



FY 2013

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**

May 2012

The MWRA Advisory Board...

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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Fiscal Year 2013
Capital Improvement Program
and
Current Expense Budget

May 2012

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, 2012 (FY 2013). 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 17, 2012 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 FY13 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.

Over time, the Advisory Board's active recommendations have come to focus on larger policy issues rather than a line-by-line item review. Toward this end, two changes have been made to the format of the *Comments and Recommendations*. First, a separate policy chapter has been created to provide a consolidated section where the Advisory Board's policy recommendations are discussed in greater detail. Second, the analysis of the budget has shifted away from paragraph narrative in favor of additional graphic representations and lists of the important messages to be found in each section.

The Proposed FY13 CEB represents the last year in the "three-year plan" the Authority adopted, and consistent with that plan they have proposed a rate revenue requirement increase of 3.89%. The Advisory Board and the ratepayers are cognizant of the Authority's efforts to engage in a multi-year approach to rates management, and regard the proposed rate increase as a starting point for our annual review.

Although the Authority continues to look for ways to reduce rates in the short-term, the fact remains that the rate challenges are only beginning. The rate revenue requirement increases over the next five years average \$42.2 million per year, and by FY22 rates are projected to increase by 66%. These levels of rate increases are unsupportable and unsustainable for cities and towns.

Challenges facing the Authority include restoring the pension fund to full funding by 2024, addressing the unfunded liability of Other Post-Employment Benefits (OPEB), and most importantly managing the staggering amount of debt service quickly approaching.

The Advisory Board appreciates the need for a multi-year approach, and is participating on the Long-Term Rates Management Committee to identify the best strategies for managing rates. However, having an eye toward the long-term doesn't abrogate the need for providing some measure of short-term relief.

Toward that end, the Advisory Board's recommendations include a range for the FY13 rate increase:

The Advisory Board recommends that the FY13 rate increase be no higher than 3.0%.

Additionally, the Advisory Board recommends that the FY13 rate increase be no lower than 3.0%.

Proposed FY13 Capital Improvement Program Highlights

Table 1

Currently Active Projects (\$ millions)			
Program	Spending thru FY11	Future Spending	TOTAL Active Projects
Wastewater System Improvements	\$1,586.0	\$1,057.3	\$2,643.3
Waterworks System Improvements	1,744.2	1,025.0	2,769.3
Business & Operations Support	57.3	42.5	108.1
TOTAL MWRA w/o CONTINGENCY	\$3,387.6	\$2,124.7	\$5,520.7

- Currently open capital projects total \$5.52 billion.
- \$3.4 billion has been spent through FY11.
- Future spending is currently projected at \$2.125 billion; this number will likely increase as future capital needs are identified and clarified.

Table 2

MWRA Spending Since 1985 (\$ millions)			
Program	Completed Projects	Active Spending thru FY11	TOTAL SPENT
Wastewater System Improvements	\$4,297.6	\$1,586.0	\$2,769.3
Waterworks System Improvements	397.1	1,744.2	5,520.7
Business & Operations Support	41.2	57.3	0.0
TOTAL MWRA w/o CONTINGENCY	\$4,735.9	\$3,387.6	\$8,289.9

- Spending since inception of the Authority in 1985 totals \$8.3 billion.¹
- The \$3.1 billion Master Plan shapes the proposed capital budget.
- The Master Plan identifies nearly \$3.1 billion in capital spending.
 - FY 2007 – FY2018 (12 years): nearly \$2.034 billion (66%) is identified.
 - FY 2019 – FY2048 (30 years): \$1.044 billion is identified.
- An update of the 2006 Master Plan is underway and is expected to be issued in time to guide the preparation of the FY14 CIP and the capital spending cap for the next five-year period, FY14-FY18.
- Also to be developed will be Business and Operations Support project needs including Information Systems projects. ***The Advisory Board supports using the recently completed Information Technology study to guide future MIS projects and expects them to be added into the Business Plan.***

¹ Source for completed projects is Appendix 9 of the Proposed FY13 CIP document.

Shift from Mandated Spending to Asset Protection

- Nearly 80% of all spending since 1985 has been for court-mandated projects including:²
 - Deer Island Wastewater Treatment Plant (\$3.82 billion)
 - CSO Control Program (\$754.7 million)
 - MetroWest Water Supply Tunnel (\$669.8 million)
 - Carroll Water Treatment Plant (\$378.2 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
Carroll WTP	\$428.0	\$39.5	\$15.8	-
Asset Protection	1,907.6	281	516	475
Water Redundancy	1,827.6	149.6	359.4	456.0
CSO	836.0	312.1	25.9	0.4
Other Projects	521.4	106.4	47.0	(126.6)
Total	\$5,520.7	\$888.7	\$964.1	\$804.9
Carroll WTP	7.8%	4.4%	1.6%	0.0%
Asset Protection	34.6%	31.6%	53.5%	59.0%
Water Redundancy	33.1%	16.8%	37.3%	56.7%
CSO	15.1%	35.1%	2.7%	0.1%
Other Projects	9.4%	12.0%	4.9%	-15.7%
Total	100.0%	100.0%	100.0%	100.0%

- Together, Asset Protection and Water Redundancy spending is to total just over 90% of all spending identified for the next cap period (FY14-18).
- Spending on the CSO Control Program falls to less than 3% of all spending in FY14-18.
- Negative spending beyond FY18 due to Community Loan repayments.

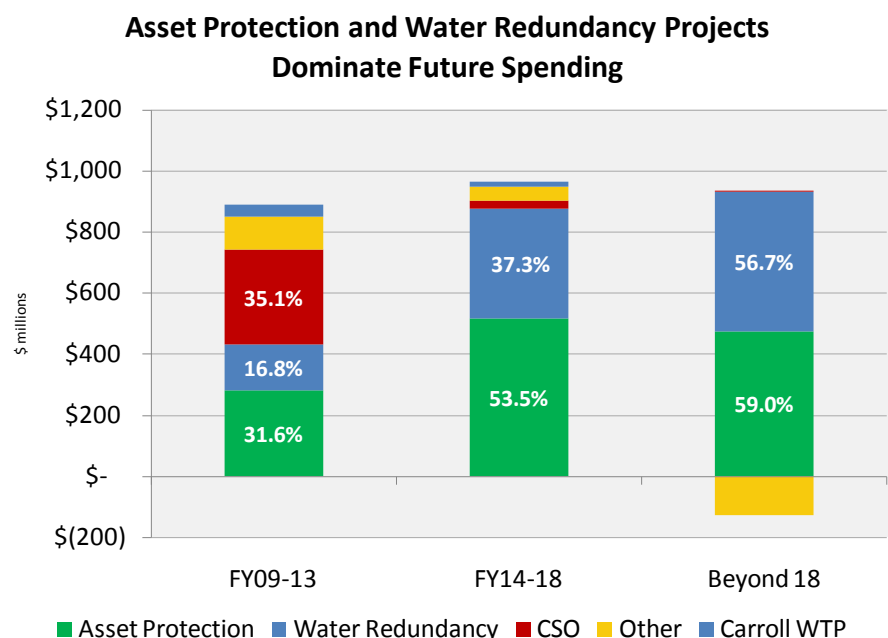


Figure 1

² All figures indicate spending through FY11.

Waterworks Spending Rises in Next Cap Period and Exceeds Wastewater Spending By FY18

(\$ millions)

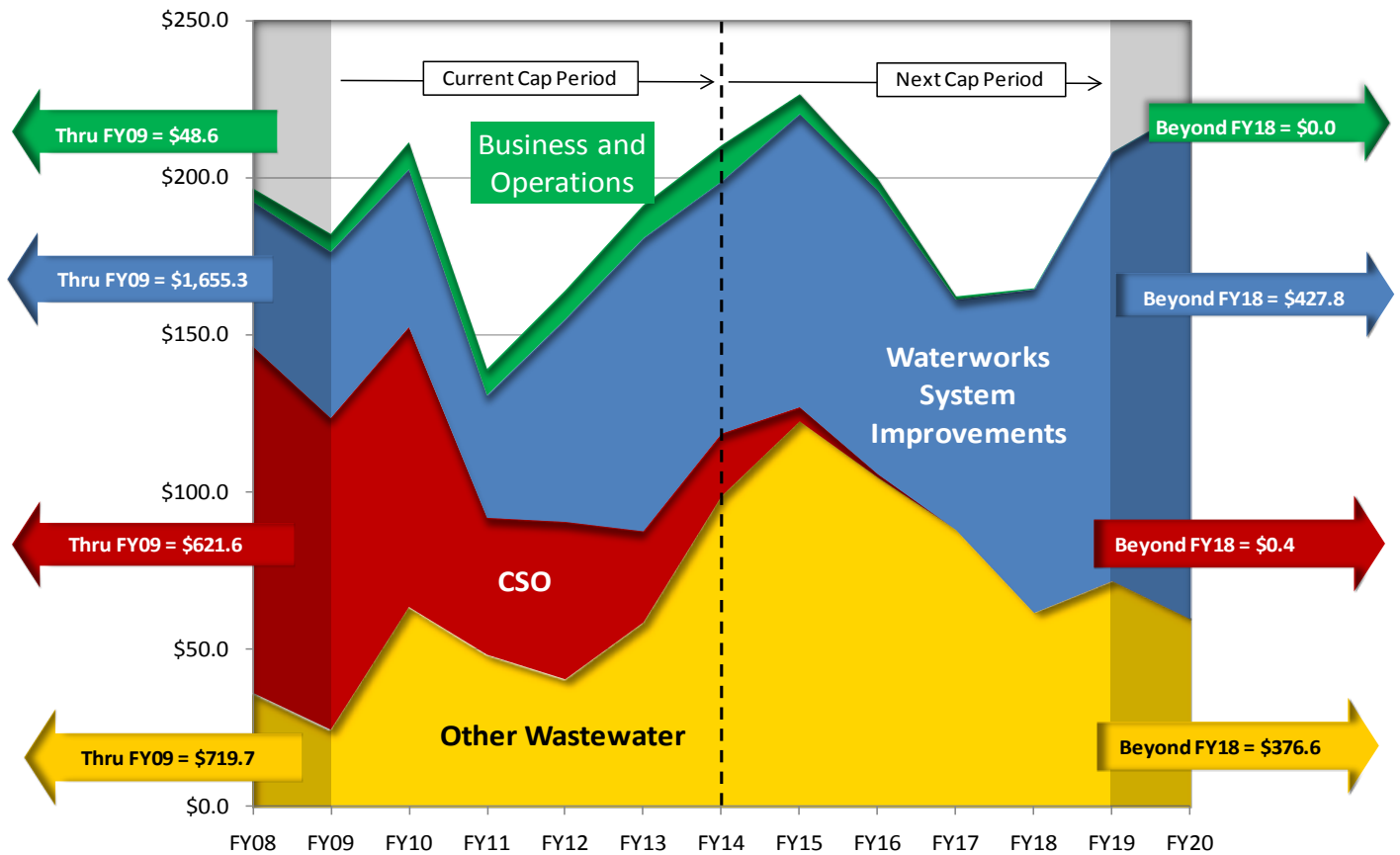


Figure 2

- Projected spending for the current capital spending cap (FY09-13) and the upcoming capital spending cap (FY14-18) totals \$1.853 billion.³
- Spending peaks for the two cap periods in FY 2015, at \$227 million⁴.
- Spending on the Deer Island Wastewater Treatment Plant also peaks in FY 2015 at nearly \$80 million (nearly twice the \$43 million proposed for the FY13 budget).
- Waterworks spending peaks in FY 2020 at \$162.6 million, as the Long-Term Redundancy project ramps up spending.

³ Net of contingency.

⁴ Net of contingency.

Spending for the FY09-13 Cap Period

Table 4

Proposed FY09-13 Capital Spending by Program									
(\$ millions)									
Program	Total Contract	Spending thru FY11	Remaining Balance	FY09 Actual	FY10 Actual	FY11 Actual	FY12 Projected	FY13 Budget	FY09-13
Wastewater System Improvements	\$2,643.3	\$1,586.0	\$1,057.3	\$123.7	\$152.7	\$92.0	\$90.7	\$87.7	\$546.8
Interception & Pumping	819.9	512.6	307.3	6.8	2.5	15.1	8.0	8.5	41.0
Treatment	628.1	152.3	475.7	14.7	56.0	29.8	27.7	45.6	173.8
Residuals	211.7	64.2	147.6	0.0	0.4	0.0	0.1	0.6	1.1
CSO	860.7	754.7	106.0	99.4	89.3	43.8	50.4	29.2	312.1
Other	122.9	102.2	20.6	2.7	4.5	3.3	4.5	3.8	18.9
Waterworks System Improvements	2,769.3	1,744.2	1,025.0	52.9	50.1	38.9	64.4	93.2	299.4
Drinking Water Quality Improvements	652.2	541.3	110.9	17.8	12.4	2.4	19.8	41.8	94.3
Transmission	1,163.2	719.5	443.7	6.3	15.7	24.6	22.0	19.4	88.1
Distribution and Pumping	910.4	354.0	556.4	19.4	16.5	12.7	13.3	13.9	75.8
Other	43.5	129.4	-86.0	9.3	5.5	-0.9	9.3	18.1	41.3
Business & Operations Support	108.1	57.3	42.5	5.7	8.7	8.4	9.2	10.5	42.5
TOTAL MWRA w/o CONTINGENCY	\$5,520.7	\$3,387.6	\$2,124.7	\$182.2	\$211.4	\$139.3	\$164.3	\$191.4	\$888.7

- The Authority projects/proposes spending of \$888.7 million for the five-year period FY09-13.⁵
- Wastewater spending, while declining toward the end of the cap timeframe, still represents nearly 62% of actual/projected spending for the period.
- Waterworks spending more than doubles in the FY11-13 timeframe, and is 34% of spending for the cap period.

A Focus on FY12 AND FY13

Table 5

Proposed FY12-13 Capital Spending			
(\$ millions)			
Program	FY12 Projected	FY13 Budget	FY12-13
Wastewater System Improvements	\$90.7	\$87.7	\$178.4
Waterworks System Improvements	64.4	93.2	157.5
Business & Operations Support	9.2	10.5	19.7
TOTAL MWRA w/o CONTINGENCY	\$164.3	\$191.4	\$355.7

- The Authority is projecting spending in FY12 of \$164.3 million and \$191.4 million in FY13, for a two-year total of \$355.7 million.
- Half of spending for the two-year period is projected for wastewater projects.
- Spending doubles on drinking water quality improvements as the UV projects and Spot Pond Storage Facility project enter peak spending periods.

⁵Net of contingency.

Change in FY12-13 Proposed Spending

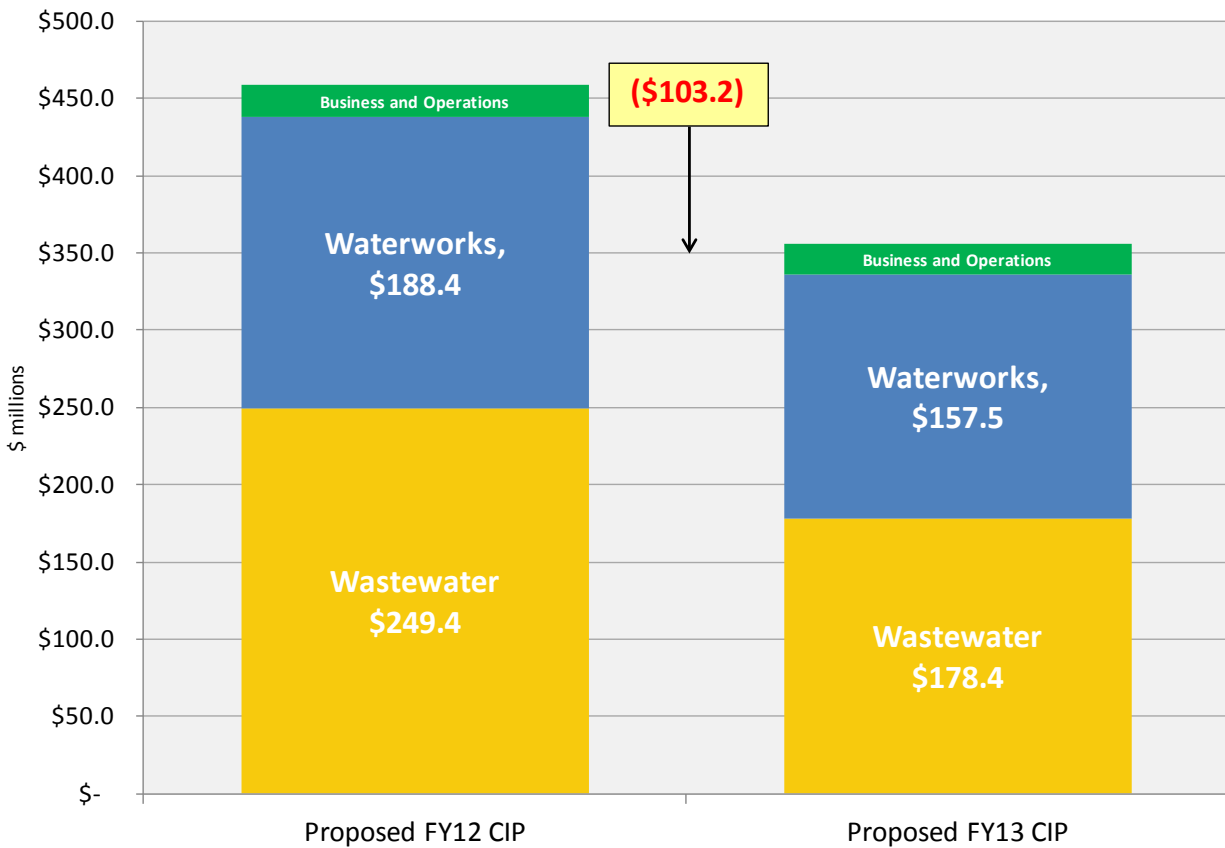


Figure 3

- This two-year spending is more than \$103 million lower than the \$459 million estimated for the same two years in last year's proposed CIP.
- Nineteen major wastewater and waterworks projects/programs account for just over \$315 million of the spending, just under 90% of the spending. (See Table 6 and Table 11.)
- The two largest programs are CSOs, at \$80 million, and Deer Island Treatment Plant asset protection, at \$69 million; together they account for nearly \$150 million of the project spending for this year and next.

Wastewater Capital Spending

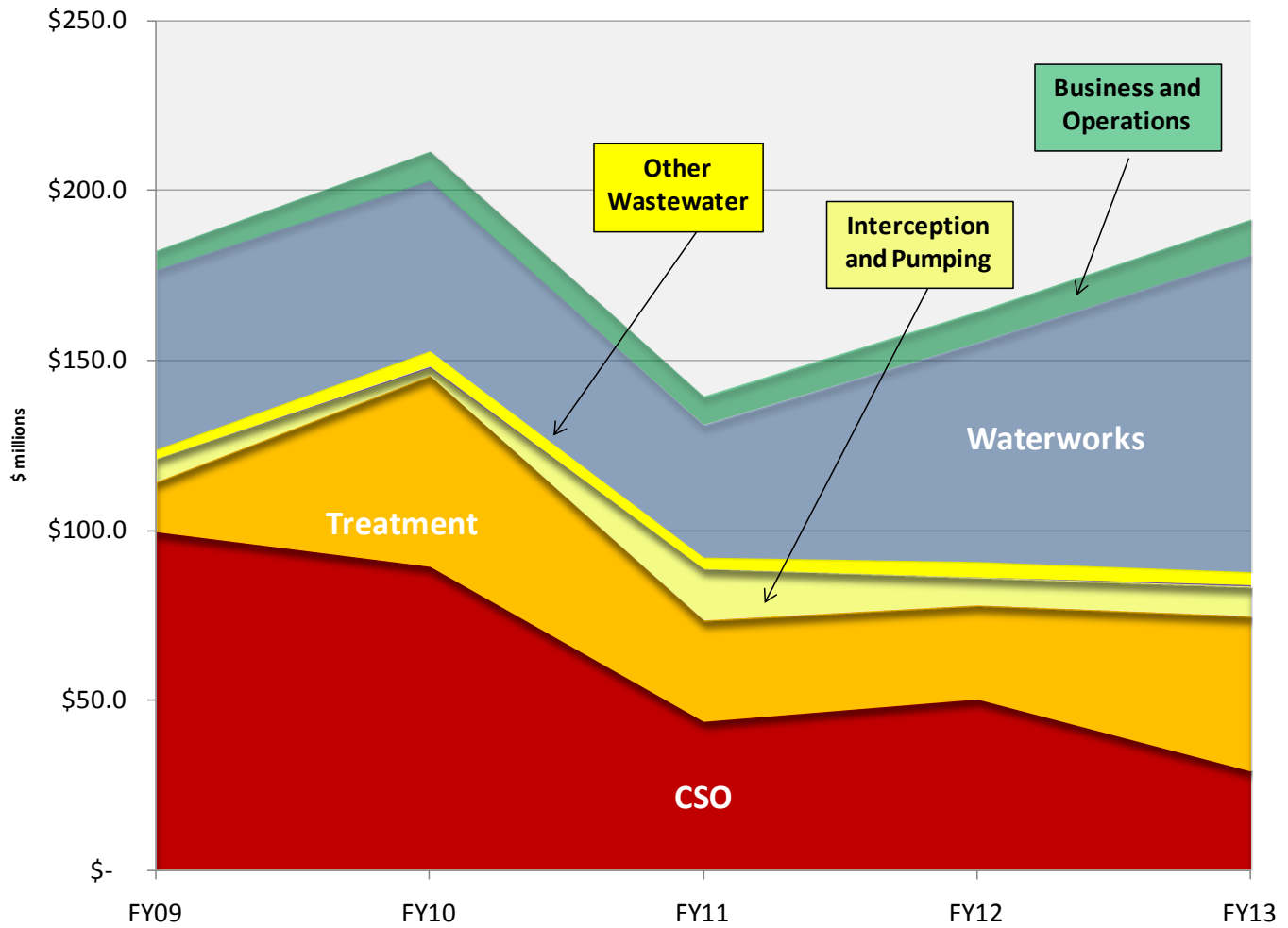


Figure 4

- Wastewater system improvements are divided into five categories: Interception and Pumping, Treatment, Residuals, the Combined Sewer Overflow Control Program, and Other. (See Figure 4.)

Table 6

Largest Wastewater Projects FY12-13		
(\$ millions)		
Project	FY12-13 Spending	Program
CSOs	\$79.60	CSO
DI Treatment Plant Asset Protection	68.88	Treatment
Facility Asset Protection	11.07	Interception and Pumping
I/I Local Financial Assistance	8.39	Other Wastewater
Dorchester Bay Sewer Separation	4.04	Interception and Pumping
Clinton Wastewater Treatment Plant	3.22	Treatment
Braintree-Weymouth Relief Facilities	2.89	Interception and Pumping
Upper Neponset Valley Sewer System	1.17	Interception and Pumping
Laboratory Services	1.12	Treatment
TOTAL	\$180.4	

Table 7

Proposed FY12-13 Capital Spending (\$ millions)			
Program	FY12 Projected	FY13 Budget	FY12-13
Wastewater System Improvements	\$90.7	\$87.7	\$178.4
Interception & Pumping	8.0	8.5	16.5
Treatment	27.7	45.6	73.2
Residuals	0.1	0.6	0.7
CSO	50.4	29.2	79.6
Other	4.5	3.8	8.4
Waterworks System Improvements	64.4	93.2	157.5
Business & Operations Support	9.2	10.5	19.7
TOTAL MWRA w/o CONTINGENCY	\$164.3	\$191.4	\$355.7

Interception and Pumping (I&P)

- Includes projects that address the wastewater collection system facilities, sewers and tunnels. Among them are:
 - Four remote headworks
 - Twenty pump stations and CSO facilities
 - More than 250 miles of sewer pipelines
 - Four cross-harbor tunnels to the Deer Island plant total 18 miles.
- Spending for FY12 and FY13 totals \$16.5 million.
- Significant reductions to this planned two-year spending were made since the proposed FY12 CIP. Notable changes include:
 - West Roxbury Tunnel project was terminated (\$14.4 million reduction).
 - Braintree-Weymouth project spending related to pending legal action was resolved during FY11 instead of FY12 (\$9.3 million reduction).
 - Facility Asset Protection project now includes later starts for the planned headworks improvements and for the Alewife Brook Pump Station Improvements (\$22.7 million reduction).
- Facility Asset Protection projects will increase measurably over the next five years.
 - The three older headworks rehab total cost estimates have increased from \$88.0 million in the proposed FY12 CIP to \$163.75 million in this proposed FY13 CIP.
 - This spending will dominate the next cap period (FY14-18).
- Two Facility Asset Protection contracts are among the ten largest contracts to be awarded during FY13:
 - Nut Island electric and grit/screens conveyance construction (\$7.1 million)
 - Alewife Brook Pump Station Rehabilitation construction (\$6.7 million)

Wastewater Treatment

- Includes Deer Island Treatment Plant asset protection, Laboratory Services and the Clinton Wastewater Treatment Plant.
- Spending for FY12 and FY13 totals \$73.2 million, almost entirely for the Deer Island plant.

- A number of projects are in construction, including Primary and Secondary Clarifier rehabilitation and VFD replacement at the North Main Pump Station. (See Table 8.)

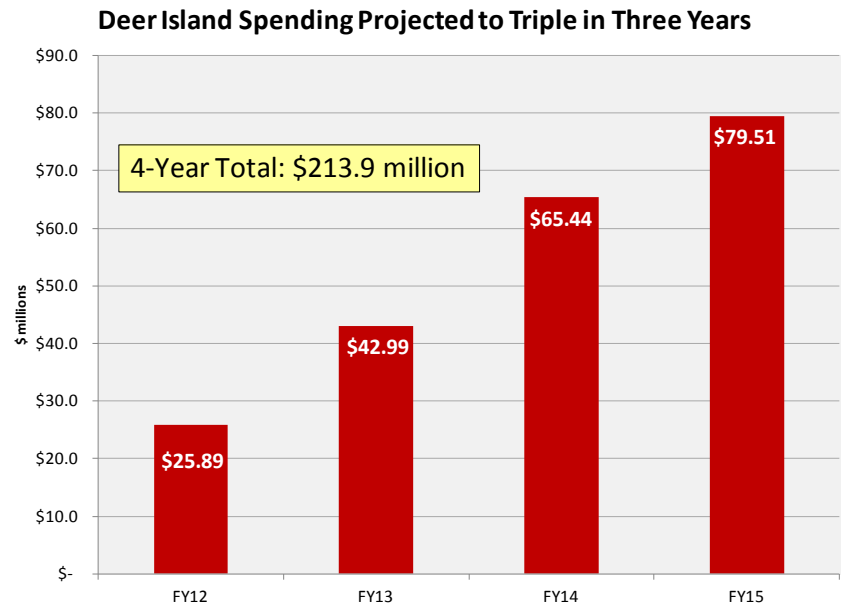


Figure 5

Table 8

Top Deer Island Projects During FY12-13 (\$ millions)	
Projects	Amount
<u>Top Deer Island Projects, Over \$1 Million</u>	
Primary & Secondary Clarifier Rehab - Construction	\$8.89
North Main Pump Station VFD Replacement - Construction	\$6.19
Digester Modules 1 & 2 Pipe Replacement	\$5.86
Power System Improvements - Construction	\$4.43
Electrical Equipment Upgrades - Construction 4	\$2.50
Switchgear Replacement - Construction	\$2.15
Expansion Joint Repair - Construction 2	\$1.85
HVAC Equipment Replacement - Design/ESDC	\$1.75
Centrifuge Backdrive Replacement	\$1.74
Barge Berth and Facility Replacement	\$1.73
Digester Sludge Pump Replacement - Construction	\$1.60
Clarifier W3H Flush System	\$1.56
Clarifier Tip Tube Replacement	\$1.50
subtotal	\$41.74
<u>All Other Active Projects During FY12-13</u>	\$27.13
TOTAL	\$68.88

- The VFD project was awarded at \$24.1 million, just over half the \$46.0 million in the final FY12 budget.
- Four Deer Island contracts are among the ten largest contracts to be awarded during FY13:
 1. Fire Alarm System Replacement (\$16.0 million, almost three times previous estimates; Deer Island's fire alarm system is considered to be the largest in New England)
 2. North Main Pump Station Motor Control Center Phase 2 construction (\$6.1 million)
 3. North Main Pump Station Harmonic Filter Replacements (\$6.0 million)
 4. Combustion Turbine Generator rebuilds (\$6.0 million)

Table 9

Clinton Wastewater Treatment Plant (\$ millions)	
Projects	Amount
<u>Total Project Spending FY12-13</u>	
Clinton Plant-Wide Concrete Repair	\$0.13
Clinton Digester Cleaning and Rehabilitation	\$1.05
Clinton Aeration Efficiency Improvement	\$1.75
Phosphorus Removal Design	\$0.30
TOTAL	\$3.23

- Projects with spending beyond FY13 include:
 - Concrete Repair (\$1.3 million beyond FY13)
 - Digester Cleaning and Rehab (\$0.67 million beyond FY13)
 - Phosphorus Removal Construction (\$3.0 million beyond FY13)
 - In anticipation of more stringent treatment requirements from the upcoming NPDES permit.
 - Design contract scheduled for fall 2012; construction scheduled to start in FY14 third quarter.

Policy Discussion

Due to a new interpretation by the Commonwealth's Comptroller in FY10, the calculation of the fringe benefits line item in the Division of Water Supply Protection (DWSP) was reduced by almost \$2.0 million per year. Because the Authority was wary of a subsequent ruling reversing this interpretation, the Authority continued to accrue the higher amount in a reserve account for two years. In FY11, Advisory Board and Authority staff met with Senate leadership to discuss the matter, and guaranteed the future calculations would be consistent with the new formula by amending legislation. As part of this arrangement, the Authority was allowed to retain the funds deposited into this reserve account (\$3.9 million) exclusively for the purposes of protecting the watershed.

Because the new phosphorus treatment system is arguably a function of protecting the watershed, **the Advisory Board recommends that both the design and construction contracts of the Clinton Phosphorus Removal project be funded exclusively from the reserve account containing the watershed fringe benefits accruals.**

Residuals

- FY12-13 spending totals \$0.7 million.
- Residuals Technology Assessment Project is out for rebid in spring of 2012 to develop a conceptual plan focusing on:
 - Optimization of existing operations to extend useful life of facilities.
 - Identification of potential long-term capital improvements to extend useful life of facilities.
 - Evaluation of potential new technologies for reduction of sludge quantities and/or new beneficial reuses.
- \$345 million is budgeted beyond FY 2015 as placeholder numbers for future improvements.
- For a more in depth discussion of the Advisory Board's recommendations related to the Residuals facility and pelletization costs, please see page 45.

Combined Sewer Overflow (CSO) Control Program

Table 10

CSO Spending (\$ millions)			
Project	FY12-13	FY14-18	Beyond FY18
North Dorchester Bay	\$5.92	\$3.56	
East Boston Branch Sewer Relief	\$0.11		
MWR003 Gate & Siphon	\$0.43	\$3.74	
Dorchester Bay Sewer Separation (Fox Point)	\$0.42		
Dorchester Bay Sewer Separation (Commercial Point)	\$4.04	\$0.81	
Stony Brook Sewer Separation	\$0.13		
Cambridge Sewer Separation	\$18.88	\$9.32	
Fort Point Channel Sewer Separation	\$0.11		
Morrissey Boulevard Drain	(\$2.69)		
Reserved Channel Sewer Separation	\$33.97	\$8.26	
Brookline Sewer Separation	\$17.38		
Bulfinch Triangle Sewer Separation	\$0.13		
CSO Support	\$0.76	\$0.25	\$0.44
TOTAL	\$79.60	\$25.94	\$0.44

- CSO spending falls from \$50.4 million in FY12 to \$29.2 million in FY13.
- Cash flows and spending schedules are tied to dates established in the Court order.
- Spending will be minor after December 2015 when the last two CSO projects (BWSC's Reserved Channel Sewer Separation and Cambridge's Alewife Brook Sewer Separation) are scheduled for completion.
- 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. (See Figure 2.)

Other Wastewater Projects

- Spending on Other Wastewater projects is budgeted at \$8.4 million for FY12 and FY13 and includes distributions and repayments (for the loan portion) for the Infiltration/Inflow Local Financial Assistance Program.
- **Given the underspending of the current cap period, the Advisory Board recommends including Phase VIII of the Inflow/Infiltration Local Financial Assistance Program in the final CIP, beginning in FY13.**

Waterworks Capital Spending

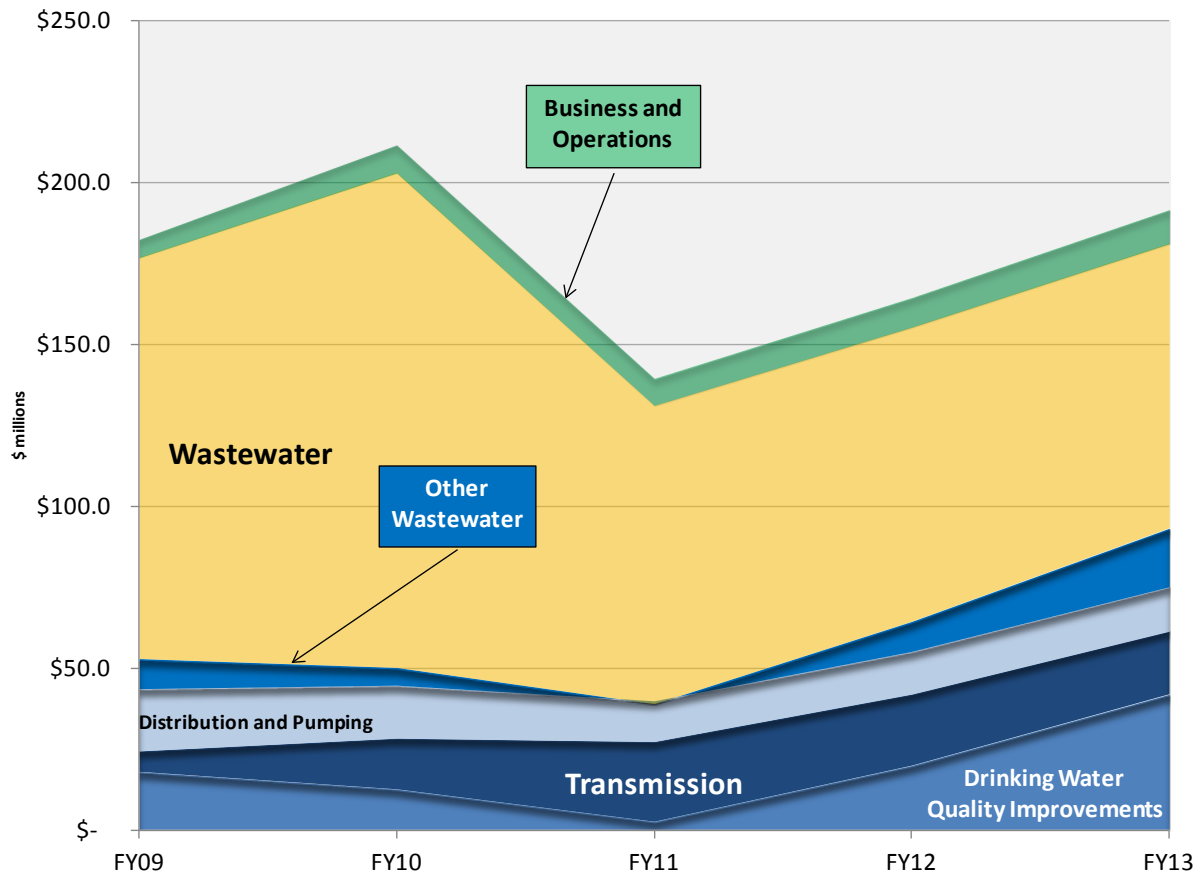


Figure 6

- There are four main categories of Waterworks spending: Drinking Water Quality Improvements, Transmission, Distribution and Pumping, and Other.

Table 11

Ten Largest Waterworks Projects FY12-13 (\$ millions)		
Project	FY12-13 Spending	Program
John J. Carroll Water Treatment Plant	\$34.02	Drinking Water Quality Improvements
Local Pipeline Assistance Program	25.50	Other Waterworks
MetroWest Tunnel/Hultman Rehabilitation	24.18	Transmission
Spot Pond Storage Facility	22.54	Drinking Water Quality Improvements
NIH Redundancy and Covered Storage	8.24	Distribution and Pumping
Long-term Redundancy	5.65	Transmission
Weston Aqueduct Supply Mains (WASMs)	5.49	Distribution and Pumping
Watershed Lands	5.10	Transmission
Southern Spine Distribution Mains	4.75	Distribution and Pumping
Quabbin Water Treatment Plant	4.67	Drinking Water Quality Improvements
TOTAL	\$140.1	

Table 12

Proposed FY12-13 Capital Spending (\$ millions)			
Program	FY12 Projected	FY13 Budget	FY12-13
Wastewater System Improvements	\$90.7	\$87.7	\$178.4
Waterworks System Improvements	64.4	93.2	157.5
Drinking Water Quality Improvements	19.8	41.8	61.5
Transmission	22.0	19.4	41.4
Distribution and Pumping	13.3	13.9	27.2
Other	9.3	18.1	27.4
Business & Operations Support	9.2	10.5	19.7
TOTAL MWRA w/o CONTINGENCY	\$164.3	\$191.4	\$355.7

Drinking Water Quality Improvements

- These projects focus on the treatment and storage of the MWRA's water supply including:
 - John J. Carroll Water Treatment Plant (CWTP)
 - Quabbin Water Treatment Plant
 - Norumbega Covered Storage
 - Blue Hills Covered Storage
 - Low Service Storage near Spot Pond
- FY12-13 spending totals \$61.5 million.
- Spot Pond design/build project (\$49.4 million) was awarded fall 2011 at \$22.6 million below the proposed FY12 CIP projections.

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.
- FY12-13 spending totals \$41.4 million.
- Three Transmission projects are among the largest Waterworks projects for FY12 - FY13 including:
 1. MetroWest Tunnel/Hultman rehabilitation (\$24.6 million)
 2. Winsor Dam Hydroelectric/Pipeline Replacement (\$7.9 million)
 3. Long-Term Water Transmission Redundancy project (\$7.6 million)
- As part of the Long-Term Redundancy project, design work is under way for a 240 million gallons per day (MGD) pump station to provide redundancy for the Cosgrove Tunnel and initial work for the MEPA review process for the Sudbury Aqueduct connection is scheduled to proceed in the summer of 2012.

Distribution and Pumping (D&P)

- Includes projects that focus on the metropolitan system, which is divided into seven pressure zones and includes:
 - 284 miles of distribution pipeline east of Shaft 5
 - 11 storage tanks
 - 11 pump stations
 - 9 tunnel shafts
 - Approximately 4,700 valves

- Notable projects include:
 - Weston Aqueduct Supply Mains (\$276.2 million contract total)
 - Southern Spine Distribution Mains (\$72.5 million contract total)
 - Northern Intermediate High Redundancy and Covered Storage (\$82.5 contract total)
 - Southern Extra High Redundancy and Storage (\$3.7 million contract total)
- FY12 – 13 spending totals \$27.2 million.
- Three D&P projects are among the largest Waterworks projects for FY12 – FY13 including:
 1. NIH Redundancy and Covered Storage (\$8.24 million)
 2. Long-Term Redundancy (\$5.65 million)
 3. Southern Spine Distribution Mains (\$4.75 million)
 - See Table 11.

Other Waterworks Projects

- FY12 - 13 net spending totals \$27.4 million.
- These projects include:
 - Central Monitoring System (\$1.3 million in FY12-13)
 - Local Pipeline Assistance Program (\$25.5 million in FY12-13)
 - Waterworks Facility Asset Protection project (\$0.3 million in FY12-13)
- Local Pipeline Assistance Program assumes:
 - \$55 million in distributions under Phase I in FY12-FY13
 - \$39 million in Phase I repayments
 - \$11.4 million in distributions under Phase II (Local Water System Assistance Program)
 - \$2.1 million in Phase II repayments
 - FY12-13 net spending for both phases: \$25.5 million

Business and Operations Support

- FY12 – FY13 spending totals \$19.7 million including:
 - Equipment Purchases (\$3.5 million)
 - Business Plan [MIS projects] (\$4.8 million)
 - Capital Maintenance Planning and Development [As-needed design contracts] (\$4.0 million)
 - Facilities Management and Planning (\$0.89 million)
 - Alternative Energy Initiatives (\$6.2 million)
- Most of the spending during the period for Alternative Energy Initiatives is for the completion of the Charlestown wind turbine and Phase II construction of a wind turbine at Deer Island.

Issues that Need Resolution before Preparing the Final FY13 CIP

- Southern Extra High (SEH) Water Redundancy Project final route
 - Contingent upon whether or not Braintree, Randolph, and Holbrook (Tri-Town) decide to apply for membership into the MWRA Waterworks System.
- Northern Intermediate High (NIH) Water Redundancy Project
 - Pending resolution of tank locations.
- Chelsea, Ward Street, and Columbus Park Headworks project implementation

- Options include bidding all three as a single package or to sequence the projects spread over a number of years.

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 FY13 CIP, include:

- The Cross Harbor Cable may need a deeper installation or protective material as part of the harbor dredging project; additional costs could be as much as \$20 million; and
- The Chelsea Creek dredging initiative could cost as much as \$10 million.

The Advisory Board again asserts that neither the additional Cross Harbor Cable costs nor Chelsea Creek dredging initiative are the responsibility of the Authority or the ratepayers to fund.

However, two additional risks are legitimate risks and responsibilities of the Authority:

1. Residuals Asset Protection or the funding to rehabilitate or replace the existing Residuals Plant needs to be determined (in the meantime, the proposed CIP does include nearly \$150 million as a placeholder for the more specific strategy for the Residuals Plant and processing technologies).
2. New regulatory mandates could represent potential risk for increased future spending.

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 13

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	\$164.3	\$191.4	\$888.7
Contingency	0.0	0.0	0.0	7.2	9.7	16.8
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)
FY12 Proposed Subtotal	\$181.6	\$210.9	\$138.4	\$170.7	\$197.2	\$898.8
Change (\$)	(62.8)	(53.2)	(91.6)	(36.3)	(1.2)	(245.0)
Change (%)	-25.7%	-20.1%	-39.8%	-17.6%	-0.6%	-21.4%

- The cap for FY09-13 was set in June 2008 as part of the approval process for the final FY09 CIP. (See Table 13.)
- Actual spending is projected to be \$888.7 million (virtually the same as the first cap), with an associated cap calculation of \$898.8 million.
- Actual spending is \$193 million below the baseline assumption for projected expenditures and the five-year cap calculation is \$245 million (21.4%) below 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 \$898.8 million. In fact, actual spending during the first three years resulted in cap calculations that were between 20% and 40% below the annual baseline caps.
- Authority staff have observed that actual spending has reflected the changing pace of capital project activity and the influence of projects that are not directly managed by the Authority including the community grant/loan programs.

The Third Five-Year Cap: FY14-18

Table 14

Proposed FY14-18 Capital Spending by Program (\$ millions)						
Program	FY14	FY15	FY16	FY17	FY18	FY14-18
Wastewater System Improvements	\$118.8	\$127.2	\$105.9	\$88.1	\$61.8	\$501.7
Waterworks System Improvements	80.2	93.2	90.3	73.2	102.9	\$439.7
Business & Operations Support	11.5	6.3	3.6	1.1	0.3	\$22.7
TOTAL MWRA w/o CONTINGENCY	\$210.5	\$226.7	\$199.7	\$162.4	\$165.0	\$964.1

- The next five-year cap, for FY14-18, is to be set with the approval of the final FY14 CIP in June 2013.
- Current projections put five-year spending at \$964.1 million. (See Table 14.)
- With actual spending measurably below the baseline cap for both the first two cap periods, the Authority has an opportunity to rethink spending levels going forward to make them closer to the ability to spend.

Policy Discussion

Authority staff has long commented that the variability of the local assistance programs contributes to the underspending observed in the capital budget and make it difficult to budget and project capital spending. In recent years, the Authority has begun to report not only its total capital underspending, but also underspending without the projects not under its direct control.⁶ Admittedly, predicting how much eligible communities are going to borrow in any fiscal year is little more than educated guesswork. Removing these programs from the cap calculation should reduce unpredictable underspending.

Figure 7 demonstrates the impacts of removing the local programs from the current cap calculation compared with actual/projected spending in each year and as a five-year average.

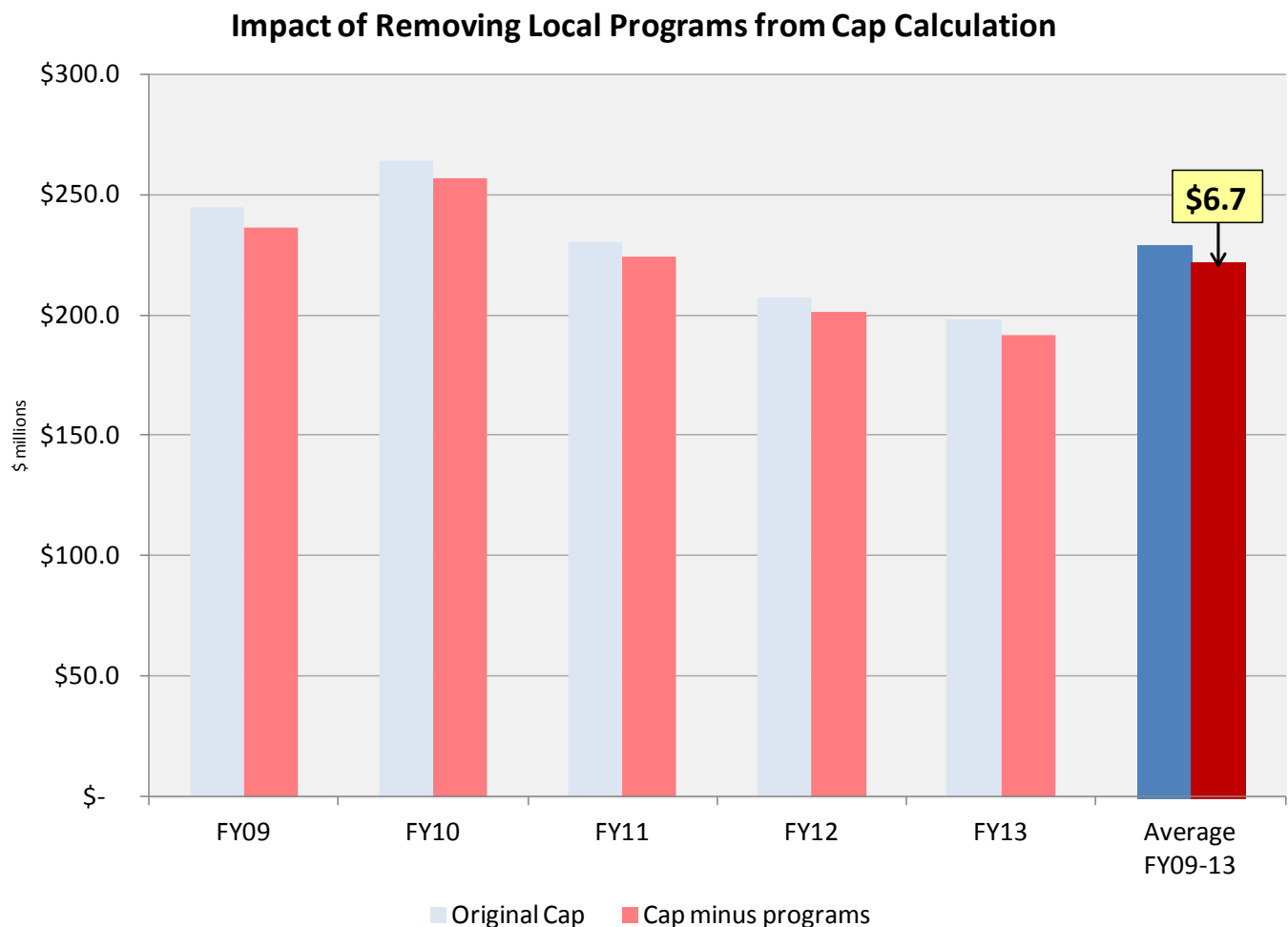


Figure 7

To reduce the variability in community loan program distributions, the Advisory Board supports a revision in the cap calculation to exclude the local assistance programs from the cap calculation beginning in FY14.

If spending under this revised cap becomes more predictable, the Advisory Board expects the significant underspending experienced under both spending caps to ease.⁷ After the experience of the first cap period (FY04-08), the Authority revised its contingency calculations to tighten underspending. Spending under the current cap (FY09-13) has repeated

⁶ In addition to the local programs, the Authority also removes community-managed CSO projects from its adjusted reporting.

⁷ Includes the first five-year cap period from FY04-08 and the current cap from FY09-13, with FY12-13 based on current projections.

the trend of underspending. Even after removing the local programs, consistent with the previous recommendation, actual/projected capital spending averages \$55.9 million/year under the baseline cap (See Figure 8).

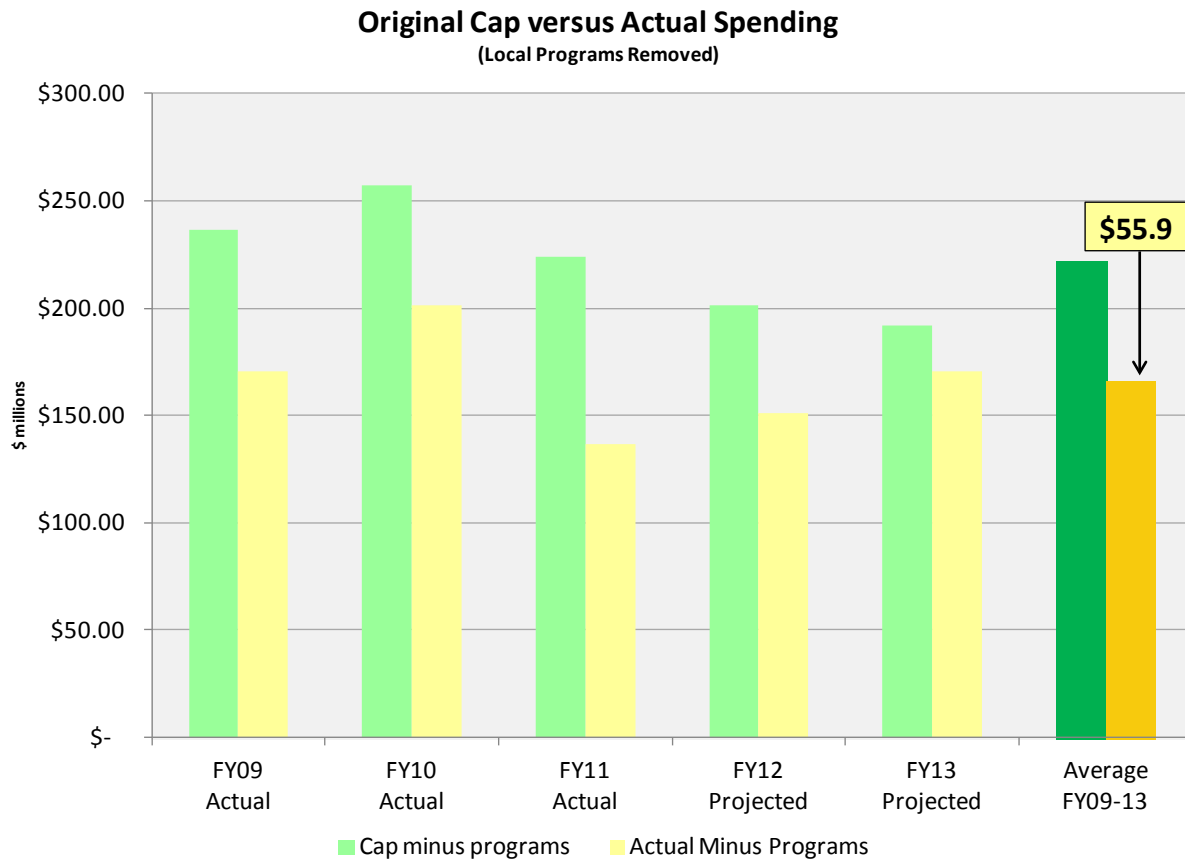


Figure 8

The decline of CSO spending by the end of this current cap period should allow the Authority to better predict future spending, as the majority of the capital program under the cap will now be under direct Authority control. Now that this large category of mandated spending is diminishing, the contingency calculation has been reduced, and if the local programs are removed, the Authority should be able to tighten the underspending trend. Additionally, as the Advisory Board has recommended in previous *Comments*, the Authority should not simply replace mandated spending with spending it controls. The Authority finally has greater control of its own destiny. Without jeopardizing the system it is tasked with maintaining, the Authority can reduce its capital program to help provide long-term rate relief. **The Advisory Board challenges the Authority to limit the next five-year cap (FY14-18) to no more than \$800 million after removing the local assistance programs from the cap calculation.**

Proposed FY13 CEB Highlights

Table 15

MWRA Current Expense Budget (\$ millions)				
	FY12 Budget	FY13 Proposed	\$ Change	% Change
<u>Expenses</u>				
Direct Expenses	209.3	217.1	7.8	3.8%
Indirect Expenses	40.9	45.2	4.3	10.6%
Capital Financing	368.0	377.5	9.5	2.6%
Subtotal Expenses	\$618.2	\$639.9	\$21.7	3.5%
<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	\$617.8	\$639.9	\$22.0	3.6%
<u>Revenues</u>				
Other User Charges	7.1	7.8	0.7	9.8%
Other Revenue	4.9	5.8	1.0	19.7%
Rate Stabilization	1.1	0.0	-1.1	-100.0%
Investment Income	15.4	13.6	-1.8	-11.7%
Subtotal Non-Rate Revenue	\$28.5	\$27.2	-\$1.2	-4.3%
Rate Revenue	589.7	612.6	22.9	3.89%
Total Revenue and Income	\$618.2	\$639.9	\$21.7	3.51%
\$5.9 million ≈ 1%				

- Wholesale rate revenue increases 3.89%, while non-rate revenue declines.
- Capital financing expense continues to dominate the Authority's budget, comprising nearly 60% of the Authority's budget.
- After four years of level funding, direct expenses rise by 3.8%. The amount is 34% of the total budget.

Proposed FY13 by Category

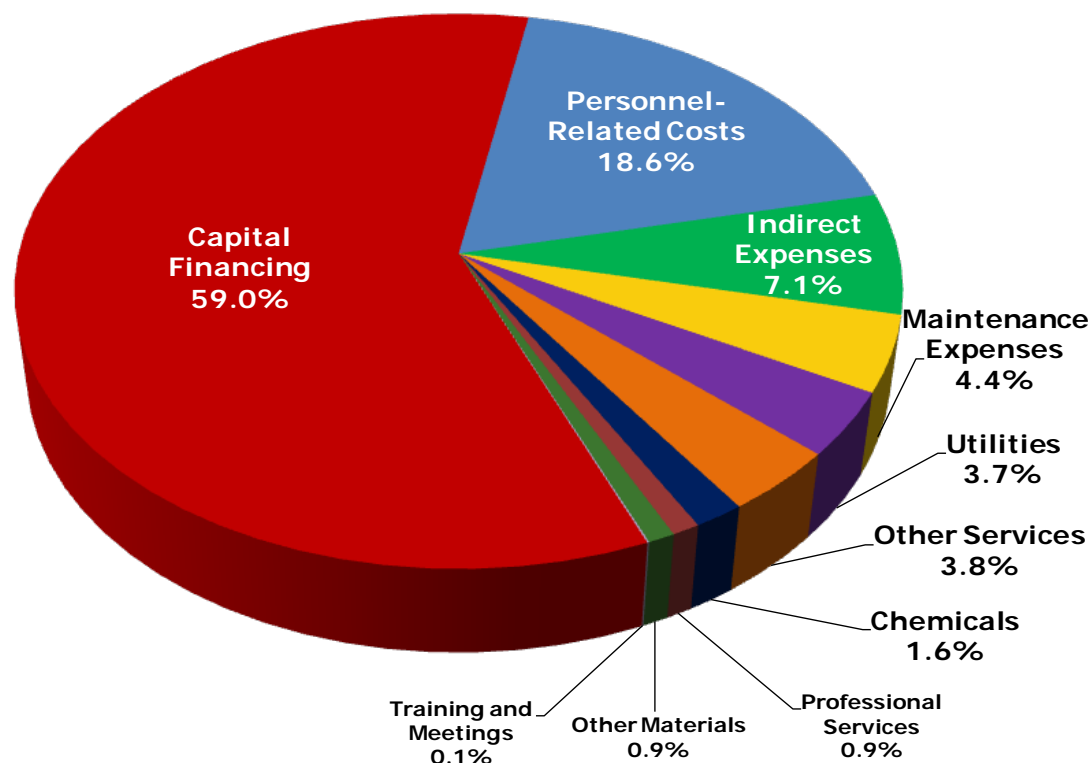


Figure 9

- Personnel-related costs (\$118.7 million) are over half of all direct expenses and include:
 - Wages and salaries
 - Overtime
 - Fringe benefits
 - Workers' compensation
- Maintenance (\$28.3 million) is the second largest category of direct expenses. Larger maintenance projects are part of the capital budget.
- Utilities total \$24.0 million.
 - 70% of utilities spending is for electricity purchase.
 - Increase driven by diesel fuel price increases.
- Other Services total \$24.0 million.
 - 61% of this expense funds sludge pelletization at the Fore River plant.
- Chemicals total \$10.4 million. Primary reasons for increase include:
 - ½ year of chemicals at Deer Island to meet expanded NPDES permit requirements.
 - Ferrous chloride price increases due to higher global demand.
- Indirect expenses (\$45.2 million) are 20.8% of the direct expenses. Major components:
 - Watershed-related expenses (\$26.4 million)
 - Pension fund and Other Post-Employment Benefits (\$10.5 million)

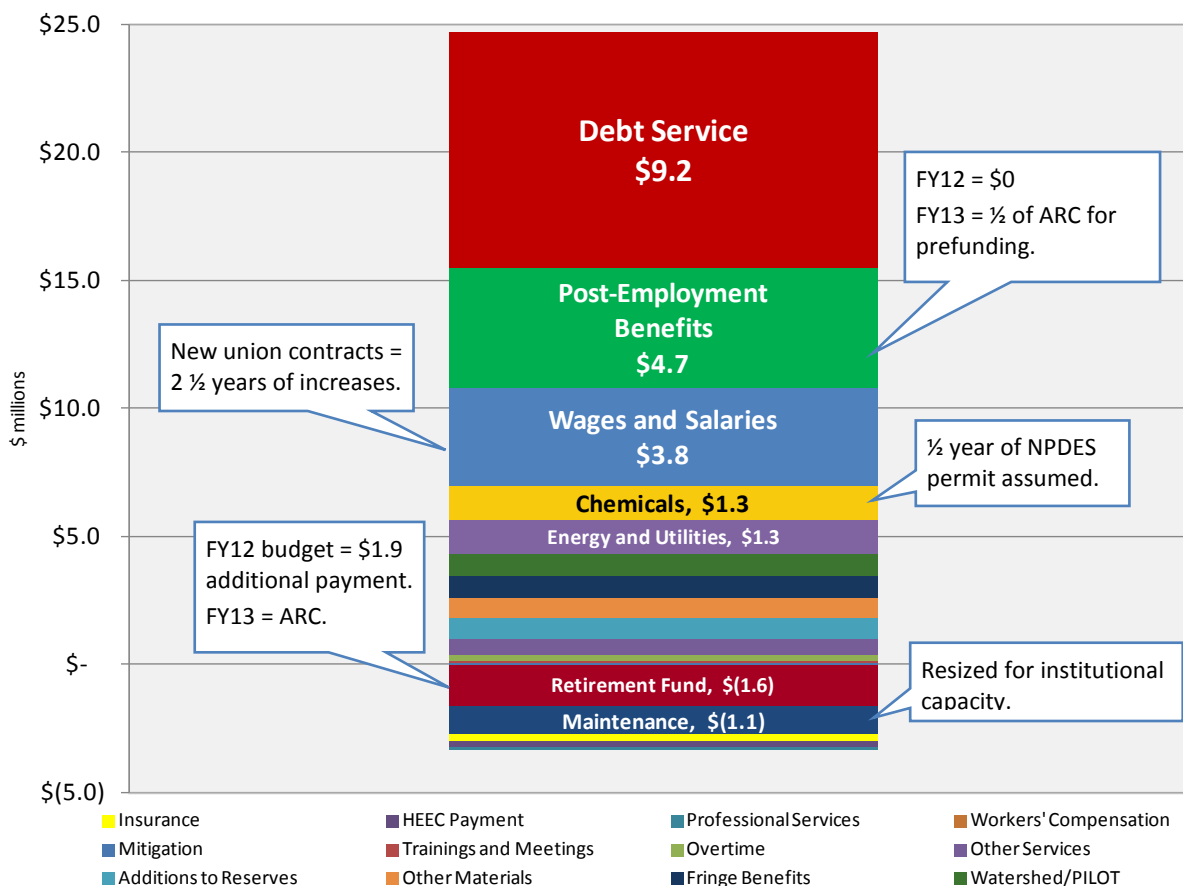


Figure 10

- Debt service is the largest increase (\$9.2 million) as more principal repayments come due.
- Other Post-Employment Benefits [OPEB] (\$4.7 million) is the next largest increase. FY12 included no funding for OPEB, while the proposed FY13 includes ½ of the annual required contribution (ARC) under the prefunding actuarial report.
- Wages and salaries had been level funded for 2 years. FY13 includes the newly negotiated union contracts, which include increases for 2 ½ years.
- Chemicals expense increase (\$1.3 million) is driven by:
 - New NPDES permit at Deer Island budgeted to begin in January 2013, including expanded treatment requirements.
 - Ferrous chloride prices increase dramatically due to increased global demand.
- Retirement fund expenses appear to decline because in FY12 an additional payment of \$1.9 million was made, while FY13 recommends funding at the minimum required levels.
 - When combined, retirement fund and OPEB expenses actually increase by \$3.1 million.
- Maintenance spending reductions are based on historical spending.
 - The Authority projects that FY12 maintenance spending will be \$27.7 million, nearly \$1.8 million below the \$29.5 million budgeted.

Rate Revenue Requirements

Rate Revenue Requirement Increases in Dollars

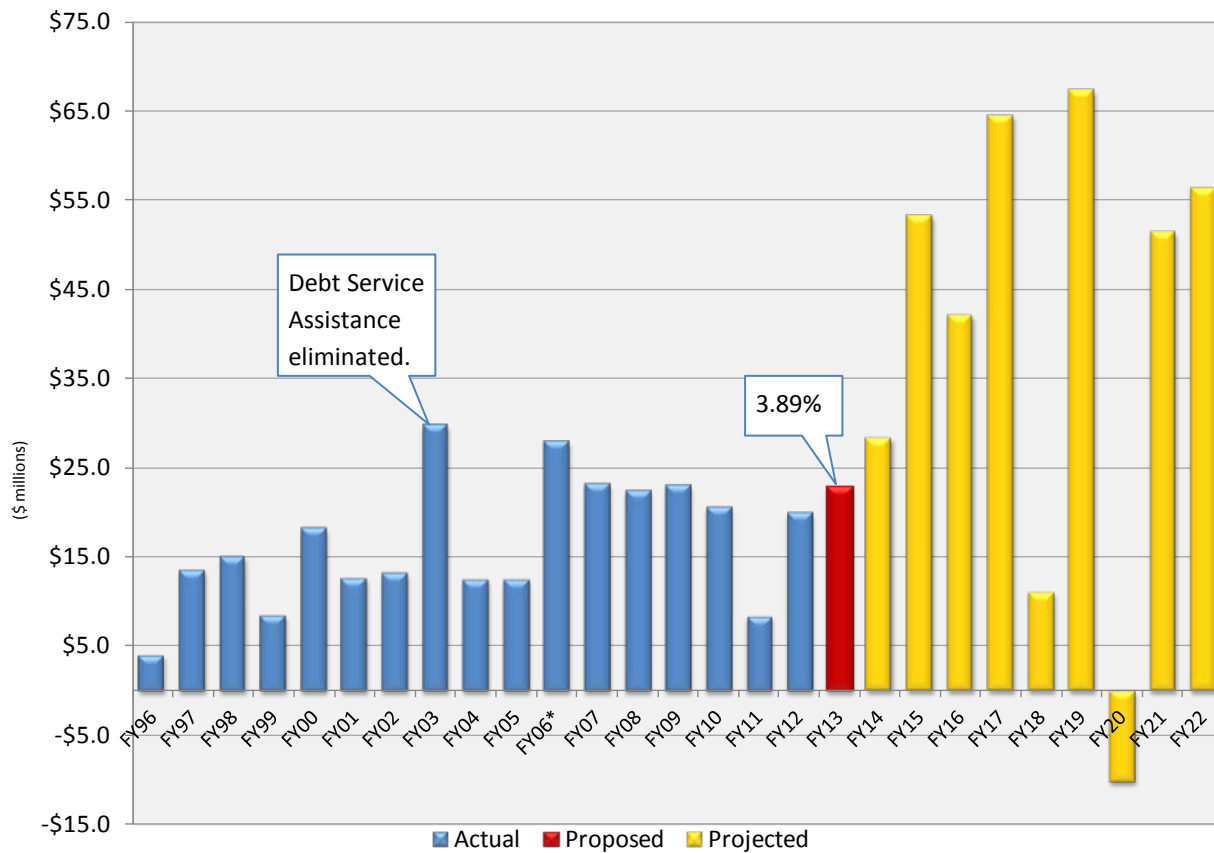


Figure 11

- The proposed rate revenue requirement for FY13 is \$612.6 million, an increase of \$22.9 million or 3.89% over the FY12 rate revenue requirement.

Total Rate Revenue Requirements Over Time

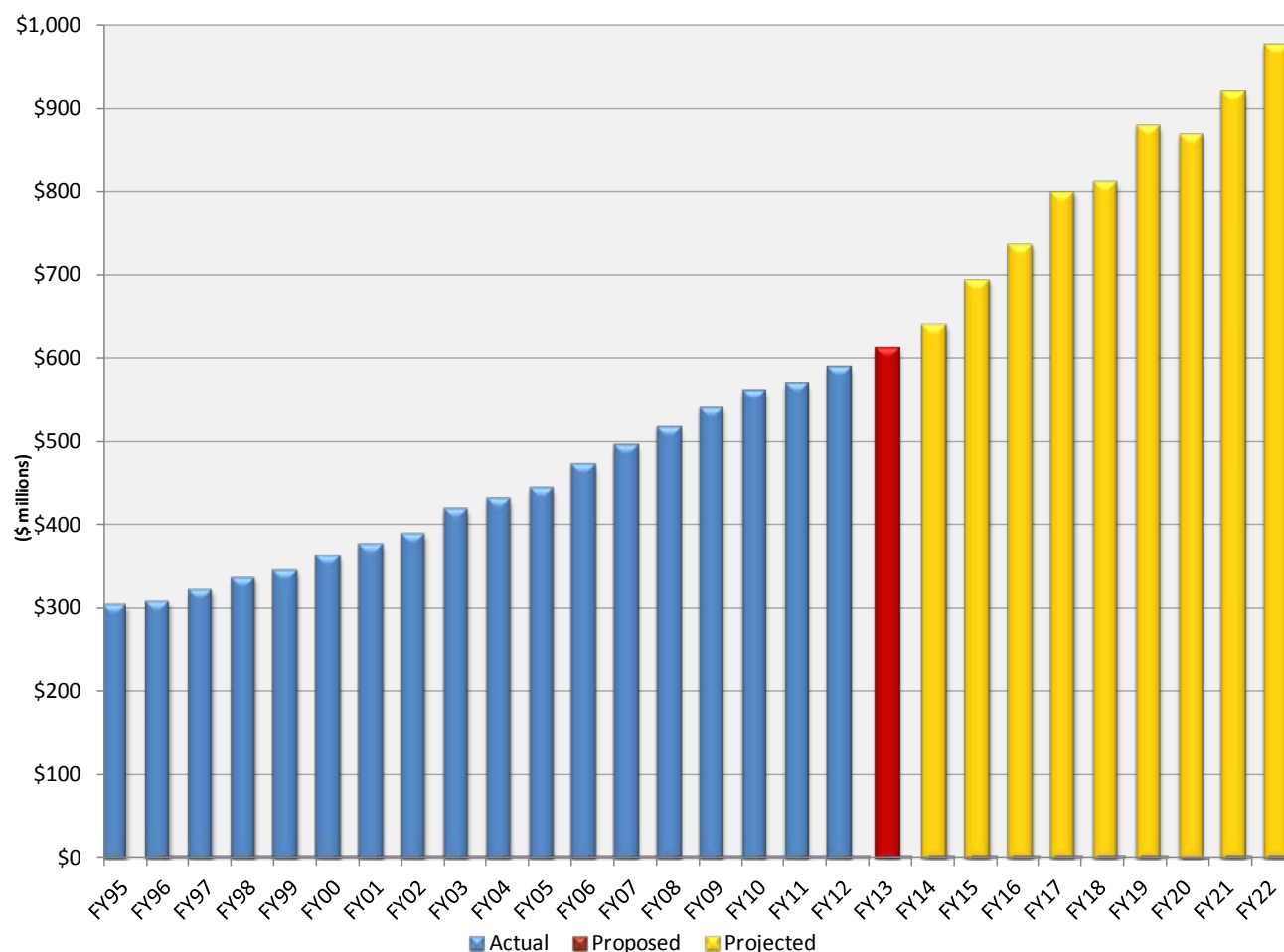


Figure 12

- FY13 is the third year of a three-year rates management strategy to keep rates at a sustainable level during these continued challenging economic times. The FY11 rate increase, at 1.49%, was the lowest in 15 years, since 1996 when the Authority received \$31.5 million in state debt service assistance. (See Figure 11 and Figure 12).
- These rates reflect the significant benefits of reduced debt service payments (as compared to earlier projections) resulting from the January 2007 restructuring transaction, the spring 2008 defeasance transaction, the February 2009 refunding, plus reduced debt service payments resulting from the spring 2010 defeasance and the restructuring of a targeted amount of debt service that had been due in FY11, 12, and 13. Adding the defeasance transactions of spring 2011 and the 2012 transaction planned for this June, the Authority reports that between FY06 and the June 2012 defeasance, some \$241.7 million in projected debt service payments has been defeased benefitting the ten fiscal years from FY07 through FY16. (See Figure 17.)
- While defeasance – or the prepayment of a portion of a future year’s debt service using current-year surplus funds – is a tool that has been used consistently and strategically, the Authority typically had not assumed defeasance transactions in its proposed budgets until the proposed FY10 CEB. Both the FY11 and FY12 proposed budgets have also assumed the benefits of the spring defeasances, making it possible to propose tighter and lower rate revenue requirements than earlier projected.
- The Authority has also continued to work to tighten direct expenses in the proposed FY13 CEB, absorbing more risk in the budget assumptions and reflecting updated historical spending patterns.

FY13 Current Expense Budget Recommendation

- The Advisory Board has previously commended the Authority for implementing more realistic assumptions for the FY12 and 13 projected rate increases; the Advisory Board has also made recommendations for some further adjustments for the final budgets. Last year, the Advisory Board recommended a series of reductions totaling \$2,514,000 resulting in a 3.49% wholesale rate increase.
- **This year, the Advisory Board is recommending a reduction of \$5,226,105 to bring the rate increase in the final FY13 CEB to 3.0%. The Advisory Board anticipates that the adjustments needed to reach this reduction could come from revised assumptions including:**
 - Timing of the NPDES permit for Deer Island
 - Updates for fringe benefits costs
 - Updates related to the ambulance contract for Deer Island
 - Personnel-related revisions
 - Reduction of the budget by \$6,749 to reflect the Advisory Board's amended FY13 budget
 - Several adjustments to elements of capital financing expense
 - A modest use of the rate stabilization fund (which is funded at \$0 this year, for the first time in five years)
 - Inclusion of the receipt of Debt Service Assistance (approximately \$350 thousand for the Authority's share) consistent with the Commonwealth's current budget process.

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

Table 16

Proposed FY13 CEB Major Categories of Spending (\$ millions)	
Capital Financing	\$377.5
Personnel-Related Costs	118.7
Indirect Expenses	45.2
Maintenance Expenses	28.3
Utilities	24.0
Other Services	24.0
Chemicals	10.4
Professional Services	5.8
Other Materials	5.6
Training and Meetings	0.4
TOTAL EXPENSES	\$639.9
REVENUE	\$639.9

Table 17

Proposed Fiscal Year 2013 Capital Financing Summary (\$ millions)				
<i>Line Item/Description</i>	<i>Final FY12</i>	<i>Proposed FY13</i>	<i>Δ (\$s)</i>	<i>Δ (%)</i>
Total Senior Debt Service	\$187.17	\$194.73	\$7.57	4.0%
<i>Outstanding</i>	\$185.29	\$184.46	-\$0.83	-0.4%
<i>New FY12/FY13</i>	\$1.88	\$11.82	\$9.95	530.4%
<i>Potential Defeasance/Restructuring</i>	0.00	-1.55	-1.55	-
Fixed rate debt service, existing and new borrowings during FY12/13.				
Total Subordinate Debt Service	94.65	93.30	-1.35	-1.4%
<i>Outstanding</i>	94.65	93.30	-1.35	-1.4%
<i>New FY12/13</i>	0.00	0.00	0.00	-
<i>Potential Defeasance/Restructuring</i>	0.00	0.00	0.00	-
Variable rate debt service. 3.25% interest rate assumption (FY12); 3.25% (FY13).				
Total SRF Debt Service	72.66	74.40	1.74	2.4%
<i>Outstanding</i>	63.85	65.59	1.74	2.7%
<i>New FY12/FY13</i>	8.81	8.81	0.00	0.0%
Low-interest loans from the Commonwealth. 2.0% interest rate (Water); 2.5% (Sewer).				
TOTAL DEBT SERVICE	\$354.48	\$362.43	\$7.96	2.2%
Water Pipeline Commercial Paper	\$3.44	\$3.65	\$0.21	6.0%
Debt service supporting \$25 million/year for the Local Pipeline Assistance and Local Water System Assistance Loan Programs.				
Current Revenue/Capital	\$7.20	\$8.20	\$1.00	13.9%
Amount of current revenue used to fund ongoing capital projects and to meet coverage requirements.				
Capital Lease	\$3.22	\$3.22	\$0.00	0.0%
Chelsea facility lease payment.				
TOTAL OTHER CAPITAL EXPENSES	\$13.86	\$15.06	\$1.21	8.7%
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 FY13 budget.				
TOTAL CAPITAL FINANCING EXPENSES	\$367.98	\$377.50	\$9.51	2.6%

Other Highlights

- Principal outstanding through April 2012 is \$5.64 billion.
- New MWRA borrowing of \$125 million and SRF borrowing of \$108.6 million is planned for FY13.
- Other sources of capital funding include tax exempt commercial paper; interest is paid from the construction fund.

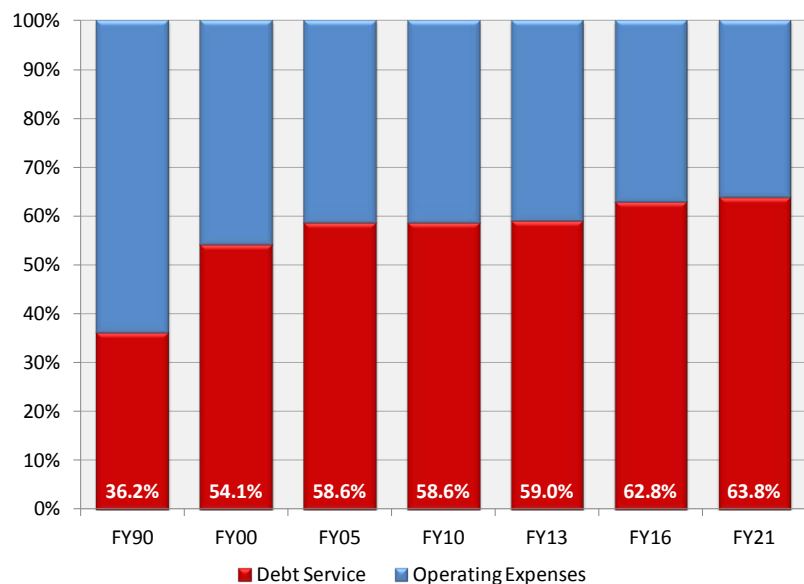


Figure 13

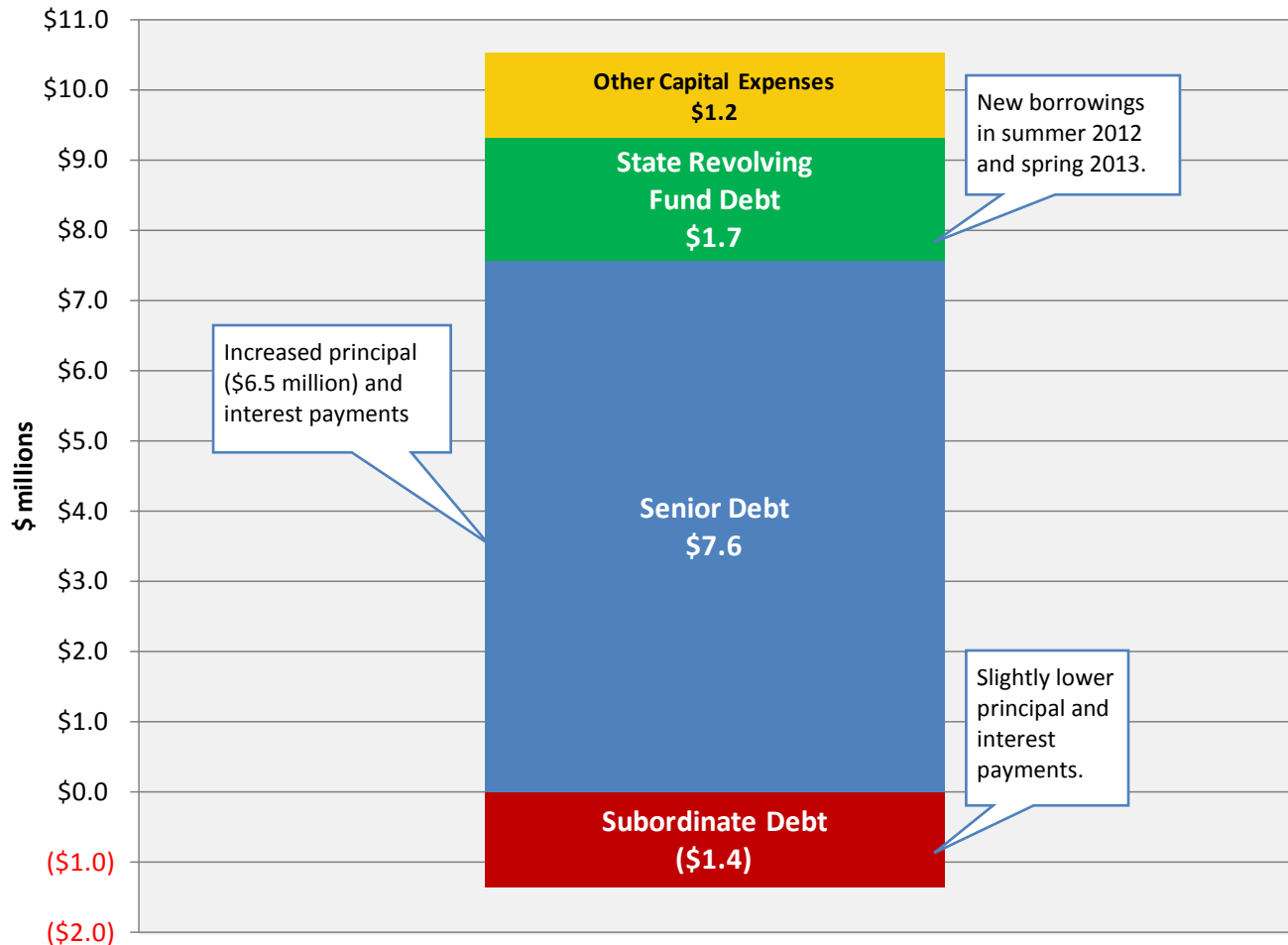


Figure 14

MWRA Debt Financing and Outstanding Principal

- The Authority relies heavily upon debt financing to fund its capital program.
- To date, the Authority has spent \$8.3 billion on its capital improvement program.⁸
- Outstanding principal borrowed totals \$5.6 billion and includes four categories:
 1. State Revolving Fund
 2. Pure Variable (subordinate debt)
 3. Swap Notional (subordinate debt)
 4. Senior Debt

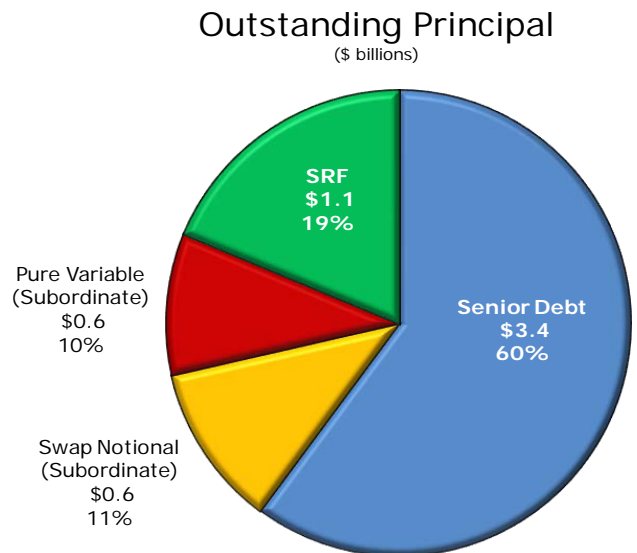


Figure 15

⁸ Source for completed projects is Appendix 9 of the Proposed FY13 CIP document.

Debt Service on Senior Debt

- Senior debt service payments are budgeted at \$194.74 million for FY13 including:
 1. \$8.4 million for the first full year of the borrowing in April 2012 of \$150 million
 2. \$3.4 million for the partial year debt service on a borrowing of \$125 million during the spring 2013
 3. \$1.55 million benefit in FY13 of the upcoming defeasance transaction in June 2012.
- **The Advisory Board believes that all three proposed senior debt service assumptions for new borrowings and the defeasance should be revisited.**
- Updated assumptions for debt service associated with new and reconfigured debt issuances are tools for reducing the proposed rate revenue requirement to 3%.
- **The Advisory Board is also recommending that the Authority, as part of the FY14 budget process, aim for a capital spending cap for the FY14-18 period of no higher than \$800 million. (See page 18.)**

Debt Service on Subordinate MWRA Debt

- The proposed FY13 CEB assumes a 3.25% interest rate for variable rate debt, the same rate assumed for FY12 and FY11.
- This rate is based on a 20-year average, although the Federal Reserve Board has indicated plans to keep rates low through calendar year 2014. 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 the next two years.
- As part of the process of issuing new or refunded debt, the rating agencies update their ratings of Authority debt. One of the components of this assessment has been discussion of the Authority's variable rate debt, and how much variable rate debt outstanding is appropriate.
- The proposed FY13 CEB puts outstanding variable rate debt at \$1.192 billion or 21%.
- Of this amount, \$637.9 million or 11.3% is swapped (swap notional) and \$554.0 is pure variable or 9.8%.
- **The Advisory Board recommends that the Authority and its advisors assess what the appropriate level of variable rate debt is going forward and prepare a plan to reach that level in the next five years.**
- There are a number of issues that the rating agencies review when updating their ratings.
- **The Advisory Board recommends that the Authority broaden its analysis to include the other factors that are considered with each rating agency review and report on steps that could be taken to ensure the Authority obtains the highest possible ratings from each rating agency. Such an analysis should be conducted in time for the due diligence process associated with the next bond issue.**

PFY13 Debt Service Expenses
\$ millions

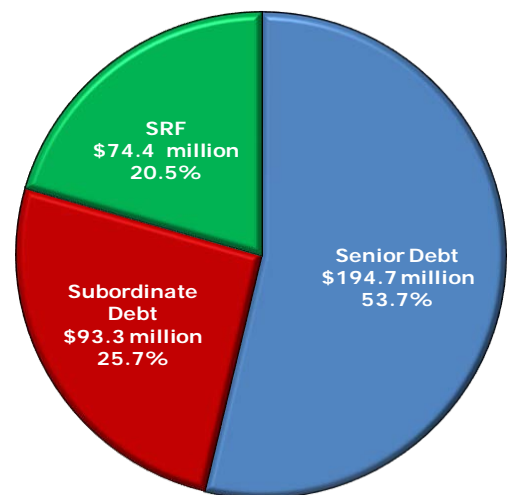


Figure 16

SRF Borrowings

- The Authority is assuming debt service on SRF borrowings totaling \$74.4 million.
- New borrowings of \$58.6 million from Pool 16 and \$50 million from Pool 17 totaling \$108.6 million are assumed during FY13. MWRA also notes the potential for additional replacement loans from funds unspent by other borrowers.
- Outstanding SRF borrowings total \$1,056.5 million or 19% of all outstanding debt as of January 3, 2012.

- Due to the sizable distribution through the SRF program of the American Recovery and Reinvestment Act (ARRA) funds, the Massachusetts Water Pollution Abatement Trust (MWPAT) is behind in its borrowing schedule
 - Pool 16 was originally scheduled for issue in March 2010; later revisions to the schedule delayed it to October 2010, then spring 2011, then spring 2012, and now summer 2012 put the issue at about two years later than the original schedule.
 - Pool 17 was included in the FY12 CEB with a spring 2012 issuance date; staff now reports that the current schedule is November 2012 although the issuance may be delayed until the winter or spring of 2013.
 - MWRA has received notice of eligibility of \$45 million for Pool 18, but given the other schedule revisions, no debt service payments associated with this borrowing have been included in the proposed FY13 CEB.
- MWPAT has indicated that there is an interim loan process enabling a borrower to be reimbursed for project-related costs at a loan rate of 0.14% until the project loan is bonded.
- **The Advisory Board recommends that the Authority conduct a cost-benefit analysis of using interim SRF loan funding until Pool 16, Pool 17 and Pool 18 bond series are issued.**

Bond Defeasance and Refunding

- The proposed FY13 CEB budget includes a \$20.69 million defeasance transaction in June 2012.
- Since 2006, MWRA has defeased \$241.7 million for targeted debt service reductions over multiple years:

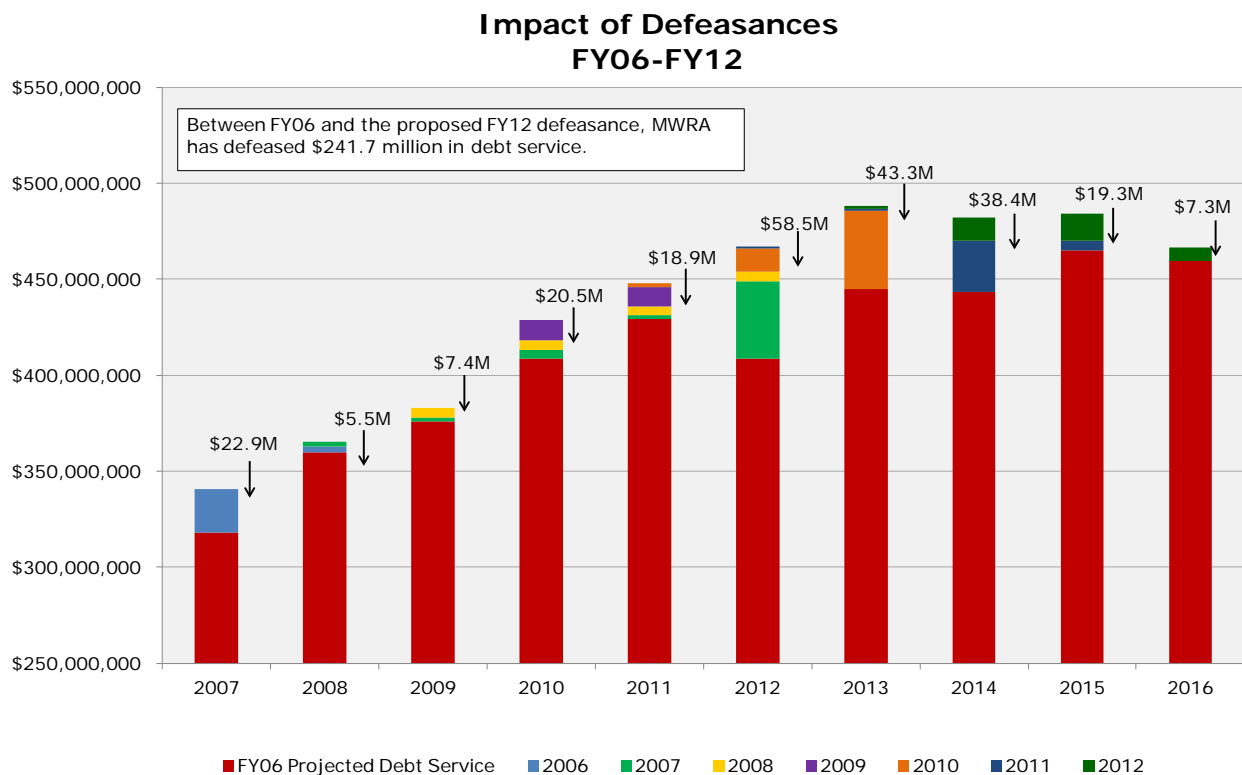


Figure 17

- The Authority continues to look for opportunities for refunding and refinancing. Staff reports that there are not many opportunities in the next several years, but there are more candidates for refunding toward the middle of the decade.
- Recently, the Authority adopted a policy to transfer surplus funds from underspending on debt service to a separate account dedicated for defeasance to manage rates. This was done to ensure that the funds were used in a manner consistent for which they were raised from the ratepayers.

- The Advisory Board recommends that moving forward the Authority formally adopt the current approach to transfer all surplus funds related to debt service into a fund dedicated for future defeasance to ensure that the funds are utilized for their originally intended purpose.
- The Advisory Board estimates that the actual surplus will be higher than the current amount proposed for defeasance, some from debt service underspending, some from other line items.
- *The Advisory Board expects any additional surplus from debt service line items will be used to augment the defeasance transaction currently scheduled for June 2012, consistent with the policy voted by the MWRA Board of Directors.*
- The Advisory Board recommends that any FY12 surplus not associated with debt service be used as a tool to reduce the rate revenue requirement to 3% in FY13 with any remaining funds deposited into the rate stabilization account.

Other Components of Capital Financing Expense

- Water Pipeline Commercial Paper (\$3,640,517)
 - Interest payments for:
 - Local Pipeline Assistance Program (LPAP)
 - Local Water System Assistance Program (LWSAP)
 - Assumptions include:
 - 3.25% interest rate (the same as FY11 and FY12 budgets)
 - \$112 million average balance of commercial paper outstanding (FY12 assumption: \$105 million)
- Chelsea facility capital lease payment (\$3.217 million)
 - The amount has remained the same since 2002.
- Current revenue for the capital program (\$8.2 million)
 - FY11 and in FY12 budgets: \$7.2 million

Debt Service Offsets

- Bond Redemption Funds
 - FY13 budget: \$0
 - Current balance: \$33 million
- Debt Service Assistance (DSA)
 - FY13 budget: \$0
 - Statewide program House budget: \$500,000
 - Authority estimated portion: \$350,000

It should be noted that the Advisory Board's recommendation of achieving a 3.0% rate revenue requirement increase assumes the receipt of the Authority's share of DSA. The House budget had \$500,000 in DSA included for the statewide program. At the time of this writing, the Senate budget did not. The Advisory Board reaffirms its belief that it is critical to keep the line item funded and as the state economy grows, so will this line item. ***The Advisory Board trusts that the final FY13 state budget will include DSA, but fully expect that the 3% rate revenue requirement will not be achieved without it.***

- Bond covenant changes from January 2001 will allow certain reserves balances to be released when $\frac{3}{4}$ of outstanding principal has been issued or restructured pursuant to the revised covenants.
 - Current projected release in FY16
 - Current projected release total: \$112 million
 - Funds eligible for release before FY16 are included in ongoing defeasance transactions.

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

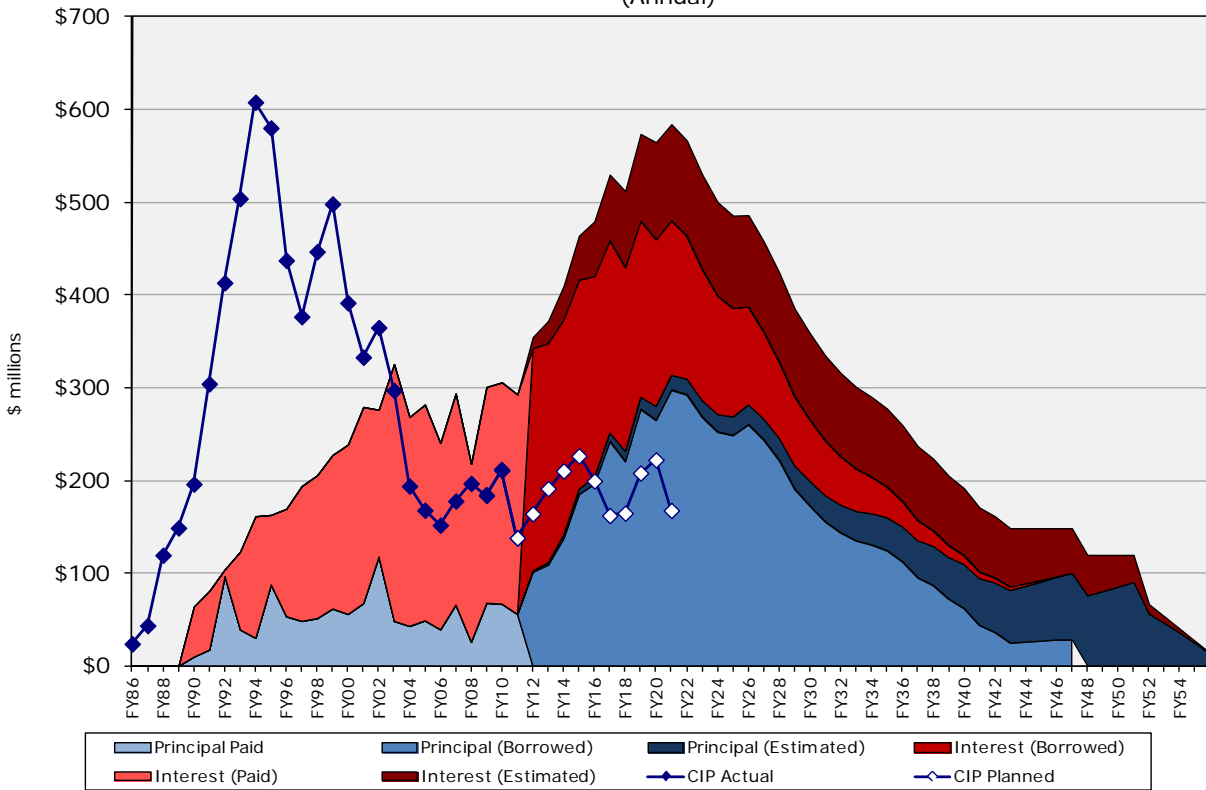


Figure 18

- Debt service payments increase rapidly in the coming years and peak in 2021.
- 2017 is the first year more principal than interest will be paid.
- Debt service payments will not return to today's levels until 2027.

Table 18

Proposed Fiscal Year 2013 Personnel Expenses Summary (\$s)				
<i>Line Item/Description</i>	<i>Final FY12</i>	<i>Proposed FY13</i>	<i>Δ (\$s)</i>	<i>Δ (%)</i>
<i>Regular Pay</i>	88,844,052	92,710,371	3,866,319	4.4%
Regular wages and salaries for full- and part-time employees.				
<i>Other Pay</i>	1,474,962	1,412,223	-62,739	-4.3%
Includes shift differential, holiday pay, temporary employees, interns/co-ops, and stand by pay.				
Wages and Salaries Subtotal	90,319,014	94,122,594	3,803,580	4.2%
Fringe Benefits	17,954,076	18,803,154	849,078	4.7%
Includes health insurance, dental insurance, Medicare, and all other fringe benefits.				
Overtime	3,508,630	3,684,062	175,432	5.0%
For planned maintenance, emergency, and coverage.				
Workers' Compensation	\$2,100,000	\$2,100,000	\$0	0.0%
Includes compensation payments, medical payments, and other related costs.				
TOTAL PERSONNEL EXPENSES	\$113,881,720	\$118,709,810	\$4,828,090	4.2%

Other Highlights

- The significant wages and salaries increase is due to the impacts of new union agreements.
- Average funding staffing level: 1,195 funded positions
 - Staffing level assumption: 1,200 funded positions
 - Vacancy rate equivalent: 5 positions
 - FY12 budget: 1,205 funded positions
- Fringe benefits increase primarily due to an assumed health insurance increase of 5%.
- Overtime increase primarily due to FY12 and FY13 wage increases.

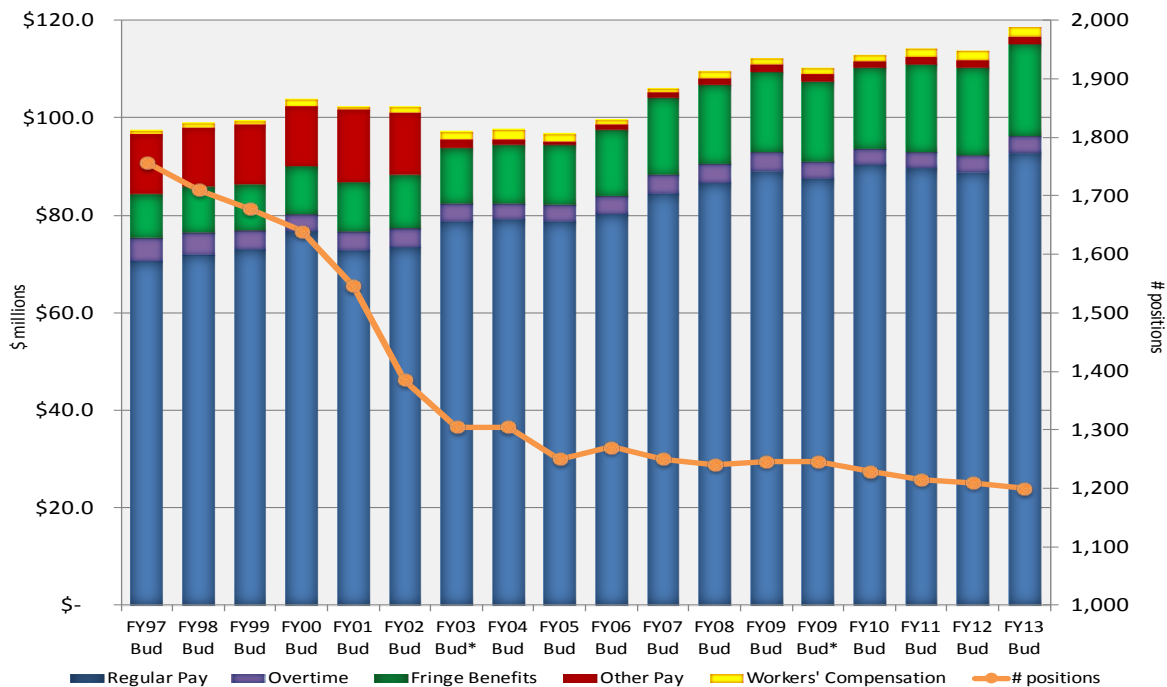


Figure 19

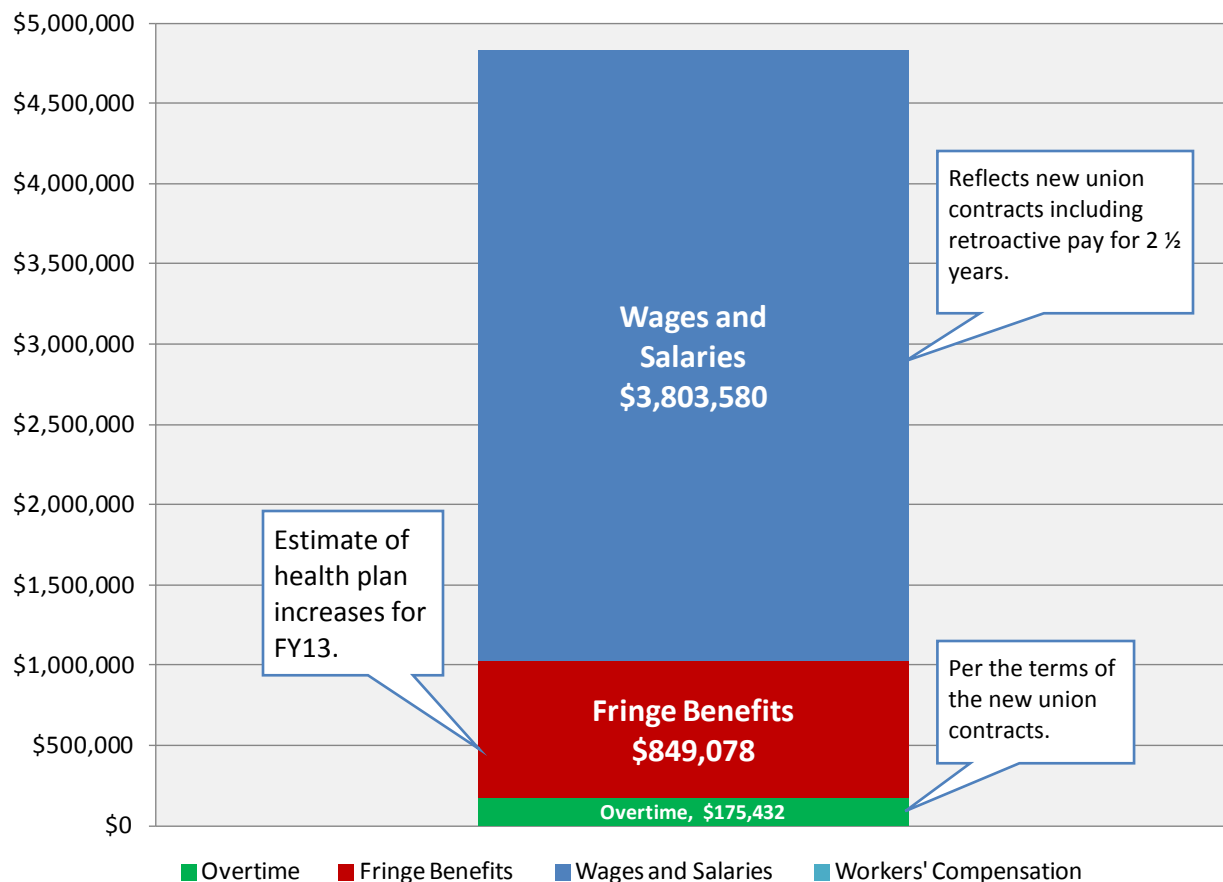


Figure 20

- Staffing levels have dropped ⅓ since the peak of 1,775 in March 1997.
- March 2012 staffing level: 1,187 filled positions
- Fringe benefits to be updated in the final CEB, based on new data released in April.
- Workers' compensation is level-funded from FY12
- Current projections for workers' compensation accruals: \$378,000 (18%) below budget.
- The staffing study was recently completed and was presented to the Board of Directors at the May 2012 meeting.

Proposed FY13 Fringe Benefit Expenses

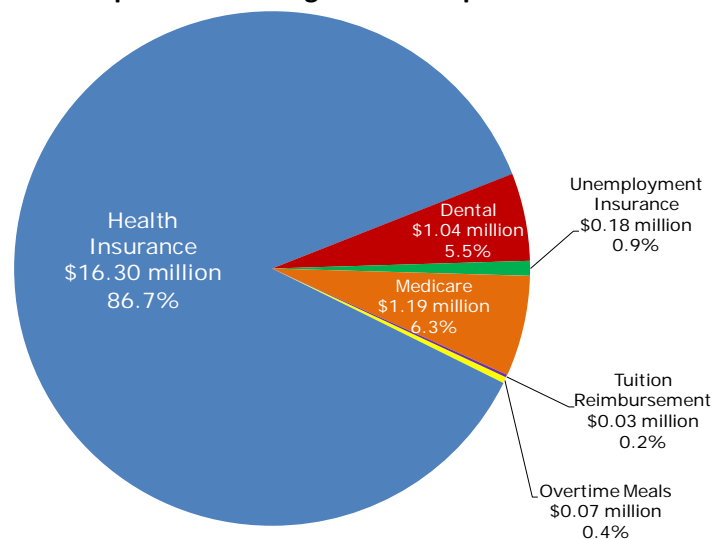


Figure 21

Staffing Study

The staffing study was first proposed by the Advisory Board's representatives to the MWRA Board of Directors in March 2010. The study was to follow up the most recent staffing assessment study conducted by Black and Veatch in 2002.

The Advisory Board had two appointed members on the 11-member staffing study working committee, which was charged with developing the scope of the staffing study, selecting the consultant, and reviewing the results before they were finalized and presented to the MWRA Board of Directors.

The charge of the consultant (Amawalk Consulting Group in association with PEER Consultants) was to compare MWRA staffing levels, overtime and stand-by usage to comparable water and/or wastewater utilities. Amawalk was selected by the committee largely based upon its experience with the Qualserve benchmarking program, which was utilized in this report. The staffing study took longer than originally anticipated due to the difficulty of finding comparable agencies or adjusting data to account for the differences between agencies. Indeed, the consultants admitted to the Board of Directors not one directly comparable agency was found when evaluating the Authority against other agencies nationwide. The size and scope of the Authority's facilities and service area, its role as a wholesaler versus retail entities, and the manner in which it structures staffing for its operations made it different from every entity surveyed.

While it is completely understandable that each agency structures itself differently and therefore would make comparisons difficult, the Advisory Board remains concerned about the implications of this fact. Additionally, the consultant notes that there are around 200 positions in the Operations Division for which no comparables were found. With such a disconnect between the comparable agencies surveyed and the Authority, the conclusions drawn by the consultant, including recommended five-year reduction ranges by division are, at best, questionable.

Succession Planning

Not covered by the scope of the study is the subject of succession planning. The staffing study reports that the average age of water and wastewater utility workers in the United States (46 years old) tends to be higher than the national average (42 years old). More concerning is that the average age of Authority employees is 52. In fact, 64% of MWRA employees are currently eligible for retirement.

The Authority reports that it has begun to document procedures and knowledge that might be lost with pending retirements and will be making a detailed presentation to the Board of Directors on the topic soon.

Ensuring knowledge is not lost is certainly important, but the sobering statistic of employees eligible for retirement leads **the Advisory Board to recommend that MWRA build upon efforts already achieved, and develop a comprehensive and detailed succession plan utilizing internal resources and outside consultants if deemed necessary.**

Table 19

Proposed Fiscal Year 2013 Indirect Expenses Summary (\$s)				
Line Item/Description	Final FY12	Proposed FY113	Δ (\$s)	Δ (%)
Pension	\$7,340,438	\$5,750,085	-\$1,590,353	-21.7%
Scheduled updated contribution to retirement fund. FY12 included a \$1.9 million optional payment. FY13 funded at annual required amount.				
Post-Employment Benefits	0	4,724,291	4,724,291	-
All other benefits for retirees (e.g. health insurance). FY13 represents ½ of actuarial study recommended amount.				
Insurance	2,285,870	2,037,875	-247,995	-10.8%
Insurance and pyaments/claims.				
Mitigation Payments	1,528,700	1,566,923	38,223	2.5%
Mitigation payments to Quincy and Winthrop.				
HEEC Payments	3,965,500	3,741,915	-223,585	-5.6%
Cross harbor cable to Deer Island (includes both debt service and O&M components).				
Watershed Reimbursements	25,576,274	26,433,175	856,901	3.4%
Supports the operations and related costs of the state's Department of Conservation and Recreation, Office of Watershed Management.				
Additions to Reserves	195,468	970,958	775,490	396.7%
1/6th of all planned Operating Expenses.				
TOTAL INDIRECT EXPENSES	\$40,892,250	\$45,225,222	\$4,332,972	10.6%

Other Highlights

- FY13 would be the first year of OPEB funding at this level. Planning projections include the assumption of half the actuarial required contribution in future years.
- The pension is funded at 87.6% and is expected to reach full funding by FY24. A new actuarial study will be conducted January 2013.
- Insurance expenses decrease due to lower anticipated claims and is based on a 3-year average. The insurance program is out for bid with award anticipated for later this spring, and remains on an annual renewal schedule.
- HEEC payments for O&M and debt service charges decline. The current agreement runs to May 2015.
- Watershed expenses rise while revenues decrease.

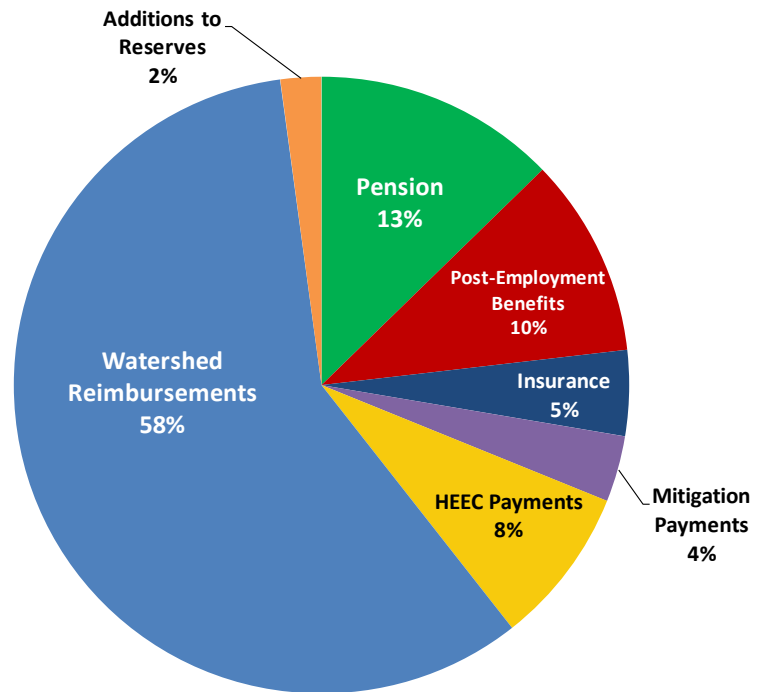


Figure 22

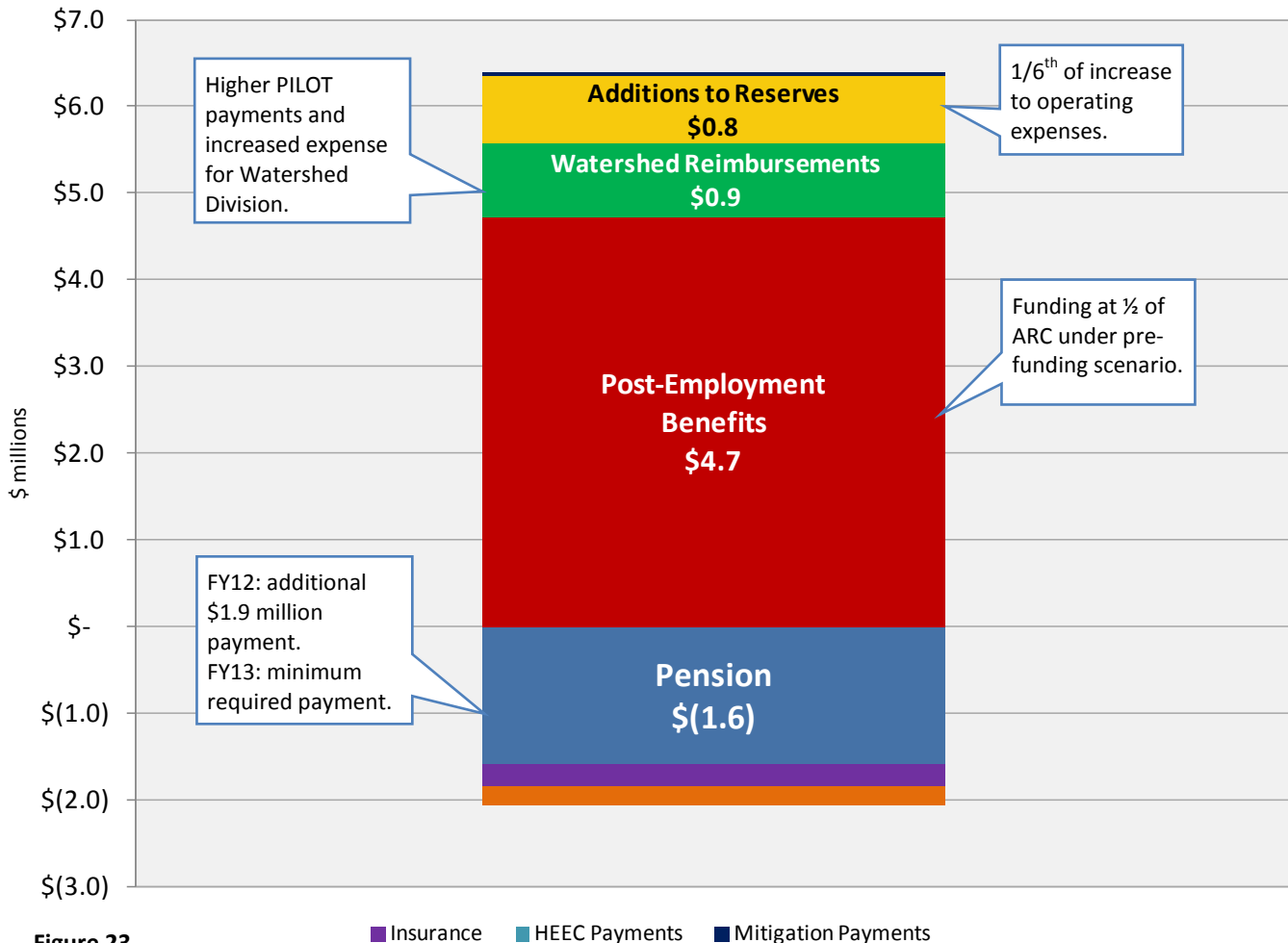


Figure 23

- Operating reserve deposits rise measurably, reflecting the increases in direct expenses.
- Mitigation payments are set by agreement with each community and are proposed to increase by 2.5%.

Table 20

Watershed Reimbursement ⁹				
EXPENSES	FY12 Budget	FY13 Proposed	Δ (\$s)	Δ (%)
Operating Expenses	\$13,832,441	\$14,183,341	\$350,900	2.5%
Debt Service	5,608,833	5,608,833	0	0.0%
Revenue	1,165,000	959,000	(206,000)	-17.7%
SUBTOTAL	\$18,276,274	\$18,833,174	\$556,900	3.0%
Payment in Lieu of Taxes (PILOT)	7,300,000	7,600,000	300,000	4.1%
TOTAL	\$25,576,274	\$26,433,174	\$856,900	3.4%

- Watershed reimbursement expense rises for the costs of the Office of Watershed Management by \$856,900 to \$26,433,174, an increase of 3.4%. The reimbursement charge is also rising due to lower revenues from watershed

⁹ Data from DCR Office of Watershed Management.

related programs. PILOT payments rise by 4.1% to \$7,600,000 while watershed debt payments reflect an even multi-year payment schedule and remain at \$5,608,833.

- 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.

Table 21

Watershed Revenues				
EXPENSES	FY12 Budget	FY13 Proposed	Δ (\$s)	Δ (%)
Interment Fees	\$0	\$0	\$0	-
Fish & Boating/Deer Hunt	275,000	270,000	(5,000)	-1.8%
Rents	0	0	0	-
Forestry Sales	350,000	200,000	(150,000)	-42.9%
Miscellaneous	15,000	15,000	0	0.0%
Prior Year Refunds	0	0	0	-
Hydropower/Tr Lines	525,000	474,000	(51,000)	-9.7%
TOTAL	\$1,165,000	\$959,000	(\$206,000)	-17.7%

Policy Discussion

Other Post-Employment Benefits and Pension

The Advisory Board has made numerous recommendations regarding Other Post-Employment Benefits (OPEB) and funding the Authority's retirement fund. The Authority and the Advisory Board have adopted the view first presented by the MWRA's financial advisors that the pension fund and OPEB represent one total liability, and has focused on first fully funding the pension before addressing OPEB. Following this strategy, the FY12 budget included an optional payment of \$1.9 million beyond the minimum required payment to the retirement fund. While \$4.7 million has been proposed in the Authority's FY13 CEB, the Authority has agreed that it will seek specific direction and authorization from the MWRA Board of Directors about how these funds will be used.

The Advisory Board does not deny that OPEB is a very real liability and will one day need to be addressed; however, given that deposits to the retirement fund provide a greater rate of return and help to reduce the Authority's combined liability, the **Advisory Board recommends that the \$4.7 million proposed for Other Post-Employment Benefits be redirected to the retirement fund.**

Watershed

The Advisory Board has made its concerns over the current moratorium on DCR's forestry management program very clear to all involved. Given that there does not appear to be a successful resolution of this issue before FY13 begins, the **Advisory Board recommends that DCR remove projected revenues from the forestry program and reduce its operating expenses by the same amount by delaying projects such as the Wachusett Carpenter Shop Replacement, abandoned structures demolition, and equipment storage facilities at Quabbin currently scheduled for FY13.**

While loss of revenue is certainly not ideal, more germane to this matter are the potential effects upon the MWRA's drinking water. DCR has asserted that active forestry management is an integral part of protecting the quality of the MWRA's drinking water, but the moratorium has placed this program on hold for almost two years. At some point the

lack of forestry management will have a negative effect upon water quality. It is critical that this program be resumed as quickly as possible. **Therefore, the Advisory Board recommends that the most recent draft of the Science and Technical Advisory Committee (STAC) report be brought to the MWRA Board of Directors in June 2012 to allow for its findings to be included in the Final Current Expense Budget.**

Non-Water Supply Dams

To clarify its responsibility with regard to water supply protection the Authority has a Memorandum of Understanding with the Commonwealth. This language is very clear that all dams related directly to the water supply are strictly in the care of the Authority. Likewise, those dams that exist in the watershed, but do not have a direct impact upon the protection of the water supply, remain in the care of the Commonwealth.

At recent MWRA Board of Directors meetings, the issue of removing Brigham Pond Dam, which is not related to the water supply, has been discussed. The Advisory Board feels strongly that expending any ratepayer funds on dams not within its charge creates a dangerous precedent, and as such **recommends that the Authority remove, or that DCR find alternative funding for, any dam work that does not directly impact the water supply.**

Table 22

Proposed Fiscal Year 2013 Maintenance Expense Summary (\$s)				
<i>Line Item/Description</i>	<i>Final FY12</i>	<i>Proposed FY13</i>	<i>Δ (\$s)</i>	<i>Δ (%)</i>
Buildings and Grounds Expense	\$4,324,926	\$4,027,949	-296,977	-6.9%
Materials and services for maintaining buildings and grounds.				
Automotive Expense	667,500	667,500	0	0.0%
Materials and services for maintaining vehicles.				
Plant and Machinery Expense	12,222,175	12,771,395	549,220	4.5%
Materials and services for maintaining plant and machinery expenses. (E.g. drive chains, facility painting and coating)				
Pipeline Expense	1,075,562	1,165,562	90,000	8.4%
Materials and services for maintaining pipeline.				
Specialized Equipment Expense	3,878,689	3,350,749	-527,940	-13.6%
Materials and services for specialized equipment. (E.g. grit screens, lab equipment repairs, sewer bucketing equipment)				
Computer Expense	2,905,346	2,685,222	-220,124	-7.6%
Includes materials services, software licenses and upgrades.				
Electrical Expense	3,429,227	2,572,200	-857,027	-25.0%
Materials and services for maintaining electrical systems.				
All Other Maintenance Expense	966,596	1,093,066	126,470	13.1%
Includes HVAC materials and services and purchase cards.				
TOTAL MAINTENANCE EXPENSE	\$29,470,021	\$28,333,643	-\$1,136,378	-3.9%

Other Highlights

- Maintenance spending has been decreased to reflect historical spending and institutional capacity.
- Maintenance expense is 13% of all direct expenses.
- Deer Island accounts for 44% of all maintenance expense (\$12.6 million).
- Another 37%, or \$10.5 million, is for Field Operations, including the CWTP, headworks, CSO facilities, and water and wastewater pump stations.
- All other Operations Division maintenance expense is \$1.5 million and includes \$1.0 million for the residuals pelletizing plant plus \$0.22 million for the Clinton Wastewater Treatment Plant, plus \$0.28 million for laboratory services.
- All other maintenance expense totals \$3.7 million, or 13%, of total maintenance expense including \$2.56 million for MIS and \$0.72 million for fleet maintenance.
- Maintenance is also funded through the technical assistance group of engineering contracts and through the capital program.

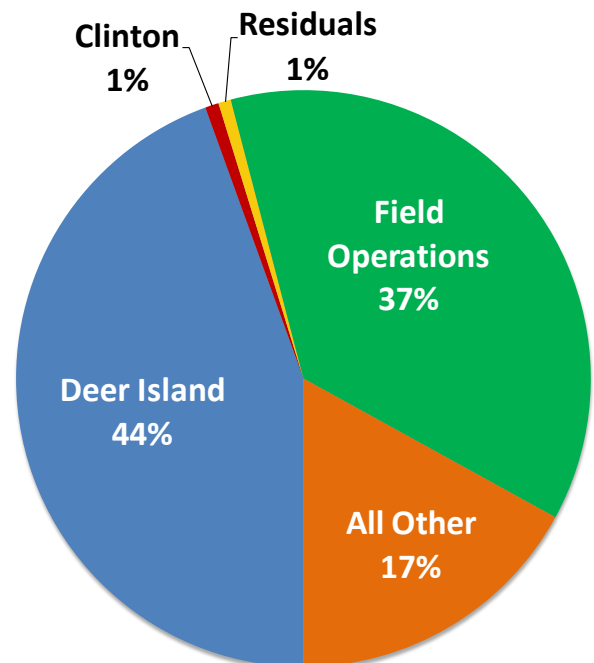


Figure 24

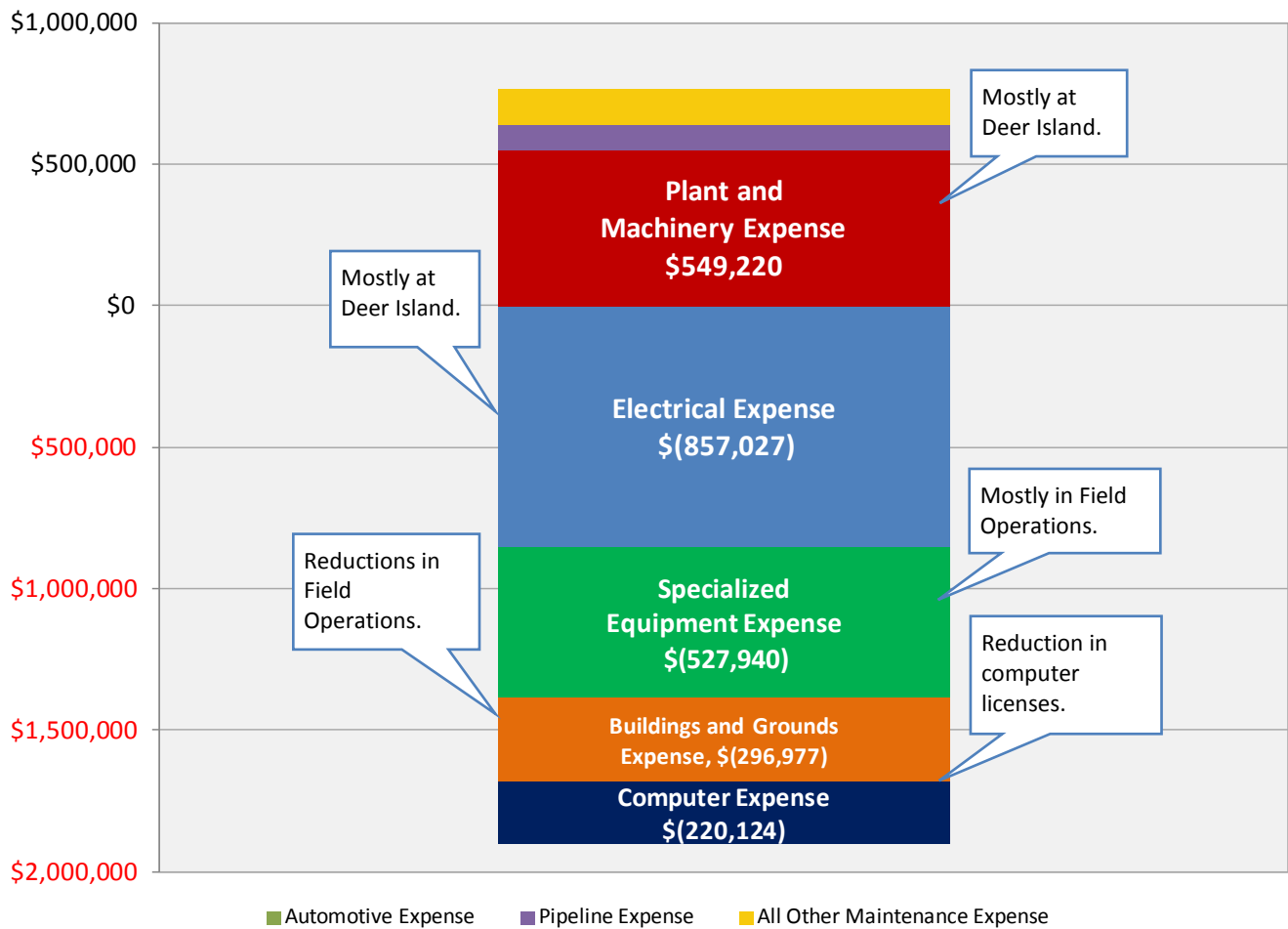


Figure 25

Deer Island Maintenance totals \$12.6 million

- Materials: \$5.6 million
- Services: \$7.0 million
- Deer Island maintenance decreases \$175,000 or 1.4% from FY12.
- Most of the reduction is for electrical services and materials.
- Plant and machinery services and materials total \$8.2 million or nearly two-thirds of all Deer Island maintenance expense.
- \$2.1 million is for electrical system maintenance and \$1.3 million is for building and grounds work.
- Seven projects or contracts over \$500,000 include:
 1. Facility painting and coating
 2. Liquid train maintenance
 3. Boiler maintenance
 4. Residuals maintenance

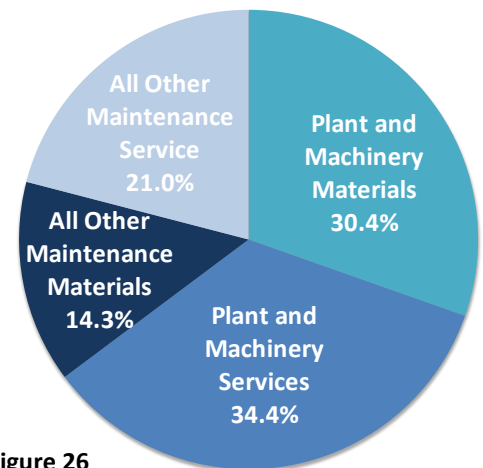


Figure 26

5. Janitorial services
6. Purchase of hydraulic actuators
7. Cryogenic maintenance services.

Field Operations Department (FOD) Maintenance totals \$10.5 million

- FOD maintenance decreases \$846,000 (7.5%) from FY12.
- The decrease reflects the completion of many critical and high-cost projects.
- Project spending decreases by \$0.93 million
- \$2.8 million is included for major projects in FY13, including:
 - Prison Point pump rebuild (\$0.45 million)
 - Manhole rehabilitation contract (\$0.18 million)
 - Repair or replacement of cargo hatches (\$0.15 million)
 - Replacement of 10 wastewater flow meters (\$0.125 million)
- Nearly 50 maintenance projects are planned for FY13.
- Day-to-day costs increase by \$0.12 million to \$3.8 million. Funding is included for materials and parts for each program.
- Energy initiatives are funded at \$520,000 or \$50,000 lower than for FY12 including:
 - HVAC and lighting efficiency upgrades at various facilities
 - LED lighting replacement
 - HVAC upgrade at the Chelsea facility
- Services increase by \$16,000 to accommodate increases in the eastern grounds contract and an increase in electrical testing and maintenance.
- Over 20 service contracts over \$50,000 are listed for FY13 including:
 - Paving
 - HVAC preventive and corrective services
 - High voltage and medium voltage service contracts
 - Diesel generator services
 - Fire alarm services
 - Wastewater metering service contract

Residuals Pelletizing Facility Maintenance totals \$1.0 million

- Budget increases \$80,000 to adjust for inflation.
- Most of the amount is for capital repair, replacement and improvement projects for the New England Fertilizer Company (NEFCo) contract, which includes a specific level of maintenance work each year, adjusted for inflation. Work includes the replacement of a dryer drum and tank cleaning.

Clinton Wastewater Treatment Plant Maintenance totals \$200,440

- Spending is 5% lower than the FY12 budget due to lower estimates for major project spending in FY13.
- \$50,000 is included for major projects based on the most current rolling priority list including:
 - Large submersible pumps
 - Landfill leachate well replacement pump
 - Pistons
 - Replacement belts for the belt filter presses
- The remainder of the budget is for routine materials and services including:
 - Groundskeeping and snow removal services
 - Fire alarm and fire sprinkler system service
 - Electrical, plumbing and instrumentation services.

Table 23

Proposed Fiscal Year 2013 Utilities Summary (\$s)				
Line Item/Description	Final FY12	Proposed FY13	Δ (\$s)	Δ (%)
Electricity Most facilities are powered by Electricity including DITP and CWTP.	\$16,448,794	\$16,798,895	\$350,101	2.1%
Diesel Fuel Heating, CTGs at DITP, and other backup generators.	3,668,770	4,508,305	839,535	22.9%
Water A "pass-through" cost to account for Water; self-supplied.	1,783,994	1,909,277	125,283	7.0%
Natural Gas Primarily used for heating various MWRA facilities	548,840	539,205	-9,635	-1.8%
All Other Utilities Oxygen, #2 Fuel Heating Oil, Propane, and all Other Utilities.	204,532	210,983	6,451	3.2%
TOTAL UTILITIES EXPENSES	\$22,654,930	\$23,966,665	\$1,311,735	5.8%

Other Highlights

- Electricity purchase declines by 4.72 million kWh but pricing increases by \$610,000. Net increase: \$350,101.
- Increases for transmission and distribution charges cause a 9% price increase at Deer Island; prices at all other facilities decline.
- Increased wind and solar energy generation and improved energy efficiency continues to reduce the amount of purchased electricity.
- Electricity prices in New England are driven by natural gas pricing rather than oil pricing.
- Diesel fuel increases almost entirely due to increased purchases for Deer Island to run the backup CTGs during wet weather; some fuel (25% of the Deer Island purchase) is used to run the boilers.
- 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 \$3.2 million for the cost of natural gas in the NEFCo contract.

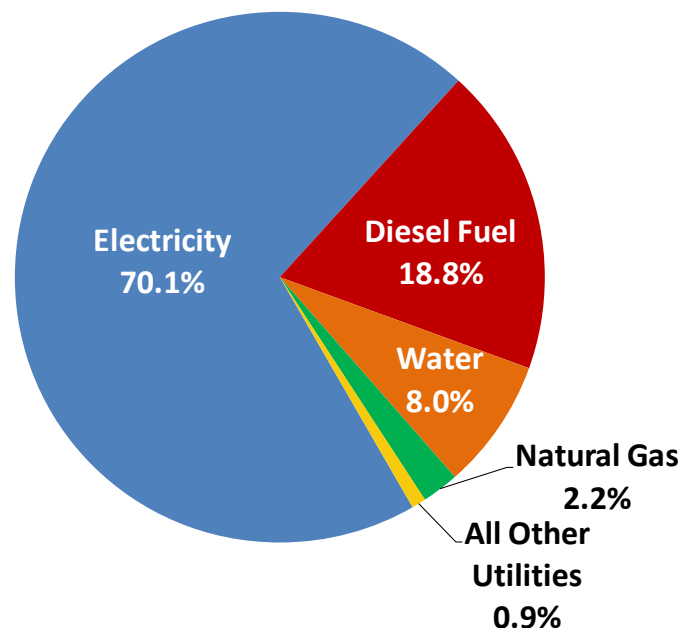


Figure 27

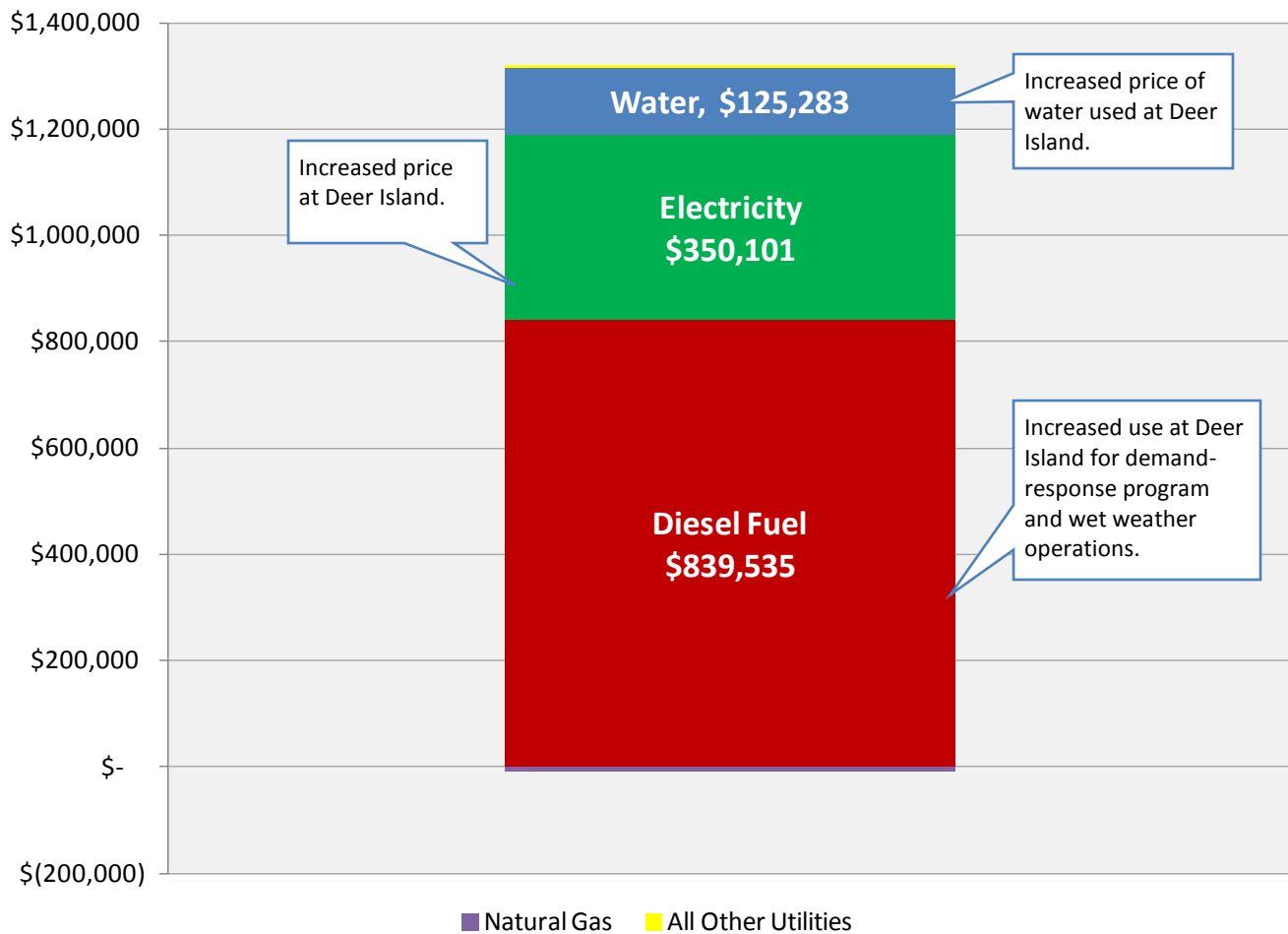


Figure 28

Electricity

- Deer Island electricity totals nearly \$10 million.
 - Self-generation and savings due to energy efficiencies increase by 6.3 million kWh.
 - FY13 increase: \$300 thousand.
 - The completion of the back pressure steam generator project contributes to most of the increased self-generation.
 - Deer Island is projected to self-generate 30% of its electricity needs.
 - The Authority is also pursuing a number of demand-side changes and initiatives.
- Field Operations Department (FOD) facility electricity expenses rise by \$90 thousand.
 - Prices under the new contract are lower.
 - Charlestown pump station purchases increase. Wind power will be sold to the grid with the benefit budgeted as non-rate revenue totaling \$256,335.
 - Framingham pump station purchases have increased due to increased use of SCADA controls.

Diesel Fuel

- Deer Island diesel fuel expense totals \$2.4 million.
 - FY13 increase: \$854 thousand
 - Assumes two more days of wet weather CTG use and more purchases to restore inventory, partially offset by \$71,500 in slightly lower price assumptions.
 - ***Price assumptions for the final budget may need to be increased to reflect recent changes in fuel pricing.***
- Field Operations Department diesel fuel purchases total \$2.1 million.
 - FY13 increase: \$59 thousand
 - Based on more usage at the water treatment plant for self-generation and increased purchases for wastewater and wet weather operations.

Natural Gas

- Natural gas purchases total nearly \$540,000
 - FY13 decrease: \$10,000
 - Natural gas is used at a number of facilities in the Field Operations Department.

Table 24

Proposed Fiscal Year 2013 Other Services Summary (\$s)				
<i>Line Item/Description</i>	<i>Final FY12</i>	<i>Proposed FY13</i>	<i>Δ (\$s)</i>	<i>Δ (%)</i>
Pelletization	\$14,140,214	\$14,596,161	\$455,947	3.2%
NEFCo contract to process and dispose of sludge pellets				
Lease	3,561,044	3,569,571	8,527	0.2%
Charlestown (\$1.68 million), Chelsea (\$1.76 million), Marlborough Records Center (\$95.8 thousand).				
Telephone	1,394,086	1,424,772	30,686	2.2%
Voice and data lines; Operations Division				
Grit and Screenings Removal	783,743	830,407	46,664	6.0%
Removal of grit and screened materials from various facilities.				
All Others	3,443,986	3,577,873	133,887	3.9%
Printing, membership dues/subscriptions, advertising; health/safety, police details; Advisory Board operations; various other services.				
TOTAL OTHER SERVICES EXPENSES	\$23,323,073	\$23,998,784	\$675,711	2.9%

Other Highlights

- New England Fertilizer Company (NEFCo) pelletizing operations are based on processing an average of 105.7 tons per day plus an inflation factor.
- Inflation factor accounts for most of the increase (\$436,000).
- The pelletizing contract runs from FY01 through December 2015.
- Grit and screenings are removed from Deer Island, the remote headworks, certain pump stations and CSO facilities.
 - Tonnages have increased at Deer Island and at the headworks due to mechanical improvements.
 - Current contract runs through May 2013.
- Lease costs increase slightly, reflecting an increase in taxes relating to the Chelsea lease.

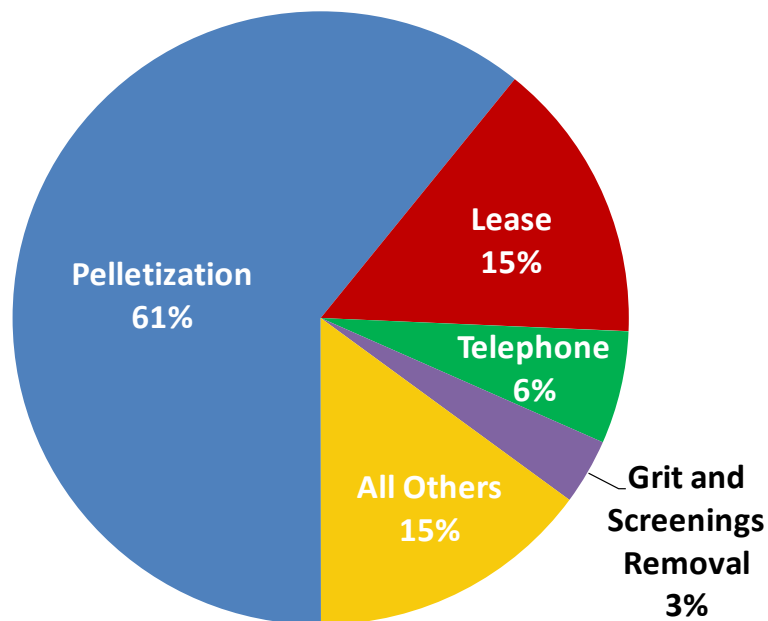


Figure 29

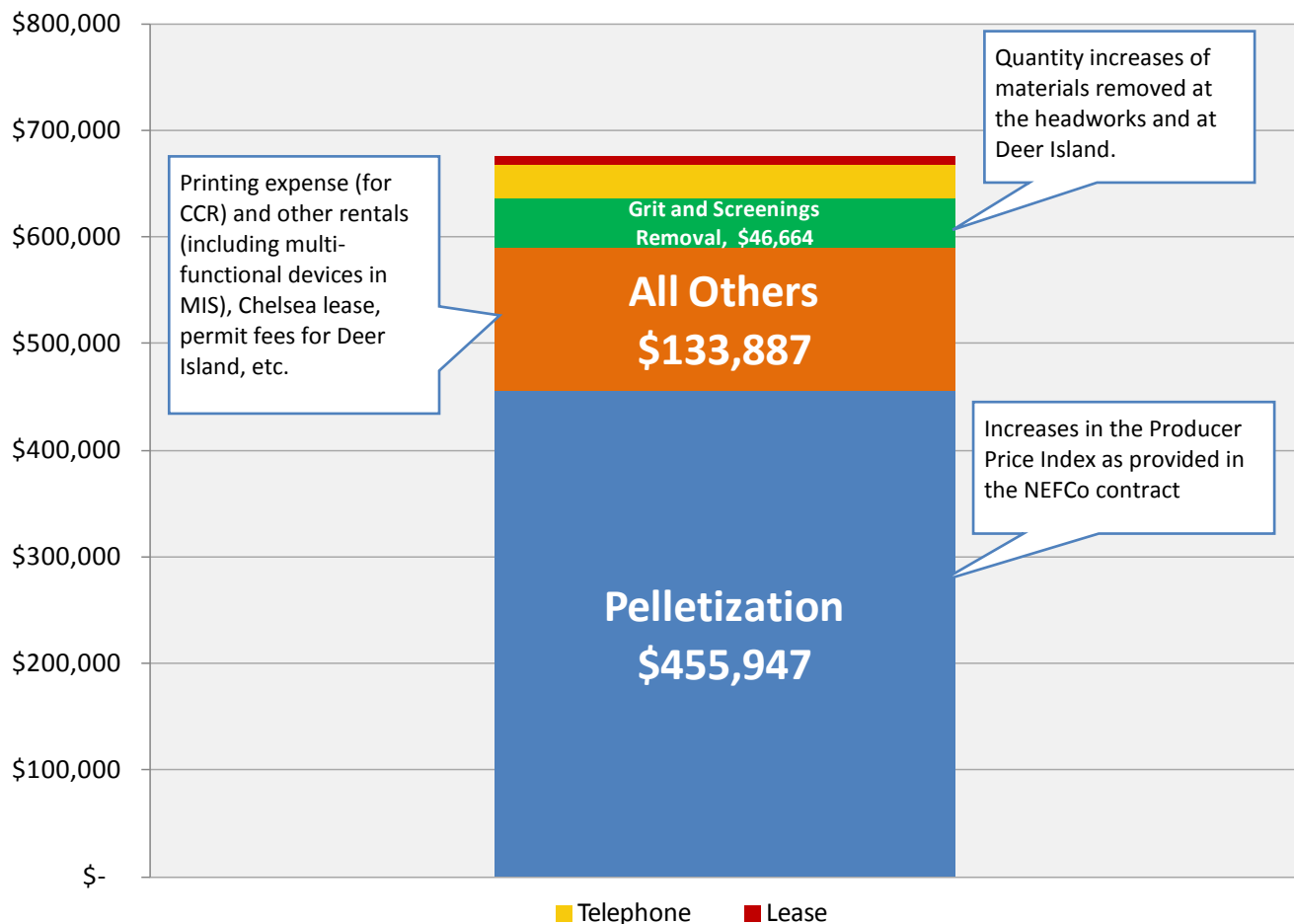


Figure 30

Pelletization

- FY13 proposed budget: \$14,596,161
 - Increase: \$455,947 (3%) from FY12.
 - Producer Price Index adjustments drive the increase, per the contract terms for NEFCo.
 - Much of the costs are fixed due to a base amount of 90 tons per day.
 - Each additional ton, on an annual basis, would be equivalent to an incremental cost of \$103,000/year.
 - Assumed quantity: 105.7 tons per day.
 - Residuals quantities have been slightly higher than budgeted due to recent work on digesters at Deer Island.
 - Spending through March: \$310,058 (3%) over budget.

Policy Discussion

Even under the terms of the existing contract, reducing even a few tons per day on average could result in measurable savings for the Authority. A reduction of five tons per day would equal lower spending of \$510,000; ten tons would result in savings of \$1,020,000.

The expiration of the contract affords the Authority the opportunity to revisit the terms of the existing contract, as well as to explore options for reducing processing costs, and perhaps, total quantities processed. The Authority's existing treatment program is reliable and it may be that the Authority may want to wait for emerging technologies to further develop, requiring an extension of the current pelletizing contract operation.

Given the delay and rebid of the contract to assess existing and potential new technologies related to processing and pelletization, it is a near certainty that the current contract will expire before any recommended changes to the current process 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 begin the process of investigating options for an extension of the current pelletization contract.** It can be anticipated that the process may take some time to develop and consider a number of scenarios, and then to negotiate with the contractor.

Some of the elements that are in the contract that could be considered are the base quantity of 90 tons per day and the expenses that are considered fixed, the use of the PPI or other indices for the inflation factor(s), and ongoing maintenance requirements. Other elements that are not enumerated in the contract involve product sales and placement including transportation and, if necessary, disposal costs, plus revenues. Regulatory issues could also be addressed, such as air emissions impacts on certain uses of the pellet product, such as use as a fuel alternative at cement kiln plants.

In the longer term, in anticipation of the expiration of the NEFCo contract in December 2015, the Authority has the opportunity to reduce operating costs of sludge treatment and disposal and currently has a revised contract out for bid for a residuals technology options assessment for facilities at Deer Island and at the Fore River pelletizing plant. The goal of the assessment is to "optimize the existing residuals processing operation and to identify potential long-term capital improvements such that the useful life of the residuals processing facilities is extended another 15 to 20 years." Existing facilities are themselves 15 to 20 years old.

In addition to exploring options for reducing quantities processed at Deer Island and the pelletizing plant, there is the potential for considering other operational changes that could result in increased energy resources, thereby reducing amounts of purchased electricity at Deer Island.

With regard to the long-term future of the residuals process, the Advisory Board recommends that the Authority target a goal of reducing costs associated with pelletization (or any alternative process selected) by \$2 million per year.

Police Details

- FY13 CEB: \$392,140
 - Spending increases \$362 thousand (8%) from FY12.
 - Spending through March: \$316,707 – \$48,000 (18%) greater than the year-to-date budget.
 - Police details are used for sewer, manhole, water and wastewater meter and water valve maintenance work, as well as in-house water valve and pipeline construction projects.
 - Police details are also used at capital construction projects. Costs often vary depending on the community where work is being done.

(See additional discussion on page 62.)

Table 25

Proposed Fiscal Year 2013 Chemicals Summary (\$s)				
Line Item/Description	Final FY12	Proposed FY13	Δ (\$s)	Δ (%)
Soda Ash Used primarily at the CWTP; some at Clinton WWTP.	\$3,371,810	\$3,317,769	-\$54,041	-1.6%
Sodium Hypochlorite Used for treatment at DITP (\$1.43 million) and CWTP (\$1.05 million). NPDES begins January 2013 and price increased.	1,994,093	2,645,561	651,468	32.7%
Hydrofluosilic Acid Fluoride control at CWTP. Reduced federal dosing recommendation assumed in January 2013 (\$110 thousand) with price adjustments.	761,165	675,108	-86,057	-11.3%
Liquid Oxygen Ozone generation at CWTP.	523,840	530,929	7,089	1.4%
Ferric/Ferrous Chloride For struvite control at DITP. Dramatic price increase due to increased global demand for new applications.	413,920	672,695	258,775	62.5%
Sodium Bisulfite For dechlorination of treated wastewater and water. Usage increased for new NPDES permit requirements.	364,502	680,812	316,310	86.8%
Activated Carbon For odor control at DITP.	316,251	311,309	-4,942	-1.6%
Carbon Dioxide To increase pH and alkalinity level of water supply at CWTP.	298,960	313,920	14,960	5.0%
Polymer Sludge thickening at DITP and Clinton. Expected reduction in Final FY13 due to new contract prices.	253,952	300,511	46,559	18.3%
All Other Chemicals For algae control; corrosion control in Framingham Relief Sewer and DITP.	748,781	923,138	174,357	23.3%
TOTAL CHEMICALS EXPENSES	\$9,047,274	\$10,371,752	\$1,324,478	14.6%

Other Highlights

- Proposed chemicals budget is 1.6% of all expenses and 4.8% of all direct expenses.
- Chemicals budget increases nearly 15% (\$1,324,481) largely due to additional sodium hypochlorite and sodium bisulfite to meet anticipated requirements of the new NPDES permit for enterococcus treatment at the Deer Island wastewater treatment plant. The proposed budget assumes new permit conditions will become effective January 1, 2013 for both the Deer Island and Clinton plants.
- Total Water Operations chemicals: \$6,135,446.
- Total Deer Island wastewater treatment plant chemicals: \$3,458,040.
- Total Other Wastewater facilities chemicals: \$496,721.
- Total Clinton wastewater treatment plant chemicals: \$281,546.

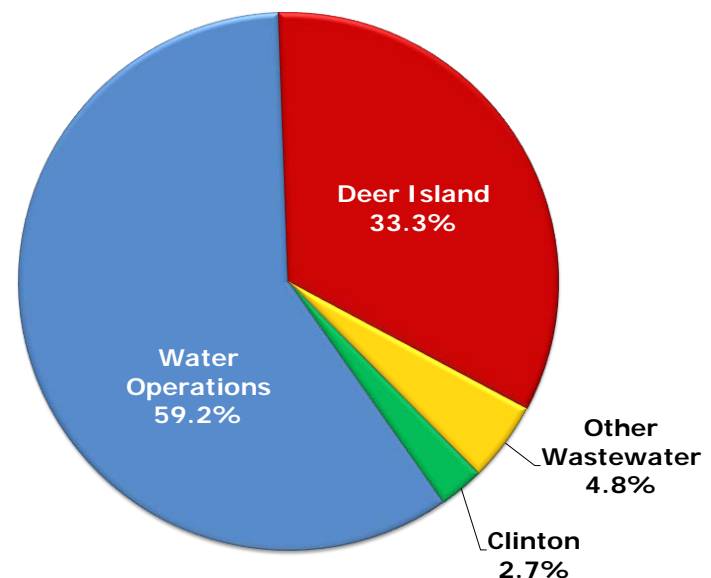


Figure 31

"DELTA REPORT"

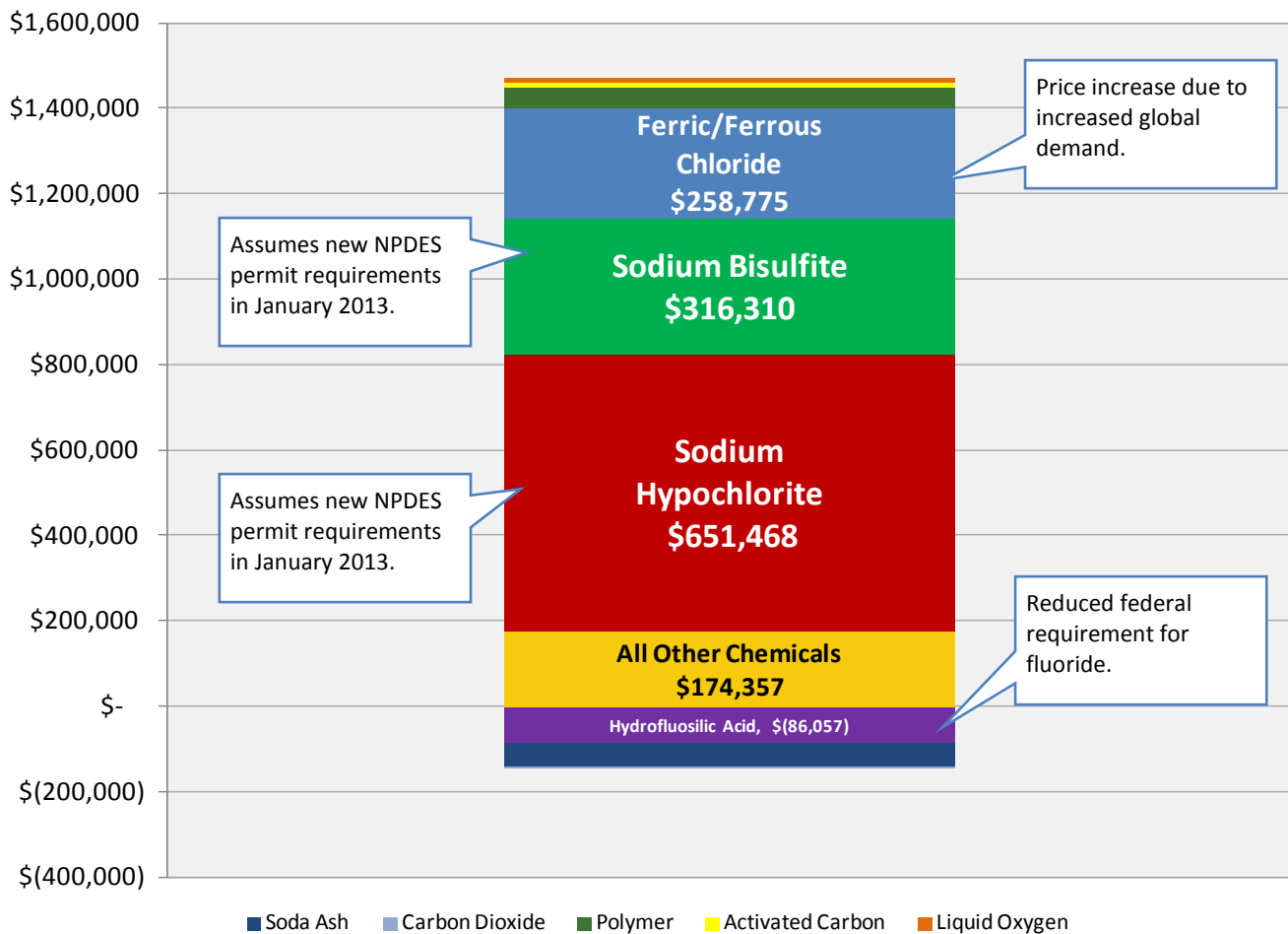


Figure 32

Regulatory Changes Impacts

- The National Pollutant Discharge Elimination System (NPDES) permit for Deer Island expired in August 2005.
- New permit with stricter enterococcus treatment assumed in January 2013: \$635 thousand increase.
- Reduced federal requirement for fluoride levels beginning in January 2013: **(\$85 thousand)**.

Price Impacts

- Sodium hypochlorite prices at Deer Island increase by 16% or \$346 thousand.
- Ferric chloride prices at Deer Island increase by \$150 thousand.
 - Now being used to extract natural gas from shale, increasing worldwide demand.
- Nitrazyme to control odors in the Framingham sewer increase \$106 thousand.
- Total net impact of price changes: \$565 thousand.

Usage Impacts

- Chemical usage optimization efforts continue (e.g. Nut Island and in the Framingham sewer).

- Demand for certain chemicals is also impacted by levels of flow or process conditions impact demand (e.g. ferrous chloride for struvite control).
- Total increases due to changes in quantity: \$865 thousand.

The Advisory Board recommends that the chemicals budgets be revised to reflect updated pricing, and to remove the assumption of 6 months of the next NPDES permit at Deer Island.

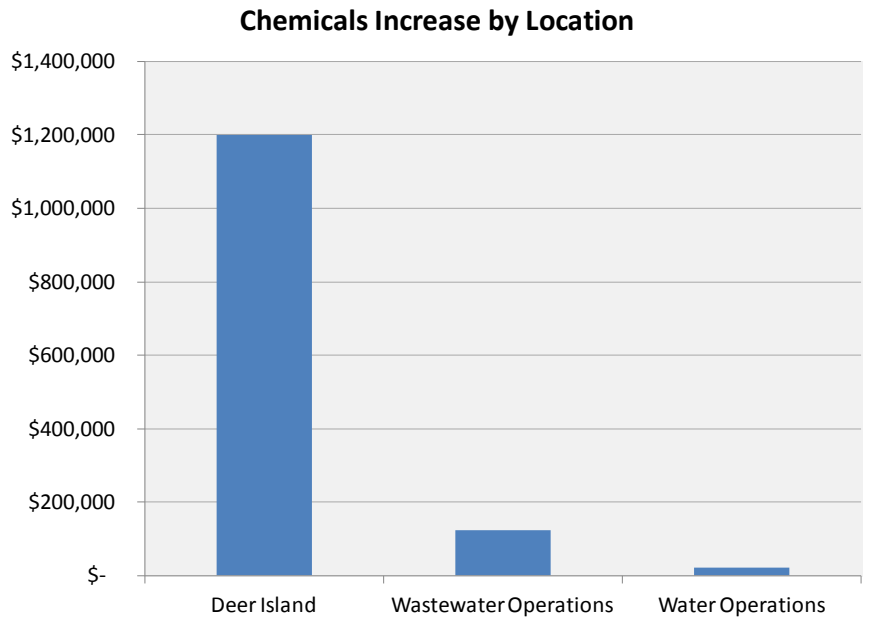


Figure 33

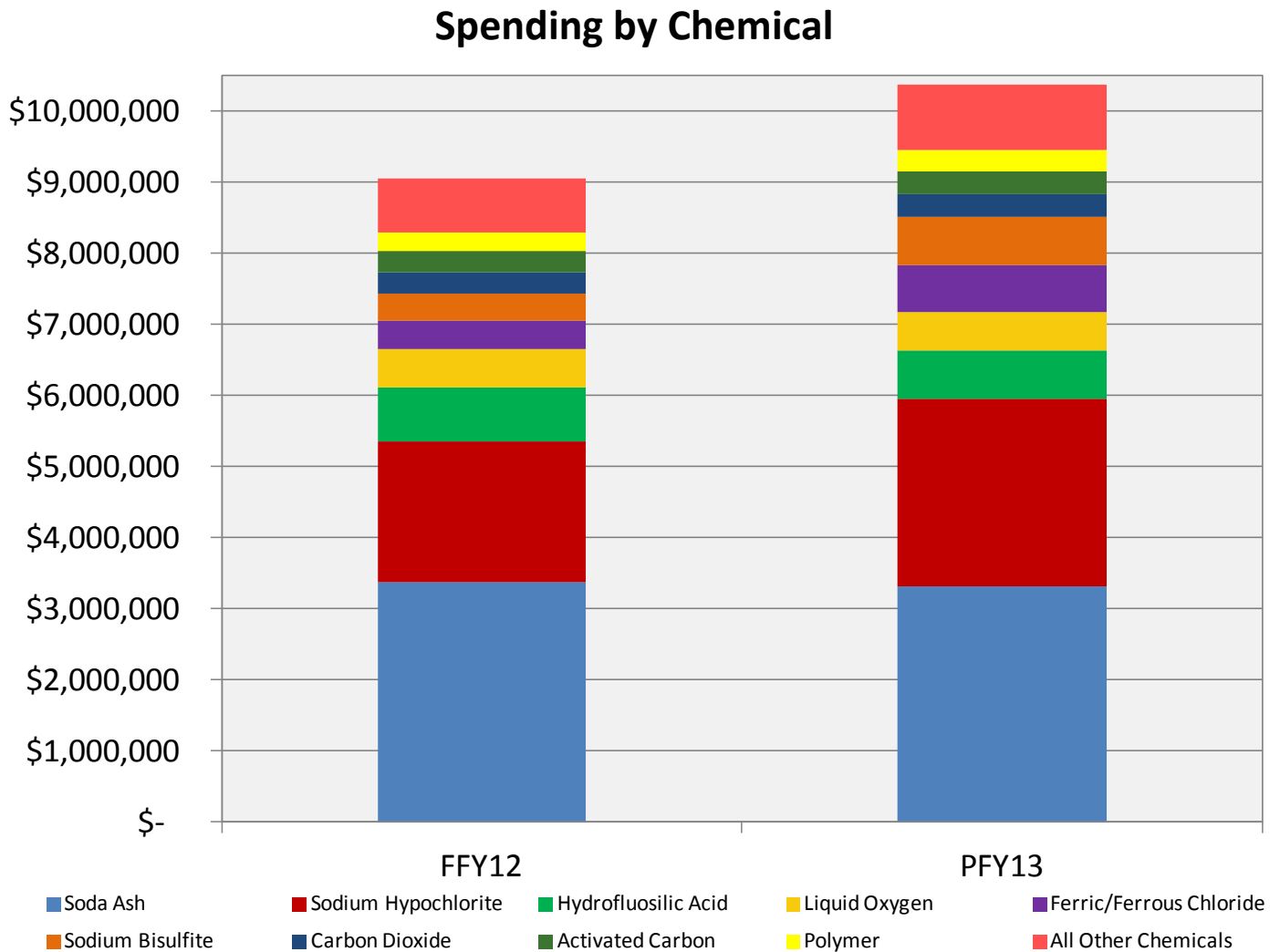


Figure 34

Table 26

Proposed Fiscal Year 2013 Professional Services Summary (\$s)				
<i>Line Item/Description</i>	<i>Final FY12</i>	<i>Proposed FY13</i>	<i>Δ (\$s)</i>	<i>Δ (%)</i>
Lab and Testing Analysis Primarily harbor and outfall monitoring; some specialized outside lab services.	\$1,642,836	\$1,543,557	-99,279	-6.0%
Security Security and guard contracts.	1,606,247	1,765,603	159,356	9.9%
Engineering Specialized outside services such as dam inspection; beach nourishment studies for Deer Island; as needed engineering support.	858,000	863,500	5,500	0.6%
All Other Professional Services Legal Services, Audit Services, Local Limits Study, Communications; energy audits	1,785,358	1,593,552	-191,806	-10.7%
TOTAL PROFESSIONAL SERVICES EXPENSES	\$5,892,441	\$5,766,212	-\$126,229	-2.1%

Other Highlights

- Professional services expenses have continued recent declines. The proposed FY13 budget is lower than actual spending for nine of the previous ten years.
- Harbor and Outfall Monitoring (HOM) costs are linked to the NPDES permit. Changes in the scope over the years and the transfer of some analysis to in-house staff have resulted in savings of an estimated \$800,000/year.
- FY13 budget for HOM declines by \$131,000.
- The new NPDES permit has not yet been released for discussion, which could affect HOM expenses.
- The increase for security services is driven by new terms in an 18-month extension of the security guard contracts for several major facilities.
- All other professional services includes:
 - Trustee and financial advisor services for the Finance Department
 - Insurance consultant services
 - Energy consulting services
 - Technical and professional development services for human resources
 - Workers' compensation claims administration fees
 - Legal services
 - Audit services
 - Communications including funding for WAC and WSCAC.
- Spending declines due to completion of MIS 5-year plan and completion of the staffing study.

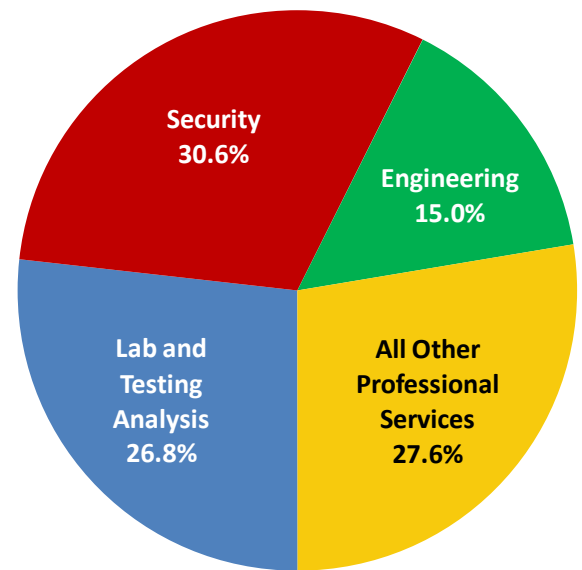


Figure 35

Professional Services Decrease \$126 thousand

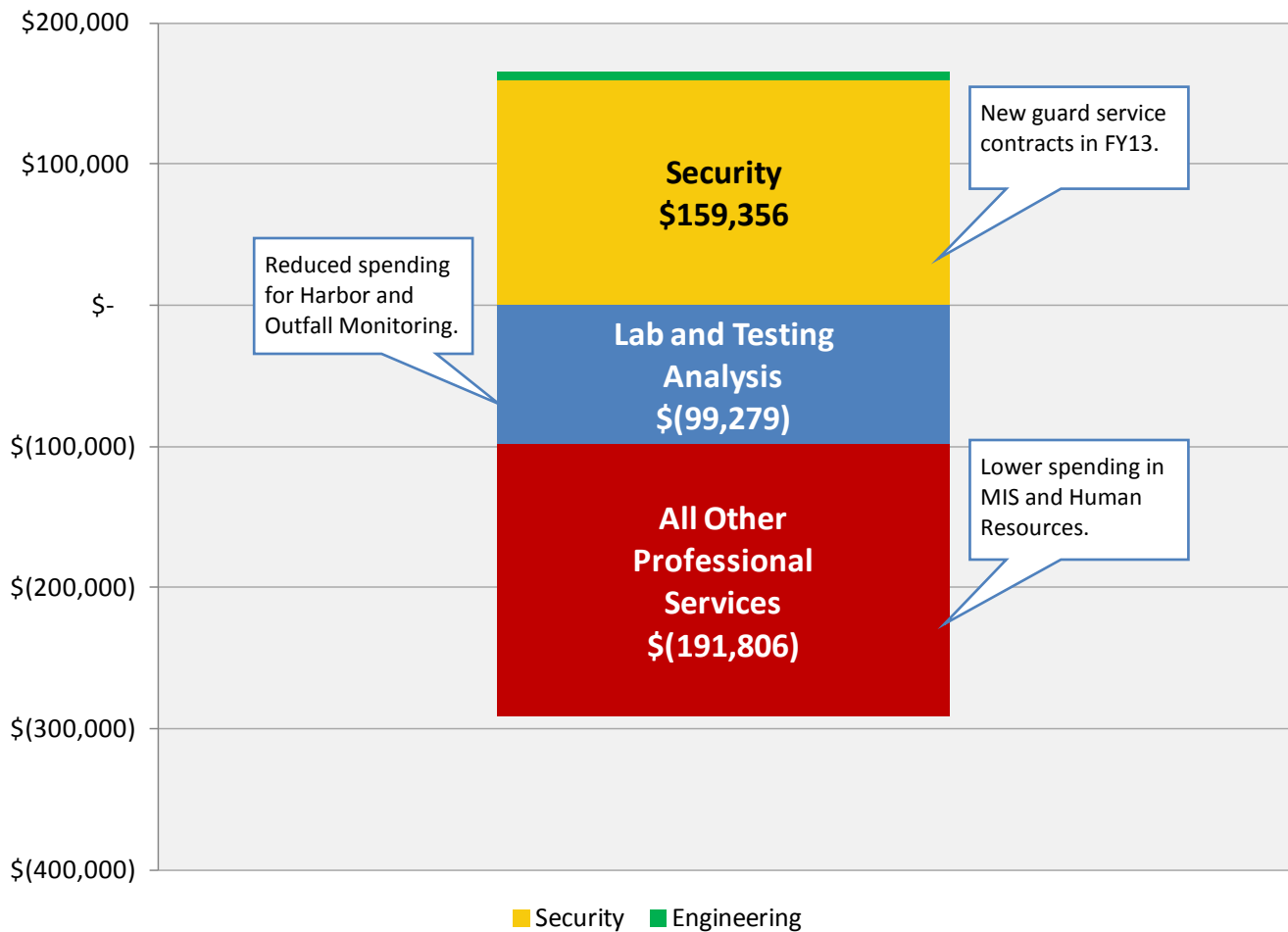


Figure 36

- The Authority also budgets \$136,607 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.

Table 27

Proposed Fiscal Year 2013 Other Materials Summary (\$s)				
Line Item/Description	Final FY12	Proposed FY13	Δ (\$s)	Δ (%)
Vehicle Expense Bulk gasoline, diesel purchases, mileage reimbursement, and some toll fees.	\$1,096,267	\$1,091,217	-5,050.00	-0.5%
Lab and Testing Supplies Supports Central Lab and TRAC.	744,685	739,858	-4,827.00	-0.6%
Vehicle Purchase/Replacements Purchases of vehicles and equipment under \$100,000.	800,000	1,500,000	700,000	87.5%
Equipment/Furniture Miscellaneous equipment and furniture.	402,230	333,230	-69,000	-17.2%
Computer Hardware PCs, printers, plotters, and scanners.	360,892	517,592	156,700	43.4%
Office Supplies Office supplies including paper.	180,339	222,938	42,599	23.6%
All Others Includes postage, work clothes, and health and safety materials.	1,181,069	1,198,634	17,565	1.5%
TOTAL OTHER MATERIALS EXPENSES	\$4,765,482	\$5,603,469	\$837,987	17.6%

Other Highlights

- The Authority has multi-year replacement plans for purchases of vehicles and computer hardware.
- FY13 replaces 42-50 vehicles, or about 8.5%-10% of the active fleet.
- Computer hardware budget increases primarily due to specialized hardware needs.
- Vehicle expense and lab and testing supplies are based on historical spending.
- Equipment and furniture budget is mostly for lab equipment replacement, some of which is 10 to 15 years old.

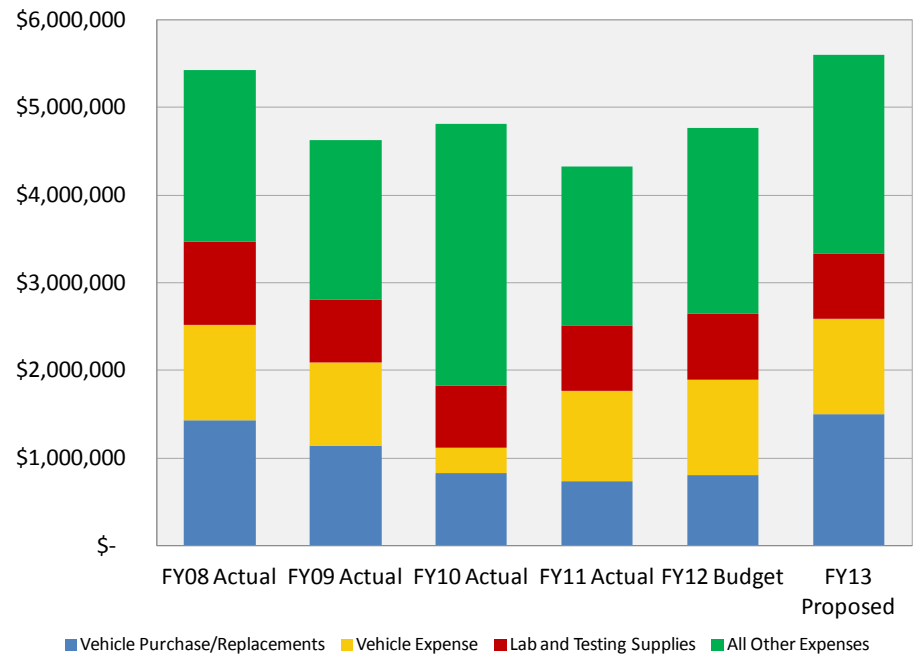


Figure 37

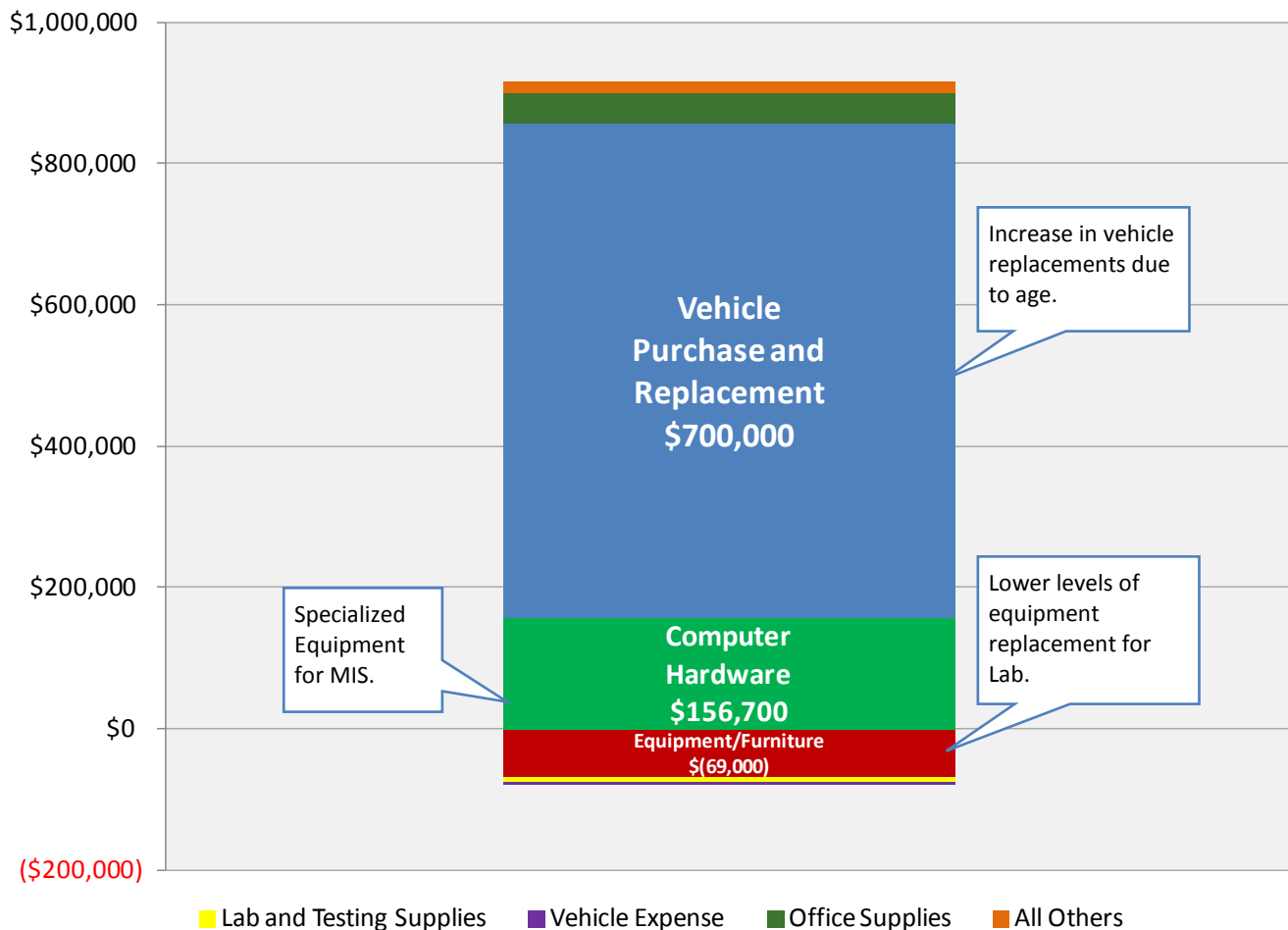


Figure 38

- Computer hardware budget increases primarily due to specialized hardware needs.
- New computer hardware contributes to the green computing model by using more energy efficient CPUs and monitors.
- The Authority recently completed a five-year Information Technology (IT) strategic plan.
- Primary findings of the plan include the need to:
 - Adopt more effective and standardized IT management and processes.
 - Develop methods to share data quickly across multiple applications.
 - Develop streamlined work flows.
 - Reduce reliance upon paper records and improve access to information.
- The Advisory Board commends the Authority for completing the IT strategic plan, and looks forward to the Authority's future plans to implement a multi-year strategy.
- 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 Replacements

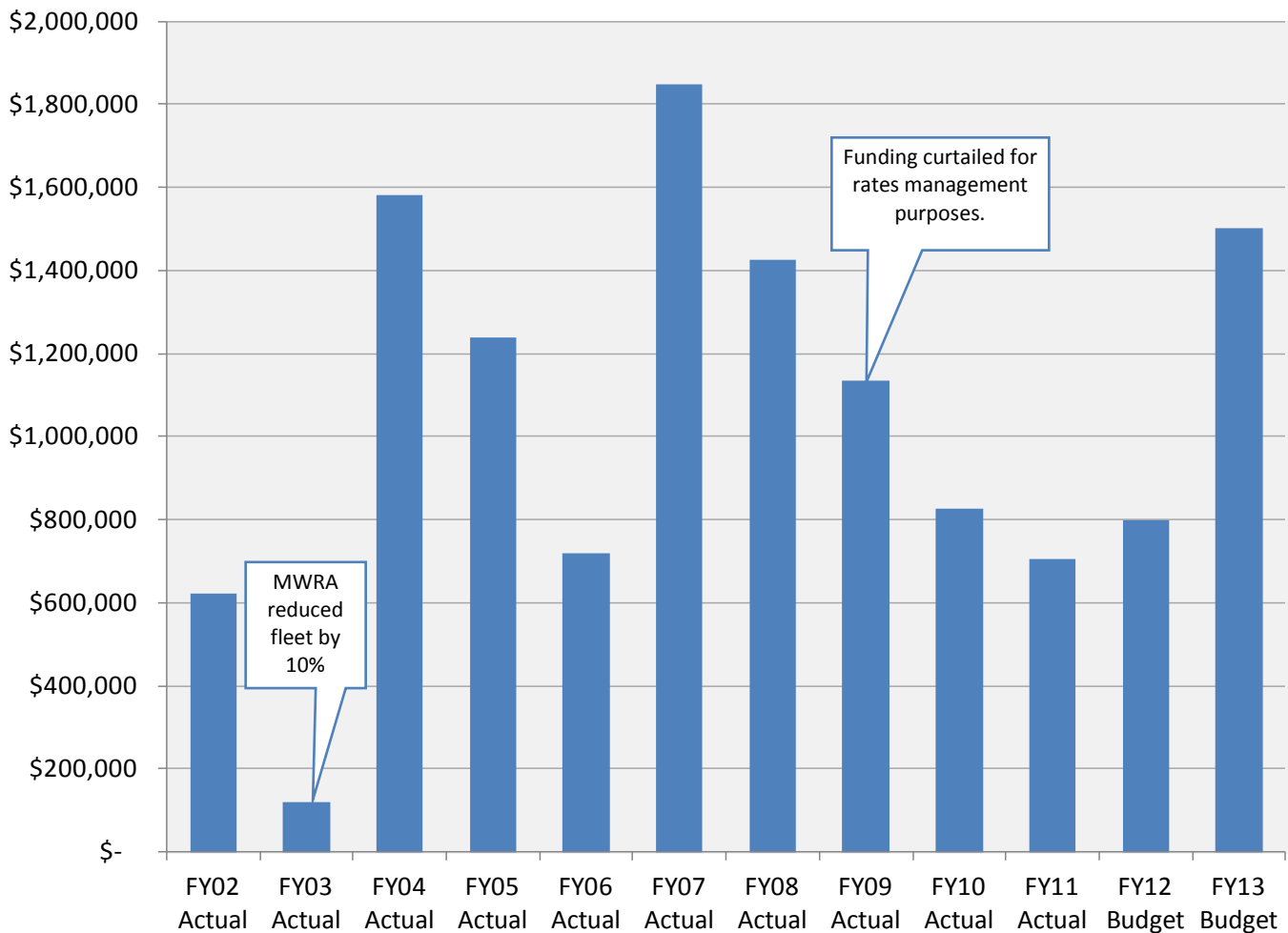


Figure 39

- 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 life.
 - Reduction of the number of domiciled vehicles.
 - Increase in the use of pool vehicles.
- 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 is seven years or older.
- 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.
- 15 % of the fleet is powered by fuels other than gasoline and diesel.¹⁰

¹⁰ Includes hybrids.

Table 28

Proposed Fiscal Year 2013 Training and Meetings Summary (\$s)				
Line Item/Description	Final FY11	Proposed FY12	Δ (\$s)	Δ (%)
Training and Meetings	\$251,550	\$385,617	134,067.00	53.3%
TOTAL TRAINING AND MEETINGS EXPENSES	\$251,550	\$385,617	\$134,067	53.3%

Other Highlights

- Training and meetings expense increase by \$134,000.
- The proposed budget represents an increase to professional training and site visits after sharply reduced spending in recent years. Spending for the year-to-date has been more than 20% below budgeted amounts.
- Costs cover a variety of meetings, seminars, conferences, and training sessions. Most spending supports maintaining professional licenses and certifications, as well as training in the use of specialized equipment, out-of-state site visits (such as plants that use UV disinfection) and site audits, and health and safety compliance.
- Much of the increase supports staff training in computer applications as part of the MIS strategic plan.

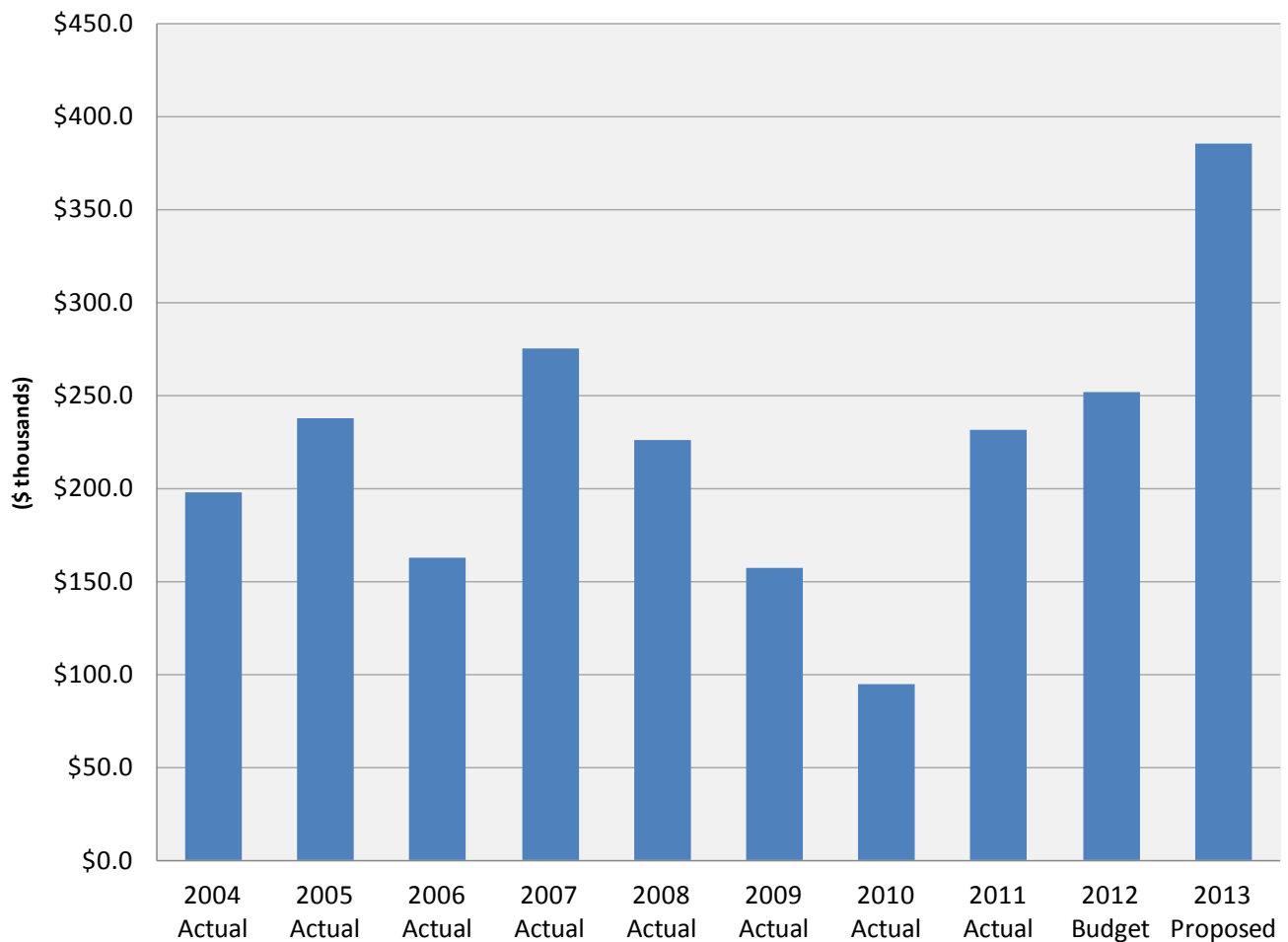


Figure 40

Table 29

Proposed Fiscal Year 2013 Revenue Summary (\$s)				
Line Item/Description	Final FY12	Proposed FY13	Δ (\$s)	Δ (%)
Rate Revenue	\$589,700,000	\$612,617,105	\$22,917,105	3.9%
Revenue generated directly from member communities through annual assessments.				
Other User Charges	7,142,495	7,845,688	703,193	9.8%
From 20 customers including CVA communities; emergency water supply connections, and entrance fees.				
<i>Hydropower Revenue</i>	279,985	319,007	39,022	13.9%
Revenue generated from hydroturbines at Cosgrove.				
<i>Permit Fees</i>	2,020,395	2,070,820	50,425	2.5%
TRAC permit and monitoring fees.				
<i>Penalties</i>	150,000	175,000	25,000	16.7%
Issued through the TRAC program.				
<i>Payments from Commonwealth</i>	0	0	0	-
For chemical costs via statute.				
<i>Miscellaneous Revenue</i>	880,482	1,034,791	154,309	17.5%
Includes revenue from Fore River Railroad, antenna licenses, and other miscellaneous revenues.				
<i>Revenue - Energy</i>	1,541,480	2,231,827	690,347	44.8%
Includes Deer Island and CWTP demand-response payments; renewable portfolio credits for Deer Island.				
Other Revenue Subtotal	4,872,342	5,831,445	959,103	19.7%
Rate Stabilization	1,091,781	0	-1,091,781	-100.0%
From rate stabilization fund.				
Investment Income	15,352,043	13,563,475	-1,788,568	-11.7%
Interest on both short- and long-term investments.				
TOTAL REVENUES	\$618,158,661	\$639,857,713	\$21,699,052	3.5%

Other Highlights

- The rate revenue increase of \$22.9 million is the highest dollar increase since FY07.
- Each 1% increase in rates represents \$5.897 million.
- No rate stabilization funds are proposed in FY13. The last time \$0 funds were used was in FY08.
- Chemical cost payments from the Commonwealth of \$867 thousand have been eliminated since FY10.
- No funds for Debt Service Assistance (DSA) from the Commonwealth are assumed.
- Other user charges increase for CVA communities to reflect increased costs relating to the installation of UV treatment.

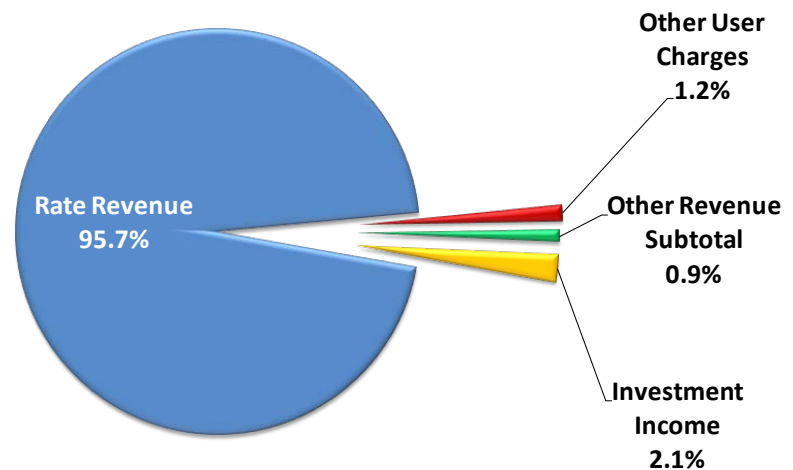


Figure 41

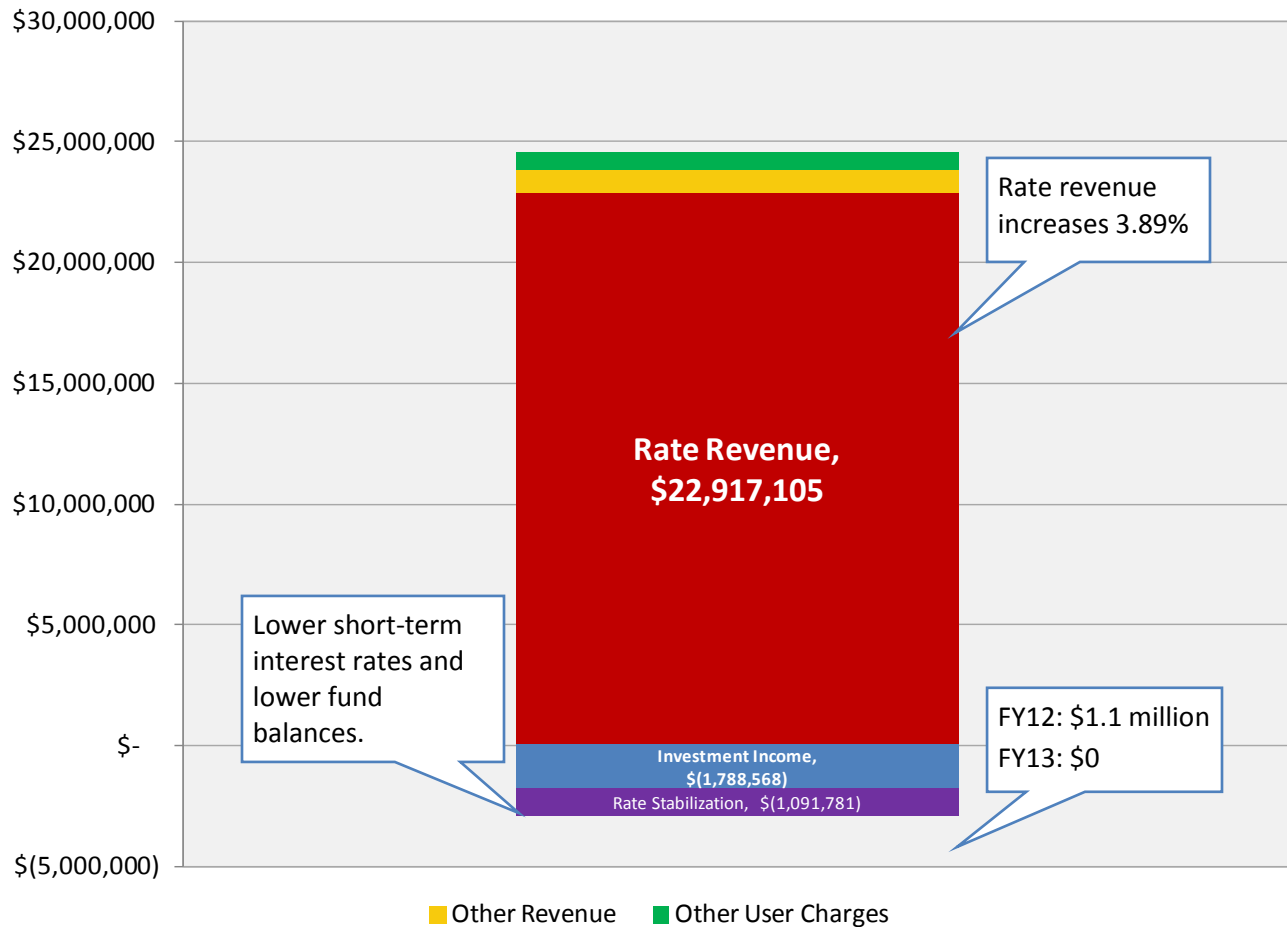


Figure 42

- Recently, \$500 thousand for the statewide Debt Service Assistance (DSA) program have been included in the proposed House budget.
- The Advisory Board is grateful to the House for including these funds during this still very difficult economic time for the Commonwealth.
- Investment income declines due to:
 - Lower short-term interest rate assumption of 0.30% vs. 0.50% in the FY12 budget
 - Lower balance in the debt service reserve fund due to release of certain reserves due to the June 2012 defeasance.
 - The proposed budget is barely one-third of the FY07 earnings.

Investment Income

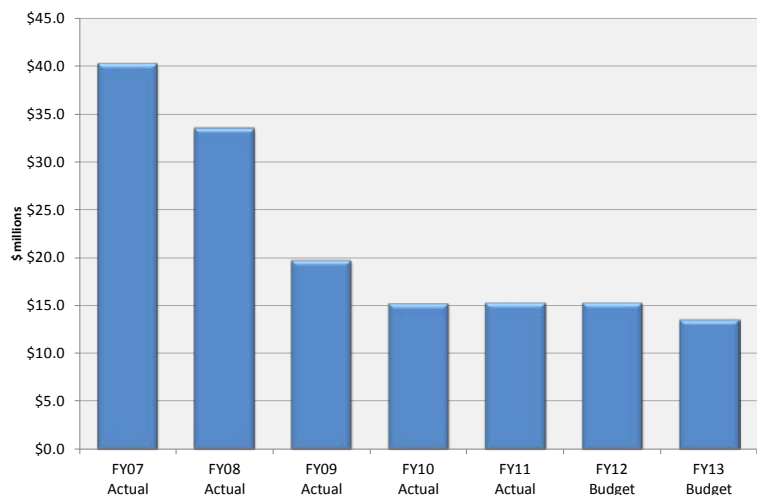


Figure 43

Other Revenue Related Topics

- Expansion of the water system would provide another source of revenue. Allowing new communities to come on to the system would help share the costs across the waterworks system and reduce assessments for member communities. (See discussion in the Policy Recommendations section, page 60.)
- Providing supplemental water to communities that may face drought conditions would also provide some revenue from the sale of water on a temporary basis. (See discussion in the Policy Recommendations section, page 61.)
- The Authority needs to continue to explore additional sources of revenue as a means of controlling and reducing the annual rate revenue requirement.
- **To repeat, the Advisory Board recommends a reduction to the FY13 rate revenue requirement of \$5,226,105.** (See discussion in the CEB Highlights section, page 24.)

Policy Recommendations

Wastewater Primacy

“Do unto wastewater what is done unto water”

Recently the Advisory Board began discussing the possibility of the Commonwealth assuming delegated authority (primacy) with regard to NPDES issues. There are many precedents for state pathway primacy with regard to NPDES matters; in fact, EPA only has primacy over wastewater discharges for New Mexico, New Hampshire, Idaho, and Massachusetts, while the other 46 states have primacy. Most recently, Alaska went through the process to assume delegated authority.

State NPDES Program Authority

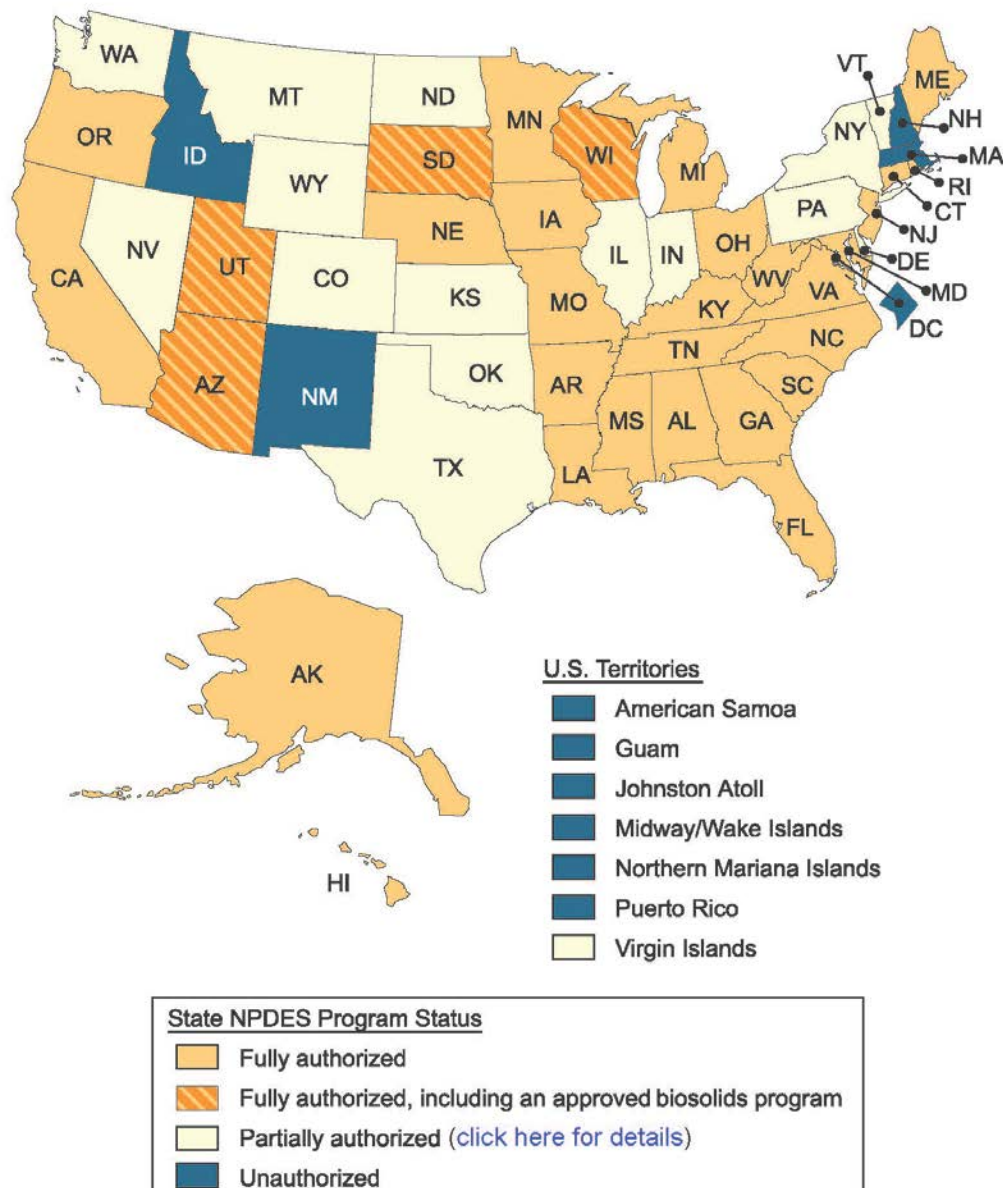


Figure 44

Advantages

There are many advantages to the Commonwealth assuming primacy including:

- Greater responsiveness and more consistent decisions
- Use of sound science based on local conditions and needs
- Giving public officials and utility managers a “seat at the table” and advisory groups a direct link to the process
- Reducing the likelihood of lengthy legal battles

In essence, primacy would allow Mass DEP to be the single point of contact for the federal and state NPDES permit, reducing the duplicative processes and efforts required by reporting to the two separate regulatory agencies. While EPA still monitors the state’s efforts to ensure its compliance with the terms of delegated authority, the primary administration would be by Mass DEP.

Challenges

Funding remains the principal challenge of allowing Mass DEP to assume primacy. Estimates for the annual costs range from \$4 million to \$7 million. NPDES permit holders would likely need to pay additional fees or assessments to the state. MWRA already pays a similar fee to the state, which has primacy for the Safe Drinking Water Act (SDWA). While the state assuming wastewater primacy would increase the costs to the Authority, in essence, the fee would help pay for outcomes better suited to local conditions. One example of cost savings can be found under the SDWA. Mass DEP sided with the Authority against EPA when it sought to avoid filtration, resulting in the avoidance of a \$200 million expense to the ratepayers. While one cannot know for certain that a similar high-cost initiative may be averted with wastewater primacy, Mass DEP is far more likely to take into account permittees’ concerns.

Widespread Interest

While wastewater primacy has been a topic of discussion before, there seems to be a renewed interest in the topic. The Executive Office of Energy and Environmental Affairs, legislators, Mass DEP, and environmental organizations have all expressed interest in opening a dialogue about NPDES delegated authority.

While the topic is complex and any pathway to adoption would take time, the Advisory Board is of the opinion that now is the right time to begin seriously exploring this option. Toward that end, **the Advisory Board recommends that the Authority join with the Advisory Board by actively engaging and participating in a process with the necessary stakeholders to allow the Commonwealth of Massachusetts to assume primacy with regard to wastewater issues.**

System Expansion

“If there was ever a win-win”

In recent years the Advisory Board’s *Comments and Recommendations* have discussed the topic of system expansion in depth. Given the continuing decline in water use at the local level, and the ever-increasing water assessments, it is critical that the Authority expand its user base. Allowing new communities to come on to the system would help share the costs across the waterworks system and reduce assessments for member communities.

The Advisory Board also addressed concerns that the cost for potential new members to join the MWRA system was too high. While the Advisory Board adamantly believes the entrance fee is critical to reimbursing existing members for investments already made, it has also adopted an approach toward flexibility for how and when the entrance fee is paid.

Additional discussion has also identified the cost for building connections to the MWRA system also represents a financial obstacle to potential member communities. Toward that end, the Advisory Board is hoping to adopt a new approach with regard to connections.

Lack of available water can limit a municipality's options when considering new development or new growth. Indeed, when the Town of Stoughton was debating whether or not to join the MWRA system, much of the discussion centered around its inability to attract new businesses due to chronic water shortages. After joining the MWRA system, Stoughton saw an influx of new businesses helping to boost local tax revenues and to create new jobs. **The Advisory Board is interested in quantifying the economic benefits of providing a community with additional water, and, therefore, recommends that the Authority participate with the Advisory Board on a formal study of the issue.**

Additionally, the Advisory Board intends to file legislation seeking \$100 million from the Commonwealth to further local economic development and job creation by helping new applicants to the MWRA water system pay for the connection costs. **The Advisory Board recommends that the Authority support this legislation and all efforts to obtain outside funding to further system expansion.**

Another impediment that continues to hamper the MWRA's ability to expand its customer base and hinders potential member communities is the regulatory process. The Advisory Board has previously discussed the burdensome nature of the existing process, and has attempted to work with stakeholders to develop a streamlined regulatory review. ***To date, these efforts have not yielded any measurable changes, but the Advisory Board is committed to pursuing a streamlined process for the long-term and expects the Authority to participate in any additional discussions with stakeholders to see that this is accomplished.***

However, the Authority and Advisory Board have recently engaged in active discussions with many communities including Braintree, Randolph, Holbrook, and Ashland who have water capacity needs in the near-term. It would be especially frustrating to have successfully addressed the financial barriers to membership only to be delayed by the existing process. **Toward that end, the Advisory Board recommends that the Authority actively seek and pursue an exemption of 9 MGD from the regulatory review process to expedite waterworks system expansion.**

In previous comments, the Advisory Board has also noted that capital projects in particular, are directly tied to this expedited regulatory review. The Hatchery Pipeline was included in the CIP to assist the Commonwealth in its desire to save costs related to its hatchery facility. **Toward that end, the Advisory Board recommends that the Authority expend no further staff resources or funds for the Hatchery Pipeline project until a streamlined regulatory review for system expansion is adopted by the Commonwealth.**

On a related note, the Advisory Board is recommending that the Authority convene a committee to examine the Water Rate Methodology with specific emphasis on standby fees.

Proactive Drought Assistance

"Over 21 billion gallons spilled"

Not directly connected to the long-term issue of system expansion, but related to the MWRA's water system, is the topic of proactive drought assistance. Although conditions may change between the time of this writing and the summer, the extremely mild winter and lack of rainfall have raised concerns across the state of potential drought conditions during the summer.

Despite the lack of snowmelt and rainfall, the MWRA spilled over 21 billion gallons of water between September 2011 and April 2012. Recent news stories are prolific about the potential drought conditions across the Commonwealth.

In response to Advisory Board staff's inquiry, the Authority has identified several communities not currently in the MWRA water system who could connect on a temporary basis. The list identified to date includes:

- | | | |
|-------------|--------------------|---------------|
| • Braintree | • Concord | • Natick |
| • Randolph | • Burlington | • Wayland |
| • Holbrook | • Danvers | • Hudson |
| • Weymouth | • Lynn | • Ashland |
| • Walpole | • Lynnfield Center | • Hopkinton |
| • Sharon | • North Reading | • Westborough |

Admittedly, each community has a unique series of interconnections to the MWRA system requiring different logistics and levels of effort to draw water; additionally, each community's needs will be different with many ready to pursue other alternatives. However, many communities may be interested in avoiding depleting local sources, water bans, or other potential consequences. The Authority clearly has ample water to help ease stress on communities and river basins facing summer drought conditions.

Therefore, the Advisory Board recommends that the MWRA actively pursue a proactive dialogue with these communities to share with them that they have water available and to outline where and how they could connect to our system if they choose to do so.

MWRA's Role in Communities

"If the Authority pays double, the communities pay double"

The Authority has existing programs and resources in place for its member communities. Most prominent are the local assistance programs in the CIP (see discussion on page 17.), but there are other manners in which the MWRA supports its communities. The Authority offers leak detection services from five competitively procured contractors to its water system member communities to meet their biennial requirement to survey their local distribution system. Additionally, the Authority has a Community Water Conservation Outreach Program (\$25 thousand/year) that provides educational materials and low-flow water fixtures and related materials at no cost to member communities and individual customers. Most recently, the Authority has also provided assistance for communities by helping them complete state-required emergency training reports and reviews of community water tanks.

The Advisory Board is interested in additional ways the Authority's role in the member communities could be better realized. In particular, the Advisory Board is looking to create a task force that will help to address issues that are common to member communities. One such issue is the cost of police details on MWRA projects.

Currently, the average rate for details for the 58 communities and agencies the Authority works with is \$43.50/hour. Recently, some communities have begun to charge a much higher hourly rate of \$90/hour. Experience has shown that particularly with regard to union contract-related matters once one police department makes a change to its union contracts other communities soon follow suit. In an average year the Authority can spend as much as \$300 thousand on details for annual maintenance projects and up to \$2 million on details related to capital projects. The potential impact of doubling these numbers would provide a significant increase of costs to the ratepayers. Unlike private entities for whom police details are a cost of doing business, the Authority is a public entity attempting to improve the service being provided to the ratepayers. The Advisory Board believes it is in the best interest of the Authority and the stakeholders

from communities and other agencies to discuss the issue in depth and attempt to find some consensus. **The Advisory Board, therefore, recommends that the Authority participate on the task force the Advisory Board intends to convene with community and state police representatives to arrive at an agreement, or standard rate, on hourly charges and conditions for requiring the police details.**

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Appendix A

List of Recommendations

1. The FY13 rate revenue requirement should be no higher than \$607,391,000, representing an increase of 3.0%.
2. The FY13 rate increase should be no lower than \$607,391,000, representing an increase of 3.0%.
3. The reduction of \$5,226,105 necessary to achieve a 3.0% rate increase could come from revised assumptions including:
 - Timing of the NPDES permit for Deer Island
 - Updates for fringe benefits costs
 - Updates related to the ambulance contract for Deer Island
 - Personnel-related revisions
 - Reduction of the budget by \$6,749 to reflect the Advisory Board's amended FY13 budget
 - Several adjustments to elements of capital financing expense
 - A modest use of the rate stabilization fund (which is funded at \$0 this year, for the first time in five years)
 - Inclusion of the receipt of Debt Service Assistance (approximately \$350 thousand for the Authority's share) consistent with the Commonwealth's current budget process
4. Fund both the design and construction contracts of the Clinton Phosphorus Removal project exclusively from the reserve account containing the watershed fringe benefits accruals.
5. Include Phase VIII of the Inflow/Infiltration Local Financial Assistance Program in the final CIP, beginning in FY13.
6. Revise the cap calculation beginning in FY14 to exclude the local assistance programs from the cap calculations.
7. The Advisory Board challenges the Authority to limit the next five-year cap (FY14-18) to no more than \$800 million after removing the local assistance programs from the cap calculation.
8. Revisit proposed senior debt service assumptions for new borrowings and the defeasance.
9. Assess what the appropriate level of variable rate debt is going forward and prepare a plan to reach that level in the next five years.
10. Analyze the other factors that are considered with each rating agency review and report on steps that could be taken to ensure the Authority obtains the highest possible ratings from each rating agency. Such an analysis should be conducted in time for the due diligence process associated with the next bond issue.
11. Conduct a cost-benefit analysis of using interim SRF loan funding until Pool 16, Pool 17 and Pool 18 bond series are issued.
12. Moving forward, formally adopt the current approach to transfer all surplus funds related to debt service into a fund dedicated for future defeasance to ensure that the funds are utilized for their originally intended purpose.
13. Use any FY12 surplus not associated with debt service as a tool to reduce the rate revenue requirement to 3% in FY13 with any remaining funds deposited into the rate stabilization account.

Appendix B

List of Comments

1. The Advisory Board supports using the recently completed Information Technology study to guide future MIS projects, and expects them to be added into the Business Plan.
2. The Advisory Board again asserts that neither the additional Cross Harbor Cable costs nor Chelsea Creek dredging initiative are the responsibility of the Authority or the ratepayers to fund.
3. The Advisory Board expects any additional surplus from debt service line items will be used to augment the defeasance transaction currently scheduled for June 2012, consistent with the policy voted by the MWRA Board of Directors.
4. The Advisory Board trusts that the final FY13 state budget will include DSA, but fully expect that the 3% rate revenue requirement will not be achieved without it.
5. Price assumptions for the final budget may need to be increased to reflect recent changes in fuel pricing.
6. The Advisory Board expects the Authority will participate in any additional discussions with stakeholders to see that a streamlined process for system expansion regulatory review is developed.

Appendix A

14. Build upon efforts already achieved and develop a comprehensive and detailed succession plan utilizing internal resources and outside consultants if deemed necessary.
15. Redirect the \$4.7 million proposed for Other Post-Employment Benefits to the retirement fund.
16. DCR should remove projected revenues from the forestry program and reduce its operating expenses by the same amount by delaying projects such as the Wachusett Carpenter Shop Replacement, abandoned structures demolition, and equipment storage facilities at Quabbin currently scheduled for FY13.
17. Bring the most recent draft of the Science and Technical Advisory Committee (STAC) report to the MWRA Board of Directors in June 2012 to allow for its findings to be included in the Final Current Expense Budget.
18. Remove or have DCR find alternative funding for any dam work that does not directly impact the water supply.
19. Begin the process of investigating options for an extension of the current pelletization contract.
20. Target a goal of reducing costs associated with pelletization (or any alternative process selected) by \$2 million per year.
21. Revise the chemicals budget to reflect updated pricing, and to remove the assumption of 6 months of the next NPDES permit at Deer Island.
22. Actively engage and participate in a process with the necessary stakeholders to allow the Commonwealth of Massachusetts to assume primacy with regard to wastewater issues.
23. Participate with the Advisory Board on a formal study to quantify the local and regional economic benefits of system expansion.
24. Support legislation the Advisory Board intends to file seeking \$100 million in state funds for the purposes of economic development to fund capital connection costs for new water service member communities.
25. Actively seek and pursue an exemption of 9 MGD from the regulatory review process to expedite waterworks system expansion.
26. Expend no further staff resources or funds for the Hatchery Pipeline project until a streamlined regulatory review for system expansion is adopted by the Commonwealth.
27. Convene a committee to examine the Water Rate Methodology with specific emphasis on standby fees.
28. Pursue a proactive dialogue with non-member communities that have connections to the MWRA to outline where and how they could connect to our system if they choose to do so.
29. Participate on the task force the Advisory Board intends to convene with community and state police representatives to arrive at an agreement, or standard rate, on hourly charges and conditions for requiring the details.

Appendix C

	Total MWRA	FY12 Approved	FY13 Proposed	Change FY13 Proposed vs FY12 Approved Budget	
				\$	%
EXPENSES	Wages and Salaries	90,319,013	94,122,594	3,803,581	4.2%
	Overtime	3,508,630	3,684,062	175,432	5.0%
	Fringe Benefits	17,954,076	18,803,154	849,078	4.7%
	Workers' Compensation	2,100,000	2,100,000	-	0.0%
	Chemicals	9,047,275	10,371,752	1,324,477	14.6%
	Energy and Utilities	22,654,931	23,966,664	1,311,733	5.8%
	Maintenance	29,470,020	28,333,643	(1,136,377)	-3.9%
	Training and Meetings	251,550	385,617	134,067	53.3%
	Professional Services	5,892,441	5,766,212	(126,229)	-2.1%
	Other Materials	4,765,482	5,603,469	837,987	17.6%
	Other Services	23,323,074	23,998,784	675,710	2.9%
	TOTAL DIRECT EXPENSES	209,286,492	217,135,951	7,849,459	3.8%
	Insurance	2,285,866	2,037,875	(247,991)	-10.8%
	Watershed/PILOT	25,576,274	26,433,175	856,901	3.4%
	HEEC Payment	3,965,499	3,741,915	(223,584)	-5.6%
	Mitigation	1,528,705	1,566,923	38,218	2.5%
	Addition to Reserves	195,467	970,958	775,491	396.7%
	Retirement Fund	7,340,438	5,750,085	(1,590,353)	-21.7%
	Post-Employment Benefits	-	4,724,291	4,724,291	-
	TOTAL INDIRECT EXPENSES	40,892,249	45,225,222	4,332,973	10.6%
	Debt Service (before offsets)	368,329,918	377,496,538	9,166,620	2.5%
	Bond Redemption	-	-	-	
	Debt Service Assistance	(350,000)	-	350,000	
TOTAL DEBT SERVICE	367,979,918	377,496,538	9,516,620	2.6%	
TOTAL EXPENSES	618,158,659	639,857,711	21,699,052	3.5%	
REVENUE AND INCOME	Rate Revenue	589,700,000	612,617,101	22,917,101	3.9%
	Other User Charges	7,142,494	7,845,688	703,194	9.8%
	Other Revenue	4,872,342	5,831,445	959,103	19.7%
	Rate Stabilization	1,091,781	-	(1,091,781)	-100.0%
	Investment Income	15,352,043	13,563,475	(1,788,568)	-11.7%
	TOTAL REVENUE AND INCOME	618,158,660	639,857,709	21,699,049	3.5%

Appendix D

Cap Calculation versus Actual FY04-08 Spending

Final FY04 CIP	Baseline Cap FY04-08						
	(\$ millions)						
		FY04	FY05	FY06	FY07	FY08	Total FY04-08
	Projected Expenditures	\$237.0	\$190.2	\$195.2	\$217.3	\$183.6	\$1,023.3
	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

FY08 Closeout Data	FY04-08 Actual Spending						
		FY04 Actual	FY05 Actual	FY06 Actual	FY07 Actual	FY08 Actual	Total FY04-08
	Projected Expenditures	\$194.0	\$167.7	\$152.3	\$177.7	\$196.8	\$888.5
	Contingency	0.0	0.0	0.0	0.0	0.0	0.0
	Inflation on Unawarded Construction	0.0	0.0	0.0	0.0	0.0	0.0
	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

Change	Baseline Cap FY04-08 to Actual Spending						
		FY04	FY05	FY06	FY07	FY08	Total FY04-08
	Projected Expenditures	(\$43.0)	(\$22.5)	(\$42.9)	(\$39.6)	\$13.2	(\$134.8)
	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	5.0	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

Final FY09 CIP	Baseline Cap FY09-13 (\$ millions)					
		FY09	FY10	FY11	FY12	FY13
	Total FY09-13					
	Projected Expenditures	\$230.0	\$251.7	\$224.3	\$196.7	\$178.7
	Contingency	15.6	13.8	12.0	12.1	11.4
	Inflation on Unawarded Construction	0.0	0.5	2.8	7.8	11.3
	Less: Chicopee Valley Aqueduct Projects	(1.2)	(1.9)	(9.1)	(9.5)	(2.9)
	FY09-13 CAP	\$244.4	\$264.1	\$230.0	\$207.0	\$198.4
						\$1,143.8

Proposed FY13 CIP	Proposed FY13 CIP Updated Spending Projections					
		FY09	FY10	FY11	FY12	FY13
	Total FY09-13					
	Projected Expenditures	\$182.2	\$211.4	\$139.3	\$164.3	\$191.4
	Contingency	0.0	0.0	0.0	7.2	9.7
	Inflation on Unawarded Construction	0.0	0.0	0.0	0.0	1.5
	Less: Chicopee Valley Aqueduct Projects	(0.6)	(0.5)	(0.9)	(0.8)	(5.4)
	Projected FY09-13	\$181.6	\$210.9	\$138.4	\$170.7	\$197.2
						\$898.8

Change	Final FY09 to Proposed FY13 Comparison					
		FY09	FY10	FY11	FY12	FY13
	Total FY09-13					
	Projected Expenditures	(\$47.8)	(\$40.2)	(\$85.0)	(\$32.5)	\$12.7
	Contingency	(15.6)	(13.8)	(12.0)	(4.9)	(1.7)
	Inflation on Unawarded Construction	0.0	(0.5)	(2.8)	(7.8)	(9.7)
	Less: Chicopee Valley Aqueduct Projects	0.6	1.4	8.3	8.8	(2.5)
	FY09-13 CAP Δ (\$)	(\$62.8)	(\$53.2)	(\$91.6)	(\$36.3)	(\$1.2)
	FY09-13 CAP Δ (%)	-25.7%	-20.1%	-39.8%	-17.6%	-0.6%
						-21.4%

Appendix F

Program / Project	Contract No.	Notice to Proceed	Substantial Completion	Total Contract Amount	Payments through FY11	Remaining Balance	FY12	FY13	FY09 - FY13
Total MWRA				5,520,680,133	3,395,948,931	2,124,731,202	164,262,991	191,444,522	888,662,827
Wastewater				2,643,297,311	1,586,043,421	1,057,253,890	90,720,877	87,717,271	546,810,583
Interception & Pumping				819,942,971	512,615,430	307,327,541	8,017,869	8,506,280	40,972,800
102 Quincy Pump Facilities		completed project		25,908,066	25,908,077	(11)			
104 Braintree-Weymouth Relief Facilities				233,960,837	227,932,058	6,028,779	1,078,674	1,810,104	15,789,312
105 New Neponset Valley Relief Sewer		completed project		30,300,305	30,300,303	2			
106 Wellesley Extension Replacement Sewer		completed project		64,358,544	64,358,543	1			
107 Framingham Extension Relief Sewer		completed project		47,855,986	47,855,986	-			
127 Cummingsville Replacement Sewer		completed project		8,998,766	8,998,767	(2)	43,382		
130 Siphon Structure Rehabilitation				2,670,539	939,770	1,730,769		29,696	29,696
131 Upper Neponset Valley Sewer System				54,943,954	53,776,931	1,167,023	67,023	1,100,000	1,794,298
132 Corrosion & Odor Control				16,139,782	3,002,809	13,136,973			
136 West Roxbury Tunnel				11,487,370	10,284,737	1,202,633	202,633		1,607,568
137 Wastewater Central Monitoring				20,839,477	19,782,201	1,057,276	157,276	250,000	6,241,741
139 South System Relief Project				4,939,244	3,439,244	1,500,000	(645)		
141 Wastewater Process Optimization				10,299,552	930,308	9,369,244	278,988	278,989	557,977
142 Wastewater Meter Sys - Equip. Replacement				26,578,429	5,137,912	21,440,517	140,517	60,000	249,664
143 Regional I/I Management Planning		completed project		168,987	168,987	-			
145 Facility Asset Protection				254,743,133	9,798,797	244,944,336	6,092,758	4,977,491	14,659,807
146 D.I. Cross Harbor Tunnel				5,000,000	-	5,000,000			
147 Randolph Trunk Sewer Relief				750,000	-	750,000			
Treatment				628,065,181	152,344,516	475,720,665	27,651,926	45,563,319	173,765,700
200 DI Plant Optimization		completed project		33,455,815	33,455,815	-	296,298		
206 DI Treatment Plant Asset Protection				583,272,675	117,067,039	466,205,636	25,889,682	42,988,464	168,584,488
210 Clinton Wastewater Treatment Plant				9,043,661	648,872	8,394,789	642,004	2,574,855	3,520,948
211 Laboratory Services				2,293,030	1,172,790	1,120,240	1,120,240		1,363,966
Residuals				211,740,619	64,156,045	147,584,574	142,914	571,660	1,059,771
261 Residuals		completed project		63,810,848	63,810,848	-			
271 Residuals Asset Protection				147,929,771	345,197	147,584,574	142,914	571,660	1,059,771

Appendix F

Program / Project	Contract No.	Notice to Proceed	Substantial Completion	Total Contract Amount	Payments through FY11	Remaining Balance	FY12	FY13	FY09 - FY13
CSO				860,682,679	754,703,548	105,979,131	50,362,331	29,236,759	312,084,502
CSO MWRA Managed				439,696,269	425,936,966	13,759,303	5,130,541	1,329,657	162,946,993
339 North Dorchester Bay				227,854,368	218,375,065	9,479,303	4,959,487	959,657	85,252,115
347 East Boston Branch Sewer Relief				85,709,822	85,598,769	111,053	111,054		75,004,444
348 BOS019 Storage Conduit		completed project		14,287,581	14,287,581	-			(44,067)
349 Chelsea Trunk Sewer		completed project		29,779,319	29,779,319	-			
350 Union Park Detention Treatment Facility		completed project		49,583,406	49,583,406	-			(227,192)
353 Upgrade Existing CSO Facilities		completed project		22,385,200	22,385,200	-			
354 Hydraulic Relief Projects		completed project		2,294,549	2,294,549	-			
355 MWR003 Gate & Siphon				4,168,947	-	4,168,947	60,000	370,000	430,000
357 Charles River CSO Controls		completed project		3,633,077	3,633,077	-			2,531,693
CSO Community Managed				370,537,435	279,759,472	90,777,963	44,489,744	27,889,102	144,458,772
340 Dorchester Bay Sewer Separation (Fox Pt)				54,187,455	53,762,619	424,836	424,836		424,836
341 Dorchester Bay Sewer Separation (Comm Pt)				64,725,351	59,870,559	4,854,792	2,075,910	1,965,000	9,020,880
342 Neponset River Sewer Separation		completed project		2,444,394	2,444,394	-			
343 Constitution Beach Sewer Separation		completed project		3,768,888	3,768,888	-			
344 Stony Brook Sewer Separation				44,332,539	44,198,384	134,155	134,155		(721,285)
346 Cambridge Sewer Separation				56,390,950	28,188,682	28,202,268	7,618,000	11,260,000	28,615,551
351 BWSC Floatables Controls		completed project		932,979	932,979	-			
352 Cambridge Floatables Control		completed project		1,086,925	1,086,925	-			164,727
356 Fort Point Channel Sewer Separation				12,047,018	11,932,708	114,310	114,310		3,755,860
358 Morrissey Boulevard Drain				32,898,744	35,585,080	(2,686,336)	(2,895,792)	209,457	18,222,573
359 Reserved Channel Sewer Separation				62,322,968	20,093,888	42,229,080	21,045,112	12,923,000	51,345,006
360 Brookline Sewer Separation				25,413,353	8,036,910	17,376,443	15,844,798	1,531,645	24,141,753
361 Bulfinch Triangle Sewer Separation				9,985,871	9,857,456	128,415	128,415		9,488,871
Planning & Support				50,448,975	49,007,110	1,441,865	742,046	18,000	4,678,737
324 CSO Support				50,448,975	49,007,110	1,441,865	742,046	18,000	4,678,737
Other Wastewater				122,865,861	102,223,882	20,641,979	4,545,837	3,839,253	18,927,810
128 I/I Local Financial Assistance				122,584,985	101,943,006	20,641,979	4,545,837	3,839,253	18,927,810
138 Sewerage System Mapping Upgrade		completed project		280,876	280,876	-			

Appendix F

Program / Project	Contract No.	Notice to Proceed	Substantial Completion	Total Contract Amount	Payments through FY11	Remaining Balance	FY12	FY13	FY09 - FY13
Waterworks				2,769,264,195	1,744,247,467	1,025,016,728	64,359,886	93,180,939	299,397,377
Drinking Water Quality Improvements				652,165,973	541,290,614	110,875,359	19,756,292	41,791,096	94,288,050
542 Carroll Water Treatment Plant				427,970,502	378,178,131	49,792,371	14,166,875	19,854,990	39,487,726
543 Quabbin Water Treatment Plant				17,666,662	10,767,179	6,899,483	306,490	4,367,000	5,297,147
544 Norumbega Covered Storage		completed project		106,674,146	106,674,146	-			101,670
545 Blue Hills Covered Storage				40,679,737	39,969,625	710,112	291,124	22,844	21,394,739
550 Spot Pond Storage Facility				59,174,926	5,701,533	53,473,393	4,991,803	17,546,262	28,006,768
Transmission				1,163,232,918	719,536,942	443,695,976	21,988,298	19,411,966	88,052,746
597 Winsor Station Pipeline				26,196,325	1,346,511	24,849,814	397,423	609,095	2,314,747
601 Sluice Gate Rehabilitation		completed project		9,158,418	9,158,411	7			
604 MetroWest Tunnel				711,616,468	669,794,980	41,821,488	14,254,500	9,928,000	60,176,654
615 Chicopee Valley Aqueduct Redundancy		completed project		8,666,747	8,666,747	-			95,143
616 Quabbin Transmission System				13,589,015	4,743,754	8,845,261	1,533,333	1,134,424	2,988,084
617 Sudbury/Weston Aqueduct Repairs				4,308,053	659,948	3,648,105	2		25,002
620 Wachusett Reservoir Spillway Improvements		completed project		9,287,460	9,287,461	(1)			1,237,499
621 Watershed Land				19,000,000	13,899,500	5,100,500	2,908,500	2,192,000	10,793,000
623 Dam Projects				5,729,181	719,452	5,009,729	1,592,356	1,202,932	3,514,740
625 Long Term Redundancy				355,681,251	1,260,178	354,421,073	1,302,184	4,345,515	6,907,877

Appendix F

Program / Project	Contract No.	Notice to Proceed	Substantial Completion	Total Contract Amount	Payments through FY11	Remaining Balance	FY12	FY13	FY09 - FY13
Distribution And Pumping				910,412,097	354,009,059	556,403,038	13,337,992	13,899,508	75,794,814
618 Northern High NW Transmission Section 70				1,000,000	-	1,000,000			
677 Valve Replacement				22,104,344	9,338,478	12,765,866	1,584,299	1,606,139	3,949,588
678 Boston Low Service - Pipe & Valve Rehab	completed project			23,690,864	23,690,863	-			
683 Heath Hill Road Pipe Replacement	completed project			19,358,038	19,358,036	2			(9,817)
689 James L. Gillis Pump Station	completed project			33,419,006	33,419,007	-			
692 Northern High Service - Sect 27 Improvement				3,475,091	123,646	3,351,445	250	500	750
693 NHS - Revere & Malden Pipeline Improve.				35,287,923	26,832,740	8,455,183			2,938,022
702 New Connect Mains-Shaft 7 to WASM 3				32,638,600	9,839,318	22,799,282	1,034,190		5,554,782
704 Rehab of Other Pump Stations				55,143,866	30,058,049	25,085,817	85,825		12,158,292
706 NHS-Connecting Mains from Section 91	completed project			2,360,194	2,360,194	-			
708 Northern Extra High Service - New Pipelines				7,478,503	3,632,119	3,846,384		13,000	13,000
712 Cathodic Protection Of Distribution Mains				1,526,883	140,913	1,385,970			
713 Spot Pond Supply Mains Rehab				66,187,435	60,980,158	5,207,277		80,000	581,659
714 Southern Extra High Sections 41 & 42	completed project			3,657,243	3,657,243	-			
719 Chestnut Hill Connecting Mains				29,906,382	17,486,675	12,419,707			25,061
720 Warren Cottage Line Rehab	completed project			1,204,821	1,204,821	(1)			
721 South Spine Distribution Mains				72,509,383	32,754,548	39,754,835	3,949,063	803,071	19,896,747
722 NIH Redundancy & Storage				82,491,395	1,469,640	81,021,755	3,339,011	4,901,016	9,075,694
723 Northern Low Service Rehab - Section 8				21,698,013	2,320,986	19,377,027	2,000	3,000	2,268,003
724 Northern High Service - Pipeline Improve.				-	-	-			(1,600)
725 Hydraulic Model Update	completed project			598,358	598,358	-			
727 SEH Redundancy & Storage				101,848,792	6,664,412	95,184,380	160,000	156,105	5,313,248
730 Weston Aqueduct Supply Mains				276,166,245	64,377,912	211,788,333	841,000	4,647,000	8,965,051
731 Lynnfield Pipeline				5,015,832	983,802	4,032,030	2,342,354	1,689,677	4,503,111
732 Walnut St. & Fisher Hill Pipeline Rehab	completed project			2,717,140	2,717,141	(1)			563,223
Other Waterworks				43,453,207	129,410,852	(85,957,645)	9,277,304	18,078,369	41,261,767
753 Central Monitoring System				16,992,423	15,704,996	1,287,427	430,284	857,143	1,325,478
763 Distribution System Facilities Mapping				1,798,919	1,036,368	762,551		228,000	228,000
764 Local Water Infrastructure Rehab	completed project			7,487,762	7,487,762	-			
765 Local Water Pipeline Assistance Program				-	104,944,176	(104,944,176)	8,578,315	16,918,981	39,365,339
766 Waterworks Facility Asset Protection				17,174,103	237,550	16,936,553	268,705	74,245	342,950
Business & Operations Support				108,118,627	65,658,043	42,460,584	9,182,228	10,546,312	42,454,867
881 Equipment Purchase				16,237,455	9,148,384	7,089,071	1,654,619	1,807,452	7,353,347
925 Technical Assistance				1,200,000	-	1,200,000		400,000	400,000
930 MWRA Facility - Chelsea	completed project			9,814,582	9,822,601	(8,019)	(8,019)		(72,323)
931 Business Systems Plan				39,294,428	24,659,755	14,634,673	974,944	3,805,611	7,432,230
932 Environmental Remediation				1,478,802	1,479,202	(400)	(400)		10,602
933 Capital Maintenance Planning & Develop.				10,887,901	6,296,081	4,591,820	2,312,797	1,668,247	6,557,745
934 MWRA Facilities Management & Planning				2,150,535	370,533	1,780,002	28,000	865,002	1,263,535
935 Alternative Energy Initiatives				27,054,924	13,881,487	13,173,437	4,220,287	2,000,000	19,509,731

Appendix G

Comparison of the FY13 Proposed CIP and Changes from the FY12 Final CIP (\$000)

Program and Project	FY12 Final			FY13 Proposed			Change from FY12 Final		
	Total Budget Amount	FY 09-13	FY14-18	Beyond 18	Total Budget Amount	FY 09-13	FY14-18	Beyond 18	Total Budget Amount
Total MWRA	5,468,271	936,660	999,850	668,745	5,520,680	888,663	964,145	804,878	52,409
Wastewater	2,625,405	574,878	558,525	274,333	2,643,297	546,811	501,736	377,080	17,892
Interception & Pumping	814,734	60,708	217,929	47,930	819,943	40,973	146,783	144,021	5,209
102 Quincy Pump Facilities	25,908	-	-	-	25,908	-	-	-	-
104 Braintree-Weymouth Relief Facilities	234,002	15,830	3,140	-	233,961	15,789	3,140	-	(41)
105 New Neponset Valley Relief Sewer	30,300	-	-	-	30,300	-	-	-	-
106 Wellesley Extension Replacement Sewer	64,359	-	-	-	64,359	-	-	-	-
107 Framingham Extension Relief Sewer	47,856	-	-	-	47,856	-	-	-	-
127 Cummingsville Replacement Sewer	8,999	43	-	-	8,999	43	-	-	-
130 Siphon Structure Rehabilitation	2,685	88	1,657	-	2,671	30	1,701	-	(14)
131 Upper Neponset Valley Sewer	55,056	1,906	-	-	54,944	1,794	-	-	(112)
132 Corrosion & Odor Control	16,782	275	12,504	1,000	16,140	-	5,706	7,431	(642)
134 Ashland Extension Sewer	-	-	-	-	-	-	-	-	-
135 System Master Plan Interceptors	-	-	-	-	-	-	-	-	-
136 West Roxbury Tunnel	46,934	1,608	21,100	15,347	11,487	1,608	-	1,000	(33,447)
137 Wastewater Central Monitoring	20,839	6,842	50	-	20,839	6,242	650	-	-
139 South System Relief Project	4,939	(1)	938	563	4,939	(1)	188	1,313	-
140 Neponset Valley Relief Sewer	-	-	-	-	-	-	-	-	-
141 Wastewater Process Optimization	10,248	1,000	7,693	625	10,300	558	5,686	3,125	52
142 Wastewater Meter System-Equipment	26,578	1,443	8,892	11,154	26,578	250	8,547	12,691	-
143 Regional I/I Management Planning	169	-	-	-	169	-	-	-	-
145 Facility Asset Protection	213,329	31,672	156,205	19,242	254,743	14,660	117,496	116,378	41,414
146 D.J. Cross Harbor Tunnel Inspection	5,000	-	5,000	-	5,000	-	2,919	2,081	-
147 Randolph Trunk Sewer Relief	750	-	750	-	750	-	750	-	-
Treatment	618,975	190,210	227,759	149,212	628,065	173,766	252,878	149,628	9,090
200 DI Plant Optimization	33,456	296	-	-	33,456	296	-	-	-
206 DI Treatment Plant Asset Protection	575,907	186,099	224,236	149,212	583,273	168,584	247,700	149,628	7,366
210 Clinton Wastewater Treat Plant	7,298	2,430	4,523	-	9,044	3,521	5,178	-	1,746
211 Laboratory Services	2,315	1,385	-	-	2,293	1,364	-	-	(22)
Residuals	211,741	2,335	62,803	82,791	211,741	1,060	57,495	89,375	-
261 Residuals	63,811	-	-	-	63,811	-	-	-	-
271 Residuals Asset Protection	147,930	2,335	62,803	82,791	147,930	1,060	57,495	89,375	-
CSO	857,089	305,765	28,672	436	860,683	312,085	25,944	436	3,593
340 Dorchester Bay Sewer Separation (Fox Point)	54,171	409	-	-	54,187	425	-	-	16
341 Dorchester Bay Sewer Separation (Commercial Point)	64,725	8,207	1,628	-	64,725	9,021	814	-	-
342 Neponset River Sewer Separation	2,444	-	-	-	2,444	-	-	-	-
343 Constitution Beach Sewer Separation	3,769	-	-	-	3,769	-	-	-	-
344 Stony Brook Sewer Separation	44,333	(719)	-	-	44,333	(721)	-	-	-
346 Cambridge Sewer Separation	55,702	27,926	9,325	-	56,391	28,616	9,324	-	689
351 BWS Floatables Controls	933	-	-	-	933	-	-	-	-
352 Cambridge Floatables Control	1,087	165	-	-	1,087	165	-	-	-
356 Fort Point Channel Sewer Separation	12,047	3,756	-	-	12,047	3,756	-	-	-
358 Morrissey Boulevard Drain	32,899	18,197	25	-	32,899	18,223	-	-	-
359 Reserved Channel Sewer Separation	62,323	45,425	14,181	-	62,323	51,345	8,261	-	-
360 Brookline Sewer Separation	25,930	24,659	-	-	25,413	24,142	-	-	(517)
361 Bulfinch Triangle Sewer Separation	9,986	9,489	-	-	9,986	9,489	-	-	-
339 North Dorchester Bay	224,232	85,205	5	-	227,854	85,232	3,560	-	3,602
347 East Boston Branch Sewer Relief	85,715	75,009	-	-	85,710	75,004	-	-	(5)
348 BOS019 Storage Conduit	14,288	(44)	-	-	14,288	(44)	-	-	-
349 Chelsea Trunk Sewer	29,779	-	-	-	29,779	-	-	-	-
350 Union Park Detention Treatment Facility	49,583	(227)	-	-	49,583	(227)	-	-	-
353 Upgrade Existing CSO Facilities	22,385	-	-	-	22,385	-	-	-	-
354 Hydraulic Relief Projects	2,295	-	-	-	2,295	-	-	-	-

Appendix G

Comparison of the FY13 Proposed CIP and Changes from the FY12 Final CIP (\$000)

Program and Project	FY12 Final			FY13 Proposed			Change from FY12 Final		
	Total Budget Amount	FY09-13	FY14-18	Beyond 18	Total Budget Amount	FY09-13	FY14-18	Beyond 18	Total Budget Amount
355 MWR003 Gate & Siphon	3,682	430	3,252	-	4,169	430	3,739	-	487
357 Charles River CSO Controls	3,633	2,532	-	-	3,633	2,532	-	-	-
324 CSO Support	51,128	5,348	256	436	50,449	4,679	246	-	(679)
Other Wastewater	122,866	15,859	21,361	(6,036)	122,866	18,928	18,636	(6,379)	-
128 U/I Local Financial Assistance	122,585	15,859	21,361	(6,036)	122,585	18,928	18,636	(6,379)	-
138 Sewerage System Mapping Upgrade	281	-	-	-	281	-	-	-	-
Total Waterworks	2,735,725	314,347	424,552	394,411	2,769,264	299,397	439,677	427,798	33,539
Drinking Water Quality	663,548	99,989	54,970	-	652,166	94,288	49,328	-	(11,381)
542 Carroll Water Treatment Plant	426,797	33,424	20,620	-	427,971	39,488	15,771	-	1,174
543 Quabbin Water Treatment Plant	17,686	5,443	2,100	-	17,667	5,297	2,226	-	(19)
544 Nonnubega Covered Storage	106,674	102	-	-	106,674	102	-	-	-
545 Blue Hills Covered Storage	40,695	21,457	349	-	40,680	21,395	396	-	(15)
550 Spot Pond Storage Facility	71,696	39,564	31,900	-	59,175	28,007	30,935	-	(12,521)
Transmission	1,147,194	94,982	145,073	234,255	1,163,233	88,053	154,501	247,794	16,038
597 Winsor Station Pipeline	26,082	10,231	15,813	-	26,196	2,315	23,843	-	114
601 Sluice Gate Rehabilitation	9,158	-	-	-	9,158	-	-	-	-
604 Metro West Tunnel	710,719	56,375	19,544	1,000	711,616	60,177	16,639	1,000	897
615 Chicopee Valley Aqueduct Redundancy	8,667	95	-	-	8,667	95	-	-	-
616 Quabbin Transmission System	13,547	2,981	3,843	2,300	13,589	2,988	3,698	2,480	42
617 Sudbury/Weston Aqueduct Repairs	4,288	310	3,343	-	4,308	25	3,648	-	20
620 Wachusett Reservoir Spillway Improvement	9,498	1,448	-	-	9,287	1,237	-	-	(211)
621 Watershed Land	19,000	10,793	-	-	19,000	10,793	-	-	-
622 Cosgrove/Wachusett Redundancy	-	-	-	-	-	-	-	-	-
623 Dam Projects	8,181	4,797	3,384	-	5,729	3,515	2,214	-	(2,452)
625 Long Term Redundancy	338,053	7,952	99,147	230,954	355,681	6,908	104,459	244,314	17,628
Distribution & Pumping	881,820	79,213	215,696	281,459	910,412	75,795	226,430	302,736	28,593
618 Northern High NW Tran Sections 70 & 71	1,000	-	1,000	-	1,000	-	1,000	-	-
677 Valve Replacement	20,032	3,550	7,577	326	22,104	3,950	4,365	5,210	2,072
678 Boston Low Service-Pipe & Valve Rehabilitation	23,691	-	-	-	23,691	-	-	-	-
683 Heath Hill Road Pipe Replacement	19,358	(10)	-	-	19,358	(10)	-	-	-
689 James L. Gillis Pump Station Rehabilitation	33,419	-	-	-	33,419	-	-	-	-
692 NHS - Section 27 Improvements	3,308	1	1,427	1,757	3,475	1	777	2,574	167
693 NHS - Reverse & Malden Pipeline Improvement	33,612	2,949	5,768	1,000	35,288	2,938	4,241	4,215	1,676
702 New Connect Mains-Shaft 7 to WASM 3	31,632	5,409	10,346	10,559	32,639	5,555	10,664	11,100	1,007
704 Rehabilitation of Other Pump Stations	55,144	12,158	-	25,000	55,144	12,158	-	25,000	-
706 NHS-Connecting Mains from Section 91	2,360	-	-	-	2,360	-	-	-	-
708 Northern Extra High Service New Pipelines	6,690	25	3,033	-	7,479	13	2,907	926	789
712 Catholic Protection Of Distribution Mains	1,458	-	-	1,317	1,527	-	-	1,386	69
713 Spot Pond Supply Mains Rehabilitation	66,127	2,452	2,850	347	66,187	582	4,644	483	60
714 Southern Extra High Sections 41 & 42	3,657	-	-	-	3,657	-	-	-	-
719 Chestnut Hill Connecting Mains	29,361	447	6,341	5,111	29,906	25	6,046	6,374	545
720 Warren Cottage Line Rehabilitation	1,205	-	-	-	1,205	-	-	-	-
721 South Spine Distribution Mains	70,668	19,446	2,247	31,365	72,509	19,897	1,118	33,884	1,841
722 NIH Redundancy & Storage	79,070	10,172	49,213	19,052	82,491	9,076	50,325	22,457	3,421
723 Northern Low Service Rehabilitation Section 8	20,233	2,328	4,779	13,068	21,698	2,268	4,149	15,224	1,465
724 Northern High Service - Pipeline Rehabilitation	-	(2)	-	-	-	(2)	-	-	-
725 Hydraulic Model Update	598	-	-	-	598	-	-	-	-
727 SBH Redundancy & Storage	97,179	5,471	21,138	68,902	101,849	5,313	23,495	71,373	4,670
730 Weston Aqueduct Supply Mains	265,772	9,745	99,351	95,775	276,166	8,965	112,117	94,184	10,394
731 Lynnfield Pipeline	5,042	4,508	21	-	5,016	4,503	-	-	(26)
732 Walnut St. & Fisher Hill Pipeline Rehabilitation	2,717	563	-	-	2,717	563	-	-	-
733 NHS Pipeline Rehabilitation 13-18 & 48	-	-	-	-	-	-	-	-	-

Comparison of the FY13 Proposed CIP and Changes from the FY12 Final CIP (\$000)

Program and Project	FY12 Final			FY13 Proposed			Change from FY12 Final		
	Total Budget Amount	FY09-13	FY14-18	Beyond 18	Total Budget Amount	FY09-13	FY14-18	Beyond 18	Total Budget Amount
734 Southern Extra High Pipelines-Sections 30, 39,40, & 44	-	-	-	-	8,928	-	-	-	443
735 Section 80 Rehabilitation	8,485	-	606	7,879	-	-	582	(24)	-
Other	43,163	40,163	8,812	(121,302)	43,453	41,262	9,418	(122,732)	290
753 Central Monitoring System	16,992	1,325	-	-	16,992	1,325	-	-	-
763 Distribution Systems Facilities Mapping	1,799	228	535	-	1,799	228	535	-	-
764 Local Water Infrastructure Rehabilitation Assistance Program	7,488	-	-	-	7,488	-	-	-	-
765 Local Water Pipeline Improvement Loan Program	-	37,988	(2,546)	(126,518)	-	39,365	(2,546)	(127,896)	-
766 Waterworks Facility Asset Protection	16,884	621	10,824	5,218	17,174	343	11,430	5,164	290
Business & Operations Support	107,140	47,435	16,773	-	108,119	42,455	22,732	-	978
881 Equipment Purchase	15,655	7,498	2,900	-	16,237	7,353	3,627	-	582
925 Technical Assistance	1,200	800	400	-	1,200	400	800	-	-
930 MWRA Facility - Chelsea	9,851	(36)	-	-	9,815	(72)	-	-	(36)
931 Business Systems Plan	38,800	8,407	8,385	-	39,294	7,432	9,854	-	494
932 Environmental Remediation	1,556	88	-	-	1,479	11	-	-	(77)
933 Capital Maintenance Planning	11,549	7,297	533	-	10,888	6,558	611	-	(661)
934 MWRA Facilities Management	2,151	2,151	-	-	2,151	1,264	887	-	-
935 Alternative Energy Initiatives	26,377	21,231	4,554	-	27,055	19,510	6,953	-	678

FY13 CIP
NEW PROJECT REQUESTS

Ref No.	Program	Project	Subphase	Current Priority Rating	Included in the Master Plan	Priority Rating per the Master Plan	Total Contract Amount	Project Duration	NTP	FY13	FY09-13	FY14	FY15	FY16	FY17	FY18	FY14-18	Beyond FY18	Total Expenditures
Key: Current Priority Ratings - (1) Critical/Emergency: Risk moderate to high / Consequence high, (3) Necessary Projects: Risk moderate to high / Consequence moderate to low, (4) Important Projects: Risk moderate to low, (5) Desirable Projects: Risk / Consequence both low.																			
Wastewater Project Requests																			
1	Interception & Pumping	I&P Facility Asset Protection	Rehabilitation of Sections 4,5,6 of the North Metropolitan Sewer, East Boston and Winthrop Design CS/RI	3	no	n/a	\$1,000,000	4 years	Jul-13		\$0	\$205,000	\$273,000	\$222,000	\$240,000	\$50,000	\$990,000	\$10,000	\$1,000,000
			Rehabilitation of Sections 4,5,6 of the North Metropolitan Sewer, East Boston and Winthrop Construction	3	no	n/a	\$4,000,000	2 years	Jul-15					\$1,600,000	\$1,920,000	\$480,000	\$4,000,000		\$4,000,000
2		I&P Facility Asset Protection	Rehabilitation of Sections 186 and 4, Winthrop and Boston Construction	2	no	n/a	\$3,000,000	2 years	Jan-13	\$360,000	\$360,000	\$1,440,000	\$1,200,000				\$2,640,000		\$3,000,000
3	Treatment	DTP Asset Protection	Roof Replacement Phase 3	2	?	?	\$1,000,000	1 year	Jan-13	\$200,000	\$200,000	\$800,000					\$800,000		\$1,000,000
Waterworks Project Requests																			
4	Other Waterworks	Waterworks Facility Asset Protection	Electrical Distribution Upgrade at Southboro Headquarters	3	no	n/a	\$400,000	1 year	Jul-13		\$0	400,000					\$400,000		\$400,000
5	Drinking Water Quality	Carroll Water Treatment Plant	Technical Assistance 7	2	yes	2	\$563,000	2 years	Sep-12	\$157,000	\$157,000	270,000	\$136,000				\$406,000		\$563,000
6	Drinking Water Quality	Carroll Water Treatment Plant	Technical Assistance 8	2	yes	2	\$563,000	2 years	Sep-12	\$157,000	\$157,000	270,000	\$136,000				\$406,000		\$563,000
SUMMARY																			
Total Wastewater				3			\$9,000,000			\$560,000	\$560,000	\$2,445,000	\$1,473,000	\$1,822,000	\$2,160,000	\$530,000	\$8,430,000	\$10,000	\$9,000,000
Total Waterworks Project				3			\$1,526,000			\$314,000	\$314,000	\$940,000	\$272,000	\$0	\$0	\$0	\$1,212,000	\$0	\$1,526,000
Total All New Projects Requests				6			\$10,526,000			\$874,000	\$874,000	\$3,385,000	\$1,745,000	\$1,822,000	\$2,160,000	\$530,000	\$9,642,000	\$10,000	\$10,526,000