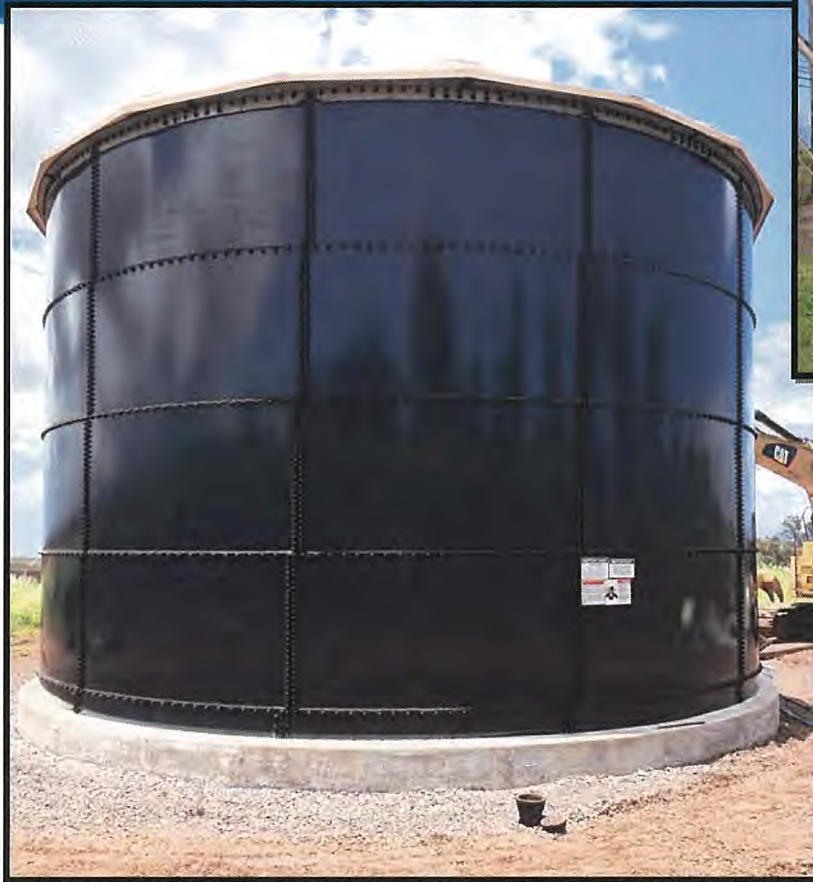
Replacing old booster pumps with newer efficient pumps and motors and advanced Motor Control Centers will increase the reliability of our Maui Meadows BP Stations

ETC+In Service Jun FY17

Haliimaile Tank Replacement

Fiscal Year 2013

Budget \$1.3 Million



A lot of our existing water tanks are becoming decrepit and nearing the end of their service life. Some tanks are also undersized due to growth in the area that the tank serves – DWS continues to schedule replacing these water tanks

ETC+In Service Jun FY16

Ulupalakua 100,000 gal Tank Replacement

Fiscal Year 2015

Budget \$1.3 Million



Another one of our existing water tanks that is past its service life. This existing tank is also undersized due to growth in the area the tank serves – DWS continues to schedule replacing these water tanks

ETC+In Service May FY17

Wakiu Well “C” Water Source Development - Hana

Fiscal Year 2014

Budget \$1.9 Million



Wakiu Well ‘C’ was constructed to replace Well “A” which was abandoned. It provides a back-up source for Well “B”

Thus, providing a “well” needed reliable backup water source for the Hana residents

Put into service – December 2016 – Final completion March 2017

Source capacity – 250-300,000 GPD

Iao Water Treatment Plant Upgrades

Fiscal Year 2016

Budget \$20.7 Million



Currently in construction

Excavation Work started in February 2017

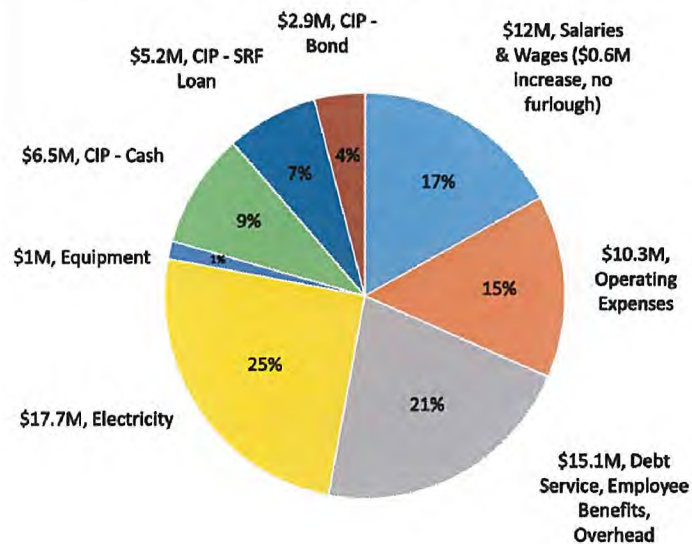
Completion scheduled for October 2018

New WTP will increase in production from 1.7 MGD to 3.2 MGD

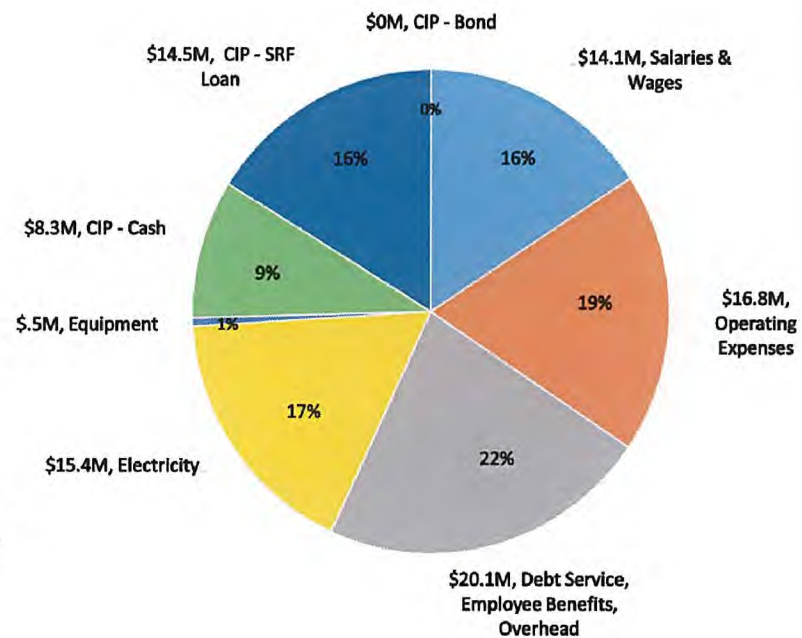
Thus, increasing our source and the Central District Reliability

DWS Fiscal Year 2010 and 2017 Comparison

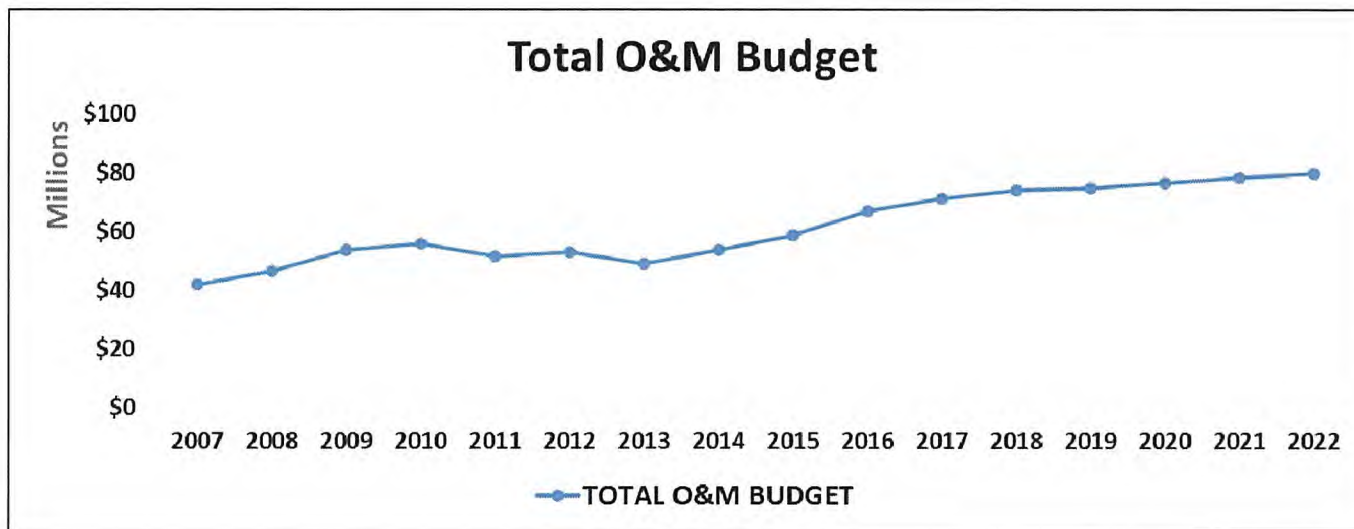
DWS Fiscal Year 2010 Budget (Total \$70.7M)



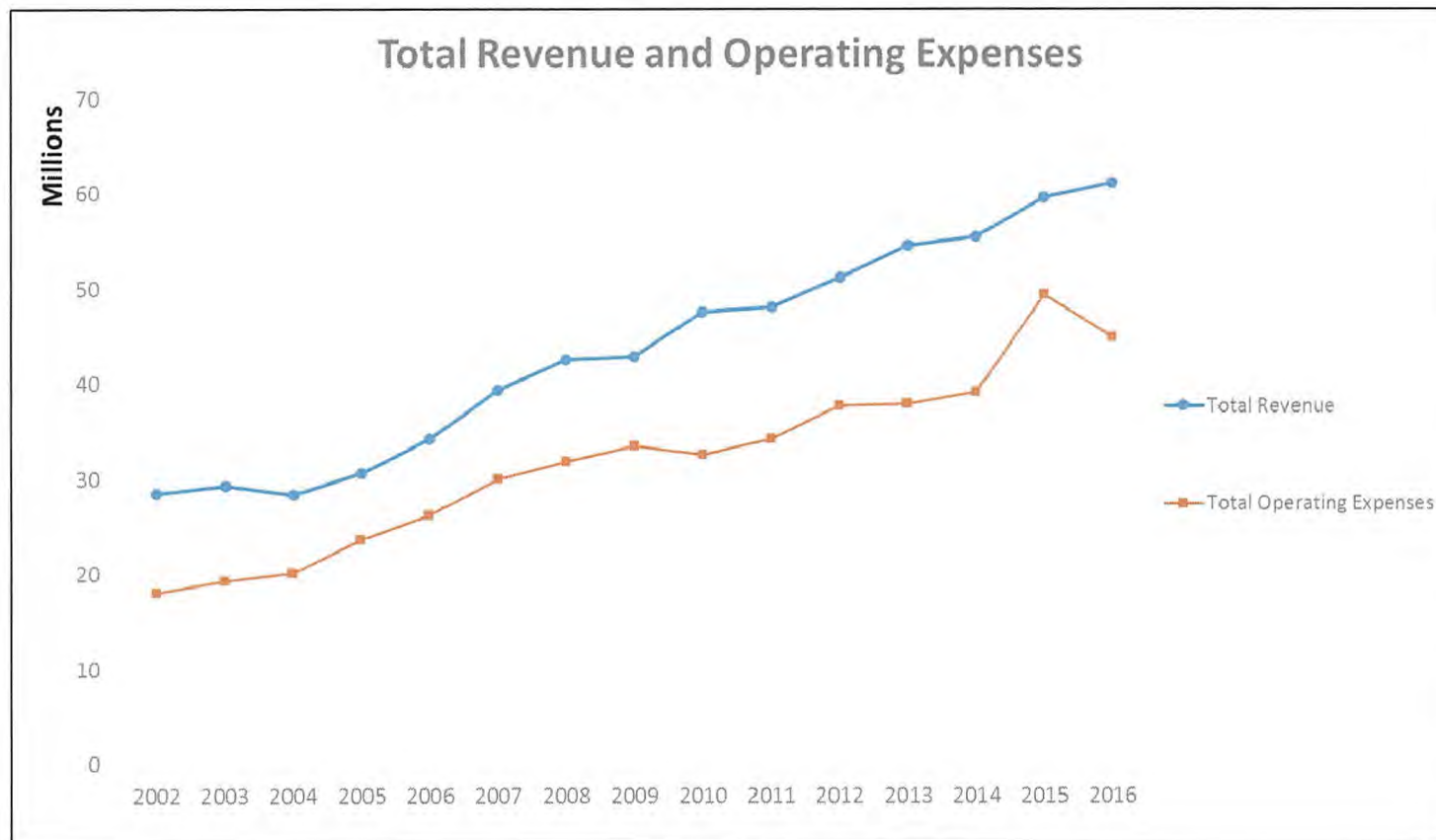
DWS Fiscal Year 2017 Budget (Total \$93.3M)



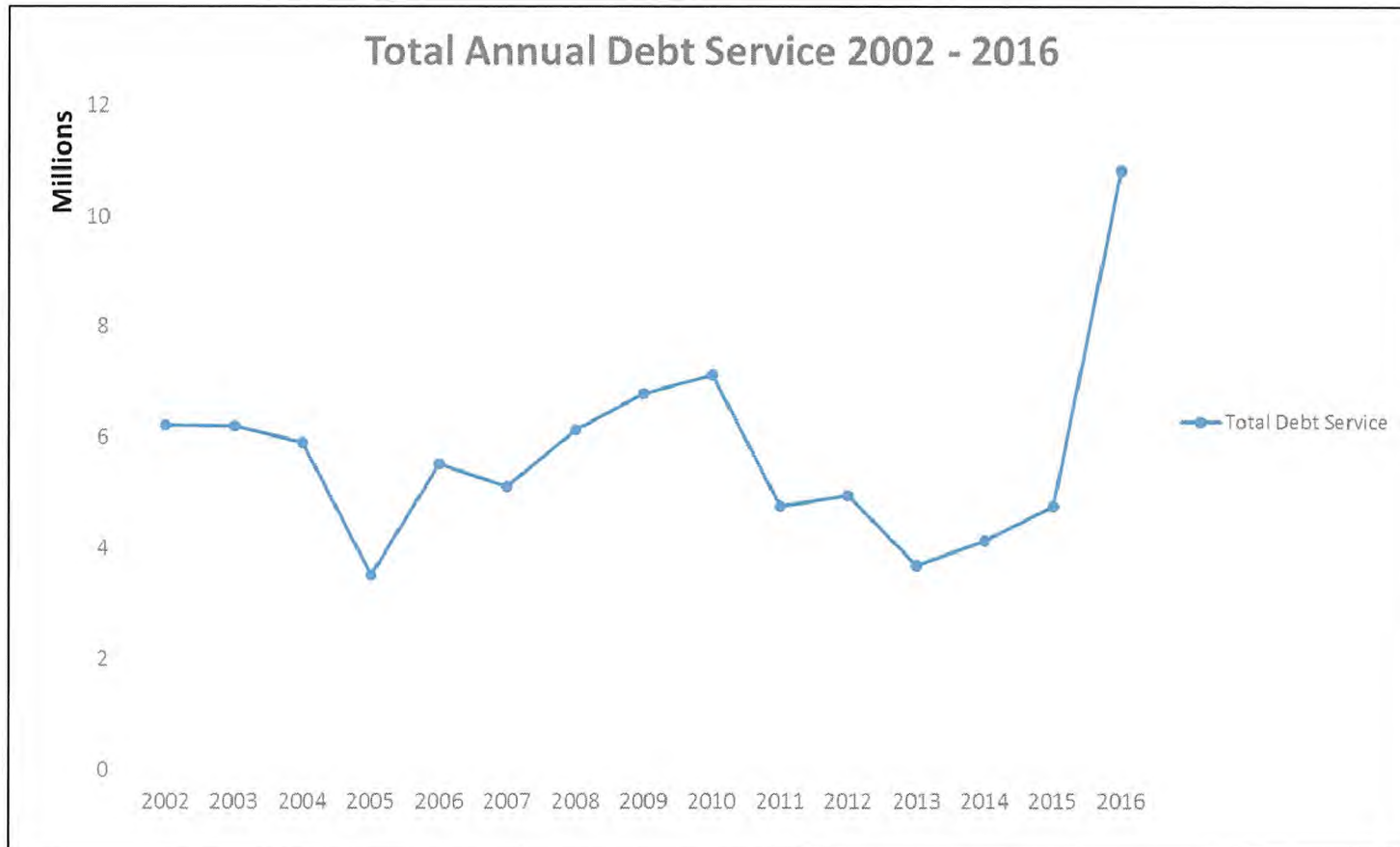
Total O&M Budget 2007-2022 Forecast



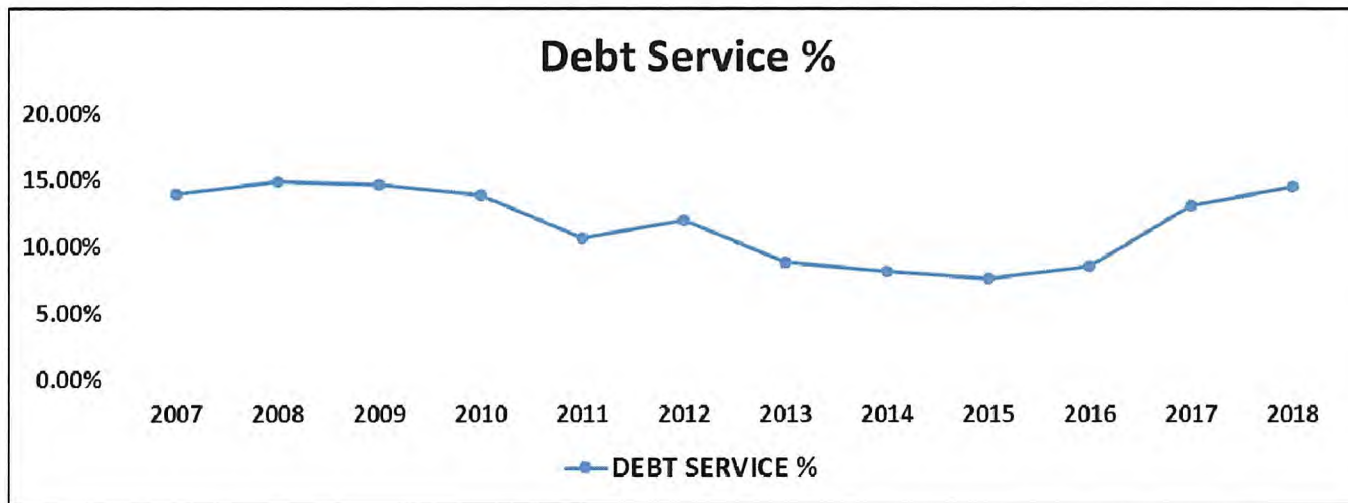
2002-2016 Total Revenue and Operating Expenses



2002-2016 Total Debt Service



2002-2018 Debt Service %



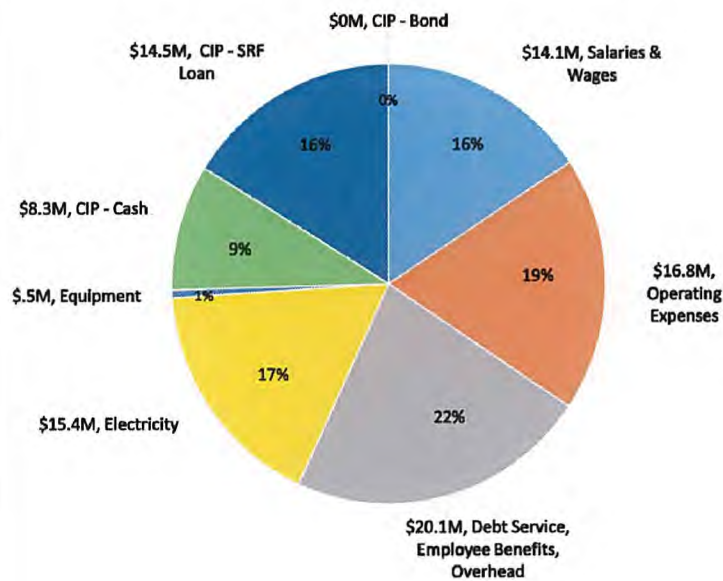
Consequences of Failure

- Bad water (Flint, Michigan)
- Regular source outages (source)
- More frequent service interruptions
- Poor road repairs
- No new services

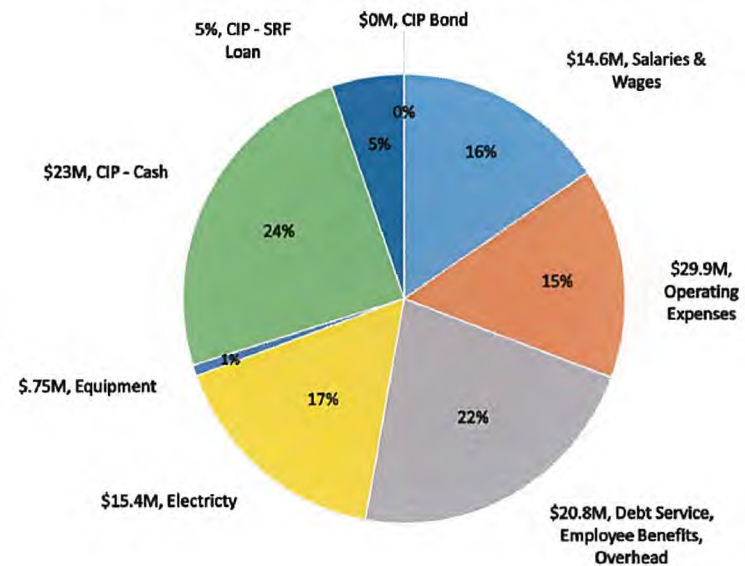


Fiscal Year 2017 vs Proposed 2018 Budget

DWS Fiscal Year 2017 Budget (Total \$93.3M)

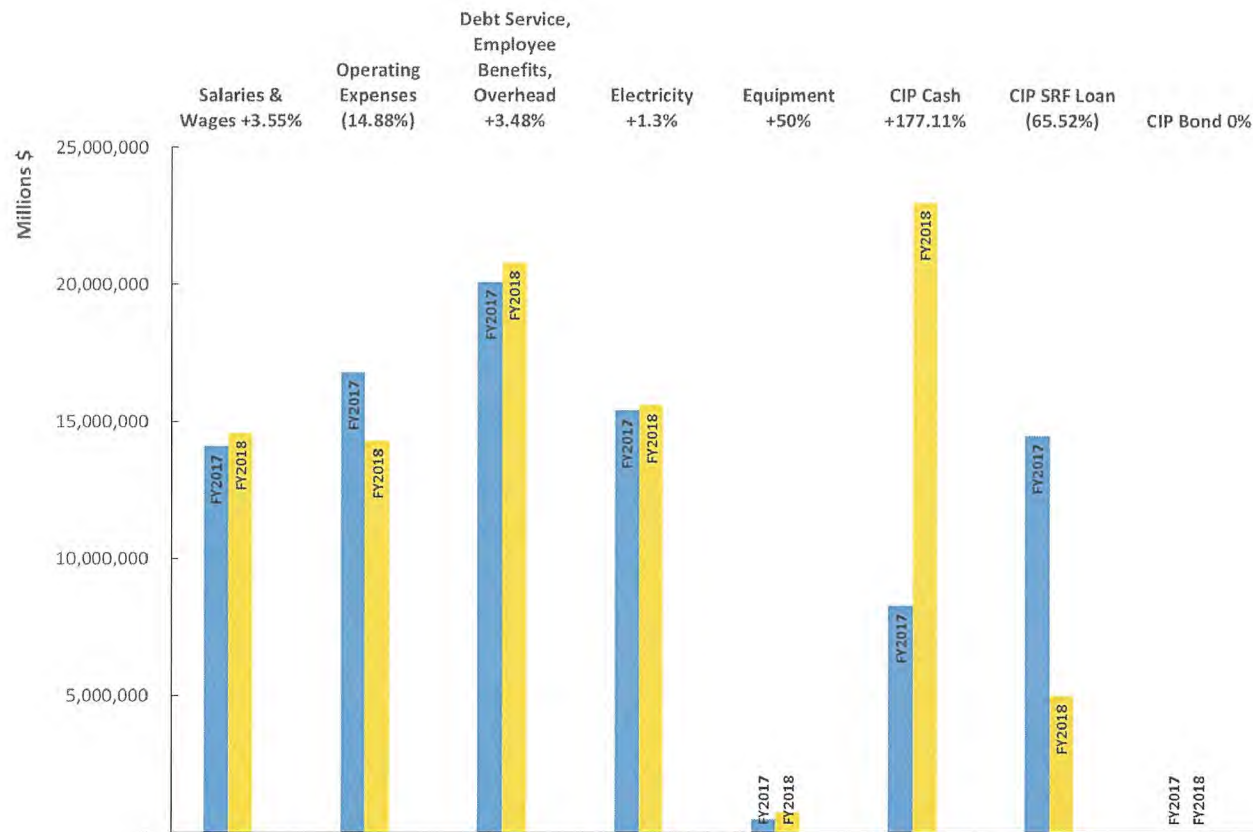


DWS Fiscal Year 2018 Proposed Budget (Total \$94.05M)



Fiscal Year 2017 to Fiscal Year 2018 % Change

Percent % Change from FY2017 to FY2018



Proposed FY2018 Budget

Fiscal Year 2018

- Mahinahina WTP Controls Upgrade – \$1.5 Million
- Multiple Motor Control Center Replacements – \$2.0 Million
- Mahinahina Well #1 Development - \$10 Million
- Upcountry – Phase 10 Booster Pump Upgrades (3 Sites)
\$8.0 Million
- Various Replacement & Safety Upgrades

Island Water Rate Comparison

Honolulu BWS

- Rate increase of 70% reflecting a 9.65% annual increase from 2012 to 2015



Kauai DOW

- Raised 5/8 meter fee 300% from \$4,600 to \$14,115



Summary

★ **Accomplishments**

★ **Challenges**

★ **Opportunity**

Thank you for listening!

County of Maui Department of Water Supply

* * *

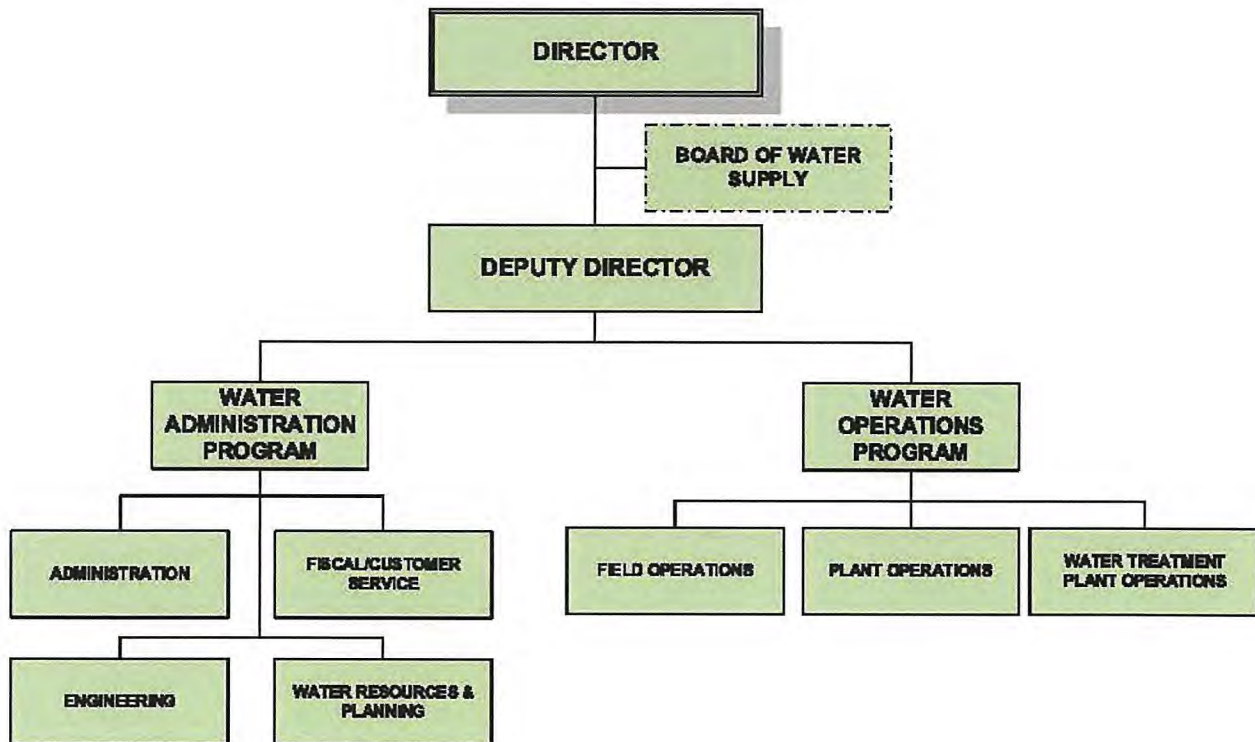
WATER SUPPLY





DEPARTMENT OF WATER SUPPLY

Summary





MISSION

The Department of Water Supply (DWS) is responsible for efficiently providing clean and safe drinking water to customers on the islands of Maui and Molokai.

DEPARTMENT DASHBOARD			
KEY DATA	FY 2016	FY 2017	FY 2018 GOAL
1. Number of system outages or water restrictions due to facility shutdown or deficient water quality	1	0	0
2. Average days for a single family residential permit review	21	21	21
3. Dollars funded for watershed protection	\$1,975,500	\$2,100,000	\$2,142,000

STRATEGIES

The Department of Water Supply's strategies are as follows:

- » Develop new and reliable sources, both independently and through public-private partnerships
- » Produce high quality water at the lowest possible cost
- » Prepare compliance strategy to meet or exceed current and future water quality regulations
- » Reliability of existing facilities 99.9997% over the long term at the lowest possible cost

The Department of Water Supply Supports the Following Countywide Outcomes:



Strong and Diversified Economy



Healthy and Sustainable Community



Augment Public Infrastructure



Responsive, Effective and Effective Government



Prepared, Safe and Livable County

OPERATIONS

DWS is under the authority of the Mayor. The Board of Water Supply acts as an advisor to the Director, the Mayor, and the County Council in all matters concerning the county's water system. Nine of the eleven Board members are appointed by the Mayor and approved by the County Council; the other two ex-officio non-voting members are the Director of Planning and the Director of Public Works.

DWS is subject to the rules and regulations of the U.S. Environmental Protection Agency's Safe Drinking Water Act, which is enforced by the Hawaii State Department of Health Safe Drinking Water Branch. Each year, the DWS Laboratory tests thousands of water samples to ensure that the water provided is of the best possible quality. The Water Treatment Facility operators also take thousands of samples each year to ensure high-quality water from the surface water treatment plants.

DWS faces the multi-faceted challenge of satisfying its customers, following local government rules and complying with federal and state water quality rules and requirements.



EXTERNAL FACTORS

Designation of the Iao Aquifer in July 2003 by the Hawaii State Commission on Water Resource Management (CWRM) has raised concerns about the adequacy of supply for the Central Maui water system.

The U.S. Environmental Protection Agency's Safe Water Drinking Act rules become stricter every year. We are significantly impacted by Ground Water Rules, Surface Water Treatment Rules, Disinfection Byproduct Rules and the Unregulated Contaminant Monitoring Regulation.

In March 2008, the CWRM designated Na Wai Eha (Waihee, Waiehu, Iao and Waikapu Streams) for surface water management. The decision may impact the department's future use of surface water. Future use of this water may also be affected by the June 2010 CWRM decision to amend the interim stream flow standards for Na Wai Eha.

The September 2008 and May 2010 decisions by the CWRM to amend the interim stream flow standards for 27 East Maui streams may also impact the department's future use of surface water.





BUDGET AND STAFF RESOURCES

CHARACTER/ OBJECT DESCRIPTION	2015 ACTUAL	2016 ACTUAL	2017 AS AMENDED*	2018 PROPOSED	CHANGE AMOUNT	CHANGE PERCENT
Salaries and Wages						
OTHER PREMIUM PAY	\$1,368,970	\$1,158,255	\$1,408,894	\$1,808,182	\$399,288	28.3%
WAGES & SALARIES	\$9,288,971	\$9,475,393	\$12,654,770	\$12,806,796	\$152,026	1.2%
Salaries and Wages Total	\$10,657,942	\$10,633,648	\$14,063,664	\$14,614,978	\$551,314	3.9%
Operations						
MATERIALS & SUPPLIES	\$5,630,824	\$5,266,311	\$6,790,793	\$6,962,317	\$171,524	2.5%
SERVICES	\$4,190,992	\$3,232,683	\$5,876,865	\$4,888,865	-\$988,000	-16.8%
UTILITIES	\$13,518,851	\$10,975,675	\$16,576,152	\$16,504,818	-\$71,334	-0.4%
TRAVEL	\$65,580	\$48,045	\$124,730	\$128,930	\$4,200	3.4%
OTHER COSTS	\$2,639,026	\$1,234,749	\$2,403,471	\$2,377,871	-\$25,600	-1.1%
INTEREST EXPENSE	-\$108,342	-\$64,488	\$0	\$0	\$0	N/A
INTERFUND COST RE- CLASSIFICATION	\$10,082,477	\$11,133,379	\$11,896,246	\$12,692,180	\$795,934	6.7%
OPERATING EXPENSE	\$2,530,362	\$4,176,352	\$1,210,084	\$1,121,088	-\$88,996	-7.4%
Operations Total	\$38,549,771	\$36,002,705	\$44,878,341	\$44,676,069	-\$202,272	-0.5%
Debt Service						
INTEREST EXPENSE	\$1,866,746	\$1,522,183	\$1,627,750	\$1,606,870	-\$20,880	-1.3%
DEBT SERVICE	\$3,811,997	\$3,160,134	\$4,422,077	\$4,393,130	-\$28,947	-0.7%
Debt Service Total	\$5,478,744	\$4,682,317	\$6,049,827	\$6,000,000	-\$49,827	-0.8%
Transfers Out						
PROPRIETARY FUNDS	\$0	\$5,000,000	\$1,440,718	\$0	-\$1,440,718	-100.0%
Transfers Out Total	\$0	\$5,000,000	\$1,440,718	\$0	-\$1,440,718	-100.0%
Equipment						
MACHINERY & EQUIPMENT	\$705,228	\$763,557	\$438,800	\$732,362	\$293,562	66.9%
LEASE PURCHASES	\$0	\$4,830	\$15,153	\$15,153	\$0	N/A
Equipment Total	\$705,228	\$768,387	\$453,953	\$747,515	\$293,562	64.7%
Department Total	\$55,391,684	\$57,087,057	\$66,886,503	\$66,038,562	-\$847,941	-1.3%

*Includes FY 2017 approved budget amendments through February 28, 2017

EQUIVALENT PERSONNEL SUMMARY

PROGRAM	2015 ADOPTED	2016 ADOPTED	2017 AS AMENDED*	2018 PROPOSED	CHANGE AMOUNT	CHANGE PERCENT
Water Administration Program	75.0	75.0	75.0	75.0	0.0	N/A
Water Operations Program	144.0	144.0	145.0	145.0	0.0	N/A
Department Total	219.0	219.0	220.0	220.0	0.0	N/A

*Includes FY 2017 approved budget amendments through February 28, 2017



WATER ADMINISTRATION PROGRAM

The Water Administration Program ensures that the department's long-term plans meet the capital, operational and economic needs of the department and county while remaining equitable for stakeholders and maintaining water sustainability and quality.

Currently, this program consists of the Director's Office, Fiscal/Customer Service Division, Engineering Division, and Water Resources and Planning Division.

The Water Administration Program Supports the Following Countywide Outcomes:



Strong and Diversified Economy



Healthy and Sustainable Community



Augment Public Infrastructure



Responsive, Effective and Effective Government



Prepared, Safe and Livable County

POPULATION SERVED

The Water Administration Program serves the County of Maui, except for Lanai, Kaanapali, Kapalua, and parts of Kahakuloa and Molokai.

SERVICES PROVIDED

The Water Administration Program is responsible for overall management of the department, expenditures and revenues, and administering the water user charge system. This program monitors compliance with Maui County Code provisions, department rules and regulations, and water system standards; reviews and approves building permits, subdivision applications and water service requests. Water Administration identifies, plans and constructs water infrastructure to support community plans. Human resources, water conservation, safety and community outreach are also functions of Administration.

PROGRAM DASHBOARD			
KEY DATA	FY 2016	FY 2017	FY 2018 GOAL
1. Percent of CIP design projects within schedule	100%	100%	100%
2. Complete Maui Water Use and Development Plan	25% Complete	100% Complete	N/A
3. Number of completed employee satisfaction surveys	N/A	N/A	40%
4. Number of completed customer satisfaction surveys	N/A	N/A	10-15%





BUDGET AND STAFF RESOURCES - WATER SUPPLY FUND

CHARACTER/ OBJECT DESCRIPTION	2015 ACTUAL	2016 ACTUAL	2017 AS AMENDED*	2018 PROPOSED	CHANGE AMOUNT	CHANGE PERCENT
Salaries and wages						
WAGES & SALARIES	\$2,681,522	\$2,637,672	\$4,671,790	\$4,803,336	\$131,546	2.8%
OTHER PREMIUM PAY	\$121,370	\$128,128	\$181,100	\$309,872	\$128,772	71.1%
Salaries and Wages Total	\$2,802,892	\$2,765,800	\$4,852,890	\$5,113,208	\$260,318	5.4%
Operations						
MATERIALS & SUPPLIES	\$1,176,193	\$991,116	\$1,317,368	\$1,306,635	-\$10,733	-0.8%
SERVICES	\$2,809,548	\$2,099,307	\$4,244,680	\$3,313,180	-\$931,500	-21.9%
UTILITIES	\$122,398	\$95,465	\$142,290	\$129,930	-\$12,360	-8.7%
TRAVEL	\$27,696	\$28,419	\$46,030	\$50,230	\$4,200	9.1%
OTHER COSTS	\$1,590,259	\$732,194	\$1,233,571	\$1,191,371	-\$42,200	-3.4%
Operations Total	\$5,726,094	\$3,946,501	\$6,983,939	\$5,991,346	-\$992,593	-14.2%
Transfers Out						
PROPRIETARY FUNDS	\$0	\$5,000,000	\$1,440,718	\$0	-\$1,440,718	-100.0%
Transfers Out Total	\$0	\$5,000,000	\$1,440,718	\$0	-\$1,440,718	-100.0%
Equipment						
MACHINERY & EQUIPMENT	\$155,702	\$120,512	\$63,900	\$67,150	\$3,250	5.1%
LEASE PURCHASES	\$0	\$4,830	\$15,153	\$15,153	\$0	N/A
Equipment Total	\$155,702	\$125,342	\$79,053	\$82,303	\$3,250	4.1%
Program Total	\$8,684,687	\$11,837,644	\$13,356,600	\$11,186,857	-\$2,169,743	-16.2%

*Includes FY 2017 approved budget amendments through February 28, 2017

EQUIVALENT PERSONNEL SUMMARY - WATER SUPPLY FUND

POSITION TITLE	2015 ADOPTED	2016 ADOPTED	2017 AS AMENDED*	2018 PROPOSED	CHANGE AMOUNT	CHANGE PERCENT
Account Clerk III	2.0	2.0	2.0	2.0	0.0	N/A
Accountant I	1.0	1.0	1.0	1.0	0.0	N/A
Accountant II	1.0	1.0	1.0	1.0	0.0	N/A
Accountant III	2.0	2.0	2.0	2.0	0.0	N/A
Accountant IV	1.0	1.0	1.0	1.0	0.0	N/A
Administrative Officer	1.0	1.0	1.0	1.0	0.0	N/A
Assistant Fiscal Officer	1.0	1.0	1.0	1.0	0.0	N/A
Cashier II	3.0	3.0	3.0	3.0	0.0	N/A
Civil Engineer III	3.0	3.0	3.0	3.0	0.0	N/A
Civil Engineer IV	5.0	5.0	5.0	5.0	0.0	N/A
Civil Engineer V	2.0	2.0	2.0	2.0	0.0	N/A
Civil Engineer VI	3.0	3.0	3.0	3.0	0.0	N/A
Clerk III	1.0	1.0	1.0	1.0	0.0	N/A
Commission Support Clerk	1.0	1.0	1.0	1.0	0.0	N/A
Customer Relations Assistant	1.0	1.0	1.0	1.0	0.0	N/A
Customer Service Representative II	4.0	4.0	4.0	4.0	0.0	N/A

**EQUIVALENT PERSONNEL SUMMARY - WATER SUPPLY FUND (CONT'D)**

POSITION TITLE	2015 ADOPTED	2016 ADOPTED	2017 AS AMENDED*	2018 PROPOSED	CHANGE AMOUNT	CHANGE PERCENT
Deputy Director	1.0	1.0	1.0	1.0	0.0	N/A
Director	1.0	1.0	1.0	1.0	0.0	N/A
Engineering Aide IV	1.0	1.0	1.0	1.0	0.0	N/A
Engineering Program Manager	2.0	2.0	2.0	2.0	0.0	N/A
Engineering Support Technician I	1.0	1.0	1.0	1.0	0.0	N/A
Field Collection Representative II	2.0	2.0	2.0	2.0	0.0	N/A
Fiscal Officer	1.0	1.0	1.0	1.0	0.0	N/A
GIS Analyst III	1.0	1.0	1.0	1.0	0.0	N/A
Land Use Permit Clerk	3.0	3.0	3.0	3.0	0.0	N/A
Meter Reader I	4.0	4.0	4.0	4.0	0.0	N/A
Meter Reading/Field Collection Super- visor	1.0	1.0	1.0	1.0	0.0	N/A
Personnel Assistant II	1.0	1.0	1.0	1.0	0.0	N/A
Planner III	1.0	1.0	1.0	1.0	0.0	N/A
Planner IV	2.0	2.0	2.0	2.0	0.0	N/A
Planner V	2.0	2.0	2.0	2.0	0.0	N/A
Planner VI	2.0	2.0	2.0	2.0	0.0	N/A
Planning Program Manager	1.0	1.0	1.0	1.0	0.0	N/A
Pre-Audit Clerk I	3.0	3.0	3.0	3.0	0.0	N/A
Private Secretary	1.0	1.0	1.0	1.0	0.0	N/A
Purchasing Specialist IV	1.0	1.0	1.0	1.0	0.0	N/A
Purchasing Technician	2.0	2.0	2.0	2.0	0.0	N/A
Safety Specialist II	1.0	1.0	1.0	1.0	0.0	N/A
Secretary III	1.0	1.0	1.0	1.0	0.0	N/A
Staff Services Assistant	1.0	1.0	1.0	1.0	0.0	N/A
Storekeeper I	1.0	1.0	1.0	1.0	0.0	N/A
Waterworks Inspector II	5.0	5.0	5.0	5.0	0.0	N/A
Program Total	75.0	75.0	75.0	75.0	0.0	N/A

*Includes FY 2017 approved budget amendments through February 28, 2017

SUMMARY BY GRANT AWARD

Grant Award Name	New grant	Required County match? Yes/No and Match \$ or %	FY 2015 Adopted	FY 2016 Adopted	FY 2017 As Amended	FY 2018 Proposed
State of Hawaii – Water Transmission and Storage, Maui	No	No	\$0	\$2,500,000	\$0	\$0
TOTAL			\$0	\$2,500,000	\$0	\$0





FY 2018 FUNDING ADJUSTMENTS - WATER SUPPLY FUND

The following funding adjustments are necessary to support the FY 2018 program. Included are primary adjustments that resulted in a 10% increase or decrease from the FY 2017 Council Adopted Budget, as amended, by object.

Salaries and Wages

- » Other Premium Pay: A \$164,375 salary adjustment for FY 2018 anticipated bargaining unit increase, a \$10,000 increase in premium pay expenses for work related projects such as the Water Use and Development Plant, offset by a \$45,600 decrease due to a lump sum bargaining unit payment in FY 2017.

Operations

- » Services: A decrease of \$1,208,000 for one-time FY 2017 appropriations for a rate study, meter replacement contract, and phase II billing system software license, a \$219,000 decrease for the FY 2017 appropriation for a waterline improvement for Lokahi Pacific, offset by a \$502,500 increase for the Oracle software upgrade, and various professional service contracts.
- » Transfers Out: A \$1,440,718 decrease to the Upcountry Water Reserve Fund for FY 2018.

COUNTY GRANT SUBSIDY DETAIL

Name of Grantee/Program	FY 2015 Actual	FY 2016 Actual	FY 2017 As Amended	FY 2018 Proposed
Auwahi Forest Restoration Project	\$0	\$0	\$37,000	\$37,000
Countywide Watershed Protection	\$159,000	\$150,000	\$80,000	\$98,000
East Maui Watershed Protection	\$595,310	\$384,675	\$505,000	\$516,000
East Molokai Watershed Protection	\$276,550	\$156,957	\$250,000	\$250,000
Hawaii Agriculture Research Center	\$0	\$0	\$68,000	\$68,000
Honokowai/Wahikuli Watershed Management	\$0	\$75,000	\$65,000	\$75,000
Lokahi Pacific, Inc	\$0	\$0	\$219,000	\$0
Leeward Haleakala Forest Restoration	\$225,942	\$160,267	\$195,000	\$198,000
Miconia Containment and Removal	\$354,822	\$170,974	\$250,000	\$250,000
Puu Kukui Watershed Preserve	\$215,115	\$219,033	\$300,000	\$300,000
West Maui Watershed Protection	\$364,711	\$206,908	\$250,000	\$350,000
TOTAL COUNTY GRANT SUBSIDY - WATER ADMINISTRATION PROGRAM	\$2,191,450	\$1,523,814	\$2,319,000	\$2,142,000



COUNTY GRANT SUBSIDY PROGRAM DESCRIPTION

Auwahi Forest Restoration Project

Restore dry forest lands on Leeward Haleakala, assess the effects of native forest restoration on soil moisture dynamics and potential aquifer recharge, support hydrological research and continue to provide a successful community based volunteer forest restoration and outreach component. Continue to exclude grazing animals, control non-native kikuyu grass, and plant closely spaced, rapidly growing native shrubs. This project provides a demonstration site for policy makers.

Countywide Watershed Protection

Funds will be used to support various watershed preservation and restoration efforts throughout Maui County including, but not limited to: ungulate control, weed management, fencing and fence maintenance, re-planting, erosion control, monitoring and mapping, native species propagation, removal of invasive species, community outreach and demo projects, wilt resistant Koa development, support hydrological and aquifer recharge research, and educational events.

East Maui Watershed Protection

The East Maui Watershed consists of approximately 120,000 acres and provides the largest harvested source of surface water in the state. This watershed services Upcountry residents and farmers from Haiku to Kanaio. Ongoing efforts to protect the watershed include fencing, ungulate control, invertebrate and small mammal control, weed management, rare species protection, removal of invasive species, monitoring, education, public outreach and volunteer recruitment to repair and install fencing, and plant native species.

East Molokai Watershed Protection

The East Molokai watershed is approximately 18,500 acres. Major problems in the area include feral animals, invasive weeds and fire. Ongoing efforts include ungulate control, weed sweeps, fencing and fence maintenance, re-planting, erosion control, monitoring, mapping and continuous research that measure water quality.

Hawaii Agriculture Research Center – Developing Wilt Resistant Acacia Koa

Koa is an integral part of native forests. High mortality of Koa in restoration efforts is due to koa wilt caused by *Fusarium axysporum* f.sp. *koae*. Restoration areas need wilt resistant Koa seeds to provide a greater Koa survival rate. With wilt resistant Koa seeds, restoration efforts are more successful than through random Koa seed collection. Landowners and managers are supplied with wilt resistant Koa through the continued development of Koa seed sources. This project continues to develop new seed sources and seed collections from known wilt resistant trees with superior growth characteristics. Post-planting care is provided in addition to technical assistance to Maui Watershed partners. Outreach is available to Maui Ranchers, landowners/managers, and other interested parties.

Honokowai/Wahikuli Watershed Management

The Kapunakea Preserve in West Maui is home to Kapaloa and Honokowai streams and the pristine headwaters of the Honokowai and Wahikuli watersheds. These watersheds have been identified as focal priority watersheds by the Hawaii DOH, EPA and NOAA. Honokowai Stream has a natural median discharge of 5.4 cubic feet per second, producing on average approximately 3.5 million gallons per day of fresh water for agricultural and potentially domestic use. The greatest threats to these watersheds are feral ungulates and invasive weeds. Management activities include fence maintenance, ungulate and weed control, monitoring and research for the Kapunakea Preserve.





COUNTY GRANT SUBSIDY PROGRAM DESCRIPTION (CONT'D)

Leeward Haleakala Forest Restoration

Protect and restore dry forest lands on Leeward Haleakala and examine impacts on moisture holding to improve both recharge and water quality in the area. Preserve and provide a reserve from which certain important forest species can recover, install fencing, increase productive vegetation using native species, broadcast seed, conduct biological survey, and recruit volunteers to help with an intensive labor effort.

Miconia Containment and Removal

Support efforts to monitor and remove the spread of miconia through repeated removal, treatments of existing areas of growth and prevention of seed dispersal. Similarly, manage other target weeds, including pampas grass, fountain grass, ivy gourd, giant reed, rubber vine, Jerusalem thorn, malabar malestome, downy rose myrtle, ruby salt bush and others. Seek to detect, identify and control potential problem weeds before they become difficult to control.

Puu Kukui Watershed Preserve

Over 8,600 acres of Puu Kukui Watershed Preserve is being protected and preserved. Ongoing efforts include ungulate control through fencing, trapping and surveying on foot, invasive plant control, rare species protection research and water quality testing. Maui Land & Pineapple Company, Inc. will be responsible for completion of management work.

West Maui Watershed Protection

Over 47,321 acres of the West Maui Mountains is being protected and preserved. This watershed is a key water recharge area that provides potable water to West and Central Maui residents. The major threats to this watershed are feral ungulates, invasive weeds, human disturbances and wildfires. Ongoing efforts include ungulate control through fence construction, retrofitting and regular trap checks weed management, planting and enclosures, monitoring, and human activities management through outreach, education and curbing use of area.





KEY PERFORMANCE MEASURES

GOALS/OBJECTIVES	KEY PERFORMANCE INDICATORS	FY 2016 ACTUAL	FY 2017 ESTIMATE	FY 2018 ESTIMATE
Goal #1: Provide reliable, top quality water service at reasonable cost.				
1. Plan, design, fund and construct CIPs in a timely manner	% of CIP design projects within schedule	100%	100%	100%
2. Maintain affordable and equitable rates and fees	Maintaining a three month operations reserve fund	100%	100%	100%
3. Complete Maui Water Use and Development Plan	In-house completion of WUDP	25%	100%	N/A
Goal #2: Recruit and retain needed staff.				
1. Retain and enhance opportunities for existing staff	# of staff promoted or obtaining new certifications	21	18	20
	# of staff training/educational opportunities provided	282	148	300
	% of annual evaluations completed on time	47%	60%	70%
2. Design complete and follow-up on employee satisfaction survey	# of completed surveys	N/A	N/A	40%
	Compilation of results	N/A	N/A	100%
	Follow-up on findings	N/A	N/A	90%
Goal #3: Improve public relations and customer service.				
1. Increase outreach to customers	# of flyers inserted in bills	N/A	N/A	4
2. Design, complete and follow-up on a customer satisfaction survey	# of surveys completed and returned	N/A	N/A	10-15%
	Compilation of results	N/A	N/A	100%
	Follow-up on findings	N/A	N/A	90%
3. Process permits in a timely and efficient manner	# of Upcountry List requests processed (reoffers)	19	50	60
	Average days for single family residential permit review	21	21	21
Goal #3: Support a sustainable water supply.				
1. Protect watersheds, aquifers and stream resources	\$ funded for watershed protection	\$1,975,500	\$2,100,000	\$2,142,000



WATER DEPARTMENT WIDE EXPENSES

CHARACTER/ OBJECT DESCRIPTION	2015 ACTUAL	2016 ACTUAL	2017 AS AMENDED*	2018 PROPOSED	CHANGE AMOUNT	CHANGE PERCENT
Salaries and Wages						
OTHER PREMIUM PAY	\$0	\$0	\$0	\$0	\$0	N/A
WAGES & SALARIES	\$0	\$0	\$0	\$0	\$0	N/A
Salaries and Wages Total	\$0	\$0	\$0	\$0	\$0	N/A
Operations						
INTEREST EXPENSE	-\$108,342	-\$64,488	\$0	\$0	\$0	N/A
INTERFUND COST RECLASSIFI-	\$10,082,477	\$11,133,379	\$11,896,246	\$12,692,180	\$795,934	6.7%
OPERATING EXPENSE	\$2,530,362	\$4,176,352	\$1,210,084	\$1,121,088	-\$88,996	-7.4%
OTHER COSTS	\$544,429	\$356,559	\$975,000	\$975,000	\$0	N/A
Operations Total	\$13,048,926	\$15,601,802	\$14,081,330	\$14,788,268	\$706,938	5.0%
Debt Service						
INTEREST EXPENSE	\$1,666,746	\$1,522,183	\$1,627,750	\$1,606,870	-\$20,880	-1.3%
DEBT SERVICE	\$3,811,997	\$3,160,134	\$4,422,077	\$4,393,130	-\$28,947	-0.7%
Debt Service Total	\$5,478,744	\$4,682,317	\$6,049,827	\$6,000,000	-\$49,827	-0.8%
Equipment						
MACHINERY & EQUIPMENT	\$0	\$0	\$0	\$0	\$0	N/A
LEASE PURCHASES	\$0	\$0	\$0	\$0	\$0	N/A
Equipment Total	\$0	\$0	\$0	\$0	\$0	N/A
Program Total	\$18,527,670	\$20,284,120	\$20,131,157	\$20,788,268	\$657,111	3.3%

*Includes FY 2017 approved budget amendments through February 28, 2017

FY2018 FUNDING ADJUSTMENTS - WATER DEPARTMENT WIDE EXPENSES

The following funding adjustments are necessary to support the FY 2018 program. Included are primary adjustments that resulted in a 10% increase or decrease from the FY 2017 Council Adopted Budget, as amended, by object.

» No changes.





WATER OPERATIONS PROGRAM

The Water Operations Program is responsible for the management, operation and repair of county water collection, transmission and processing infrastructure and related facilities.

POPULATION SERVED

The Water Operations Program serves the island of Maui and Kaunakakai, Molokai.

SERVICES PROVIDED

The Water Operations Program is responsible for the process control; safety and training; regulatory reporting and compliance; laboratory analysis; preventive maintenance; and efficient operation of the collection, transmission and processing activities.

The Water Operations Program Supports the Following Countywide Outcomes:



Strong and Diversified Economy



Healthy and Sustainable Community



Augment Public Infrastructure



Responsive, Effective and Effective Government



Prepared, Safe and Livable County

PROGRAM DASHBOARD



KEY DATA	FY 2016	FY 2017	FY 2018 GOAL
1. Number of water quality violations received from EPA or State	1	1	0
2. Number of samples analyzed to meet regulatory requirements	13,454	15,089	13,445
3. Cost of maintenance and repair to optimize and maintain equipment for reliability and efficiency	\$350,000	\$350,000	\$350,000



BUDGET AND STAFF RESOURCES - WATER SUPPLY FUND

CHARACTER/ OBJECT DESCRIPTION	2015 ACTUAL	2016 ACTUAL	2017 AS AMENDED*	2018 PROPOSED	CHANGE AMOUNT	CHANGE PERCENT
Salaries and Wages						
WAGES & SALARIES	\$6,607,449	\$6,837,721	\$7,982,980	\$8,003,460	\$20,480	0.3%
OTHER PREMIUM PAY	\$1,247,601	\$1,030,127	\$1,227,794	\$1,498,310	\$270,516	22.0%
Salaries and Wages Total	\$7,855,050	\$7,867,848	\$9,210,774	\$9,501,770	\$290,996	3.2%
Operations						
MATERIALS & SUPPLIES	\$4,454,631	\$4,275,195	\$5,473,425	\$5,655,682	\$182,257	3.3%
SERVICES	\$1,381,445	\$1,133,375	\$1,632,185	\$1,575,685	-\$56,500	-3.5%
UTILITIES	\$13,396,453	\$10,880,209	\$16,433,862	\$16,374,888	-\$58,974	-0.4%
TRAVEL	\$37,884	\$19,626	\$78,700	\$78,700	\$0	N/A
OTHER COSTS	\$504,338	\$145,996	\$194,900	\$211,500	\$16,600	8.5%
Operations Total	\$19,774,751	\$16,454,402	\$23,813,072	\$23,896,455	\$83,383	0.4%
Equipment						
MACHINERY & EQUIPMENT	\$549,526	\$643,045	\$374,900	\$665,212	\$290,312	77.4%
Equipment Total	\$549,526	\$643,045	\$374,900	\$665,212	\$290,312	77.4%
Program Total	\$28,179,326	\$24,965,294	\$33,398,746	\$34,063,437	\$664,691	2.0%

*Includes FY 2017 approved budget amendments through February 28, 2017

EQUIVALENT PERSONNEL SUMMARY - WATER SUPPLY FUND

POSITION TITLE	2015 ADOPTED	2016 ADOPTED	2017 AS AMENDED*	2018 PROPOSED	CHANGE AMOUNT	CHANGE PERCENT
Assistant Water Treatment Plant Operations/Maintenance Supervisor	2.0	2.0	2.0	2.0	0.0	N/A
Backflow Control Technician II	1.0	1.0	1.0	1.0	0.0	N/A
Backflow Cross Connection Technician IV	1.0	1.0	1.0	1.0	0.0	N/A
Carpenter I	2.0	2.0	2.0	2.0	0.0	N/A
Clerk Dispatcher II	1.0	1.0	1.0	1.0	0.0	N/A
Clerk III	1.0	1.0	1.0	1.0	0.0	N/A
Construction Equipment Mechanic I	3.0	3.0	3.0	3.0	0.0	N/A
Construction Equipment Mechanic II	1.0	1.0	1.0	1.0	0.0	N/A
Electrician/Electronic Repairer Supervisor	1.0	1.0	1.0	1.0	0.0	N/A
Electronic Technician I	4.0	4.0	4.0	4.0	0.0	N/A
Electronic Technician II	1.0	1.0	1.0	1.0	0.0	N/A
Equipment Operator III	3.0	3.0	3.0	3.0	0.0	N/A
Equipment Operator IV	4.0	4.0	4.0	4.0	0.0	N/A
Field Operations Division Chief	1.0	1.0	1.0	1.0	0.0	N/A
Heavy Equipment & Construction Welder	1.0	1.0	1.0	1.0	0.0	N/A
Labor Supervisor I	1.0	1.0	1.0	1.0	0.0	N/A

**EQUIVALENT PERSONNEL SUMMARY - WATER SUPPLY FUND (CONT'D)**

POSITION TITLE	2015 ADOPTED	2016 ADOPTED	2017 AS AMENDED*	2018 PROPOSED	CHANGE AMOUNT	CHANGE PERCENT
Laboratory Technician I	3.0	3.0	3.0	3.0	0.0	N/A
Laborer II	7.0	7.0	7.0	7.0	0.0	N/A
Pipefitter Helper	14.0	14.0	14.0	14.0	0.0	N/A
Pipefitter I	21.0	21.0	21.0	21.0	0.0	N/A
Pipefitter II	7.0	7.0	7.0	7.0	0.0	N/A
Plant Electrician/Electronic Repairer I	3.0	3.0	3.0	3.0	0.0	N/A
Plant Electrician/Electronic Repairer II	1.0	1.0	1.0	1.0	0.0	N/A
Plant Operations Division Chief	1.0	1.0	1.0	1.0	0.0	N/A
Staff Services Assistant	0.0	0.0	1.0	1.0	0.0	N/A
Supervising Electronic Technician	1.0	1.0	1.0	1.0	0.0	N/A
Treasury Clerk I	1.0	1.0	1.0	1.0	0.0	N/A
Valve Repair/Pipefitter II	1.0	1.0	1.0	1.0	0.0	N/A
Water Meter Technician I	1.0	1.0	1.0	1.0	0.0	N/A
Water Meter Technician II	1.0	1.0	1.0	1.0	0.0	N/A
Water Microbiologist I	3.0	3.0	3.0	3.0	0.0	N/A
Water Microbiologist II	2.0	2.0	2.0	2.0	0.0	N/A
Water Microbiologist III	1.0	1.0	1.0	1.0	0.0	N/A
Water Microbiologist IV	1.0	1.0	1.0	1.0	0.0	N/A
Water Plant Maintenance Mechanic Helper	4.0	4.0	4.0	4.0	0.0	N/A
Water Plant Maintenance Mechanic I	6.0	6.0	6.0	6.0	0.0	N/A
Water Plant Maintenance Mechanic II	1.0	1.0	1.0	1.0	0.0	N/A
Water Plant Maintenance Mechanic Supervisor	1.0	1.0	1.0	1.0	0.0	N/A
Water Service Clerk Dispatcher	1.0	1.0	1.0	1.0	0.0	N/A
Water Service Supervisor II	7.0	7.0	7.0	7.0	0.0	N/A
Water Support Services Supervisor	1.0	1.0	1.0	1.0	0.0	N/A
Water Treatment Plant Division Chief	1.0	1.0	1.0	1.0	0.0	N/A
Water Treatment Plant Operations/ Maintenance Supervisor	2.0	2.0	2.0	2.0	0.0	N/A
Water Treatment Plant Operator II	1.0	1.0	1.0	1.0	0.0	N/A
Water Treatment Plant Operator IV	16.0	16.0	16.0	16.0	0.0	N/A
Water Treatment Plant Operator Trainee	1.0	1.0	1.0	1.0	0.0	N/A
Water Treatment Plant Worker	2.0	2.0	2.0	2.0	0.0	N/A
Waterworks Maintenance Helper	3.0	3.0	3.0	3.0	0.0	N/A
Program Total	144.0	144.0	145.0	145.0	0.0	N/A

*Includes FY 2017 approved budget amendments through February 28, 2017





FY 2018 FUNDING ADJUSTMENTS

The following funding adjustments are necessary to support the FY 2018 program. Included are primary adjustments that resulted in a 10% increase or decrease from the FY 2017 Council Adopted Budget, as amended, by object.

Salaries and Wages

- » **Other Premium Pay:** A \$321,116 salary adjustment for FY 2018 anticipated bargaining unit increases, offset by a \$40,000 decrease in anticipated premium pay expenses and a \$10,800 decrease due to a lump sum bargaining unit payment in FY 2017.

Equipment

- » **Machinery and Equipment:** An increase of \$431,000 for the purchase of an excavator, analytical instrument, TOC analyzer, UPS emergency backup power for SCADA system, Grofos plant water pump and various pumps, a \$127,000 increase for the purchase of a Ford F-350 utility truck and a Ford Ranger for the Lahaina division, and a Chevy S-10 truck for the Meter Repair Technician, a \$86,712 increase for the purchase of the Laboratory Information System software and a \$20,500 increase for the purchase of replacement desktop computers and a SCADA terminal server, offset by a \$374,900 decrease for the FY 2017 one-time appropriation for various equipment.



KEY PERFORMANCE MEASURES

GOALS/OBJECTIVES	KEY PERFORMANCE INDICATORS	FY 2016 ACTUAL	FY 2017 ESTIMATE	FY 2018 ESTIMATE
Goal #1: Economically produce the highest quality potable water that meets or exceeds all state and federal water quality standards in sufficient quantity to meet the needs of the customers.				
1. Minimize adverse impacts to the water system	# of system outages or water restrictions due to facility shutdown or deficient water quality	1	0	0
2. Identify and review regulatory compliance requirements that will impact operations and optimize performance to meet Environmental Protection Agency (EPA) and State of Hawaii Department of Health regulatory standards	# of water quality violations received	1	1	0
4. Meet state and federal sampling requirements	# of samples analyzed to meet regulatory requirements	13,454	15,089	13,445
Goal #2: Operate and maintain the collection, transmission, and processing infrastructure in an efficient manner to ensure that our customers receive the maximum useful life from their facility investment.				
1. Optimize, maintain or replace facilities' electrical equipment, motors and switch gear for the most reliable and efficient use of electrical energy	Cost of repair and maintenance	\$350,000	\$350,000	\$350,000
2. Replacement of three well pumps and two booster pumps per year	# of well pumps replaced	3	3	2
	# of booster pumps replaced	2	2	2



PROJECT DETAIL BY DEPARTMENT

DEPARTMENT OF WATER SUPPLY

					\$ in 1000's		
					Fiscal Year		
District	Project Type	CBS No	Project Name	Fund	2018	2019-2023	6-Yr Total
Countywide	Water Supply	CBS-1075	Countywide Facility Improvements	WR	274	0	274
				WU	3,175	11,200	14,375
		CBS-1076	Countywide Conservation Program	WU	1,000	5,000	6,000
		CBS-2299	Countywide Upgrades and Replacements	SRF	0	1,500	1,500
				WR	2,255	0	2,255
				WU	3,855	29,250	33,105
		CBS-4615	Countywide Water System Modification	WU	500	2,500	3,000
Makawao-Pukalani-Kula		CBS-1106	Upcountry Reliable Capacity	SRF	0	20,000	20,000
				WR	150	400	550
				WU	3,350	17,400	20,750
Molokai		CBS-1098	Molokai Reliable Capacity	WU	500	4,200	4,700
Waikuku-Kahului		CBS-1102	Central Maui Reliable Capacity	WR	0	300	300
				WU	500	13,200	13,700
		CBS-4622	Kahului Tank II	WR	2,450	0	2,450
West Maui		CBS-1092	West Maui Reliable Capacity	SRF	5,000	10,000	15,000
				WR	0	100	100
				WU	5,000	10,900	15,900
			Total: Department of Water Supply		28,009	125,950	153,959

FUNDING SOURCE SUMMARY

Fund	\$ in 1000's		
	Fiscal Year		
	2018	2019-2023	6-Yr Total
AH	0	0	0
BW	0	0	0
FD	0	0	0
GB	0	0	0
GF	0	0	0
HF	0	0	0
LBF	0	0	0
LF	0	0	0
OG	0	0	0
OT	0	0	0
PA	0	0	0
RQ	0	0	0
SRF	5,000	31,500	36,500
ST	0	0	0
SW	0	0	0
US	0	0	0
WF	0	0	0
WR	5,129	800	5,929
WU	17,880	93,650	111,530
Total	28,009	125,950	153,959



COUNTYWIDE FACILITY IMPROVEMENTS

CBS-1075

District: Countywide

Project Description

Anticipated jobs in FY 2018 include but are not limited to:

1. Replacement of well and booster pump station components. Anticipated jobs include installation of emergency booster pump connections at tanks servicing the Lahainaluna Road service area; and
2. Replacement of water treatment facility and water tank components. Anticipated jobs include replacement of the roof at Piholo WTP due to leakage, replacement of the Mahinahina WTP control system; refurbishing the Napili A and Honokowai Tanks; and
3. Conduct a Countywide facility assessment of all water treatment facilities to evaluate each facility's operational reliability and develop a twenty year water treatment facility capital improvement plan.

Project Justification

The Countywide Facilities Improvements project supports emergency or critical repairs to existing water supply facilities. Funding for unforeseen circumstances and site conditions, emergency repairs, and annual system upgrades is necessary to minimize impact to project schedules, thereby avoiding costly delays and disruptions of service.

Funding Sources

- » Water Supply Fund - Restricted & Unrestricted

Operating Impact Narrative

No significant impact on staffing or operating budget is anticipated.



Project Type	
Drainage	Road Improvements
Government Facilities	Sanitation
Other Projects	Sewer
Parks and Recreation	Water Supply

Countywide Priority Results
Strong and Diversified Economy
Healthy and Sustainable Community
Augment Public Infrastructure
Responsive, Effective and Efficient Government
Prepared, Safe and Livable County



Funding Sources (Revenue)	FY17 Appr	FY18	FY19	FY20	FY21	FY22	FY23	FY18-23
General Fund	-	-	-	-	-	-	-	-
Highway Fund	-	-	-	-	-	-	-	-
Sewer Fund	-	-	-	-	-	-	-	-
Solid Waste Management Fund	-	-	-	-	-	-	-	-
Water Fund Restricted	-	274,000	-	-	-	-	-	274,000
Water Fund Unrestricted	2,150,000	3,175,000	5,900,000	800,000	500,000	3,500,000	500,000	14,375,000
State/Federal/SRF	-	-	-	-	-	-	-	-
Bond/Lapsed Bond	-	-	-	-	-	-	-	-
Other	-	-	-	-	-	-	-	-
Total Revenue	\$2,150,000	\$3,449,000	\$5,900,000	\$800,000	\$500,000	\$3,500,000	\$500,000	\$14,649,000

Cost Categories (Expenditures)	Prior Years Expend/Encl	FY18	FY19	FY20	FY21	FY22	FY23	FY18-23
Acquisition	-	-	-	-	-	-	-	-
Construction	-	3,449,000	5,900,000	500,000	500,000	3,500,000	500,000	14,349,000
Design	-	-	-	300,000	-	-	-	300,000
Equipment	-	-	-	-	-	-	-	-
Renovations/Rehabilitation	-	-	-	-	-	-	-	-
Management	-	-	-	-	-	-	-	-
Planning	-	-	-	-	-	-	-	-
Total Expenditure	\$3,267,809	\$3,449,000	\$5,900,000	\$800,000	\$500,000	\$3,500,000	\$500,000	\$14,649,000



COUNTYWIDE CONSERVATION PROGRAM

CBS-1076

District: Countywide

Project Description

The Countywide Conservation Program to focus on supply-side and demand-side conservation measures. These measures include locating and replacement of leaking waterlines, repair of leaking tanks, along with design of projects to provide supply side conservation, including a water audit.

Anticipated jobs in FY 2018 include but are not limited to:

1. Repair leaking water lines (transmission, distribution, and service laterals) identified by Leak Detection.

Project Justification

The subject measures are intended to conserve water through a variety of sub-programs/projects (i.e. leak detection and repair, irrigation/fixtures retro-filling, watershed protection, reduced landscape watering, etc.). Overall, the conservation program will prevent and minimize wasteful, uneconomical, or unreasonable use of our water resource. Eliminating wasteful use of water will allow DWS to serve more customers and meet future demand in a more efficient, economical, and sustainable manner.

Funding Sources

- » Water Supply Fund - Unrestricted

Operating Impact Narrative

No significant impact on staffing or operating budget is anticipated.



Project Type	
Drainage	Road Improvements
Government Facilities	Sanitation
Other Projects	Sewer
Parks and Recreation	Water Supply

Countywide Priority Results
Strong and Diversified Economy
Healthy and Sustainable Community
Augment Public Infrastructure
Responsive, Effective and Efficient Government
Prepared, Safe and Livable County



Funding Sources (Revenue)	FY17 Appr	FY18	FY19	FY20	FY21	FY22	FY23	FY18-23
General Fund	-	-	-	-	-	-	-	-
Highway Fund	-	-	-	-	-	-	-	-
Sewer Fund	-	-	-	-	-	-	-	-
Solid Waste Management Fund	-	-	-	-	-	-	-	-
Water Fund Restricted	-	-	-	-	-	-	-	-
Water Fund Unrestricted	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	6,000,000
State/Federal/SRF	-	-	-	-	-	-	-	-
Bond/Lapsed Bond	-	-	-	-	-	-	-	-
Other	-	-	-	-	-	-	-	-
Total Revenue	\$1,000,000	\$1,000,000	\$1,000,000	\$1,000,000	\$1,000,000	\$1,000,000	\$1,000,000	\$6,000,000
Cost Categories (Expenditures)	Prior Years Expend/Encl	FY18	FY19	FY20	FY21	FY22	FY23	FY18-23
Acquisition	-	-	-	-	-	-	-	-
Construction	-	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	6,000,000
Design	-	-	-	-	-	-	-	-
Equipment	-	-	-	-	-	-	-	-
Renovations/Rehabilitation	-	-	-	-	-	-	-	-
Management	-	-	-	-	-	-	-	-
Planning	-	-	-	-	-	-	-	-
Total Expenditure	\$933,456	\$1,000,000	\$1,000,000	\$1,000,000	\$1,000,000	\$1,000,000	\$1,000,000	\$6,000,000



COUNTYWIDE UPGRADES AND REPLACEMENTS

CBS-2299

District: Countywide

Project Description

The Countywide Upgrades and Replacements project supports improvements that will sustain the reliable operation of existing water infrastructure or mitigate inadequacies of the water system.

Anticipated jobs in FY 2018 include but are not limited to:

1. Des/Const: Replace the traveling screens at the Kamole WTP;
2. Des/Const: Replace the 60,000 gallon Lower Kula 200 Water Tank;
3. Const: Upgrade electrical control systems at well and booster pump sites including Mokuhan Wells 1 and 2, Kula Ag Park Booster Pumps, Kepaniwai Well, Keanae Wells 1 and 2, and Kawela Well;
4. Const: Replacement of waterlines and control valves including the 4 inch water line along Hobron Ave to address leakage and substandard fire flow;
5. Const: Replace intake piping serving the Waikamoi Reservoirs to address leakage;
6. Des/Const: Install a bypass system for the Waihee Tank for repair and maintenance purposes;
7. Des: Replacement of the 6-inch water line along Lunalilo Street and Liholiho Street, Wailuku;
8. Const: Replace/relocate 24" Raw Waterline to Iao WTP

Project Justification

The Countywide Upgrades and Replacements are necessary for the water supply system to accommodate existing and future demands, provide reliable and efficient service by limiting disruption in service, and prevent any potential health and safety issues.

Funding Sources

- » State Revolving Loan Fund
- » Water Supply Fund - Restricted & Unrestricted

Operating Impact Narrative

No significant impact on staffing or operating budget is anticipated.



Project Type	
Drainage	Road Improvements
Government Facilities	Sanitation
Other Projects	Sewer
Parks and Recreation	Water Supply

Countywide Priority Results
Strong and Diversified Economy
Healthy and Sustainable Community
Augment Public Infrastructure
Responsive, Effective and Efficient Government
Prepared, Safe and Livable County



Funding Sources (Revenue)	FY17 Appr	FY18	FY19	FY20	FY21	FY22	FY23	FY18-23
General Fund	-	-	-	-	-	-	-	-
Highway Fund	-	-	-	-	-	-	-	-
Sewer Fund	-	-	-	-	-	-	-	-
Solid Waste Management Fund	-	-	-	-	-	-	-	-
Water Fund Restricted	1,850,000	2,255,000	-	-	-	-	-	2,255,000
Water Fund Unrestricted	50,000	3,855,000	1,800,000	6,100,000	3,800,000	7,500,000	10,050,000	33,105,000
State Revolving Loan Fund	2,000,000	-	1,500,000	-	-	-	-	1,600,000
Bond/Leased Bond	-	-	-	-	-	-	-	-
Other	-	-	-	-	-	-	-	-
Total Revenue	\$4,000,000	\$6,110,000	\$3,300,000	\$6,100,000	\$3,800,000	\$7,500,000	\$10,050,000	\$36,860,000
Cost Categories (Expenditures)	Prior Years Expend/Encl	FY18	FY19	FY20	FY21	FY22	FY23	FY18-23
Acquisition	-	-	100,000	-	-	-	400,000	500,000
Construction	-	5,750,000	1,500,000	5,700,000	3,000,000	6,300,000	9,250,000	31,600,000
Design	-	360,000	1,700,000	400,000	800,000	1,200,000	400,000	4,860,000
Equipment	-	-	-	-	-	-	-	-
Renovations/Rehabilitation	-	-	-	-	-	-	-	-
Management	-	-	-	-	-	-	-	-
Planning	-	-	-	-	-	-	-	-
Total Expenditure	\$3,193,733	\$6,110,000	\$3,300,000	\$6,100,000	\$3,800,000	\$7,500,000	\$10,050,000	\$36,860,000



COUNTYWIDE WATER SYSTEM MODIFICATION

CBS-4615

District: Countywide

Project Description

The Countywide Water System Modification supports all CIP projects, including prior fiscal year, ensuing fiscal year, and emergency projects to efficiently provide clean and safe drinking water to customers. An effective CIP program demands an ability to respond to unanticipated planning, design, and construction issues in a timely manner.

Project Justification

Funding of unanticipated planning, design, and construction issues in a timely manner is critical to prevent project delays and potential added cost due to delays in funding.

Funding Sources

- » Water Supply Fund - Unrestricted

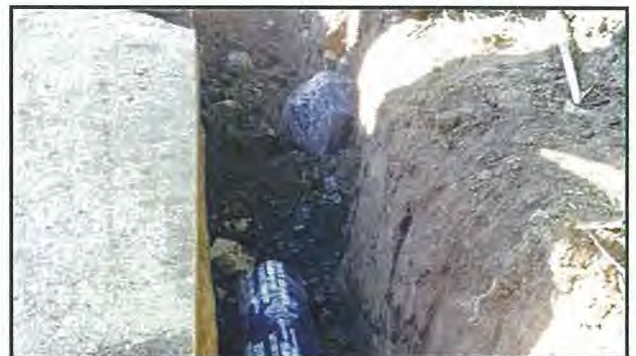
Operating Impact Narrative

No significant impact on staffing or operating budget is anticipated.



Project Type	
Drainage	Road Improvements
Government Facilities	Sanitation
Other Projects	Sewer
Parks and Recreation	Water Supply

Countywide Priority Results
Strong and Diversified Economy
Healthy and Sustainable Community
Augment Public Infrastructure
Responsive, Effective and Efficient Government
Prepared, Safe and Livable County



Funding Sources (Revenue)	FY17 Appr	FY18	FY19	FY20	FY21	FY22	FY23	FY18-23
General Fund	-	-	-	-	-	-	-	-
Highway Fund	-	-	-	-	-	-	-	-
Sewer Fund	-	-	-	-	-	-	-	-
Solid Waste Management Fund	-	-	-	-	-	-	-	-
Water Fund Restricted	-	-	-	-	-	-	-	-
Water Fund Unrestricted	-	600,000	600,000	600,000	600,000	600,000	600,000	3,000,000
State/Federal/SRF	-	-	-	-	-	-	-	-
Bond/Lapsed Bond	-	-	-	-	-	-	-	-
Other	-	-	-	-	-	-	-	-
Total Revenue	-	\$500,000	\$500,000	\$500,000	\$500,000	\$500,000	\$500,000	\$3,000,000
Cost Categories (Expenditures)	Prior Years Expend/Encl	FY18	FY19	FY20	FY21	FY22	FY23	FY18-23
Acquisition	-	-	-	-	-	-	-	-
Construction	-	500,000	500,000	500,000	500,000	500,000	500,000	3,000,000
Design	-	-	-	-	-	-	-	-
Equipment	-	-	-	-	-	-	-	-
Renovations/Rehabilitation	-	-	-	-	-	-	-	-
Management	-	-	-	-	-	-	-	-
Planning	-	-	-	-	-	-	-	-
Total Expenditure	-	\$500,000	\$500,000	\$500,000	\$500,000	\$500,000	\$500,000	\$3,000,000



UPCOUNTRY RELIABLE CAPACITY

CBS-1106

District: Makawao-Pukalani-Kula

Project Description

The Upcountry Reliable Capacity project will support source, transmission, and storage expansion for the Upcountry system. Anticipated jobs in FY 2018 include:

1. Design and construction: Replacement and expansion of booster pump stations at three sites along the Phase 10 booster pump system (Pookela Tank, Maluhia Tank, West Olinda Tank sites).
2. Design of a new water tank to improve storage capacity for the Opaepilau water system (Haiku).

Project Justification

Existing booster pump facilities are reaching end of their service life. Additional booster pumps needed to ensure reliability of the system. Replacement while still in service minimizes water service disruption and downtime.

Funding Sources

- » State Revolving Loan Fund
- » Water Supply Fund - Restricted & Unrestricted

Operating Impact Narrative

New tank will required periodic inspections and refurbishing. Expansion of booster pump stations serves to provide backup capacity and will not impact operations.



Project Type	
Drainage	Road Improvements
Government Facilities	Sanitation
Other Projects	Sewer
Parks and Recreation	Water Supply

Countywide Priority Results
Strong and Diversified Economy
Healthy and Sustainable Community
Augment Public Infrastructure
Responsive, Effective and Efficient Government
Prepared, Safe and Livable County



Funding Sources (Revenue)	FY17 Appr	FY18	FY19	FY20	FY21	FY22	FY23	FY18-23
General Fund	-	-	-	-	-	-	-	-
Highway Fund	-	-	-	-	-	-	-	-
Sewer Fund	-	-	-	-	-	-	-	-
Solid Waste Management Fund	-	-	-	-	-	-	-	-
Water Fund Restricted	2,200,000	150,000	400,000	-	-	-	-	550,000
Water Fund Unrestricted	-	3,350,000	4,800,000	5,000,000	2,100,000	3,000,000	2,500,000	20,750,000
State Revolving Loan Fund	2,500,000	-	-	20,000,000	-	-	-	20,000,000
Bond/Lapsed Bond	-	-	-	-	-	-	-	-
Other	-	-	-	-	-	-	-	-
Total Revenue	\$4,700,000	\$3,500,000	\$5,200,000	\$25,000,000	\$2,100,000	\$3,000,000	\$2,500,000	\$41,300,000
Cost Categories (Expenditures)	Prior Years Expend/Ench	FY18	FY19	FY20	FY21	FY22	FY23	FY18-23
Acquisition	-	-	300,000	-	100,000	-	-	400,000
Construction	-	3,000,000	4,800,000	24,800,000	1,800,000	3,000,000	2,500,000	39,900,000
Design	-	500,000	400,000	200,000	200,000	-	-	1,300,000
Equipment	-	-	-	-	-	-	-	-
Renovations/Rehabilitation	-	-	-	-	-	-	-	-
Management	-	-	-	-	-	-	-	-
Planning	-	-	-	-	-	-	-	-
Total Expenditure	-	\$3,500,000	\$5,200,000	\$25,000,000	\$2,100,000	\$3,000,000	\$2,500,000	\$41,300,000



MOLOKAI RELIABLE CAPACITY

CBS-1098

District: Molokai

Project Description

The Molokai Reliable Capacity project will support source, transmission, and storage expansion for the Molokai system. Anticipated jobs in FY 2018 include:

- 1) Land acquisition for a backup well site at Kualapu'u and a replacement well site at Kawela; and
- 2) Design an exploratory well for replacement of the existing Kawela Well upon acquisition of the replacement well site.

Project Justification

DWS does not have a backup source for the existing Kualapu'u well and relies upon a DHHL well for the backup source. Developing a DWS owned and operated source to backup the existing Kualapu'u Well will ensure reliable service. The existing Kawela Well is at risk of going "brackish" due the shallow groundwater condition at the site.

Funding Sources

- » Water Supply Fund - Unrestricted

Operating Impact Narrative

No impact is anticipated as the new wells will serve as backups and replacements and are not expansions.



Project Type	
Drainage	Road Improvements
Government Facilities	Sanitation
Other Projects	Sewer
Parks and Recreation	Water Supply

Countywide Priority Results
Strong and Diversified Economy
Healthy and Sustainable Community
Augment Public Infrastructure
Responsive, Effective and Efficient Government
Prepared, Safe and Livable County



Funding Sources (Revenue)	FY17 Appr	FY18	FY19	FY20	FY21	FY22	FY23	FY18-23
General Fund	-	-	-	-	-	-	-	-
Highway Fund	-	-	-	-	-	-	-	-
Sewer Fund	-	-	-	-	-	-	-	-
Solid Waste Management Fund	-	-	-	-	-	-	-	-
Water Fund Restricted	-	-	-	-	-	-	-	-
Water Fund Unrestricted	-	500,000	200,000	4,000,000	-	-	-	4,700,000
State/Federal/SRF	-	-	-	-	-	-	-	-
Bond/Lapsed Bond	-	-	-	-	-	-	-	-
Other	-	-	-	-	-	-	-	-
Total Revenue	-	\$500,000	\$200,000	\$4,000,000	-	-	-	\$4,700,000
Cost Categories (Expenditures)	Prior Years Expend/Encl	FY18	FY19	FY20	FY21	FY22	FY23	FY18-23
Acquisition	-	300,000	-	-	-	-	-	300,000
Construction	-	-	-	4,000,000	-	-	-	4,000,000
Design	-	200,000	200,000	-	-	-	-	400,000
Equipment	-	-	-	-	-	-	-	-
Renovations/Rehabilitation	-	-	-	-	-	-	-	-
Management	-	-	-	-	-	-	-	-
Planning	-	-	-	-	-	-	-	-
Total Expenditure	-	\$500,000	\$200,000	\$4,000,000	-	-	-	\$4,700,000



CENTRAL MAUI RELIABLE CAPACITY

CBS-1102

District: Wailuku-Kahului

Project Description

The Central Maui Reliable Capacity project will support source, transmission, and storage expansion for the Central Maui system. Anticipated jobs in FY 2018 include:

1. Land acquisition for a new tank site to improve storage for the Waihee Wells;
2. Design an exploratory well for replacement of the existing Waiehu Heights Well 1 upon acquisition of the replacement well site.

Project Justification

The Waihee Wells are the primary source for South Maui and existing storage is inadequate. Waiehu Heights Well 1 turned brackish leaving no backup well for the reliable operation of Waiehu Heights Well 2.

Funding Sources

- » Water Supply Fund - Restricted & Unrestricted

Operating Impact Narrative

New tank requires periodic inspections and refurbishing. Replacement well will not create new operational demand.



Project Type	
Drainage	Road Improvements
Government Facilities	Sanitation
Other Projects	Sewer
Parks and Recreation	Water Supply

Countywide Priority Results
Strong and Diversified Economy
Healthy and Sustainable Community
Augment Public Infrastructure
Responsive, Effective and Efficient Government
Prepared, Safe and Livable County



Funding Sources (Revenue)	FY17 Appr	FY18	FY19	FY20	FY21	FY22	FY23	FY18-23
General Fund	-	-	-	-	-	-	-	-
Highway Fund	-	-	-	-	-	-	-	-
Sewer Fund	-	-	-	-	-	-	-	-
Solid Waste Management Fund	-	-	-	-	-	-	-	-
Water Fund Restricted	-	-	100,000	-	200,000	-	-	300,000
Water Fund Unrestricted	425,000	500,000	4,500,000	3,000,000	100,000	1,800,000	3,800,000	13,700,000
State/Federal/SRF	-	-	-	-	-	-	-	-
Bond/Lapsed Bond	-	-	-	-	-	-	-	-
Other	-	-	-	-	-	-	-	-
Total Revenue	\$425,000	\$500,000	\$4,600,000	\$3,000,000	\$300,000	\$1,800,000	\$3,800,000	\$14,000,000
Cost Categories (Expenditures)	Prior Years Expend/Enob	FY18	FY19	FY20	FY21	FY22	FY23	FY18-23
Acquisition	-	300,000	-	-	100,000	100,000	-	500,000
Construction	-	-	4,500,000	3,000,000	-	1,500,000	3,500,000	12,500,000
Design	-	200,000	100,000	-	200,000	200,000	300,000	1,000,000
Equipment	-	-	-	-	-	-	-	-
Renovations/Rehabilitation	-	-	-	-	-	-	-	-
Management	-	-	-	-	-	-	-	-
Planning	-	-	-	-	-	-	-	-
Total Expenditure	-	\$500,000	\$4,600,000	\$3,000,000	\$300,000	\$1,800,000	\$3,800,000	\$14,000,000



KAHULUI TANK II

CBS-4622

District: Wailuku-Kahului

Project Description

Participate in construction of new 2 million gallon tank with Maui Lani.

Project Justification

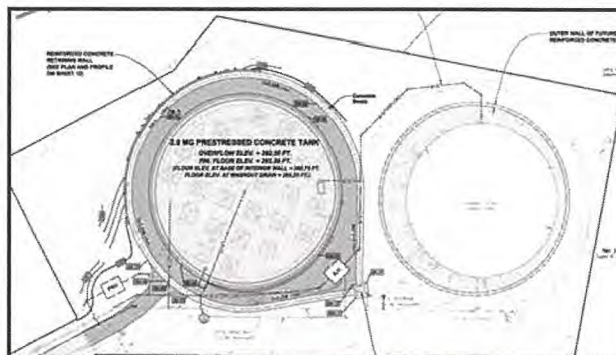
The tank is necessary for the water supply system to accommodate existing and future demands, provide reliable and efficient service by limiting disruption in service, and prevent any potential health and safety issues.

Funding Sources

- » Water Supply Fund - Restricted

Operating Impact Narrative

No significant impact on staffing or operating budget is anticipated.



Project Type	
Drainage	Road Improvements
Government Facilities	Sanitation
Other Projects	Sewer
Parks and Recreation	Water Supply

Countywide Priority Results
Strong and Diversified Economy
Healthy and Sustainable Community
Augment Public Infrastructure
Responsive, Effective and Efficient Government
Prepared, Safe and Livable County



Funding Sources (Revenue)	FY17 Appr	FY18	FY19	FY20	FY21	FY22	FY23	FY18-23
General Fund	-	-	-	-	-	-	-	-
Highway Fund	-	-	-	-	-	-	-	-
Sewer Fund	-	-	-	-	-	-	-	-
Solid Waste Management Fund	-	-	-	-	-	-	-	-
Water Fund Restricted	-	2,450,000	-	-	-	-	-	2,450,000
Water Fund Unrestricted	-	-	-	-	-	-	-	-
State/Federal/BRF	-	-	-	-	-	-	-	-
Bond/Lapsed Bond	-	-	-	-	-	-	-	-
Other	-	-	-	-	-	-	-	-
Total Revenue	-	\$2,450,000	-	-	-	-	-	\$2,450,000
Cost Categories (Expenditures)	Prior Years Expend/Enob	FY18	FY19	FY20	FY21	FY22	FY23	FY18-23
Acquisition	-	-	-	-	-	-	-	-
Construction	-	2,200,000	-	-	-	-	-	2,200,000
Design	-	250,000	-	-	-	-	-	250,000
Equipment	-	-	-	-	-	-	-	-
Renovations/Rehabilitation	-	-	-	-	-	-	-	-
Management	-	-	-	-	-	-	-	-
Planning	-	-	-	-	-	-	-	-
Total Expenditure	-	\$2,450,000	-	-	-	-	-	\$2,450,000



WEST MAUI RELIABLE CAPACITY

CBS-1092

District: West Maui

Project Description

The West Maui Reliable Capacity project will support source, transmission, and storage expansion for the West Maui system. Anticipated project in FY 2018 include but are not limited to:

1. Construction: Mahinahina Well 1 Development

Funding Sources

- » Water Supply Fund - Restricted & Unrestricted
- » State Revolving Loan Fund

Operating Impact Narrative

No significant impact on staffing or operating budget is anticipated.



Project Type	
Drainage	Road Improvements
Government Facilities	Sanitation
Other Projects	Sewer
Parks and Recreation	Water Supply

Countywide Priority Results
Strong and Diversified Economy
Healthy and Sustainable Community
Augment Public Infrastructure
Responsive, Effective and Efficient Government
Prepared, Safe and Livable County



Funding Sources (Revenue)	FY17 Appr	FY18	FY19	FY20	FY21	FY22	FY23	FY18-23
General Fund	-	-	-	-	-	-	-	-
Highway Fund	-	-	-	-	-	-	-	-
Sewer Fund	-	-	-	-	-	-	-	-
Solid Waste Management Fund	-	-	-	-	-	-	-	-
Water Fund Restricted	-	-	-	-	-	100,000	-	100,000
Water Fund Unrestricted	-	5,000,000	7,500,000	500,000	200,000	200,000	2,500,000	15,900,000
State Revolving Loan Fund	-	5,000,000	-	-	-	10,000,000	-	15,000,000
Bond/Lapsed Bond	-	-	-	-	-	-	-	-
Other	-	-	-	-	-	-	-	-
Total Revenue	-	\$10,000,000	\$7,500,000	\$500,000	\$200,000	\$10,300,000	\$2,500,000	\$31,000,000
Cost Categories (Expenditures)	Prior Years Expend/Enclb	FY18	FY19	FY20	FY21	FY22	FY23	FY18-23
Acquisition	-	-	200,000	-	-	100,000	-	300,000
Construction	-	10,000,000	7,000,000	200,000	200,000	10,000,000	2,500,000	29,900,000
Design	-	-	300,000	300,000	-	200,000	-	800,000
Equipment	-	-	-	-	-	-	-	-
Renovations/Rehabilitation	-	-	-	-	-	-	-	-
Management	-	-	-	-	-	-	-	-
Planning	-	-	-	-	-	-	-	-
Total Expenditure	-	\$10,000,000	\$7,500,000	\$500,000	\$200,000	\$10,300,000	\$2,500,000	\$31,000,000

COUNTY OF MAUI
REVENUES - FEES, RATES, ASSESSMENTS AND TAXES

ACCOUNT	REVENUE SOURCE	FEE, RATE, ASSESSMENT OR TAX	HRS	COUNTY CODE	ORDINANCE
DEPARTMENT OF TRANSPORTATION HIGHWAY FUND (Cont.)					
		Americans With Disabilities Act (ADA)			
		ADA Paratransit Fare: Monthly and daily passes shall be provided.			
	Advertising Permit Fee	Advertising inside County transit buses.....\$25 per card per month Advertising inside County transit buses for nonprofit organizations.....Free, on a space available basis		11.02.040(B) & (C)	
DEPARTMENT OF WATER SUPPLY WATER FUND					
3475	Water Service Rates General Water Consumers	Water service charges to Single-family dwellings, single-family and accessory dwellings with 5/8" meters (Monthly):		Charter 8-11.4(2)	
		Per 1,000 Gallons			
		0 - 5,000 gallons\$2.00			
		5,001-15,000 gallons..... [\$3.80] <u>\$3.95</u>			
		15,001-35,000 gallons..... [\$5.70] <u>\$5.90</u>			
		≥35,001 gallons..... [\$6.35] <u>\$6.45</u>			
		Water Shortage Rates			
		Stage 1 Stage 2 Stage 3			
		Per 1,000 Gallons			
		0 - 5,000 gallons.....\$2.00 2.00 2.00			
		5,001-15,000 gallons..... [3.80] <u>3.95</u> [3.80] <u>3.95</u> [3.80] <u>3.95</u>			
		15,001-35,000 gallons..... [5.70] <u>5.90</u> [7.10] <u>7.35</u> [8.50] <u>8.85</u>			
		≥35,001 gallons..... [6.35] <u>6.45</u> [9.50] <u>9.65</u> [11.10] <u>11.25</u>			
		Water service charges to All Other General Water Consumers (Monthly):			
		Per 1,000 Gallons			
		0 - 5,000 gallons\$2.00			
		5,001-15,000 gallons..... [\$3.80] <u>\$3.95</u>			
		≥ 15,001 gallons..... [\$5.70] <u>\$5.90</u>			
		Water Shortage Rates			
		Stage 1 Stage 2 Stage 3			
		Per 1,000 Gallons			
		0 - 5,000 gallons.....\$2.00 2.00 2.00			
		5,001-15,000 gallons..... [3.80] <u>3.95</u> [3.80] <u>3.95</u> [3.80] <u>3.95</u>			
		≥ 15,001 gallons..... [5.70] <u>5.90</u> [7.10] <u>7.35</u> [8.50] <u>8.85</u>			
		In addition to the above water service charges, there is a monthly service charge by meter size:			
		Size of Meter	Per Meter/Month		
		5/8 inch (02) [\$19.25] <u>\$20.25</u>			
		3/4 inch (03) [\$31.00] <u>\$32.50</u>			
		1 inch (04) [\$46.00] <u>\$48.50</u>			
		1-1/2 inch (06) [\$88.00] <u>\$92.50</u>			
		2 inch (07) [\$137.00] <u>\$144.00</u>			
		3 inch (09) [\$242.00] <u>\$254.00</u>			
		4 inch (12) [\$420.00] <u>\$441.00</u>			
		6 inch (15) [\$770.00] <u>\$808.00</u>			
		8 inch (18)..... [\$1,215.00] <u>\$1,275.00</u>			
3475	Temporary Meter Charges	The meter service charge for all temporary meters shall be equal to the charge for 3-inch meter. In addition, there shall be an installation and conservation meter charge. The installation charge shall be based on the cost of installation and will be determined case by case. The conservation charge shall be 1.5 times the "general" water service rate.		Charter 8-11.4(2)	

COUNTY OF MAUI
REVENUES - FEES, RATES, ASSESSMENTS AND TAXES

ACCOUNT	REVENUE SOURCE	FEE, RATE, ASSESSMENT OR TAX	HRS	COUNTY CODE	ORDINANCE																				
DEPARTMENT OF WATER SUPPLY WATER FUND (Cont.)																									
3477	Water Service Rates - Agricultural Consumers	Agriculture and non-potable water service charges (Monthly):			Charter 8-11.4(2)																				
	Agricultural Rates	<p style="text-align: center;">Per 1,000 Gallons</p> <p>0 – 5,000 gallons\$2.00</p> <p>5,001-15,000 gallons.....[\$3.80] <u>\$3.95</u></p> <p>≥ 15,001 gallons.....\$1.10</p> <p style="text-align: center;">Water Shortage Rates</p> <table><tr><td></td><td>Stage 1</td><td>Stage 2</td><td>Stage 3</td></tr><tr><td colspan="4" style="text-align: center;">Per 1,000 Gallons</td></tr><tr><td>0 – 5,000 gallons.....</td><td>\$2.00</td><td>2.00</td><td>2.00</td></tr><tr><td>5,001-15,000 gallons.....</td><td>[3.80] <u>3.95</u></td><td>[3.80] <u>3.95</u></td><td>[3.80] <u>3.95</u></td></tr><tr><td>≥ 15,001 gallons.....</td><td>1.10</td><td>1.20</td><td>1.30</td></tr></table>		Stage 1	Stage 2	Stage 3	Per 1,000 Gallons				0 – 5,000 gallons.....	\$2.00	2.00	2.00	5,001-15,000 gallons.....	[3.80] <u>3.95</u>	[3.80] <u>3.95</u>	[3.80] <u>3.95</u>	≥ 15,001 gallons.....	1.10	1.20	1.30			
	Stage 1	Stage 2	Stage 3																						
Per 1,000 Gallons																									
0 – 5,000 gallons.....	\$2.00	2.00	2.00																						
5,001-15,000 gallons.....	[3.80] <u>3.95</u>	[3.80] <u>3.95</u>	[3.80] <u>3.95</u>																						
≥ 15,001 gallons.....	1.10	1.20	1.30																						
	Non-Potable Rates	<p>All usage.....\$1.00</p> <p>In addition to the above water service charges, there is a monthly service charge by meter size:</p> <table><tr><td>Size of Meter</td><td>Per Meter/Month</td></tr><tr><td>5/8 inch (02)</td><td>[\$19.25] <u>\$20.25</u></td></tr><tr><td>3/4 inch (03)</td><td>[\$31.00] <u>\$32.50</u></td></tr><tr><td>1 inch (04)</td><td>[\$46.00] <u>\$48.50</u></td></tr><tr><td>1-1/2 inch (06).....</td><td>[\$88.00] <u>\$92.50</u></td></tr><tr><td>2 inch (07)</td><td>[\$137.00] <u>\$144.00</u></td></tr><tr><td>3 inch (09)</td><td>[\$242.00] <u>\$254.00</u></td></tr><tr><td>4 inch (12)</td><td>[\$420.00] <u>\$441.00</u></td></tr><tr><td>6 inch (15)</td><td>[\$770.00] <u>\$808.00</u></td></tr><tr><td>8 inch (18)</td><td>[\$1,215.00] <u>\$1,275.00</u></td></tr></table>	Size of Meter	Per Meter/Month	5/8 inch (02)	[\$19.25] <u>\$20.25</u>	3/4 inch (03)	[\$31.00] <u>\$32.50</u>	1 inch (04)	[\$46.00] <u>\$48.50</u>	1-1/2 inch (06).....	[\$88.00] <u>\$92.50</u>	2 inch (07)	[\$137.00] <u>\$144.00</u>	3 inch (09)	[\$242.00] <u>\$254.00</u>	4 inch (12)	[\$420.00] <u>\$441.00</u>	6 inch (15)	[\$770.00] <u>\$808.00</u>	8 inch (18)	[\$1,215.00] <u>\$1,275.00</u>			
Size of Meter	Per Meter/Month																								
5/8 inch (02)	[\$19.25] <u>\$20.25</u>																								
3/4 inch (03)	[\$31.00] <u>\$32.50</u>																								
1 inch (04)	[\$46.00] <u>\$48.50</u>																								
1-1/2 inch (06).....	[\$88.00] <u>\$92.50</u>																								
2 inch (07)	[\$137.00] <u>\$144.00</u>																								
3 inch (09)	[\$242.00] <u>\$254.00</u>																								
4 inch (12)	[\$420.00] <u>\$441.00</u>																								
6 inch (15)	[\$770.00] <u>\$808.00</u>																								
8 inch (18)	[\$1,215.00] <u>\$1,275.00</u>																								
3480	Fire Water Service Rates	<p style="text-align: right;">Per Month</p> <p>Hydrants (per hydrant)\$3.50</p> <p>Standpipes (per standpipe).....\$2.00</p> <p>Private fire systems (per inch diameter of feeder main).....\$2.75</p> <p>Water service usage as measured by detector check meters in private fire systems shall be billed at 35 times the meter reading.</p> <p>Water service usage as measured by fire meters reading the full flow shall be billed at 1.5 times the total reading. If water usage can be shown to result from a fire, there shall be no charge other than the private fire system charge.</p>																							
3481	Restoration Charge	Restoration of Water Service for locked meter [\$100] <u>\$120</u>	54-33	Department of Water Supply Rules and Regulations 3-11																					
	Installation Charges	<p>New Installation of 5/8" meter: Existing cast iron meter box and fittings [\$160] <u>\$190</u></p> <p>New installation of 3/4" and 1" meters: Existing cast iron meter box and fittings [\$230] <u>\$275</u></p> <p>Flat charge applies only on installations requested by consumers at locations with existing service lateral</p> <p>Temporary construction meter installations are subject to the "Applications and Agreement of Terms & Conditions for a Permit to use a Fire Hydrant or Standpipe for a Temporary Meter"\$485</p> <p>Replacing damaged or missing transponder [\$160] <u>\$190</u></p>	54-33	14.04.040(B)																					

COUNTY OF MAUI
REVENUES - FEES, RATES, ASSESSMENTS AND TAXES

ACCOUNT	REVENUE SOURCE	FEE, RATE, ASSESSMENT OR TAX	HRS	COUNTY CODE	ORDINANCE
DEPARTMENT OF WATER SUPPLY WATER FUND (Cont.)					
		Replacing damaged or missing meter, cost of meter, plus 20% plus cost of materials..... By Size			
		Replacement of Ball Valves	[\$260]	\$310	
		All jobs will require a cash deposit and upon completion, the customer will be billed or refunded the difference between the deposit and actual cost to do the job.			
Charges Billed on Actual Cost					
				Deposit	
		All Meter upgrades, reinstallations, and relocations (minimum charge - \$160).....		\$1,000	
		Installation of greater than 1" permanent meters (minimum charge - \$160).....		\$1,000	
		Installation of service lateral (1" or 1-1/4") requiring tapping the mainline (minimum charge \$160):			
		Same side of road.....		\$1,500	
		Opposite side of road		\$2,100	
		Paving costs		\$2,100	
		Corporation Tap - Wet tap existing waterline with corporation stop (minimum charge \$160)		\$360	
		Tap-in - Wet tap existing waterline with tapping sleeve and gate valve (minimum charge \$160):			
		Sizes			
		4", 6", 8", 12"		\$900	
		Tie-in - Removal of plug or cap from existing waterline and connect new waterline (minimum charge \$160):			
		Sizes			
		4", 6", 8"		\$900	
		12" and over		\$1,200	
		Cut-in - Installation of fitting and/or valve in existing waterline (minimum charge \$160):			
		Sizes			
		4", 6", 8"		\$1,000	
		Using A/C pipe		\$1,500	
		12" and over		\$1,500	
		Using A/C pipe		\$2,000	
		There will be a minimum charge of \$100 for all jobs billed at actual cost.			
		Overtime Work - Additional Deposit.....		\$1,200	
		The contractor shall furnish all fittings, pipes, and valves as well as all excavation, back fill work and reaction blocks for connections. The contractor shall have equipment and equipment operator at the job site to lower pipe, fittings, valves or tapping machine into the trench. A licensed DSO (Distribution System Operator) must be present on the job site. A higher deposit may be required for complex connections or hazardous conditions.			
		In addition to these charges, labor cost and other incidental supplies shall be computed and billed to the customer upon job completion and shall be based on actual labor time, rate and cost of incidental supplies.			
		Labor (includes overhead)		Per Hour	
		Job Costing.....	[\$55.83]	\$58.99	
		Overtime	[\$83.76]	\$88.49	

COUNTY OF MAUI
REVENUES - FEES, RATES, ASSESSMENTS AND TAXES

ACCOUNT	REVENUE SOURCE	FEE, RATE, ASSESSMENT OR TAX	HRS	COUNTY CODE	ORDINANCE
DEPARTMENT OF WATER SUPPLY WATER FUND (Cont.)					
	Inspection	[\$68.94] <u>\$71.12</u>			
	Overtime	[\$103.41] <u>\$106.68</u>			
	Materials (includes 20% stores expense)	(see as follows)			
	Equipment	(see as follows)			
	Transportation				
	Per Mile	[\$0.65] <u>\$0.64</u>			
	Patching				
	Without base course				
	Per sq. yd.	\$16.58			
	Per sq. ft.	\$2.00			
	With base course				
	Per sq. yd.	\$24.98			
	Per sq. ft.	\$3.41			
	Hot Mix				
	Per ton	\$133.30			
	Cold Mix				
	Per ton	\$138.00			
	S4C				
	Per ton	\$45.00			
	Crushed Rock				
	Half ton	\$35.00			
	Meals				
	Breakfast	\$6.00			
	Lunch	\$8.00			
	Dinner	\$10.00			
	Equipment will be charged at per hour rate schedule.				
	Equipment ID No.	Per Hour			
	Air Compressors (Add charge for either compactor, drilling machine, or breaker):				
	6 160 CFM, diesel powered	\$20.00			
	8 125 CFM, diesel powered	\$22.00			
	9 185 CFM <u>Airman</u> , diesel powered	[\$24.00] <u>\$50.00</u>			
	Chain Saws:				
	14" Target All-Purpose	\$20.00			
	18" 14" Target Saw	[\$12.00] <u>\$20.00</u>			
	16" Bar Saw	<u>\$20.00</u>			
	Compactors:				
	12", 22", and 24" shoe	[\$15.00] <u>\$30.00</u>			
	Boom Truck:				
	International Boom Truck	[\$76.00] <u>\$100.00</u>			
	2001 Ford 350 w/crane	\$62.00			
	Digger:				
	Post Hole Digger C71-5, 8" auger	[\$15.00] <u>\$30.00</u>			
	Mini Excavator, Model 303.5	[\$36.00] <u>\$50.00</u>			
	Mini Excavator, Model 35D	[\$36.00] <u>\$50.00</u>			
	Drilling Machine:				
	Mueller CL-12 w/601 air motor	[\$72.00] <u>\$140.00</u>			

COUNTY OF MAUI
REVENUES - FEES, RATES, ASSESSMENTS AND TAXES

ACCOUNT	REVENUE SOURCE	FEE, RATE, ASSESSMENT OR TAX	HRS	COUNTY CODE	ORDINANCE
---------	----------------	------------------------------	-----	-------------	-----------

**DEPARTMENT OF WATER SUPPLY
WATER FUND (Cont.)**

Forklift:

[Wiggins W66ST, 1976, 6,000 lbs, 14 ft. lift.....\$29.00]
Haster, 1992, 5-Ton Lift.....\$50.00

Generator:

6KW Yamaha.....[\$36.00] \$40.00

Pavement Breakers:

69 lbs. and 95 lbs. w/50-foot air hose.....[\$11.00] \$30.00

Pavement Saw:

[Rebuilt Saw] Husqvarna Road Saw.....[\$11.00] \$30.00

Roller:

Hamm Tandem Drum Roller.....[\$62.00] \$80.00

Track or Rubber Tire Loaders:

12 Case 580K, 1990, Backhoe-Loader, diesel driven, rubber
tire, CAT 416, 426.....[\$90.00] \$100.00
31 Case 580M, 2002, Backhoe-Loader, diesel driven, rubber
tire w/extendahoe.....[\$90.00] \$100.00
28, 29 John Deere 410D, 1993, Backhoe,
diesel driven (Tractor).....[\$90.00] \$100.00
44 John Deere 410E, 1995, Backhoe, diesel driven
(Tractor).....[\$90.00] \$100.00
Case 580M, Backhoe-Loader.....[\$90.00] \$100.00
Model 262, Bobcat.....[\$60.00] \$80.00
310K Backhoe Loader.....\$100.00

Trucks (Includes charge for trailer, add charge for forklift):

1011 International, 1991 Dump Truck.....[\$96.00] \$100.00
1704 International, 1998 Dump Truck.....[\$96.00] \$100.00
1899/2001 Peterbilt, 2005 Model 378 Dump Truck
.....[\$96.00] \$100.00
2145 Peterbilt, 2007 Model 378 Dump Truck[\$96.00] \$100.00
2296 2,000 Gal. Water Truck.....[\$108.00] \$120.00
1373 International, 1990 Dump Truck.....[\$96.00] \$100.00
2482 2014 Peterbilt Dump Truck.....\$100.00

Water Pump:

Trash Pump, 3" Wacker.....[\$36.00] \$40.00

Welder:

Miller Bobcat 250, Gas-Driven.....[\$30.00] \$40.00

Materials will be charged [from] at Stores Inventory Price cost list
plus 20% warehouse expense.

COUNTY OF MAUI
REVENUES - FEES, RATES, ASSESSMENTS AND TAXES

ACCOUNT	REVENUE SOURCE			FEE, RATE, ASSESSMENT OR TAX				HRS	COUNTY CODE	ORDINANCE	
DEPARTMENT OF WATER SUPPLY WATER FUND (Cont.)											
MATERIALS UNIT COST											
	1/4"	1/2"	3/4"	1"	1-1/4"	1-1/2"	2"	2-1/2"	3"	4"	6"
GATE VALVE	---	---	[43.73] 30.23	41.00	22.32	[64.37] 25.32	[132.68] 72.20	[144.61] 67.27	[183.42] 94.80	[93.60] 136.90	---
GATE VALVE, MJFE 6"	---	---	---	---	---	---	---	---	---	---	668.63
CHECK VALVE	---	---	57.84	[52.79] 39.86	10.55	42.85	167.86	96.82	189.06	---	---
BALL VALVE		22.21	[44.88] 45.13	[72.56] 71.05	---	[146.88] 144.86	[216.52] 214.68	[186.29] 247.42	---	---	---
MALE ADAPTER	---	1.25	[2.62] 2.06	[5.45] 4.37	8.81	[9.26] 9.05	19.08	58.50	22.85	39.02	---
BRASS COCK	3.38	23.32	[39.71] 39.02	[57.61] 57.08	[88.80] 88.16	[111.80] 115.58	[184.44] 181.73	[181.62] 351.89	---	---	---
SERVICE COUPLER PJ x PJ	---	---	15.19	[18.07] 18.18	[30.19] 31.16	[53.90] 58.50	[79.32] 81.64	[118.25] 118.26	---	---	---
COUPLINGS:											
Standard Brass T X T	0.65	---	[2.65] 2.96	[3.70] 3.96	6.37	[4.60] 6.67	15.53	[19.57] 23.02	13.32	---	---
Copper to Copper	0.19	0.23	0.52	[1.44] 1.45	1.18	5.81	1.66	---	30.48	---	---
Galvanized	---	---	0.74	1.21	1.81	2.59	4.66	[19.92] 19.10	[10.32] 17.21	25.28	---
Service x 6	---	17.95	27.92	[29.80] 29.06	25.73	35.68	---	---	38.12	---	---
Service x 12	---	---	36.04	26.46	48.10	[74.90] 75.04	[89.86] 92.54	[95.98] 98.50	[114.25] 114.74	[144.10] 145.44	---
Meter Coupling	---	---	---	14.90	---	---	---	---	---	---	---
Coupler, PJ, Male	---	---	[12.98] 12.90	[15.43] 15.19	[29.88] 29.38	[42.42] 41.90	[60.19] 60.29	---	---	---	---
Coupler, PJ, Female	---	---	[13.56] 13.52	[18.53] 18.43	[32.20] 32.40	[48.96] 49.82	[61.98] 62.50	[32.75] 61.22	---	---	---
ELBOWS 45°:											
Copper to Copper	---	---	0.52	---	---	0.76	---	---	50.89	---	---
Galvanized	---	---	0.92	1.03	1.60	1.27	1.74	3.97	---	10.09	---
ELBOWS 90°:											
Copper to Copper	---	0.24	[1.66] 1.67	4.34	1.45	7.60	4.43	29.98	29.32	---	---
Standard Brass T X T	---	---	[4.13] 3.72	[6.34] 5.65	9.17	[10.88] 10.58	[18.66] 17.76	[38.83] 35.35	18.29	---	---
Standard Brass ST	---	---	[4.57] 4.51	---	---	---	---	---	---	---	---
Galvanized	---	---	---	[0.89] 0.90	1.60	3.06	[4.88] 7.84	[28.61] 23.44	[35.29] 31.73	38.06	---
Galvanized Street	---	---	0.76	1.60	[1.14] 1.64	3.41	[7.32] 9.77	21.24	28.22	56.58	---
PIPES:											
Copper Type K	---	3.55	[3.38] 3.13	[4.86] 4.87	6.11	[9.32] 6.78	[15.53] 14.69	25.03	4.93	8.35	---
Galvanized	---	0.73	[1.25] 1.97	1.70	2.35	3.05	[4.09] 4.39	---	[13.64] 10.62	6.47	---
Drisco 5100, 100 ft.	---	---	---	[0.77] 0.62	0.88	1.10	[2.68] 2.36	---	---	---	---
Drisco 5100, 300 ft.	---	---	---	---	---	1.20	2.09	---	---	---	---
Drisco 8600, 20 ft.	---	---	---	---	---	---	---	---	---	[5.44] 5.33	---
Drisco 8600, 300 ft.	---	---	---	---	---	---	2.50	---	---	---	---
DI, TY 6"	---	---	---	---	---	---	---	---	---	---	[22.19] 18.23
PLUG - Brass	---	---	---	2.86	4.07	---	---	---	---	---	---
PLUG - Galvanized	---	1.58	1.64	0.86	2.18	[4.57] 3.95	6.29	[7.56] 7.69	10.19	5.98	---
UNIONS:											
Copper to Copper	---	---	12.35	6.96	17.22	26.44	---	13.80	---	---	---
Copper to Female	---	---	4.42	19.39	76.64	13.14	34.00	368.95	---	---	---

COUNTY OF MAUI
REVENUES - FEES, RATES, ASSESSMENTS AND TAXES

ACCOUNT	REVENUE SOURCE			FEE, RATE, ASSESSMENT OR TAX				HRS	COUNTY CODE	ORDINANCE	
DEPARTMENT OF WATER SUPPLY WATER FUND (Cont.)											
MATERIALS UNIT COST											
Copper to Male	---	---	9.40	20.42	8.69	14.62	17.40	117.94	---	---	---
Standard Brass T X T	---	---	7.72	[7.49] 11.87	12.14	10.42	28.79	38.46	83.05	---	---
Galvanized	---	---	1.62	2.35	3.79	3.98	5.32	15.44	13.67	62.42	---

COUNTY OF MAUI
REVENUES - FEES, RATES, ASSESSMENTS AND TAXES

ACCOUNT	REVENUE SOURCE	FEE, RATE, ASSESSMENT OR TAX	HRS	COUNTY CODE	ORDINANCE
---------	----------------	------------------------------	-----	-------------	-----------

**DEPARTMENT OF WATER SUPPLY
WATER FUND (Cont.)**

TEES	T X T	C - C	GALV.	OTHER
3/4	[4.66] 4.33	2.86	0.94	---
3/4 x 3/4 x 1	---	0.50	---	---
1	8.45	3.04	1.52	---
1 x 1 x 3/4	---	3.47	---	---
1 x 1 x 1-1/2	---	29.24	---	---
1-1/4	12.10	8.17	2.41	---
1-1/4 x 1 x 1	---	12.44	---	---
1-1/4 x 1-1/4 x 1	---	7.54	---	---
1-1/2	15.70	6.43	2.66	---
1-1/2 x 1 x 1	---	0.00	---	---
1-1/2 x 1-1/2 x 1	---	15.53	---	---
1-1/2 x 1-1/2 x 1-1/4	---	---	---	---
2	27.11	33.96	4.32	---
2 x 3/4	---	8.09	---	---
2 x 2 x 1	---	22.75	---	---
2 x 2 x 1-1/4	---	8.20	---	---
2-1/2	34.12	3.23	25.70	---
2-1/2 x 3/4	---	23.20	---	---
2-1/2 x 2-1/2 x 1	---	24.31	---	---
2-1/2 x 2-1/2 x 1-1/4	---	5.57	---	---
2-1/2 x 2-1/2 x 1-1/2	---	5.57	---	---
2-1/2 x 2-1/2 x 2	---	5.57	---	---
3	66.23	---	[14.66] 19.79	---
4	---	---	[75.78] 81.38	---
6" CIMJ	---	---	---	125.26

LEAK REPAIR CLAMP	
1/2 x 3	4.94
3/4 x 3	[10.58] 9.70
3/4 x 6	[15.29] 17.26
1 x 3	[10.62] 10.24
1 x 6	[17.78] 18.52
1-1/4 x 3	[10.30] 10.72
1-1/4 x 6	[17.20] 18.74
1-1/2 x 3	[10.25] 10.76
1-1/2 x 6	[21.74] 22.00
2 x 3	[11.62] 12.12
2 x 6	[22.08] 22.38
2-1/2 x 3	[9.10] 10.40
2-1/2 x 6	19.36
3 x 6	[25.15] 26.53
4 x 6	28.31

NIPPLES	BRASS	GALV.
1/2 x 4	[3.34] 3.35	0.40
1/2 x 6	---	0.58
3/4 x Close	[1.72] 1.61	---
3/4 x 2	[2.24] 2.09	---
3/4 x 2-1/2	[2.71] 2.52	---
3/4 x 4	[3.84] 3.68	0.43
3/4 x 6	[5.41] 5.23	1.00
3/4 x 8	[6.56] 10.79	---
1 x Close	[3.04] 2.52	---
1 x 2-1/2	[3.86] 3.58	---
1 x 4	[5.47] 5.26	0.61
1 x 6	[8.26] 7.52	1.51
1-1/4 x 4	8.23	1.08
1-1/4 x 6	11.64	1.24
1-1/2 x 4	9.82	1.81
1-1/2 x 6	[14.04] 14.03	2.90
2 x 4	12.32	1.03
2 x 6	17.87	[4.62] 22.09
2-1/2 x Close	15.26	---
2-1/2 x 4	28.13	[4.94] 4.55
2-1/2 x 6	[36.60] 65.28	[8.48] 7.69
3 x 4	---	4.68
3 x 6	53.16	4.57
4 x 6	76.49	[11.62] 15.64

COUNTY OF MAUI
REVENUES - FEES, RATES, ASSESSMENTS AND TAXES

ACCOUNT	REVENUE SOURCE	FEE, RATE, ASSESSMENT OR TAX	HRS	COUNTY CODE	ORDINANCE
DEPARTMENT OF WATER SUPPLY WATER FUND (Cont.)					
MATERIALS UNIT COST					
SERVICE SADDLES					
1-1/2 x 3/4	Galvanized	90.62			
2 x 3/4	Galvanized	15.31			
2 x 1	Galvanized	13.72			
2-1/2 x 3/4	Galvanized	23.02			
2-1/2 x 1	Galvanized	---			
3 x 3/4	Galvanized	106.25			
4 x 3/4	Galvanized	23.56			
4 x 1	Galvanized	66.07			
4 x 1-1/2	Galvanized	42.96			
6 x 3/4	Galvanized	52.12			
3 x 1	AC	26.29			
4 x 3/4	AC	84.83			
4 x 1	AC	[80.26] 79.96			
4 x 1-1/4	AC	42.46			
4 x 1-1/2	AC	47.12			
6 x 3/4	AC	93.66			
6 x 1	AC	[94.21] 93.83			
6 x 1-1/4	AC	69.66			
6 x 1-1/2	AC	[107.57] 107.27			
6 x 2	AC	[120.71] 119.78			
8 x 1	AC	[113.77] 115.18			
8 x 3/4	AC	90.46			
8 x 1-1/4	AC	52.70			
8 x 1-1/2	AC	[123.60] 123.04			
8 x 2	AC	[134.11] 133.50			
10 x 2	AC	142.92			
12 x 3/4	AC	80.10			
12 x 1	AC	168.34			
12 x 1-1/4	AC	155.45			
12 x 1-1/2	AC	205.16			
12 x 2	AC	197.15			
FULL CIRCLE CLAMP					
4 x 8		88.33			
4 x 12		[152.06] 152.76			
4 x 15		[175.63] 184.04			
6 x 12		[164.42] 151.94			
8 x 8		66.68			
8 x 12		182.62			
12 x 16		[307.09] 317.71			
STAINLESS STEEL INSERTS					
1 5100		[2.15] 1.46			
1-1/4 5100		[3.07] 2.76			
1-1/2 5100		[2.74] 2.87			
2 5100		[2.22] 2.64			
MISCELLANEOUS ITEMS					
THREAD BOLTS, 5/8 x 3		2.39			
THREADED RODS (PER FOOT) 5/8		[1.57] 9.65			
THREADED RODS (PER FOOT) 3/4		8.52			
HEX NUT, 3/4"		[0.43] 1.88			
HEX NUT, 5/8"		[0.83] 1.69			
HEX NUT, 5/8", OILED		0.40			
MACHINE BOLT, 3/4 x 2-1/2		1.18			
MACHINE BOLT, 5/8 x 2-1/2		[9.54] 13.81			
MEGA LUG 6"		31.04			
FLANGE GASKET #125 4"		[6.43] 5.20			
FLANGE GASKET #125 6"		[7.16] 7.24			
GASKET, MJ 6"		4.00			
SLEEVE, SOLID CIMJ 6 X 12		[69.68] 70.74			
BOX, VALVE-ROUND GFEEEN PLASTIC		[14.28] 16.25			
GLAND KIT 6"		[40.92] 48.74			
SHOVEL, FLAT		[13.70] 13.72			
SEALING TAPE		[1.43] 1.39			
CEMENT - 1 BAG		---			
HOSE REDUCER 2-1/2 x 1-1/2		[25.24] 24.29			
HOSE NIPPLE 2-1/2		39.06			
DOUBLE HOSE CONNECTION 2-1/2		70.78			
SLIDING VALVE BOX, TOP & BOTTOM, 24"		[157.01] 163.97			
SVB COVER TYLER 5 1/2"		[18.18] 19.50			
TAPPING SLEEVE 6 x 6		204.76			
PLASTIC METER BOX		[31.61] 32.63			
CAST IRON METER BOX 5/8 & 3/4, SHORT		111.90			
CAST IRON METER BOX 5/8 & 3/4, LONG		[289.94] 281.10			
CAST IRON METER BOX 1, LONG		[396.89] 396.92			
HANDLE, BALL VALVE 3/4 TO 1		[4.12] 4.04			
REDUCERS					
3/4 x 1/2	C - C	3.20	0.78		
1 x 3/4	---	[6.25] 5.72	1.60		
1-1/4 x 3/4	---	---	0.67		
1-1/4 x 1	2.24	10.56	0.86		
1-1/2 x 3/4	---	[11.80] 12.41	0.91		
1-1/2 x 1	1.48	[10.85] 11.17	0.92		
1-1/2 x 1-1/4	7.04	[10.75] 11.05	1.64		
2 x 3/4	---	13.52	1.31		
2 x 1	5.82	15.08	1.32		
2 x 1-1/4	2.09	14.80	1.31		
2 x 1-1/2	---	17.05	2.35		
2-1/2 x 1	---	4.08	---		
2-1/2 x 1-1/4	4.19	---	2.57		
2-1/2 x 1-1/2	4.66	[21.98] 26.09	6.10		
2-1/2 x 2	4.82	[26.12] 26.14	[13.81] 18.26		
3 x 1-1/2	---	---	3.64		
3 x 2	---	---	7.72		
3 x 2-1/2	---	31.38	3.64		
4 x 2	---	---	17.81		
4 x 2-1/2	---	---	25.60		
4 x 3	---	---	[34.62] 34.63		

COUNTY OF MAUI
REVENUES - FEES, RATES, ASSESSMENTS AND TAXES

ACCOUNT	REVENUE SOURCE	FEE, RATE, ASSESSMENT OR TAX	HRS	COUNTY CODE	ORDINANCE
---------	----------------	------------------------------	-----	-------------	-----------

**DEPARTMENT OF WATER SUPPLY
WATER FUND (Cont.)**

MATERIALS UNIT COST

HYDRANT RISER	
6 x 6	[89.80] 86.64
6 x 12	[111.29] 108.49
6 x 18	[141.54] 124.63

HYDRANT BURY	
6 x 30	215.71
6 x 36	230.62
6 x 42	239.12
6 x 48	[295.31] 289.31

HYDRANTS & ACCESSORIES	
#5 FIRE HYDRANT	1,182.00
#2-1/2 WHARF HYDRANT	[499.50] 506.16
2-1/2" HYDRANT GASKET	2.59
6" HYDRANT GASKET	[2.38] 17.22
5/8 x 3 HYDRANT BOLTS	[4.26] 4.27
5/8 x 3 MACHINE BOLTS	1.01

Corporation Stop	
1/2	7.94
1/2 x 3/4	15.10
3/4 x 3/4	20.50
3/4 x 1	18.16
1 x 1	5.77
1 x 1-1/4	29.71
1-1/4 x 1-1/2	77.53
1-1/2 x 2	78.40
2 x 2-1/2	[123.44] 123.46

Ball Corporation	
1/2	---
1/2 x 3/4	---
3/4 x 3/4	---
3/4 x 1	---
1 x 1	[45.34] 45.72
1 x 1-1/4	---
1-1/4 x 1-1/2	---
1-1/2 x 1-1/2	[110.95] 117.22
1-1/2 x 2	---
2 x 2	[192.41] 194.81
2 x 2-1/2	---

BUSHINGS	BRASS	GALV.
1/2 x 3/8	[1.46] 1.33	---
3/4 x 3/8	[2.23] 1.96	---
3/4 x 1/2	[2.29] 2.04	0.77
1 x 3/4	[3.31] 2.95	0.95
1-1/4 x 3/4	[4.61] 4.70	0.48
1-1/4 x 1	[5.42] 5.20	0.42
1-1/2 x 3/4	[9.02] 7.84	[0.92] 0.94
1-1/2 x 1	[7.82] 6.83	1.86
1-1/2 x 1-1/4	[7.19] 6.44	1.43
2 x 3/4	[9.25] 10.18	1.98
2 x 1	[10.69] 10.75	2.15
2 x 1-1/4	9.49	5.90
2 x 1-1/2	[9.62] 9.19	1.84
2-1/2 x 3/4	[22.10] 20.57	---
2-1/2 x 1	[22.02] 23.83	3.22
2-1/2 x 1-1/4	[16.72] 19.45	0.88
2-1/2 x 1-1/2	11.12	2.64
2-1/2 x 2	[20.08] 19.00	3.07
3 x 1	---	3.23
3 x 1-1/4	---	1.06
3 x 1-1/2	---	[16.09] 14.45
3 x 2	---	14.65
3 x 2-1/2	20.72	[1.72] 9.40
4 x 1-1/2	---	[13.15] 20.95
4 x 2	---	19.45
4 x 2-1/2	[38.80] 48.12	15.37
4 x 3	[21.80] 54.04	19.38

COUNTY OF MAUI
REVENUES - FEES, RATES, ASSESSMENTS AND TAXES

ACCOUNT	REVENUE SOURCE	FEE, RATE, ASSESSMENT OR TAX	HRS	COUNTY CODE	ORDINANCE
DEPARTMENT OF WATER SUPPLY WATER FUND (Cont.)					
3482	Service Fee for Dishonored Checks	\$30			
3797	Water System Development Fees	Water System Development Fund (Chapter 3.92, MCC) Meter Size Source Transmission Storage Fee 5/8 inch 5,789 3,859 2,412 \$12,060 3/4 inch 9,064 6,043 3,777 \$18,884 1 inch 16,011 10,674 6,671 \$33,356 1-1/2 inch 34,535 23,023 14,390 \$71,948 2 inch 60,006 40,004 25,002 \$125,012 3 inch 134,102 89,402 55,876 \$279,380 4 inch 238,301 158,867 99,292 \$496,460 6 inch 534,688 356,458 222,786 \$1,113,932 8 inch 949,165 632,777 395,486 \$1,977,428 10 inch 1,482,893 988,595 617,872 \$3,089,360 12 inch 2,134,769 1,423,180 889,487 \$4,447,436 Fixture units for single-family dwellings, single-family and accessory dwellings with 5/8", 3/4", and 1" meters shall be as follows: Meter Size Included Additional Maximum with fee unit cost additional units 5/8 inch 31 \$389 8 3/4 inch 53 \$356 14 1 inch 128 \$261 32 Water system development fee rates as of April 1993 will apply to requests of applicants on the priority list for upcountry, pursuant to Section 14.13.090, MCC, as of October 31, 2001 up to a maximum of three lots.	Charter 8-11.4(2)		
	Board of Water Supply Appeals Fees	Appeals\$300 Filing Fee		14.11.030	3557
		Fee for filing appeal may be refunded if board renders final decision and order authorizing refund in full or in part of filing fee.			
	Late Fees	Service charge to all late payments over 30 days1% per month	16-7-4(b)		
	Tenant Deposit	A tenant (including a lessee or licensee) may be required to provide a lump sum deposit equal to a two billing period estimate, as collateral for future billings.		14.10.010	
	Water Shortage Penalty	Violation of "Water Conservation and Control of Water Usage During Water Shortage" \$500 per violation		14.06A.090	4178
		Reinstallment fee for water meter removed..... \$100		14.06A.090	4178