

# **FY 2014**

# Integrated Comments and Recommendations

on the MWRA's Proposed
Capital Improvement Program
and
Current Expense Budget

# MWRA Advisory Board

The Community Advisory Board to the Massachusetts Water Resources Authority

**June 2013** 

# was established by the State Legislature to represent the 60 communities in the MWRA service area. Through annual comments and

recommendations on the Authority's proposed capital and current expense budgets and rates, the Advisory Board provides a ratepayer perspective on the MWRA's plans and policies to improve the region's water and sewer systems.

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# Integrated Comments and Recommendations

on the MWRA's Proposed

Fiscal Year 2014

Capital Improvement Program and Current Expense Budget

**June 2013** 

Joseph E. Favaloro

**Executive Director** 

#### **Preface**

Pursuant to its responsibility under Sections 8 and 23 of Chapter 372 of the Acts of 1984, the MWRA Advisory Board has undertaken a comprehensive review of the Authority's proposed Current Expense Budget and Capital Improvement Program and Budget for the fiscal year beginning July 1, 2013 (FY 2014). The Advisory Board's review has produced these *INTEGRATED COMMENTS AND RECOMMENDATIONS*, which state the Advisory Board's opinions on a number of issues and policies, plus recommendations on proposed spending in each MWRA department. These *Comments and Recommendations* were approved at the May 16, 2013 meeting of the full Advisory Board.

These *Comments and Recommendations* were prepared by Joseph Favaloro, Cornelia Potter, and Matthew Romero of the Advisory Board staff. Overall direction was provided by Vice Chairman for Finance, Bernard Cooper, with the participation of Advisory Board members.

All base information for figures and tables, schematics and photographs contained within the *Comments and Recommendations* document are provided by MWRA or their consultants, unless otherwise noted.

The Advisory Board extends its appreciation to MWRA staff for their assistance in reviewing the FY14 Capital and Current Expense Budgets.

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#### Introduction

Each year the Massachusetts Water Resources Authority (MWRA) transmits its proposed Capital Improvement Program (CIP) and proposed Current Expense Budget (CEB) to the MWRA Advisory Board for its statutory review. Beginning in 2009, the Advisory Board consolidated its review of the CIP and CEB into an *Integrated Comments and Recommendations* document.

The proposed FY14 CEB includes a rate revenue requirement increase of 3.89%, making it the fifth year in a row that rate increases would be below 4%. It's worth noting, however, that even while keeping rates under 4% in each of these years, the rate revenue requirement increased over \$90 million during this same period. Even with all of this, rate revenue requirements are projected to increase almost \$270 million between now and FY22 serving as a reminder not only of the challenges ahead but the work still to be done.

The Advisory Board has long endeavored to keep rates sustainable and predictable. In its attempts to execute its core mission while meeting the Advisory Board's recommendations, the MWRA has adopted an additional goal of keeping rates reasonable and responsible. Over the years the Advisory Board has advocated for many cost-cutting recommendations, many of which the Authority has agreed to. Additionally, the Authority has implemented several initiatives and programs to contain costs where possible. Through both the Authority's and the Advisory Board's efforts, the MWRA's costs continue to be actively reviewed, managed, and, when possible, reduced.

Another example of the cost containment resulting from the back-and-forth between the Advisory Board and the MWRA is the Authority's proposed FY14 CIP, which includes the setting of the Authority's third capital spending cap for FY14-18. In its review of last year's proposed CIP, the Advisory Board recommended that the Authority's FY14-18 capital spending cap total no more than \$800 million. The Authority's proposed FY14 CIP includes a recommended capital spending cap of \$793.5 million, meeting the Advisory Board's goal.

Reducing its capital spending is one way the Authority can control its costs and their effect upon the ratepayers. Additionally, direct expenses have been level-funded for the fifth year in a row. In essence, the Authority is holding the line on the areas of spending over which it has more direct control. The challenge for cost containment remains the same: the MWRA's rates are driven almost entirely by debt service. In fact, for the first time capital financing makes up over 60% of the Authority's total expenses. One merely needs to look at the oft-invoked "mountain of debt" chart to see the difficulty of managing this expense. This stems largely from the fact that the debt service on the early capital spending of the Authority was "back-ended," and structured with the assumption of the receipt of tens of millions of dollars of Debt Service Assistance (DSA) from the Commonwealth.

Despite the absence of any meaningful amounts of DSA, the bill on prior capital spending still came due, and the Authority – and ultimately the ratepayers – had to and continue to have to pay it. Despite the seeming immutability of this expense, the Authority has utilized every tool in its arsenal to manage debt service costs: well proportioned amounts of variable rate debt, prudent restructuring, refinancing, defeasance transactions, and even "vanilla" and exceptionally limited swaps.

The Authority was created as a quasi-independent agency to help fix a system that had been run to failure and was poorly maintained by the Commonwealth. The Advisory Board was created to introduce a measure of review and control upon the Authority. Working together – sometimes in tandem, sometimes at odds – the two entities have met their charge: cleaned up the "dirtiest harbor in America" and providing arguably the best drinking water in the country. Now, through its own self-management and without any assistance from the Commonwealth, it continues to be the exemplar of a state agency. It meets its obligations, it actively manages its costs, it introduces as many checks and balances as possible to reduce mistakes and if mistakes are made, it quickly corrects them. Last, but not least, it listens to and positively engages its Advisory Board.

This is the context in which the Advisory Board undertakes its review. With the Authority already implementing many of the Advisory Board's prior recommendations, including the defeasance account strategy, there are not millions of dollars to be reduced from the CEB. With the Authority already meeting the Advisory Board's capital spending cap recommendation from last year, there is not an overabundance of capital projects padding the CIP. There is instead a

pair of capital and operating budgets that reflect an agency doing its job while keeping costs contained where possible, which indicates that the Advisory Board has done its job.

This year's review will strive to point out the many cost-cutting and cost-containing initiatives undertaken by both the Advisory Board and the Authority. The Advisory Board does not agree with everything the Authority is doing or has proposed, and these differences will form the basis of this year's recommendations. However, the Advisory Board would be remiss if it did not acknowledge in full measure all the Authority is doing – oftentimes because of the insistence of the Advisory Board.

Moving forward, water and sewer infrastructure needs, both locally and nationally, will increase, and the cost to make these critical investments will soar. Absent federal and state assistance, these represent staggering costs to ratepayers across the nation, and finding additional revenue sources will be critical.

The Advisory Board and the Authority will continue to work together – again, sometimes in tandem, sometimes at odds – to continue providing high quality wholesale drinking water and wastewater services to all of its member communities at the lowest cost possible.

### **Proposed FY14 Capital Improvement Program Highlights**

#### Table 1

Currently Active Projects (\$ millions)					
Spending Future TOTAL through FY12 Spending Active Projection					
Wastewater System Improvements	\$1,661.8	\$993.8	\$2,655.6		
Waterworks System Improvements	1,799.6	1,022.2	2,821.7		
<b>Business &amp; Operations Support</b>	72.2	48.4	120.7		
TOTAL MWRA w/o CONTINGENCY	\$3,533.6	\$2,064.4	\$5,598.0		

- Currently open capital projects total \$5.6 billion.
- \$3.5 billion has been spent through FY12. Another \$4.1 billion is treated as completed and removed from the open projects list. From inception in 1985 through FY12, the Authority has spent \$7.6 billion.
- Future spending is currently projected at \$2.064 billion.

Table 2

<u>e z                                   </u>					
MWRA Spending Since 1985 (\$ millions)					
Program	Completed (and closed out) Projects	Active Projects Spending thru FY12	TOTAL SPENT 1985-2012		
Wastewater System Improvements	\$3,911.5	\$1,661.8	\$5,573.3		
Waterworks System Improvements	159.8	1,799.6	1,959.3		
Business & Operations Support	44.7	72.2	116.9		
TOTAL MWRA w/o CONTINGENCY	\$4,115.9	\$3,533.6	\$7,649.5		

- The \$3.1 billion Master Plan, published in the fall 2006, shapes the proposed capital budget.
- The Master Plan has identified nearly \$3.1 billion in capital spending.
  - o FY 2007 2018 (12 years): nearly \$2.034 billion in project needs (66%) are identified.
  - o FY 2019 2048 (30 years): \$1.044 billion in project needs have been identified to date.
- An updated version is expected to be available concurrent with the final FY14 capital budget.

#### Shift from Mandated Spending to Asset Protection

- Nearly 80% of all spending since 1985 has been for court-mandated projects, including:
  - o Deer Island Wastewater Treatment Plant/Boston Harbor Project: \$3.51 billion
  - o CSO Control Program: \$429.2 million
  - MetroWest Water Supply Tunnel: \$683.7 million

- o Carroll Water Treatment Plant: \$391.2 million
- Going forward, the Authority's focus is on Water and Wastewater Asset Protection and on Water System Redundancy projects.

Table 3

	Total Contract	FY09-13	FY14-18	Beyond 18
Asset Protection	\$1,934.3	\$250.6	\$384.2	\$664.1
Carroll WTP	\$432.3	\$39.1	\$20.4	\$0.1
Water Redundancy	1,853.6	141.2	243.5	606.2
CSO	842.3	315.7	28.8	0.3
Other Projects	535.5	85.8	55.1	(100.1)
Total	\$5,598.0	\$832.5	\$732.0	\$1,170.6
Carroll WTP	7.7%	4.7%	2.8%	0.0%
Asset Protection	34.6%	30.1%	52.5%	56.7%
Water Redundancy	33.1%	17.0%	33.3%	51.8%
CSO	15.0%	37.9%	3.9%	0.0%
Other Projects	9.6%	10.3%	7.5%	-8.5%
Total	100.0%	100.0%	100.0%	100.0%

- Together, Asset Protection and Water Redundancy spending is to total nearly 86% of all spending identified for the next cap period (FY14-18). (See column 2, Table 3.)
- Spending on the CSO Control Program falls to less than 4% of all spending for the FY14-18 period and declines from \$316 million during FY09-13 to a projected \$29 million during FY14-18.
- Negative spending beyond FY18 (column 3, Table 3) is due to Community Loan program repayments.

# Asset Protection and Water Redundancy Projects Dominate Future Spending

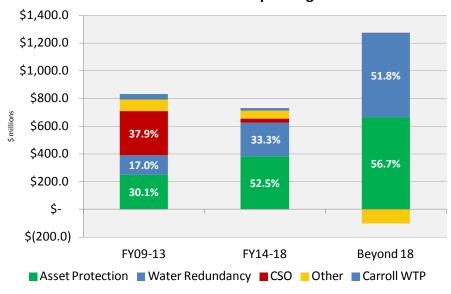


Figure 1

#### **Actual and Proposed Capital Spending**

(\$ millions)

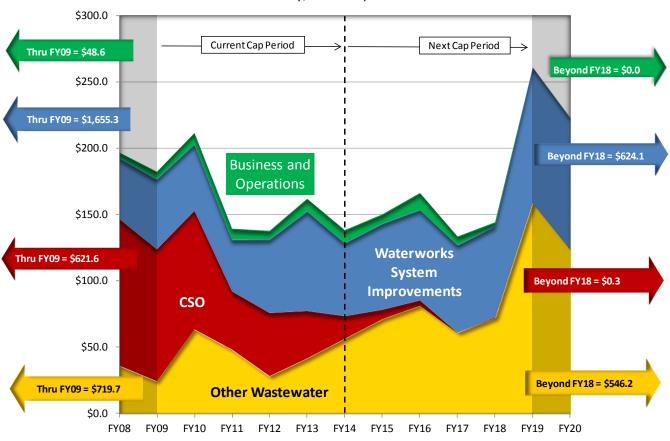


Figure 2

Table 4

E 4									
Proposed FY14-18 Capital Spending by Program									
(\$ millions)									
		Spending	Remaining	FY14	FY15	FY16	FY17	FY18	
Program	Total Contract	thru FY12	Balance	Projected	Projected	Projected	Projected	Projected	FY14-18
Wastewater System Improvements	\$2,655.6	\$1,661.8	\$993.8	\$73.4	\$78.2	\$85.2	\$60.8	\$72.5	\$370.1
Interception & Pumping	839.7	518.6	321.1	14.5	21.6	31.6	25.4	27.2	120.3
Treatment	658.0	168.7	489.3	42.3	49.1	47.5	31.0	40.4	210.4
Residuals	168.0	64.2	103.9	0.4	1.6	1.6	3.0	3.0	9.7
CSO	867.0	802.3	64.7	17.0	7.1	4.0	0.1	0.6	28.8
Other	122.9	108.1	14.8	-0.9	-1.3	0.5	1.3	1.3	0.9
Waterworks System Improvements	2,821.7	1,799.6	1,022.2	55.1	64.8	68.3	66.1	68.7	322.9
Drinking Water Quality Improvements	657.0	559.7	97.2	36.2	17.4	1.8	1.4	0.6	57.5
Transmission	1,186.7	737.9	448.8	8.6	22.4	24.3	20.0	10.4	85.7
Distribution and Pumping	932.7	368.3	564.4	9.0	22.0	36.5	40.3	53.5	161.3
Other	45.4	133.7	-88.3	1.1	3.1	5.7	4.4	4.1	18.5
Business & Operations Support	120.7	72.2	48.4	9.8	7.1	12.7	6.5	2.9	39.0
TOTAL MWRA w/o CONTINGENCY	\$5,598.0	\$3,533.6	\$2,064.4	\$138.2	\$150.1	\$166.2	\$133.4	\$144.1	\$732.0

#### Table 5

; <b>J</b>									
Proposed FY09-13 Capital Spending by Program									
	(\$ millions)								
	Total	Spending	Remaining	FY09	FY10	FY11	FY12	FY13	
Program	Contract	thru FY12	Balance	Actual	Actual	Actual	Actual	Projected	FY09-13
Wastewater System Improvements	\$2,655.6	\$1,661.8	\$993.8	\$123.7	\$152.7	\$92.0	\$75.8	\$77.2	\$521.4
Interception & Pumping	839.7	518.6	321.1	6.8	2.5	15.1	6.0	2.5	33.0
Treatment	658.0	168.7	489.3	14.7	56.0	29.8	16.4	18.7	135.6
Residuals	168.0	64.2	103.9	0.0	0.4	0.0	0.0	0.5	0.8
CSO	867.0	802.3	64.7	99.4	89.3	43.8	47.6	35.7	315.7
Other	122.9	108.1	14.8	2.7	4.5	3.3	5.8	19.9	36.3
Waterworks System Improvements	2,821.7	1,799.6	1,022.2	52.9	50.1	38.9	55.3	75.2	272.3
Drinking Water Quality Improvements	657.0	559.7	97.2	17.8	12.4	2.4	18.4	39.6	90.8
Transmission	1,186.7	737.9	448.8	6.3	15.7	24.6	18.3	20.2	85.2
Distribution and Pumping	932.7	368.3	564.4	19.4	16.5	12.7	14.3	6.5	69.3
Other	45.4	133.7	-88.3	9.3	5.5	-0.9	4.3	8.8	27.0
Business & Operations Support	120.7	72.2	48.4	5.7	8.7	8.4	6.6	9.5	38.8
TOTAL MWRA w/o CONTINGENCY	\$5,598.0	\$3,533.6	\$2,064.4	\$182.2	\$211.4	\$139.3	\$137.6	\$161.9	\$832.5

#### **Changes in Proposed Spending**

- For the next cap period spending has been reshaped to \$732.0 million, or \$100 million less than projected (updated) spending for the current capital spending cap period of \$832.5 million.
- Proposed spending for the FY14-18 period has been reduced from \$997.3 million<sup>1</sup> in the final FY13 CIP to \$732.0 million in the proposed FY14 CIP, a reduction of \$265.3 million. (See Figure 3.)

#### **Change in FY14-18 Proposed Spending**

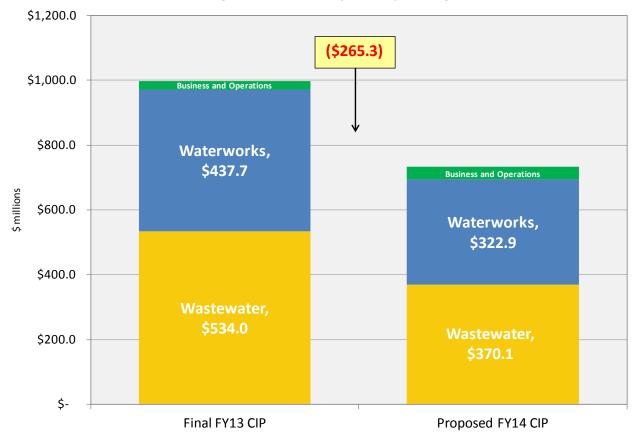


Figure 3

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<sup>&</sup>lt;sup>1</sup> Net of contingency

- Spending ranges from \$133 million to \$166 million and averages \$146 million per year.
- Spending on the Deer Island plant and on rehabilitation of the three headworks facilities dominate wastewater spending, while asset protection and redundancy projects are the largest waterworks projects planned during the FY14-18 period.
- Total costs have risen by a net of \$73.1 million: \$10.2 million for Wastewater projects; \$52.6 million for Waterworks projects; and \$10.36 million for Business and Operations Support projects.
- Costs have been reduced for residuals upgrades (\$43.7 million) and for the Southern Extra High redundancy and storage project (\$8.4 million). Thus, total costs have risen \$125.2 million.

#### **Wastewater Capital Spending**

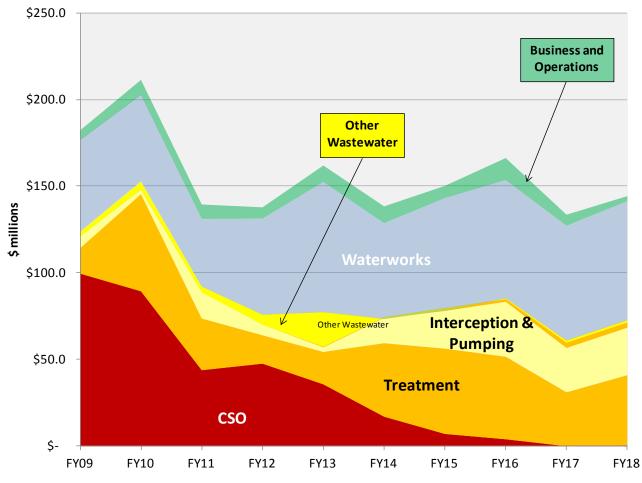


Figure 4

- Wastewater system improvements are divided into five categories: Interception and Pumping; Treatment; Residuals; the Combined Sewer Overflow Control Program (CSOs); and Other. (See Figure 4 and Table 5.)
- In FY14, Wastewater spending is budgeted at \$73.4 million, just over half of all proposed spending.
- Just over half of all Wastewater spending in FY14 is for the Deer Island Treatment plant, \$40.51 million. The amount is nearly 30% of all spending for the year.
- Facility Asset Project contracts total \$13.66 million in FY14, primarily for the Alewife Brook Pump Station, design of the rehabilitation of the Chelsea Creek Headworks, design and construction of improvements to the Nut Island Headworks, work at the Prison Point facility, and rehabilitation of sewer pipelines.

#### Table 6

#### **Largest Wastewater Projects** FY09-13

(\$ millions)

Project	FY09-13 Spending	Program
DI Treatment Plant Asset Protection	\$131.43	Treatment
North Dorchester Bay	83.37	CSO (MWRA Managed)
East Boston Branch Relief Sewer	74.86	CSO (MWRA Managed)
Reserved Channel Sewer Separation	51.86	CSO (Community Managed)
I/I Local Financial Assistance	36.31	Other Wastewater
Cambridge Sewer Separation	35.43	CSO (Community Managed)
Brookline Sewer Separation	24.72	CSO (Community Managed)
Morrissey Boulevard Drain	18.01	CSO (Community Managed)
Braintree-Weymouth Relief Facilities	13.15	Interception and Pumping
TOTAL	\$469.1	

#### Table 7

#### **Largest Wastewater Projects FY14**

(\$ millions)						
Project	FY14 Spending	Program				
DI Treatment Plant Asset Protection	\$40.51	Treatment				
Facility Asset Protection	13.66	Interception and Pumping				
Cambridge Sewer Separation	7.65	CSO (Community Managed)				
Dorchester Bay Sewer Separation	2.95	CSO (Community Managed)				
Clinton Wastewater Treatment Plant	1.84	Treatment				
MWR003 Gate & Siphon	1.05	CSO (MWRA Managed)				
North Dorchester Bay	0.45	CSO (MWRA Managed)				
Residual Asset Protection	0.38	Residuals				
Wastewater Central Monitoring	0.31	Interception and Pumping				
TOTAL	\$68.8					

#### Table 8

Largest Wastewater Projects							
	FY14-18						
	(\$ millions)						
Project	FY14-18 Spending	Program					
DI Treatment Plant Asset Protection	\$199.90	Treatment					
Facility Asset Protection	107.27	Interception and Pumping					
Cambridge Sewer Separation	11.17	CSO (Community Managed)					
Clinton Wastewater Treatment Plant	10.50	Treatment					
Residuals Asset Protection	9.67	Residuals					
Reserved Sewer Channel Separation	9.53	CSO (Community Managed)					
Wastewater Meter Sys. Equip. Replace.	5.65	Interception and Pumping					
MWR003 Gate & Siphon	3.59	CSO (MWRA Managed)					
Dorchester Bay Sewer Separation	2.95	CSO (Community Managed)					
TOTAL	\$360.2						

• In all, nine projects account for \$68.8 million of the \$73.4 million in Wastewater spending budgeted for FY14, nearly 94% of the total; the top two projects account for \$54.2 million or nearly 75% of all Wastewater spending for the next year.

#### Interception and Pumping (I&P)

- Includes projects that address the wastewater collection system facilities, sewers and tunnels. Among them are:
  - o Four remote headworks
  - Twenty pump stations and CSO facilities
  - o More than 250 miles of sewer pipelines
  - o Four cross harbor tunnels to the Deer Island plant totaling 18 miles.
- Proposed spending for the FY14 18 period totals \$120.3 million and nearly doubles between FY14 and FY18, as
  design and construction of rehabilitation of three of the older headworks advances and pipeline projects move
  forward (Facility Asset Protection projects).
- The Facility Asset Protection projects total \$107.3 million of the five-year budget for Interception and Pumping projects.
- The largest contract award in the next year is the Nut Island Headworks (improvements to the electrical and the grit/screenings conveyance systems), which is scheduled for spring 2013 at a budgeted cost of \$8.05 million.
- The next largest contract to be awarded in the next year is rehabilitation of the Alewife Brook Pump Station in October 2013 at a budgeted cost of \$7.93 million.

#### **Wastewater Treatment**

- Includes Deer Island Treatment Plant asset protection, the Clinton Wastewater Treatment Plant and Laboratory Services.
- No funds are budgeted after FY13 for Laboratory Services.
- Some lab instrumentation and equipment purchases are budgeted under Business and Operations Support.
- Spending for FY14 is \$42.3 million, and \$210.4 million for the FY14-18 cap period.
- Over the five-year cap period FY14-18, the largest wastewater capital project will be Deer Island Treatment Plant Asset Protection at a total cost of just under \$200 million.
- Spending on the Deer Island plant reaches nearly \$40 million or more for four of the five years ahead.
- Dozens of contracts are moving forward or are planned for the next five years; nearly 20 contracts involve spending of \$3 million or more during the cap period. (See Table 9.)
- Among the largest contracts to be awarded or with significant spending during the FY14-18 period are:
  - 1. North Main Pump Station VFD Replacement (nearly \$20 million in spending)
  - 2. Clarifier Tip Tube Replacement (\$20 million)
  - 3. HVAC Equipment replacement (nearly \$14 million for design and construction costs)
  - 4. Fire Alarm System Replacement (\$15.4 million in design and construction costs)
    - Deer Island's fire alarm system is the largest in New England
  - 5. Sodium Hypochlorite Pipe Replacement (\$10 million in design and construction costs)
  - 6. Electrical Equipment Upgrade Construction, phase 4 (\$10 million)
- The largest wastewater capital project in FY14 is Deer Island Treatment Plant Asset Protection including:
  - 1. Centrifuge backdrive replacement
  - 2. Clarifier tip tube replacement
  - 3. Butterfly valve replacement
  - 4. North Main Pump Station variable frequency drive replacement plus electrical equipment upgrades
- Spending on equipment and modifications for the Central Laboratory at Deer Island has been budgeted at \$2.2 million in recent years. No spending is budgeted after FY13.

Table 9

Top Deer Island Projects (\$ millions)		
Projects	FY09-13	FY14-18
,		
Top Deer Island Projects, Over \$1 Million	-	
DITP Roof Replacements	\$2.30	
Ancillary Modifications - Construction 4		\$2.46
Roof Replacement Phase 1	2.75	
Transformer Replacement	1.67	
DSL Pump Replacement - Phase 2		\$4.66
Reline Hypochlorite Tanks 2 & 4	1.79	
Chemical Pipe Replacement Design		\$0.51
Chemical Pipe Replacement Construction		\$1.94
Sodium Hypochlorite Pipe Replacement - Design		\$2.21
Sodium Hypochlorite Pipe Replacement - Construction		\$7.75
Electrical Equipment Upgrades - Construction 3	14.53	
WTF VFD Replacement - Construction		\$3.95
Primary & Secondary Clarifier Rehab - Construction	56.79	
Electrical Equipment Upgrades - Construction 4	0.18	\$6.32
NMPS VFD Replacement - Design	1.09	
NMPS VFD Replacement - Construction	4.18	\$19.89
Fire Alarm System Replacement - Design		\$2.10
Fire Alarm System Replacement - Construction		\$13.33
Gravity Thickener Rehab - Design	0.26	\$1.14
STG System Modifications - Construction	2.58	•
Digester & Storage Tank Rehab - Design		\$2.88
Digester Modules 1 & 2 Pipe Replacement	5.62	\$1.28
Centrifuge Backdrive Replacement	0.54	\$5.95
Power System Improvements - Construction	5.77	\$3.00
NMPS VFD Replacement - REI	0.31	\$1.69
Heat Loop Pipe Replacement - Construction 3	11.34	
Ancillary Modifications - Final Design 4		\$3.17
HVAC Equipment Replacement - Design/ESDC	0.58	\$2.92
HVAC Equipment Replacement - Construction		\$10.93
DI As-needed Technical Design	2.16	\$5.00
DI Switchgear Replacement - Design		\$3.00
DI CTG Rebuilds		\$3.33
Cryogenics Plant - Equipment Replacement - Construct.		\$5.30
NMPS & WTF Butterfly Valve Replacement		\$8.50
Digester & Storage Tank Rehab - Construction		\$5.43
Clarifier Rehab Phase 2 - Design		\$3.00
Clarifier Rehab Phase 2 - Construction		\$2.25
Clarifier Tip Tube Replacement		\$20.00
NMPS Motor Control Center Phase 2 - Construction		\$6.09
Gravity Thickener Rehab		\$5.79
Sodium Bisulfite Tanks Rehab		\$2.54
subtotal	\$114.45	\$168.28
All Other Active Projects	\$16.98	\$31.62
TOTAL	\$131.43	\$199.90

#### Table 10

Clinton Wastewater Treatment Plant (\$ millions)							
Projects	FY 09-13	FY14-18					
Clinton Soda Ash Replacement Clinton Plant-Wide Concrete Repair Clinton Digester Cleaning and Rehab Clinton Aeration Efficiency Improvement Phosphorus Removal - Design Phosphorus Removal - Construction Clinton Roof Rehab Clinton Facilities Rehab	0.152878 0.062615 0.218242 1.971 0.12	\$2.98 \$0.78 \$5.76 \$0.51 \$0.47					
TOTAL	\$2.52	\$10.50					

• Spending on the Clinton Wastewater Treatment Plant increases four-fold from the current cap period to FY14-18, from \$2.5 million to \$10.5 million. More than 60% of the spending is for the phosphorus removal project, required by the next NPDES permit. Another 30% is for continuation of a contract for digester cleaning and rehabilitation and installation of new influent gates.

#### <u>Residuals</u>

- FY14 spending is budgeted at \$0.4 million as the Authority pursues assessments of possible technology and related capital improvements to extend the useful life of the facilities.
- Proposed spending expands for the latter years of the cap period for a total of \$9.7 million.
- Beyond FY18 placeholder estimates: \$93.7 million
  - o For potential facility modification, rehabilitation and expansions
  - o Proposed FY13 CIP placeholder: \$345 million
- Budget amounts have been reduced by \$43.7 million.

#### Combined Sewer Overflow (CSO) Control Program

Table 11

CSO Spending (\$ millions)						
Project	FY09-13	FY14-18	Beyond FY18			
North Dorchester Bay	\$83.37	\$0.65	\$0.25			
East Boston Branch Sewer Relief	\$74.86					
MWR003 Gate & Siphon	\$0.68	\$3.59				
Dorchester Bay Sewer Separation (Fox Point)	\$0.42					
Dorchester Bay Sewer Separation (Commercial Point)	\$6.94	\$2.95				
Cambridge Sewer Separation	\$35.43	\$11.17				
Fort Point Channel Sewer Separation	\$3.72					
Morrissey Boulevard Drain	\$18.01	\$0.22				
Reserved Channel Sewer Separation	\$51.86	\$9.53				
Brookline Sewer Separation	\$24.72					
Bulfinch Triangle Sewer Separation	\$9.49					
Charles River CSO	\$2.53					
CSO Support	\$4.53	\$0.69	\$0.01			
TOTAL	\$316.55	\$28.80	\$0.26			

- Work on the multi-year CSO Control Program is nearly completed in FY13, with nearly \$840 million of the \$867 million budgeted project to be spent by June 2013, leaving less than \$30 million to be spent, most during the next cap period.
- Cash flows and spending schedules are tied to dates established in the Court Order.
- The two remaining active projects are the BWSC Reserved Channel Sewer Separation project and the Cambridge Alewife Brook Sewer Separation project, scheduled for completion by December 2015.
- Measurably lower levels of spending will continue through FY 2021, when MWRA is to complete a sewer system performance assessment verifying attainment of the long-term CSO control levels. (Figure 2.)

#### Other Wastewater Projects

• Spending on Other Wastewater projects is budgeted at \$0.9 million for FY14-18, and includes distributions and repayments (for the loan portions) for the Infiltration/Inflow Local Financial Assistance Program.

#### **Waterworks Capital Spending**

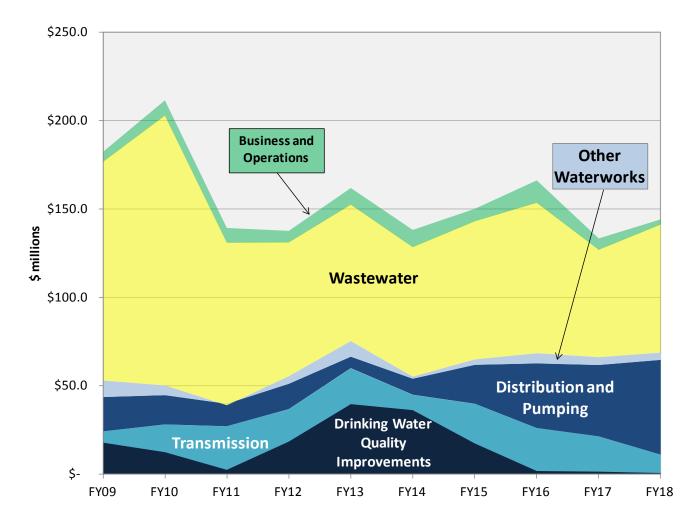


Figure 5

- There are four main categories of Waterworks spending: Drinking Water Quality Improvements, Transmission, Distribution and Pumping, and Other.
- Spending on Waterworks System Improvements is budgeted at \$55.1 million in FY14, 40% of all capital spending for the year.
- Spending for the five-year cap period is proposed to be \$322.9 million, or 44% of all spending.
- Nine projects make up over 90% of all Waterworks spending for FY14. (See Table 13.)

#### Table 12

Largest Waterworks Projects FY09-13 (\$ millions)					
Project	FY09-13 Spending	Program			
MetroWest Tunnel/Hultman Rehabilitation	\$62.31	Transmission			
John J. Carroll Water Treatment Plant	39.14	Drinking Water Quality Improvements			
Spot Pond Storage Facility	28.32	Drinking Water Quality Improvements			
Local Water Pipeline Assistance Program	26.37	Other Waterworks			
Blue Hills Covered Storage	21.22	Drinking Water Quality Improvements			
Southern Spine Distribution Mains	19.48	Distribution and Pumping			
Rehab of Other Pump Stations	12.07	Distribution and Pumping			
Watershed Lands	10.79	Transmission			
NIH Redundancy and Storage	6.51	Distribution and Pumping			

5.65

\$231.9

Distribution and Pumping

#### Table 13

**TOTAL** 

New Connecting Mains - Shaft 7 to WASM 3

Large	est Waterworks Pro	Largest Waterworks Projects						
	FY14							
(\$ millions)								
Project	FY14 Spending	Program						
Spot Pond Storage Facility	\$19.15	Drinking Water Quality Improvements						
John J. Carroll Water Treatment Plant	12.72	Drinking Water Quality Improvements						
Long-Term Redundancy	4.60	Transmission						
Quabbin Water Treatment Plant	4.19	Drinking Water Quality Improvements						
NIH Redundancy and Covered Storage	4.18	Distribution and Pumping						
Weston Aqueduct Supply Mains (WASMs)	3.55	Distribution and Pumping						
MetroWest Tunnel	1.76	Transmission						
Local Water Pipeline Assistance Program	0.64	Other Waterworks						
SEH Redundancy and Storage	0.54	Distribution and Pumping						
TOTAL	\$51.3							

#### Table 14

Largest Waterworks Projects							
FY14-18							
(\$ millions)							
Project	FY14-18 Spending	Program					
Weston Aqueduct Supply Mains (WASMs)	\$59.43	Distribution and Pumping					
Long-Term Redundancy	56.80	Transmission					
NIH Redundancy and Covered Storage	51.54	Distribution and Pumping					
Spot Pond Storage Facility	30.79	Drinking Water Quality Improvements					
SEH Redundancy and Storage	26.52	Distribution and Pumping					
John J. Carroll Water Treatment Plant	20.40	Drinking Water Quality Improvements					
Local Water Pipeline Assistance Program	13.29	Other Waterworks					
MetroWest Tunnel	7.78	Transmission					
Winsor Station Pipeline	7.07	Transmission					
New Connecting Mains - Shaft 7 to WASM 3	6.11	Distribution and Pumping					
TOTAL	\$279.7						

#### **Drinking Water Quality Improvements**

- These projects focus on the treatment and storage of the MWRA's water supplies, including:
  - o John J. Carroll Water Treatment Plant (CWTP) and related projects
  - Quabbin Water Treatment Plant
  - o Blue Hills Covered Storage Reservoir
  - o Low Service Storage near the Spot Pond Reservoir
- The Norumbega Covered Storage reservoir is a completed project and included in the listing in Appendix 9.
- The two largest Waterworks projects in FY14 are the Spot Pond storage facility (\$19.15 million) and work on the Carroll Water Treatment plant (\$12.72 million). Together they represent nearly 60% of all Waterworks spending for next year.

#### Transmission

- The water transmission system consists of more than 100 miles of tunnels and aqueducts in daily use that transport water by gravity from the supply reservoirs to points of distribution within the service area.
- FY14 spending totals \$8.63 million. For the five-year cap period spending, is projected to be \$85.7 million.
- Two Transmission projects are among the largest Waterworks projects for FY14:
  - 1. MetroWest Tunnel/Hultman rehabilitation, with spending budgeted at \$1.76 million
  - 2. Long Term Redundancy, with spending budgeted at \$4.6 million primarily for the Wachusett Aqueduct Pump Station. Funding is also included for work on alternatives analysis and the MEPA review process for the Sudbury Aqueduct connection.
- Land acquisition is included in this category of Waterworks spending, with \$5 million budgeted for the five-year cap period.
- Completed projects include: Sluice Gate Rehabilitation, Chicopee Valley Aqueduct Redundancy, and Wachusett Reservoir Spillway Improvements.

#### Distribution and Pumping (D&P)

- Includes projects that focus on the metropolitan system, which is divided into seven pressure zones and includes:
  - o 284 miles of distribution pipeline east of Shaft 5
  - o 11 storage tanks
  - o 11 pump stations
  - o 9 tunnel shafts
  - o Approximately 4,700 valves
- Notable projects include:
  - Weston Aqueduct Supply Mains (\$3.55 million in FY14 and \$59.4 million for FY14-18);
  - Northern Intermediate High Redundancy and Covered Storage (\$4.18 million in FY14 and \$51.54 million for FY14-18);
  - Southern Extra High Redundancy and Storage (\$0.54 million in FY14 and \$26.5 million for FY14-18).
  - Southern Spine Distribution Mains (\$0.16 million in FY14 and \$1.04 million for FY14-18) is nearing completion.
- FY 14 spending totals \$9.036 million. Five-year spending is \$161.258 million.
- Completed projects include:
  - Boston Low Service Pipe and Valve Rehabilitation
  - o Heath Hill Road Pipe Replacement

- o James L. Gillis Pump Station
- Northern High Service Connecting Mains from Section 91
- o Southern Extra High Sections 41 & 42
- o Warren Cottage Line Rehabilitation
- o Hydraulic Model Update
- o Walnut Street & Fisher Hill Pipeline Rehabilitation

#### Other Waterworks Projects

- FY14 net spending totals \$1.138 million; five-year spending totals \$18.454 million.
- These projects include:
  - o Central Monitoring System (\$0.5 million in FY14)
  - Local Pipeline Assistance Program (\$0.64 million in FY14)
  - Waterworks Facility Asset Protection (\$13.3 million beginning in FY15).
- Local Water Pipeline Assistance Program assumes:
  - \$21 million in distributions during FY14
  - \$20.3 million in repayments during FY14.
- Water Facility Asset Protection assumes a nearly three-year program, including Shaft 9 rehabilitation, Cosgrove Valve replacement, covered storage tank rehabilitation and water meter upgrade replacement, among other project plans. At \$13.3 million, it is one of the ten largest Waterworks projects/programs for the FY14-18 period. (See Table 14.)

#### **Business and Operations Support**

- The Authority is proposing spending of \$38.96 million during FY14-18 for a number of projects under the Business and Operations Support category, nearly the same level of spending as for FY09-13. Total project costs increase by \$10.36 million, while spending during the cap period rises by \$13.3 million.
- Included is \$17.7 million of MIS related spending, including the Business Systems Plan, Application Improvement Program, Information Security, Information Technology Management, and the IT Infrastructure program. Net budgeted spending for the cap period rises by \$5.5 million.
- Alternative Energy Initiatives is budgeted at \$8.14 million for the FY14-18 period, including two new phases of wind energy turbine construction at Deer Island. Net spending rises \$1.19 million for the period.
- Capital Maintenance Planning and Development contracts totaling \$5.5 million. Included are three new contracts for \$1.6 million, a total of \$4.8 million, for future as-needed design services.
- Capital Equipment purchases of \$5.3 million are budgeted, an increase of \$1.3 million for the period.
- Facilities Management and Planning spending of \$1.78 million is unchanged.
- Technical Assistance services totaling \$1.2 million increased by \$0.4 million, to support contracts covering mechanical, materials testing, surveying, hazardous materials assessment, instrumentation control and wetland/environmental analyses.

#### **Future Risk Factors**

The Authority continues to note future risk factors for the capital program. These potential projects or required spending increases, which are not yet funded as part of the proposed FY14 CIP, include:

Residuals asset protection or the funding to rehabilitate or replace the existing residuals plant;

- Sudbury Aqueduct decision regarding tunnel versus surface piping;
- Sludge pipeline rehabilitation at Deer Island;
- Timing and potential cost increases of the Cambridge CSO project;
- The Brigham Pond Dam; and
- New regulatory mandates.

### **Capital Spending Cap**

#### Background for Setting a Five-Year Cap on Capital Spending

- The Authority first adopted a capital spending cap in 2001, setting a ten-year cap each year as part of the approval of the final CIP and annual caps for the first three years of the budget period. In each succeeding year a new ten-year cap was calculated by removing the completed year, adding any unspent funds from the just completed year and adding a new tenth year in the amount of \$100 million adjusted for inflation.
- In June 2003, the Board of Directors adopted a revised capital spending cap policy with a calculation that reflected projected expenditures for a five-year period, plus contingency allowances and inflation adjustments (on unawarded construction contracts), less Chicopee Valley Aqueduct projects.
- A second provision of the cap allows annual spending within the five-year period to vary within plus or minus 20% of
  the initial amounts calculated for each of the five years as long as the five-year total is not exceeded. In the event
  that an annual cap limit is exceeded, the Authority may request approval by the Board of Directors to exceed the
  limit for an individual fiscal year.

#### The First Five-Year Cap: FY04-08

- The FY04-08 cap was approved in June 2003 as part of the approval of the final FY04 CIP. The cap was based on projected capital spending of \$1.0233 billion and was set at \$1.1345 billion. (See Appendix D.)
- Actual spending came to \$888.5 million.
- The Authority exceeded neither the overall five-year cap nor the allowance of 20% over the individual base year caps. In fact, the cap calculation for each year was well below the baseline cap (by as much as 30% for two of the years) and the five-year calculation was 22.4% below the original cap calculation. (See Appendix D)

#### The Second Five-Year Cap: FY09-13

Table 15

FY09-13 Baseline Cap Calculation Versus Updated Spending Projections (\$ millions)						
	FY09	FY10	FY11	FY12	FY13	Total FY09-13
Projected Expenditures	\$230.0	\$251.7	\$224.3	\$196.7	\$178.7	\$1,081.4
Contingency	15.6	13.8	12.0	12.1	11.4	64.8
Inflation on Unawarded Construction	0.0	0.5	2.8	7.8	11.3	22.4
Less: Chicopee Valley Aqueduct Projects	(1.2)	(1.9)	(9.1)	(9.5)	(2.9)	(24.8)
FY09-13 Baseline Cap	\$244.4	\$264.1	\$230.0	\$207.0	\$198.4	\$1,143.8
Projected Expenditures	\$182.2	\$211.4	\$139.3	\$137.6	\$161.9	\$832.5
Contingency	0.0	0.0	0.0	0.0	6.6	6.6
Inflation on Unawarded Construction	0.0	0.0	0.0	0.0	0.0	0.0
Less: Chicopee Valley Aqueduct Projects	(0.6)	(0.5)	(0.9)	(0.1)	(1.7)	(3.9)
FY14 Proposed Subtotal	\$181.6	\$210.9	\$138.4	\$137.5	\$166.7	\$835.2
Change (\$)	(62.8)	(53.2)	(91.6)	(69.5)	(31.7)	(308.6)
Change (%)	-25.7%	-20.1%	-39.8%	-33.6%	-16.0%	-27.0%

- The cap for FY09-13 was set in June 2008 as part of the approval process for the final FY09 CIP. (See Table 15 and Appendix E.)
- Actual spending is now projected to be \$832.5 million (lower than during the first cap period), with an associated cap calculation of \$835.2 million.
- Actual spending is \$248.9 million below the baseline assumption for projected expenditures and the five-year cap calculation is \$308.6 million (27%) lower than the baseline cap. (See Appendix E.)
- The Authority projects that none of the annual calculations will exceed the annual caps, nor will the five-year calculation of \$835.2 million. In fact, actual spending during the first four years resulted in cap calculations that were between 20% and 40% below the annual baseline caps.

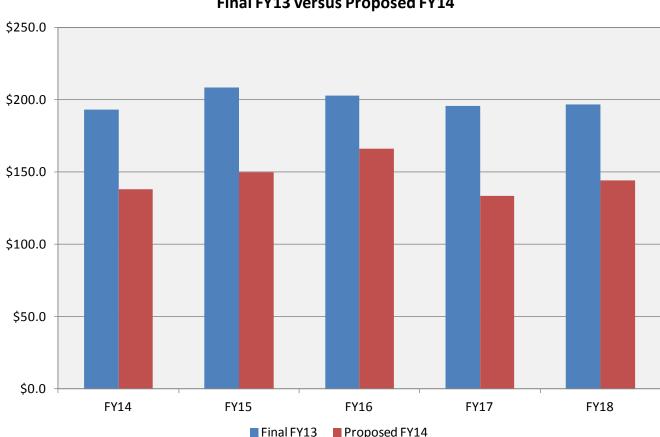
#### The Third Five-Year Cap: FY14-18

Table 16

Δ.	Proposed FY14 CIP Updated Spending Projections									
Proposed FY14 CIP		FY09	FY10	FY11	FY12	FY13	Total FY09-13			
	Projected Expenditures	\$182.2	\$211.4	\$139.3	\$137.6	\$161.9	\$832.5			
	Contingency	0.0	0.0	0.0	0.0	6.6	6.6			
	Inflation on Unawarded Construction	0.0	0.0	0.0	0.0	0.0	0.0			
	Less: Chicopee Valley Aqueduct Projects	(0.6)	(0.5)	(0.9)	(0.1)	(1.7)	(3.9)			
	Projected FY14-18	\$181.6	\$210.9	\$138.4	\$137.5	\$166.7	\$835.2			

- The next five-year cap, for FY14-18, is being set with the approval of the final FY14 CIP in June 2013.
- During last year's review of the proposed FY13 CIP, the Advisory Board, noting the lower than budgeted spending of
  the first two cap periods and observing that the progress toward completing the court-ordered CSO Control
  Program, challenged the Authority to limit the FY14-18 cap to no more than \$800 million.
- The Authority has reshaped its capital program and reconsidered the scheduling for a number of projects within the CIP, and is now recommending a new five-year cap below the \$800 million challenge, at \$793.5 million. (See Table 16.)

- The Authority notes that this represents a \$350 million reduction from the current cap. This level of spending also represents the lowest projected spending since the Boston Harbor Clean-Up began in 1990.
- Annual spending, according to the cap calculation, is measurably lower than during the previous two cap periods. (See Figure 3 and Figure 6.)
- The Authority notes that staff had initially identified \$1.1 billion in spending for non-mandated projects. However, given the pressure on rising water and sewer rates, particularly from increasing debt service payments on existing debt, the Authority's request has been reduced by over \$300 million. MWRA is only moving forward with the most critical projects such as water system redundancy and sewer facility upgrades that offer the greatest public health and environmental benefits.
- Proposed spending for the FY14-18 period, at \$732 million, is \$100 million below the \$832.5 million in actual spending for the FY09-13 period (FY13 spending is projected). Yet, if spending on the CSO Control Program is netted out, spending of \$703.2 million for FY14-18, as compared to \$516.8 million of non-CSO spending during FY09-13, is \$186.4 million, or 36% greater.



FY14 - 18 Capital Spending Final FY13 versus Proposed FY14

Figure 6

The Advisory Board applauds the Authority for meeting the recommendation from last year's budget review in keeping the FY14-18 capital spending cap beneath \$800 million. Provided the capital spending cap remains under \$800 million, the Advisory Board endorses the proposed capital spending cap and Proposed FY14 CIP with one exception: the Advisory Board recommends the removal of the Fish Hatchery Pipeline project.

Because the Hatchery Pipeline project was tied to an anticipated streamlined system expansion regulatory review process that has yet to be realized, the Advisory Board renews its objection to funding it.



These yellow tabs indicate a new section that identifies many of the ideas that the Advisory Board and MWRA have identified and implemented to control costs.

- By embracing the concept of the capital spending cap, the MWRA has helped to control capital spending costs. This has the long-term effect of reducing debt service costs and their impact upon MWRA assessments.
- By meeting the Advisory Board's challenge for keeping the third capital spending cap under \$800 million, the Authority has further managed long-term rates.
- Over the years, the Advisory Board recommendations (including Battery D at the Deer Island Treatment Plant and the West Roxbury Tunnel) have reduced overall capital spending by over \$1 billion.
- The Advisory Board and Authority successfully avoided \$1 million in costs associated with the restoration of the historic bridge at Elm Bank.

## **Proposed FY14 CEB Highlights**

Table 17

# MWRA Current Expense Budget

(\$ millions)										
	FY13	FY14	\$	%						
	Budget	Proposed	Change	Change						
<u>Expenses</u>										
Direct Expenses	214.9	214.8	-0.1	0.0%						
Indirect Expenses	45.7	47.7	2.0	4.4%						
Capital Financing	375.6	398.0	22.4	6.0%						
Subtotal Expenses	\$636.2	\$660.6	\$24.4	3.8%						
<u>Offsets</u>										
Bond Redemption	0.0	0.0	0.0	-						
Debt Service Assistance	(0.4)	0.0	0.4	-100.0%						
Subtotal Offsets	-\$0.4	\$0.0	\$0.4	-100.0%						
Net Expenses	\$635.9	\$660.6	\$24.7	3.9%						
Revenues										
Other User Charges	7.8	8.2	0.4	5.6%						
Other Revenue	6.1	5.9	-0.3	-4.3%						
Rate Stabilization	0.0	3.5	3.5	=						
Investment Income	14.5	11.8	-2.7	-18.5%						
Subtotal Non-Rate Revenue	\$28.3	\$29.3	\$1.0	3.5%						
Rate Revenue	\$607.5	\$631.2	\$23.7	3.90%						
Total Revenue and Income	\$635.9	\$660.6	\$24.7	3.89%						
\$6.1 million ≈ 1%										

- The Authority proposes a budget of \$660.6 million.
- Wholesale rate revenue increases by 3.90% or \$23.7 million.
- Direct expenses are level-funded for the fifth time in six years.

### Proposed FY14 CEB by Major Category

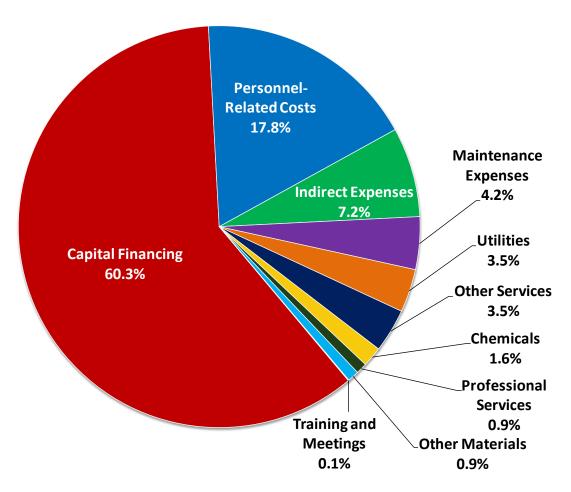


Figure 7

• Capital Financing exceeds 60% of the Authority's budget for the first time in the Proposed FY14 CEB.

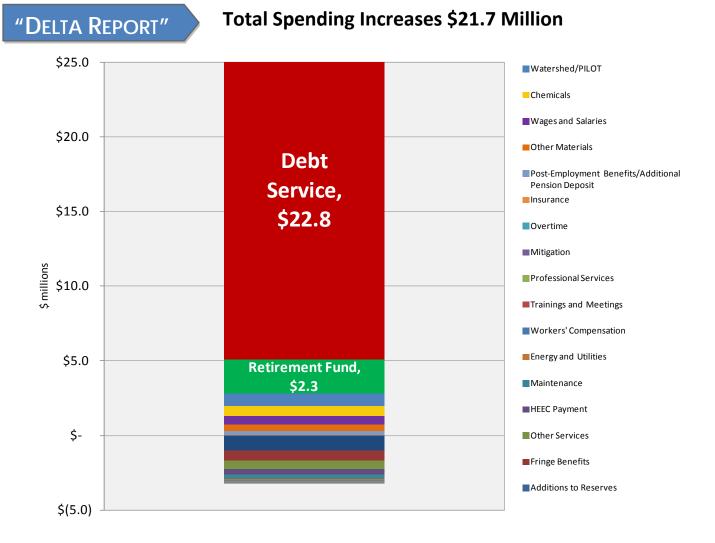
#### **Direct Expenses**

- Direct Expense spending is 33% of all current expense budget expenses.
- Personnel-related costs (\$118.2 million) are over half (55%) of all direct expenses and include:
  - Wages and Salaries
  - o Overtime
  - o Fringe benefits
  - o Workers' compensation.
- Maintenance (\$27.96 million) is the second largest category of direct expenses. Larger maintenance projects are part of the capital budget.
- Utilities costs total \$23.0 million or 11% of all direct expense spending.
  - $\circ\quad$  Just over 71% of the amount is for the purchase of electricity.
  - o Increases in spending on electricity and natural gas are more than offset by decreased spending on diesel fuel.
- Other Services (\$23.1 million) makes up 11% of all direct expense spending.

- o 61% of this expense funds sludge pelletization at the Fore River plant.
- Chemicals expense (\$10.7 million) is 5% of all direct expense spending.
  - o More than 60% of the spending supports water operations.
  - 30% is used for treatment at Deer Island.
- The remaining 5% is for Professional Services, Other Materials, and Training and Meetings.

#### **Indirect Expenses**

- Proposed indirect expenses (\$47.7 million) make up 7% of total expenses. Major components:
  - Watershed-related expenses (\$27.2 million)
  - o Pension fund and Other Post-Employment Benefits (\$13.03 million)



#### Figure 8

- Debt Service expense increase is driven by more principal payments coming due.
- The next largest increase is for the Retirement Fund (pension) contribution (\$2.3 million).
- Watershed/PILOT budget increases by an estimated 3% or \$0.8 million.
- Chemicals expense increases by \$0.7 million due to increased pricing for soda ash and ferric chloride.
- Wages and Salaries expense increases by \$0.55 million, less than 1% from the FY13 budget.

 Decreases in Additions to Reserves, Fringe Benefits and Other Services, plus smaller decreases in a number of other categories, serve to partially offset the total increases.

#### **Annual Rate Revenue Requirement Increases in Dollars**

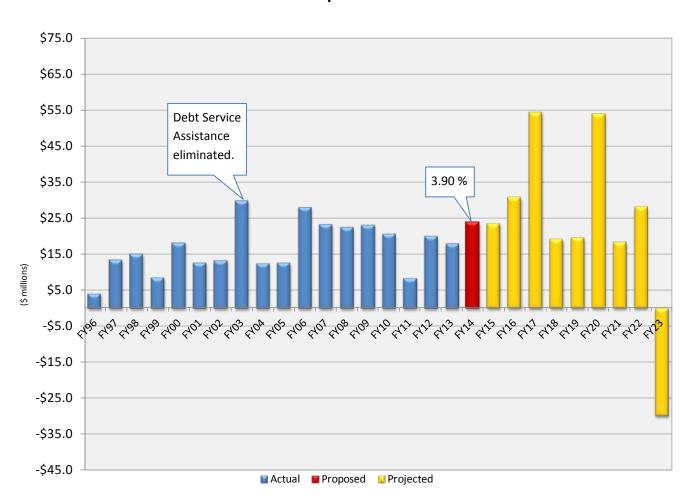


Figure 9

Changes from the FY13 Current Expense Budget

- The proposed rate revenue requirement for FY14 is \$631.2 million, an increase of \$23.7 million or 3.90% over the FY13 rate revenue requirement.
- It is the seventh year out of the last eight (since FY 2007) that the Authority has kept its annual rate increase between \$20 and \$24 million. (The FY11 increase was, at 1.49% or \$8.4 million, the lowest in the previous 15 years, since 1996 when the Authority received \$31.5 million in state debt service assistance.)

## **Annual Rate Revenue Requirements over Time**

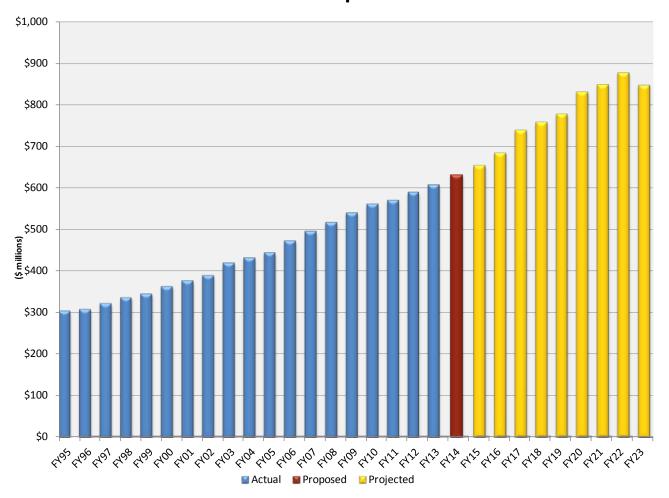


Figure 10

- The rate increases, lower than previous projections, reflect a multi-year rates management strategy to keep rates at sustainable levels during these continued challenging economic times.
- These rates reflect the significant benefits of reduced debt service payments (as compared to earlier projections) resulting from:
  - January 2007 restructuring transaction
  - Spring 2008 defeasance transaction
  - o February 2009 refunding
  - Reduced debt service payments resulting from the spring 2010
  - Restructuring of a targeted amount of debt service that had been due in FY11, 12, and 13.
- Defeasance: the prepayment of a portion of a future year's debt service using current-year surplus funds.
  - This tool has been used consistently and strategically.
  - o Proposed FY10 CEB: first proposed budget assuming benefits of planned defeasance transaction.
  - o This assumption allows proposal of lower rate revenue increases than earlier projected.
  - Total defeased debt between 2006 and proposed FY13 defeasance: \$271.5 million
    - Benefits seen in the ten fiscal years from FY07 through FY16. (See Figure 14.)
- The Authority has also continued to work to tighten direct expenses in the proposed FY14 CEB, continuing to absorb more risk in the budget assumptions and reflected updated historical spending patterns.

## **FY13 Current Expense Budget Recommendation**

As noted in the introduction, the Advisory Board believes that the Authority has submitted a current expense budget that is reasonable overall. However, the Advisory Board has made some recommendations, discussed more fully in subsequent sections. The Advisory Board recommends that the Authority reduces the rate revenue requirement for the FY14 Current Expense Budget by \$2,510,662, resulting in a 3.49% wholesale rate increase including:

- 1. Reducing the retirement fund expense line item by the \$2,151,996 associated with the increase associated with updated mortality tables to be introduced in FY15.
- 2. Reduce the "addition to reserves" line item by \$358,666 to reflect the amount that would have been added to cover the \$2,151,996 being recommended for reduction from pension expense.

#### **Major Categories of Spending**

Detailed discussion of the major categories of spending follows in order of highest to lowest levels of spending:

Table 18

Proposed FY14 CEB Major Categories of Spending (\$ millions)		
Capital Financing	\$398.0	
Personnel-Related Costs	117.8	
Indirect Expenses	47.7	
Maintenance Expenses	28.0	
Utilities	23.0	
Other Services	23.1	
Chemicals	10.7	
Professional Services	5.9	
Other Materials	6.0	
Training and Meetings	0.4	
TOTAL EXPENSES	\$660.6	
REVENUE	\$660.6	



• Direct expenses are level funded for FY14, for the fifth time in six years.

Table 19

Proposed Fiscal Year 2014  Capital Financing Summary  (\$ millions)					
Line Item/Description	Final FY13	Proposed FY14	Δ (\$s)	Δ (%)	
Total Senior Debt Service	\$193.43	\$202.82	\$9.39	4.9%	
Outstanding	191.60	201.98	10.38	5.4%	
New FY13/FY14	1.83	1.13	-0.70	-38.2%	
Potential Defeasance/Restructuring	0.00	-0.28	-0.28	-	
		Fixed rate debt service, exis	ting and new borrowings	during FY13/14.	
Total Subordinate Debt Service	93.30	102.68	9.38	10.0%	
Outstanding	93.30	102.91	9.61	10.3%	
New FY13/14	0.00	0.00	0.00	-	
Potential Defeasance/Restructuring	0.00	-0.23	-0.23	-	
Variable rate debt service: 3.25% interest rate assumption					
Total SRF Debt Service	73.80	75.96	2.16	2.9%	
Outstanding	73.80	72.26	-1.55	-2.1%	
New FY13/FY14	0.00	3.70	3.70	-	
	Low-interest lo	oans from the Commonwealth.	2.0% interest rate (Water	); 2.5% (Sewer).	
TOTAL DEBT SERVICE	360.54	381.47	20.93	5.8%	
Water Pipeline Commercial Paper	3.64	4.13	0.49	13.4%	
Debt service supporting \$25 million/year for the Local Water Pipeline In	mprovement and Local Water	r System Assistance Loan Progr	ams.		
Current Revenue/Capital	8.20	9.20	1.00	12.2%	
Amount of current revenue used to fund ongoing capital projects and to	o meet coverage requiremen	ts.			
Capital Lease	3.22	3.22	0.00	0.0%	
Chelsea facility lease payment.					
TOTAL OTHER CAPITAL EXPENSES	15.06	16.54	1.49	9.9%	
Debt Service Assistance (offset)	-0.35	0.00	0.35	-100.0%	
The state-wide program providing assistance with wastewater debt service is not expected in the Commonwealth's FY14 budget.					
TOTAL CAPITAL FINANCING EXPENSES	\$375.25	\$398.01	\$22.76	6.1%	

- Principal outstanding through December 31, 2012 is \$5.69 billion.<sup>2</sup>
- New MWRA borrowing of \$100 million and SRF borrowing of \$53.8 million is planned for FY14.
- Budgeted spring 2013 borrowing of \$100 million is no longer planned.
- No Debt Service Assistance is assumed.
- SRF borrowing of \$38.0 million is scheduled for May 2013.

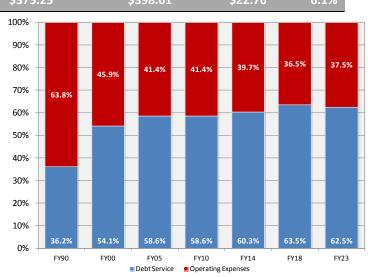


Figure 11

<sup>&</sup>lt;sup>2</sup> Excludes water pipeline commercial paper.

## **Capital Financing Expenses Increase \$22.8 Million**

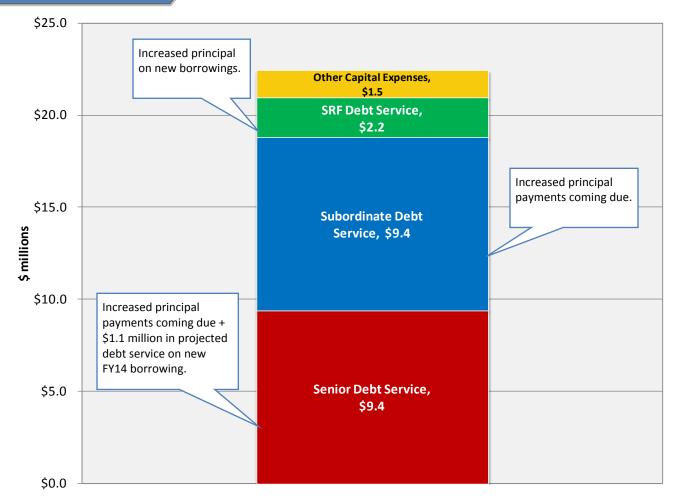
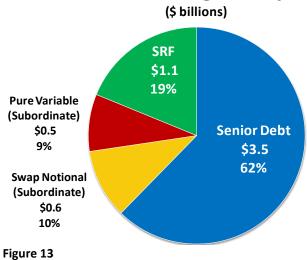


Figure 12

#### MWRA Debt Financing and Principal

- The Authority relies heavily on debt financing to fund its capital program.
- Through FY12, the Authority has spent \$7.65 billion on its capital improvement program.
- For FY14, capital financing expense as a percent of all expenses crosses the 60% mark to 60.3%.
- Outstanding principal borrowed totals \$5.686 billion and includes four categories:
  - 1. State Revolving Fund
  - 2. Pure Variable (subordinate debt)
  - 3. Swap Notional (subordinate debt)
  - 4. Senior Debt
- Commercial paper outstanding: \$144 million.
  - o If added, total outstanding principal = \$5.83 billion.

## **Outstanding Principal**



#### **Debt Service on Senior Debt**

- Senior debt service payments are budgeted at \$202.8 million for FY14, including:
  - 1. \$13.9 million for the spring 2012 borrowing of \$150 million plus refunding of \$87 million.
  - 2. \$1.13 million for the partial year debt service on a new borrowing in the spring 2014.
  - 3. \$0.285 million in reduced debt service from the planned defeasance transaction in June 2013.
  - 4. No new borrowing is planned for this spring.

#### **Debt Service on Subordinate MWRA Debt**

- Debt service on subordinate debt is proposed to be \$102.68 million.
- Variable rate debt interest rate assumption: 3.25% (the same as FY11, FY12 and FY13)
- This rate is based on a 20-plus year average, although the Federal Reserve Board has indicated plans to keep rates low for some time ahead. While the Authority cannot guarantee in its budget approach that lower interest rates will actually occur, it can be expected that the actual expense for subordinate debt will remain low for some time.
- One factor rating agencies consider when updating the Authority's bond rating is how much variable rate debt exposure the Authority has.
- Outstanding variable rate debt (\$1.138 billion) in the proposed FY14 CEB is 20% of all outstanding debt.<sup>3</sup>
- Last year outstanding variable rate debt (\$1.192 billion) was 21% of all outstanding debt.<sup>4</sup>
- Current variable rate debt (\$1.0715 billion) of outstanding debt is 18.87%.
  - o Pure variable rate debt: \$0.484 billion
  - o Swap notional debt: \$0.587 billion
- The Authority expects its total variable rate exposure to decrease to around 15% by the end of FY18.

#### **SRF Borrowings**

- Assumed debt service on SRF borrowings: \$75.96 million.
- Debt service expense for funding from Pool 17 of \$38 million is included, and scheduled for May 2013.
- Debt service expense for new borrowings of \$39 million in clean water loans and \$14.8 million in drinking water loans during FY14 are included in the proposed FY14 budget.
- The Authority received an \$11.4 million replacement loan from the Massachusetts Water Pollution Abatement Trust in June 2012.
- Outstanding SRF debt (\$1.0699 billion) is 18.8% of all MWRA and SRF debt.<sup>6</sup>

#### Bond Defeasance and Refunding

- June 2013 defeasance transaction of \$14.58 million assumed in proposed FY14 CEB.
  - Source: FY13 surplus funds, particularly variable rate debt service underspending.
  - o Future benefit: \$15.26 million reduction in future debt service (mostly FY15 and 16)
  - Updated 2013 defeasance transaction: \$25 million
    - o Total benefit: \$26.29 million future debt service reduction

<sup>4</sup> As of December 31, 2011.

<sup>&</sup>lt;sup>3</sup> As of December 31, 2012.

<sup>&</sup>lt;sup>5</sup> As of May 1, 2013. Percentage based on \$5.68 billion in total outstanding debt; excludes commercial paper.

<sup>&</sup>lt;sup>6</sup> As of December 31, 2012.

• Since 2006, MWRA has defeased \$271.5 million for targeted debt service reductions over multiple years. (See Figure 14.)

# Impact of Defeasances FY06 - Proposed FY13

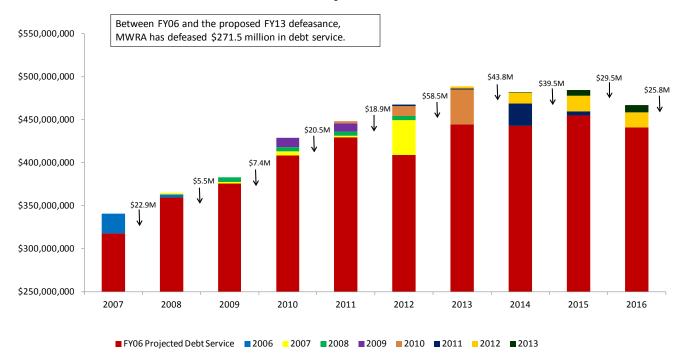


Figure 14

- The Authority continues to look for opportunities for refunding and refinancing.
- In September 2012 the Board of Directors authorized the continuation of the defeasance account to receive surplus funds raised for capital financing expenses to manage future rates. The account ensures that these funds are used in a manner consistent with the purpose for which they were budgeted and raised from the ratepayers.
- The Advisory Board supports the continuation of the defeasance account strategy, which clearly identifies a use of variable rate debt service savings that is consistent with the original intent of the funds that were appropriated.
- The Advisory Board expects the Authority to update its borrowing assumptions including the approved final defeasance transaction scheduled for 2013.

#### Other Components of Capital Financing Expense

- Water Pipeline Commercial Paper: \$4,127,811
  - Interest payments for:
    - Local Pipeline Assistance Program (LPAP)
    - Local Water System Assistance Program (LWSAP)
  - Assumptions include:
    - 3.25% interest rate (the same as FY11, FY12 and FY13)
    - \$127 million average balance of commercial paper outstanding (FY13 assumption: \$105 million;
       FY12 assumption \$105 million)
- Chelsea facility capital lease payment: \$3.217 million
  - o The amount has remained the same since 2002.

- o The current portion is included in the CEB (see Other Services).
- Current revenue for the capital program: \$9.2 million
  - o FY13 budget was \$8.2 million
  - FY12 and FY11 budgets were \$7.2 million

#### **Debt Service Offsets**

- Bond redemption funds
  - o FY14 budget: \$0
  - Current balance: \$32.85 million
- DSA is a critical tool in managing water and sewer rate revenue increases for MWRA communities.
  - o FY14 proposed budget assumes \$0 funding.
  - The \$500,000 approved as part of the FY13 state budget was eliminated by the Governor under his 9C powers.
- The Advisory Board's short-term goal is to keep the line item funded in the state budget. As staff works to restore the FY13 appropriation, it will also work to ensure the line item is funded for FY14.

# MWRA Capital Improvement Spending and Capital Financing (Principal & Interest) Repayment (Annual)

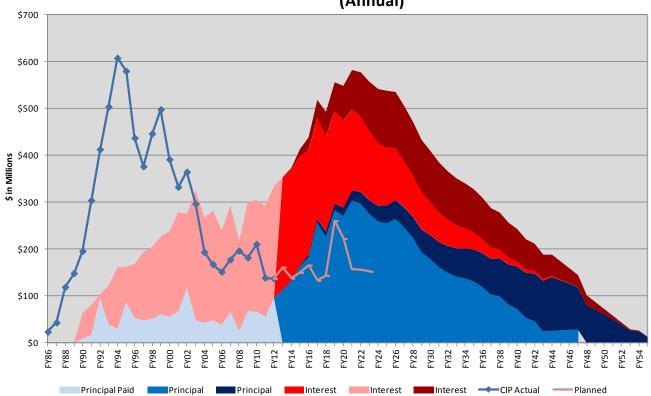


Figure 15

#### **Bond Covenant Changes**

- Bond covenant changes from January 2007 will allow certain reserves balances to be released when two-thirds of
  outstanding principal has been issued or restructured pursuant to the revised covenants.
  - Current projected release is during FY16.
  - o Current projected release total: \$105 million.
  - Funds eligible for release before FY16 are included in ongoing defeasance transactions.

#### <u>Longer Term Outlook for Principal and Interest Payments</u>

- Debt Service payments increase rapidly in the coming years and are currently projected to peak in 2021.
- 2017 is the first year the Authority projects that more principal than interest will be paid.
- Current projections indicate that debt service payments will not return to today's levels until 2027.
- Starting in FY14, the Authority will be repaying more principal than the amount of new borrowings. Total outstanding debt will be declining from that point.
- During the next cap period, FY14-18, total outstanding debt is projected to decrease by \$351 million. (See Figure 16.)

#### **MWRA's Outstanding Debt**

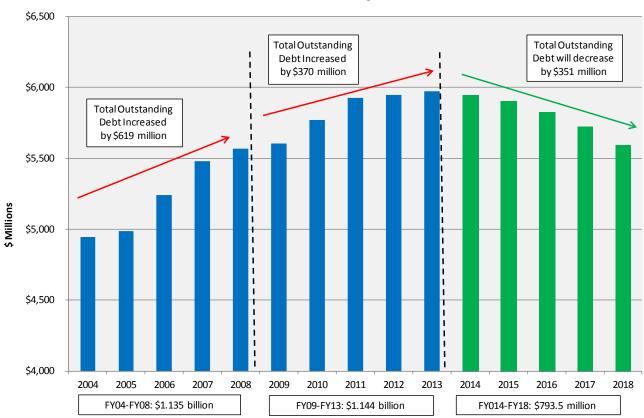


Figure 16



- The 2007 restructuring provided much needed short-term rate relief to member communities.
- The prudent use of variable rate debt as a portion of the MWRA's debt portfolio has saved the Authority millions of dollars in capital financing expense over the years.
- The Authority funds as much as possible through the SRF program, providing capital financing at a reduced cost.
- The Authority has consistently and strategically used defeasance as a tool to manage rates; the Authority has further formalized this strategy by transferring current debt service surpluses into a dedicated defeasance account.
- At the request of the Advisory Board, the Authority renegotiated the terms of the bond covenants to allow for the release of reserves (\$105 million) currently projected for FY16.
- The Advisory Board successfully mounted a legal challenge to avoid unrealistic prepayment of preexisting MDC debt, saving over \$200 million in principal and interest costs.

Table 20

Proposed Fiscal Year 2014 Personnel Expenses Summary (\$s)				
Line Item/Description	Final FY13	Proposed FY14	Δ (\$s)	Δ (%)
Regular Pay	\$92,563,778	\$93,055,723	\$491,945	0.5%
		Regular wages and sala	ries for full- and part-time	e employees.
Other Pay	1,495,622	1,556,289	60,667	4.1%
Includes shift differential, holiday pay, temporary employees, interns/co-ops, and stand by pa				
Wages and Salaries Subtotal	94,059,400	94,612,012	552,612	0.6%
Fringe Benefits	18,241,926	17,613,825	-628,101	-3.4%
Includes health insurance, dental insurance, Medicare, and all oth	ner fringe benefits.			
Overtime	3,573,495	3,580,022	6,527	0.2%
For planned maintenance, emergency, and coverage.				
Workers' Compensation	2,100,000	2,025,000	-75,000	-3.6%
Includes compensation payments, medical payments, and other related costs.				
TOTAL PERSONNEL EXPENSES	\$117,974,821	\$117,830,859	-\$143,962	-0.1%

- Wages and salaries expense reflects full-year impacts of recent union agreements.
- Average funded staffing level: 1,175.
  - o Represents a reduction of 20 positions.
  - o FY13 budget: 1,195 funded positions.
- Fringe benefits expense declines largely due to reduced headcount.
- Workers' compensation expense declines as average actual spending shifts downward.

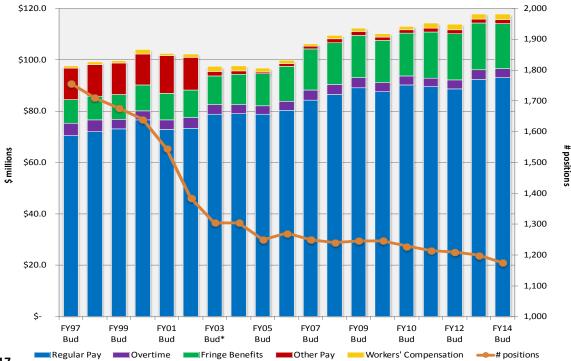


Figure 17

## **Personnel Expenses Decrease \$144 Thousand**

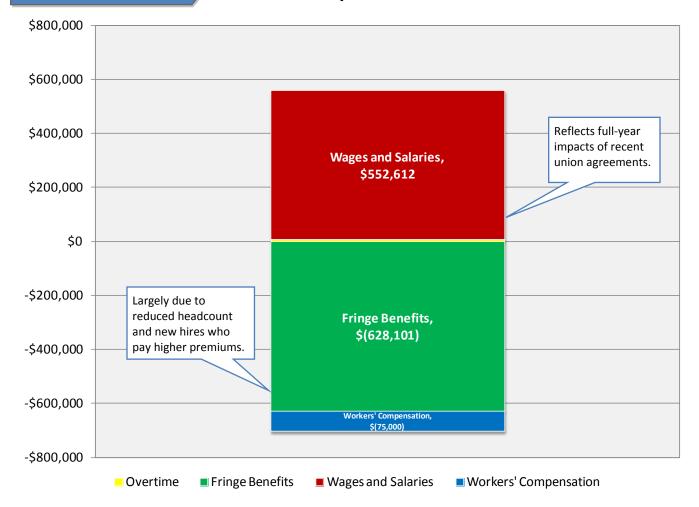


Figure 18

- Staffing levels have dropped by 600 positions since the peak of 1,775 in March 1997 to a budgeted average level for FY14 of 1,175, a reduction of just over onethird.
- April 2013 staffing level: 1,165 filled positions.
- Fringe benefits to be updated in the final CEB, based on new data released this spring.
- New hires tend to begin at lower pay-rates than the incumbents, helping to contain costs.
- New hires pay a higher percent of health insurance premiums reducing fringe benefits costs.
- Workers' compensation accruals continue to decline as the Authority works to settle outstanding cases. The proposed budget is based on a three-year average of costs.

## **Proposed FY14 Fringe Benefit Expenses**

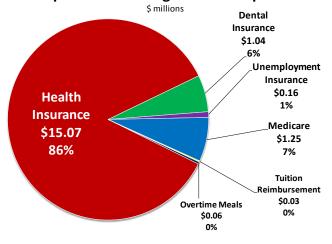


Figure 19

 Overtime expense is essentially level funded, reflecting overtime use limited to coverage, emergencies (including more extreme wet weather events), and critical maintenance projects; use of planned overtime has been reduced. As more employees move toward retirement, the Authority is working on a number of approaches to succession
planning including working with community colleges to seek out candidates, developing formal apprenticeship
training programs and internships, developing training and mentorship opportunities, restructuring positions to
provide future opportunities for advancement, and documenting work practices. The Authority anticipates that
increased retirements will continue.

The Advisory Board supports the active steps the Authority is taking toward succession planning, and further supports the expansion of the internship program and exploration of an apprenticeship program to facilitate the creation of a skilled potential hiring pool with working knowledge of the MWRA.

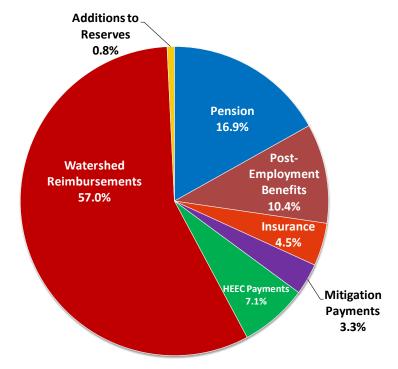


- The Advisory Board has initiated two staffing studies and a management study to evaluate Authority staffing levels and structural efficiency.
- The Authority's reduction of staff by over 600 since 1997 has helped to control the largest direct expense cost center.
- The Authority is further reducing its staffing levels consistent with the findings of the most recent staffing study.
- Union negotiations resulted in restructured coverage, and overtime is now managed to ensure individuals are used specifically when there is an emergency.
- The Authority is now augmenting peak workload with temporary employees (e.g. Laboratory Services, Deer Island Treatment Plant, as-needed engineering contracts).

Table 21

Proposed Fiscal Year 2014 Indirect Expenses Summary  (\$s)				
Line Item/Description	Final FY13	Proposed FY14	Δ (\$s)	Δ (%)
Pension	\$10,474,376	\$8,055,103	-\$2,419,273	-23.1%
Scheduled updated contribution to retirement fund. Required annual contribution	on = \$5.9 million. Updated mort	tality tables impact = \$2.15 m	nillion.	
Post-Employment Benefits/Additional Pension Deposit	0	4,976,411	4,976,411	-
All other benefits for retirees (e.g. health insurance). Line item relabeled to refle	ct expectation of transfer into t	the pension fund consistent v	vith long-term strategy.	
Insurance	2,097,875	2,143,618	45,743	2.2%
Insurance and payments/claims.				
Mitigation Payments	1,566,923	1,566,797	-126	0.0%
Mitigation payments to Quincy and Winthrop.				
HEEC Payments	3,741,915	3,386,970	-354,945	-9.5%
Cross harbor cable to Deer Island (includes both debt service and O&M componer	ents).			
Watershed Reimbursements	26,413,175	27,214,833	801,658	3.0%
Supports the operations and related costs of the state's Department of Conserva	ation and Recreation, Office of \	Watershed Management.		
Additions to Reserves	1,398,329	362,971	-1,035,358	-74.0%
1/6th of all planned Operating Expenses.				
TOTAL INDIRECT EXPENSES	\$45,692,593	\$47,706,703	\$2,014,110	4.4%

- The pension fund contribution is based on the valuation report as of January 2011; funding is at 87.6% and is expected to reach full funding by FY24. A new evaluation as of January 2013 is due in the coming months.
- Insurance expense decreases due to fewer anticipated claims and is based on a three-year average. The insurance program is out for bid with award anticipated for later this spring, and remains on an annual renewal schedule.
- Other Post-Employment Benefits (OPEB) are treated together with pension obligations and will be actively funded when the pension is fully funded.
- HEEC payments for O&M and debt service charges decline. The current agreement runs until May 2015.
- Costs of the Office of Watershed Management are treated as a reimbursement to the state and include
   PILOT payments and debt service on watershed land purchases, as well as direct operating expenses.



## **Indirect Spending Increases \$2.0 Million**

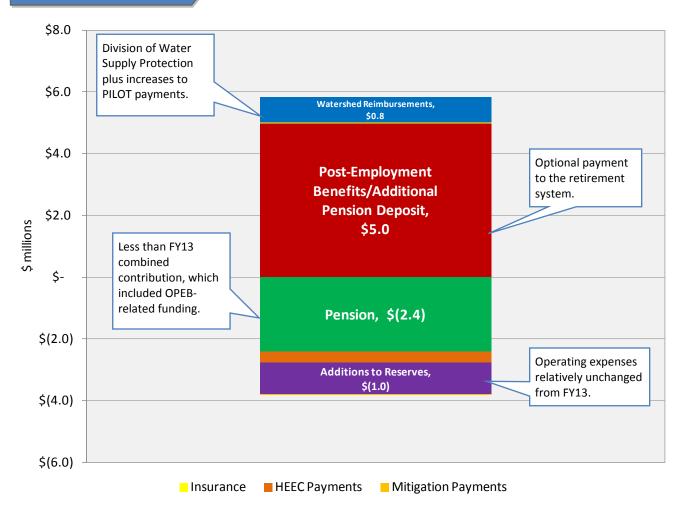


Figure 21

- The budget for the additional operating reserve deposit is measurably lower than for FY13, reflecting level funding for direct expenses.
- Mitigation payments are set by agreement with each community and are proposed to be level funded in FY14.

#### Other Post-Employment Benefits (OPEB) and Pension

- The retirement fund is currently scheduled to be fully funded by 2024.
- FY13 pension expense: \$10.5 million
  - o \$5.8 million = annual required contribution
  - \$4.7 million = optional contribution originally budgeted as OPEB.
- Proposed FY14 pension expense: \$8.1 million
  - \$5.9 million = annual required contribution
  - \$2.15 million = revised mortality tables (See policy discussion below.)
- Proposed FY14 OPEB expense: \$5.0 million
  - o Authority has re-labeled this line item "Other Post-Employment Benefits/Additional Pension Payments" to be consistent with the intended use of the funds.

#### **Policy Discussion**

The Advisory Board continues to support the view of the Authority's financial advisor that treats the pension fund and OPEB as one total liability. The Authority has, therefore, focused on first fully funding the retirement fund, with the intention of then beginning to make direct contributions toward the OPEB liability.

The Advisory Board maintains that 2024 is an aggressive funding schedule compared to most entities; moreover, the Authority has made optional payments in recent years beyond the annual required contribution. The Advisory Board appreciates the Authority's treatment of OPEB in the Proposed FY14 CEB by adding "Additional Pension Deposit" to the line item to more accurately reflect its final intended use. Toward that end, the Advisory Board officially recommends that the \$4,976,411 in the Proposed FY14 CEB for "Other Post-Employment Benefits/Additional Pension Deposit" be added to the retirement fund as an optional payment.

However, in the pension line item, the annual required contribution totals approximately \$5.9 million, and an additional \$2.2 million has been included to reflect updated mortality tables. Updated mortality tables are long overdue, and should certainly be incorporated in the actuarial evaluation of the Authority's liability. Quite simply, individuals are living longer, which undeniably increases the Authority's liability. That said, the Advisory Board notes that including the updated mortality tables is not required until FY15. Authority staff supported including this additional payment as an effort to "ramp up" to the eventual cost in FY15, thereby mitigating some of the impact on the percentage of rate increase between FY14 and FY15. Nonetheless, the Advisory Board believes this impact to be manageable through traditional measures (e.g. targeted defeasances, updated spending assumptions, etc.), and, therefore, recommends that the Authority reduce the FY14 Current Expense Budget by removing \$2,151,996 related to the updated mortality tables from the retirement fund expense line item.

#### <u>Additions to Reserves</u>

- $\%^{\text{th}}$  of all designated expenses are placed into the Operating Reserve.
- Proposed FY14 budgeted additions to reserves: \$362,971

Contributions to the retirement fund are designated as expenses to be covered by the Operating Reserve. Because of this, any reduction to pension expense has a corresponding reduction to the "Additions to Reserves" line item.

Consistent with its recommendation to remove the portion of pension expense related to updated mortality tables, the Advisory Board recommends reducing the Additions to Reserves line item by \$358,666.

#### Watershed

Table 22

Draft FY14 Office of Watershed Management Work Plan				
1.2				Δ (%)
Operating Expenses	\$14,163,342	\$14,391,231	\$227,889	1.6%
Debt Service	5,608,833	5,608,833	0	0.0%
Revenue	936,000	985,000	49,000	5.2%
SUBTOTAL	\$18,836,175	\$19,015,064	\$178,889	0.9%
Payment in Lieu of Taxes (PILOT)	7,600,000	8,200,000	600,000	7.9%
TOTAL	\$26,436,175	\$27,215,064	\$778,889	2.9%

- Other costs relating to watershed management have been added in recent years to both the Authority's CEB and CIP budgets. These include funding for new acquisition of watershed lands, dam repairs and PCB removal, as well as dam inspections and invasive species surveys and control.
- Watershed reimbursement expense rises for the costs of the Office of Watershed Management by 1.5% to \$13.4 million (including revenue assumptions). PILOT payments rise by nearly 8% to \$8.2 million, an increase of \$0.6 million. Watershed related debt service reflects an even, multi-year payment schedule and remain at \$5.6 million.

Table 23

Watershed Revenues <sup>7</sup>				
EXPENSES	FY13 Projected	FY14 Final	Δ (\$s)	Δ (%)
Interment Fees	\$0	\$0	\$0	1
Fish & Boating/Deer Hunt	240,000	260,000	20,000	8.3%
Rents	0	0	0	-
Forestry Sales	40,000	110,000	70,000	175.0%
Miscellaneous	56,000	15,000	(41,000)	-73.2%
Prior Year Refunds	0	0	0	-
Hydropower/Tr Lines	600,000	600,000	0	0.0%
TOTAL	\$936,000	\$985,000	\$49,000	5.2%

#### **Policy Discussion**

The Authority has listed Brigham Pond Dam, which is not related to the water supply, as a potential "budget risk." Consistent with last year's comments, the Advisory Board reaffirms its assertion that as part of a Memorandum of Understanding between the Commonwealth and the MWRA, non-water supply dams are not the responsibility of the Authority, and recommends that the Authority remove or that DCR find alternative funding for any dam work that does not directly impact the water supply.

<sup>&</sup>lt;sup>7</sup> Source data: Office of Watershed Management Final Draft FY 2014 Work Plan



- As the result of an initiative of the Advisory Board, the Water Supply Protection Trust was established in 2004 to provide a more efficient mechanism for MWRA's funding of the Office of Watershed Management.
- At the request of the Advisory Board, in FY2006, the MWRA Retirement Board extended its deadline for fully funding the pension fund until 2024, allowing for reduced annual costs for this line item. Despite the ability to extend the deadline further to 2030, the Authority has maintained its aggressive 2024 schedule.
- The Advisory Board has submitted a letter to the governor and the legislature supporting changes to OPEB that could reduce the Authority's obligation by \$40 to \$60 million.

Table 24

Proposed Fiscal Year 2014  Maintenance Expense Summary  (\$s)				
Line Item/Description	Final FY13	Proposed FY14	Δ (\$s)	Δ (%)
Buildings and Grounds Expense	\$4,422,949	\$4,907,343	\$484,394	11.0%
Materials and services for maintaining buildings and grounds.				
Automotive Expense	667,500	652,500	-15,000	-2.2%
Materials and services for maintaining vehicles.				
Plant and Machinery Expense	12,461,396	11,172,620	-1,288,776	-10.3%
Materials and services for maintaining plant and machinery expenses. (E.g. drive chains, facility painting and coating)				
Pipeline Expense	1,165,562	1,468,102	302,540	26.0%
Materials and services for maintaining pipeline.				
Specialized Equipment Expense	3,330,749	3,119,705	-211,044	-6.3%
Materials and services for specialized equipment. (E.g. grit screens, lab equipment)	ment repairs, sewer bucketing	equipment)		
Computer Expense	2,500,649	2,891,415	390,766	15.6%
Includes materials services, software licenses and upgrades.				
Electrical Expense	2,487,200	2,372,800	-114,400	-4.6%
Materials and services for maintaining electrical systems.				
All Other Maintenance Expense	1,193,066	1,378,941	185,875	15.6%
Includes HVAC materials and services and purchase cards.				
TOTAL MAINTENANCE EXPENSE	\$28,229,071	\$27,963,426	-\$265,645	-0.9%

 Maintenance spending has been reduced to reflect historical spending and institutional capacity. Larger maintenance projects are funded through the capital budget.

- Maintenance expense is 13% of all direct expenses.
- Deer Island accounts for 45.5% of all maintenance expense (\$12.73 million)
- Another 36.4% or \$10.18 million is for Field Operations, including the CWTP, headworks, CSO facilities, and water and wastewater pump stations.
- Other Operations Division maintenance expense includes \$0.68 million for the residuals pelletizing plant and \$0.2 million for the Clinton WWTP.
- All other maintenance expense totals \$4.16 million or 14.9% of all maintenance spending, including \$2.77 million for MIS, \$0.3 million for laboratory services, and \$0.68 for fleet maintenance.
- Maintenance needs are also funded through the technical assistance group of engineering contracts and through the capital program.

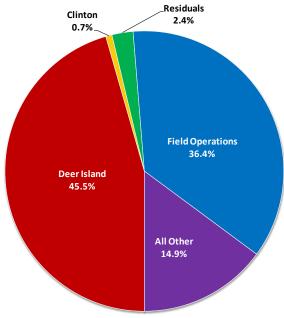


Figure 22

## **Maintenance Spending Decreases \$266 Thousand**

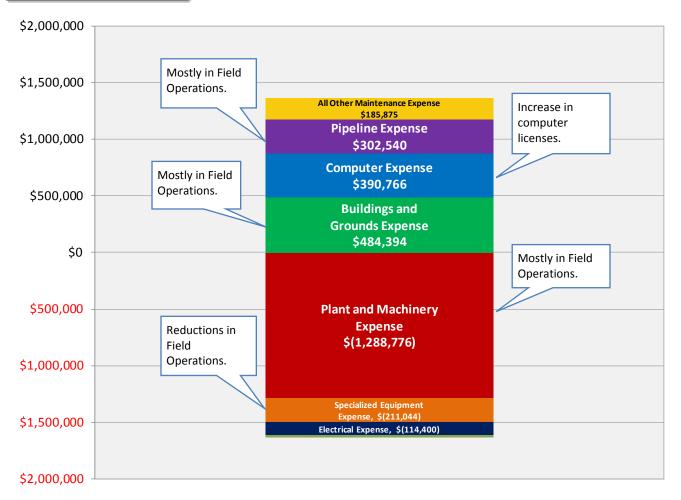


Figure 23

#### Deer Island Maintenance Totals \$12.7 Million

- Materials: \$5.7 million (or 45% of the department's budget).
- Services: \$7.1 million (or 55% of the department's budget).
- Deer Island maintenance spending is essentially level-funded from FY13.
- Plant and machinery services and materials total \$8.2 million or 64% of all Deer Island maintenance expense.
- \$1.8 million is for electrical system maintenance, and \$1.4 million is for cleaning and grounds work.
- Some of the largest projects or contracts include:
  - o painting and coating
  - o boiler maintenance
  - o pipe cleaning
  - o janitorial services
  - o cryogenic maintenance services
  - o air compressor replacements
  - replacement of failed HVAC units.

#### Field Operations Department Maintenance Totals \$10.2 Million

- FOD maintenance spending decreases \$323,500 or 3.1% from FY13.
- The decrease continues to reflect the completion of many critical and high-cost projects.
- Still, the proposed budget represents the third highest spending year in the past nine years. Spending has been nearly \$10 million or greater for the past four years, including the proposed budget for FY14.
- Plant and machinery materials and services spending declines by \$790,000, or 37%, while building and grounds services and pipeline services increase.
- The budget includes \$4.0 million for day-to-day needs, \$3.5 million for services, \$2.2 million for major projects and \$0.5 million for energy initiatives (including HVAC and lighting efficiency upgrades).
- Some of the largest contracts are for roofing, painting, manhole rehabilitation, easement clearing, invasives control
  (at Chestnut Hill, Stillwater Basin, Wachusett Reservoir and the Sudbury Reservoir), and the replacement of 10
  wastewater flow meters.

#### Residuals Pelletizing Facility Maintenance Totals \$685 Thousand

- The proposed maintenance budget represents a reduction of 33% from the current year and is based on an
  approved replacement schedule established at the time of the NEFCo contract award. The reduction is also a
  function of a lower inflation adjustment for FY14.
- The funding supports capital repair, replacement and improvements.

#### Clinton Wastewater Treatment Plant Maintenance Totals \$202 Thousand

- The proposed budget has beenessentially level funded for the last four years.
- Included is \$57,000 for major projects based on the most current rolling priority list.
- The remainder of the budget is for routine materials and services.



• The Authority has implemented several different methods of maintenance – predictive maintenance, corrective maintenance, and reliability centered maintenance. These different approaches help to reduce maintenance costs while still ensuring the Authority's assets are properly cared for.

Table 25

•	oosed Fiscal Year 2014 ilities Summary (\$s)			
Line Item/Description	Final FY13	Proposed FY14	Δ (\$s)	Δ (%)
Electricity	\$16,084,323	\$16,360,145	\$275,822	1.7%
Most facilities are powered by Electricity including DITP and CWTP.				
Diesel Fuel	4,411,148	3,800,048	-611,100	-13.9%
Heating, CTGs at DITP, and other backup generators.				
Water	1,900,443	1,982,473	82,030	4.3%
A "pass-through" cost to account for Water; self-supplied.				
Natural Gas	514,695	627,906	113,211	22.0%
Primarily used for heating various MWRA facilities				
All Other Utilities	216,590	219,229	2,639	1.2%
Oxygen, #2 Fuel Heating Oil, Propane, and all Other Utilities.				
TOTAL UTILITIES EXPENSES	\$23,127,199	\$22,989,801	-\$137,398	-0.6%

- Electricity expense increases by nearly \$276,000 due to price increases, especially at Deer Island.
- Increased wind and solar energy generation, hydropower generation, use of steam generators at Deer Island, and improved energy efficiency continue to reduce the amount of purchased electricity over the last several years (net of somewhat lower estimates for the electricity produced by the new back pressure steam generator).
- Electricity prices in New England are driven by natural gas pricing rather than oil pricing.
- Diesel fuel expense declines nearly 14% reflecting lower prices and quantities purchased, and, in the Field Operations Department, the result of heating system conversions.
- Natural gas use at the Fore River pelletizing plant is part of the NEFCo monthly charge, under the Other Services

budget category. The Authority has included \$2.65 million for natural gas, and another \$1.37 million for electricity (more than \$4 million) for utilities under the NEFCo contract.

 Wastewater operations account for \$17.65 million (or 77%) of all Utilities spending; Water operations account for \$5.3 million (or 23%) of all Utilities spending.

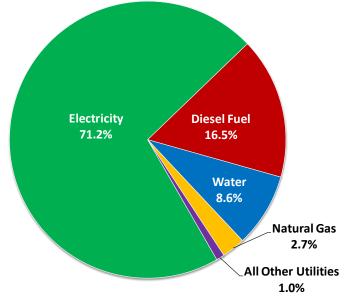
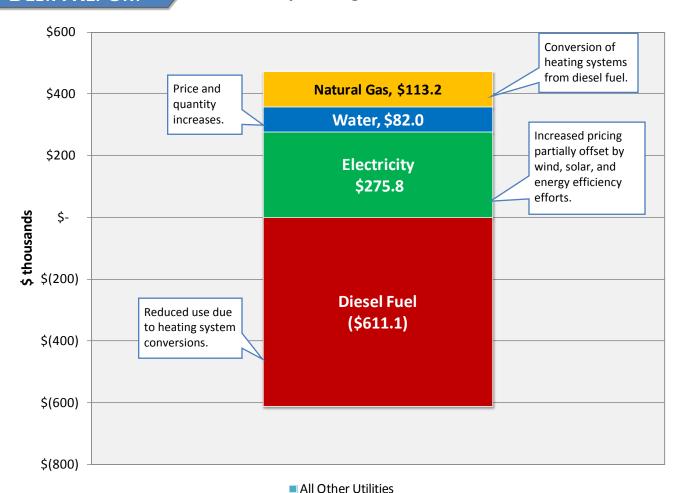


Figure 24

## **Utilities Spending Decreases \$137 Thousand**



#### Figure 25

- Deer Island electricity totals \$9.65 million, a 3% (\$250,000) increase over FY13's budget but lower than the previous 8 years. The amount is nearly 60% of all electricity expense.
- The planned purchase of 110.3 million kWh is essentially the same amount as assumed for FY13 but lower than any of the previous 9 years.
- Deer Island is projected to generate nearly 30% of its electricity needs.
- The Authority is also pursuing a number of demand-side changes and initiatives.
- Field Operations Department (FOD) facilities electricity expense increases by \$88,000 to \$6.44 million based on a three-year average and anticipation of UV coming online at the Carroll Water Treatment Plant. The amount is nearly 40% of all electricity expense.

#### **Proposed FY14 Electricity Expense**

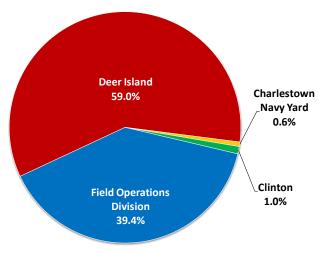


Figure 26

The Authority is also pursuing energy efficiency initiatives at several FOD facilities (see Maintenance section).

#### Diesel Fuel

- Of the \$3.8 million budgeted for diesel fuel purchases, \$2.0 million is for use at Deer Island, \$1.6 million is for use at Wastewater facilities and \$0.2 million is for use at Water facilities.
- Planned purchases at Deer Island are little changed from FY13 and are less than half the actual spending in FY10. Price declines from an assumed \$3.75 per gallon in the FY13 budget to \$3.50 per gallon for FY14.
- Field Operations Department purchases are budgeted for a 21% decline (nearly \$500,000) with no change in the current year's pricing of \$3.75 per gallon. The proposed budget reflects the conversion of some facilities from diesel fuel to natural gas.

#### **Natural Gas**

- Natural gas expense totals nearly \$628,000 in FY14.
- Natural gas is used at a number of facilities in the Field Operations Department.
- The 22% increase (or \$113,000) in budgeted spending reflects the conversion of heating systems at the Intermediate Pump Station and the Chelsea Headworks from diesel fuel to natural gas.

The Advisory Board expects updates of pricing and usage assumptions to all utilities to be incorporated into the final FY14 CEB.



- The Authority has undertaken and continues to work on several demand-side initiatives to reduce electricity costs including:
  - LED lighting resulting in a 60% energy reduction.
  - Variable frequency drives at pump stations and the headworks.
  - Motion sensor interior lights for facilities.
- Additionally, the Authority has received significant amounts of funding from utility companies toward energy efficiency projects.
- The Authority additionally has converted some facilities from diesel fuel to natural gas, as well as improved HVAC systems at some facilities resulting in energy savings.
- The Authority has been highly aggressive with alternative energy generation programs including:
  - o Oakdale hydroelectric
  - Cosgrove hydroelectric
  - Loring Road hydroelectric
  - Carroll Water Treatment Plant photovoltaic
  - Charlestown Pump Station wind turbine
  - o Deer Island wind turbines, photovoltaic, and steam turbine generation

Table 26

·	osed Fiscal Year 2014 Services Summary (\$s)			
Line Item/Description	Final FY13	Proposed FY14	Δ (\$s)	Δ (%)
Pelletization	\$14,596,161	\$14,144,936	-\$451,225	-3.1%
NEFCo contract to process and dispose of sludge pellets				
Lease	3,569,571	3,608,246	38,675	1.1%
Charlestown (\$1.68 million), Chelsea (\$1.76 million), Marlborough Records Center (\$95.8 thousand).				
Telephone	1,424,771	1,404,870	-19,901	-1.4%
Voice and data lines; Operations Division				
Grit and Screenings Removal	830,407	932,668	102,261	12.3%
Removal of grit and screened materials from various facilities.				
All Others	3,322,698	3,043,548	-279,150	-8.4%
Printing, membership dues/subscriptions, advertising; health/safety, police de	etails; Advisory Board operation	ons; various other services.		
TOTAL OTHER SERVICES EXPENSES	\$23,743,608	\$23,134,268	-\$609,340	-2.6%

- New England Fertilizer Company (NEFCo) pelletizing operations are based on processing an average of 106.0 tons per day, with annual costs subject to an inflation factor.
- A reduction in the inflation factor accounts for nearly all of the decrease.
- The pelletizing contract runs from FY 2001 through December 2015.
- Grit and screenings are removed from Deer Island, the remote headworks, certain pump stations and CSO facilities.
- Estimates of tonnages of grit and screenings have increased by 10% to reflect mechanical improvements at some of the headworks and more scum screenings at Deer Island during an upcoming clarifier rehabilitation project.
- The current two-year contract runs through May 2013; a 10% increase is assumed for the proposed FY14 budget.
- Together, pelletizing and grit and screenings expense total nearly two-thirds of all Other Services expense.
- Lease costs increase slightly, reflecting an increase in taxes relating to the Chelsea lease. (The capital cost (debt service) of the Chelsea facility is reflected under Debt Service expense.)
- Some costs have been shifted to maintenance, including invasives control at several reservoirs.

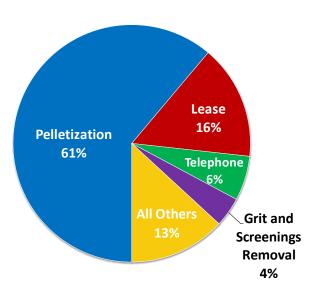


Figure 27

### Other Services Decreases \$609 Thousand

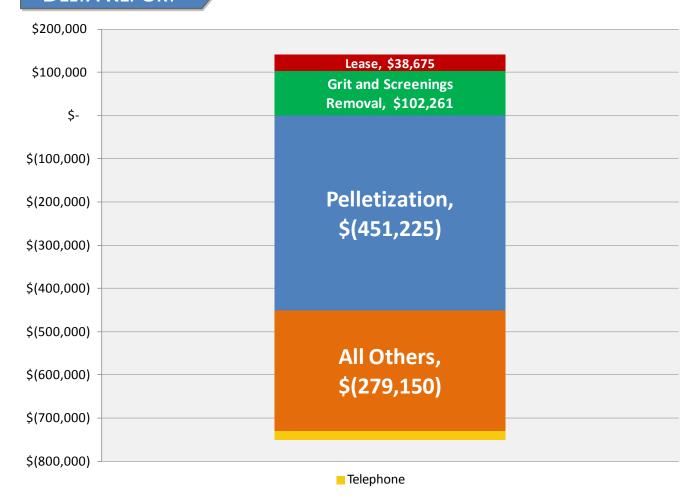


Figure 28
Pelletization

- FY14 proposed budget: \$14.145 million.
  - o The decrease is \$451,225 (3%) from FY13.
  - o Producer Price Index adjustments are the basis for the decrease, per the contract terms for NEFCo.
  - o Much of the costs of pelletization are fixed due to a base amount of 90 tons per day.
  - o Each additional ton, on an annual basis, is equivalent to \$98,588.
  - o Assumed quantity: 106 tons per day.

#### **Co-Digestion**

Please see the Policy Chapter for an in-depth discussion and the Advisory Board's position on co-digestion.

#### **Policy Discussion**

#### **Pelletization Contract**

As the Advisory Board noted in its comments last year, the time needed to assess new technologies, and now to consider co-digestion, as well as rebid the existing NEFCo contract have made it a near certainty that the current contract will expire before any recommended changes to the current contract could be enacted. Given the complexity of the operation and the current terms and structure of the existing contract, the Advisory Board recommends that the Authority investigate options for an extension of the current pelletization contract.

As part of the process of considering a number of scenarios and elements that should be part of the contract, the Advisory Board recommends the Authority consider the following elements:

#### Product quality

Should there be new or revised limits on some components of the waste stream (an example: fats, oils and grease; or certain cleaning products or certain industrial discharges)?

What is the outlook for state and federal regulations governing molybdenum in the wastestream?

How does quality impact product marketing and placement? Value/importance of the designation as "organic"?

#### **Product quantity**

Both the influent stream coming into the Deer Island plant and residuals processing at Deer Island (detention times and solids destruction rates)

#### Financial factors

Review the base quantity of 90 tons per day

Expenses that are considered fixed, variable

The use of the Producer Price Index (PPI) or other indices for inflation factor(s)

Multi-year maintenance plans/requirements

#### Product marketing and placement

Options for uses as fuel and as fertilizer

#### Distribution and transportation

Wholesale and retail sales options, advantages and disadvanges

Needs/requirements for backup landfill capacity

State and municipal use and charges (or waiving of fees)

Bulk or bagged product

Should there be a requirement or an incentive to use the product in the service area?

Should certain markets be targeted?

How do transportation costs impact product placement?

#### **Regulatory issues**

Use of the product as a fuel, including air quality issues

State and federal regulations/standards for molybdenum

#### Contract and contract extension durations

How long should an extension be? What should the new contract duration be? How does facility and component ages and outlook for technology impact these considerations?



• At the Advisory Board's urging, the Authority eliminated the requirement of and costs for the backup landfill in Utah to hold sludge in the event of an emergency at the pelletizing plant.

Table 27

•	osed Fiscal Year 2014 micals Summary (\$s)			
Line Item/Description	Final FY13	Proposed FY14	Δ (\$s)	Δ (%)
Soda Ash	\$3,317,769	\$3,524,611	\$206,842	6.2%
Used primarily at the CWTP; some at Clinton WWTP.				
Sodium Hypochlorite	2,349,611	2,271,472	-78,139	-3.3%
Used for treatment at DITP (\$1.15 million) and CWTP (\$0.9 million). NPDES be	gins January 2013 and price in	creased.		
Hydrofluosilic Acid	675,108	761,818	86,710	12.8%
Fluoride control at CWTP.				
Liquid Oxygen	650,935	726,069	75,134	11.5%
Ozone generation at CWTP.				
Ferric/Ferrous Chloride	672,695	898,094	225,399	33.5%
For struvite control at DITP. Dramatic price increase due to increased global de	emand for new applications.			
Sodium Bisulfite	397,955	485,647	87,692	22.0%
For dechlorination of treated wastewater and water. Usage increased for new	NPDES permit requirements.			
Activated Carbon	309,646	314,080	4,434	1.4%
For odor control at DITP.				
Carbon Dioxide	313,920	272,655	-41,265	-13.1%
To increase pH and alkalinity level of water supply at CWTP.				
Polymer	280,507	323,577	43,070	15.4%
Sludge thickening at DITP and Clinton. Expected reduction in Final FY14 due to	new contract prices.			
All Other Chemicals	995,350	1,075,724	80,374	8.1%
For algae control; corrosion control in Framingham Relief Sewer and DITP.				
TOTAL CHEMICALS EXPENSES	\$9,963,496	\$10,653,747	\$690,251	6.9%

- Proposed chemicals budget is 1.6% of all expenses and 5% of all direct expenses.
- Water operations chemicals: \$6.66 million.
- Deer Island chemicals: \$3.19 million.
  - No new NPDES treatment requirement is assumed for FY14.
- Clinton Wastewater Treatment Plant chemicals: \$0.31 million.
- Other wastewater facilities chemicals: \$0.49 million.
- Over half (54% or \$5.8 million) of all chemicals spending is for soda ash and sodium hypochlorite. (See Figure 32.)

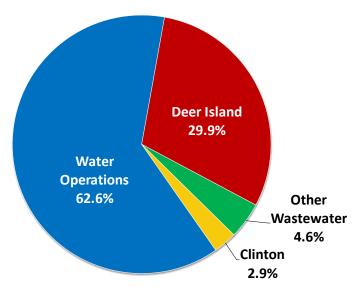


Figure 29

## **Chemicals Expenses Increase \$690 Thousand**

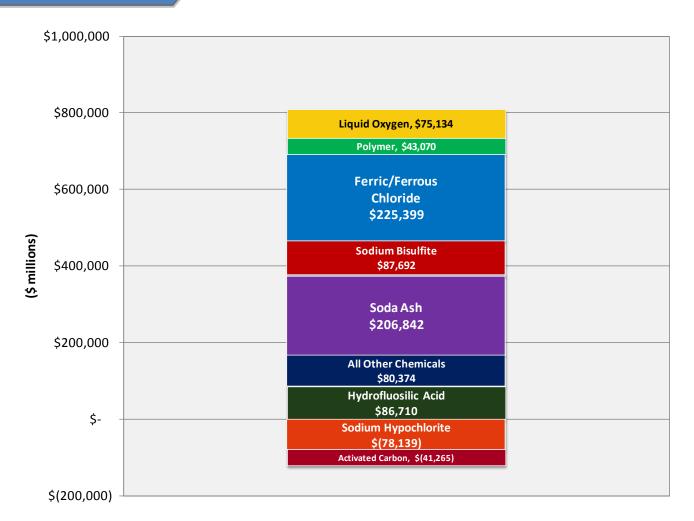


Figure 30

**Regulatory Changes Impacts** 

- This year the Authority does not assume any increased costs associated with potential regulatory changes to the National Pollutant Discharge Elimination System (NPDES) permit for Deer Island.
- The existing permit expired in August 2005; a draft of a new permit has not been issued.
- Fluoride use has increased by \$64,000 due to increased dosing; the timing of the updated regulatory changes is uncertain.

#### Price Increases Impact on Chemicals Budget

- The largest price increases are for soda ash (\$192,000); ferric chloride (\$143,000); sodium bisulfite (\$90,000); liquid oxygen (\$80,000); and aqua ammonia (\$75,000).
- Total net impact of price changes: \$592,000.

#### **Usage Impacts**

The impacts of changes in usage increase the proposed budget by a net of \$99,000.

- Usage optimization efforts continue: use of nitrazyme in the Framingham sewer continues to decrease; the proposed budget assumes costs decline by \$80,000.
- Most of the budget increase is due to price increases, particularly for soda ash and ferric chloride.
- Chemicals expenses use in water operations increases to nearly 63% of all chemicals costs or \$6.66 million.
- Deer Island spending represents 30% of the proposed chemicals budget and increases 10.5% reflecting increases in the price and use of ferric chloride.

Over half (54% or \$5.8 million) of all chemicals spending is for soda ash and sodium hypochlorite. (See Figure 32.)

 Contributing to higher expenses are increases in the price of soda ash and increased usage of fluoride to reflect current dosing.
 Soda ash is 33% of the chemicals budget.

The Advisory Board expects that the chemicals budgets will be revised to reflect updated pricing and usage assumptions.

#### **Chemicals Increase by Location**

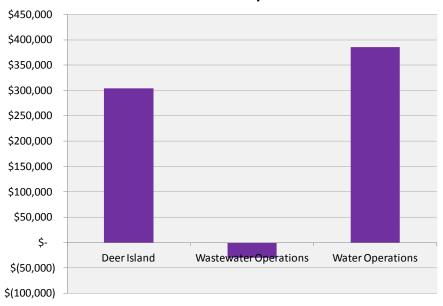


Figure 31

## Chemicals Expense Final FY13 versus Proposed FY14

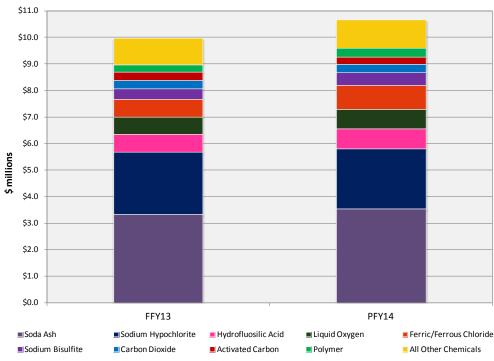


Figure 32

Table 28

abic 20				
Proposed Fiscal Year 2014 Professional Services Summary  (\$ss)				
Line Item/Description	Final FY13	Proposed FY14	Δ (\$s)	Δ (%)
Lab and Testing Analysis	\$1,543,557	\$1,650,873	\$107,316	7.0%
Primarily harbor and outfall monitoring; some specialized outside lab services.				
Security	1,715,603	1,768,505	52,902	3.1%
Security and guard contracts.				
Engineering	863,500	650,000	-213,500	-24.7%
Specialized outside services such as dam inspection; beach nourishment studies for De	er Island; as needed enginee	ring support.		
All Other Professional Services	1,778,124	1,804,524	26,400	1.5%
Legal Services, Audit Services, Local Limits Study, Communications; energy audits				
TOTAL PROFESSIONAL SERVICES EXPENSES	\$5,900,784	\$5,873,902	-\$26,882	-0.5%

- Professional services expenses decline slightly: reductions in engineering and legal services slightly offset increases in security and laboratory and testing analysis.
- Some increases are for as-needed utility borings and for costs associated with a new monitoring buoy.
- Harbor and outfall monitoring (HOM) costs are linked to the existing NPDES permit, which expired in August 2005 and not yet redrafted or updated. Changes in the scope over the years and the transfer of some analyses to inhouse staff have resulted in savings in contracted services of an estimated \$800,000 per year.
- Security services rise due to increased contract wages for security guard service at various facilities, including Deer Island, the Chelsea facility, the Carroll Water Treatment Plant, as well as the Charlestown Navy Yard and roving guard services and patrol equipment.

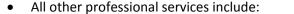
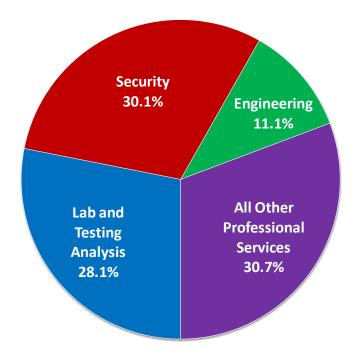
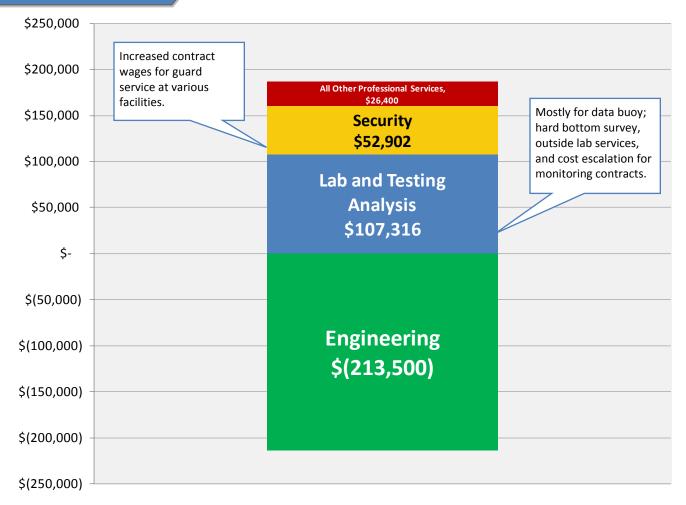


Figure 33

- Trustee and financial advisor services for the Finance Department
- Insurance consultant services
- Energy consulting services
- o Technical and professional development services for human resources
- o Workers' compensation claims administration fees
- Legal services
- o Audit services
- o Communications including funding for WAC and WSCAC.



## **Professional Services Decrease by \$27 Thousand**



#### Figure 34

- No funding is included in FY14 for Local Limits studies associated with new NPDES permits.
- Some funds are being added for a comprehensive reservoir plants survey.
- The Authority also budgets \$153,423 for professional lab services for the Laboratory Services Department at Deer Island. The Lab contracts out a variety of complex and/or low volume tests.

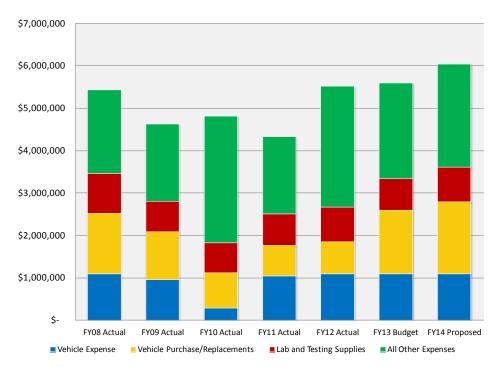


- At the long-time request of the Advisory Board, the Authority sought and received changes to the ambient monitoring plan and brought ENQUAD database management in house resulting in more than \$2 million/year in savings.
- Cost-share contracts managed by ENQUAD have saved MWRA more than \$4 million.
- The laboratory services department switched to Colilert method of testing for water quality assurance resulting in less staff time allowing for redeployment of resources.

Table 29

•	sed Fiscal Year 2014 laterials Summary (\$s)			
Line Item/Description	Final FY13	Proposed FY14	Δ (\$s)	Δ (%)
Vehicle Expense	\$1,095,440	\$1,091,644	-\$3,796	-0.3%
Bulk gasoline, diesel purchases, mileage reimbursement, and some toll fees.				
Lab and Testing Supplies	739,858	822,545	82,687.00	11.2%
Supports Central Lab and TRAC.				
Vehicle Purchase/Replacements	1,500,000	1,700,000	200,000	13.3%
Purchases of vehicles and equipment under \$100,000.				
Equipment/Furniture	333,230	539,730	206,500	62.0%
Miscellaneous equipment and furniture.				
Computer Hardware	517,592	462,332	-55,260	-10.7%
PCs, printers, plotters, and scanners.				
Office Supplies	222,938	224,106	1,168	0.5%
Office supplies including paper.				
All Others	1,182,233	1,203,927	21,694	1.8%
Includes postage, work clothes, and health and safety materials.				
TOTAL OTHER MATERIALS EXPENSES	\$5,591,291	\$6,044,284	\$452,993	8.1%

- The Authority has multi-year replacement plans for purchase of vehicles and computer hardware.
- Funding for lab and testing supplies increases mostly due to the switch to the Colilert method for bacteria testing and for the mobile lab.
- Funding for vehicle replacement supports purchase of 49-57 vehicles or 10-11% of the active fleet.
- computer The hardware budget declines due to lower specialized hardware needs in FY14.
- Vehicle expense, lab and testing supplies, and work clothes budgets are based on Figure 35 updated historical spending.



Equipment and furniture budget provides for replacement of certain lab equipment, some of which is 15-17 years old. Also included is funding for fit out to accommodate shifts of staff from the Navy Yard offices to Chelsea.

## **Other Materials Increases \$453 Thousand**

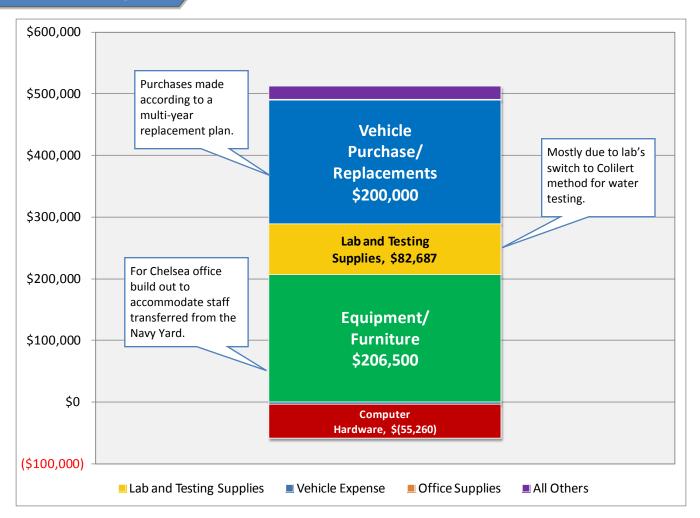


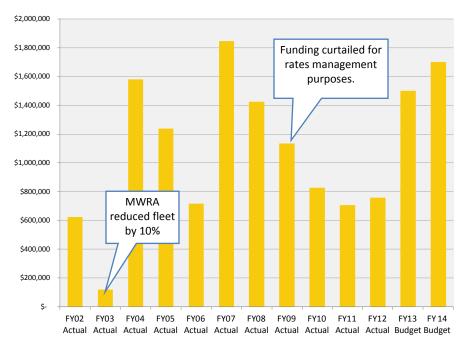
Figure 36
Computer Hardware Purchases

- Findings of the five-year Information IT Technology (IT) strategic plan (completed in 2012) include the need to:
  - o Adopt more effective and standardized IT management and processes.
  - o Develop methods to share data quickly across multiple applications.
  - Develop streamlined work flows.
  - o Reduce reliance on paper records and improve access to information.
- Because technology evolves so rapidly, the Authority will have to continuously adapt its plans to accommodate changes and updates to its programs and software.

#### **Vehicle Purchases**

- Vehicle fleet size is reviewed regularly, and has been reduced in recent years by about 10%.
- The multi-year replacement schedule also helps to control materials and services costs in the Fleet Services Department.
- About 50% of the active, operable fleet will be seven years or older at the beginning of FY14.
- The Authority continues to reduce fuel consumption by reducing idle times and increasing the number of vehicles powered by fuel other than gasoline and diesel. The Authority procures bulk fuels from state contracts.
- 15% of the fleet is powered by fuels other than gasoline and diesel.

## **Vehicle Replacement Historical Spending**



S Figure 37



- The Authority actively manages its fleet through several initiatives and strategies:
  - Regular meetings of an internal vehicle management committee to review the fleet's status.
  - A successful trade-down strategy to repurpose older vehicles for less strenuous needs, maximizing useful life.
  - Reduction in the number of domiciled vehicles.
  - Increase in the use of pooled vehicles.

Table 30

Proposed Fiscal Year 2014  Training and Meetings Summary  (\$s)				
Line Item/Description	Final FY13	Proposed FY14	Δ (\$s)	Δ (%)
Training and Meetings	\$385,617	\$355,617	-\$30,000	-7.8%
TOTAL TRAINING AND MEETINGS EXPENSES	\$385,617	\$355,617	-\$30,000	-7.8%

- Costs cover variety of meetings, seminars, conferences training and sessions. Most spending supports maintaining professional licenses certifications, as well as training the use of specialized equipment, out-of-state site visits (such as water treatment plants that use UV disinfection) and site audits, and health and safety compliance, as well as cyber security training.
- The reduction is due to the one-time underground storage tank operator training program in FY13 and lower budget

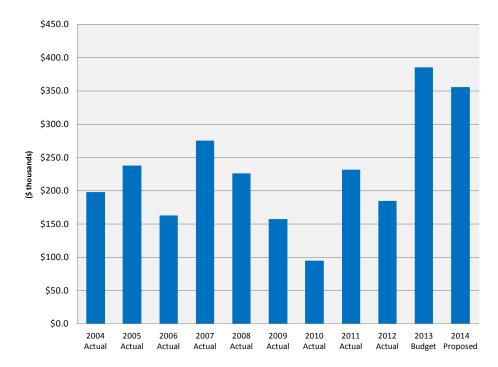


Figure 38

amounts for training in various computer applications as part of the MIS IT Strategic Plan.

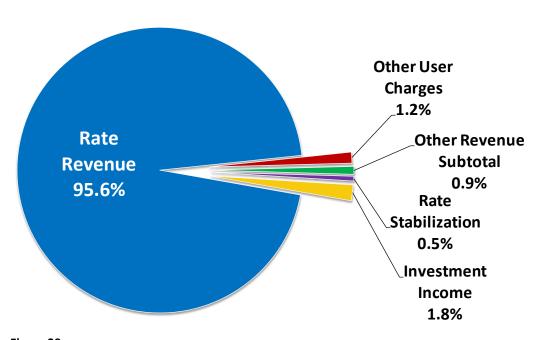
• The Authority also budgets \$155,000 for professional development and technical training under professional services in the Human Resources Department.

Table 31

	Proposed Fiscal Year 20: Revenue Summar			
Line Item/Description	Final FY13	Proposed FY14	Δ (\$s)	Δ (%)
Rate Revenue	\$607,512,000	\$631,233,001	\$23,721,001	3.9%
Revenue generated directly from member communities through a	annual assessments.			
Other User Charges	7,766,692	8,198,509	431,817	5.6%
From 20 customers including CVA communities; emergency wate	r supply connections, and entran	ce fees.		
Other Revenue	6,116,845	5,850,795	-266,050	-4.3%
Other sources of revenue including alternative energy sources.				
Rate Stabilization	0	3,500,000	3,500,000	-
From rate stabilization fund.				
Investment Income	14,461,012	11,780,818	-2,680,194	-18.5%
Interest on both short- and long-term investments.				
TOTAL REVENUES	\$635,856,549	\$660,563,123	\$24,706,574	3.9%

### Other Highlights

- The proposed rate revenue increase of \$23.72 million is the highest dollar increase in eight years.
- Each 1% increase represents \$6.075 million.
- Nearly \$30 million of the \$660.6 million in budgeted revenue comes from non-rate sources, which increase \$0.986 million from FY13.



- No funds are assumed Figure 39 for debt service assistance (DSA) from the Commonwealth.
- Chemical cost reimbursements from the Commonwealth of \$0.867 million, long a source of revenue, have been eliminated since FY10.
- Other user charges increase for CVA communities to reflect increased costs relating to the installation of UV treatment.
- Other revenue from forestry product sales, fishing, and hunting licenses is credited to the Office of Watershed Management budget. (See Indirect Expenses, Watershed Revenues, Table 23.)

# "DELTA REPORT"

## **Total Revenues Increase by \$24.7 Million**

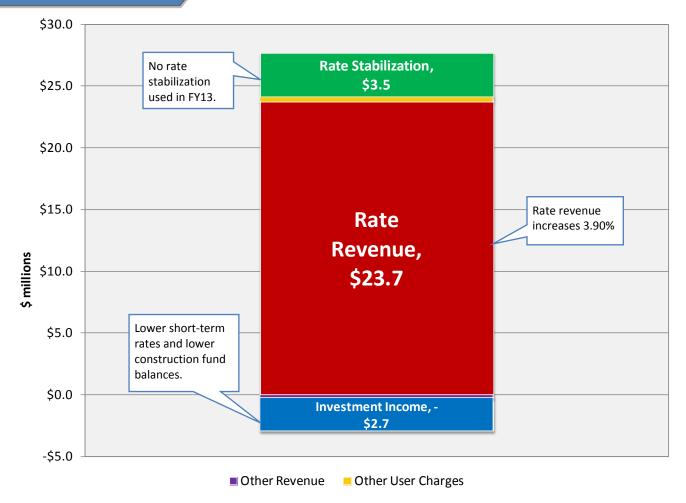


Figure 40

Table 32

Table 32		
	Oth	er User Charges
Fernald School	\$74,182	
Commonwealth Zoological (State Zoo)	\$34,304	
Westborough State Hospital	\$17,626	
DCR Pools/Parks	\$22,869	
Regis College	\$52,070	Individual users of sewer system
NE Center for Children	\$13,608	iliulvidual users of sewer system
Lancaster	\$201,945	
Worcester	\$130,162	Income relating to Clinton Wastewater Treatment Plant costs
Clinton	\$500,000	
Chicopee	\$3,302,446	
Wilbraham	\$719,958	CVA Communities
South Hadley	\$694,849	
WTP Residuals	\$264,631	From nine water treatment plants
Wilmington	\$0	Now part of rate base.
Entrance Fees	\$651,427	From Stoughton and Wilmington
Deer Island	\$1,518,432	Transfer payment of sewer cost to water revenue
TOTAL	\$8,198,509	

Table 33

			Other Revenue
Category	Final FY13	Proposed FY14	Description
Hydropower Revenue	\$302,614	\$234,000	Revenue generated from hydroturbines at Cosgrove.
Permit Fees	2,070,815	2,100,000	TRAC permit and monitoring fees.
Penalties	175,000	175,000	Issued through the TRAC program.
Payments from the			
Commonwealth	0	0	For chemical costs via statute.
Miscellaneous Revenue	1,034,978	875,469	Includes revenue from Fore River Railroad, antenna licenses, and other miscellaneous revenues.
Revenue - Energy	2,533,438	2,466,326	Includes Deer Island and CWTP demand-response payments; renewable portfolio credits for Deer Island.
TOTAL	\$6,116,845	\$5,850,795	

### **Investment Income**

- Investment income declines again due to:
  - Lower short-term interest rate assumptions of 0.20% vs. 0.40% in the FY13 budget (and 0.50% in the FY12 budget).
  - Lower balances in the debt service reserve fund following the release of certain reserves due to recent defeasance transactions.
  - Lower average fund balances in the construction fund.
- The proposed budget for investment income is less than 30% of the \$40.3 million earned in FY07.

### **Debt Service Assistance**

 Debt Service Assistance (DSA), when available, is treated as an offset to debt service.

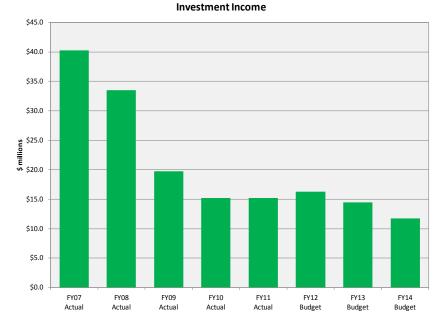


Figure 41

• In the past, the Authority assumed eligibility of 70% of the funding when approved.



- The Authority is exceptionally aggressive in submitting for and receiving FEMA and MEMA grants for reimbursement of emergency costs whenever possible.
- The Advisory Board consistently files legislation seeking funding through Debt Service Assistance, Bottle Bill receipts, online sales tax, and economic stimulus funding.
- The Advisory Board successfully mounted legal battles to eliminate a per gallon water tax resulting in savings of \$8-10 million per year, which would have been raised in rate revenue through member communities' assessments.

### **Policy Recommendations**

### Co-Digestion

A change in the Department of Environmental Protection (DEP) regulations is anticipated by the end of 2014 whereby commercial and industrial entities will be required to divert organic materials from the solid waste stream that eventually ends up in landfills within the Commonwealth. Because of these pending regulations, a significant amount of discussion at the Authority has centered around the possibility of using the excess capacity in the Deer Island Treatment Plant (DITP) digesters to accept some of the food waste.

In essence, a third-party would take the organic waste from the private industrial users, process it into a slurry consistency, and then transport it to DITP to be inserted into the digesters. There are potential advantages to codigestion. For example, the organic nature of the slurry lends itself easily to digestion and could provide an abundance of extra energy to be captured and utilized.

However, there are many details still to be worked out and questions abound:

- What additional infrastructure and associated costs would be needed to accept this organic material on a large scale?
- What additional staff or staff time would be required for co-digestion?
- How much extra energy would the slurry actually produce?
- Does DITP have the capacity to capture and use said energy with its existing infrastructure and facility?
- How much additional sludge would result from the added material, and what would the impact upon the quantity and cost on sludge Pelletization be?
- What impacts are there upon the treatment process, specifically as it relates to quality standards required by the NPDES permit?
- How would the material be transported and received by DITP, and what financial implications would this have?

The Authority has undertaken a small-scale pilot program to test the effects of co-digestion and to help provide answers to some of these questions. The Advisory Board supports this pilot program, and also supports the approach favored by Authority staff in a 1-3 year pilot program to answer the operational questions and address any concerns. It is of utmost importance that any process toward adopting a co-digestion program not be rushed and be fully explored before implementation. The regulations may be pending, but the issue is entirely centered on Mass DEP and the private entities affected. This initiative is a Commonwealth initiative, not an MWRA one, and as such, the Authority should firmly maintain its own timetable, and not one that conforms to the Commonwealth's goals.

Additionally, the Advisory Board's primary concern is relative to financial impacts upon the ratepayer. The Authority has assured the Advisory Board and the MWRA Board of Directors that any implementation of co-digestion would not be at the cost of ratepayers. Advisory Board staff has taken this one step further, and instead views this as an opportunity for a "win-win" situation. The Commonwealth's aim is to divert food waste from landfills. The private entities that have to divert this material are looking for methods of disposal. The Authority has excess digester capacity and potential ability to accept some of this diverted organic material. By accepting this food waste, the Authority can assist the Commonwealth in its goals, and help the private entities conform to the new regulations; however, this could and should benefit the Authority as well as the ratepayers. By charging a tipping fee, the Authority has the opportunity to create an additional source of non-rate revenue to help offset operational expenses and mitigate future rate increases.

The Advisory Board, therefore, recommends that any implementation of a co-digestion program provide a financial benefit to the Authority significantly greater than the costs associated with co-digestion.

### Watershed PILOTs

The Authority has reimbursed the Commonwealth of Massachusetts for Payments In Lieu Of Taxes (PILOTs) on lands it owns in the watershed communities. These costs have continued to climb, and it appears that there is no end in sight. The MWRA has to pay based on 100% value on the highest rate in those communities. The Advisory Board believes there is a better way to implement the PILOT program.

Toward that end, the Advisory Board recommends convening a working committee to explore new options for containing costs associated with PILOTs with relevant stakeholders, but not limited to, the Department of Revenue, the impacted communities, MWRA and staff, and the MWRA Advisory Board and staff.

### Watershed Land Acquisition

The Advisory Board has long supported a DCR watershed forestry program. It strongly believes that an actively managed program provides a buffer and filter in the protection of Greater Boston's drinking water supply.

Additionally, forestry revenue also supplies a small measure of offset to the Watershed Division budget, which is 100% borne by MWRA ratepayers.

The Advisory Board recognizes that there are groups and individuals who have raised concerns to the DCR Watershed Division's forestry programs. It is in this light the Advisory Board recommends that DCR pursue a "green" recertification of DWSP lands through the Forest Stewardship Council. This will provide an additional layer of oversight, openness, interaction, and assurance as DCR moves forward with its forestry management plan.

### **System Expansion**

The Advisory Board has long advocated that expanding the water system to include new communities and entities is critical to helping control costs for the MWRA's member communities. State-wide water use continues to decline as local and individual conservation efforts increase. While usage declines, costs are fixed or rising to provide the same units of water, putting additional financial pressure on communities and ratepayers alike.

The Advisory Board has also maintained that the entrance fee charged to member communities is critical to keeping the member water communities and ratepayers whole financially. The Authority has invested significant capital expense and the ratepayers have paid the resulting debt service to improve the waterworks system. To allow a new community or entity to join the system without paying its fair share of these expenditures would be patently unfair to the ratepayers.

In spite of this, the Advisory Board has expressed a desire to remain flexible with regard to the entrance fee. Because the full payment of the entrance fee prior to joining the system can represent a barrier at the local level to joining the system, in recent years the Advisory Board has recommended options to mitigate the impact. Options discussed and

voted upon by the Advisory Board include extending the repayment timeframe over multiple years, allowing repayment to be interest-free, and even providing a grace period on the front end of the repayment timeframe. Many of these were part of ongoing discussions with TriTown (collectively Braintree, Randolph, and Holbrook) to facilitate their entrance into the water system.

Additionally, the Advisory Board has supported the approach of securing economic development legislation to provide state funds to communities looking to join the system for the purposes of reducing the infrastructure costs of joining the system. However, the Advisory Board very much believes that cost of the infrastructure to connect to the MWRA's waterworks system (e.g. service pipelines) is not the responsibility of the ratepayer. Adopting responsibility for these costs directly reduces the financial benefit of adding communities to the system.

It is helpful to revisit all policies on occasion. Indeed, revisiting the up-front entrance fee payment led to the specific proposal of the Advisory Board to allow an interest-free, multi-year repayment plan with a grace period. It was hoped that this would incentivize communities to quickly join the system; however, this has not been the case. As such, the Advisory Board recommends that a sunset provision on the current terms of entrance fee repayment be instituted with a date certain of June 30, 2014. This does not preclude communities from negotiating similar or other terms with regard to entrance fee payment in the future, but does reset the entrance fee payment to the original terms.

### **Septic Sites**

Recently Authority staff reported that a good part of the south wastewater system became clogged by industrial rags and cloths that had been dumped at a septic site in Braintree. These materials are prohibited from these sites, and the amount being dumped indicates blatant abuse of the system and disregard for the pertinent regulations.

The Authority has indicated that it will be conducting an educational outreach program for the communities with the septic sites, which the Advisory Board supports. Additionally, the Advisory Board recommends that a task force be created to look at all of the septic sites to identify how the prohibited materials could have been allowed, and to identify ways to better manage and regulate the sites to ensure that this problem does not reoccur.

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# **Appendix A**

### **List of Recommendations**

- 1. Remove the Hatchery Pipeline project from the Proposed FY14 CIP. (Page 27)
- 2. With the exception of the Hatchery Pipeline, the Advisory Board endorses the Authority's proposed capital spending cap for FY14-18, as well as its Proposed FY14 CIP, with the caveat that any updated assumptions incorporated into the Final FY14 CIP and capital spending cap calculation remain under the \$793.5 million in the Proposed FY14 CIP. (Page 27)
- 3. Reduce the rate revenue requirement for the FY14 Current Expense Budget by \$2,510,662, resulting in a 3.49% wholesale rate increase. (Page 34)
- 4. Advisory Board officially recommends that the \$4,976,411 in the Proposed FY14 CEB for "Other Post-Employment Benefits/Additional Pension Deposit" be added to the retirement fund as an optional payment. (Page 47)
- 5. Reduce the FY14 Current Expense Budget by removing \$2,151,996 related to the updated mortality tables from the retirement fund expense line item. (Page 47)
- 6. Reduce the Additions to Reserves line item by \$358,666. (Pages 34, 47)
- 7. Remove funding or require DCR to find alternative funding for any dam work that does not directly impact the water supply. (Page 48)
- 8. Design a co-digestion program to provide a financial benefit to the Authority significantly greater than the costs associated with co-digestion. (Page 73)
- 9. Convene a working committee to explore new options for containing costs associated with PILOTs with relevant stakeholders, but not limited to, the Department of Revenue, the impacted communities, MWRA and staff, and the MWRA Advisory Board and staff. (Page 73)
- 10. Have DCR pursue a "green" recertification of DWSP lands through the Forest Stewardship Council. This will provide an additional layer of oversight, openness, interaction, and assurance as DCR moves forward with its forestry management plan. (Page 73)
- 11. Institute a sunset provision on the current terms of entrance fee repayment with a date certain of June 30, 2014. (Page 74)
- 12. Create a task force to look at all of the MWRA area approved septic sites to identify how to best regulate, monitor, and manage all sites to better guarantee proper disposal of septage. (Page 74)

# **Appendix B**

### **List of Comments**

- 1. The Advisory Board supports the continuation of the defeasance account strategy, which clearly identifies a use of variable rate debt service savings that is consistent with the original intent of the funds that were appropriated. (Page 38)
- 2. The Advisory Board expects the Authority to update its borrowing assumptions including the approved final defeasance transaction scheduled for 2013. (Page 38)
- 3. The Advisory Board supports the active steps the Authority is taking toward succession planning, and further supports the expansion of the internship program and exploration of an apprenticeship program to facilitate the creation of a skilled potential hiring pool with working knowledge of the MWRA. (Page 44)
- 4. The Advisory Board expects updates of pricing and usage assumptions for all utilities to be incorporated into the final FY14 CEB. (Page 55)
- 5. The Advisory Board expects that the chemicals budgets will be revised to reflect updated pricing and usage assumptions. (Page 62)

# **Appendix C**

	Total MWRA	FY13 Approved	FY14 Proposed	Change FY14 Propose FY13 Approved E	
				\$	%
	Wages and Salaries	94,059,400	94,612,012	552,612	0.6%
	Overtime	3,573,495	3,580,022	6,527	0.2%
	Fringe Benefits	18,241,926	17,613,825	(628,101)	-3.4%
	Workers' Compensation	2,100,000	2,025,000	(75,000)	-3.6%
	Chemicals	9,963,496	10,653,747	690,251	6.9%
	Energy and Utilities	23,127,199	22,989,801	(137,398)	-0.6%
	Maintenance	28,229,071	27,963,426	(265,645)	-0.9%
	Training and Meetings	385,617	355,617	(30,000)	-7.8%
	Professional Services	5,900,784	5,873,902	(26,882)	-0.5%
	Other Materials	5,591,291	6,044,284	452,993	8.1%
	Other Services	23,743,608	23,134,268	(609,340)	-2.6%
ES	TOTAL DIRECT EXPENSES	214,915,887	214,845,904	(69,983)	0.0%
EXPENSES	Insurance	2,097,875	2,143,618	45,743	2.2%
EX	Watershed/PILOT	26,413,175	27,214,833	801,658	3.0%
	HEEC Payment	3,741,915	3,386,970	(354,945)	-9.5%
	Mitigation	1,566,923	1,566,797	(126)	0.0%
	Addition to Reserves	1,398,329	362,971	(1,035,358)	-74.0%
	Retirement Fund	10,474,376	13,031,514	2,557,138	24.4%
	Post-Employment Benefits	-	-	-	-
	TOTAL INDIRECT EXPENSES	45,692,593	47,706,703	2,014,110	4.4%
	Debt Service (before offsets)	375,598,070	398,010,516	22,412,446	6.0%
	Bond Redemption	-	-	-	
	Debt Service Assistance	\$ (350,000)	-	\$ 350,000	
	TOTAL DEBT SERVICE	375,248,070	398,010,516	22,762,446	6.1%
	TOTAL EXPENSES	635,856,550	660,563,123	24,706,573	3.9%
	Rate Revenue	607,512,000	631,233,001	23,721,001	3.9%
ш	Other User Charges	7,766,692	8,198,509	431,817	5.6%
REVENUE AND INCOME	Other Revenue	6,116,845	5,850,795	(266,050)	-4.3%
REVENUE ND INCOM	Rate Stabilization	 -	3,500,000	3,500,000	_
RI ANE	Investment Income	14,461,012	11,780,818	(2,680,194)	-18.5%
	TOTAL REVENUE AND INCOME	635,856,549	660,563,123	24,706,574	3.9%

# **Appendix D**

# Cap Calculation versus Actual FY04-08 Spending

	Base	line Ca (\$ mill	•	4-08			
Final FY04 CIP		FY04	FY05	FY06	FY07	FY08	Total FY04-08
<u> </u>	Projected Expenditures	\$237.0	\$190.2	\$195.2	\$217.3	\$183.6	\$1,023.3
Fin	Contingency	19.4	14.1	15.5	19.8	18.1	86.9
_	Inflation on Unawarded Construction	0.0	0.8	5.8	13.0	16.1	35.7
	Less: Chicopee Valley Aqueduct Projects	(5.4)	(1.5)	(1.4)	(0.1)	(3.0)	(11.4)
	FY04-08	\$250.9	\$203.5	\$215.2	\$250.1	\$214.8	\$1,134.5

m.	FY04-0	)8 Actu	ıal Spe	nding			
Data		FY04	FY05	FY06	FY07	FY08	Total
		Actual	Actual	Actual	Actual	Actual	FY04-08
Closeout	Projected Expenditures	\$194.0	\$167.7	\$152.3	\$177.7	\$196.8	\$888.5
Ö	Contingency	0.0	0.0	0.0	0.0	0.0	0.0
FY08	Inflation on Unawarded Construction	0.0	0.0	0.0	0.0	0.0	0.0
Ŧ	Less: Chicopee Valley Aqueduct Projects	(0.4)	(0.5)	(2.4)	(3.3)	(1.8)	(8.4)
	FY04-08	\$193.6	\$167.2	\$149.9	\$174.4	\$195.0	\$880.1

	Baseline Cap F	Y04-08	to Ac	tual Sp	endin	g	
		FY04	FY05	FY06	FY07	FY08	Total FY04-08
Change	Projected Expenditures	(\$43.0)	(\$22.5)	(\$42.9)	(\$39.6)	\$13.2	(\$134.8)
har	Contingency	(19.4)	(14.1)	(15.5)	(19.8)	(18.1)	(86.9)
J	Inflation on Unawarded Construction	0.0	(0.8)	(5.8)	(13.0)	(16.1)	(35.7)
	Less: Chicopee Valley Aqueduct Projects	5.0	1.0	(1.0)	(3.2)	1.2	3.0
	FY04-08 CAP Δ (\$)	(\$57.4)	(\$36.4)	(\$65.2)	(\$75.6)	(\$19.8)	(\$254.4)
	FY04-08 CAP Δ (%)	-22.9%	-17.9%	-30.3%	-30.2%	-9.2%	-22.4%

# **Appendix E**

# Cap Calculation versus Proposed FY13 Updated Projections

	Base	line Ca (\$ mill	•	9-13			
Final FY09 CIP		FY09	FY10	FY11	FY12	FY13	Total FY09-13
<u> </u>	Projected Expenditures	\$230.0	\$251.7	\$224.3	\$196.7	\$178.7	\$1,081.4
Fi	Contingency	15.6	13.8	12.0	12.1	11.4	64.8
_	Inflation on Unawarded Construction	0.0	0.5	2.8	7.8	11.3	22.4
	Less: Chicopee Valley Aqueduct Projects	(1.2)	(1.9)	(9.1)	(9.5)	(2.9)	(24.8)
	FY09-13 CAP	\$244.4	\$264.1	\$230.0	\$207.0	\$198.4	\$1,143.8

	Proposed FY13 CIP	Updat	ed Spe	ending	Proje	ctions	
Proposed FY13 CIP		FY09	FY10	FY11	FY12	FY13	Total FY09-13
Ē	Projected Expenditures	\$182.2	\$211.4	\$139.3	\$164.3	\$191.4	\$888.7
ose	Contingency	0.0	0.0	0.0	7.2	9.7	16.8
odo	Inflation on Unawarded Construction	0.0	0.0	0.0	0.0	1.5	1.5
₹.	Less: Chicopee Valley Aqueduct Projects	(0.6)	(0.5)	(0.9)	(0.8)	(5.4)	(8.2)
	Projected FY09-13	\$181.6	\$210.9	\$138.4	\$170.7	\$197.2	\$898.8

	Final FY09 to P	ropose	ed FY1	3 Com	pariso	n	
		FY09	FY10	FY11	FY12	FY13	Total FY09-13
Change	Projected Expenditures	(\$47.8)	(\$40.2)	(\$85.0)	(\$32.5)	\$12.7	(\$192.7)
har	Contingency	(15.6)	(13.8)	(12.0)	(4.9)	(1.7)	(48.0)
0	Inflation on Unawarded Construction	0.0	(0.5)	(2.8)	(7.8)	(9.7)	(20.8)
	Less: Chicopee Valley Aqueduct Projects	0.6	1.4	8.3	8.8	(2.5)	16.6
	FY09-13 CAP Δ (\$)	(\$62.8)	(\$53.2)	(\$91.6)	(\$36.3)	(\$1.2)	(\$245.0)
	FY09-13 CAP Δ (%)	-25.7%	-20.1%	-39.8%	-17.6%	-0.6%	-21.4%

Program / Project	Contract No.	Notice to S Proceed Co	Substantial Completion	Total Contract Amount	Payments through FY12	Remaining Balance	FY14	FY15	FY16	FY17	FY18	FY14 - FY18
Total MWRA				5,598,020,120	3,533,594,900	2,064,425,220	138,178,791	150,093,964	166,187,593	133,375,035	144,136,330	731,971,714
Wastewater				2,655,636,808	1,661,795,832	993,840,976	73,350,944	78,182,239	85,192,850	60,838,188	72,530,721	370,094,941
Interception & Pumping				839,716,016	518,609,282	321,106,734	14,492,870	21,622,587	31,577,413	25,414,632	27,215,289	120,322,791
102 Quincy Pump Facilities	ldmoo	completed project		25,908,066	25,908,077							
104 Braintree-Weymouth Relief Facilities				233,884,969	228,063,541	5,821,428	100,000	473,000	302,656	80,051	309,146	1,264,853
105 New Neponset Valley Relief Sewer	dmoo	completed project		30,300,305	30,300,303							
106 Wellesley Extension Replacement Sewer	dmoo	completed project		64,358,544	64,358,543							
107 Framingham Extension Relief Sewer	ldmoo	completed project		47,855,986	47,855,986							
127 Cummingsville Replacement Sewer	dmoo	completed project		8,998,766	792'86'8							
130 Siphon Structure Rehabilitation				3,023,235	939,770	2,083,465	175,000	247,900	1,442,803	217,762		2,083,465
131 Upper Neponset Valley Sewer System				54,180,692	53,860,692	320,000						
132 Corrosion & Odor Control				16,259,955	3,001,406	13,258,549		360,000	480,000	160,000		1,000,000
136 West Roxbury Tunnel				11,309,178	10,309,178	1,000,000						
137 Wastewater Central Monitoring				20,639,477	19,782,201	857,276	307,276	250,000	200,000	100,000		857,276
139 South System Relief Project				4,939,244	3,439,244	1,500,000						
141 Wastewater Process Optimization				10,314,261	1,137,662	9,176,598	30,293		221,000	968,750	976,250	2,196,293
142 Wastewater Meter Sys - Equip. Replacement				26,578,429	5,137,912	21,440,517	220,517	28,065	1,462,033	2,372,208	1,538,461	5,651,284
143 Regional I/I Management Planning	dmoo	completed project		168,987	168,987							
145 Facility Asset Protection				275,245,923	15,347,013	259,898,910	13,659,784	20,233,622	27,468,921	21,515,861	24,391,432	107,269,620
146 D.I. Cross Harbor Tunnel				5,000,000		5,000,000						
147 Randolph Trunk Sewer Relief				750,000		750,000						

Program / Project	Contract No.	Notice to Proceed	Substantial Completion	Total Contract Amount	Payments through FY12	Remaining Balance	FY14	FY15	FY16	FY17	FY18	FY14 - FY18
Treatment				658,026,382	168,695,431	489,330,950	42,342,154	49,133,895	47,531,096	31,020,744	40,367,849	210,395,738
200 DI Plant Optimization	completed project			33,455,815	33,455,815							
206 DI Treatment Plant Asset Protection				605,368,736	132,409,844	472,958,893	40,506,454	46,474,217	44,177,351	28,841,494	39,900,924	199,900,440
210 Clinton Wastewater Treatment Plant				16,966,811	755,538	16,211,273	1,835,700	2,659,678	3,353,745	2,179,250	466,925	10,495,298
211 Laboratory Services				2,235,019	2,074,234	160,785						
Residuals				168,020,224	64,156,045	103,864,180	377,030	1,649,254	1,554,104	3,042,741	3,042,740	9,665,869
261 Residuals	completed project			63,810,848	63,810,848							
271 Residuals Asset Protection				104,209,377	345,197	103,864,180	377,030	1,649,254	1,554,104	3,042,741	3,042,740	9,665,869
CSO				867,008,325	802,275,286	64,733,039	17,032,165	7,099,445	4,035,275	58,700	575,524	28,801,109
CSO MWRA Managed				435,120,008	429,187,262	5,932,746	1,502,257	2,036,817	604,536	52,700	20,000	4,246,310
339 North Dorchester Bay				223,320,644	221,540,523	1,780,121	453,609	20,000	20,000	20,000	20,000	623,609
347 East Boston Branch Sewer Relief				85,562,955	85,534,665	28,290						
348 BOS019 Storage Conduit	completed project			14,287,581	14,287,581							
349 Cheisea Trunk Sewer	dшoo	completed project		29,779,319	29,779,319							
350 Union Park Detention Treatment Facility	completed project			49,583,406	49,583,406							
353 Upgrade Existing CSO Facilities	comp	completed project		22,385,200	22,385,200							
354 Hydraulic Relief Projects	completed project			2,294,549	2,294,549							
355 MWR003 Gate & Siphon				4,273,277	148,942	4,124,335	1,048,648	1,986,817	554,536	2,700		3,592,701
357 Charles River CSO Controls	completed project			3,633,077	3,633,077							

Program / Project	Contract No. Pro	Notice to Substantial Proceed Completion	itial Total Contract tion Amount	Payments through FY12	Remaining Balance	FY14	FY15	FY16	FY17	FY18	FY14 - FY18
CSO Community Managed			381,573,773	323,528,806	58,044,967	15,436,908	5,019,628	3,412,739			23,869,275
240 Dorchester Ray Couser Consestion Fry Doint			090 181 05	30 EA 152 20E	24 773						
341 Dorchester Bay Sewer Separation (Comm. Pt.)			64,781,012		4,329,542	515,150	1,425,000	1,007,392			2,947,542
	completed project		2,444,394								
343 Constitution Beach Sewer Separation	completed project	project	3,768,888	3,768,888							
344 Stony Brook Sewer Separation			44,332,539	19 44,198,384	134,155						
346 Cambridge Sewer Separation			65,048,535	15 35,489,357	29,559,178	7,654,000	1,313,000	2,204,178			11,171,178
351 BWSC Floatables Controls c	completed project		932,979	932,979	•						
352 Cambridge Floatables Control	completed project	project	1,086,925	1,086,925							
356 Fort Point Channel Sewer Separation	completed project		12,006,709	12,006,708							
358 Morrissey Boulevard Drain			32,904,545	32,346,787	557,758	219,758					219,758
359 Reserved Channel Sewer Separation			64,105,782	41,529,984	22,575,797	7,048,000	2,281,628	201,169			9,530,797
360 Brookline Sewer Separation			25,988,525	25,263,178	725,347						
36.1 Bulfinch Triangle Sewer Separation			9,985,871	9,857,456	128,415						
36.1 Bulfinch Triangle Sewer Se	CSO Community Managed		9,985,871	9,857,456	128,415						
Planning & Support			50,314,543	49,559,217	755,326	93,000	43,000	18,000	000′9	525,524	685,524
324 CSO Support			50,314,543	13 49,559,217	755,326	93,000	43,000	18,000	000′9	525,524	685,524
Other Wastewater			122,865,861	108,059,788	14,806,073	(893,275)	(1,322,942)	494,962	1,301,371	1,329,319	909,435
128 (/ Local Financial Assistance			122,584,985	107,778,912	14,806,073	(893,275)	(1,322,942)	494,962	1,301,371	1,329,319	909,435
138 Sewerage System Mapping Upgrade	completed project	project	280,876	76 280,876							

Program / Project	Contract No.	Notice to Proceed	Substantial Completion	Total Contract Amount	Payments through FY12	Remaining Balance	FY14	FY15	FY16	FY17	FY18	FY14 - FY18
Waterworks				2,821,732,022	1,799,565,147	1,022,166,875	55,052,417	64,833,476	68,295,293	66,077,732	656'659'89	322,918,277
Drinking Water Quality Improvements				656,956,507	559,732,487	97,224,020	36,246,985	17,417,044	1,775,504	1,414,000	649,000	57,502,533
542 John J. Carroll Carroll Water Treatment Plant				432,338,261	391,220,222	41,118,039	12,724,643	4,424,176	1,192,000	1,414,000	649,000	20,403,819
543 Quabbin Water Treatment Plant				17,903,007	10,832,937	7,070,070	4,193,000	1,465,082	63,538			5,721,620
544 Norumbega Covered Storage	completed project			106,674,146	106,674,146							
545 Blue Hills Covered Storage				40,703,606	39,969,816	733,790	182,444	53,733	353,700			589,877
550 Spot Pond Storage Facility				59,337,488	11,035,366	48,302,122	19,146,898	11,474,053	166,266			30,787,217
Transmission				1,186,701,243	737,867,886	448,833,356	8,631,410	22,370,665	24,301,469	19,960,963	10,438,677	85,703,184
597 Winsor Station Pipeline				27,256,312	1,389,157	25,867,155	328,868	466,868	4,091,816	1,838,350	348,436	7,074,338
601 Sluice Gate Rehabilitation	шо	completed project		9,158,418	9,158,411							
604 MetroWest Tunnel				709,547,377	683,664,737	25,882,640	1,756,606	1,704,068	762,000	1,484,000	2,071,000	7,777,674
615 Chicopee Valley Aqueduct Redundancy	lwo	completed project		8,666,747	8,666,747							
616 Quabbin Transmission System				13,488,555	4,913,428	8,575,127	192,335		550,000	900,000	1,520,000	3,162,335
617 Sudbury/Weston Aqueduct Repairs				4,326,514	659,948	3,666,566		313,923	485,410	2,221,693	645,538	3,666,564
620 Wachusett Reservoir Spillway Improvements	completed project			9,287,460	9,287,461							
621 Watershed Land				24,000,000	15,563,500	8,436,500	1,500,000	1,500,000	1,000,000	500,000	200,000	5,000,000
623 Dam Projects				5,535,133	2,887,967	2,647,166	255,390	756,595	350,551	432,143	432,143	2,226,822
625 Long Term Redundancy				375,434,727	1,676,530	373,758,197	4,598,211	17,629,211	17,061,692	12,584,777	4,921,560	56,795,451

Program / Project	Contract No.	Notice to Proceed	Substantial Completion	Total Contract Amount	Payments through FY12	Remaining Balance	FY14	FY15	FY16	FY17	FY18	FY14 - FY18
Distribution And Pumping				932,713,322	368,277,508	564,435,814	9,036,000	21,965,061	36,490,074	40,289,576	53,477,739	161,258,450
618 Northern High NW Transmission Section 70				1,000,000		1,000,000			750,000	250,000		1,000,000
677 Valve Replacement				22,387,800	11,522,846	10,864,954	501,577	501,577	542,423	620,577	972,260	3,138,414
678 Boston Low Service - Pipe & Valve Rehab	completed project			23,690,864	23,690,863							
683 Heath Hill Road Pipe Replacement	duo	completed project		19,358,038	19,358,036							
689 James L. Gillis Pump Station	completed project			33,419,006	33,419,007							
692 Northern High Service - Sect 27 Improvement				1,042,789	123,646	919,143	1,000	1,000	4,000	12,000	159,506	177,506
693 NHS - Revere & Malden Pipeline Improve.				48,621,925	26,832,740	21,789,185	6,000	6,000	381,000	926,000	3,865,000	5,184,000
702 New Connecting Mains - Shaft 7 to WASM 3				33,351,352	10,960,807	22,390,545			500,000	1,516,000	4,089,000	6,105,000
704 Rehab of Other Pump Stations				55,057,844	30,057,852	24,999,992						
706 NHS - Connecting Mains from Section 91	lwoo	completed project		2,360,194	2,360,194							
708 Northern Extra High Service - New Pipelines				7,653,107	3,632,119	4,020,988	13,000	13,000	128,000	124,114	915,000	1,193,114
712 Cathodic Protection Of Distribution Mains				1,590,815	140,913	1,449,902		241,651	241,651		241,651	724,952
713 Spot Pond Supply Mains Rehab				66,243,122	60,980,157	5,262,965	80,000	1,020,000	825,000	275,000	775,000	2,975,000
714 Southern Extra High - Sections 41 & 42	comp	completed project		3,657,243	3,657,243							
719 Chestnut Hill Connecting Mains				31,301,217	17,486,675	13,814,542				359,000	478,000	837,000
720 Warren Cottage Line Rehab	comp	completed project		1,204,821	1,204,821							
721 Southern Spine Distribution Mains				73,595,237	36,406,074	37,189,163	161,363			378,000	504,000	1,043,363
722 NIH Redundancy & Storage				86,910,062	5,331,010	81,579,052	4,180,917	10,254,000	15,043,000	15,289,000	6,778,049	51,544,966
723 Northern Low Service Rehab - Section 8				22,439,870	2,320,986	20,118,884		4,000	14,000	214,000	522,088	754,088
724 Northern High Service - Pipeline Improve.												
725 Hydraulic Model Update	completed project			598,358	598,358							
727 SEH Redundancy & Storage				93,459,769	6,672,412	86,787,357	542,824	1,596,833	3,536,000	10,472,000	10,372,000	26,519,657
730 Weston Aqueduct Supply Mains				285,814,908	64,829,663	220,985,245	3,549,319	8,327,000	14,525,000	9,726,885	23,297,186	59,425,390
731 Lynnfield Pipeline				5,898,285	3,973,945	1,924,340						
732 Walnut St. & Fisher Hill Pipeline Rehab	completed project			2,717,140	2,717,141							
735 Section 80 Rehabilitation				9,339,557		9,339,557				127,000	209,000	636,000

Program / Project	Contract No.	Notice to Proceed	Substantial Completion	Total Contract Amount	Payments through FY12	Remaining Balance	FY14	FY15	FY16	FY17	FY18	FY14 - FY18
Other Waterworks				45,360,951	133,687,266	(88,326,316)	1,138,022	3,080,706	5,728,247	4,413,193	4,093,943	18,454,111
753 Central Monitoring System				16,992,423	15,803,729	1,188,694	200,000	200,000				1,000,000
763 Distribution Systems Facilities Mapping				1,798,919	1,036,368	762,551			228,000	305,000	229,551	762,551
764 Local Water Infrastructure Rehab	completed project			7,487,762	7,487,762							
765 Local Water Pipeline Assistance Program					108,821,204	(108,821,204)	638,022	402,706	240,247	(190,807)	2,306,749	3,396,917
766 Waterworks Facility Asset Protection				19,081,846	538,203	18,543,644		2,178,000	5,260,000	4,299,000	1,557,643	13,294,643
Business & Operations Sunnort				120 651 290	020 882 22	08.417.370	9.775 430	7 078 250	12 699 450	6 459 115	2 946 250	38 958 495
881 Equipment Purchase				17,608,660	10,108,351	7,500,308	1,829,121	1,188,000	000'686	260,000	000'099	5,226,121
925 Technical Assistance				1,200,000		1,200,000	400,000	400,000	400,000			1,200,000
930 MWRA Facility - Chelsea	completed project			9,813,633	9,813,633							
931 Business Systems Plan				26,630,448	24,288,747	2,341,700	405,988	1,150,000	720,000			2,275,988
932 Environmental Remediation	completed project			1,478,802	1,478,802							
933 Capital Maintenance Planning & Development				15,618,832	8,269,645	7,349,187	1,848,301	1,515,000	1,515,000	633,000		5,511,301
934 MWRA Facilities Management & Planning				2,150,535	370,533	1,780,002			140,000	888,002	752,000	1,780,002
935 Alternative Energy Initiatives				27,430,380	16,985,111	10,445,269	1,413,020		5,607,200	1,123,688		8,143,908
940 Application Improvement Program				6,900,000		6,900,000	800,000	625,000	1,563,000	1,800,000	1,312,000	6,100,000
942 Information Security Program				1,347,000	357,641	989,359	140,000	100,000	100,000	100,000		440,000
944 Information Technology Management Program				1,493,000	•	1,493,000	435,000	425,000	295,000	198,000		1,353,000
946 IT Infrastructure Program				8,980,000	561,456	8,418,544	2,504,000	1,675,250	1,370,250	1,156,425	222,250	6,928,175

# Comparison of the FY14 Proposed CIP and the FY13 Final CIP

		FY13 ]	Final			FY14 P	FY14 Proposed			Change from FY13 Final	ı FY13 Final	
Program and Project	Total Budget	FY09-13	FY14-18	Beyond 18	Total Budget	FY09-13	FY14-18	Beyond 18		FY09-13	FY14-18	Beyond 18
Total MWD A	5 574 606	636 130	736 700	802 708	Amount	NTA C59	731 077	1 170 591	Amount	(5 656)	(306 396)	244 073
I Otal IVI W.N.A.	3,324,030	000,000	107,166	000,070	0,20,050,0	032,474	716101	100,0/1,1	13,177	(0c0'c)		5/0,446
Wastewater	2,645,510	517,299	533,950	376,591	2,655,637	521,370	370,095	546,500	10,126	4,072	(163,855)	169,909
Interception & Pumping	822,656	37,483	156,752	140,255	839,716	32,970	120,323	198,257	17,058	(4,513)	(36,428)	58,002
102 Quincy Pump Facilities	25,908	-	1	1	25,908	-	-	Ì	1	_	1	1
104 Braintree-Weymouth Relief Facilities	233,735	14,203	4,499	1	233,885	13,147	1,265	4,441	150	(1,056)	(3,234)	4,441
105 New Neponset Valley Relief Sewer	30,300		•	1	30,300	-	-	1	1	-	1	1
106 Wellesley Extention Replacement Sewer	64,359			1	64,359	-	1		1	-	1	1
107 Framingham Extension Relief Sewer	47,856	1		,	47,856	-	-		1	•	1	1
127 Cummingsville Replacement Sewer	8,999	43		ı	8,999	43		1	1	•		ı
130 Siphon Structure Rehabilitation	2,671	30	1,702	ı	3,023	-	2,084	1	352	(30)	382	ı
131 Upper Neponset Valley Sewer	54,942	1,792		ı	54,181	1,032		1	(761)	(09L)	ı	ı
132 Corrosion & Odor Control	16,140	1	5,706	7,431	16,260	(1)	1,000	12,259	120	(1)	(4,706)	4,828
134 Ashland Extension Sewer	-		•	1	1	-	-	1	1	-	1	1
135 System Master Plan Interceptors		1	1	1	1	-	•	ı	1	1	1	1
136 West Roxbury Tunnel	11,309	1,429		1,000	11,309	1,429	1	1,000	1	-	1	1
137 Wastewater Central Monitoring	20,839	6,241	929	1	20,639	5,834	857	ı	(200)	(407)	207	ı
139 South System Relief Project	4,939	(1)	188	1,313	4,939	(1)	•	1,501	1	•	(188)	188
140 Neponset Valley Relief Sewer		1	1	,	1	-	1	i	1	1	1	ı
141 Wastewater Process Optimization	10,300	558	5,686	3,125	10,314	527	2,196	6,660	14	(31)	(3,490)	3,535
142 Wastewater Meter System-Equipment	26,578	210	8,586	12,691	26,578	69	5,651	15,767	1	(141)	(2,935)	3,076
143 Regional I/I Management Planning	169	1		1	169	-	1	1	1	1		1
145 Facility Asset Protection	257,863	12,977	124,609	114,068	275,246	10,890	107,270	150,877	17,383	(2,087)	(17,339)	36,809
146 D.I. Cross Harbor Tunnel Inspection	5,000	ı	4,375	625	5,000	-	•	5,000	1	•	(4,375)	4,375
147 Randolph Trunk Sewer Relief	750	-	750	1	750	-	-	750	1	-	(750)	750
Treatment	626,107	156,257	270,123	147,933	658,026	135,559	210,396	260,275	31,919	(20,697)	(59,728)	112,342
200 DI Plant Optimization	33,456	296	1	ı	33,456	296	•	İ	-	-	ı	i
206 DI Treatment Plant Asset Protection	580,900	151,601	264,005	147,933	605,369	131,432	199,899	256,675	24,469	(20,169)	(64,106)	108,742
210 Clinton Wastewater Treat Plant	9,538	3,075	6,118	1	16,967	2,526	10,496	3,600	7,429	(549)	4,378	3,600
211 Laboratory Services	2,214	1,285	1	1	2,235	1,306	1	1	21	21	1	'
Residuals	211,741	941	54,337	92.652	168.020	806	9996	93,738	(43,721)	(134)	(44,671)	1.086
261 Residuals	63,811	1	, 1		63,811		,		1	-		,
271 Residuals Asset Protection	147,930	941	54,337	92,652	104,209	807	999'6	93,738	(43,721)	(134)	(44,671)	1,086
CSO	862,140	308,740	31,173	6	867,008	315,727	28,801	262	4,871	986'9	(2,370)	253
340 Dorchester Bay Sewer Separation (Fox Point)	54,187	390	35	1	54,187	425	-	1	1	35	(35)	1
341 Dorchester Bay Sewer Separation (Commercial Point)	64,725	6,472	3,363	1	64,781	6,943	2,947	ı	56	471	(416)	1
342 Neponset River Sewer Separation	2,444	1		,	2,444	-	-		1	•	-	1
343 Constitution Beach Sewer Separation	3,769	1		ı	3,769	-		1	1	•		ı
344 Stony Brook Sewer Separation	44,333	(829)	134	1	44,333	(722)	-	1	1	134	(134)	1
346 Cambridge Sewer Separation	56,791	29,208	9,131	1	65,049	35,426	11,171	1	8,258	6,218	2,040	1
351 BWSC Floatables Controls	933		•	ı	933		ı	1	1		1	1

**Appendix G** 

# **Appendix G**

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		FY13 Final	Final			FY14 Proposed	pesodo.			Change from FY13 Final	r FY13 Final	
,	Total Budget	236	EX714 10	100	Total	EX700 13	EV14 10	0	Total	EX200 13	EX714 10	
Frogram and Froject	Amount	F Y 09-13	FY 14-18	Beyond 18	Budget Amount	F Y U9-13	F Y 14-18	Beyond 18	Budget	F Y 09-13	F Y 14-18	Beyond 18
352 Cambridge Floatables Control	1,087	164	-		1,087	164	-	1	ı	•	-	-
356 Fort Point Channel Sewer Separation	12,007	3,715	-	i	12,007	3,715	-	1	1	1	-	-
358 Morrissey Boulevard Drain	32,905	18,009	220	i	32,905	18,009	220	1	1	1	-	-
359 Reserved Channel Sewer Separation	64,330	50,776	10,837	ı	64,106	51,858	9,531	1	(224)	1,082	(1,306)	1
360 Brookline Sewer Separation	25,998	24,726	1	1	25,989	24,716	1	1	(6)	(10)	1	•
361 Bulfinch Triangle Sewer Separation	9,986	9,489	_	ı	986'6	9,489	-	1	1	1	İ	1
339 North Dorchester Bay	226,562	83,997	3,523	ı	223,321	83,375	654	250	(3,241)	(622)	(2,869)	250
347 East Boston Branch Sewer Relief	85,706	75,000	•	ı	85,563	74,857		ı	(143)	(143)		
348 BOS019 Storage Conduit	14,288	(44)	-	1	14,288	(44)	1	1	1	1	-	ı
349 Chelsea Trunk Sewer	29,779	1	1	1	29,779	ı	1	1	1	1	1	ı
350 Union Park Detention Treatment Facility	49,583	(227)	1	1	49,583	(227)	1	1	•	1	i	1
353 Upgrade Existing CSO Facilities	22,385	1	1	1	22,385	i	1	1	•	1	i	1
354 Hydraulic Relief Projects	2,295	1	•	ı	2,295	ı	1	ı	1	1		
355 MWR003 Gate & Siphon	4,098	838	3,260	ı	4,273	681	3,594	1	175	(157)	334	1
357 Charles River CSO Controls	3,633	2,532	1	1	3,633	2,532	1	1	1	1	1	ı
324 CSO Support	50,316	4,549	0.29	6	50,315	4,529	989	12	(1)	(20)	16	3
Other Wastewater	122,866	13,878	21,564	(4,256)	122,866	36,308	606	(6,032)	•	22,430	(20,655)	(1,776)
128 I/I Local Financial Assistance	122,585	13,878	21,564	(4,256)	122,585	36,308	606	(6,032)	1	22,430	(20,655)	(1,776)
138 Sewerage System Mapping Upgrade	281	1	1	1	281	i	1	1	•	1	i	1
Total Waterworks	2,769,093	279,095	437,691	449,916	2,821,732	272,343	322,918	624,079	52,639	(6,752)	(114,772)	174,163
Dai-Line Weten Orelite	200 002	767 00	17 111		750 757	200 00	57 503	OF.	070 €	(0 (10)	11 202	91
Dinking Water Quanty	760.007	004,67	11,021	•	100,000	50,06	50,404	7	2,000		1	13
542 Carroll Water Treatment Plant	430,036	41,292	16,031	1	452,338	39,142	20,404	6/	2,302			6/
543 Quabbin Water Treatment Plant	1,06/	5,535	4,170	ı	17,903	2,037	27,177	1	730	(1,316)	1,552	1
544 Norumbega Covered Storage	106,674	102	_	1	106,674	102	-	1	1	1	1	ı
545 Blue Hills Covered Storage	40,687	21,361	436	1	40,704	21,224	590	1	17			-
550 Spot Pond Storage Facility	59,032	33,325	25,474		59,337	28,318	30,787	1	305	(5,007)	5,313	
Transmission	1.157.005	84.688	151.538	247.894	1.186.701	85.204	85.703	342,909	29.696	517	(65.832)	95.015
597 Winsor Station Pipeline	26,427	2,075	24,314		27,256	1,626	7,074	18,519	829		(17,240)	18,519
601 Sluice Gate Rehabilitation	9,158	1	•	ı	9,158	ı	1	ı	1	1		
604 MetroWest Tunnel	709,477	59,063	15,513	1,100	709,547	62,309	7,778	5,660	70	3,246	(7,735)	4,560
615 Chicopee Valley Aqueduct Redundancy	8,667	95	•	1	8,667	66		1	1	1		
616 Quabbin Transmission System	13,526	2,903	3,718	2,480	13,489	2,773	3,162	3,130	(37)	(130)	(556)	059
617 Sudbury/Weston Aqueduct Repairs	4,308	25	3,648	1	4,327	25	3,667	1	19	1	19	1
620 Wachusett Reservior Spillway Improvement	9,287	1,238	1	1	9,287	1,238	1	1	•	1	i	1
621 Watershed Land	19,000	10,794	•	ı	24,000	10,794	5,000	ı	5,000	1	5,000	
622 Cosgrove/Wachusett Redundancy	ı	1	-	1	1	-	1	1	'	1	-	ı
623 Dam Projects	5,651	3,427	2,224	1	5,535	3,265	2,227	43	(116)	(162)	3	43
625 Long Term Redundancy	351,504	5,069	102,119	244,314	375,435	3,081	56,796	315,557	23,931	(1,988)	(45,323)	71,243
Distribution & Pumping	914,533	73,606	204,704	330,770	932,713	69,321	161,258	396,685	18,181	(4,288)	(43,444)	65,915
618 Northern High NW Tran Sections 70 & 71	1,000		1,000	ı	1,000	1	1,000	ı	'	,		

# Appendix G

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		FY13	Final			FY14 Proposed	pesodo.			Change from FY13 Final	FY13 Final	
Program and Project	Total Budget Amount	FY09-13	FY14-18	Beyond 18	Total Budget	FY09-13	FY14-18	Beyond 18	Total Budget	FY09-13	FY14-18	Beyond 18
677 Valve Replacement	22,392	4,092	4,511	5,209	Amount 22,388	3,931	3,139	6,737	Amount (4)	(161)	(1,372)	1,528
678 Boston Low Service-Pipe & Valve Rehabilitation	23,691		•	I	23,691	1	1	1	1	1	-	1
683 Heath Hill Road Pipe Replacement	19,358	(10)	1		19,358	(10)	1	1	1	1	-	
689 James L. Gillis Pump Station Rehabilitation	33,419	-	-	1	33,419	-	-	1	1	-	-	1
692 NHS - Section 27 Improvements	3,475	1	778	2,574	1,043	1	178	742	(2,432)	-	(009)	(1,832)
693 NHS - Revere & Malden Pipeline Improvement	37,276	2,938	4,494	5,950	48,622	2,938	5,184	16,605	11,346	1	069	10,655
702 New Connect Mains-Shaft 7 to WASM 3	32,763	5,680	10,664	11,101	33,351	5,649	6,105	16,278	588	(31)	(4,559)	5,177
704 Rehabilitation of Other Pump Stations	55,058	12,072	1	25,000	55,058	12,072	1	25,000	1	1		1
706 NHS-Connecting Mains from Section 91	2,360	-	-	1	2,360	-	-	1	1	-	-	1
708 Northern Extra High Service New Pipelines	7,479	13	2,908	925	7,653	13	1,193	2,815	174	-	(1,715)	1,890
712 Cathodic Protection Of Distrubution Mains	1,527	-	1	1,386	1,591	-	726	725	64	1	726	(661)
713 Spot Pond Supply Mains Rehabilitation	66,187	502	4,725	482	66,243	502	2,975	2,288	56	1	(1,750)	1,806
714 Southern Extra High Sections 41 & 42	3,657	1	1	i	3,657	-	1	1	1	1	İ	-
719 Chestnut Hill Connecting Mains	30,041	25	6,315	6,239	31,301	25	837	12,977	1,260	-	(5,478)	6,738
720 Warren Cottage Line Rehabilitation	1,205	1	1	ı	1,205	1	•	1	ı	1	ī	•
721 South Spine Distribution Mains	72,465	19,958	1,013	33,885	73,595	1	1,043	35,463	1,130	(478)		1,578
722 NIH Redundancy & Storage	83,660	9,063	51,456	22,506	86,910	6,507	51,545	28,224	3,250	(2,556)	68	5,718
723 Northern Low Service Rehabilitation Section 8	21,698	2,268	4,149	15,222	22,440	2,263	754	19,366	742	(5)	(3,395)	4,144
724 Northern High Service - Pipeline Rehabilitation	1	(2)	1	ı	1	(2)		1	1	ı		1
725 Hydraulic Model Update	598	1	1	i	598	-	1	1	1	1	İ	-
727 Southern Extra High Redundancy & Storage	101,849	5,311	11,998	82,873	93,460	5,156	26,520	60,116	(8,389)	(155)	14,522	(22,757)
730 Weston Aqueduct Supply Mains	276,166	6,081	100,111	109,072	285,815	4,844	59,425	160,645	9,649	(1,237)	(40,686)	51,573
731 Lynnfield Pipeline	5,563	5,050	-	1	5,898	5,385	-	ı	335	335	-	1
732 Walnut St. & Fisher Hill Pipeline Rehabilitation	2,717	563	-	i	2,717	563	-	1	1	-	-	1
733 NHS Pipeline Rehabilitation 13-18 & 48	1	-	-	1	i	-	-	-	-	-	-	1
734 Southern Extra High Pipelines-Sections 30, 39,40, & 44	-		•	I	ı	1	1	1	1	1	-	ı
735 Section 80 Rehabilitation	8,928	1	582	8,346	9,340	1	989	8,704	412	1	54	358
Other	43,458	21,366	35,338	(128,750)	45,361	26,993	18,454	(115,592)	1,903	5,628	(16,883)	13,158
753 Central Monitoring System	16,992	326	1,000	1	16,992	326	1,000	1	1	-	-	-
763 Distribution Systems Facilities Mapping	1,799	1	763		1,799	-	763	1	1	1	-	1
764 Local Water Infrastructure Rehabilitation Assistance Program	7,488	1	ı	1	7,488	,	1	ı	1	ı	1	1
765 Local Water Pipeline Improvement Loan Program	1	20,737	22,179	(133,993)	1	26,367	3,397	(120,841)	1	5,630	(18,782)	13,152
766 Waterworks Facility Asset Protection	17,179	303	11,396	5,243	19,082	301	13,295	5,249	1,903	(2)	1,899	9
Business & Operations Support	110.294	41.736	75 627	•	120 651	38.761	38.058	•	10.357	(2.975)	13 332	•
881 Equipment Purchase	16,744	7,561	3,925		17,609	7,125	5,226	1	865	(436)	1,301	
925 Technical Assistance	1,200	400	800	1	1,200	1	1,200	1	1	(400)	400	1
930 MWRA Facility - Chelsea	9,814	(74)	ī		9,814	(74)	1	1	1	1	1	1
931 Business Systems Plan	26,583	2,385	2,190	1	26,630	2,347	2,276	1	47	(38)	98	1

# Appendix G

# Comparison of the FY14 Proposed CIP and the FY13 Final CIP

		F Y 13 I	ınaı			FY 14 Proposed	obosea			Change Irom	nange irom FY 13 Final	
Program and Project	Total Budget Amount	FY09-13	FY14-18	Beyond 18	Total Budget Amount	FY09-13	FY14-18	Beyond 18	Total Budget Amount	FY09-13	FY14-18	Beyond 18
932 Environmental Remediation	1,479	11	•	ı	1,479	11	1	1	1	1	1	ı
933 Capital Maintenance Planning	10,617	6,286	611	1	15,619	6,388	5,511	1	5,002	102	4,900	1
934 MWRA Facilities Management	2,151	371	1,780	1	2,151	371	1,780	1	1	1	1	1
935 Alternative Energy Initiatives	27,225	19,680	6,954	-	27,430	18,694	8,144	1	205	(986)	1,190	1
940 Applicat Improv Program	3,800	787	3,013	-	6,900	008	6,100	1	3,100	13	3,087	1
942 Info Security Program ISP	1,000	700	300	-	1,347	206	440	-	347	207	140	1
944 Info Tech Mgmt Program	2,562	1,012	1,550	-	1,493	140	1,353	1	(1,069)	(872)	(197)	1
946 IT Infrastructure Program	7,120	2,616	4,504	1	8,980	2,052	6,927	1	1,860	(564)	2,423	1

# **Appendix H**

	F	New Capital Projects Added to the FY14 Proposed CIP	to the FY14	Proposed	CIP		
Program	Project	Subphase	Total Contract Amount	FY09-13	FY14-18	Beyond FY18	Total Expenditures
	DITP Asset Protection	Sodium Bisulfite Tanks Rehabilitation	\$2,543,075	0\$	\$2,543,075		\$2,543,075
Treatment	Clinton Wastewater Treatment Plant	Clinton Roofing Rehabilitation	\$508,615	0\$	\$508,615		\$508,615
	Clinton Wastewater Treatment Plant	Clinton Facilities Rehabilitation	\$4,068,920	80	\$466,925	\$3,601,995	\$4,068,920
Interception & Pumping	Interception & Pumping Facility Asset Protection	Diesel Engine Upgrade	\$715,000	0\$	\$715,000		\$715,000
Other Waterworks	Waterworks Asset Protection	Water Meter Upgrade Replacement	\$1,000,000	80	\$1,000,000		\$1,000,000
Distribution and Pumping	NHS Revere & Malden Pipeline	Section 56 Replacement/Saugus	\$10,000,000	80	\$8,560,000	\$1,440,000	\$10,000,000
Drinking Water Quality Improvements	Carroll Water Treatment Plant	CWTP - Asset Protection	\$500,000	\$0	\$500,000		\$500,000
SUMMARY:							
Total Wastewater Projects	iter Projects		\$7,835,610	\$0	\$4,233,615	\$3,601,995	\$7,835,610
Total Waterworks Projects	rks Projects		\$11,500,000	80	\$10,060,000	\$1,440,000	\$11,500,000
Total Projects			\$19,335,610	0\$	\$14,293,615	\$5,041,995	\$19,335,610

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Joseph Foti – Chelsea

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<sup>\*\*</sup>Chairman of Executive Committee