



# Massachusetts Water Resources Authority

## *FY16 Draft Final Capital Improvement Budget*



FY16 Marks the Completion of CSO Program Construction  
June 3, 2015



## FY16 Draft Final CIP

- ✓ Focus on Asset Protection and Long-Term Redundancy initiatives;
- ✓ Reduce debt levels, paying more principal than projected borrowings; and
- ✓ FY16 Draft Final CIP meets all Cap requirements.

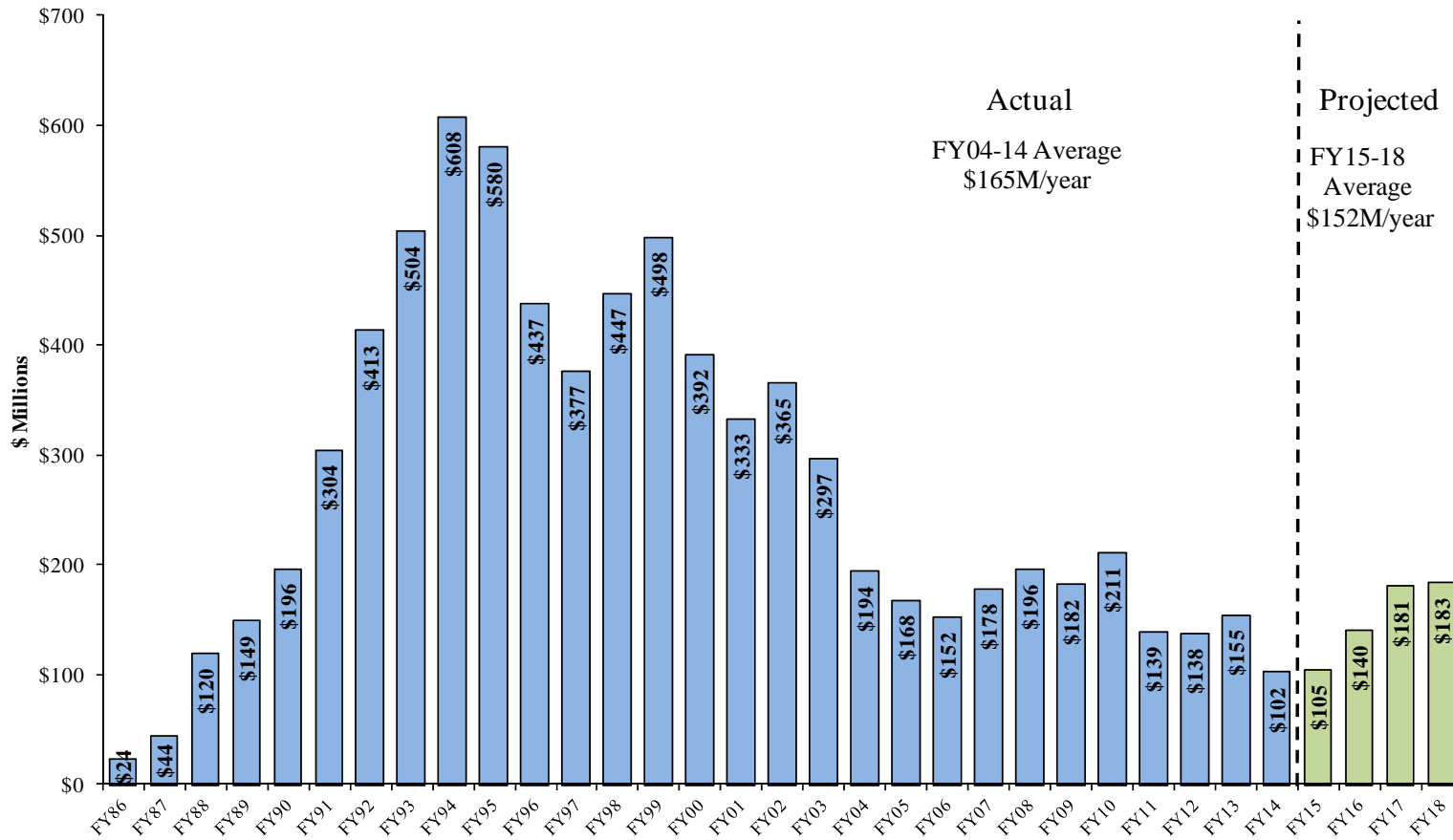


## Capital Project Updates

- Combined Heat & Power – Deer Island;
- Fish Hatchery Pipeline/Hydro;
- Sudbury Aqueduct – tunnel vs. surface pipeline;
- Residual Processing/Asset Management;
- Co-Digestion Deer Island Receiving Facilities; and
- New regulatory mandates.



# Historic and Projected Capital Improvement Spending (\$ in Millions)





## Asset Protection & Redundancy (\$ in millions)

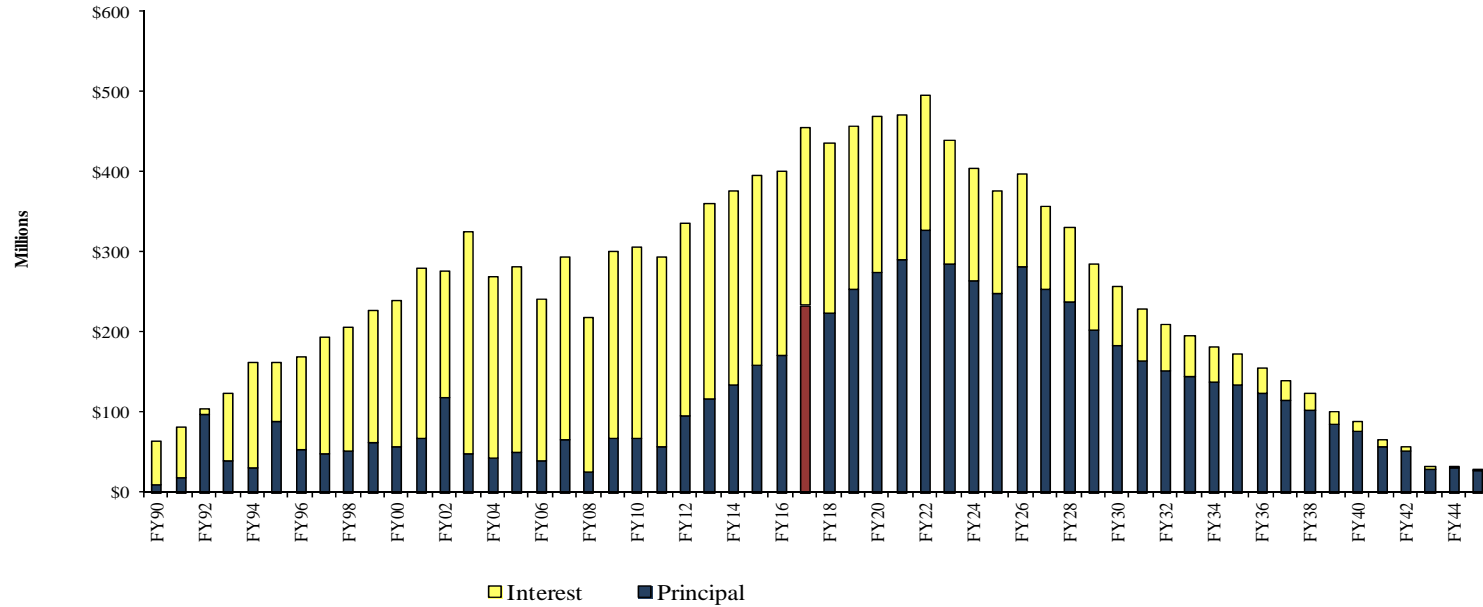
As the MWRA reaches steady state, capital spending will be increasingly targeted to preserving its physical plant (asset protection) and improving operating efficiencies (water redundancy).

	<b>FY09-13</b>	<b>FY14-18</b>	<b>FY19-23</b>	<b>Beyond 23</b>
Asset Protection	\$ 248.0	\$ 401.2	\$ 734.8	\$ 235.3
Water Redundancy	\$ 134.7	\$ 183.8	\$ 495.3	\$ 218.5
<b>Total</b>	<b>\$ 825.1</b>	<b>\$ 711.5</b>	<b>\$1,223.8</b>	<b>\$ 389.0</b>
<b>Asset Protection</b>	<b>30.1%</b>	<b>56.4%</b>	<b>60.0%</b>	<b>60.5%</b>
<b>Water Redundancy</b>	<b>16.3%</b>	<b>25.8%</b>	<b>40.5%</b>	<b>56.2%</b>
<b>Total</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>



# Paying More Principal than Interest

**MWRA Principal and Interest  
Payment History and Projections**





## FY14-18 Base-Line Cap as Compared with FY16 Draft Final Spending (\$ in Millions)

FY14-18 Base-Line Cap		FY14	FY15	FY16	FY17	FY18	Total FY14-18
	Projected Expenditures	\$142.5	\$147.6	\$149.3	\$141.8	\$136.8	\$718.0
Contingency	7.6	9.5	10.1	9.8	9.3	46.1	
Inflation on Unawarded Construction	0.8	4.2	8.4	11.1	13.5	37.9	
Less: Chicopee Valley Aqueduct Projects	(5.0)	(2.2)	(1.4)	(1.3)	(0.4)	(10.3)	
<b>FY14-18 Base-Line Cap</b>	<b>\$145.8</b>	<b>\$159.1</b>	<b>\$166.4</b>	<b>\$161.3</b>	<b>\$159.1</b>	<b>\$791.7</b>	

FY16 Final		FY14	FY15	FY16	FY17	FY18	Total FY14-18
	Projected Expenditures	\$102.2	\$104.7	\$140.5	\$180.8	\$183.4	\$711.5
Contingency	0.0	4.7	7.6	11.1	11.4	34.8	
Inflation on Unawarded Construction	0.0	0.0	1.1	5.4	8.6	15.1	
Less: I/I Program	0.0	(17.2)	(17.2)	(18.9)	(17.6)	(71.0)	
Less: Water Loan Program	0.0	1.4	2.2	2.5	(0.1)	6.0	
Less: Chicopee Valley Aqueduct Projects	(5.6)	(1.4)	(0.1)	(0.1)	(0.2)	(7.3)	
<b>FY16 Proposed FY14-18 Spending</b>	<b>\$96.6</b>	<b>\$92.2</b>	<b>\$134.1</b>	<b>\$180.8</b>	<b>\$185.5</b>	<b>\$689.1</b>	

FY16 Final vs FY14-18 Base-Line Cap		FY14	FY15	FY16	FY17	FY18	Total FY14-18
	Projected Expenditures	(\$40.3)	(\$42.9)	(\$8.8)	\$39.1	\$46.5	(\$6.4)
Contingency	(7.6)	(4.8)	(2.4)	1.3	2.1	(11.3)	
Inflation on Unawarded Construction	(0.8)	(4.2)	(7.3)	(5.7)	(4.9)	(22.8)	
Less: I/I Program	0.0	(17.2)	(17.2)	(18.9)	(17.6)	(71.0)	
Less: Water Loan Program	0.0	1.4	2.2	2.5	(0.1)	6.0	
Less: Chicopee Valley Aqueduct Projects	(0.6)	0.7	1.4	1.2	0.2	3.0	
<b>FY14-18 Cap (\$ Change)</b>	<b>(\$49.2)</b>	<b>(\$66.9)</b>	<b>(\$32.2)</b>	<b>\$19.5</b>	<b>\$26.3</b>	<b>(\$102.5)</b>	
<b>FY14-18 Cap (% Change)</b>	<b>-33.8%</b>	<b>-42.1%</b>	<b>-19.4%</b>	<b>12.1%</b>	<b>16.6%</b>	<b>-13.0%</b>	



## FY16 Draft Final CIP Summary vs FY16 Proposed

Draft Final CIP increased \$3.2 million vs. FY16 Proposed.

	<b>\$ Change</b>	<b>% Change</b>
<b>Total Wastewater</b>	\$ (1.0)	0.0%
<b>Total Waterworks</b>	\$ 2.8	0.1%
<b>Business &amp; Operations Support</b>	\$ 1.4	1.1%
<b>Total MWRA</b>	\$ 3.2	0.1%





## FY16 Draft Final CIP Summary vs FY16 Proposed

Draft Final CIP FY14-18 spending decreased \$10.2 million vs. FY16 Proposed.

	<b>FY16 Proposed FY14-18</b>	<b>FY16 Final FY14-18</b>	<b>FY14-18 \$ Change</b>	<b>FY14-18 % Change</b>
<b>Total Wastewater</b>	\$ 432.0	\$ 419.3	\$ (12.6)	-2.9%
<b>Total Waterworks</b>	\$ 248.3	\$ 251.3	\$ 3.0	1.2%
<b>Business &amp; Operations Support</b>	\$ 41.5	\$ 40.9	\$ (0.6)	-1.5%
<b>Total MWRA</b>	\$ 721.8	\$ 711.5	\$ (10.2)	-1.4%



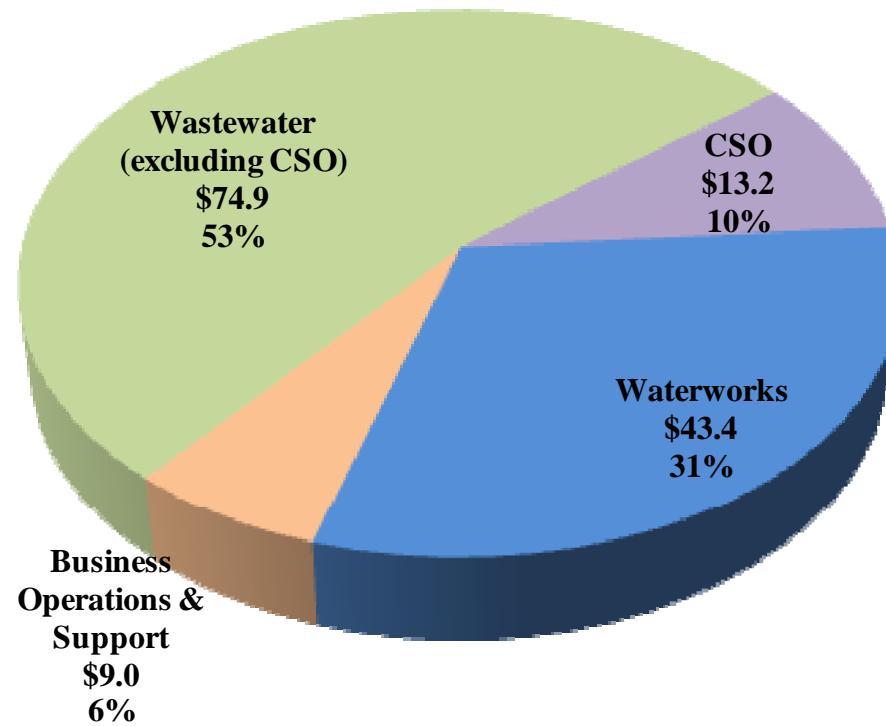
## Annual Capital Expenditure Changes from the Proposed FY16 CIP

	<b>FY14</b>	<b>FY15</b>	<b>FY16</b>	<b>FY17</b>	<b>FY18</b>	<b>Total FY14-18</b>
FY16 Draft Final	\$102.2	\$104.7	\$140.5	\$180.8	\$183.4	\$711.5
FY16 Proposed	\$102.2	\$108.1	\$147.1	\$177.6	\$186.8	\$721.8

- No new projects added;
- FY14-18 Capital Spending is \$10.2 million lower, mostly due to revised cashflows and schedule changes.



## FY16 Draft Final CIP Expenditures by Major Programs (\$'s Millions)





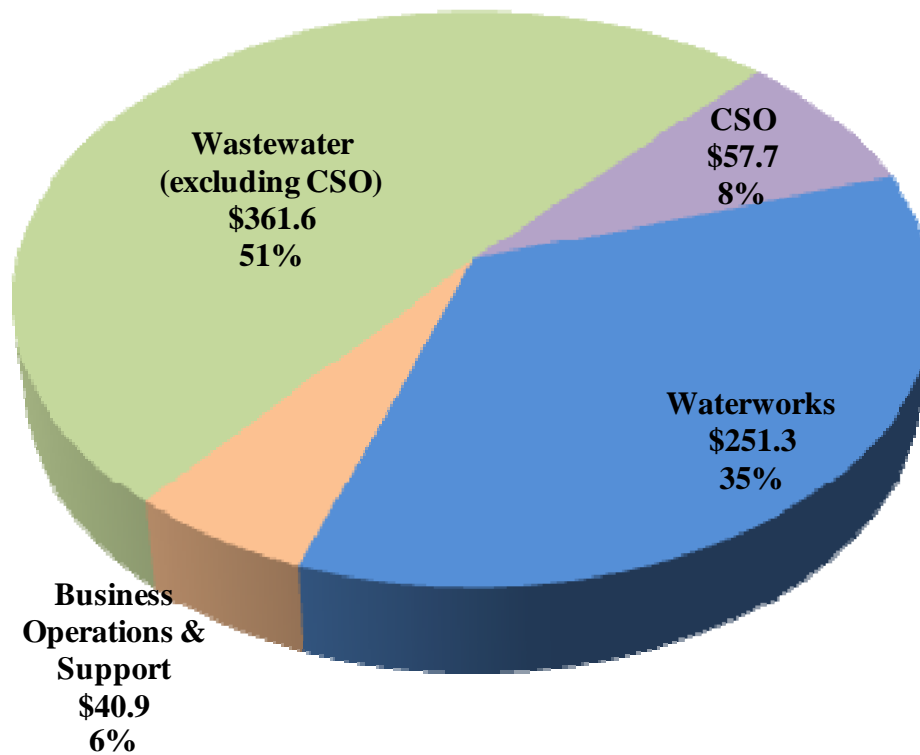
## FY16 Big Spenders

Projected spending for FY16 is \$140.5 million with 10 projects accounting for over 85% of that total.

	<b>FY16 Planned Spending</b>
DI Treatment Plant Asset Protection	\$35.0
Facility Asset Protection	19.6
I/I Local Financial Assistance	17.2
Long-Term Redundancy	14.8
Cambridge Sewer Separation	10.4
Weston Aqueduct Supply Mains	7.6
NIH Redundancy & Storage	5.6
Carroll Water Treatment Plant	3.2
Spot Pond Storage Facility	3.1
Equipment Purchase	3.0
<b>Top 10 Spending</b>	<b>\$119.5</b>
<b>FY16 Projected Spending</b>	<b>\$140.5</b>



## FY14-18 Draft Final CIP Expenditures by Major Programs (\$'s in Millions)





## FY16 Projected Contract Awards (\$ in millions)

Project	Subphase	NTP	FY16 Budget
Long Term Redundancy	Wachusett Aqueduct Pump Station Construction	Sep-15	60.5
Facility Asset Protection	Chelsea Creek Upgr Construction	Dec-15	54.8
NIH Redundancy & Storage	Section 89/29 Redundancy Construction Phase 1B	Aug-15	11.0
Facility Asset Protection	Alewife Brook Pump Station Rehabilitation - Construction	Aug-15	10.4
Clinton Wastewater Treatment Plant	Phosphorus Reduction Construction	Feb-16	7.1
Carroll Water Treatment Plant	Existing Facilities Modifications - CP7	Jul-15	6.7
DI Treatment Plant Asset Protection	Sodium Bisulfite & Hypochlorite Tanks Rehabilitation	Jun-16	6.6
DI Treatment Plant Asset Protection	Combined Heat & Power Design	Jan-16	6.0
DI Treatment Plant Asset Protection	Gravity Thickener Rehabilitation	Dec-15	5.8
DI Treatment Plant Asset Protection	Digester Sludge Pump Replacement Phase 2	Oct-15	4.7
<b>Top Ten Awards for FY16</b>			<b>\$173.5</b>
<b>49 Contract Awards Planned for FY16</b>			<b>\$224.8</b>

The top ten awards account for over 77% of FY16 planned awards.



## On-Going Capital Projects



## Deer Island Asset Protection







## North Main Pump Station & Winthrop Terminal Facility Valve Replacements



NTP: June 2014  
SC : June 2017



Total Contract:           \$17.1M  
FY14-18 Spending:       \$17.1M  
FY16 Spending:           \$ 4.5M



## Spot Pond Covered Storage Facility and Pump Station

NTP: November 2011  
SC : August 2015



Total Contract:	\$51.4M
FY14-18 Spending:	\$33.8M
FY16 Spending:	\$ 2.1M



## Cambridge Sewer Separation



**Contract 9**

NTP: July 1998  
SC : December 2015

Total Contract:	\$92.6M
FY14-18 Spending:	\$42.1M
FY16 Spending:	\$10.4M



**Contract 8B - Concord Avenue**



## Clinton Treatment Plant Phosphorus Reduction



Construction  
NTP: February 2016  
SC : August 2017

Total Contract: \$7.1M  
FY14-18 Spending: \$7.1M  
FY16 Spending: \$0.6M

Design	Total Contract:	\$1.0M
NTP: November 2013	FY14-18 Spending:	\$1.0M
SC : August 2018	FY16 Spending:	\$0.2M





## Upcoming Capital Projects



# Wachusett Aqueduct Pump Station

NTP: September 2015

SC : June 2019



Total Contract:	\$60.5M
FY14-18 Spending:	\$40.8M
FY16 Spending:	\$13.2M



## Chelsea Headworks Rehabilitation

Design/Admin./RI

NTP: July 2010

SC : June 2020

Total Contract: \$7.9M

FY14-18 Spending: \$4.9M

FY16 Spending: \$0.8M



Construction

NTP: December 2015

SC : June 2019

Total Contract: \$54.8M

FY14-18 Spending: \$35.7M

FY16 Spending: \$ 8.1M



## Alewife Brook Pump Station Rehabilitation

NTP: August 2015

SC : December 2017



Total Contract:	\$10.4M
Fy14-18 Spending:	\$10.4M
FY16 Spending:	\$ 3.1M





# Deer Island Combined Heat and Power

## Design

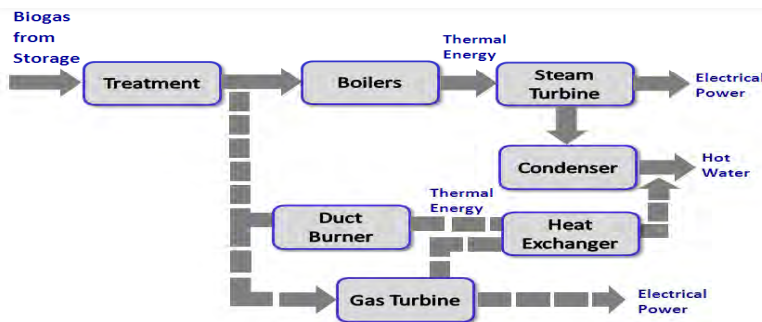
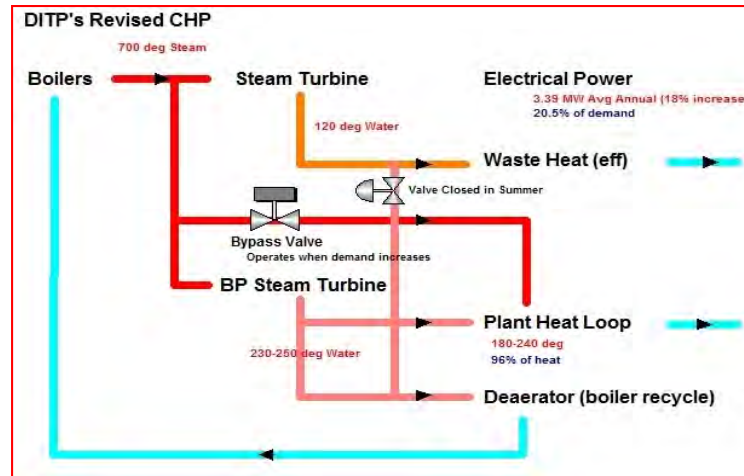
NTP: January 2016

SC : July 2022

Total Contract: \$6.0M

FY14-18 Spending: \$3.0M

FY16 Spending: \$0.8M



## Construction

NTP: July 2018

SC : July 2022

Total Contract: \$83.0M

FY14-18 Spending: \$ 0.0M

FY16 Spending: \$ 0.0M



## Driving Factors for Underspending from FY14-18

- Deliberate decisions to pause or slow projects;
- Design assumption changes;
- Considerations for climate change; and
- Cashflow assumptions.



## Corrective Measures to Improve CIP Underspending

- Stream-line internal review processes;
- Improve CIP progress monitoring; and
- Continuous backfilling of critical positions.



Massachusetts Water Resources Authority

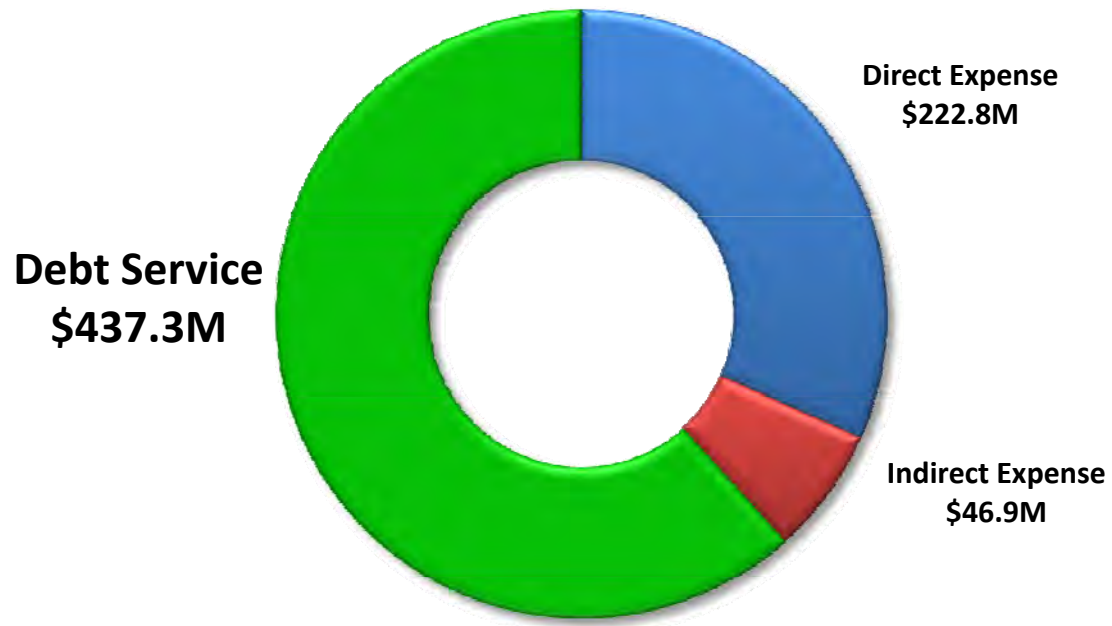
**MWRA Fiscal Year 2016  
Draft Final  
Current Expense Budget**

June 3, 2015



## FY16 Draft Final Current Expense Budget (CEB)

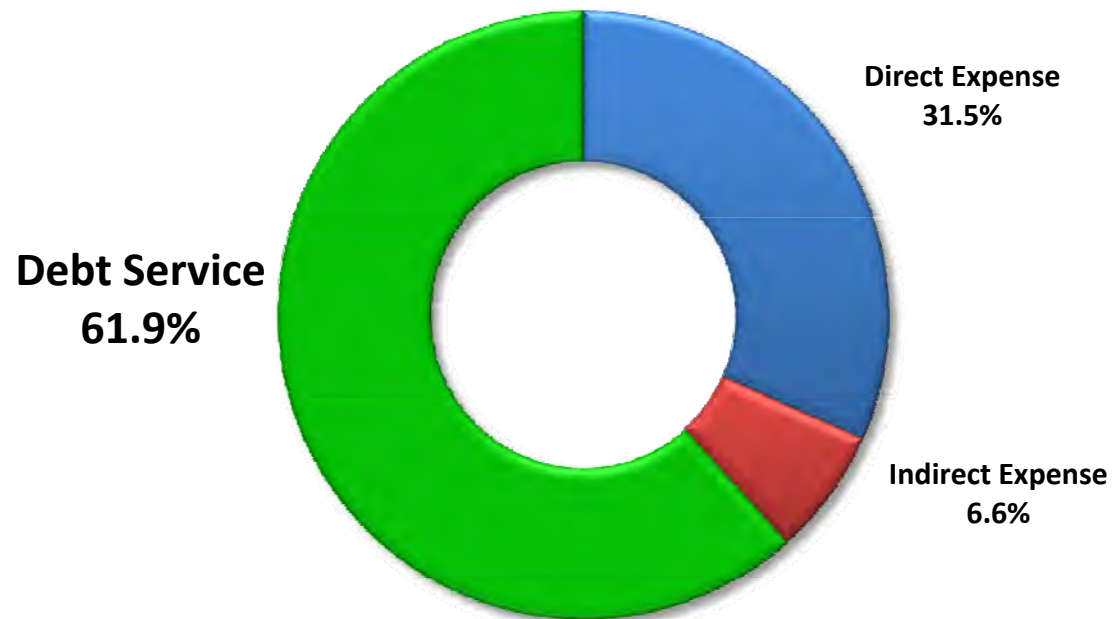
### FY16 Current Expense Budget





## FY16 Draft Final Current Expense Budget (CEB)

### FY16 Current Expense Budget





### **Fiscal Year 2016 Year of Milestones**

- Bond Resolution Changes become effective – Reserves Release
- Pension Fund achieves virtual Full Funding
- Other Post Employment Benefits (OPEB)
- New England Fertilizer Company (NEFCO)



## **Bond Resolution Change effective April 23, 2015**

- Long-Term Rates Management Committee met
  - Decision regarding utilization of Reserves
    - Debt Service Reserve -\$67.1M for Defeasance
    - CORE & RRR Reserve -\$36.4M for Defeasance  
-\$10.0M for OPEB





## Fiscal Year 2016 - Milestones

### **Bond Resolution changes became effective April 23<sup>rd</sup> – Reserves Release**

- Debt Service Reserves
- Community Obligation and Revenue Enhancement (CORE)
  - **FY16 Impact – Decrease of \$6.7M**
- Renewal and Replacement Reserve (RRR)



## Fiscal Year 2016 - Milestones

### **Pension Fund achieves virtual Full Funding**

- 98.3% Funded ratio 1/1/2015 achieved
- Other Post Employment Benefits (OPEB)
  - OPEB Trust has been established
  - Staff is recommending funding OPEB
    - **FY16 Impact –Decrease to Operating Reserve of \$843K**



## Fiscal Year 2016 - Milestones

### **New England Fertilizer Company (NEFCO)**

- Contract extended for 5 years
- Over the five-year term, expenses are expected to decrease by \$1.25M
- Capital Expenditure responsibility shifts
  - **FY16 Impact – Decrease to Maintenance of \$401K**



## FY16 Draft Final Current Expense Budget (CEB)

### **Changes from Proposed – Direct Expenses**

- Utilities - \$1.8M – decreases for pricing;
- Chemicals - \$0.3M – decrease for updated contract pricing;
- Fringe Benefits of \$0.3M – increases for Health Insurance;
- Other Materials – \$0.3M increase;
- Other Services - \$0.2M increase;
- Professional Services - \$0.1M increase; and
- Wages and Salaries - \$0.1M increase



## FY16 Draft Final Current Expense Budget (CEB)

### **Changes from Proposed – Indirect Expenses**

- Addition to Operating Reserve Fund - \$1.0M decrease;
- OPEB contribution - \$0.2M increase.



## FY16 Draft Final Current Expense Budget (CEB)

### Changes from Proposed – Debt Service Expenses

- Traditional Defeasance increase from \$20M to \$30M -\$0.4M decrease
- SRF Update
- No Bond Redemption use
  - **FY16 Impact – Decrease of \$3.5M**



## FY16 Draft Final Current Expense Budget (CEB)

### Revenue

- Investment Income -\$144K decrease



## FY16 Draft Final Assessments

### **Range of Assessment Increases**

- Current Proposed 4.10%
- Advisory Board Recommendation 3.36%

The Advisory Board shared their recommendations and comments

MWRA staff is evaluating comments and formulating responses

MWRA agrees with the majority of the recommendations





## Planning Estimate Assumptions

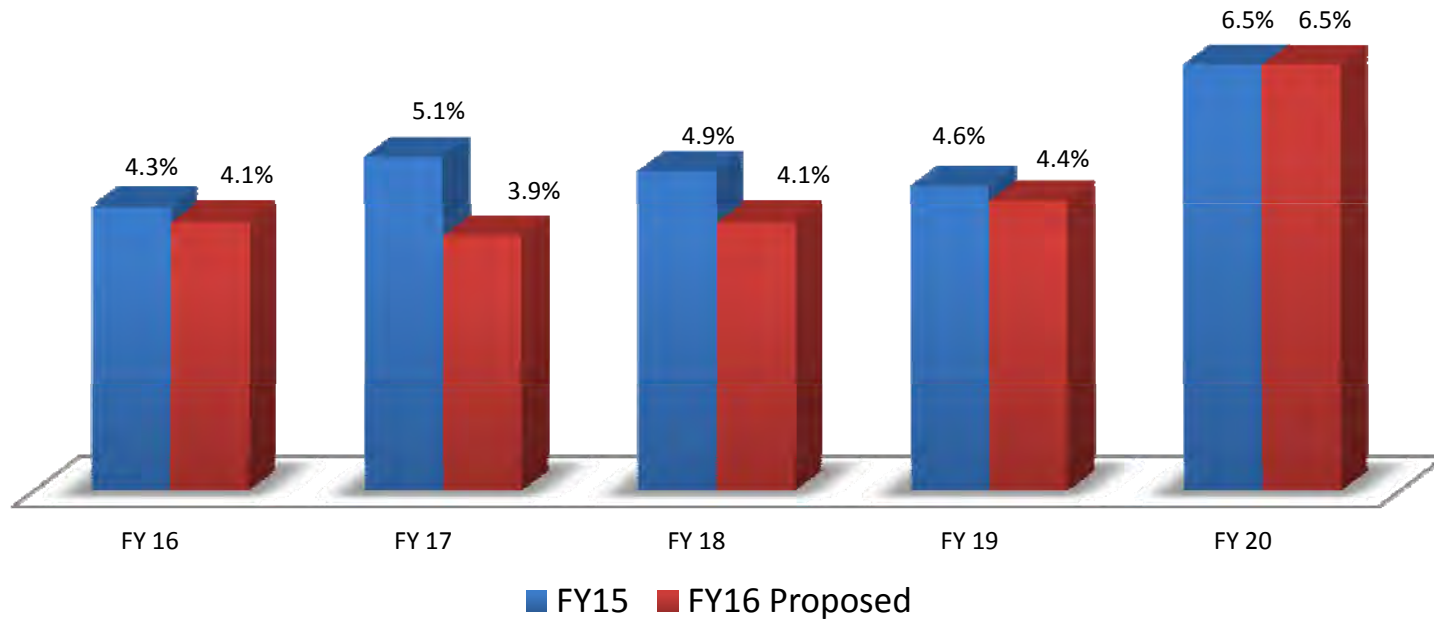
### **Assumptions**

- Direct Expenses Inflation
- Indirect Expenses Inflation
- Capital Spending Levels
- Variable and Fixed Debt Interest Rates
- Investment Income Interest Rates
- Level of Pension/OPEB Funding
- Use of Reserves



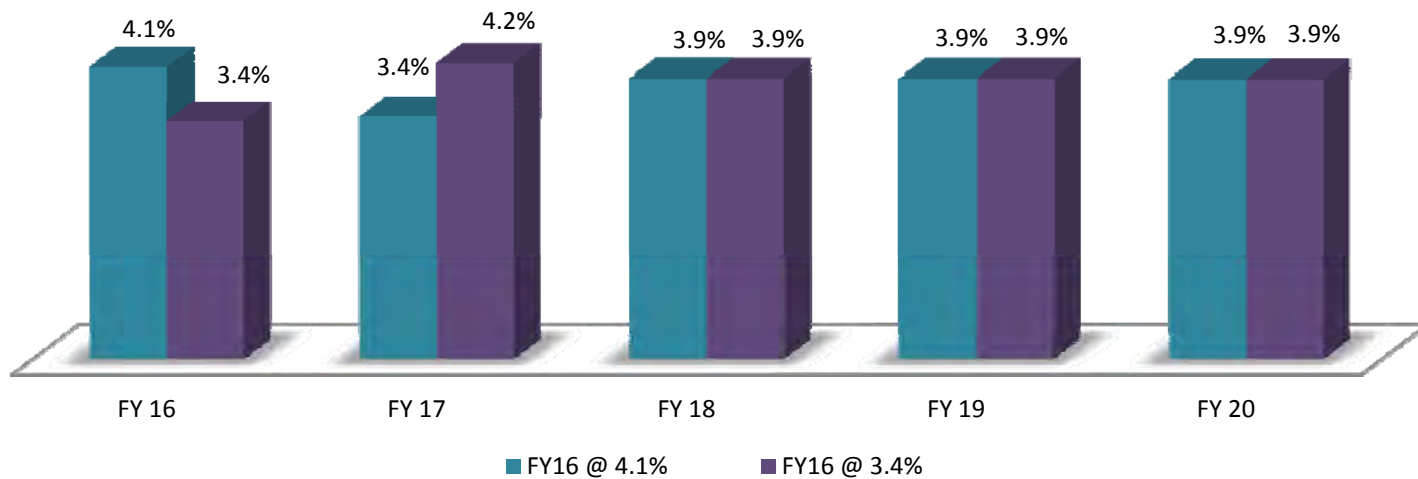
## Effects on Assessments

### Assessment Increase Forecast Comparison





## Assessment Increase Forecast Comparison





## FY16 Current Expense Budget Next Steps

- ✓ Transmit Proposed Budget to Advisory Board for 60 day review
- ✓ Reconvene Long-Term Rates Management Committee
- ✓ Public Hearings
  - Staff will address comments from the Advisory Board
  - Staff will present Draft Final Budget in June



## FY16 Current Expense Budget Closing

***Thank You***