



## STAFF SUMMARY

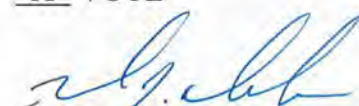
**TO:** Board of Directors  
**FROM:** Frederick A. Laskey, Executive Director  
**DATE:** June 24, 2015  
**SUBJECT:** Final FY16 Capital Improvement Program



COMMITTEE: Administration, Finance & Audit

INFORMATION  
 VOTE

  
Kathy Soni, Budget Director  
  
David Whelan, Budget Manager  
Preparer/Title

  
Thomas J. Durkin  
Director, Finance

*The Final FY16 Capital Improvement Program projects \$140.5 million in spending for FY16, of which \$88.1 million supports Wastewater System Improvements, \$43.4 million supports Waterworks System Improvements, and \$9.0 million is for Business and Operations Support.*

*Some of the larger projects with spending in FY16 include Deer Island Asset Protection- \$29.7 million, Interception and Pumping Facility Asset Protection-\$13.8 million, Infiltration/Inflow (I/I) Local Financial Assistance- \$17.2 million, Long-Term Redundancy- \$12.8 million, and Cambridge Sewer Separation- \$10.4 million.*

*FY16 is the third year of the FY14-18 Base-Line Cap which was set at \$791.7 million. Based on the Final FY16 Budget, Cap Spending for FY14-18 stands at \$689.1 million which is \$102.5 million or 13.0% lower than the Base-Line Cap. This lower Cap Spending is the result of lower projected spending and the exclusion of the community assistance programs. As a reminder, beginning in FY15 as recommended by the MWRA Advisory Board, the Community Financial Assistance programs (Both I/I and Local Water Pipeline) are excluded from the Cap calculation.*

*The Final FY16 CIP reaffirms that MWRA will be reducing its total bonded indebtedness over the Cap period by paying off more principal on debt than annual CIP spending.*

### RECOMMENDATION:

1. To approve the Final FY16 Capital Improvement Program (CIP), with \$148.1 million spending level, including contingency.
2. To approve the Responses to the Advisory Board's Comments and Recommendation on MWRA's Fiscal Year 2016 Proposed Capital Improvement Program (Attachment D).

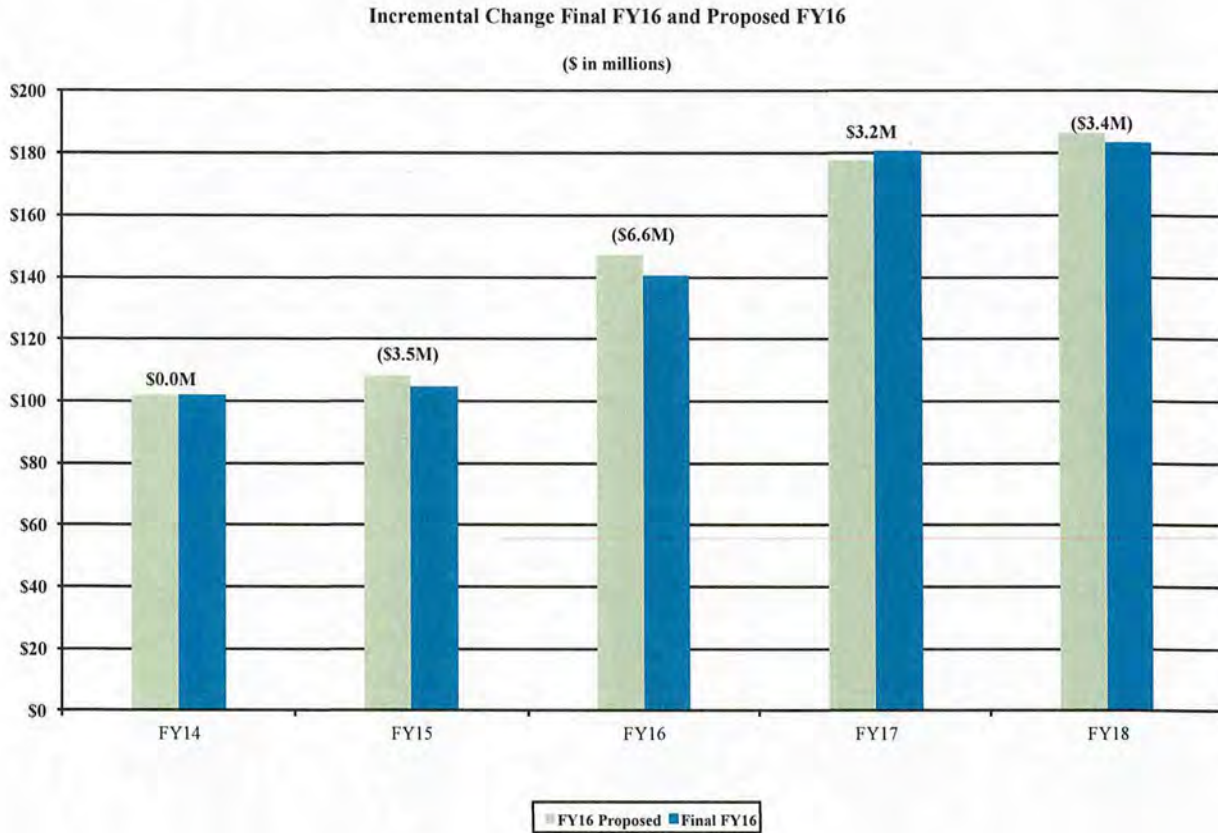
**DISCUSSION:**

The Final FY16 Capital Improvement Program represents an update to the Proposed FY16 program presented to the Board in December 2014.

The spending projections put forth today are the result of prioritizing the projects driven by the Master Plan, establishing updated cashflows based on the latest information, striking a balance between maintenance and infrastructure improvements, while ensuring there is adequate support for the core operations and to meet all regulatory operating permit requirements.

In comparison with the Proposed FY16 CIP, the Final FY16 CIP increased at the overall program level by \$3.2 million, with a net (\$10.2) million decrease in the FY14-18 Cap period. This change was due to updated cost estimates and revised schedules and cashflows.

The table below shows the incremental change by fiscal year between the Final FY16 and FY15 Final CIP.



The Final FY16 CIP reaffirms MWRA's commitment to the Community Financial Assistance Programs, both for the Local Water Pipeline Assistance and the Inflow and Infiltration (I/I).

## Spending Cap

### *The Base-Line Cap*

The Final FY14 CIP established the FY14-18 Base-Line Cap at \$791.7 million. This is the third five-year Cap established by the Authority since FY04 and is significantly lower than the prior two five-year Cap periods which exceeded \$1.1 billion each. The following is a breakdown of the Cap components:

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>	

### *FY14-18 Cap Spending*

The Final FY16 CIP budget anticipates capital expenditures in the FY14-18 timeframe to total \$711.5 million. Including contingency of \$34.8 million and inflation of \$15.1 million offset by \$65.0 million in Community Loan Program Support and Chicopee Valley Aqueduct adjustments of \$7.3 million, the Final FY16 FY14-18 Cap totals \$689.1 million which is \$102.5 million or 13.0% less than the FY14 Final Y14-18 Base-Line Cap. However, of the \$102.5 million projected underspending, \$60.1 million is due to exclusion of the Community Financial Assistance Programs from the Cap calculation.

### **Final FY16 Cap FY14-18 Comparison**

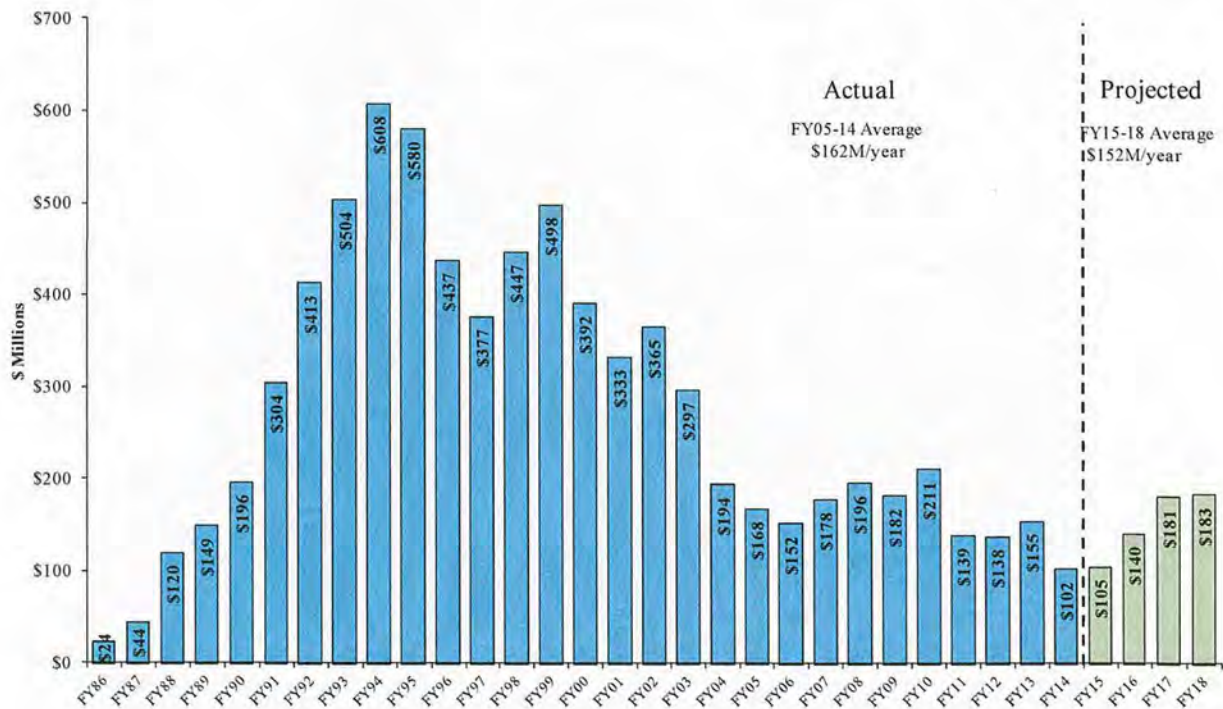
Final FY16		FY14	FY15	FY16	FY17	FY18	Total FY14-18
	Projected Expenditures	\$102.2	\$104.7	\$140.5	\$180.8	\$183.4	\$711.5
Contingency	0.0	4.7	7.6	11.1	11.4	34.8	
Inflation on Unawarded Construction	0.0	0.0	1.1	5.4	8.6	15.1	
Less: I/I Program	0.0	(17.2)	(17.2)	(18.9)	(17.6)	(71.0)	
Less: Water Loan Program	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 Draft Final 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>	

Final FY16 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>	

This Cap complies with both the annual and overall Cap requirements.

## Historical Spending

The chart below captures the historical CIP spending through FY14 and projected spending to FY18 based on the Final FY16 CIP.



As referenced previously, the five-year cap concept was introduced in the FY04 budget development cycle and covered the FY04-08 period. The first cap level was established at \$1.134 billion.

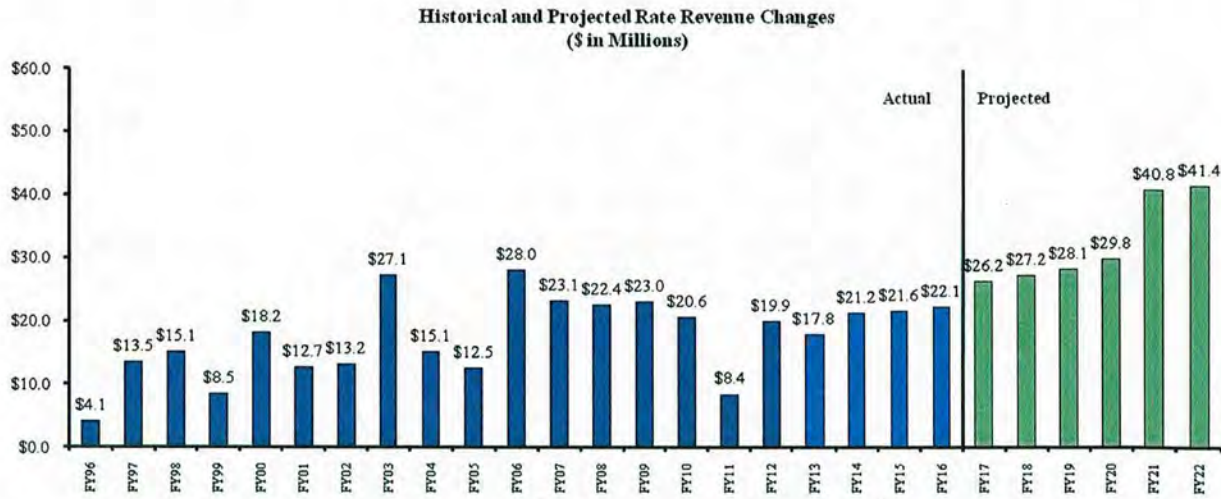
The average spending for FY05-14 timeframe was \$162 million per year and based on the Final FY16 CIP, we are currently projecting that average spending during the current FY15-18 period will be \$152 million per year.

### MWRA Capital Improvement Spending versus Debt Service

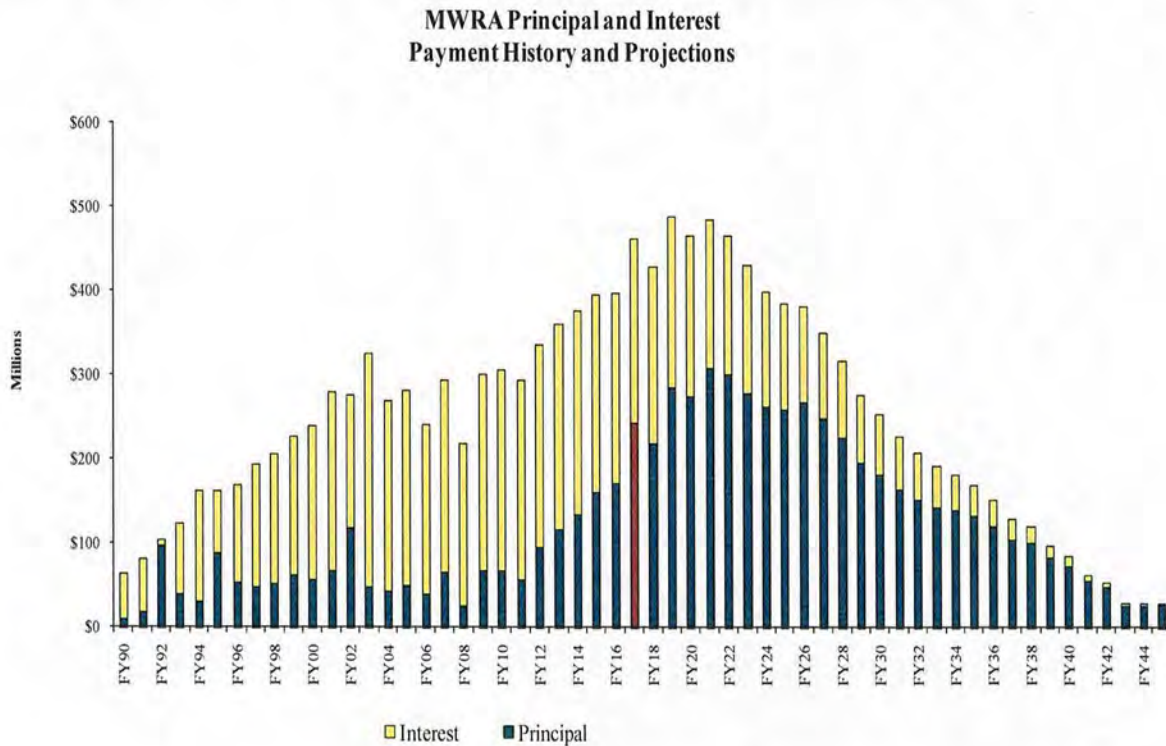
As of June 30<sup>th</sup>, MWRA's total debt will be \$5.8 billion which results in significant increases in debt service obligations in the upcoming years. The Authority's debt service as a percent of total expenses has increased from 36% in 1990 to nearly 61% in the Final FY16 Current Expense Budget.

Through FY22, the Rate Revenue Requirement is projected to increase an average of \$32.2 million per year, mostly driven by Debt Service related expenses.

The graph below shows the projected Rate Revenue Requirement changes updated with the FY16 CIP spending and debt service projections.



For the first time, MWRA will be reducing its total bonded indebtedness during this Cap period as the Authority will be paying more principal than annual CIP spending. In addition, it is worthy of note that MWRA reaches another milestone during this Cap period and will begin paying more principal than interest on its debt during the FY14-18 timeframe.



### Future of the Capital Program - Shift from Mandated Projects

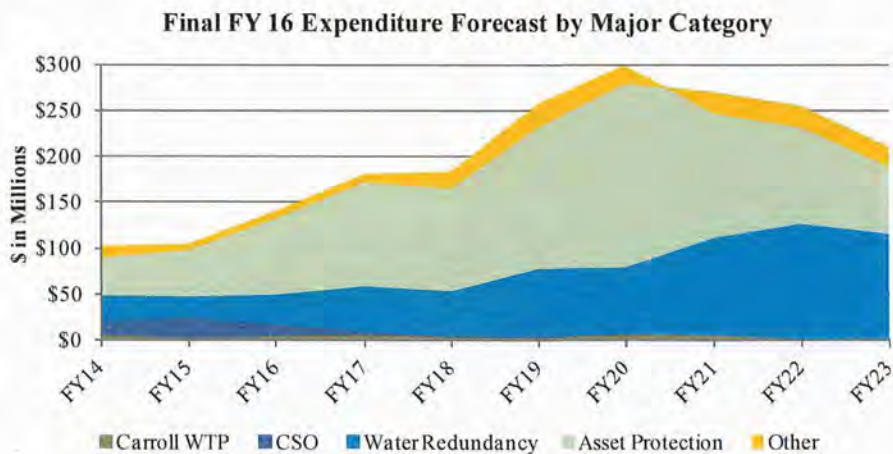
Since 1985, nearly 80% of the Authority's spending has been on court mandated and regulatory required projects. Based on the Final FY16 CIP, mandated or regulatory related projects account for ~ 30% of contract spending - the majority of which will support Asset Protection, Water System Redundancy, Pipeline Replacement and Rehabilitation, and continued support for Community Assistance programs.

The table below captures the changing nature of the program in the future:

	Total Contract	FY09-13	FY14-18	FY19-23	Beyond FY23
Asset Protection	\$2,254.7	\$248.0	\$401.2	\$734.8	\$235.3
Carroll WTP	438.2	38.5	15.2	11.8	0.0
Water Redundancy	1895.0	134.7	183.8	495.3	218.5
CSO	873.8	315.5	57.7	3.0	0.0
Other	550.7	88.4	53.6	-21.1	-64.8
<b>Total</b>	<b>\$6,012.4</b>	<b>\$825.1</b>	<b>\$711.5</b>	<b>\$1,223.8</b>	<b>\$389.0</b>
<b>Asset Protection</b>	<b>37.5%</b>	<b>30.1%</b>	<b>56.4%</b>	<b>60.0%</b>	<b>60.5%</b>
Carroll WTP	7.3%	4.7%	2.1%	1.0%	0.0%
<b>Water Redundancy</b>	<b>31.5%</b>	<b>16.3%</b>	<b>25.8%</b>	<b>40.5%</b>	<b>56.2%</b>
CSO	14.5%	38.2%	8.1%	0.2%	0.0%
Other	9.2%	10.7%	7.5%	-1.7%	-16.7%
<b>Total</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>

As presented above, Asset Protection and Water Redundancy initiatives accounted for 30.1% and 16.3% of FY09-13 spending, respectively. Asset Protection and Water System Redundancy spending is projected to rise from past levels and currently accounts for 56.4% and 25.8% of FY14-18 capital expenditures respectively, a total of nearly \$585.0 million of the \$711.5 million, or over 82% projected to be spent over the 5-year period.

The graph below displays the projected trend of expenditures by major category for the FY14-23 time period.



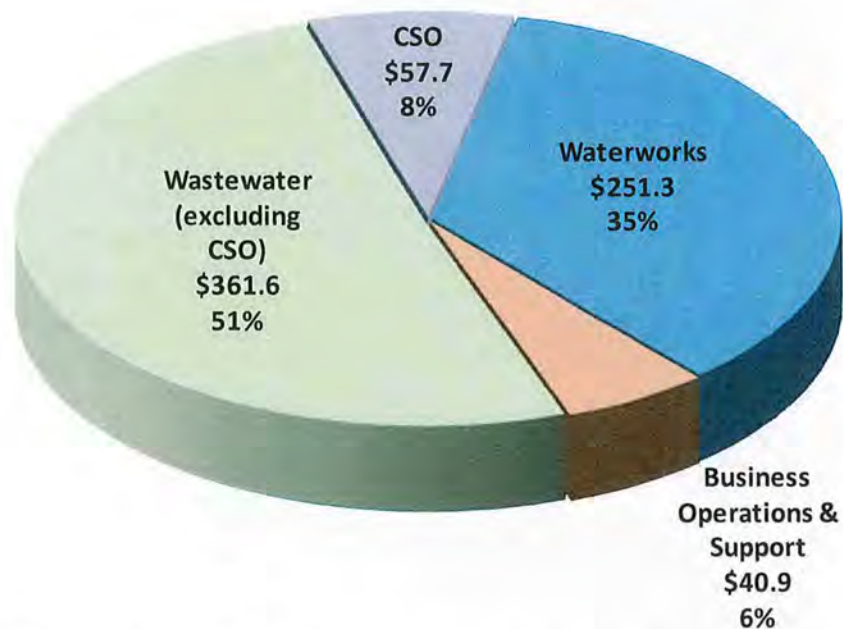
## Final FY16 CIP Expenditures

The Final FY16 CIP contains future spending estimated at \$2.2 billion. The Final FY16 CIP (without contingency) includes planned expenditures of \$140.5 million for FY16 and total projected expenditures of \$711.5 million for the FY14-18 timeframe.

The table below represents the projected spending by the major project categories:

	Total Contract Amount	Payments Thru FY14	Projected Spending	FY14	FY15	FY16	FY17	FY18	Total FY14-18
<b>Wastewater System Improvements</b>	<b>\$2,974.6</b>	<b>\$1,791.7</b>	<b>\$1,182.9</b>	<b>\$55.7</b>	<b>\$71.5</b>	<b>\$88.1</b>	<b>\$108.3</b>	<b>\$95.7</b>	<b>\$419.3</b>
Interception & Pumping	890.0	527.4	362.6	6.9	9.5	20.1	32.2	29.3	98.0
Treatment	775.6	213.8	561.8	29.1	21.5	37.6	50.2	45.7	184.0
Residuals	167.6	64.6	103.0	0.1	-	-	2.9	1.6	4.6
CSO	898.5	853.3	45.2	15.6	23.3	13.2	4.1	1.5	57.7
Other Wastewater	242.9	132.5	110.3	4.0	17.2	17.2	18.9	17.6	75.0
<b>Waterworks System Improvements</b>	<b>\$2,909.4</b>	<b>\$1,915.6</b>	<b>\$993.8</b>	<b>\$41.0</b>	<b>\$26.3</b>	<b>\$43.4</b>	<b>\$62.9</b>	<b>\$77.7</b>	<b>\$251.3</b>
Drinking Water Quality Improvements	666.3	625.4	40.9	30.2	15.1	6.4	4.9	2.3	58.9
Transmission	1,224.2	759.5	464.7	4.5	3.0	19.5	24.3	27.5	78.8
Distribution & Pumping	949.1	377.5	571.6	4.8	9.1	17.4	31.9	42.6	105.8
Other Waterworks	69.8	153.2	(83.4)	1.5	(0.9)	0.1	1.8	5.2	7.8
Business & Operations Support	128.4	83.0	45.4	5.5	6.9	9.0	9.6	10.0	40.9
<b>Total MWRA</b>	<b>\$6,012.4</b>	<b>\$3,790.3</b>	<b>\$2,222.1</b>	<b>\$102.2</b>	<b>\$104.7</b>	<b>\$140.5</b>	<b>\$180.8</b>	<b>\$183.4</b>	<b>\$711.5</b>

The graph below illustrates a breakdown of the major program spending (in millions) for the FY14-18 timeframe.



Please refer to Attachment B for a more detailed project listing and projected cash flows.

## Contingency

Contingency for each fiscal year is incorporated into the CIP to fund the uncertainties inherent to construction. The contingency budget is calculated as a percentage of budgeted expenditure outlays. Specifically, contingency is 7% for non-tunnel projects and 15% for tunnel projects. The contingency budget is \$7.6 million for FY16 and \$34.8 million for the FY14-18 timeframe.

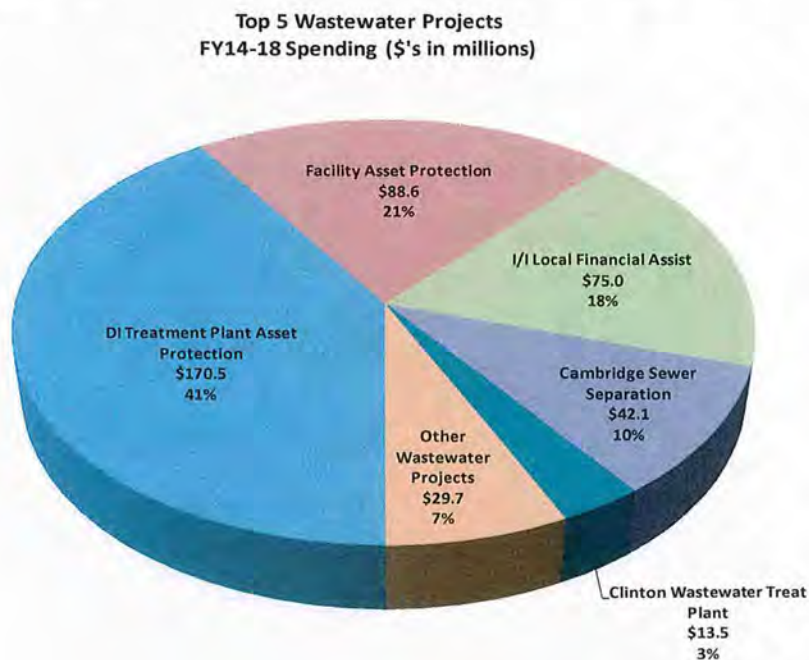
## Top 10 Projects – FY14-18 Cap Period

It is important to emphasize that the majority of spending within the Wastewater and Water Capital programs is concentrated in several larger projects with significant spending in the FY14-18 timeframe. These projects are either currently under construction or soon to be awarded.

Project	Total Contract Amount	FY14-18 Spending	% of Program
DI Treatment Plant Asset Protection	\$720.4	\$170.5	41%
Facility Asset Protection	\$311.8	\$88.6	21%
I/I Local Financial Assist	\$242.6	\$75.0	18%
Cambridge Sewer Separation	\$92.6	\$42.1	10%
Clinton Wastewater Treat Plant	\$20.5	\$13.5	3%
<b>Total Top 5 Wastewater Projects</b>	<b>\$1,387.8</b>	<b>\$389.7</b>	<b>93%</b>
Other Wastewater Projects	\$1,586.8	\$29.7	7%
<b>Total Wastewater</b>	<b>\$2,974.6</b>	<b>\$419.3</b>	<b>100%</b>

The top five projects for the Wastewater program total \$389.7 million for the FY14-18 period and represent 93% of the \$419.3 million total program.

The breakdown of the \$419.3 million program by the major projects is illustrated below:

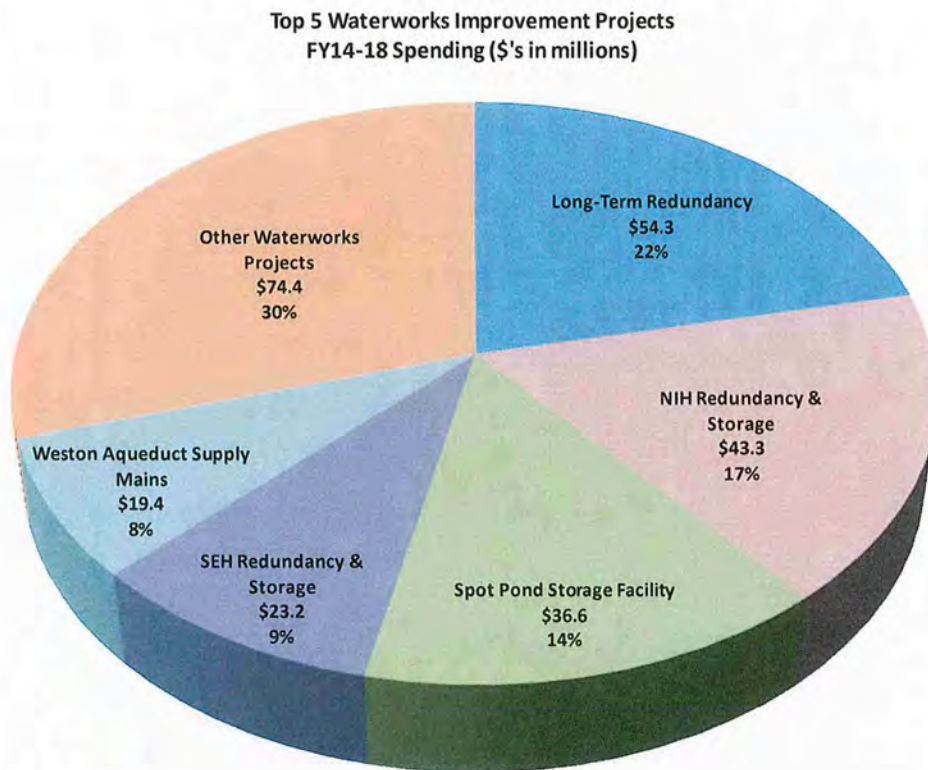




Similarly, the top five projects for the Waterworks program total \$176.9 million for FY14-18 and represent 70% of the \$251.3 million total program.

Project	Total Contract Amount	FY14-18 Spending	% of Program
Long-Term Redundancy	\$409.4	\$54.3	22%
NIH Redundancy & Storage	\$90.2	\$43.3	17%
Spot Pond Storage Facility	\$61.2	\$36.6	15%
SEH Redundancy & Storage	\$99.5	\$23.2	9%
Weston Aqueduct Supply Mains	\$281.1	\$19.4	8%
<b>Total Top 5 Waterworks Projects</b>	<b>\$941.4</b>	<b>\$176.9</b>	<b>70%</b>
Other Waterworks Projects	\$1,968.0	\$74.4	30%
<b>Total Waterworks</b>	<b>\$2,909.4</b>	<b>\$251.3</b>	<b>100%</b>

The breakdown of the \$251.3 million program by the major projects is illustrated below:



**Major Planned Contract Awards for Fiscal Year 2016:**

In Fiscal Year 2016, 49 contracts totaling \$224.8 million are projected to be awarded. The largest ten projected contract awards are listed below and account for over 77% of expected awards:

Project	Subphase	NTP	FY16 Budget
Long Term Redundancy	Wachusett Aqueduct Pump Station Construction	Sep-15	\$60.5
Facility Asset Protection	Chelsea Creek Upgrade 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 -	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>

**Future Risks and Opportunities**

Going forward the largest decision that MWRA will have to make is pertaining to the Long-Term Redundancy project specifically the Sudbury Aqueduct alternatives plans. That decision will have a significant impact on the capital program for the next 10-15 years.

**CIP Review and Adoption Process**

In December, the MWRA transmitted the FY16 Proposed Capital Improvement Program to the Advisory Board for its review and comment. The Advisory Board issued their Integrated Comments and Recommendations in May. Please refer to Attachment D for the Authority’s responses to the Advisory Boards Comments and Recommendations.

**ATTACHMENTS:**

- A. New Capital Projects Added to the FY16 CIP
- B. Final FY16 Expenditure Forecast at Project Level
- C. Comparison of the Final FY16 CIP and the Final FY15 CIP
- D. MWRA Responses to Advisory Board’s FY16 Integrated CIP and CEB Comments and Recommendations

**ATTACHMENT A**

**New Capital Projects Added to the FY16 CIP**

Program	Project	Subphase	Total Contract Amount	FY16	FY17	FY18	FY14-18	FY19-23	Beyond FY23	Total Expenditures
Interception & Pumping	Wastewater Central Monitoring	Wastewater SCADA/PLC Upgrade	\$7,000,000		150,000	470,000	\$620,000	\$2,350,000	\$4,030,000	\$7,000,000
Transmission	Sudbury/Weston Aqueduct Repairs	Replacement of Weston Aqueduct Flow Control Valve (Southborough)	\$900,000		675,000	225,000	\$900,000	\$0		\$900,000
	Quabbin Transmission System	Oakdale High Line Replacement	\$500,000		500,000		\$500,000	\$0		\$500,000
Other Waterworks	Waterworks Facility Asset Protection	Flat Roof Replacement at Cosgrove	\$300,000		300,000		\$300,000	\$0		\$300,000
	Central Monitoring	Waterworks SCADA/PLC Upgrade	\$18,500,000		350,000	1,244,000	\$1,594,000	\$6,220,000	\$10,686,000	\$18,500,000
<b>SUMMARY:</b>										
<b>Total Wastewater Projects</b>			<b>\$7,000,000</b>	<b>\$0</b>	<b>\$150,000</b>	<b>\$470,000</b>	<b>\$620,000</b>	<b>\$2,350,000</b>	<b>\$4,030,000</b>	<b>\$7,000,000</b>
<b>Total Waterworks Projects</b>			<b>\$20,200,000</b>	<b>\$0</b>	<b>\$1,825,000</b>	<b>\$1,469,000</b>	<b>\$3,294,000</b>	<b>\$6,220,000</b>	<b>\$10,686,000</b>	<b>\$20,200,000</b>
<b>Total Projects</b>			<b>\$27,200,000</b>	<b>\$0</b>	<b>\$1,975,000</b>	<b>\$1,939,000</b>	<b>\$3,914,000</b>	<b>\$8,570,000</b>	<b>\$14,716,000</b>	<b>\$27,200,000</b>

**ATTACHMENT B  
FINAL FY16 PROJECT LEVEL EXPENDITURE FORECAST**

Program/Project/Subphase	Total Contract Amount	Payments through FY14	Remaining Balance	FY16	FY14 - FY18	FY19-FY23	Beyond FY23
<b>Total MWRA</b>	<b>6,012,395,317</b>	<b>3,790,288,064</b>	<b>2,222,107,252</b>	<b>140,497,933</b>	<b>711,532,304</b>	<b>1,223,762,003</b>	<b>388,976,133</b>
<b>Wastewater</b>	<b>2,974,567,125</b>	<b>1,791,690,217</b>	<b>1,182,876,908</b>	<b>88,109,253</b>	<b>419,343,793</b>	<b>634,898,652</b>	<b>184,324,035</b>
<b>Interception &amp; Pumping</b>	<b>890,031,273</b>	<b>527,413,833</b>	<b>362,617,440</b>	<b>20,101,234</b>	<b>98,023,637</b>	<b>224,869,580</b>	<b>46,597,991</b>
102 Quincy Pump Facilities	25,907,202	25,907,202	-				
104 Braintree-Weymouth Relief Facilities	232,454,622	227,703,644	4,750,978	-	309,835	4,440,854	-
105 New Neponset Valley Relief Sewer	30,300,303	30,300,303	-				
106 Wellesley Extension Replacement Sewer	64,358,543	64,358,543	-				
107 Framingham Extension Relief Sewer	47,855,986	47,855,986	-				
127 Cummingsville Replacement Sewer	8,998,768	8,998,768	-				
130 Siphon Structure Rehabilitation	6,634,725	939,770	5,694,955	-	-	5,694,954	-
131 Upper Neponset Valley Sewer System	54,174,078	54,174,078	-				
132 Corrosion & Odor Control	19,781,890	3,001,406	16,780,484	87,500	542,503	16,237,981	
136 West Roxbury Tunnel	11,313,573	10,313,573	1,000,000	-	-	1,000,000	
137 Wastewater Central Monitoring	27,482,036	19,782,036	7,700,000	-	759,836	2,910,000	4,030,000
139 South System Relief Project	4,939,244	3,439,244	1,500,000	-	-	1,500,000	
141 Wastewater Process Optimization	10,382,688	1,216,655	9,166,033	64,688	1,391,021	5,816,539	1,969,948
142 Wastewater Meter System-Equip. Replacement	27,737,912	5,137,912	22,600,000	358,974	6,435,898	1,564,102	14,600,000

**ATTACHMENT B  
FINAL FY16 PROJECT LEVEL EXPENDITURE FORECAST**

Program/Project/Subphase	Total Contract Amount	Payments through FY14	Remaining Balance	FY16	FY14 - FY18	FY19-FY23	Beyond FY23
143 Regional I/I Management Planning	168,987	168,987	-				
145 Facility Asset Protection	311,790,717	24,115,727	287,674,990	19,590,072	88,584,545	179,955,150	25,998,043
146 D.I. Cross Harbor Tunnel	5,000,000	-	5,000,000	-	-	5,000,000	
147 Randolph Trunk Sewer Relief	750,000	-	750,000	-	-	750,000	
<b>Treatment</b>	<b>775,572,590</b>	<b>213,805,783</b>	<b>561,766,807</b>	<b>37,566,920</b>	<b>183,993,877</b>	<b>352,082,969</b>	<b>54,772,976</b>
182 DI Primary and Secondary Treatment	(957,878)	(957,878)	-				
200 DI Plant Optimization	33,426,679	33,426,679	-				
206 DI Treatment Plant Asset Protection	720,365,098	176,308,421	544,056,676	34,960,571	170,510,713	347,938,363	54,415,448
210 Clinton Wastewater Treatment Plant	20,511,018	2,800,886	17,710,131	2,606,349	13,483,163	4,144,606	357,528
211 Laboratory Services	2,227,674	2,227,674	-				
<b>Residuals</b>	<b>167,642,622</b>	<b>64,642,623</b>	<b>103,000,000</b>	<b>-</b>	<b>4,570,307</b>	<b>8,469,507</b>	<b>90,066,993</b>
261 Residuals	63,810,848	63,810,848	-				
271 Residuals Asset Protection	103,831,775	831,775	103,000,000	-	4,570,307	8,469,507	90,066,993

**ATTACHMENT B  
FINAL FY16 PROJECT LEVEL EXPENDITURE FORECAST**

Program/Project/Subphase	Total Contract Amount	Payments through FY14	Remaining Balance	FY16	FY14 - FY18	FY19-FY23	Beyond FY23
<b>CSO</b>	<b>898,454,777</b>	<b>853,284,951</b>	<b>45,169,826</b>	<b>13,228,016</b>	<b>57,747,155</b>	<b>3,001,304</b>	
<b>MWRA Managed</b>	<b>433,759,856</b>	<b>430,576,324</b>	<b>3,183,532</b>	<b>786,531</b>	<b>3,881,389</b>	<b>-</b>	
339 North Dorchester Bay	221,597,299	221,601,931	(4,632)	-	(23,295)	-	
347 East Boston Branch Sewer Relief	85,637,164	85,637,164	-	-	(8,831)	-	
348 BOS019 Storage Conduit	14,287,581	14,287,581	-				
349 Chelsea Trunk Sewer	29,779,319	29,779,319	-				
350 Union Park Detention Treatment Facility	49,583,406	49,583,406	-				
353 Upgrade Existing CSO Facilities	22,385,200	22,385,200	-				
354 Hydraulic Relief Projects	2,294,549	2,294,549	-				
355 MWR003 Gate & Siphon	4,562,261	1,374,097	3,188,164	786,531	3,913,516	-	
357 Charles River CSO Controls	3,633,077	3,633,077	-				
<b>CSO Community Managed</b>	<b>414,446,801</b>	<b>374,520,110</b>	<b>39,926,691</b>	<b>12,423,485</b>	<b>54,243,723</b>	<b>1,739,639</b>	
340 Dorchester Bay Sewer Separation (Fox Point)	54,625,590	54,625,590	-	-	473,295		
341 Dorchester Bay Sewer Sep. (Commercial Point)	64,173,625	60,322,568	3,851,057	400,000	1,286,836	1,739,639	
342 Neponset River Sewer Separation	2,549,086	2,549,086	-	-	104,692		
343 Constitution Beach Sewer Separation	3,731,315	3,731,315	-	-	(37,573)		
344 Stony Brook Sewer Separation	44,246,462	44,246,462	-	-	48,079		

**ATTACHMENT B  
FINAL FY16 PROJECT LEVEL EXPENDITURE FORECAST**

<b>Program/Project/Subphase</b>	<b>Total Contract Amount</b>	<b>Payments through FY14</b>	<b>Remaining Balance</b>	<b>FY16</b>	<b>FY14 - FY18</b>	<b>FY19-FY23</b>	<b>Beyond FY23</b>
346 Cambridge Sewer Separation	92,562,714	63,493,803	29,068,911	10,430,000	42,078,510	-	
351 BWSC Floatables Controls	945,936	945,936	-	-	12,957		
352 Cambridge Floatables Controls	1,126,708	1,086,925	39,783	-	39,783	-	
356 Fort Point Channel Sewer Separation	11,917,090	11,917,090	-	-	(89,619)		
358 Morrissey Boulevard Drain	32,185,790	32,188,262	(2,472)	(2,472)	(160,999)		
359 Reserved Channel Sewer Separation	72,612,534	64,361,307	8,251,228	1,595,958	12,572,633		
360 Brookline Sewer Separation	24,715,545	25,997,364	(1,281,819)	-	(1,281,819)		
361 Bulfinch Triangle Sewer Separation	9,054,405	9,054,405	-	-	(803,052)		
<b>CSO Planning &amp; Support</b>	<b>50,248,120</b>	<b>48,188,517</b>	<b>2,059,603</b>	<b>18,000</b>	<b>(377,957)</b>	<b>1,261,665</b>	
324 CSO Support	50,248,120	48,188,517	2,059,603	18,000	(377,957)	1,261,665	
<b>Other Wastewater</b>	<b>242,865,861</b>	<b>132,543,027</b>	<b>110,322,835</b>	<b>17,213,083</b>	<b>75,008,817</b>	<b>46,475,291</b>	<b>(7,113,925)</b>
128 I/I Local Financial Assistance	242,584,985	132,262,151	110,322,835	17,213,083	75,008,817	46,475,291	(7,113,925)
138 Sewerage System Mapping Upgrades	280,876	280,876	-				

**ATTACHMENT B  
FINAL FY16 PROJECT LEVEL EXPENDITURE FORECAST**

Program/Project/Subphase	Total Contract Amount	Payments through FY14	Remaining Balance	FY16	FY14 - FY18	FY19-FY23	Beyond FY23
<b>Waterworks</b>	2,909,435,666	1,915,648,552	993,787,114	43,430,312	251,266,386	578,834,798	204,652,098
<b>Drinking Water Quality Improvements</b>	666,291,655	625,440,011	40,851,644	6,430,927	58,903,283	12,160,835	20,009
542 Carroll Water Treatment Plant	438,191,551	415,484,707	22,706,844	3,248,294	15,166,026	11,797,000	20,009
543 Quabbin Water Treatment Plant	19,718,993	18,358,535	1,360,458	53,549	6,950,751		
544 Norumbega Covered Storage	106,674,146	106,674,146	-				
545 Blue Hills Covered Storage	40,554,905	40,082,823	472,082	53,723	228,247	363,835	
550 Spot Pond Storage Facility	61,152,059	44,839,800	16,312,259	3,075,361	36,558,258		
<b>Transmission</b>	1,224,184,761	759,501,011	464,683,749	19,503,960	78,812,099	275,899,672	114,434,833
597 Winsor Station Pipeline	27,883,243	1,734,958	26,148,286	737,822	9,660,830	16,826,822	
601 Sluice Gate Rehabilitation	9,158,411	9,158,411	-				
604 MetroWest Tunnel	708,664,247	696,776,534	11,887,713	233,508	3,259,836	9,888,122	117,781
615 Chicopee Valley Aqueduct Redundancy	8,666,292	8,666,292	-				
616 Quabbin Transmission System	15,456,914	7,456,913	8,000,000	-	773,199	7,481,250	
617 Sudbury/Weston Aqueduct Repairs	7,148,957	659,948	6,489,009	1,226,039	3,146,406	3,342,603	
620 Wachusett Reservoir Spillway Improvements	9,287,460	9,287,460					
621 Watershed Land	24,000,000	17,882,400	6,117,600	2,500,000	6,657,600		
623 Dam Projects	4,538,205	3,094,856	1,443,349	71	978,024	474,999	



**ATTACHMENT B  
FINAL FY16 PROJECT LEVEL EXPENDITURE FORECAST**

Program/Project/Subphase	Total Contract Amount	Payments through FY14	Remaining Balance	FY16	FY14 - FY18	FY19-FY23	Beyond FY23
625 Long Term Redundancy	409,381,031	4,783,239	404,597,792	14,806,520	54,336,204	237,885,876	114,317,052
Distribution And Pumping	949,122,944	377,520,183	571,602,761	17,388,581	105,791,099	324,977,156	145,651,109
618 Northern High NW Transmission Section 70	1,000,000	-	1,000,000	-	474,000	526,000	
677 Valve Replacement	22,702,289	12,016,378	10,685,911	835,962	2,716,876	3,618,703	4,350,327
678 Boston Low Service - Pipe & Valve Rehab.	23,690,864	23,690,864	-				
683 Heath Hill Road Pipe Replacement	19,358,036	19,358,036	-				
689 James L. Gillis Pump Station	33,419,006	33,419,006	-				
692 Northern High Service - Section 27 Improvement	1,091,568	123,646	967,922	4,550	177,506	790,416	
693 NHS - Revere & Malden Pipeline Improvements	55,160,861	26,832,740	28,328,121	460,000	11,020,000	16,606,767	701,355
702 New Connecting Mains - Shaft 7 to WASM 3	34,295,531	10,960,807	23,334,725	-	403,000	17,110,668	5,821,056
704 Rehab of Other Pump Stations	55,057,852	30,057,852	25,000,000	-	-	18,750,000	6,250,000
706 NHS - Connecting Mains from Section 91	2,360,194	2,360,194	-				
708 Northern Extra High Service - New Pipelines	7,863,498	3,632,119	4,231,379	36,400	61,114	3,495,000	675,266
712 Cathodic Protection Of Distribution Mains	1,667,849	140,913	1,526,935	254,490	508,980	763,470	254,490
713 Spot Pond Supply Mains Rehabilitation	66,806,744	61,168,728	5,638,016	1,730,000	2,712,693	3,112,051	
714 Southern Extra High - Sections 41 & 42	3,657,243	3,657,243	-				
719 Chestnut Hill Connecting Mains	32,035,145	17,486,675	14,548,470	-	316,000	10,156,494	4,075,977

**ATTACHMENT B  
FINAL FY16 PROJECT LEVEL EXPENDITURE FORECAST**

Program/Project/Subphase	Total Contract Amount	Payments through FY14	Remaining Balance	FY16	FY14 - FY18	FY19-FY23	Beyond FY23
720 Warren Cottage Line Rehabilitation	1,204,822	1,204,822	-				
721 Southern Spine Distribution Mains	74,773,200	36,681,373	38,091,827	1,269	368,533	4,036,837	33,676,182
722 NIH Redundancy & Storage	90,186,811	8,145,032	82,041,778	5,613,910	43,327,076	40,885,371	
723 Northern Low Service Rehabilitation - Section 8	23,333,783	2,320,986	21,012,797	14,000	553,421	20,459,375	
725 Hydraulic Model Update	598,358	598,358	-				
727 SEH Redundancy & Storage	99,543,770	6,830,942	92,712,829	853,000	23,223,812	15,273,809	54,289,180
730 Weston Aqueduct Supply Mains	281,136,768	68,490,501	212,646,267	7,585,000	19,421,782	160,114,416	35,557,276
731 Lynnfield Pipeline	5,625,832	5,625,828	-	-	(51,693)		
732 Walnut St. & Fisher Hill Pipeline Rehabilitation	2,717,140	2,717,140	-				
735 Section 80 Rehabilitation	9,835,779	-	9,835,779	-	558,000	9,277,779	
<b>Other Waterworks</b>	<b>69,836,306</b>	<b>153,187,346</b>	<b>(83,351,040)</b>	<b>106,845</b>	<b>7,759,905</b>	<b>(34,202,866)</b>	<b>(55,453,852)</b>
753 Central Monitoring System	39,006,328	15,803,729	23,202,599	1,494,498	6,296,599	6,220,000	10,686,000
763 Distribution Systems Facilities Mapping	2,298,919	1,036,368	1,262,551	-	914,095	348,456	
764 Local Water Infrastructure Rehabilitation	7,487,762	7,487,762	-				
765 Local Water Pipeline Assistance Program	-	128,313,468	(128,313,468)	(2,156,653)	(4,508,413)	(53,489,976)	(68,860,852)
766 Waterworks Facility Asset Protection	21,043,297	546,018	20,497,278	769,000	5,057,624	12,718,655	2,721,000

**ATTACHMENT B  
FINAL FY16 PROJECT LEVEL EXPENDITURE FORECAST**

Program/Project/Subphase	Total Contract Amount	Payments through FY14	Remaining Balance	FY16	FY14 - FY18	FY19-FY23	Beyond FY23
<b>Business &amp; Operations Support</b>	<b>128,392,526</b>	<b>82,949,295</b>	<b>45,443,231</b>	<b>8,958,368</b>	<b>40,922,125</b>	<b>10,028,554</b>	
881 Equipment Purchase	23,167,626	13,348,295	9,819,331	3,000,882	10,063,297	997,000	
925 Technical Assistance	1,125,000	-	1,125,000	375,000	1,125,000		
930 MWRA Facility - Chelsea	9,813,633	9,813,633	-				
931 Business Systems Plan	24,551,785	24,515,683	36,102	-	100,555		
932 Environmental Remediation	1,478,602	1,478,602	-	-	(200)		
933 Capital Maintenance Planning & Development	16,720,749	11,057,829	5,662,920	1,871,133	6,596,524		
934 MWRA Facilities Management	2,150,535	370,533	1,780,002	-	-	1,780,002	
935 Alternative Energy Initiatives	25,629,544	17,387,564	8,241,980	52,000	3,575,680	4,857,055	
940 Application Improvement Program	10,176,000	366,135	9,809,865	1,566,064	8,437,071	1,665,804	
942 Information Security Program (ISP)	2,385,411	819,825	1,565,586	351,667	1,595,221	255,000	
944 Information Technology Management Program	922,640	-	922,640	58,230	863,306	59,334	
946 IT Infrastructure Program	10,271,000	3,791,196	6,479,804	1,683,392	8,565,670	414,359	

**ATTACHMENT C**  
**Comparison of the Final FY16 CIP and the Final FY15 CIP**

Program and Project	Final FY15				Final FY16				Change from Final FY15			
	Total Budget Amount	FY14-18	FY19-23	Beyond 23	Total Budget Amount	FY14-18	FY19-23	Beyond 23	Total Budget Amount	FY14-18	FY19-23	Beyond 23
<b>Total MWRA</b>	<b>5,852,185</b>	<b>756,279</b>	<b>1,131,090</b>	<b>276,690</b>	<b>6,012,395</b>	<b>711,532</b>	<b>1,223,762</b>	<b>388,976</b>	<b>160,210</b>	<b>(44,738)</b>	<b>92,672</b>	<b>112,286</b>
<b>Wastewater</b>	<b>2,885,828</b>	<b>423,390</b>	<b>620,567</b>	<b>105,869</b>	<b>2,974,568</b>	<b>419,348</b>	<b>634,900</b>	<b>184,324</b>	<b>88,743</b>	<b>(4,044)</b>	<b>14,332</b>	<b>78,456</b>
<b>Interception &amp; Pumping</b>	<b>873,172</b>	<b>108,970</b>	<b>213,926</b>	<b>29,735</b>	<b>890,032</b>	<b>98,025</b>	<b>224,870</b>	<b>46,598</b>	<b>16,861</b>	<b>(10,946)</b>	<b>10,944</b>	<b>16,863</b>
102 Quincy Pump Facilities	25,907	-	-	-	25,907	-	-	-	-	-	-	-
104 Braintree-Weymouth Relief Facilities	232,453	309	4,441	-	232,455	310	4,441	-	2	1	-	-
105 New Neponset Valley Relief Sewer	30,300	-	-	-	30,300	-	-	-	-	-	-	-
106 Wellesley Extension Replacement Sewer	64,359	-	-	-	64,359	-	-	-	-	-	-	-
107 Framingham Extension Relief Sewer	47,856	-	-	-	47,856	-	-	-	-	-	-	-
127 Cummingsville Replacement Sewer	8,999	-	-	-	8,999	-	-	-	-	-	-	-
130 Siphon Structure Rehabilitation	6,520	-	5,580	-	6,635	-	5,695	-	115	-	115	-
131 Upper Neponset Valley Sewer	54,174	-	-	-	54,174	-	-	-	-	-	-	-
132 Corrosion & Odor Control	16,346	1,000	12,344	-	19,782	543	16,238	-	3,436	(457)	3,894	-
136 West Roxbury Tunnel	11,314	-	1,000	-	11,314	-	1,000	-	-	-	-	-
137 Wastewater Central Monitoring	20,482	327	373	-	27,482	760	2,910	4,030	7,000	433	2,537	4,030
139 South System Relief Project	4,939	-	1,500	-	4,939	-	1,500	-	-	-	-	-
141 Wastewater Process Optimization	10,360	1,391	5,794	1,970	10,383	1,391	5,817	1,970	23	-	23	-
142 Wastewater Meter System-Equipment	26,438	7,300	3,000	11,000	27,738	6,436	1,564	14,600	1,300	(864)	(1,436)	3,600
143 Regional I/I Management Planning	169	-	-	-	169	-	-	-	-	-	-	-
145 Facility Asset Protection	306,806	98,644	174,144	16,766	311,791	88,585	179,955	25,999	4,985	(10,059)	5,811	9,233
146 D.I. Cross Harbor Tunnel Inspection	5,000	-	5,000	-	5,000	-	5,000	-	-	-	-	-
147 Randolph Trunk Sewer Relief	750	-	750	-	750	-	750	-	-	-	-	-
<b>Treatment</b>	<b>709,420</b>	<b>191,535</b>	<b>282,292</b>	<b>50,871</b>	<b>775,572</b>	<b>183,995</b>	<b>352,083</b>	<b>54,773</b>	<b>66,152</b>	<b>(7,541)</b>	<b>69,791</b>	<b>3,903</b>
182 DI Primary and Secondary	(958)	-	-	-	(958)	-	-	-	-	-	-	-
200 DI Plant Optimization	33,427	-	-	-	33,427	-	-	-	-	-	-	-
206 DI Treatment Plant Asset Protection	655,558	178,663	278,524	50,871	720,365	170,511	347,938	54,416	64,807	(8,152)	69,414	3,545
210 Clinton Wastewater Treat Plant	19,166	12,872	3,768	-	20,511	13,483	4,145	358	1,345	611	377	358
211 Laboratory Services	2,228	-	-	-	2,228	-	-	-	-	-	-	-
<b>Residuals</b>	<b>167,920</b>	<b>10,384</b>	<b>58,917</b>	<b>34,083</b>	<b>167,643</b>	<b>4,570</b>	<b>8,470</b>	<b>90,067</b>	<b>(277)</b>	<b>(5,814)</b>	<b>(50,447)</b>	<b>55,984</b>
261 Residuals	63,811	-	-	-	63,811	-	-	-	-	-	-	-
271 Residuals Asset Protection	104,109	10,384	58,917	34,083	103,832	4,570	8,470	90,067	(277)	(5,814)	(50,447)	55,984

**ATTACHMENT C**  
**Comparison of the Final FY16 CIP and the Final FY15 CIP**

Program and Project	Final FY15				Final FY16				Change from Final FY15			
	Total Budget Amount	FY14-18	FY19-23	Beyond 23	Total Budget Amount	FY14-18	FY19-23	Beyond 23	Total Budget Amount	FY14-18	FY19-23	Beyond 23
<b>CSO</b>	<b>892,449</b>	<b>53,481</b>	<b>1,262</b>	<b>-</b>	<b>898,455</b>	<b>57,749</b>	<b>3,002</b>	<b>-</b>	<b>6,007</b>	<b>4,268</b>	<b>1,740</b>	<b>-</b>
340 Dorchester Bay Sewer Separation (Fox Point)	54,626	474	-	-	54,626	473	-	-	-	(1)	-	-
341 Dorchester Bay Sewer Separation (Commercial Point)	64,174	3,026	-	-	64,174	1,287	1,740	-	-	(1,739)	1,740	-
342 Neponset River Sewer Separation	2,549	105	-	-	2,549	105	-	-	-	-	-	-
343 Constitution Beach Sewer Separation	3,731	(38)	-	-	3,731	(38)	-	-	-	-	-	-
344 Stony Brook Sewer Separation	44,247	48	-	-	44,246	48	-	-	(1)	-	-	-
346 Cambridge Sewer Separation	90,847	40,363	-	-	92,563	42,079	-	-	1,716	1,716	-	-
351 BWSC Floatables Controls	946	13	-	-	946	13	-	-	-	-	-	-
352 Cambridge Floatables Control	1,127	40	-	-	1,127	40	-	-	-	-	-	-
356 Fort Point Channel Sewer Separation	11,917	(90)	-	-	11,917	(90)	-	-	-	-	-	-
358 Morrissey Boulevard Drain	32,339	(8)	-	-	32,186	(161)	-	-	(153)	(153)	-	-
359 Reserved Channel Sewer Separation	68,902	8,862	-	-	72,613	12,573	-	-	3,711	3,711	-	-
360 Brookline Sewer Separation	24,802	(1,195)	-	-	24,716	(1,282)	-	-	(86)	(87)	-	-
361 Bulfinch Triangle Sewer Separation	9,054	(803)	-	-	9,054	(803)	-	-	-	-	-	-
339 North Dorchester Bay	221,606	(14)	-	-	221,597	(23)	-	-	(9)	(9)	-	-
347 East Boston Branch Sewer Relief	85,638	(8)	-	-	85,637	(9)	-	-	(1)	(1)	-	-
348 BOS019 Storage Conduit	14,288	-	-	-	14,288	-	-	-	-	-	-	-
349 Chelsea Trunk Sewer	29,779	-	-	-	29,779	-	-	-	-	-	-	-
350 Union Park Detention Treatment Facility	49,583	-	-	-	49,583	-	-	-	-	-	-	-
353 Upgrade Existing CSO Facilities	22,385	-	-	-	22,385	-	-	-	-	-	-	-
354 Hydraulic Relief Projects	2,295	-	-	-	2,295	-	-	-	-	-	-	-
355 MWR003 Gate & Siphon	3,716	3,067	-	-	4,562	3,914	-	-	846	847	-	-
357 Charles River CSO Controls	3,633	-	-	-	3,633	-	-	-	-	-	-	-
324 CSO Support	50,264	(362)	1,262	-	50,248	(378)	1,262	-	(16)	(16)	-	-
<b>Other Wastewater</b>	<b>242,866</b>	<b>59,020</b>	<b>64,171</b>	<b>(8,820)</b>	<b>242,866</b>	<b>75,009</b>	<b>46,475</b>	<b>(7,114)</b>	<b>-</b>	<b>15,989</b>	<b>(17,696)</b>	<b>1,706</b>
128 I/I Local Financial Assistance	242,585	59,020	64,171	(8,820)	242,585	75,009	46,475	(7,114)	-	15,989	(17,696)	1,706
138 Sewerage System Mapping Upgrade	281	-	-	-	281	-	-	-	-	-	-	-
<b>Total Waterworks</b>	<b>2,843,684</b>	<b>294,623</b>	<b>503,558</b>	<b>170,821</b>	<b>2,909,434</b>	<b>251,266</b>	<b>578,834</b>	<b>204,653</b>	<b>65,753</b>	<b>(43,356)</b>	<b>75,276</b>	<b>33,831</b>
<b>Drinking Water Quality</b>	<b>659,861</b>	<b>62,761</b>	<b>1,892</b>	<b>-</b>	<b>666,292</b>	<b>58,902</b>	<b>12,161</b>	<b>20</b>	<b>6,430</b>	<b>(3,858)</b>	<b>10,269</b>	<b>20</b>
542 Carroll Water Treatment Plant	433,712	20,611	1,892	-	438,192	15,166	11,797	20	4,480	(5,445)	9,905	20
543 Quabbin Water Treatment Plant	19,305	6,536	-	-	19,719	6,951	-	-	414	415	-	-
544 Norumbega Covered Storage	106,674	-	-	-	106,674	-	-	-	-	-	-	-
545 Blue Hills Covered Storage	40,547	584	-	-	40,555	228	364	-	8	(356)	364	-
550 Spot Pond Storage Facility	59,624	35,030	-	-	61,152	36,558	-	-	1,528	1,528	-	-

**ATTACHMENT C**  
**Comparison of the Final FY16 CIP and the Final FY15 CIP**

Program and Project	Final FY15				Final FY16				Change from Final FY15			
	Total Budget Amount	FY14-18	FY19-23	Beyond 23	Total Budget Amount	FY14-18	FY19-23	Beyond 23	Total Budget Amount	FY14-18	FY19-23	Beyond 23
<b>Transmission</b>	<b>1,201,724</b>	<b>98,047</b>	<b>236,780</b>	<b>111,859</b>	<b>1,224,183</b>	<b>78,813</b>	<b>275,899</b>	<b>114,434</b>	<b>22,460</b>	<b>(19,235)</b>	<b>39,119</b>	<b>2,576</b>
597 Winsor Station Pipeline	27,434	17,182	8,856	-	27,883	9,661	16,827	-	449	(7,521)	7,971	-
601 Sluice Gate Rehabilitation	9,158	-	-	-	9,158	-	-	-	-	-	-	-
604 MetroWest Tunnel	708,490	4,981	8,110	-	708,664	3,260	9,888	118	174	(1,721)	1,778	118
615 Chicopee Valley Aqueduct Redundancy	8,666	-	-	-	8,666	-	-	-	-	-	-	-
616 Quabbin Transmission System	13,592	2,240	4,150	-	15,457	773	7,481	-	1,865	(1,467)	3,331	-
617 Sudbury/Weston Aqueduct Repairs	5,968	3,211	2,098	-	7,149	3,146	3,343	-	1,181	(65)	1,245	-
620 Wachusett Reservoir Spillway Improvement	9,287	-	-	-	9,287	-	-	-	-	-	-	-
621 Watershed Land	24,000	6,658	-	-	24,000	6,658	-	-	-	-	-	-
622 Cosgrove/Wachusett Redundancy	-	-	-	-	-	-	-	-	-	-	-	-
623 Dam Projects	4,540	1,412	43	-	4,538	978	475	-	(2)	(434)	432	-
625 Long Term Redundancy	390,588	62,363	213,524	111,859	409,381	54,336	237,886	114,317	18,793	(8,027)	24,362	2,458
<b>Distribution &amp; Pumping</b>	<b>932,592</b>	<b>121,064</b>	<b>306,096</b>	<b>132,729</b>	<b>949,123</b>	<b>105,791</b>	<b>324,976</b>	<b>145,651</b>	<b>16,534</b>	<b>(15,273)</b>	<b>18,880</b>	<b>12,921</b>
618 Northern High NW Tran Sections 70 & 71	1,000	1,000	-	-	1,000	474	526	-	-	(526)	526	-
677 Valve Replacement	22,540	3,411	7,113	-	22,702	2,717	3,619	4,351	162	(694)	(3,494)	4,351
678 Boston Low Service-Pipe & Valve Rehabilitation	23,691	-	-	-	23,691	-	-	-	-	-	-	-
683 Heath Hill Road Pipe Replacement	19,358	-	-	-	19,358	-	-	-	-	-	-	-
689 James L. Gillis Pump Station Rehabilitation	33,419	-	-	-	33,419	-	-	-	-	-	-	-
692 NHS - Section 27 Improvements	1,071	178	770	-	1,092	178	790	-	21	-	20	-
693 NHS - Revere & Malden Pipeline Improvement	48,988	12,814	9,342	-	55,161	11,020	16,607	702	6,173	(1,794)	7,265	702
702 New Connect Mains-Shaft 7 to WASM 3	33,902	6,105	16,836	-	34,296	403	17,111	5,821	394	(5,702)	275	5,821
704 Rehabilitation of Other Pump Stations	55,058	-	18,750	6,250	55,058	-	18,750	6,250	-	-	-	-
706 NHS-Connecting Mains from Section 91	2,360	-	-	-	2,360	-	-	-	-	-	-	-
708 Northern Extra High Service New Pipelines	7,776	1,206	2,938	-	7,863	61	3,495	675	87	(1,145)	557	675
712 Cathodic Protection Of Distribution Mains	1,636	498	748	249	1,668	509	763	254	32	11	15	5
713 Spot Pond Supply Mains Rehabilitation	66,470	3,261	2,227	-	66,807	2,713	3,112	-	337	(548)	885	-
714 Southern Extra High Sections 41 & 42	3,657	-	-	-	3,657	-	-	-	-	-	-	-
719 Chestnut Hill Connecting Mains	31,731	805	8,031	5,408	32,035	316	10,156	4,076	304	(489)	2,125	(1,332)
720 Warren Cottage Line Rehabilitation	1,205	-	-	-	1,205	-	-	-	-	-	-	-
721 South Spine Distribution Mains	74,073	390	4,000	32,992	74,773	369	4,037	33,676	700	(21)	37	684
722 NIH Redundancy & Storage	88,723	39,821	42,928	-	90,187	43,327	40,885	-	1,464	3,506	(2,043)	-
723 Northern Low Service Rehabilitation Section 8	22,964	754	19,889	-	23,334	553	20,459	-	370	(201)	570	-
724 Northern High Service - Pipeline Rehabilitation	-	-	-	-	-	-	-	-	-	-	-	-
725 Hydraulic Model Update	598	-	-	-	598	-	-	-	-	-	-	-
727 Southern Extra High Redundancy & Storage	97,774	18,130	19,731	53,156	99,544	23,224	15,274	54,289	1,770	5,094	(4,457)	1,133
730 Weston Aqueduct Supply Mains	276,475	31,939	143,819	34,675	281,137	19,422	160,114	35,557	4,662	(12,517)	16,295	882
731 Lynnfield Pipeline	5,774	97	-	-	5,626	(52)	-	-	(148)	(149)	-	-
732 Walnut St. & Fisher Hill Pipeline Rehabilitation	2,717	-	-	-	2,717	-	-	-	-	-	-	-
733 NHS Pipeline Rehabilitation 13-18 & 48	-	-	-	-	-	-	-	-	-	-	-	-
734 Southern Extra High Pipelines-Sections 30, 39,40, & 44	-	-	-	-	-	-	-	-	-	-	-	-
735 Section 80 Rehabilitation	9,630	656	8,974	-	9,836	558	9,278	-	206	(98)	304	-

**ATTACHMENT C**  
**Comparison of the Final FY16 CIP and the Final FY15 CIP**

Program and Project	Final FY15				Final FY16				Change from Final FY15			
	Total Budget Amount	FY14-18	FY19-23	Beyond 23	Total Budget Amount	FY14-18	FY19-23	Beyond 23	Total Budget Amount	FY14-18	FY19-23	Beyond 23
<b>Other</b>	<b>49,507</b>	<b>12,752</b>	<b>(41,211)</b>	<b>(73,767)</b>	<b>69,836</b>	<b>7,760</b>	<b>(34,203)</b>	<b>(55,454)</b>	<b>20,329</b>	<b>(4,991)</b>	<b>7,008</b>	<b>18,313</b>
753 Central Monitoring System	19,592	3,789	-	-	39,006	6,297	6,220	10,686	19,414	2,508	6,220	10,686
763 Distribution Systems Facilities Mapping	1,799	763	-	-	2,299	914	348	-	500	151	348	-
764 Local Water Infrastructure Rehabilitation Assistance	7,488	-	-	-	7,488	-	-	-	-	-	-	-
765 Local Water Pipeline Improvement Loan Program	-	(2,581)	(49,647)	(74,632)	-	(4,508)	(53,490)	(68,861)	-	(1,927)	(3,843)	5,771
766 Waterworks Facility Asset Protection	20,628	10,781	8,436	865	21,043	5,058	12,719	2,721	415	(5,723)	4,283	1,856
<b>Business &amp; Operations Support</b>	<b>122,673</b>	<b>38,266</b>	<b>6,965</b>	<b>-</b>	<b>128,393</b>	<b>40,922</b>	<b>10,029</b>	<b>-</b>	<b>5,720</b>	<b>2,655</b>	<b>3,063</b>	<b>-</b>
881 Equipment Purchase	20,491	7,460	924	-	23,168	10,063	997	-	2,677	2,603	73	-
925 Technical Assistance	1,125	1,125	-	-	1,125	1,125	-	-	-	-	-	-
930 MWRA Facility - Chelsea	9,814	-	-	-	9,814	-	-	-	-	-	-	-
931 Business Systems Plan	24,535	84	-	-	24,552	101	-	-	17	17	-	-
932 Environmental Remediation	1,479	-	-	-	1,479	-	-	-	-	-	-	-
933 Capital Maintenance Planning	13,971	3,847	-	-	16,721	6,597	-	-	2,750	2,750	-	-
934 MWRA Facilities Management	2,151	-	1,780	-	2,151	-	1,780	-	-	-	-	-
935 Alternative Energy Initiatives	26,522	5,707	3,618	-	25,630	3,576	4,857	-	(892)	(2,131)	1,239	-
940 Applicat Improv Program	10,050	9,795	182	-	10,176	8,437	1,666	-	126	(1,358)	1,484	-
942 Info Security Program ISP	1,343	808	-	-	2,385	1,595	255	-	1,042	787	255	-
944 Info Tech Mgmt Program	923	923	-	-	923	863	59	-	-	(60)	59	-
946 IT Infrastructure Program	10,271	8,519	461	-	10,271	8,566	414	-	-	47	(47)	-

**ATTACHMENT D**

**MWRA's Responses to the Advisory Board's FY2016 Integrated CIP and CEB Recommendations and Comments**

	MWRA Responses
<p>1. The Advisory Board recommends that the Phosphorus Removal Construction Project be placed on indefinite hold pending receipt of \$500 thousand toward the operations of the Clinton Wastewater Treatment Plant. (Page 24)</p>	<p>The Authority received the \$500,000 on 6/15/2015 for FY15 and funds are appropriated in FY16.</p>
<p>2. The Advisory Board grants approval under Section 8 (d) of the MWRA's Enabling Act for the MWRA to provide water to the Commonwealth at its McLaughlin Fish Hatchery subject to the execution of a legally binding agreement between the Authority and the Commonwealth guaranteeing no less than \$2.5 million, as well as confirmation of the grant funding necessary to construct the hydropower turbine. (Page 33)</p>	<p>On June 3, the MWRA Board of Directors authorized the Executive Director, on behalf of the Authority, to execute a Memorandum of Agreement between the Massachusetts Division of Fisheries and Wildlife, the Massachusetts Department of Fish and Game, and the Massachusetts Water Resources Authority relating to the construction and operation of the McLaughlin Fish Hatchery Pipeline and Hydropower Project, at the Chicopee Valley Aqueduct. The Division of Fisheries and Wildlife Board also voted to approve the MOA. The MOA provides for \$2.5 million to be transferred to MWRA to be deposited in an interest-bearing money market account prior to the end of FY2015. The \$2.5 million represents the estimated capital cost of the pipeline at the 30% stage of design and includes a 25% contingency. Per the MOU, the \$2.5 million is to be used exclusively to pay for the costs of design, permitting, procurement, construction and resident engineering for the pipeline; if the pipeline costs are less than \$2.5 million, unused monies will be returned to Fisheries and Wildlife and Fish and Game. MWRA has received grants from both the Leading By Example Program and the Mass. Clean Energy Center for the hydropower facilities: the grants total \$577,000, which is the estimated capital cost of the hydropower facilities, including a 25% contingency.</p>
<p>3. The Advisory Board reverses its prior recommendation to remove the Hatchery Pipeline Project from the MWRA's Capital Improvement Program, subject to the terms of the prior recommendation. (Page 33)</p>	<p>Understood. MWRA is proceeding with the detail design of the project, and plans to advertise for construction bids late this year.</p>



**ATTACHMENT D**

**MWRA's Responses to the Advisory Board's FY2016 Integrated CIP and CEB Recommendations and Comments**

	MWRA Responses
<p>4. The Advisory Board recommends that the Authority identifies the causes for continued capital underspending and takes the steps necessary to bring capital spending closer to the baseline cap levels. (Page 40)</p>	<p>The Authority agrees with the Advisory Board observation that although the current Cap (FY14-18) was lowered significantly versus the prior two Caps (FY04-09 and FY09-13) there is comparable level of underspending present. It is important to note that the underspending is measured against a base-line Cap set, by the end of the cap period, six years in advance of the actual spending. The annual underspending may not be a good measure of a successful investment program. A better measure may be the availability of equipment and the history of significant failures. As analyzed in great detail in prior periods, the spending against a set target which is an estimate at a given time, depends on a variety of factors and in most cases a combination of multiple factors. In 2007 at the Advisory Board's recommendation, a Committee was formed to identify and document the reasons of perceived underspending during the FY04-07 period. The committee identified a series of factors which may cause underspending, such as: delay in notices to proceed, deliberate decisions to pause or slow a project, design assumption changes, staffing issues, level of contingencies, cashflow assumptions, lower bid awards, legal settlements, environmental issues and permits. As result of the committee's recommendation, the contingency factors applied to cashflows were lowered downwards from 10% to 7%. These factors continue to impact the timing and the amount of spending in the capital program. As outlined in the Authority's presentation to the Board on June 3rd, 2015 during the budget briefings, the Authority is planning to improve CIP spending by implementing corrective measures such as streamlining the internal review process, improving the CIP progress monitoring and continuous backfilling of critical positions.</p>
<p>5. The Advisory Board recommends that the rate revenue requirement for the FY16 Current Expense Budget be reduced by \$4,811,604, resulting in a 3.36% wholesale rate increase. (Page 47)</p>	<p>Agree.</p>
<p>6. The Advisory Board recommends that the \$6,663,030 CORE Fund deposit is removed from the final FY16 CEB. (Page 53)</p>	<p>Agree, the CORE Fund deposit is no longer a requirement based on the Revised Bond Resolution.</p>
<p>7. The Advisory Board recommends reducing the anticipated use of bond redemption funds by \$3,547,000. (Page 53)</p>	<p>Agree. Given the dynamics of the CORE Funds requirement (see Item 6) the reduction of bond redemption funds enables the Authority to preserve these funds for future years, a strategy which is part of the long-term management of assessment increases.</p>
<p>8. The Advisory Board recommends that the Authority adjusts its attrition/vacancy rate assumptions upward by the average value of three positions, for a reduction of \$300,000 (including associated fringe benefits). (Page 59)</p>	<p>Upon further evaluation, the Authority's position is that the Regular Pay line item (based on a detail position by position comparison) is sized appropriately for FY16.</p>

**ATTACHMENT D**

**MWRA's Responses to the Advisory Board's FY2016 Integrated CIP and CEB Recommendations and Comments**

	<b>MWRA Responses</b>
<p>9. The Advisory Board recommends adding \$100,000 to fund additional personnel for the Toxic Reduction and Control (TRAC) department to begin preparation for issuing permits aimed at reducing molybdenum in the wastewater system (Page 59, and page 104)</p>	<p>Agree. The Authority added two positions to TRAC in support the effort required if MWRA decides to adopt a regulatory approach to reduce molybdenum levels.</p>
<p>10. In order to avoid triggering Operating Reserve Requirement related to Other Post-Employment Benefits (OPEB) contributions, the Advisory Board recommends that any strategy toward funding the OPEB liability be framed as the Authority's "approach" or "practice" rather than as a formally voted policy of the MWRA Board of Directors. (Page 65-66)</p>	<p>Agree. The establishment of a policy would deem the OPEB contribution subject to the Operating Reserve calculation under the General Resolution.</p>
<p>11. The Advisory Board endorses designating the \$5,062,470 in the proposed FY16 CEB currently listed as "Post-Employment Benefits/Additional Pension Deposit" as an intended contribution toward the OPEB liability rather than as an additional pension payment. (Page 66)</p>	<p>As based on the latest actuarial evaluation, MWRA's Pension Fund is at 98.3%, it is appropriate to start funding the OPEB liability in FY16. The Authority included \$5,224,848 to fund the OPEB obligation based on the latest Actuarial valuation.</p>
<p>12. The Advisory Board recommends that the \$5,062,470 in the proposed FY16 CEB be deposited on the final day of FY 2016 to allow the Authority flexibility to use these funds for other purposes if deemed necessary. (Page 66)</p>	<p>Agree, for the amount indicated above, \$5,224,848. Depositing the funds on the final day of the Fiscal Year, ensures its exemption from the operating reserve requirements.</p>
<p>13. The Advisory Board recommends that the FY16 CEB be reduced by \$843,745 - the amount that had been budgeted in case OPEB contributions were found to trigger the Operating Reserve Requirement. (Page 66)</p>	<p>Agree.</p>
<p>14. The Advisory Board recommends that any future contributions to OPEB be no greater than 50% of the Actuarial Calculated Cost. (Page 67)</p>	<p>The Authority would like to reserve the right the re-evaluate in every Budget cycle the future contribution levels. Certainly the contribution in the current budget year will be subject of discussion with the OPEB Trust and the Board. The Authority agrees with the Advisory Board to not include more than 50% of the latest Actuarial Calculated cost in the long-term Planning Estimates.</p>
<p>15. The Advisory Board recommends that the Authority adopt the practice of depositing any funds intended as an OPEB contribution on the last day of the fiscal year in which they are intended to be deposited. (Page 67)</p>	<p>Agree.</p>
<p>16. The Advisory Board recommends that the Authority reduce the "additions to reserves" line item by \$207,404 FY16 to reflect reductions to applicable expenses as recommended by the Advisory Board (see Appendix C). (Page 67)</p>	<p>Partially agree. The reduction to the Operating Reserve is \$153,631.</p>

**ATTACHMENT D**

**MWRA's Responses to the Advisory Board's FY2016 Integrated CIP and CEB Recommendations and Comments**

	<b>MWRA Responses</b>
17. The Advisory Board recommends that Department of Conservation and Recreation should pursue a "green" recertification of Division of Water Supply Protection lands through the Forest Stewardship Council. (Page 69)	As discussed at the Water Supply Protection Trust meeting of June 4, DCR is actively evaluating "green" certification options for the Watershed Forestry Program. Further discussion will be held at the Trust's meeting in September.
18. The Advisory Board recommends that the Division of Water Supply Protection make a formal presentation to the MWRA Board of Directors comparing the current status of the forestry program with the recommendations of the Quabbin Science and Technical Advisory Committee report to see what progress has been made. (Page 69)	DCR made a presentation to the Water Supply Protection Trust on the status of the Watershed Forestry Program on June 4th. The program is going strong and all of the STAC report recommendations are being implemented. DCR, in collaboration with MWRA staff, is slated to present an overview on source water protection to the Board sometime soon and will include an update on forestry in the staff summary and presentation.
19. The Advisory Board recommends a reduction of \$58,000 to reflect a later start-up of the co-digestion pilot program until the last quarter of the fiscal year. (Page 78, Page 100)	Agree. The FY16 CEB will not include any funds for the DITP co-digestion pilot project, which is now expected to start-up after FY16.
20. The Advisory Board recommends that the Authority reduce the "other services" line item in the final FY16 CEB by \$5,425 consistent with the Advisory Board's final FY16 operating budget. (Page 79)	Agree.
21. The Advisory Board recommends that the Authority limit financial participation in the Mystic River Modeling Project to the amount committed to in the Joint Funding Agreement with USGS, and to revisit further contributions if and when the other collaborating entities secure funds for their portion of the project. (Page 86)	Agree.
22. The Advisory Board recommends a reduction of the Mystic River Modeling Project by \$116,000 in the final FY16 CEB. (Page 86)	Disagree. The Mystic River Watershed Association is actively seeking additional funding for this project and MWRA is optimistic their efforts will be successful. If so, MWRA is committed to providing matching funds up to \$150,000 for FY16 and thus does not want to decrease the budget as the Advisory Board has recommended. This will provide MWRA the flexibility to provide the matching funds in case additional funding is obtained through other organizations.
23. The Advisory Board supports the Authority's expected addition of \$435,000 in CEB spending and the estimated additional \$340,000 in CIP spending consistent with the additional contaminant monitoring needs. (Page 90)	The Authority appreciates the Advisory Board's support in funding this important initiative.
24. The Advisory Board recommends that Authority staff draft an informational staff summary and provide a detailed presentation to the full MWRA Board of Directors in July 2015 on the history and the significance of the issues at stake with regard to co-permittee language in the Deer Island NPDES permit. (Page 97)	Agree. Staff will work on a staff summary outlining the issues and concerns; however, this will be later in the calendar year.

**ATTACHMENT D**

**MWRA's Responses to the Advisory Board's FY2016 Integrated CIP and CEB Recommendations and Comments**

	MWRA Responses
<p>25. The Advisory Board recommends that the Authority join with the Advisory Board by actively pursuing NPDES delegation authority with the current administration. (Page 98)</p>	<p>Agree. Staff will continue to evaluate this issue. An expected benefit would be requirements that better reflect local conditions. However, a consequence could be a significant permit fee paid to DEP in order to administer the program, especially if DEP expects financial support on the basis of one or more metrics that require proportionate contributions.</p>
<p>26. The Advisory Board recommends that the Authority put together a joint MWRA/Advisory Board working committee to review and identify areas where the Authority may be of assistance to the member communities in meeting the requirements of the MS4 General Permits, including but not necessarily limited to the public education and outreach requirements. (Page 99)</p>	<p>Staff agree to meet with the Advisory Board to discuss the feasibility of participation in such a committee.</p>
<p>27. The Advisory Board recommends that the Authority arrange a presentation to the MWRA Board of Directors from MassDEP on the status of the Organics Diversion Program. Additionally, the Advisory Board recommends that Authority staff then extrapolate from this information the viability of a market/supply for Deer Island should co digestion be deemed viable. (Page 100)</p>	<p>MWRA staff will engage with DEP staff to get the requested information and evaluate timing of a presentation to the Board of Directors. An evaluation of the market will be one of the factors considered in a decision for implementation of co-digestion.</p>
<p>28. The Advisory Board recommends that the Authority convene a working group to develop an appropriate rate structure for Direct Source Water. Further that the recommendation of the working group be brought to the Operations Committee and full Advisory Board for a vote as a new admission policy for the MWRA. (Page 101)</p>	<p>MWRA is in agreement that development of an appropriate rate structure for Direct Source Water makes sense and that a working group should be convened, with the intent that the recommendation of the working group be brought to the Operations Committee and the full Advisory Board, and ultimately, to the MWRA Board of Directors for adoption in a formal policy.</p>
<p>29. The Advisory Board recommends that a working group be convened to discuss a methodology for structuring Water Capacity Insurance to be offered to non-member communities, including members of the Advisory Board, as well as staff from both MWRA and the Advisory Board. Further, that the recommendation of this working group be brought to the Operations Committee and full Advisory Board for a vote as a new admission policy for the MWRA. (Page 102)</p>	<p>MWRA staff shall work with the Advisory Board and its working group regarding a methodology for structuring Water Capacity Insurance. It is MWRA's understanding that it is the Advisory Board's desire to apply a water capacity insurance charge to communities that are not currently part of the MWRA system but that may need MWRA water from time to time. MWRA notes, though, that pursuant to Section 8C of the Interbasin Transfer Act, any MWRA service to new communities that are not within the Chicopee and Nashua Donor Basins require Interbasin Transfer Act approval, except if water is being provided pursuant to water supply emergencies declared by DEP or authorized by law.</p>
<p>30. The Advisory Board recommends that the Authority partner with the Advisory Board to take any and all actions necessary to ensure that 100% of the pellets from the Fore River Pelletization Plant are able to be placed within the Commonwealth year-round by FY 2017. (Page 104)</p>	<p>Staff have begun preliminary work to evaluate a regulatory response to the molybdenum issue, and will work closely with the Advisory Board if such a response is required.</p>

**ATTACHMENT D**

**MWRA's Responses to the Advisory Board's FY2016 Integrated CIP and CEB Recommendations and Comments**

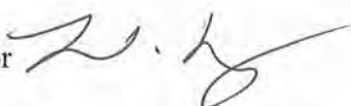
	MWRA Responses
<p>31. The Advisory Board recommends that the Five-Year Strategic Business Plan makes more specific references throughout the list of initiatives to better help readers "crosswalk" between the Business Plan and more detailed backup such as the Orange Notebook. (Page 106)</p>	<p>The Final Business Plan contains 31 hyperlinks throughout the Plan, that refer to existing documents in order to provide additional context and more detailed information about MWRA's activities, including, the Orange Notebook, the Water and Wastewater Master Plans, the CIP, the NPDES Permit, the TRAC Annual Report, as well as many others.</p>
<p>1. The Advisory Board supports the funds included in the proposed FY16 CIP to provide distributions to communities for Phase 9, Phase 10, and earlier phases as well. (Page 28)</p>	<p>The FY16 CIP continues to support and fund this important program at the projected level.</p>
<p>2. The Advisory Board supports the continued use of the defeasance account strategy, which clearly identifies a use of variable rate debt service savings that is consistent with the original intended use of the funds that were raised. (Page 52)</p>	<p>As the use of the defeasance account is a significant part of the Authority's multi-year assessment management strategy the continuation of this practice is essential. Besides the variable rate debt savings, any other debt related favorable variance is included in the defeasance account.</p>
<p>3. The Advisory Board expects the Authority to reduce capital financing by an additional \$400,000 to reflect the spring 2015 defeasance transaction. (Page 52)</p>	<p>Agree. The final reduction to capital financing based on the defeasance executed in May was \$389,225.</p>
<p>4. The Advisory Board expects the Authority to increase the line item for State Revolving Fund (SRF) debt service by \$1,000,000 to reflect the updated amounts anticipated for FY16. (Page 52)</p>	<p>Upon receipt of revised estimates from the Trust, the State Revolving Fund (SRF) debt service increased by \$510,288 versus the \$1,000,000 prior estimate. Both the estimates for the new money deal and the replacement loans were increased by approximately \$4.0 million/each for a total increase of \$8.0 million.</p>
<p>5. The Advisory Board supports and endorses the recommendation of the Long-Term Rates Management Committee and subsequent vote of the MWRA Board of Directors for the intended use of the unencumbered released reserves including \$10 million as an initial deposit into the OPEB irrevocable trust. (Page 56)</p>	<p>Based on the recommendation of the Long-Term Rates Management Committee and subsequent vote of the MWRA Board of Directors, \$10 million of the \$46.3 million reserve release pertaining to the Bond Resolution changes effecting the Community Obligation and Revenue Enhancement Fund (CORE) and the Renewal and Replacement Reserve Fund (RRR) was deposited into an OPEB account. Furthermore the irrevocable OPEB Trust has been established and funded as of April 23, 2015.</p>
<p>6. The Advisory Board expects the Authority's health insurance costs to increase based on new data released this spring from the GIC. The Advisory Board estimates this increase to be \$350,000. (Page 60)</p>	<p>The Authority increased the health insurance related cost, based on the latest GIC premium estimates by \$320,281.</p>
<p>7. The Advisory Board endorses the "virtual full funding" concept, which defines the pension as fully funded if the system's valuation is between 95% - 105% of the targeted funding level. (Page 65)</p>	<p>The Advisory Board's support is appreciated.</p>

**ATTACHMENT D**


**MWRA's Responses to the Advisory Board's FY2016 Integrated CIP and CEB Recommendations and Comments**

	MWRA Responses
<p>8. The Advisory Board supports and endorses the MWRA Board of Directors' establishment of the irrevocable trust as presented at the April 2015 Board of Directors meeting. (Page 65)</p>	<p>The Advisory Board's support is appreciated.</p>
<p>9. The Advisory Board expects that future contributions to the OPEB trust will not trigger the need for the one-sixth Operating Reserve Requirement, per the opinion of bond counsel. (Page 65)</p>	<p>Agree.</p>
<p>10. The Advisory Board supports the Authority's actions in making an \$800 thousand deposit into the OPEB irrevocable trust from the funds appropriated in a previous year for this purpose. (Page 66)</p>	<p>The \$800,000 deposit, which was established in FY10 was rolled into the Irrevocable OPEB Trust established on April 23, 2015.</p>
<p>11. The Advisory Board expects the Authority to decrease its FY16 CEB "utilities" line item. The Advisory Board's estimate of this reduction is \$1,600,000. (Page 76)</p>	<p>Agree. The updated FY16 CEB for utilities results in a reduction of \$1,699,732.</p>
<p>12. The Advisory Board expects that the chemicals budget will be revised to reflect updated pricing and usage assumptions, including the reduction in fluoride dosing consistent with updated federal regulations. The Advisory Board estimates this to be a reduction of \$350,000. (Page 82)</p>	<p>Agree. The updated FY16 CEB for chemicals results in a reduction of \$359,062.</p>
<p>13. The Advisory Board agrees with the Authority's current belief that CSO/SSO discharges are not the primary cause of the Mystic River's water quality issues. (Page 86)</p>	<p>MWRA continues to work cooperatively with the Mystic River Watershed Association and the Mystic River Steering Committee to understand water quality issues facing the Mystic River.</p>
<p>14. The Advisory Board supports and endorses the increased staff training and participation in national groups and organizations provided there are checks and balances to ensure that there is no misuse of funds for these purposes, particularly with regard to out-of-state travel. (Page 92)</p>	<p>The Advisory Board support is appreciated. As in the past, the Authority will continue to approve staff training and participation in national groups and organizations one a case by case basis, after evaluation of the overall benefits for the organization.</p>

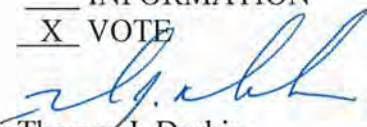
## STAFF SUMMARY

**TO:** Board of Directors  
**FROM:** Frederick A. Laskey, Executive Director   
**DATE:** June 24, 2015  
**SUBJECT:** FY16 Final Current Expense Budget

COMMITTEE Administration, Finance & Audit

  
Kathy Soni, Budget Director  
David Whelan, Budget Manager  
Preparer/Title

INFORMATION  
 VOTE

  
Thomas J. Durkin  
Director, Finance

*The FY16 Proposed Current Expense Budget (CEB) submitted to the Advisory Board at the March 2015 Board meeting included a 4.1% combined assessment increase. Based on the Board discussions during the June 3<sup>rd</sup> budget hearings and the Advisory Board's recommendations, staff are now proposing a 3.4% combined assessment increase, which is significantly lower than the 4.3% increase projected for FY16 last year.*

*In comparison with the Proposed Budget, the Rate Revenue Requirement was reduced by \$4.6 million as result of a \$3.0 reduction to Debt, \$922,000 in savings for direct expenses and \$800,000 in savings for indirect expenses.*

*FY16 was favorably impacted by the Amended and Restated Bond Resolution effective in FY15, which eliminated the FY16 Community Obligation and Revenue Enhancement (CORE) fund deposit required under the old resolution, and enabled MWRA to preserve \$3.5 million of Bond Redemption reserves for use in future years. The elimination of the CORE fund and the reduction of the Renewal and Replacement Reserve fund contributed greatly to the future years assessment estimates reductions and allowed the Authority to deposit \$10 million in an Irrevocable OPEB Trust. The larger than originally planned defeasance in FY15 will also contribute to future years assessments reductions.*

*MWRA continues to utilize a multi-year rates management strategy to provide sustainable and predictable assessment increases to its member communities. To achieve this goal again this year, MWRA has continued to employ conservative budgeting and fiscal discipline which includes controlled spending and use of historical variable rate assumptions. The combination of these measures resulted in assessment increase projections below 4.0% for the next five years, in line with the Advisory Board's recommendations.*

## **RECOMMENDATION:**

1. To adopt the Final FY16 Current Expense Budget (CEB) set forth in Attachment B and Attachment C with current revenue and expenses of \$702.5 million.
2. To adopt the Final FY16 Operating Budget (Trustee's Budget) set forth in Attachment D.

## **DISCUSSION:**

This staff summary presents the Final FY16 CEB. On June 3rd, the Board of Directors held a hearing on the Draft Final FY16 CEB. Discussions and materials provided at the hearing outlined changes to the budget since the transmittal of the Proposed FY16 CEB in March 2015. The additional changes made to the Draft Final FY16 CEB are highlighted above.

For a line item comparison between the Proposed FY16 CEB to the Final FY16 CEB, please refer to Attachment A.

### **Summary**

The Final FY16 Budget recommends a combined increase in rates and charges of 3.4%. Capital financing costs remain the largest component of the CEB and account for 61.6% of total expenses. Total expenses are \$702.5 million, an increase of \$28.0 million or 4.2% over the FY15 Budget. There are no offsets from Debt Service Assistance (DSA) assumed for FY16 or in any future years.

Total expenses include \$432.7 million for Capital Financing costs and \$269.8 million for operating expenses, of which \$222.8 million is for Direct Expenses and \$47.0 million is for Indirect Expenses. Total expenses increased \$28.0 million or 4.2% from the FY15 Budget mainly due to a higher debt service requirement of \$22.9 million, higher Direct Expenses of \$5.7 million due to inclusion of Cost of Living Adjustments (COLA) for staff, higher healthcare costs, and higher projected maintenance expenses. It is important to note that Direct Expenses increased slightly below the targeted 2.7% versus FY15, due to on-going cost improvement initiatives and favorable prices for utilities and chemicals.

The Final FY16 Budget revenues, excluding rate revenue, total \$30.0 million, an increase of \$5.9 million or 24.3% from the FY15 Budget. The Final FY16 Budget non-rate revenue budget includes \$20.7 million in Other User Charges and Other Revenue and \$9.4 million for Investment Income. The majority of the increase is due to recognizing a one-time water revenue for water provided to the City of Cambridge during an FY14 Combined Sewer Overflow (CSO) project.

The Final FY16 Rate Revenue Requirement is \$672.4 million, an increase of \$22.1 million or 3.4% over the FY15 Budget.

Table 1 on the following page provides a comparison of the Final FY16 CEB and FY15 Budget by major categories. Additional detail by line item and by Division is provided in Attachments B and C.



**Table 1**

**MWRA Current Expense Budget  
Final FY16 Budget versus FY15 Budget**

(\$ in Millions)	FY15 Budget	Final FY16 Budget	\$ Change	% Change
Directs	\$ 217.1	\$ 222.8	\$ 5.7	2.6%
Indirects	47.5	47.0	(0.6)	-1.2%
Sub-Total Operating Expenses	\$ 264.7	\$ 269.8	\$ 5.1	1.9%
Capital Financing (before Offsets)	417.4	432.7	15.3	3.7%
Offsets: Bond Redemption <sup>1</sup>	(6.7)	-	6.7	
Variable Debt Savings	-	-	-	
Debt Service Assistance	(0.9)	-	0.9	0.0%
Sub-Total Capital Financing	\$ 409.8	\$ 432.7	\$ 22.9	5.6%
<b>Total Expenses</b>	\$ 674.5	\$ 702.5	\$ 28.0	4.2%
Investment Income	\$ 9.7	\$ 9.4	\$ (0.4)	-3.9%
Non-Rate Revenue	14.4	20.7	6.2	43.2%
Rate Stabilization <sup>1</sup>	-	-	-	
Sub-Total Non-Rate Revenue	\$ 24.2	\$ 30.0	\$ 5.9	24.3%
Rate Revenue	650.3	672.4	22.1	3.4%
<b>Total Revenue &amp; Income</b>	\$ 674.5	\$ 702.5	\$ 28.0	4.2%
<b>FY16 Rate Revenue Increase</b>			<b>3.4%</b>	
<b>Combined Use of Reserves</b>	\$ 6.7	\$ -		

<sup>1</sup> MWRA has two reserve funds (Bond Redemption and Rate Stabilization) which can be used at the discretion of the Authority to manage the rate revenue requirement. Use of the Bond Redemption reduces total expenses and Rate Stabilization increases total revenue. Under the terms of the General Bond Resolution the annual use of Rate Stabilization funds cannot exceed 10% of the year's senior debt service. Bond Redemption funds can be used only to retire or prepay outstanding debt. There is no annual limit on the amount of Bond Redemption funds used in a year, however the use is tied to the bonds' maturity dates and it is utility specific.

## EXPENSES:

### Direct Expenses

FY16 Direct Expenses total \$222.8 million, an increase of \$5.7 million, or 2.6%, from the FY15 Budget.

- *Wages and Salaries* – The budget includes \$99.4 million for Wages and Salaries as compared to \$96.6 million in the FY15 Budget, an increase of \$2.8 million or 2.9%. Regular Pay which is 98.2% of total Wages and Salaries, increased \$2.8 million mostly for COLA increases. The Final FY16 Budget funds 1,170 positions, 5 fewer positions than FY15 Budget. On the Full-Time-Equivalent (FTE's) basis the budget is set for 1,160. The Authority started to report FTE's in April of 2015. It is important to note that the Authority is striving to achieve the 1,150 FTE goal recommended by Amawalk consultants based on a staffing study in 2012, to be reached in a five-year timeframe. As always, new hires and backfills of vacant positions will be managed at the agency level and addressed on a case-by-case basis by senior management.
- *Overtime* – The budget includes \$4.2 million for Overtime, \$599,000 or 16.5% above the FY15 Budget. The main reason for the large increase in funding is associated with the planned overtime activities for the North Main Pump Station and Winthrop Terminal Facility Butterfly Valve Replacement project which will require as many as 62 overnight shutdowns.
- *Fringe Benefits* – The budget includes \$19.3 million for Fringe Benefits, an increase of \$1.0 million or 5.6% from the FY15 Budget. Health Insurance premiums total \$16.8 million, an increase of \$1.0 million or 6.4% from the FY15 Budget largely due to anticipated cost increases.
- *Workers' Compensation* – The budget includes \$2.3 million for Workers' Compensation, an increase of \$143,000 or 6.5% from the FY15 Budget and is based on a three-year average of actual and projected spending.
- *Chemicals* – The budget includes \$9.8 million for Chemicals, a decrease of \$429,000 or 4.2% from the FY15 Budget mainly due to the revised dosing protocol for fluoride as well as updated assumptions for usage and pricing based on the most recent information. The FY16 Budget does not include any funding for the new Deer Island National Pollutant Discharge Elimination System (NPDES) permit which is projected to have more stringent requirements for enterococcus treatment compliance.
- *Utilities* – The budget includes \$23.2 million for Utilities, which is a reduction of \$308,000 or 1.3% from the FY15 Budget. The decrease is mainly for lower projected unit pricing for energy, both electricity and diesel fuel. The budget funds \$16.9 million for Electricity, \$3.3 million for Diesel Fuel, \$2.2 million for Water, and \$486,000 for Natural Gas.

- *Maintenance* – The budget includes \$28.7 million for Maintenance projects, an increase of \$726,000 or 2.6% from the FY15 budget. The FY16 Maintenance request is in line with FY14 actual maintenance spending of \$29.5 million.
- *Training and Meetings* – The budget includes \$414,000 for Training and Meetings, an increase of \$53,000 or 14.6% from the FY15 Budget.
- *Professional Services* – The budget includes \$5.8 million for Professional Services, a decrease of \$138,000 or 2.3% from the FY15 Budget. The budget reflects funding of \$1.8 million for Security, \$1.7 million for Regulatory Monitoring, and \$1.3 million for Other Professional Services to support items such as the professional staff development and as-needed professional services.
- *Other Materials* – The budget includes \$6.2 million for Other Materials, an increase of \$212,000 or 3.6% from the FY15 Budget. The budget includes funding of \$1.7 million for Vehicle Purchases, \$996,000 for Vehicle Expenses mostly for gasoline purchases, \$841,000 for Lab and Testing Supplies, \$709,000 for Equipment/Furniture, \$435,000 for Health and Safety, \$425,000 for Computer Hardware needs, and \$377,000 for Work Clothes.
- *Other Services* – The budget includes \$23.5 million for Other Services, an increase of \$991,000 or 4.4% from the FY15 Budget. The budget includes funding of \$14.1 million for Sludge Pelletization, \$3.6 million for Space/Lease Rentals and related expenses for the CNY and Chelsea facilities, \$1.7 million for Voice and Data costs, \$1.2 million for Grit & Screenings, and \$1.2 million for Other Services. The largest increase is for Telecommunications of \$268,000 for increased lines for security initiatives, Sludge Pelletization of \$218,000 due to increases in inflation indices, and Space/Lease Rentals of \$144,000 for contractual increases.

#### Indirect Expenses

Indirect Expenses for FY16 total \$47.0 million, a decrease of \$559,000 or 1.2% from the FY15 Budget. Below are the highlights of major changes:

- The budget includes \$28.1 million for the Division of Water Supply Protection (formerly MDC Division of Watershed Management), an increase of \$629,000 or 2.3% over the FY15 Budget. The budget is comprised of \$14.1 million for reimbursement of operating expenses net of revenues, \$8.3 million for Payment in Lieu of Taxes (PILOT), and \$5.6 million for debt service expenses on prior land purchases financed by the Commonwealth. The largest increases are for operating expenses net of revenues of \$394,000 mainly for contractual increases and Payment in Lieu of Taxes of \$200,000.
- The budget includes \$8.2 million for the Retirement Fund, an increase of \$351,000 or 4.5% over the FY15 required contribution. This funding of \$8.2 million represents the

minimum required contribution for FY16 based on the actuarial valuation of January 1, 2013, and confirmed by the January 1, 2015 actuarial report.

- The budget includes \$1.9 million for the Harbor Energy Electric Company (HEEC), a decrease of \$1.3 million or 39.1% from the FY15 Budget. This funding is for the repayment of the capital investment for the Deer Island electric cable and substation which provides electric power to the treatment plant. The significant decrease is due to contractual obligations which expired in May 2015, ending the amortization of the cable financing component of the capital investment.
- The budget includes \$2.2 million for Insurance, an increase of \$33,000 or 1.5% from the FY15 Budget. The FY16 Budget was based on actual average spending for the past five years, FY10-14. It should be noted that at the June 3<sup>th</sup> meeting, the Board of Directors approved the MWRA FY16 Insurance program with a not to exceed estimate of \$290,000 for the excess liability coverage line item. Since the June 3<sup>rd</sup> Board meeting, staff obtained the actual amount for the excess liability coverage which was \$267,000, for a savings of \$23,000.
- The Authority has complied with the GASB 45, *Accounting and Financial Reporting by Employers for Postemployment Benefits Other than Pensions (OPEB)*, by disclosing this liability in the year-end Financial Statements. As part of the multi-year strategy to address its unfunded liabilities for OPEB and pension holistically, the Board approved a plan to pay down our pension liability and upon reaching full funding, move to address the OPEB obligation. This strategy was employed in the FY08-15 budgets (although temporarily halted in FY11 to achieve a 1.5% rate increase). Based on the latest actuarial evaluation, MWRA's pension fund is at 98.3% funding level, which is considered virtually fully funded. As such, in the Final FY16 Budget the Authority will begin funding its OPEB liability at \$5.2 million, continuing the Authority's long-term commitment to address its liabilities. Furthermore, to maximize the benefits in terms of returns and accounting treatment, an irrevocable OPEB Trust was established after Board approval and funding started on April 23<sup>rd</sup>, 2015 with \$10,800,000 deposit. The source of the deposit is \$10 million cash reserves which became available due to the Amended and Revised Bond Indenture, and \$800,000 from funds appropriated in FY10 for funding OPEB.
- Funding for the Operating Reserve for FY16 is \$518,000 lower than the FY15 Budget. The Operating Reserve balance is in compliance with MWRA General Bond Resolution which requires a balance of one-sixth of annual operating expenses. Based on the Final FY16 Budget the required balance is \$39.4 million versus the \$39.5 million required in FY15.

### Capital Financing

As a result of the Authority's Capital Improvement Program, debt service as a percent of total expenses (before offsets) has increased steadily from 36% in 1990 to over 61% in the FY16 Current Expense Budget. Much of this debt service is for completed projects, primarily the

Boston Harbor Project and the Integrated Water Supply Improvement Program. The MWRA's capital spending, from its inception, had been dominated by projects mandated by court ordered or regulatory requirements, which in total have accounted for ~80% of capital spending to date. Going forward, and as the Combined Sewer Overflow (CSO) projects wind down, the majority of spending will be focused on asset protection and water redundancy initiatives. The projected capital spending scheduled for fiscal year 2016 is less than scheduled principal payments which will decrease MWRA's outstanding indebtedness.

The Authority has actively managed its debt structure to take advantage of favorable interest rates. Tools used by the MWRA to lower borrowing costs and manage rates include current and advanced refunding of outstanding debt, maximizing the use of the subsidized State Revolving Fund (SRF) debt, issuance of variable rate debt, swap agreements, and the use of surplus revenues to defease debt. The MWRA also uses tax exempt commercial paper to minimize the financing cost of construction in process.

The Final FY16 Budget capital financing costs total \$432.7 million and remain the largest portion of the MWRA's budget, accounting for 61.6% of total expenses.

The Final FY16 Budget includes a targeted defeasance which will reduce debt service by approximately \$1.3 million in FY16, \$12.6 million in FY17, \$13.1 million in FY18, and \$4.0 million in FY19.

The FY16 Budget assumes a 3.25% interest rate for variable rate debt which is the same level as in FY15. The Authority's variable rate debt assumption is comprised of three separate elements: the interest rate for the daily and weekly series; liquidity fees for the Standby Bond Purchase Agreement, Letter of Credit, and Direct Purchase providers; and remarketing fees. While MWRA continues to experience unusually low interest rates, they are not reflective of historical averages and there is no guarantee that rates will remain as low as they are.

The Final FY16 Budget capital financing costs increased by \$22.9 million or 5.6% compared to the FY15 Budget. This increase in the MWRA's debt service is the result of projected FY16 borrowings and the structure of the debt, partially offset by the impact of the projected defeasance. The FY16 capital financing budget includes:

- \$283.0 million in principal and interest payments on MWRA's senior fixed rate bonds. This amount includes \$6.5 million to support issuances of \$100 million in June 2015 and \$1.8 million to support issuances of \$100 million of new money in June 2016. Also includes a reduction of 1.3 million for the effect of the planned FY15 defeasance;
- \$49.2 million in principal and interest payments on subordinate bonds;
- \$81.9 million in principal and interest payments on SRF loans. This amount includes \$5.4 million to support issuances of \$16.0 of replacement loans and \$46.5 million in regular loans during 2016;

- \$11.2 million to fund ongoing capital projects with current revenue and to meet coverage requirements;
- \$4.1 million to fund the interest expense related to the Local Water Pipeline Assistance Program; and,
- \$3.2 million for the Chelsea Lease.

## **Revenue**

FY16 non-rate revenue totals \$30.0 million, an increase of \$5.9 million or 24.3% more than the FY15 Budget. The FY16 non-rate revenue budget includes:

- \$12.0 million in Other Revenue including \$5.6 million due to increased water utility related revenue, \$3.1 million from the sale of the Authority's Renewable Portfolio Credits, sale of generated power, and revenue from the demand response program as well as \$2.2 million in permit fees and penalties. Other Revenue increased \$5.8 million from the FY15 Budget.
- \$9.4 million in Investment Income, a decrease of \$377,000 or 3.9% from the FY15 Budget. The FY16 Budget will have fewer funds invested long-term due to liquidity needs for the reserve releases based on the amendments to the Bond Indenture anticipated for FY16. The short-term interest rate assumption is at 0.20% which is at the FY15 Budget level.
- \$8.7 million in Other User Charges, including \$4.8 million for Chicopee Valley Aqueduct (CVA) communities, \$1.7 million for Deer Island water usage, \$753,000 for entrance fees from member communities, and \$500,000 for the Commonwealth's partial reimbursement for Clinton Wastewater Treatment Plant expenses. Other User Charges are \$424,000 or 5.1% more than the FY15 Budget which is mainly due to assessment increases related to increases for Deer Island, Chicopee, and Lancaster as well as increased entrance fees to reflect Dedham Westwood increased demand.

The Rate Revenue Requirement for FY16 is \$672.4 million, an increase \$22.1 million or 3.4% over the FY15 Budget. The Rate Revenue Requirement is the difference between total expenses of \$702.5 million, less non-rate revenue of \$30.0 million.

## **Planning Estimates and Future Rate Increases**

MWRA's planning estimates are projections based on a series of assumptions about future spending (operating and capital), interest rates, inflation, and other factors. MWRA uses the planning estimates to model and project what future rate increases might be based upon these assumptions, as well as to test the impact of changes to assumptions on future rate increases. The planning estimates are not predictions of what rate increases will be but rather they provide the context and framework for guiding MWRA financial policy and management decision making that ultimately determine the level of actual rate increases on an annual basis.

Historically, the planning estimates were based on conservative financial assumptions. Conservative projections of future rate increases benefit the MWRA by providing assurance to the rating agencies that MWRA anticipates to raise revenues sufficient to pay for its operations and outstanding debt obligations now and over the long-term. Additionally, conservative forecasts of rate revenue increases enable member communities to adequately plan and budget for future payments to MWRA. In FY14 the Authority tightened certain planning estimate assumptions such as inflation on direct expenses and limiting the annual capital improvement spending to \$160 million after FY17.

Table 2 below presents the combined estimated future rate increases and household charges based on the FY16 Budget. The planning estimates shown below assume no Debt Service Assistance from the Commonwealth and use of Rate Stabilization and Bond Redemption reserves through FY23 to manage the rate increases. These projections also include the release of cash and debt service reserves starting in FY16 as a result of Bond Indenture changes.

**Table 2**

Rates & Budget Projections										
Final FY16 CEB	FY2016	FY2017	FY2018	FY2019	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025
Total Rate Revenue (\$000)	\$ 672,440	\$ 698,606	\$ 725,790	\$ 753,918	\$ 783,697	\$ 824,471	\$ 865,825	\$ 836,159	\$ 822,366	\$ 813,431
Rate Revenue Change from Prior Year (\$000)	22,124	26,166	27,184	28,128	29,779	40,774	41,355	(29,666)	(13,793)	(8,935)
Rate Revenue Increase	3.4%	3.9%	3.9%	3.9%	3.9%	5.2%	5.0%	-3.4%	-1.6%	-1.1%
Use of Reserves (\$000)	\$ -	\$ -	\$ -	\$ -	\$ 34,682	\$ 13,646	\$ 13,136	\$ 1,156	\$ -	\$ -

*Estimated Household Bill*

Based on annual water usage of 61,000 gallons	\$ 1,055	\$ 1,100	\$ 1,154	\$ 1,204	\$ 1,253	\$ 1,326	\$ 1,393	\$ 1,425	\$ 1,460	\$ 1,497
Based on annual water usage of 90,000 gallons	\$ 1,556	\$ 1,622	\$ 1,703	\$ 1,777	\$ 1,848	\$ 1,956	\$ 2,055	\$ 2,102	\$ 2,154	\$ 2,208

**CEB Review and Adoption Process**

In March, the MWRA transmitted the Proposed FY16 Budget to the Advisory Board for its review and comment. In June, the Advisory Board submitted their *Integrated Comments and Recommendations*. Responses to the Advisory Board’s review and comments are attached as Attachment F.

Attachments

- Attachment A - FY16 Final Budget vs. FY16 Proposed Budget
- Attachment B - FY16 Final Budget vs. FY15 Approved Budget
- Attachment C - FY16 Final Direct Expense Budget by Division
- Attachment D - FY16 Final Operating Budget (Trustee’s Budget)
- Attachment E - FY16 Final Budget vs. FY15 Projection
- Attachment F - MWRA Responses to Advisory Board’s FY16 Integrated CIP and CEB Comments and Recommendation

**ATTACHMENT A**

**FY16 Final Budget vs FY16 Proposed Budget**

TOTAL MWRA	FY15 Budget	FY16 Proposed Budget	FY16 Final Budget	Change FY16 Final Budget vs FY16 Proposed Budget	
				\$	%
<b>EXPENSES</b>					
WAGES AND SALARIES	\$ 96,554,749	\$ 99,185,938	\$ 99,363,168	\$ 177,230	0.2%
OVERTIME	3,620,600	4,219,293	4,219,293	-	0.0%
FRINGE BENEFITS	18,299,405	19,006,475	19,326,756	320,281	1.7%
WORKERS' COMPENSATION	2,200,000	2,343,000	2,343,000	-	0.0%
CHEMICALS	10,219,580	10,149,911	9,790,849	(359,062)	-3.5%
ENERGY AND UTILITIES	23,472,354	24,864,554	23,164,822	(1,699,732)	-6.8%
MAINTENANCE	27,972,607	28,611,968	28,698,772	86,804	0.3%
TRAINING AND MEETINGS	361,019	413,714	413,714	-	0.0%
PROFESSIONAL SERVICES	5,957,201	5,681,504	5,819,611	138,107	2.4%
OTHER MATERIALS	5,952,729	5,881,553	6,164,588	283,035	4.8%
OTHER SERVICES	22,538,498	23,398,351	23,529,902	131,551	0.6%
<b>TOTAL DIRECT EXPENSES</b>	<b>\$ 217,148,742</b>	<b>\$ 223,756,261</b>	<b>\$ 222,834,475</b>	<b>\$ (921,786)</b>	<b>-0.4%</b>
INSURANCE	\$ 2,128,155	\$ 2,160,797	\$ 2,160,797	\$ -	0.0%
WATERSHED/PILOT	27,466,790	28,061,183	28,096,233	35,050	0.1%
HEEC PAYMENT	3,198,174	1,946,157	1,946,157	-	0.0%
MITIGATION	1,605,967	1,400,000	1,400,000	-	0.0%
ADDITIONS TO RESERVES	482,953	962,449	(34,927)	(997,376)	-103.6%
RETIREMENT FUND	7,808,155	8,159,521	8,159,521	-	0.0%
ADDITIONAL PENSION DEPOSIT		5,062,470		(5,062,470)	-100.0%
POSTEMPLOYMENT BENEFITS	4,821,320		5,224,848	5,224,848	
<b>TOTAL INDIRECT EXPENSES</b>	<b>\$ 47,511,514</b>	<b>\$ 47,752,576</b>	<b>\$ 46,952,628</b>	<b>\$ (799,948)</b>	<b>-1.7%</b>
STATE REVOLVING FUND	\$ 78,460,635	\$ 81,365,988	\$ 81,876,276	\$ 510,288	0.6%
SENIOR DEBT	220,835,626	283,413,656	283,024,431	(389,225)	-0.1%
SUBORDINATE DEBT	99,686,105	49,222,442	49,222,442	-	0.0%
LOCAL WATER PIPELINE CP	4,148,453	4,149,242	4,149,242	-	0.0%
CURRENT REVENUE/CAPITAL	10,200,000	11,200,000	11,200,000	-	0.0%
CAPITAL LEASE	3,217,060	3,217,060	3,217,060	-	0.0%
CORE FUND DEPOSIT	876,507	6,663,030		(6,663,030)	-100.0%
BOND REDEMPTION	(6,745,598)	(3,546,984)		3,546,984	
VARIABLE RATE SAVINGS	-	-	-	-	
DEFEASANCE ACCOUNT	-	-	-	-	
DEBT SERVICE ASSISTANCE	(853,660)	-	-	-	
<b>TOTAL DEBT SERVICE</b>	<b>\$ 409,825,128</b>	<b>\$ 435,684,435</b>	<b>\$ 432,689,451</b>	<b>\$ (2,994,983)</b>	<b>-0.7%</b>
<b>TOTAL EXPENSES</b>	<b>\$ 674,485,384</b>	<b>\$ 707,193,272</b>	<b>\$ 702,476,554</b>	<b>\$ (4,716,719)</b>	<b>-0.7%</b>
<b>REVENUE &amp; INCOME</b>					
RATE REVENUE	\$ 650,315,782	\$ 676,995,000	\$ 672,440,000	\$ (4,555,000)	-0.67%
OTHER USER CHARGES	8,259,693	8,751,391	8,683,898	(67,493)	-0.8%
OTHER REVENUE	6,180,451	11,950,563	12,000,066	49,503	0.4%
RATE STABILIZATION	-	-	-	-	
INVESTMENT INCOME	9,729,458	9,496,318	9,352,590	(143,728)	-1.5%
<b>TOTAL REVENUE &amp; INCOME</b>	<b>\$ 674,485,384</b>	<b>\$ 707,193,272</b>	<b>\$ 702,476,554</b>	<b>\$ (4,716,719)</b>	<b>-0.7%</b>