FY 2011

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 2010

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 2011
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Current Expense Budget

May 2010

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, 2010 (FY 2011). 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 20, 2010 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 FY11 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.

This integrated format allows the Advisory Board greater flexibility to discuss proposed expenditures that pertain to elements of both the CIP and CEB as well as to discuss policy decisions within a more comprehensive context of the issues facing the Authority.

It is important to first understand this larger context within which the Authority fits as an operational and financial entity. In keeping with its charge, the Advisory Board would remind the reader that 95% of the Authority's funding comes from rate revenue, a burden ultimately born by the cities and towns, and the ratepayers. By 2020, the ratepayers' burden will increase by a projected 68% to nearly $1 billion. This is the primary context against which all of the Authority's proposed expenditures and policies must be made.

While there are some signs that the economic pressures are beginning ease somewhat, the timetable for a full recovery is still uncertain. Moreover, historical experience has shown that the public sector's recovery typically tends to lag behind the private sector, suggesting that pressures upon the Authority's primary funding source – the cities and towns – could continue for the short-term. In FY11 cities and towns are facing an estimated 5% reduction in local aid, and many have already begun discussion of how to further cut services and reduce costs further.

Being fully cognizant of the financial challenges facing cities and towns, particularly over the next few years, the Advisory Board sought to build upon its budget review strategy to influence the development of the Proposed FY11 CEB.

Last year, the Advisory Board issued only two formal recommendations – reducing both the capital and the current expense budgets by $100 million over the course of four years. This was a significant departure from previous reviews where, particularly in the CEB, the Advisory Board would recommend dollar specific reductions to individual line items. Instead, the Advisory Board outlined a series of "tools" that the Authority could use to achieve the $100 million decrease.

Building off of its "toolbox" from last year's review, in the fall of 2009, the Advisory Board challenged the Authority with two goals: first, provide rate relief to cities and towns in view of the many financial challenges they faced in the short-term; and second, to have communities' preliminary assessments (typically transmitted in February) equal their final assessments to aid in the local budgetary process. Through a series of discussions both at the staff level and the Board level, by February the MWRA Board of Directors voted and approved preliminary assessments with a wholesale increase of 1.49% - the lowest rate increase since 1996.

In addition, the Authority also tightened up its planning projections by using more realistic assumptions in FY11 and FY12, achieving 3.9% rate increases in those years as well. It should be noted, that in the updated planning projections the Authority not only meets the Advisory Board's recommendation from last year (reduction of $100 million to the CEB over four years), but also exceeds it by almost $50 million. The Advisory Board applauds the Authority for balancing the needs of cities and towns against the needs of the agency to achieve an exceptionally low, yet still responsible rate increase.

Last year the Advisory Board was pleased to commend the Authority for its financial management during the worst of the economic downturn. It was also glad to report an upgrade in the Authority's credit rating by Standard & Poor's at the same time. This year, the Advisory Board was disappointed to learn that although Moody's recently affirmed the Authority's credit rating[1] that it also placed the Authority on negative watch. This is particularly troubling when the Advisory Board believes that the Authority has proved to be the exemplar of a public agency as evidenced by twenty-five years of environmental stewardship, infrastructure investment, and an undeniable record of meeting its financial obligations. The Advisory Board's response to Moody's concerns is being included in this year's *Integrated Comments and Recommendations*.

While the Advisory Board has not always agreed with the Authority's actions and made recommendations to such an effect, the experience of the past twenty-five years has indicated that the Authority is a success story among public agencies. Undertaking a rigorous, court-mandated capital intensive program with ever increasing costs and declining outside financial assistance, the Authority has met or exceeded almost every challenge before it, while still remaining sensitive overall to the pressures upon the cities and towns that fund its expenditures. The Advisory Board looks forward to working with the Authority as it moves forward on the next phase of its existence – an agency transitioning from a focus on capital construction to maintenance. Additionally, the Advisory Board looks forward to working with the Authority as it prepares its long-term strategies for addressing the increasing debt service payment obligations through FY 2022 with particular focus upon the greater context within which all of its decisions should and must be made – the context of the 60 cities and towns that fund nearly 100 percent of its annual expenses.

[1] On April 26, 2010, Moody's completed its global municipal issuer rating recalibration, which resulted in an upgrade to MWRA's rating to Aa1 from Aa2 on the senior lien and to Aa2 from Aa3 on the subordinated bonds.

HIGHLIGHTS

CAPITAL IMPROVEMENT PROGRAM OBSERVATIONS

Currently Open Capital Projects Total Nearly $5.1 Billion

The Authority states that the total contract value of active (or open) capital projects is $5.088 billion, of which $3.259 billion is projected to have been spent through FY10.[2] Future spending, as identified to date, totals $1.829 billion, of which $1.68 billion is to be spent during the next ten years (FY11-20). The Authority also budgets $0.111 billion for potential contingency allowances during the ten-year period.

The total contract value increased by $106.84 million from the Final FY10 CIP and by $131.93 million since the Advisory Board's review of the Proposed FY10 CIP at this time last year.[3] The increases from the final FY10 CIP to the proposed FY11 CIP were driven by updated cost estimates of $66.5 million (including scope changes, change orders and amendments, and actual award amounts as compared to previous budget assumptions), new projects of $35.6 million (and deleted projects of nearly $4 million), and updated inflation estimates of $8.7 million.

Another $0.266 billion from the Master Plan has been included for the period beyond FY18. Most of this amount (nearly $0.20 billion) is for Deer Island Treatment Plant Asset Protection and the Residuals Processing Facility. It can be expected that the Authority will continue to analyze capital spending needs with each future budget process and that spending for the years FY14-18 (the next cap period), and for the years that follow, will expand based on the Master Plan.

Spending Since the Inception of the MWRA is Nearly $7.4 Billion

Another $4.12 billion for completed (and closed out) capital projects is identified in Appendix 7 in the Proposed FY11 CIP document. Thus, together with the $3.26 billion discussed above, total spending from inception through FY10 is expected to reach $7.38 billion.

The $3.1 Billion Master Plan Shapes the Proposed Capital Budget

The Authority's Master Plan for Wastewater and Waterworks projects identifies nearly $3.1 billion in capital spending.[4] Nearly $2.034 billion (66%) is identified for the twelve-year period FY 2007 through FY 2018, while another $1.044 billion of future capital needs is identified for the thirty-year period from FY 2019 through FY 2048.[5] Additional spending needs can be expected to be identified in future updates of the Master Plan, anticipated every five or so years. Also to be developed will be Business and Operations Support project needs including Information Systems projects. These projects are expected to be added to the Business Plan.

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[2] Includes current projections for FY10 spending.
[3] Does not include contingency funding.
[4] In 2006 dollars.
[5] These figures include disbursements and repayments to the Community Assistance programs.

The Budget for the Five-Year Cap Period FY09-13 is Projected to be $1.129 Billion

The Authority is proposing a capital budget of $1.129 billion for FY09-13. The total represents spending of $1.079 million plus contingency allowances of $0.05 billion.

Table 1

Proposed FY09-13 Capital Spending by Program
($ millions)

Program	Total Contract	Spending thru FY09	Remaining Balance	FY09 Actual	FY10 Projected	FY11	FY12	FY13	FY09-13
Wastewater System Improvement	**$2,550.9**	**$1,341.4**	**$1,209.5**	**$123.7**	**$146.4**	**$153.2**	**$123.4**	**$116.3**	**$663.1**
Interception & Pumping	795.0	495.0	300.0	6.8	5.6	17.0	20.5	34.9	84.8
Treatment	545.0	66.5	478.4	14.7	44.6	69.3	65.9	56.0	250.5
Residuals	211.7	63.8	147.9		0.8	0.6	1.2	2.0	4.6
CSO	876.3	621.6	254.7	99.4	92.1	67.5	34.1	21.4	314.5
Other	122.9	94.4	28.4	2.7	3.4	-1.1	1.7	2.0	8.7
Waterworks System Improvement	**2,431.9**	**1,655.3**	**776.7**	**52.9**	**54.3**	**58.5**	**83.1**	**114.0**	**362.7**
Drinking Water Quality Improvements	647.6	526.4	121.2	17.8	15.3	6.2	29.1	33.5	101.9
Transmission	990.9	679.2	311.6	6.3	20.3	20.7	17.6	28.5	93.5
Distribution and Pumping	762.4	324.8	437.5	19.4	12.9	17.1	23.3	30.1	102.9
Other	31.1	124.8	-93.7	9.3	5.8	14.6	13.0	21.8	64.5
Business & Operations Support	**105.1**	**48.6**	**56.5**	**5.7**	**12.9**	**17.4**	**11.0**	**6.5**	**53.5**
TOTAL MWRA w/o CONTINGENCY	**$5,087.9**	**$3,045.2**	**$2,042.7**	**$182.2**	**$213.7**	**$229.1**	**$217.4**	**$236.8**	**$1,079.2**

(See footnote[6])

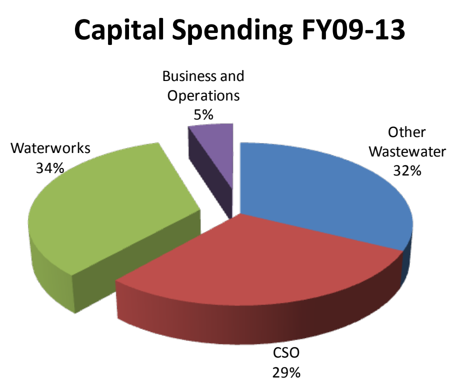

Chart 1

Over the five-year period, 61% of all spending is for Wastewater projects. Another 34% supports Waterworks projects, while 5% is for Business and Operations Support projects. (See Chart 1) Gradually, spending is shifting slightly from Wastewater projects to Waterworks projects as well as Business and Operations Support which includes an expanding Alternative Energy project category. By FY13, budgeted spending for Wastewater and Waterworks projects is practically the same. (See Table 1, above, and Chart 2)

Just under 30% of all spending for the period – $314.5 million – is budgeted for the Combined Sewer Overflow Control Program. The amount is nearly half of all Wastewater spending for the period.

The twenty largest projects during the cap period represent 83% of all spending for FY09-13 or $894.4 million.[7] With the exception of one project, the largest projects represent spending of more than $10 million during the period. Spending at that level tends to be for projects in construction. Six of the ten largest Wastewater projects are part of the CSO Control Program. Spending at that level tends to be for projects in construction.

[6] Numbers may vary slightly from MWRA figures due to rounding.
[7] Net of contingency.

Table 2

10 Largest Wastewater Projects FY09-13 $000s		
Project	**FY09-13 Spending**	**Program**
DI Treatment Plant Asset Protection	$244,232	Treatment
North Dorchester Bay	83,466	CSO (MWRA Managed)
East Boston Branch Sewer Relief	74,467	CSO (MWRA Managed)
Reserved Channel Sewer Separation	49,088	CSO (Community Managed)
Facility Asset Protection	42,628	Interception and Pumping
Cambridge Sewer Separation	32,318	CSO (Community Managed)
Brookline Sewer Separation	22,753	CSO (Community Managed)
Braintree-Weymouth Relief Facilities	21,925	Interception and Pumping
Morrissey Boulevard Drain	21,729	CSO (Community Managed)
West Roxbury Tunnel	11,612	Interception and Pumping
TOTAL	**$604,218**	

Table 3

10 Largest Waterworks Projects FY09-13 $000s		
Project	**FY09-13 Spending**	**Program**
Local Water Pipeline Improve. Loan Program	$61,003	Waterworks Other
MetroWest Tunnel	53,583	Transmission
John J. Carroll Water Treatment Plant	39,726	Drinking Water Quality Improvements
Spot Pond Storage Facility	32,905	Drinking Water Quality Improvements
NIH Redundancy & Storage	25,069	Distribution and Pumping
Southern Spine Distribution Mains	24,676	Distribution and Pumping
Blue Hills Covered Storage	21,852	Drinking Water Quality Improvements
Rehab of Other Pumping Stations	12,713	Distribution and Pumping
Watershed Land	10,793	Transmission
SEH Redundancy & Storage	7,840	Distribution and Pumping
TOTAL	**$290,160**	

The Authority also points out that since the agency's inception in 1985, nearly 80% of all spending has been for court mandated projects, most notably the Deer Island Wastewater Treatment Plant and the CSO Control Program. Now, for the FY09-13 period, mandated projects account for 36% of spending; this amount increases to 63% when expenditures for asset protection initiatives, including Deer Island, are included. By the end of the FY09-13 cap period more than 95% of the CSO Control Program will be completed and the focus will shift to critical asset protection and water redundancy initiatives.

Spending for the FY09-13 timeframe is now flattening as compared to the sharper peaks previously anticipated for fiscal years 2010 and 2011. The proposed CIP now anticipates peak spending in FY 2014, as Waterworks project spending grows and spending on the West Roxbury Tunnel and Wastewater Headworks projects increases and shifts into the next cap period.

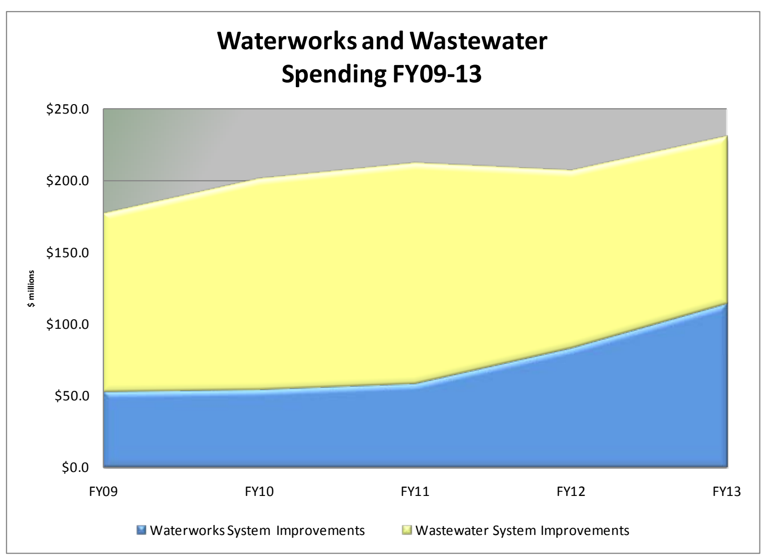

Chart 2

The Proposed Budget for FY09-13 Puts Spending $16.5 million Below the Cap Calculation

In June 2008, in the final FY09 CIP, the Authority set a new capital spending cap for the five-year period, FY09-13, at $1,143.8 million. According to the cap calculation, the Authority now expects spending and other adjustments to reach $1,127.3 million or $16.5[8] million less than the official cap number set two years ago. (See Table 4 and Appendix F.)The change is largely the result of decreased contingency and inflation on unawarded construction contract. Planned spending itself is within $2 million of the original cap assumption. Lower contingency and inflation assumptions are also the result of schedule shifts for some large project spending, such as the West Roxbury Tunnel, to the next cap period.

Table 4

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	64.9
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)	(24.6)
FY09-13 Baseline Cap	**$244.4**	**$264.1**	**$230.0**	**$207.1**	**$198.5**	**$1,144.1**
FY11 Updated Projections	$181.6	$224.8	$241.0	$226.2	$253.8	$1,127.4
Change ($)	(62.8)	(39.3)	11.0	19.1	55.3	(16.7)
Change (%)	-25.7%	-14.9%	4.8%	9.2%	27.9%	1.3%

(See footnote)[9]

Future Risk Factors

The Authority has also identified other potential risk factors that could increase capital spending in the future. These include:

- Whether the West Roxbury Tunnel project involves rehabilitation or replacement of the tunnel could add $60 million to the $80 million already included in the budget, bringing the total project cost closer to $140 million. More recently, staff indicates that the less expensive rehabilitation alternative is likely to be pursued.
- The Cross Harbor Cable may need a deeper installation or protective material as part of the harbor dredging project; additional costs could be in the $20 million range.
- A Chelsea Creek dredging initiative could cost as much as $10 million.
- Residuals asset protection or the funding to rehabilitate or replace the existing residuals plant has yet to be determined.
- New mandates could arise and cause increased spending in the future.

[8] Note: due to rounding, the Authority's budget lists a figure of $9.5 million.
[9] Note: Due to rounding, Authority's figures may differ; additional cap calculation data in Appendix F.

CURRENT EXPENSE BUDGET OBSERVATIONS

The Budget in Brief

The Massachusetts Water Resources Authority has proposed a Current Expense Budget for Fiscal Year 2011 (beginning July 1, 2010) of $602.8 million. Non-rate revenue of $33.0 million leaves $569.8 million to be raised from rate revenue. The amount is $8.4 million or 1.49% more than the $561.4 million in rate revenue budgeted for FY10.

The budget does not include any funds from state Debt Service Assistance. The proposed budget for FY11 is lower than the $603.5 million proposed for FY10 at this time last year.

Table 5

MWRA Current Expense Budget
($ millions)

	FY10 Budget	FY11 Proposed	$ Change	% Change
Expenses				
Direct Expenses	209.6	209.0	(0.6)	-0.3%
Indirect Expenses	39.8	38.5	(1.2)	-3.1%
Capital Financing	347.2	355.3	8.0	2.3%
Subtotal Expenses	***596.6***	***602.8***	***6.2***	***1.0%***
Offsets				
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	**596.3**	**602.8**	**6.6**	**1.1%**
Revenues				
Other User Charges	7.9	7.0	(0.9)	-11.9%
Other Revenue	4.4	4.8	0.4	8.8%
Rate Stabilization	7.3	6.8	(0.5)	-6.6%
Investment Income	15.2	14.4	(0.7)	-4.9%
Subtotal Non-Rate Revenue	***34.8***	***33.0***	***(1.8)***	***-5.1%***
Rate Revenue	561.4	569.8	8.4	1.49%
Total Revenue and Income	**596.3**	**602.8**	**6.6**	**1.10%**
FY11 Rate Revenue Increase ($)	$8.4			
FY11 Rate Revenue Increase (%)	1.49%			

Direct expense spending is budgeted at $209.0 million, a $0.57 million (0.3%) reduction from the $209.6 million budgeted in FY10. The proposed budget reflects reductions in all but one of the largest line items, including wages and salaries, overtime, fringe benefits, chemicals, utilities, professional services and other services (which includes the contract costs of the pelletizing plant.

Increases to training and meetings and other materials, particularly computer hardware, reflect renewed funding for these two categories of expense that had been sharply reduced in recent budgets. Maintenance expense increases by nearly $1 million or 3.4%, most notably for the Field Operations Department due to a significant increase in planned maintenance projects and improved capacity to complete the work due mainly to a reorganization.

Direct Expenses Show Net Decrease

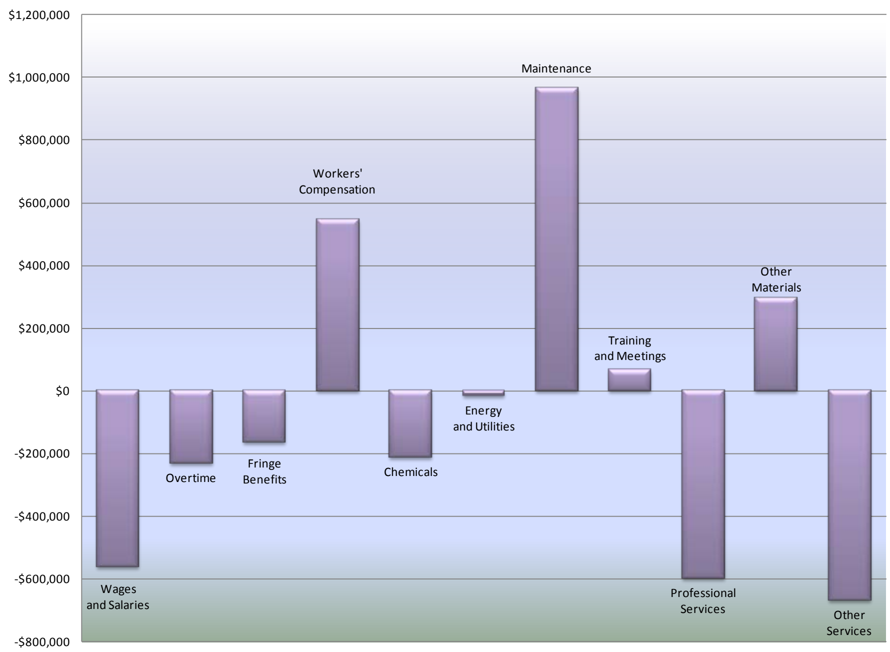

Chart 3

Indirect expense spending is budgeted at $38.5 million, a decrease of $1.22 million (3.1%) from the $39.8 million budgeted in FY10. The reduction reflects lower additions to the pension fund, which do not include optional payments to the pension fund beyond current actuarial study recommendations. No further expense associated with the other post-employment benefits obligation is budgeted for FY11.

Capital financing expenses increase by $8.4 million (2.4%) to $355.26 million or 59% of the FY11 budget. The budget assumes no receipts for Debt Service Assistance, and reflects the budgetary benefits of restructuring targeted amounts of debt service to reduce expenses in FY11, FY12, and FY13.

Rate Revenue Requirements & Percentage Increases[10]

Non-rate revenue of $33.0 million comes from other user charges, other revenue, a drawdown from the rate stabilization fund, and investment income. The use of rate stabilization monies is nearly $0.5 million lower than in FY10, and investment income also falls nearly 5% or $0.75 million as interest rates for short and long term interest earnings continue to decline. Other revenue increases nearly $0.4 million, reflecting updated

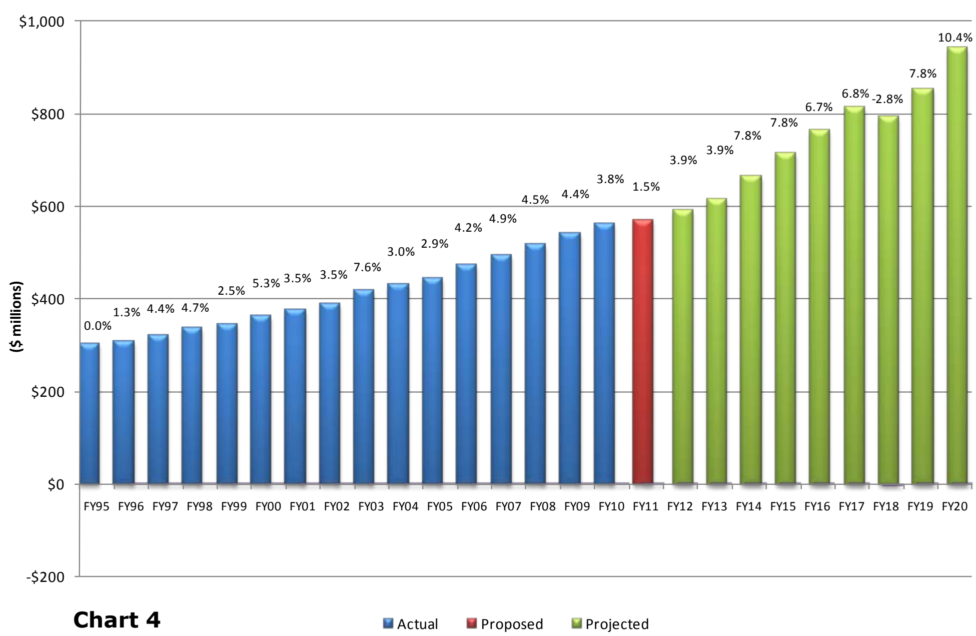

Chart 4

[10] The rate revenue increase in FY06 is 4.2% higher than the Final FY05 rate revenue requirement of $453.0 million, which did not include Debt Service Assistance of $8.02 million; figures based upon Proposed FY11 CEB projections and rate runs.

charges for the TRAC Permit Fee program and additional energy related revenues.

Rate revenue of $569.8 million is proposed, a 1.49% increase over the $561.4 million budgeted in FY10.

The modest rate increase reflects that significant benefits of reduced debt service payments resulting from the January 2007 restructuring transaction and from the more recent February 2009 refunding plus the anticipated benefits of the upcoming bond defeasance transaction of up to $23 million and the restructuring of a targeted amount of debt service that had been due in FY11 (and FY12 and FY13). The proposed increase in rate revenue is the lowest in 15 years, since 1996 when the Authority received $31.5 million in Debt Service Assistance. (See Chart 4 and Chart 5.)

Annual Rate Revenue Requirements Increases[11]
Actual, Proposed and Projected @ 1.49%

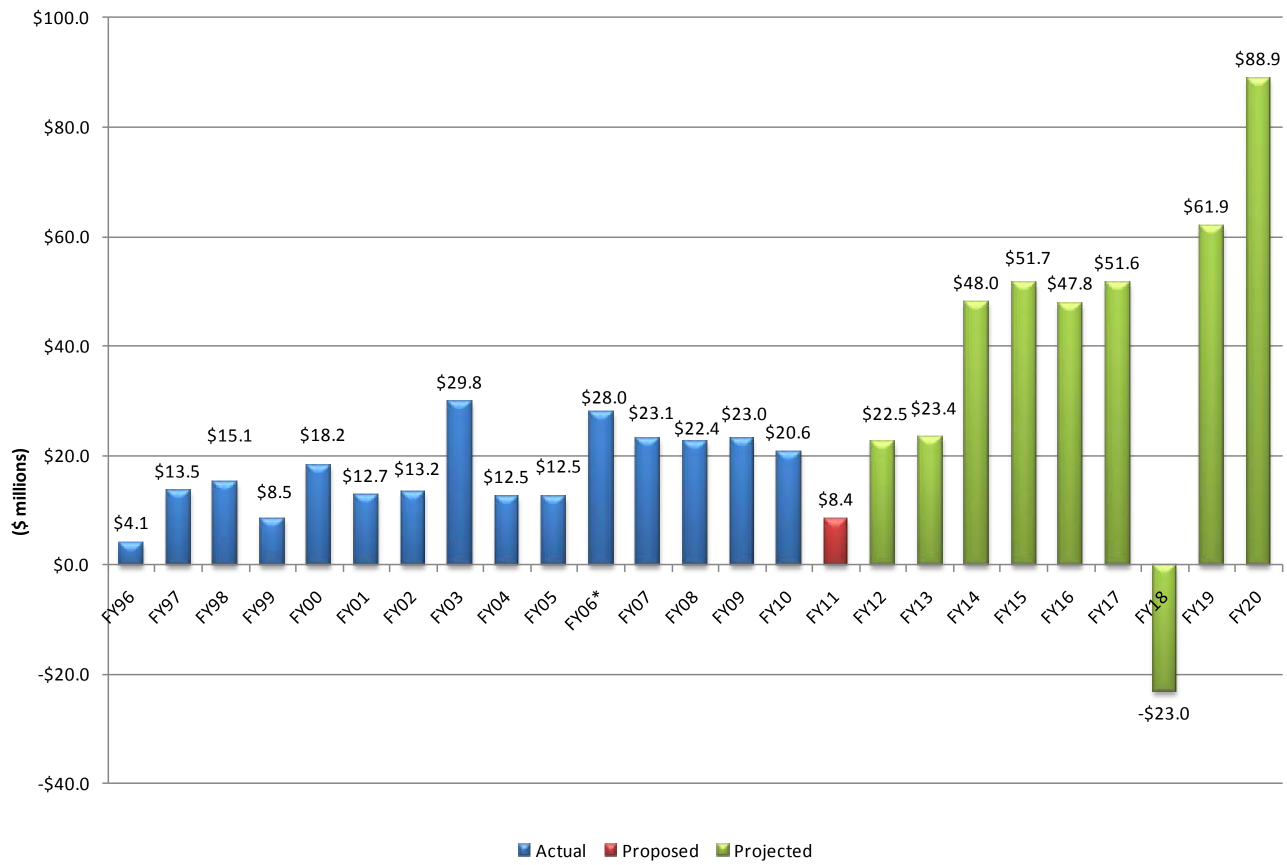

Chart 5

[11] The rate revenue increase in FY06 is 4.2% higher than the Final FY05 rate revenue requirement of $453.0 million, which did not include Debt Service Assistance of $8.02 million; figures based upon Proposed FY11 CEB projections and rate runs.

FY11 CURRENT EXPENSE BUDGET PROCESS

Advisory Board's Fall 2009 Challenge

In October 2009, the Advisory Board sent a letter to the MWRA Board of Directors calling for rate relief for cities and towns in their Proposed FY11 Current Expense Budget. Additionally, the Advisory Board requested that the preliminary assessments presented to the communities in February 2010 be equal to the final assessments they were to receive in June. The aim was to assist cities and towns in their local budgeting processes by providing them with more concrete numbers for their FY11 MWRA assessments.

Through January 2010 the issue was discussed both between Advisory Board and MWRA staff, and at the MWRA Board of Directors meetings. Ultimately, the MWRA Board of Directors voted in February 2010 to approve preliminary/final assessments with a wholesale increase of 1.49% - the lowest rate increase since FY96.

The Advisory Board's approach built upon last year's budget review, which outlined a series of "tools" the Authority could use to reduce rate revenue requirement by $100 million over the four years from FY10-FY13. As of now, the updated planning projections indicate rate revenue requirements over this same period are now $152.7 million less than the Proposed FY10 Planning Projections. In short, though the Authority did not formally accept the Advisory Board's FY10 CEB recommendation through its FY11 budgeting process, it has already met and exceeded the original challenge.

Some major components of the Proposed FY11 CEB that allowed the Authority to achieve a 1.49% increase included:

Controlling Costs and Reducing Direct Expenses Below FY10 Budgeted Levels

The Authority reduced direct expenses slightly ($600,000), largely through reductions in personnel-related expenses, chemicals, professional services, and other services, all while increasing maintenance expense to support its core mission objectives.

The proposed FY11 CEB includes an elimination of any COLA increases in FY11 for union and non-union staff. This had been one of the tools identified by the Advisory Board in its FY10 *Integrated Comments and Recommendations*. Throughout the Commonwealth many unions were discussing concessions and many agencies were discussing layoffs. The Advisory Board believed and continues to believe that 0% COLA increases for MWRA employees are a reasonable concession for union employees given the current economic conditions and extreme budgetary pressures the Authority faces.

In responding to the Advisory Board's "Fall Challenge" the Authority continued the "tightening" on direct expenses that began in earnest during the budget amendment process in FY09. The result is an arguably "tight" budget with regard to direct expenses for FY11.

Reduction of Indirect Expenses

In its proposed FY11 CEB, the Authority not only eliminated optional payments to the pension system (payments above and beyond the Annual Required Contribution (ARC) outlined in its current actuarial study), but also reduced its proposed expense beyond the current ARC. This reduction, however, was not conducted without reason. Understanding that the pension fund had recovered from its lowest point – the point reflected in the updated actuarial study – the Retirement Board at the request of Authority staff undertook an interim actuarial study to better reflect the recent gains of the pension fund.

Defeasance

The proposed FY11 CEB also includes the utilization of FY10 surplus for a defeasance transaction of up to $24 million. While defeasance – or the prepaying of a future fiscal 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. Given the current challenges facing the Authority, staff decided to similarly include the benefits of such a transaction in the proposed FY11 CEB.

"Targeted Rate Relief Restructuring"

The most significant of the tools used by the Authority to achieve the lowest wholesale rate increase since 1996 is what the Advisory Board is terming "Targeted Rate Relief Restructuring" (TRRR) Typically, the Authority sets a 4% present value savings as a refunding threshold, and any discussions of potential restructuring transactions have taken place within that paradigm. However, in an effort to preserve its rate stabilization funds Authority staff recommended and received Board of Directors approval for a transaction to restructure $75 million that would not necessarily meet the 4% threshold, but would provide budget – and thereby rate – relief during the FY11-13 period. The Advisory Board applauds the Authority for its strategic and very limited use of TRRR to provide relief for cities and towns during the years they most need the help. While understanding that the this tool should used judiciously, the Advisory Board supports adding it to the list of tools and options for the Authority to manage rates in the future should the need again arise.

Results

As noted before, in February 2010, the MWRA Board of Directors approved a wholesale rate increase of 1.49% - the lowest rate increase since 1996. Moreover, in an effort to provide municipalities with more accurate numbers as they begin their difficult budget building processes, the Authority's preliminary assessments are anticipated to be the same – at the wholesale level – as the final assessments provided to communities in June 2010. **The Advisory Board concurs with the 1.49% rate revenue requirement increase, and recommends that the final FY11 CEB be adopted with the same wholesale rate increase.**

Moreover, the Authority made an effort to make its projections more realistic moving forward. Instead of including the budget assumptions for FY11 and then entering placeholder numbers for assumptions in FY12 at a higher level, the Authority incorporated more realistic assumptions. For example, both inflation and variable rate debt interest rate assumptions – both much lower in FY11 than typical placeholder assumptions – graduate up during FY12 instead of including the much higher placeholders used in the out-year projections. These changes to the assumptions have the effect of providing a much more realistic starting point for the FY12 and FY13 wholesale rate increases – both 3.9%.

The Advisory Board commends the Authority staff for its comprehensive and well thought out response to the Advisory Board's "Fall Challenge" and for balancing difficult budgetary decisions with the fiscal responsibility that has been its hallmark as an agency for twenty-five years.

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PROPOSED FY11 CIP OVERVIEW

PROPOSED FY11 CAPITAL IMPROVEMENT PROGRAM AND BUDGET

The Authority is proposing a capital improvement program with a total contract value of $5.088 billion. Payments through FY09 of $3.045 billion leaves a remaining balance of $2.043 billion for the period FY10 forward. Currently, projected spending for the current five-year period, FY09-13 is $1.079 billion, fully $200 million more than the $879.45 million presently projected for the next five-year cap period. The Advisory Board's review continues to focus on the current cap period. Spending for FY14-18 and for the several decades beyond will continue to evolve based on periodic updates of the Master Plan and the development of subsequent capital budgets.

A Focus on the Five-Year Cap Period, FY09-13

The Authority is proposing a budget of $1.129 billion for the five-year period FY09-13: $1.079 billion for project spending plus contingency allowances of $49.6 million. Following actual spending of $182.2 million for FY09, planned and projected spending for the remaining four years of the current cap (including the remainder of FY10) range from $225 million and $250 million (including contingency allowances). The highest year is expected to be FY13, at $250.9 million.

Table 6

Proposed FY09-13 Capital Spending by Program

($ millions)

Program	Total Contract	Spending thru FY09	Remaining Balance	FY09 Actual	FY10 Projected	FY11	FY12	FY13	FY09-13
Wastewater System Improvement	**$2,550.9**	**$1,341.4**	**$1,209.5**	**$123.7**	**$146.4**	**$153.2**	**$123.4**	**$116.3**	**$663.1**
Interception & Pumping	795.0	495.0	300.0	6.8	5.6	17.0	20.5	34.9	84.8
Treatment	545.0	66.5	478.4	14.7	44.6	69.3	65.9	56.0	250.5
Residuals	211.7	63.8	147.9		0.8	0.6	1.2	2.0	4.6
CSO	876.3	621.6	254.7	99.4	92.1	67.5	34.1	21.4	314.5
Other	122.9	94.4	28.4	2.7	3.4	-1.1	1.7	2.0	8.7
Waterworks System Improvement	**2,431.9**	**1,655.3**	**776.7**	**52.9**	**54.3**	**58.5**	**83.1**	**114.0**	**362.7**
Drinking Water Quality Improvements	647.6	526.4	121.2	17.8	15.3	6.2	29.1	33.5	101.9
Transmission	990.9	679.2	311.6	6.3	20.3	20.7	17.6	28.5	93.5
Distribution and Pumping	762.4	324.8	437.5	19.4	12.9	17.1	23.3	30.1	102.9
Other	31.1	124.8	-93.7	9.3	5.8	14.6	13.0	21.8	64.5
Business & Operations Support	**105.1**	**48.6**	**56.5**	**5.7**	**12.9**	**17.4**	**11.0**	**6.5**	**53.5**
TOTAL MWRA w/o CONTINGENCY	**$5,087.9**	**$3,045.2**	**$2,042.7**	**$182.2**	**$213.7**	**$229.1**	**$217.4**	**$236.8**	**$1,079.2**

Wastewater

Wastewater spending accounts for 61% of all project spending ($663.1 million) Waterworks projects for just under 34% ($362.7 million) and Business and Operations Support spending for 5% ($53.5 million). Despite a number of cost updates, new and expanded projects, inflation updates and a number of schedule shifts, planned spending for the period has decreased by just $2.1 million and the cap calculation to date, as compared to the baseline, is $16.5 million lower (1.4%) than the numbers set two years ago.

Wastewater spending peaks in FY11, at $153.2 million, and is the highest year of the ten years from FY09-18, as CSO project spending and large projects at the Deer Island Plant move forward. Together these two categories of Wastewater spending represent $136.8 million of all Wastewater spending and 54.8% of all capital spending for the period.

Wastewater system improvements are divided into five categories: Interception and Pumping, Treatment, Residuals, the Combined Sewer Overflow Control Program and Other.

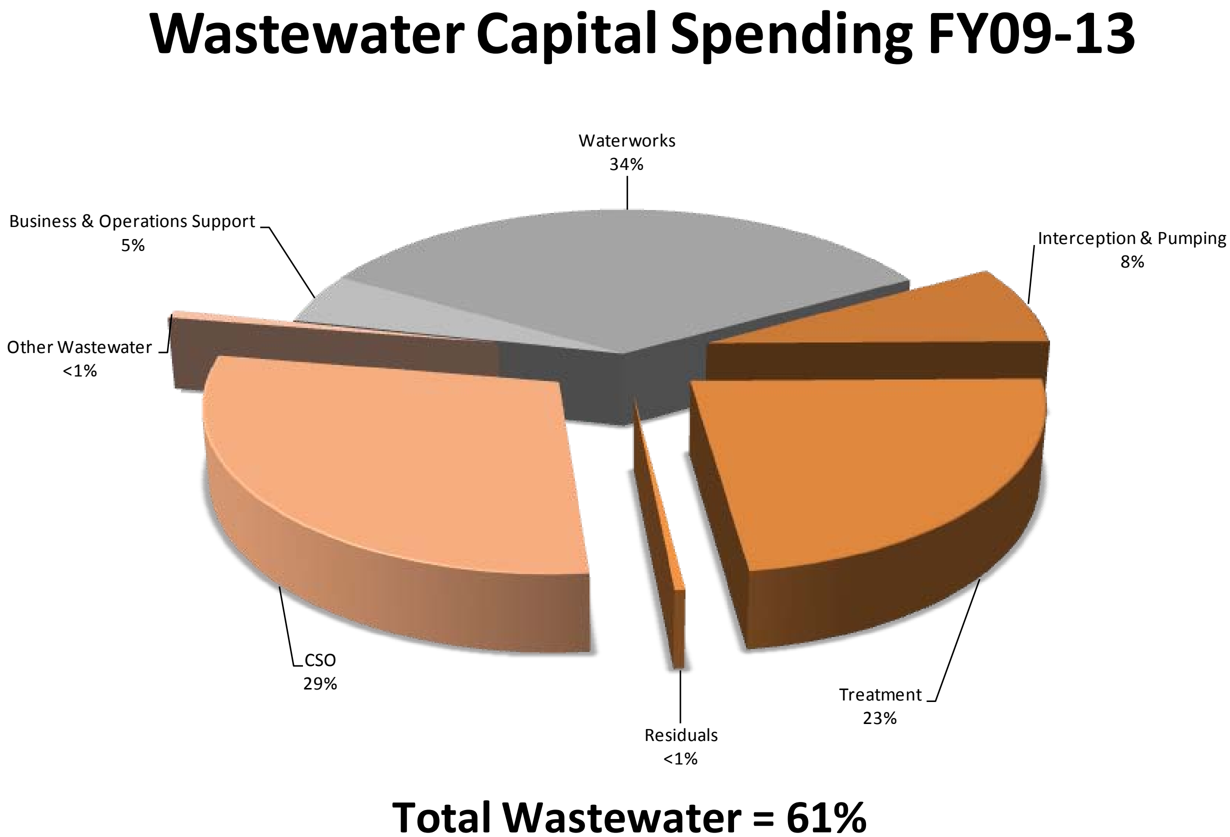

Chart 6

Interception and Pumping

Interception and Pumping projects focus on collection system facilities, sewers and tunnels. The facilities include the four remote headworks and twenty pump stations and CSO facilities. The Authority has noted that three of the headworks facilities are now over 40 years old and are in only fair condition. Recommended in the Master Plan are a comprehensive facilities plan and subsequent upgrades. The average age of the pump stations and CSO facilities is now approximately 20 years old (although some facilities are newer and others are much older). The Master Plan has recommended a number of equipment rehabilitation and replacement projects. There are more than 250 miles of sewer pipelines, of which 18 miles are severely damaged (and ranked "C-rated"). The Master Plan has recommended thirteen projects for interceptor repair. Four cross harbor tunnels to the Deer Island plant total 18 miles. While the Authority states that the tunnels are presumed to still be in good condition, based on the industry benchmark of 100-plus years of useful life, there as been some deterioration in the shafts and the actual condition of the tunnels is unknown.

The Authority is proposing a budget of $306.8 million for Interception and Pumping projects for the period FY09 forward. Of this amount, $84.78 million is to be spent during the FY09-13 period. Three projects are among the ten largest Wastewater projects for the period.

The largest project during the period is now the Interception and Pumping Asset Protection group of contracts, with a total contract value of $160.4 million and planned spending during the cap period of $42.6 million. With an increased focus on this group of projects, the Authority has expanded and accelerated a number of contracts, bringing important increased attention to a number of long overdue improvements. The largest increase has been to the Headworks Upgrades for the three older headworks facilities. Cost estimates have nearly tripled since the final FY09 CIP, from $28.0 million to $81.3 million and have been advanced to the FY13 to FY17 timeframe. Some $13 million is budgeted for the current cap period. Other notable projects during the cap period are: the Alewife Brook Pump Station Rehabilitation ($3.3 million is estimated for the cap period) and Nut Island Mechanical and Electrical Replacements ($5.5 million is budgeted for the cap period).

The second largest project, in terms of spending during the cap period, is the Braintree-Weymouth Relief Facilities project, with spending of $21.9 million planned. Rehabilitation of Section 624 in North Weymouth is expected to be awarded this spring, at an estimated cost of $8.5 million over a two year period. Also part of this group of projects is spending of $10.7 million associated with the Intermediate Pump Station. This amount represents a "placeholder" for a potential claim, which is still pending and is scheduled for FY12. If the Authority's position is supported or upheld, this expenditure will be removed from the CIP.

The third largest project is the West Roxbury Tunnel. Long a major project in the CIP, this project was reactivated with the award in January 2009 of a design and engineering services contract. Ongoing is work to confirm the initial findings of the original conceptual design report and a re-examination of the tunnel. Costs of the tunnel construction phase have increased by $11 million, the notice to proceed is now budgeted for September 2012 with a substantial completion date of December 2015. The cash flow assumptions have been updated, lowering FY09-13 spending by $5.3 million, while FY14-18 spending absorbs this later spending as well as the $11 million cost increase, for higher spending of $68.2 million, an increase of $16.3 million in the next cap period. Spending during the FY09-13 period was $36.5 million when the baseline cap was set, while the updated estimates are budgeted at $11.6 million, a reduction of nearly $25 million.

<u>Treatment</u>

Treatment projects address the needs of the Deer Island Wastewater Treatment Plant and the Clinton Wastewater Treatment Plant. The proposed CIP includes $493.17 million for all future spending from FY09 forward, of which $250.5 million is for ongoing and new project spending during the five-year period (or just under 25% of all capital spending for the period). Deer Island Treatment Plant funding totals $244.2 million for FY09-13.The largest projects during the period are Primary and Secondary Clarifier Rehabilitation ($59.4 million), North Main Pump Station Variable Frequency Drive Replacements ($31.1 million), Electrical Equipment Upgrades ($14.4 million), Digester Pipe Replacement ($11.5 million), Heat Loop Pipe Replacement ($11.2 million), HVAC Equipment Replacement ($9.8 million) and Power System Improvements ($9.5 million).

Table 7

Top Deer Island Projects During Cap Period FY09-13 ($ millions)		
Projects	Amount	Comments
<u>Top Eight Projects, Over $5 Million</u>		
Prim & Sec Clarifier Rehab	$59.38	Total project cost within cap; high priority
North Main PS VFD Replacement	31.11	Total project cost expected to increase to $45.0 million
Electrical Equipment Upgrade 3	14.38	
Digester Pipe Replacement	11.46	
Heat Loop Pipe Replacement	11.23	Three parts: $2.9 million awarded, two others still to be awarded
HVAC Equipment Replacement	9.84	Does not include design/ESDC costs
Power System Improvements	9.50	
North Main PS Motor Control Center	7.09	
subtotal	**$153.99**	
<u>All Other Active Projects During Cap</u>	**$90.24**	There are 55 other active Deer Island contracts during FY09-13
TOTAL	**$244.23**	During the FY09-13 period

Funding is also included for the *Clinton Wastewater Treatment Plant* ($2.77 million during the cap period) and for the *Central Laboratory* ($3.2 million).

Residuals

Residuals project spending is budgeted at $4.6 million during the five-year period. To date, the Authority has included funding totaling $147.9 million for Residuals Asset Protection, with much of the spending to pick up in FY14.

Currently a contract operator runs and maintains the pelletizing plant at Fore River. Maintenance includes all capital projects through the term of the contract, which ends in December 2015. Funding beyond the FY13 timeframe would support dryer, air scrubber, and centrifuge replacements, and upgrades to the pumping and utility systems among other potential projects.

First in a multi-step process to address long-term residuals planning for the period beyond 2015 is the Facility Condition Assessment, a $460,000 contract awarded in March 2009. This contract includes an assessment of various facility support utilities, the condition of all major facility assets, the remaining useful life of the assets, recommendations for possible equipment replacement and a review of the quality of the existing maintenance program. A second study is out for bid to Assess Technology and Regulatory Trends in this country and overseas. Award is anticipated for June 2010.

Once both studies are complete, staff expects to recommend a conceptual course of action to address the residuals processing needs beyond 2015.

Combined Sewer Overflow (CSO) Control Program

Combined Sewer Overflow Control Program project spending is proposed at $314.5 million for the five year period, or 29.1% of all capital spending for the period. Cash flows and spending schedules are tied to dates established in the Court Order, which drives the CSO Control Program. The Authority is budgeting another $39.2 million for the next five-year period. The FY09-13 spending is $37.2 million lower than the $351.7 million assumed for the period when the baseline cap was set.

The proposed FY11 CIP shows a total project cost of $876.3 million for the CSO Control Program, a reduction of $1.7 million from the $878.0 million in the final FY10 budget. At this time last year, the Authority anticipated a budget of $927.3 million, but reductions of $14.5 million for the North Dorchester Bay tunnel project and $34.8 million due to revised estimates for the Reserved Channel Sewer Separation project in South Boston resulted in reductions totaling $49.3 million in the final FY10 CIP.

The proposed FY11 CIP estimates total spending for CSO control of $894.3 million, including escalation to the midpoint of construction and contingency, to complete the plan on schedule.

Despite these recent revisions, the Program has changed and grown considerably over the years. The Final CSO Conceptual Plan listed a total cost of $398 million in 1994. By 1997 this cost had risen to $487 million when EPA and DEP approved the Final CSO Facilities Plan and Environmental Impact Report. The Plan at that point contained 25 CSO projects.

The proposed FY11 CIP includes 35 projects, at the updated cost of $876.3 million. The Authority reports that through calendar year 2009, the total number of completed projects came to 24. MWRA and the CSO communities started five new construction contracts and continued progress on four other construction contracts. After several years of delay, the City of Cambridge progressed on design of three of the five Alewife Brook projects in 2009 and awarded a contract for two of the projects in January 2010. Average annual volume of CSO discharges has been reduced from 3.3 billion gallons in 1988 to 613 million gallons today, an 81% reduction, with 73% of the current discharge volume receiving treatment at MWRA’s four CSO facilities. Of the 84 CSO outfalls addressed in the Plan, 27 have been closed and nine more are scheduled to be closed by December 2015.

As noted in the Highlights section, six of the ten largest Wastewater Projects with spending during the cap period are part of the CSO Control Program. (See Table 8.) The largest is $83.5 million for the North Dorchester Bay tunnel project, while the next largest is the East Boston Branch Sewer Relief project, at $74.5 million. The third largest is the Reserved Channel Sewer Separation project, with cap period spending of $49.1 million.

Table 8

10 Largest Wastewater Projects FY09-13 $000s

Project	FY09-13 Spending	Program
DI Treatment Plant Asset Protection	$244,232	Treatment
North Dorchester Bay	83,466	CSO (MWRA Managed)
East Boston Branch Sewer Relief	74,467	CSO (MWRA Managed)
Reserved Channel Sewer Separation	49,088	CSO (Community Managed)
Facility Asset Protection	42,628	Interception and Pumping
Cambridge Sewer Separation	32,318	CSO (Community Managed)
Brookline Sewer Separation	22,753	CSO (Community Managed)
Braintree-Weymouth Relief Facilities	21,925	Interception and Pumping
Morrissey Boulevard Drain	21,729	CSO (Community Managed)
West Roxbury Tunnel	11,612	Interception and Pumping
TOTAL	**$604,218**	

Staff notes that CSO spending is scheduled to continue through FY 2021, when MWRA will complete a sewer system performance assessment verifying attainment of the long-term CSO control levels. 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 projects, are scheduled to be completed.

Other Wastewater Projects

Spending on Other Wastewater projects is budgeted at $8.7 million for the cap period and includes distributions and repayments (for the loan portion) for the Infiltration/Inflow Local Financial Assistance Program.

Waterworks System Improvements

Waterworks project spending for the FY09-13 period is budgeted at $362.7 million or 33.6% of all planned capital spending for the period.[12] MWRA divides Waterworks projects into four categories: Drinking Water Quality Improvements, Transmission, Distribution and Pumping and Other. Planned spending is divided nearly evenly between the first three categories, at close to 10% for each category.

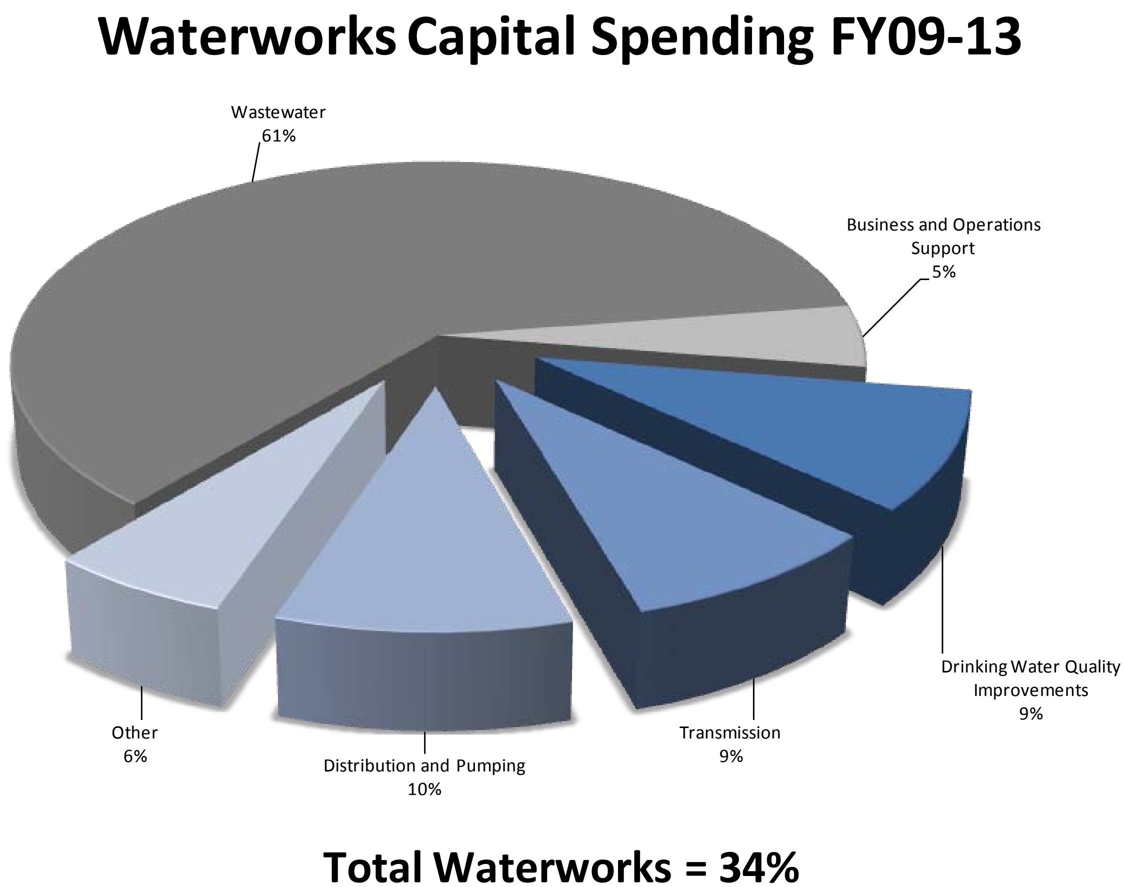

Chart 7

Drinking Water Quality Improvements

Drinking Water Quality Improvements projects focus on the treatment and storage of the MWRA's water supply. Most notably, the projects in this category include the John J. Carroll Water Treatment Plant (CWTP), Quabbin Water Treatment Plant, Norumbega Covered Storage, Blue Hills Covered Storage, and Low Service Storage near Spot Pond.

Spending for the five-year period is budgeted at $101.9 million. Included are $39.7 million for the Carroll Water Treatment Plant, including $23.6 million for the design and construction costs of the ultraviolet (UV) light treatment process during the period; $32.9 million for the Spot Pond Low Service Storage project (as compared to $2.2 million in the proposed FY09 CIP, having been accelerated by 2.5 years); and $21.85 million to complete the Blue Hills Covered Storage project. (See Ten Largest Waterworks Projects, Table 9.)

[12] Net of contingency and loan programs.

Table 9

10 Largest Waterworks Projects FY09-13 $000s		
Project	**FY09-13 Spending**	**Program**
Local Water Pipeline Improve. Loan Program	$61,003	Waterworks Other
MetroWest Tunnel	53,583	Transmission
John J. Carroll Water Treatment Plant	39,726	Drinking Water Quality Improvements
Spot Pond Storage Facility	32,905	Drinking Water Quality Improvements
NIH Redundancy & Storage	25,069	Distribution and Pumping
Southern Spine Distribution Mains	24,676	Distribution and Pumping
Blue Hills Covered Storage	21,852	Drinking Water Quality Improvements
Rehab of Other Pumping Stations	12,713	Distribution and Pumping
Watershed Land	10,793	Transmission
SEH Redundancy & Storage	7,840	Distribution and Pumping
TOTAL	**$290,160**	

<u>Transmission</u>

The MWRA's 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. Many system improvements over the years have allowed for older facilities, no longer in daily use, to remain as critical emergency standby facilities as long as the facilities are maintained and linked to new facilities where necessary.

While many of these emergency facilities provide redundancy in the event of a failure of a section of the transmission system, there remain some shortfalls in the system's overall redundancy. The Master Plan and the proposed FY11 CIP focus largely on the major goal of providing system-wide redundancy to ensure no interruption of service to any of the MWRA's water communities. Notable portions of the transmission system include the MetroWest Tunnel, Chicopee Valley Aqueduct, Wachusett Aqueduct, and the Quabbin Transmission System. Watershed land acquisition and dam repairs projects also fall under this category of Waterworks projects.

For the five-year period from FY09-13, Transmission projects total $93.5 million. Included are $53.6 million for projects within the MetroWest Tunnel project, most notable are $48.2 million for the design and construction of the Lower Hultman rehabilitation project plus $3.7 million for the Upper Hultman rehabilitation project. The next largest area of spending during the five-year period is $10.8 million for Watershed Land Acquisition. (See Ten Largest Waterworks Projects, Table 9.)

While not one of the ten largest Waterworks projects during the cap period, the Long Term Water Transmission Redundancy project is budgeted at $203.4 million, with estimated spending of $7.4 million during the cap period. The budget includes a $100 million placeholder for provision of redundancy to the Cosgrove Tunnel to allow for its repair and to provide long-term redundancy for the tunnel. In January 2010, following consultant evaluation, the staff recommended to the Board the design and construction of an emergency pumping station at the terminus of the Wachusett Aqueduct to the Carroll Water Treatment Plant. The staff noted that the construction of this new pumping station along with the completion of the ongoing Hultman Aqueduct rehabilitation and interconnections project will provide fully treated water transmission redundancy for at least average day demands from the Wachusett Reservoir to the beginning of the metropolitan distribution system in Weston. Should the Cosgrove Tunnel be taken out of service during period of peak demand, some demand management measures would also be required. The capital cost of the pumping station is estimated at $48 million compared to $156-$203 million for several alternatives for pressurizing the Wachusett Aqueduct. Thus, the placeholder in the proposed FY11 CIP will be reduced by $52 million in the final CIP. Most of the reduction can be anticipated to be reflected for the FY14-18 timeframe. Staff notes that this project represents "an historical upgrade to MWRA's water system."

Also being evaluated are alternatives for the Metropolitan Boston area. Staff plan to brief the Board in the spring, with study results expected to be reflected in the FY12 CIP cycle. A $100 million placeholder for the eastern system is also part of the Long-Term Transmission Redundancy project, with spending budgeted for the FY14-18 and beyond timeframe (with substantial completion budgeted for December 2023).

Distribution and Pumping

Distribution and Pumping projects focus on the MWRA's Metropolitan system, which is divided into seven pressure zones and contains 284 miles of distribution pipeline east of Shaft 5, eleven storage tanks, eleven pump stations, nine tunnel shafts, and approximately 4,700 valves. Notable Distribution and Pumping projects include the Weston Aqueduct Supply Mains (WASMs), Southern Spine Distribution Mains, Northern Intermediate High (NIH) Redundancy and Covered Storage, and Southern Extra High (SEH) Redundancy and Storage.

For the five-year period FY09-13 spending on Distribution and Pumping projects is budgeted at $102.85 million. Key project spending includes: $25.1 million for NIH redundancy, $24.7 million for Southern Spine Distribution Mains, and $12.7 million for Rehabilitation of Other Pumping Stations. (See Ten Largest Waterworks Projects, Table 9.)

A contract to develop a Northern Intermediate High Assessment and Concept Plan was awarded in December 2005. The final concept plan is expected to recommend a pipeline route and storage tank site that can provide long-term redundancy to the NIH system. The contract term has been extended several times (an additional 4.5 years) to add preparation of environmental review and additional coordination with communities and more extensive development of short-term risk-reduction measures for the NIH communities. Currently the ENF is being completed for only the proposed redundant seven-mile pipeline route. Design of the redundant pipeline is expected to be advertised once the ENF is published. The budget for the combined project is $90.9 million, with $25.1 million budgeted for the cap period. Another $54.1 million is budgeted for the following period, with construction of the redundant pipeline to start in FY13 and rehabilitation and storage projects to extend to December 2017.

The Southern Spine Distribution Mains project is budgeted at $75.6 million, with spending of $24.7 million assumed for the cap period. Three of the five construction contracts are complete, and the fourth, Section 107 - Phase 2, was approved by the Board in January 2010 for a three-year term. The award, at $14.6 million, was nearly 30% below the $20.47 million budgeted in the proposed FY11 CIP.

Other important Distribution and Pumping projects include $7.8 million for SEH redundancy and $5.6 million for New Connecting Mains. Staff has noted that the SEH service area has been identified as being deficient in distribution storage and lacking redundant distribution pipelines. A Distribution Storage and Redundancy Plan has been under way since February 2007, and in January 2009 staff presented the Board with a number of options for redundancy, including additional storage. Time extensions have been approved, pending results of the Long Term Transmission Redundancy Study, anticipated later this spring. (See discussion under Transmission projects, above.) The SEH Redundancy and Storage project is budgeted at $93.8 million, with $7.8 million anticipated for the FY09-13 timeframe, and $84.3 million budgeted for design and construction contracts beginning in FY12 and extending through FY27.

Other Waterworks

Other Waterworks projects total $64.5 million for the cap period. These projects include the Central Monitoring System project, Distribution System Facilities Mapping, the Local Water Infrastructure Improvements Loan Program, and Waterworks Facility Asset Protection. Budget estimates include community loan distributions of $116.7 million during the cap period, offset by repayments of $87.7 million plus distributions of the new local water system loans of $35.0 million during the cap period, partially offset by initial repayments of $3.0 million during the period. The Local Water System Assistance Program is the largest new project in the proposed FY11 CIP, and adds $32 million in increased spending to the cap period. Eventually, the $200 million in new loans will be fully offset by $200 million in repayments over time. **The Advisory Board recommends that the Local Water System Assistance Program be included in the Authority's final FY11 CIP as amended and voted by the Advisory Board at its meetings in March and April 2010.**

Business and Operations Support

Spending on Business and Operations Support projects for the FY09-13 periods totals $53.5 million and includes $23.8 million for Alternative Energy Initiatives, $9.0 million for the Business Systems Plan (MIS), $7.3 million for Facilities Management and Planning, $6.5 million for Equipment Purchases, and $5.5 million for Capital Maintenance Planning and Development.

Alternative Energy Initiatives have increased from $4.5 million just two years ago and include solar, wind and hydropower installations at a number of locations, supported by grant funding for a number of the projects. Spending is expected to peak in FY11, at $10.8 million (net of grant receipts). Grant receipts totaling $2.24 million are budgeted, bringing total budgeted spending for the cap period to $26 million. Three projects are new to the proposed FY11 CIP: Delauri Pump Station Wind ($4.75 million, awarded at the December 2009 Board meeting); a Solar installation at the Carroll Water Treatment Plant ($3.3 million, also awarded at the December 2009 Board meeting); and Deer Island Wind Phase II ($2.5 million, expected for award later in the fall). Construction of all three is budgeted for the cap period; ARRA grant funding is expected.

CAPITAL SPENDING CAP

Background for Setting a Five-Year Cap on Capital Spending

The Advisory Board's advocacy for an effective spending cap was born of the desire to achieve sustainable and predictable levels of capital spending and annual wholesale rate revenue requirements for the member communities without compromising needs for maintaining the system's infrastructure.

Prior to establishing the five-year cap, the MWRA had employed a ten-year spending cap. However, during that time the Authority stayed within the ten-year cap by assuming that the funds allocated in later years of the cap would be available to "cover" spending scheduled in earlier years. The Advisory Board's argument to revisit the capital spending cap centered on the argument that this practice defeated the spirit and intent of the cap.

The First Five-Year Cap: FY04-08

The Authority took the Advisory Board's recommendations under advisement, and explored various options for revising the structure and policies governing the capital spending cap. In June 2003 the MWRA Board of Directors approved the first five-year capital spending cap of $1.135 billion for the years FY04-08.

Table 10

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)
FY09-13 CAP	**$250.9**	**$203.5**	**$215.2**	**$250.1**	**$214.8**	**$1,134.5**

(See footnote [13])

As part of the policy changes, spending caps were applied to both the overall five-year period and to each individual year within the cap. The Authority was also given the flexibility to vary spending in individual years within ±20% of the original base year cap for each year.

During the first five-year cap, the Authority exceeded neither the overall five-year cap nor the allowance of 20% over the individual base year caps. The average annual spending for the first cap period was about $176 million which has helped the Authority define its annual target for agency-wide capital spending at about $200 million. Actual spending, according to the cap calculation, was $880 million.

The Second Five-Year Cap: FY09-13

Table 11

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	$1,081.4
Contingency	15.6	13.8	12.0	12.1	11.4	64.9
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)	(24.6)
FY09-13 CAP	**$244.4**	**$264.1**	**$230.0**	**$207.1**	**$198.5**	**$1,144.1**

(See footnote [14])

The Authority set the second five-year cap, for the years FY09-13, in June 2008 as part of the approval process for the final FY09 CIP. Capital expenditures for the period totaled $1.081 billion and the cap calculation (including contingency allowances, inflation on unawarded construction contracts less Chicopee Valley Aqueduct projects) came to $1,143.8 million. The number was $9.3 million greater than the first five-year cap, although because contingency allowances were tightened and inflation amounts on unawarded construction contract were lower than for the first cap, the capital expenditures were $58.1 million greater than for the first cap period.

The Authority reports that for the first full year of the cap, FY09, that expenditures were $47.8 million below the budgeted amount, and that the cap calculation for the year (including contingency, inflation and CVA project adjustments) totaled $181.6 million or $62.8 million below the cap set for that year, or 26% below the original cap amount.

For the second year of the cap, FY10, the Authority has projected that expenditures will total $213.7 million or $38.0 million below the amount budgeted for the year. The cap calculation for the

[13] Note that numbers may not add up due to rounding of original numbers.
[14] Note that numbers may not add up due to rounding of original numbers.

year is projected to be $224.8 million or $39.3 million below the original cap, or 15% below the original cap. Spending through the third quarter of the fiscal year reached $155.5 million or $24.0 million below the year to date budget of $179.5 million, a variance of 13%. The projected spending amount, including contingency, included in the proposed FY11 CIP, leaves $70.3 million for the fourth quarter, more than the original budget assumptions for the quarter of $61.9 million. The Advisory Board anticipates some additional variance during the fourth quarter, with a year-end cap variance of approximately 20%.

The Authority projects that spending during the remaining three years under the current cap will rise and for each year will be greater than the baseline cap, reflecting changing assumptions and a somewhat different mix of projects that had been assumed when the original cap was set two years ago. Examples of new project spending includes the new Local Water Infrastructure Program, additional pipeline and facilities projects under Wastewater I & P Facility Asset Projection, and additional Alternative Energy Initiatives.

Experience during these first seven years of the first and second cap periods points to the evolving nature of the capital budget and spending assumptions. The Authority has already made some adjustments in recent years, including a shift in contingency allowances, reducing non-tunnel contingency from 10% to 7%. Of these seven years, spending for six of the years came to 15% or more under the cap calculation. (FY08 finished at 9.4% below the baseline cap calculation.) For four of the years and for the total FY04-08 period, spending was more than 20% less than the baseline cap, outside the cap guidelines. While the cap is meant to set a ceiling and not a target for spending, this experience does invite further reconsideration of how annual capital budgets are set, with an eye to narrowing the annual variances. **Review planned spending for the final FY11 capital budget, to ensure the approved final budget is as realistic as possible.**

On a related note, the proposed and spending and related cap calculation for FY13, the last year of the current cap period, shows a proposed budget and cap calculation that is 28% greater than the baseline cap for that year. The guidelines for arriving at the cap calculation note that each year's spending should result in an updated cap calculation that is no more than 20% plus or minus as compared to the baseline cap. **Revisit planned spending and the cap calculation for FY13, with an eye to bringing the budget within the cap calculation guidelines.**

The Third Five-Year Cap: FY14-18

The Authority is expected to set the next five-year cap, for the years FY14-18, with the final budget for FY14 in June 2013, three years from now. With each budget cycle, the Authority reviews the capital program and the pace of planned spending. For this upcoming cap period, spending approaches or is greater than $200 million for the first three years, but, at $98 million and $94 million for the last two years, planned spending can be expected to grow. Between the final FY10 CIP and the proposed FY11 CIP, expenditure estimates for FY14-18 increased by $191 million to nearly $880 million. With contingency estimates included, this five-year period currently stands at $943.45 million.

While the Authority still has three years to finalize planned spending for the next cap period, the Advisory Board believes that the Authority should keep a close eye on the direction of planned or projected spending. Noting that "you control rates in the future by controlling capital spending now," **the Advisory Board recommends that the Authority set broad guidelines for setting boundaries for the next cap period, aiming to limit the next cap to no more than $1.0 billion.**

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Table 12

PROPOSED FY11 CEB MAJOR CATEGORIES OF SPENDING ($ millions)	
Capital Financing	$355.3
Personnel-Related Costs	112.6
Indirect Expenses	38.5
Maintenance Expenses	29.2
Utilities	24.1
Other Services	22.6
Chemicals	10.2
Professional Services	5.3
Other Materials	4.9
Training and Meetings	0.2
TOTAL EXPENSES	**$602.8**
REVENUE	**$602.8**

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Table 13

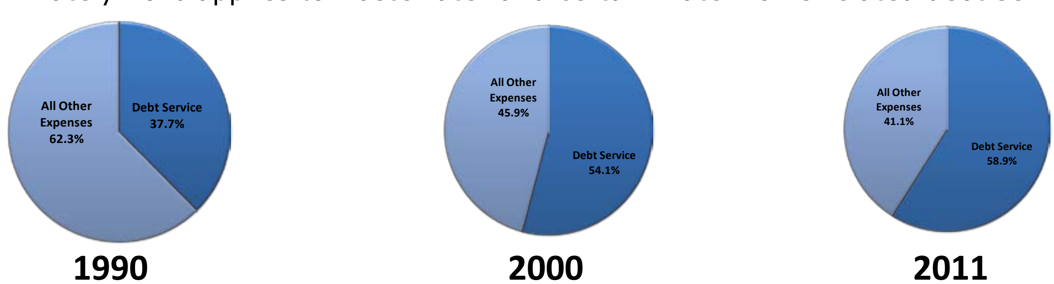
Proposed Fiscal Year 2011
CAPITAL FINANCING SUMMARY
($ millions)

Line Item/Description	*Final FY10*	*Proposed FY11*	*Δ ($s)*	*Δ (%)*
Total Senior Debt Service	**$179.49**	**$198.73**	**$19.24**	**10.7%**
Outstanding	$177.81	$199.49	$21.68	12.2%
New FY10/FY11	$1.68	$1.58	-$0.11	-6.3%
Fixed rate debt service, existing and new borrowings during FY10/11.				
Total Subordinate Debt Service	**93.87**	**72.74**	**-21.13**	**-22.5%**
Outstanding	93.87	104.28	10.41	11.1%
New FY10	0.00	0.00	0.00	-
Potential Defeasance/Restructuring	0.00	-31.54	-31.54	-
Variable rate debt service. 3.5% interest rate assumption (FY10); 3.25% (FY11).				
Total SRF Debt Service	**60.55**	**69.93**	**9.38**	**15.5%**
Outstanding	58.23	62.76	4.53	7.8%
New FY10/FY11	2.32	7.17	4.85	209.1%
Low-interest loans from the Commonwealth. 2.0% interest rate (Water); 2.5% (Sewer).				
TOTAL DEBT SERVICE	**$333.91**	**$341.40**	**$7.49**	**2.2%**
Water Pipeline Commercial Paper	**$4.50**	**$3.44**	**-$1.06**	**-23.6%**
Debt service supporting $25 million/year for the Local Water Pipeline Improvement Loan Program.				
Current Revenue/Capital	**$5.60**	**$7.20**	**$1.60**	**28.6%**
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	**$13.32**	**$13.86**	**$0.54**	**4.1%**
Debt Service Assistance (offset)	**-$0.40**	**$0.00**	**$0.40**	**-100.0%**
The state-wide program providing assistance with wastewater debt service is not expected in the Commonwealth's FY11 budget.				
TOTAL CAPITAL FINANCING EXPENSES	**$347.23**	**$355.26**	**$8.03**	**2.3%**

Other Highlights

- Debt outstanding through December 2009 totals $5.78 billion
- New MWRA borrowing of $80 million and SRF borrowing of $100 million is proposed for FY11.
- Other sources of capital funding include tax exempt commercial paper; interest is paid from the construction fund. Stimulus funding could also serve as a source of capital funding.
- Debt Service Assistance, when it has been available, is treated as an offset to capital expenses.
- The state-wide Debt Service Assistance program of which the Authority typically plans on approximately 70% applies to wastewater and certain waterworks related debt service.

Chart 8



Overview: Capital Financing

Debt service payments and related capital financing expenses make up the largest component of the Authority's Current Expense Budgets and, as in recent years, continue to approach 60% of all expenses. Debt service and all other capital financing expenses totaling $355.3 million represents 58.9% of all spending in the proposed CEB for FY 2011.

Major components of Capital Financing Expense are:

1. Debt Service Payments including:
   - Senior Debt Service
   - Subordinate Debt Service
   - Debt Service on State Revolving Loan Fund borrowings
2. Interest on Commercial Paper for the Local Water Pipeline Program
3. Current Revenue for the Capital Construction Fund
4. Capital Lease Payment for the Chelsea Facility

When it has been available, Debt Service Assistance from the Commonwealth has been treated as an offset to capital financing expense. Commercial paper issued to support current spending for the capital program is capitalized until it is replaced with a new bond issue, after which the debt service payments are added to the debt service payments listed above.

Other aspects of Capital financing expense include the size and other characteristics of each maturity (including whether a maturity is callable or non callable) and associated interest rates which impact whether the Authority can refund or restructure certain maturities in order to reduce or retime specific debt service payments.

The Relationship Between Capital Spending and Debt Service

While there is a direct relationship between capital spending and the debt service payments that repay the borrowing that supports that capital spending, reducing capital spending as a method for reducing rate revenue requirements is best used as a long-term tool for managing rates over a number of years.

It should be noted that the availability of grant and stimulus program (ARRA) funding also serve as a means of reducing borrowing and associated debt service payments.

As can be seen on Chart 9, debt service payments are projected to peak by FY 2022, when they are projected to total $550 million, almost as much as the proposed Current Expense Budget for FY2011.

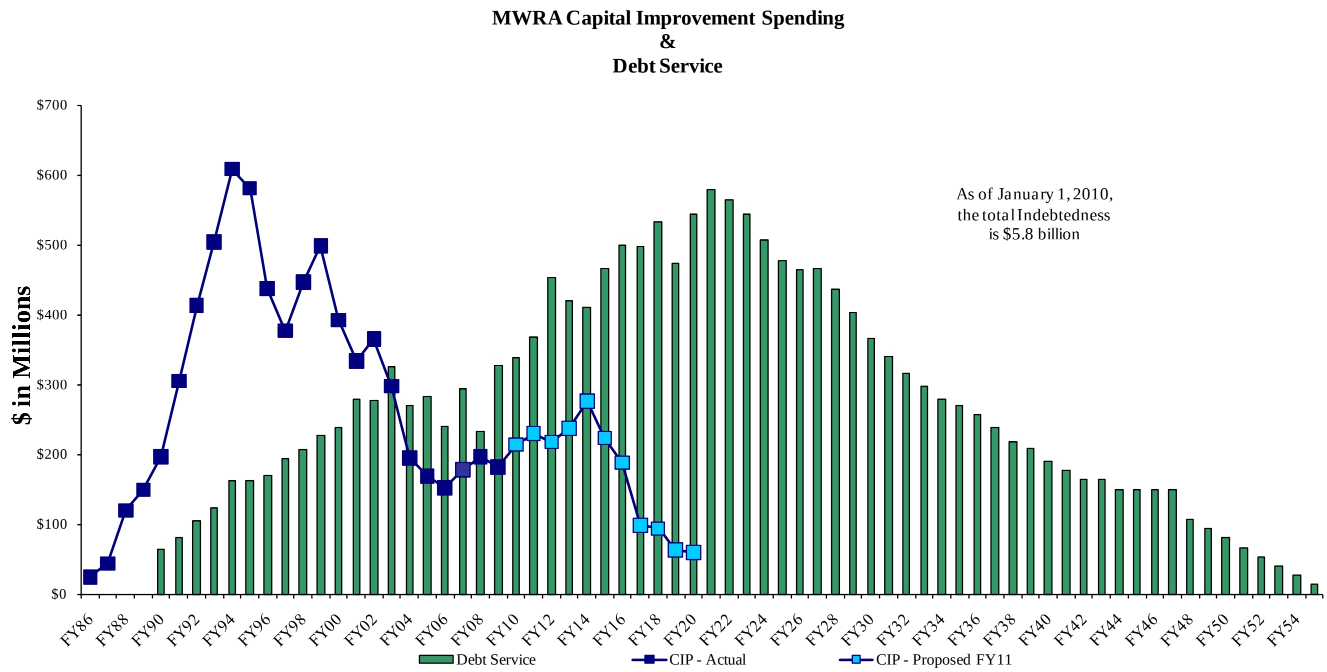


Chart 9

(See Footnote 15)

In order to influence the level of capital spending in the coming years, the Authority therefore needs to anticipate spending over a multi-year period. One such approach is to begin to address the anticipated level of spending during the next cap period, FY 2014 – FY 2018. (See discussion under the Capital Spending Cap section) But as noted in previous *Comments*, other elements of capital financing, as well as other tools must be examined if a meaningful reduction or modifications to current projections of annual debt service payments are to be achieved.

Components of Capital Financing

<u>Outstanding Principal and Debt Service Payments</u>

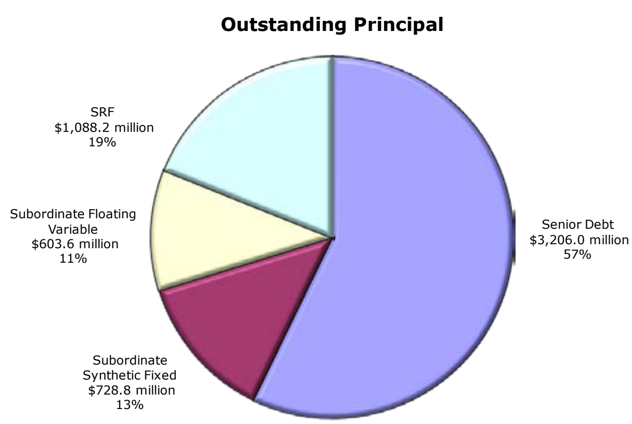


Chart 10

The Authority currently has $5.8 billion in outstanding principal made up of senior debt, subordinate debt (both synthetically fixed and floating variable rate), and SRF debt as well as outstanding commercial paper. (Chart 10). It is important to note that not all subordinate debt is variable rate, and that over half of outstanding subordinate debt is, in effect, fixed-rate debt.

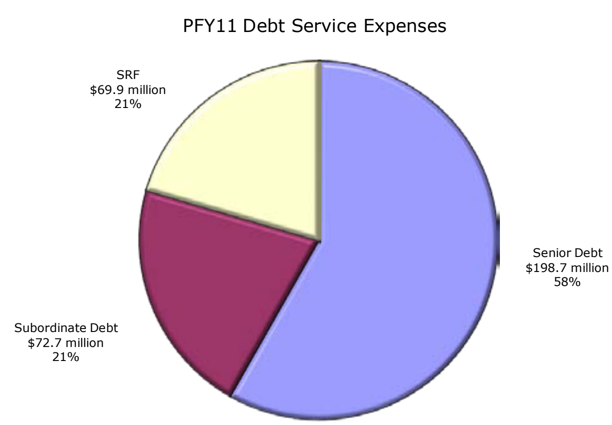


Chart 11

[15] Includes SRF.

In addition to repaying this principal, the Authority pays interest on the amount borrowed, resulting in its annual debt service payments. The Authority is proposing $341.4 million for total debt service payments in FY11 including senior debt service, subordinate debt service and SRF debt service (Chart 11).

Debt Service on Senior Debt

Senior debt service is fixed rate. Short of refinancing there is typically little opportunity to reduce this component of capital financing.

The proposed FY11 budget assumed senior debt service payments of $198.7 million and assumes the benefit (or reduction to debt service) of $2.34 million from the "potential defeasance/restructuring" transactions planned for the spring 2010.

A second area of potential adjustment to the proposed FY11 CEB is the budgeted amount associated with the upcoming issuance of $100 million of new money later this spring. The Authority is assuming debt service of $6.95 million for the payments on this new issue. It can be assumed that this amount will be updated for the final CEB, following the transaction, planned for mid-April 2010.

Debt Service on Subordinate MWRA Debt

The Authority's Subordinate Debt totals $1,332.45 million or 24% of the $5,582.3 million in total outstanding SRF and senior and subordinate debt. However, just under half of the subordinate debt ($603.6 million) is floating variable debt, while the 55% of the remaining subordinate debt ($728.8 million) is synthetically fixed rate debt. Thus, just less than 11% of the Authority's current outstanding debt is truly variable rate debt.

The proposed FY11 CEB assumes a 3.25% interest rate for variable rate debt (25 basis points lower than the FY10 budget assumption.

The budget document also notes that the budget assumes the impact of restructuring $75 million of certain maturities of subordinate debt bonds, another $75 million for restructuring for savings, and the use of a projected surplus in FY10 to defease up to $23.6 million to reduce projected debt service during the three year period FY11, FY12 and FY13. Over that time frame, debt service has been projected to be reduced by $93.5 million.

The Authority is proposing a budget of $72.74 million for debt service payments on subordinate debt for FY11. The amount assumes the benefit in FY11 of the spring 2010 defeasance and restructuring transactions, totaling $31.54 million.

SRF Borrowings

The Authority is assuming debt service on SRF borrowings of $69.9 million including $11.2 million on new borrowings: the full year cost of borrowings during FY10 ($4.0 million) plus the partial year cost of new borrowings during FY11 ($7.2 million).

Bond Defeasance and Refunding

Other tools for modifying capital financing expense, in both the short-term and the longer term, are refunding and defeasing existing senior and subordinate debt as the opportunities to do so become available. For example, the Authority last refunded some debt as part of the February 2009 revenue bond issues. Nearly $230 million of refunding bonds were sold for savings of approximately $690,000 per year between FY 2010 and 2015, and nearly $2 million per year between FY 2016 and 2027.

This spring the Authority is planning a multi-part transaction in late April 2010. Accompanying a new borrowing of $100 million (senior debt) will be refunding of $75 million to provide budget relief in the years FY 2011, FY 2012 and FY 2013 plus the issuance of up to $135 million in general revenue refunding bonds to achieve interest rate savings. The benefits of these transactions are already reflected in the proposed FY11 CEB.

These revisions and reductions to budget assumptions will also have the effect of lowering coverage requirements of the bond covenants and lower current revenue for capital.

Other Components of Capital Financing

Local Water Pipeline Improvement Loan Program Interest Payments

Now in its eleventh year, the $250 million Local Water Pipeline Improvement Loan Program (LPIP) originally provided $25 million per year to communities to be used to replace and rehabilitate municipal water pipelines. After adjustments for the actual pace of distributions, funding is available through FY 2013.

The Authority is proposing a budget of $3.44 million for debt service relating to the commercial paper issued in support of the LPIP. The assumptions include a 3.25% interest rate and an average balance of $105.7 million of commercial paper outstanding in support of this program, which now includes distributions under the first year of the expended Local Water System Loan Program.

Use of Current Revenue to Fund the Capital Program

For FY11, the Authority is proposing to budget $7.2 million in current revenue to fund ongoing capital projects. The amount is the highest in at least eight years; the FY10 budget included $5.6 million.

The Advisory Board anticipates that the several categories of expense that can be used to meet coverage requirements as called for the bond covenants can be revisited and resized as part of the final budget process, including current revenue for the capital program.

Capital Lease

The Authority is budgeting $3.2 million for the ninth year of payments on the capital lease for the Chelsea office and maintenance facilities. This is the same amount budgeted each year since 2002.[16]

Debt Service Offsets

Among the credits that can be used to offset budgeted amounts for debt service (and also to offset debt service coverage requirements) are the use of bond redemption funds and variable rate savings (from previous years).

The Authority is assuming a bond redemption transaction this spring, using approximately $24 million from FY10 funds to benefit (reduce) FY11 debt service payments.

[16] The Authority treats this expense as an operating expense for purposes of calculating the coverage requirement called for in the bond covenants; otherwise, this is considered a capital finance expense.

No variable rate debt service savings from previous years are assumed, as the Authority now accrues actual savings in the year in which they occur.

Debt Service Assistance (DSA) is also treated as a debt service offset. The budget assumes no DSA funding will be available in FY 2011.

American Recovery and Reinvestment Act (Stimulus/ARRA) Funding

The proposed FY11 CEB does not include specific assumptions about the potential receipt of funding from the Economic Recovery Act (stimulus funding). Each category of funding appears to be treated somewhat differently for Clean Water funding, as compared to Green Energy projects, for example. In one case, loan repayments are to be "forgiven" as they come due over the amortization payment of the loan, while it is anticipated that other loans will be forgiven closer to the start of the loan.

Reserves Requirements

The Authority made a number of changes to the bond covenants in January 2007, which will allow certain reserve requirements to be eased when two-thirds of its outstanding principal has been issued pursuant to the revised covenants. The Authority currently estimates that this turning point will be reached in FY 2014 or FY 2015. Current estimates put the anticipated released reserves at $138 million. The Advisory Board expects the estimate will be updated in June, when the FY11 budget is finalized.

Authority's Credit Rating Updates

Recently, the Authority received a reaffirmation of its credit rating from both Fitch and Moody's. Fitch's comments go on to note that the "[r]ates charged by the (MWRA) are among the highest in the urban U.S. and remain one of the most significant credit vulnerabilities"; a point the Advisory Board has long commented upon in its annual *Comments* and *Annual Water and Sewer Retail Rate Survey*.

Fitch further echoes the Advisory Board's previous remarks in its report:

> "While management continues to be proactive in trimming costs where possible and reducing staffing, Fitch Ratings remains concerned over the viability of further cuts and staff reductions without impacting service delivery."

The Advisory Board was pleased to see the Authority's credit rating updated, and heartened to see that Fitch's concerns prioritized the agency's core mission and the ratepayers who comprise the primary funding mechanism for the Authority. In contrast, the Advisory Board was disappointed that Moody's placed the Authority on negative watch, even while affirming its current rating.

As part of its report, Moody's outlined the myriad factors that caused this negative watch. The Advisory Board would like to highlight Moody's concerns and provide a rebuttal to support the Authority's standing and actions with regard to the concerns.

The Advisory Board believes that each of Moody's concerns can be addressed with three general responses:

1. The Authority is meeting its obligations.
2. The concern is out of the Authority's direct control, but it continues to mitigate the circumstances as best it can.
3. The Authority is a victim of its own success and unfairly being criticized for prudent short-term policy and budgetary decisions given the current economic outlook.

Moody's reiterates many times in its reports concerns over the Authority's declining coverage ratios. However, the fundamental truth is that the Authority has never dipped below its required coverage levels. Coverage levels, as they currently exist, are not presented in a range, but rather in a definitive breaking point – a point which the Authority has never crossed. Recalling that 95% of the funding for the MWRA comes from the ratepayers, over-recovering for coverage essentially translates to overcharging cities and towns rather than simply meeting the clearly delineated trigger points and limits the Authority has in place. The Authority has, and continues to meet its obligations with regard to coverage.

Moody's also remarks upon the Authority's high debt ratio. As the Authority points out in its Proposed FY11 CIP, nearly 80 percent of its capital spending to date has funded court-mandated projects. The Authority's creation, mission, and charge were by definition capital-intense and timeline driven. Moreover, since 1995 the Authority had been slated to receive increasing levels of Debt Service Assistance (DSA) from the Commonwealth specifically to aid in the payment of the increasing debt burden/debt ratio. DSA had since been eliminated, never restored to its originally projected levels, and was once more eliminated in the Commonwealth's FY10 budget. Yet, despite this increasing mountain of debt and reduction of outside financial assistance, the Authority has continued to make good on both its operations and its debt service payment obligations. Indeed, the Authority has been very conservative and prudent in utilizing various financial tools – including a major restructuring effort in January 2007 – to manage its ever-increasing debt load. The Authority's debt ratio is almost entirely beyond its control due to the court-ordered capital spending required of its charge; and yet, the Authority continues to mitigate the circumstances as best it can while never once failing to meet its debt service payment obligations.

Related to the Authority's debt ratio, Moody's also expresses concern over the Authority's exposure to risks associated with variable rate debt and derivative agreements. First, the Authority's variable rate debt exposure is prudently and deliberately matched on the investment income side to provide parity to help mitigate variability. Indeed, as interest rates on the Authority's variable rate debt goes up, so too does its investment income. As the Authority benefits from historically low interest rates on variable rate debt (as it has seen throughout all of FY10 to date), so, too, does investment income underperform. Moreover, the Authority's twenty-five year experience with variable rate debt has demonstrated a significant amount of savings to the ratepayers over time compared with its fixed-rate counterparts. The Authority has always been cautious and judicious with the amount of variable rate debt it has incurred, and given the recent volatility in the variable rate market, is not taking on any additional variable rate debt in the short-term. Additionally, the Authority has also made use of counterparties to synthetically fix over half of its subordinate debt, providing additional security and minimizing its exposure. While variable rate debt is just that – variable and unpredictable – the Authority has strategically utilized it over the long-term to provide savings for the ratepayers while minimizing its risk and meeting its obligations.

Moody's has additionally expressed concern over the reduction of cash reserves and financial flexibility after the amended bond resolutions take effect. For several years the Authority has made known and very clearly outlined its plans for changing the bond resolutions. By definition, there will be a reduction of cash reserves, but the Advisory Board argues that the released reserves will provide greater financial flexibility for the Authority. The release of $138 million in reserves will prove an invaluable tool for the Authority to manage its increasing debt load between FY14 (as currently projected) and the crest of debt service expenses in FY22. While $93 million of these reserves have limitations on their uses, the Authority is already beginning to work with its financial advisors to create a long-term strategy for utilizing these funds to maximize benefits for the ratepayers. Even if this plan isn't completed until FY11, this provides at least two years of lead time for the Authority before the funds become available. It should also be noted that while the level of reserves will be reduced after the amended bond resolutions take effect over half of the current level of reserves – nearly $150 million – will remain. The Authority has met its obligations under the existing bond resolutions, has planned and continues to plan for a prudent management of the changes to the bond resolutions as well as any reserves released. In this instance, Moody's criticism demonstrates that the Authority is, indeed, a victim of its own success. Its highly conservative actions with the original bond resolutions is being rewarded now with a negative watch in the face of a prudent and still quite conservative plan of action in the form of the amended bond covenants.

Another area in which the Authority has continued to be a victim of its own success is Moody's concern over "prolonged period of minimal rate increases, shifting funding of capital needs and long-term liabilities to the future." First and foremost, the Authority has continued to address the system's capital needs - 80% of which were mandated – over the course of its twenty-five year existence. At the urging of the Advisory Board, the Authority also undertook the development of a Master Plan to better identify, prioritize, and plan out its long-term capital expenditures. To maximize the expected life of its new capital infrastructure investments, the Authority has implemented facilities and asset maintenance plans, which it has continued to refine and improve. To suggest that the Authority is deferring necessary capital spending to achieve minimal rate increases is simply not supportable, given its previous track record and Proposed FY11 CIP.

The first of the long-term liabilities that Moody's identifies as a concern is the Authority's Other Post-Employment Benefits (OPEB) liability. With regard to the OPEB liability, the Authority undertook the actuarial study required by the new provisions of Government Accounting Standards Board (GASB) Statement 45 that identified the Authority's OPEB liability. Armed with this information and before the economic crisis, the Authority built into its budgets prefunding of this OPEB liability to begin addressing very real, and long-term issue. It should be pointed out that the only actions currently required by GASB 45 are an accurate reporting the liability as part of an agency's financial statements; indeed, very few public entities have done more than this required reporting especially given the scope of this liability. The Authority, however, pushed itself to begin actively addressing this liability. Since the onset of the economic downturn the Authority has revised its prefunding of the OPEB liability, correctly recognizing that there are greater concerns facing it at this stressed time. Although the Authority has revisited its prefunding strategy in the Proposed FY11 CEB, it continues to report its OPEB liability on its financial statements – the only requirement of GASB 45 at this time. In effect, the Authority is being penalized with a negative watch for trying to exceed the requirements during more stable times and revising its approach to this expense during financially stressed times, all the while still meeting its obligations under GASB 45.

The second long-term liability Moody's discusses is the Authority's Pension Fund liability. While previously at 100% funding based on the aggregate cost method of actuarial valuation, in 2007 the Authority switched its actuarial method to entry age normal resulting in a revised funding ratio of 84%. The Authority's actuarial study indicated that the Pension Fund was underfunded, and the Retirement Board approved a plan for bringing it back to full funding. When the most recent actuarial study was completed, the snapshot taken was at the Pension Fund's lowest point, indicating a funding level of 74% of the total liability. To fully fund the Pension by 2024 according to this actuarial study would have dramatically increased the Pension Fund expense in the Authority's FY11 CEB. However, due in part to strategic timing of the Retirement Board's actions, the Authority knew the Pension Fund had recovered some of its losses. Given the potential burden of this increased Pension Fund expense, the Retirement Board authorized an interim actuarial study to better assess the Pension Fund's level of funding, and this updated study with a corresponding lower Annual Required Contribution will be utilized in the Final FY11 CEB. In this instance, the Authority effectively balanced the need to continue reducing the underfunding of the Pension Fund with the short-term needs to reduce expense for the sake of the ratepayers. Using updated and more accurate information to make better and more realistic spending decisions is apparently a cause of concern for Moody's and warrants a negative watch. The Advisory Board, on the other hand, applauds the Authority's actions as a prudent navigation of harsh financial realities rather than a strict adherence to academic calculations at the expense of the ratepayers.

The Authority, unlike many agencies, sets its rates each and every year and develops its operating and capital budgets annually in the context of a longer term horizon. Both characteristics serve as another indication of the strength of the Authority's budgetary position and are a reminder that actions that reflect the economic conditions of the current year are not a demonstration of a permanent turn in direction. Hence, a lower rate increase in the face of extraordinary economic conditions of historic proportions is not an indication of an unwillingness to meet its obligations, but rather a demonstration of the agency's ability to work with the difficulties of current times and to revisit spending plans each and every year going forward while being sensitive to the larger economic situation.

While the Advisory Board has not always agreed with the Authority's actions and made recommendations to such an effect, the experience of the past twenty-five years has indicated that the Authority is a success story among public agencies. Undertaking a rigorous, court-mandated capital intensive program with ever increasing costs, and declining outside financial assistance the Authority has met or exceeded almost every challenge before it, while still remaining sensitive overall to the pressures upon the cities and towns that fund its expenditures. The Advisory Board looks forward to working with the Authority as it moves forward on the next phase of its existence – an agency transitioning from a focus on major new capital construction to maintenance. Additionally, the Advisory Board looks forward to working with the Authority as it prepares its long-term strategies for addressing the increasing debt service payment obligations through FY 2022 with particular focus upon the greater context within which all of its decisions should and must be made – the context of the 60 cities and towns that fund nearly 100 percent of its annual expenses.

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Table 14

Proposed Fiscal Year 2011 **PERSONNEL EXPENSES SUMMARY** ($s)				
Line Item/Description	*Final FY10*	*Proposed FY11*	*Δ ($s)*	*Δ (%)*
Regular Pay	90,367,955	89,693,820	-674,135	-0.7%
Regular wages and salaries for full- and part-time employees.				
Other Pay	1,343,159	1,457,476	114,317	8.5%
Includes shift differential, holiday pay, temporary employees, interns/co-ops, and stand by pay.				
Wages and Salaries Subtotal	91,711,114	91,151,296	-559,818	-0.6%
Fringe Benefits	16,578,832	16,416,310	-162,522	-1.0%
Includes health insurance, dental insurance, Medicare, and all other fringe benefits.				
Overtime	3,408,792	3,178,791	-230,001	-6.7%
For planned maintenance, emergency, and coverage.				
Workers' Compensation	$1,325,000	$1,870,000	$545,000	41.1%
Includes compensation payments, medical payments, and other related costs.				
TOTAL PERSONNEL EXPENSES	**$113,023,738**	**$112,616,397**	**-$407,341**	**-0.4%**

Other Highlights

- Personnel expenses decrease slightly by less than 1%.
- Regular pay also decreases slightly, by less than 1% and reflects a net average funded staffing level of 1,210, which is 12 fewer average funded positions than the 1,222 in the FY10 budget.
- Overtime declines by 7% or $230,000.
- Fringe benefits make up 7.9% of all direct expenses and 14.6% of total personnel costs.

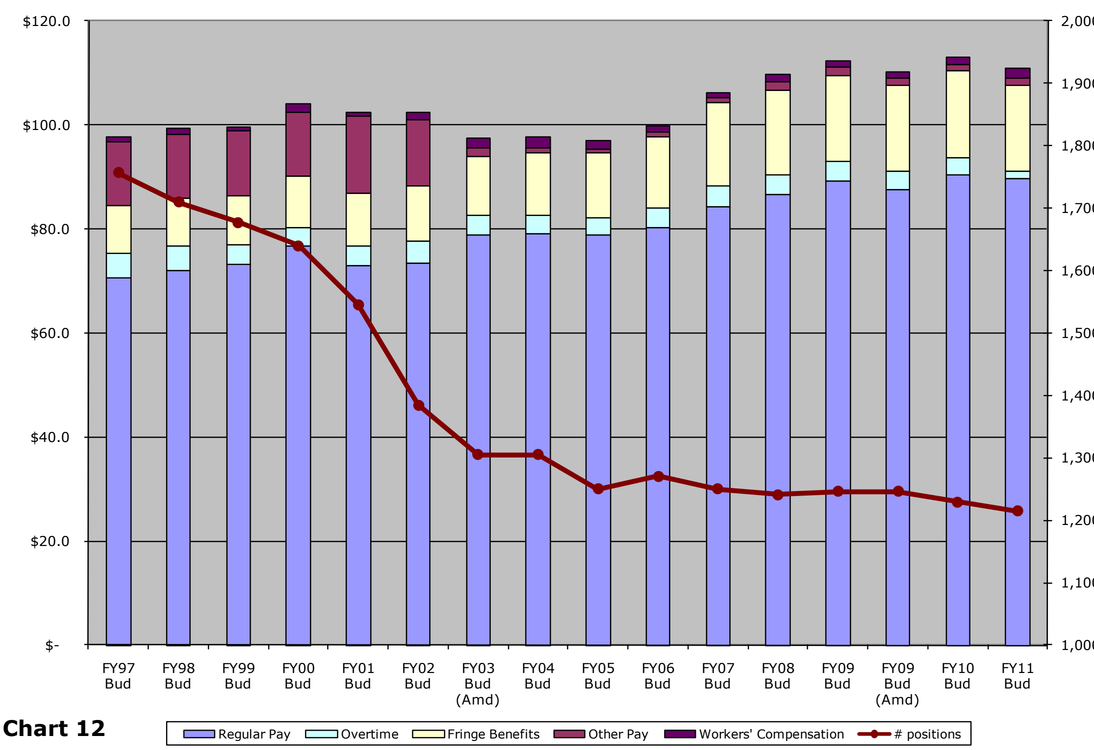

Chart 12

Overview: Personnel-Related Expenses

The Authority is proposing a budget of $112,616,397 for all personnel-related expenses for FY11. The amount represents a $407,341 (0.4%) decrease from the $113,023,738 budgeted for FY10, the first decrease in at least twenty years. Personnel-related expenses include: wages and salaries, overtime, fringe benefits, and workers' compensation. The proposed budget for each of these categories decline, with the exception of workers' compensation which increases by 41% over the amount budgeted in FY10.

Wages and Salaries

The Authority's proposed budget of $91.15 million for wages and salaries in FY11 represents a 0.6% decrease from the FY10 budget.

The budget assumes a funded staffing level of 1,216 positions and reflects a continuing downward trend over the last fifteen years. The Authority also assumes a 0.5% vacancy rate, the equivalent of 6 positions, for a net average funded staffing level of 1,210 (or 12 fewer average funded positions than the 1,222 in the FY10 budget. As of March 2010, staffing stood at 1,209 positions. This compares with the peak number of filled positions of 1,775 in March 1997, a reduction of over 550 positions or nearly one-third. The proposed budget does not include any salary increases for union employees or non-union managers. Also included are estimated accruals for leave balance liabilities. All union contracts are up for renegotiation in the coming months.

As noted in previous *Comments*, contributing to the lower staffing levels over the years have been the completion of a number of new and upgraded facilities, as well as new technology and increased automation of facilities. Other efficiencies have been achieved through union negotiations. As noted in the *Comments* on the proposed FY10 budget, *the Advisory Board expects the Authority to approach contract negotiations during FY10 within the context of the financial challenges facing the Authority between FY11 and FY13 and the aim of managing personnel expenses during this timeframe.*

Other pay, totaling $1,457,476, includes funding for shift differential, holiday pay, temporary employees, interns/co-ops and stand-by pay.

Staffing Study

At its February 2010 meeting, the MWRA Board of Directors discussed a letter sent by the Advisory Board's representatives to the Board of Directors requesting that a staffing level study be conducted. MWRA staff returned in April 2010 with a procurement proposal for a consultant firm to compare the MWRA with comparable utilities and to prepare a report on findings and recommendations for an approach to attaining an appropriate level of staffing for the Authority.

The most recent staffing study, conducted by Black and Veatch, originally called for a follow up staffing study in 2007. Although the Authority has continued to reduce its headcount beyond the recommendations of the Black and Veatch study, the agency's focus has changed since its inception. Indeed, MWRA staff note that the agency is currently shifting from a focus on major new capital construction, as with the Boston Harbor Project, towards a focus on maintaining its assets and infrastructure. As such, the timing for an updated staffing study seems appropriate, and *the Advisory Board expects the Authority to update its staffing levels consistent with any recommendations from the staffing study.*

Overtime

The Authority's proposed budget of $3.18 million for overtime expense in FY11 is the lowest in at least eighteen years (with the exception of FY09 actual spending of $3.0 million). The reductions reflect a decline in the number of overtime hours, including reduced overtime for coverage, based on adjustments developed with the cooperation of the unions. The Authority has been working in recent years on containing and tightening the use of overtime, including negotiating agreements with facility operators to carry out light maintenance tasks. Increases in kitting of materials for planned maintenance has allowed some maintenance work to be completed within shorter timeframes and regular schedules. Changes in shift assignments and staffing levels have also resulted in measurable savings.

While these steps have resulted in reduced use of overtime, the extreme wet weather over a six-week period in late February and March plus the Shaft 5A pipe break in early May will result in greater than budgeted spending for the remainder of the fiscal year. As of the April variance report, year-to-date spending was nearly $400,000 (14%) over budget, and can be expected to grow with the May report. Authority staff has indicated that the overtime line item may be revised upward as part of the final FY11 CEB.

Fringe Benefits

The Authority is proposing a budget of $16.4 million for fringe benefits in FY11, a 1% decrease from the FY10 budget. Included in this category of expense are: health insurance, dental insurance, unemployment insurance, Medicare payments, tuition reimbursement and overtime meals (Chart 13).

There are several reasons for the decrease in the fringe benefits budget, including fewer employees participants, shifting of some costs to employees (such as higher co-pays), and renegotiation of rates to lower levels.

Because the Authority's proposed FY11 CEB reflects a 1% potential reduction in fringe benefits (and projected FY10 spending is also expected to be lower than the year before), it masks the fact that the rising cost of fringe benefits, particularly health insurance, has been a subject of continual discussion for a number of years. As noted in previous *Comments*, fringe benefits have been a "pressure point" for the Authority's budget in recent years as well. Between FY04 and FY09, the Authority's fringe benefits expense increased by over 50%. The Advisory Board expects that the Authority will continue to monitor any changes in program scope and costs, as well as changes resulting from recent national legislation regarding health insurance contributions very closely.

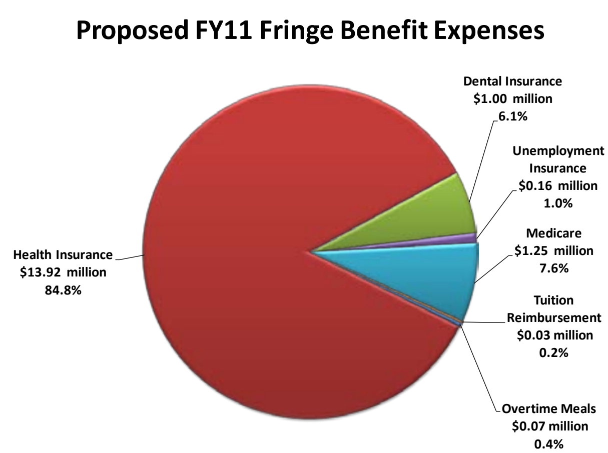

Chart 13

In addition, as noted previously, changes to the dental insurance program, possibly moving the program to the GIC, are still under consideration and could mean savings in the future. *The Advisory Board anticipates the Final FY11 budget will reflect the status of these developments.*

Workers' Compensation

The Authority is proposing a budget of $1,870,000 for workers' compensation expense in FY11, an increase of 41% ($545,000) from the $1,325,000 budgeted in FY10. Actual spending was at lower levels in FY07, FY08, and FY09, as the Authority resolved a number of open claims. However, accruals through April 2010 are running more than $500,000 over budget and reflect actual payments, as well as monthly reserve adjustments. Projections for year-end spending, as of the end of February, are for $1,800,000 or $475,000 (36%) greater than budgeted. Staff notes that there have been an unusually high number of claims during FY10. While staff is working to settle these claims and expect that the accruals should trend down, they are budgeting conservatively for FY11.

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Table 15

Proposed Fiscal Year 2011 — INDIRECT EXPENSES SUMMARY ($s)				
Line Item/Description	*Final FY10*	*Proposed FY11*	*Δ ($s)*	*Δ (%)*
Pension	$8,392,133	$6,500,000	-$1,892,133	-22.5%
Scheduled updated contribution to retirement fund.				
Post-Employment Benefits	800,000	0	-800,000	-100.0%
All other benefits for retirees (e.g. health insurance). Strategy for meeting liability tied to pension strategy.				
Insurance	2,316,000	2,216,000	-100,000	-4.3%
Insurance and pyaments/claims.				
Mitigation Payments	1,481,367	1,518,401	37,034	2.5%
Mitigation payments to Quincy and Winthrop.				
HEEC Payments	3,877,500	3,964,256	86,756	2.2%
Cross harbor cable to Deer Island (includes both debt service and O&M components).				
Watershed Reimbursements	23,549,673	24,746,467	1,196,794	5.1%
Supports the operations and related costs of the state's Department of Conservation and Recreation, Office of Watershed Management.				
Additions to Reserves	-653,254	-406,397	246,857	-37.8%
1/6th of all planned Operating Expenses.				
TOTAL INDIRECT EXPENSES	**$39,763,419**	**$38,538,727**	**-$1,224,692**	**-3.1%**

Other Highlights

- The Authority's defined pension contribution is based on a recent mid-cycle update to the January 2009 actuarial study to reflect recent changes in market performance.
- Insurance expense assumes a $100,000 decrease in payments/claims from budgeted levels. FY10 insurance expense is currently projected to exceed budgeted amounts by $2.1 million due to accruals for the Cottage Farm site cleanup and for equipment and pipeline replacement and repair due to the March wet weather events.
- HEEC payments have decreased for the capacity (debt service) charge, while the O&M charge increased by 11% plus $200,000 for a planned special project.
- Watershed expenses increase by 5.1% and reflect a 1% increase for the Office of Watershed Management, 6% for Payments in Lieu of Taxes (PILOT), and a 14% increase for the debt service on MDC purchases of watershed land according to a revised repayment plan.[17] Current and future watershed land purchases are financed through the Authority's CIP.
- The operating reserve deposit requirement has fallen to negative territory as the Authority has continued to reduce operating expenses over the last two budget cycles.

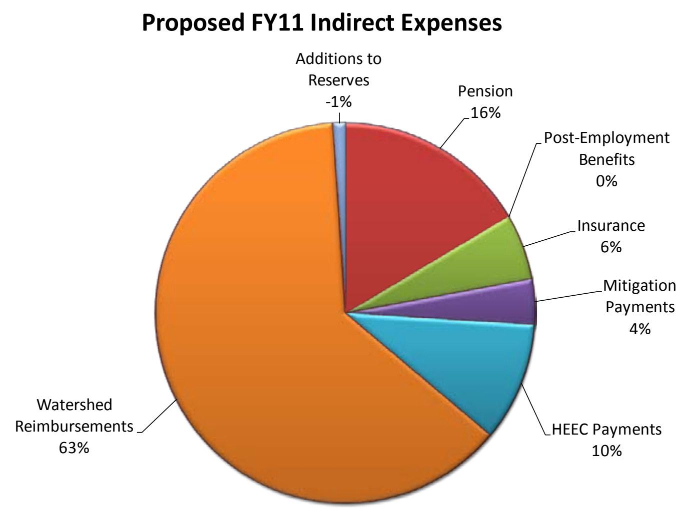

Chart 14

[17] Source: MWRA. Watershed land purchases reflect an accounting adjustment and differ from DCR's figures referenced later.

Overview: Indirect Expenses

The largest categories of indirect expenses are watershed reimbursement and pension expense (and related other-post employment benefits expense). Together, they represent just over 80% of the $38,538,727 budgeted for indirect expenses.

Watershed Reimbursement/PILOT Payments/Debt Service

The Authority has proposed a budget of $24,746,467 for watershed reimbursement, which includes operating expenses for the Division of Water Supply Protection (DWSP), debt service for watershed land purchases, and Payments in Lieu of Taxes (PILOTs). Note that due to an accounting credit in the Authority's CEB, the figures from the MWRA differ slightly from the DCR's. (See footnotes 17 and 18).

As it did last year, the DWSP has continued to tighten its operating expenses, and the 5.1% increase overall is largely due to increases in PILOT payments combined with a decrease in projected revenue (Table 16) together with a return to annual watershed debt service payments of $5.608 million as established in a review of the multi-year payment schedule. In essence, the DWSP is doing its part to tighten its expenses due to the current economic situation; the Advisory Board commends both DWSP and the Authority for controlling these expenses.

Watershed Reimbursement [18]

Table 16

EXPENSES	Budget FY2009[19]	Final FY2010	FY2011 Proposed	Increase %
Division of Water Supply Protection Operating Expenses	$13,720,279	$13,520,280	$13,721,254	1.5%
Revenue	$1,503,000	$1,403,000	$1,478,000	5.3%
Net	$12,217,279	$12,117,280	$12,243,254	1.0%
Debt Service	5,608,833	5,608,833	5,608,833	0.0%
TOTAL	$17,826,112	$17,726,113	$17,852,087	0.7%
Payment In Lieu of Taxes	5,933,500	6,500,000	6,892,834	6.0%
TOTAL	**$23,759,612**	**$24,226,113**	**$24,744,921**	**2.1%**

Forest Management Plan

Recently, the DCR has received some press coverage about the issue of "clear cutting" areas of forest under its jurisdiction; the DWSP has also received some attention recently due to similar instances of clear cutting.

At a recent Advisory Board meeting, the DWSP made a presentation outlining the necessity of maintaining a diversity of plant life (both in age and in species) for proper watershed management. Recognizing the unique needs of watershed lands as compared to other parklands, the Advisory Board remains supportive of a forestry management plan, including strategic cutting of trees, for the Authority's watershed lands. However, the potential abuse being currently discussed and investigated as a result of recent press coverage is concerning and cannot be allowed.

[18] Source data: DCR Division of Watershed Supply Protection. The debt service numbers do not reflect the accounting credit incorporated in the MWRA's CEB (see footnote 17).

[19] These numbers reflect the FY2009 Original Budget. Post-budget amendment, DWSP's total expenses including PILOT payments was $22,659,385.

The Advisory Board supports the DWSP's move to have an audit conducted of the watershed forestry management program, and further recommends that the audit be conducted by an outside, independent consultant/group/organization.

The DWSP also suspended all forestry sales until the review has been completed. Forestry sales represent a revenue offset to DWSP expenses. As such, there is a budgetary impact to this suspension of sales – an impact that ratepayers should not bear. **The Advisory Board therefore recommends that the DWSP reduce its expenses to mitigate the loss of revenues from any suspension of forestry sales.**

<u>Watershed CIP Projects</u>

The Authority has some projects in its Proposed FY11 CIP that relate to water supply protection with planned spending in the FY10-13 period.

Funding to support ongoing purchase of watershed land has been budgeted since FY06. Prior to this point, land acquisition was carried out by the Commonwealth, with the Authority reimbursing the state for the ongoing debt service for those purchases (as discussed above). The Authority's budget includes $19.0 million for these purchases, of which $15.7 million is projected to have been spent through FY10. Another $1.0 million is budgeted for FY11 and $2.3 million in FY12 and FY13.

The Wachusett Reservoir Spillway Improvements/Winsor Dam Repair project was undertaken to make necessary improvements at dams that are 60 and 100 years old respectively; however, during preparations for improvements at the Wachusett dam, the presence of polychlorinated biphenyls (PCBs) was discovered in exterior caulking materials and nearby facilities as well. Three separate contracts were developed for PCB-removal. The project is currently scheduled for completion in FY10, at a total cost of $11.8 million.

The Authority is also budgeting $7.7 million in Dam Repairs with $5.92 million of spending scheduled for the FY10-13 timeframe and $1.77 million during FY14 and FY15.

Also included in the CIP is $2.25 million for the design and construction of an automated chemical dispensing system to control algae in the Wachusett Reservoir.

Other projects relating to watershed management are funded through the Current Expense Budget. (See Table 17.) Among them are: a three year contract for invasive aquatic plant control primarily in the Wachusett Reservoir ($50,000 in FY11); and $125,000 for an invasive species baseline survey (to be conducted every three years). These projects appear to focus on the identification and control of aquatic plants. Given the recent appearance of zebra mussels in Western Massachusetts waters, inclusion of other forms of invasives in these studies, and even more frequent surveys may be warranted. In addition, there are three dam related projects: dam inspection ($15,000), appurtenant structures inspection ($50,000), and inspection technical services related to repairs ($35,000).

Table 17

Watershed-Related CEB Projects

Project	$	Comments
Invasive Species Survey	$125,000	Every three years
Dam Appurtenant Structures Inspection	50,000	Two years @ $50,000
Invasives Control Services	50,000	3-year contract FY10-12
Dam Inspection	35,000	Bi-annual program; 12 dams
Dam Inspeciton Technical Services	15,000	
TOTAL	**$275,000**	

Many of these CIP and CEB projects are tasks that have been or would have been taken on by the Department of Conservation and Recreation, and, as such, would have been part of the Watershed Reimbursement budget.[20] As a reimbursement, such expenses are categorized as a use of coverage and, in addition, would not be subject to the operating reserve deposit requirement (in the case of the CEB expenses). **The Advisory Board believes that the Authority should consider treating these expenses in a separate category, as a subset of Watershed Reimbursement expenses, particularly if there are any benefits to doing so with regard to meeting the Authority's coverage requirements, which may yield overall budgetary savings.**

Pension Expense/OPEB

The Authority is proposing a budget of $6.5 million for the pension fund deposit in FY11, based on an updated actuarial study of the fund's returns over the last year. No funds are included for the OPEB expense, as the Authority continues to focus on increasing the pension fund's funding level.

In FY10, the Authority budgeted $8.4 million for pension fund expense, which includes the scheduled payment, as well as an additional $2.8 million for rebuilding depleted pension fund levels due to the economic downturn.

During FY10, the Authority received an update to its pension fund liability actuarial study as of January 2009; an update is required every two years. However, given that the "snapshot" of the pension fund was taken at the worst of the economic conditions and had since realized some gains subsequent to the 2009 actuarial study update, the Retirement Board undertook an interim actuarial study based on January 2010 data, which substantially reduced the pension fund expense in FY11 to the $6.5 million in the Proposed FY11 CEB. The Advisory Board commends the Authority for taking this proactive step to balance the needs of the cities and towns (by saving them millions of additional dollars during a fiscal year that they can ill afford it) with the fiscally responsible actions necessary to address the Authority's very real pension fund liability.

In FY09, the Board of Directors voted to redirect the funds originally designated for the OPEB liability toward the pension fund liability based, in part, upon its financial advisors' advice, and, in effect, dramatically altering its strategy with regard to these two line items. In effect, the Authority began viewing the pension and OPEB liabilities as one total liability, choosing to focus first on restoring full funding to the pension fund before addressing its OPEB liability directly.

In recent years, the Advisory Board has consistently advocated against funding OPEB until better direction is received from the rating agencies about the best approach to meet this liability. The $0.8 million in the final FY10 CEB is not only a nominal amount compared to the amounts proposed in the last two years, but also was tied directly to legislation proposed by the Governor last year. The legislation introduced a new income-based method of calculating an employee's contribution for health care benefits; the final FY10 CEB reduced fringe benefits by $0.8 million, but placed the same amount as a "placeholder" in the OPEB line item. Had the legislation not be enacted, the $0.8 million would be redirected back to the fringe benefits line item.

As recommended in the *FY10 Integrated Comments and Recommendations*, **the $2.8 million beyond the required pension payment should not be transferred while still maintaining the Authority's fiscal responsibility toward its pension liability by following its adopted schedule according to the interim actuarial study. The funds should be redirected to the Rate Stabilization Fund.**

Additionally, the $0.8 million currently budgeted in the OPEB line item should also be redirected to the Rate Stabilization Fund.

[20] In the case of the CIP projects, the resulting annual debt service expenses related to these projects would have been included in the annual Watershed Reimbursement budget.

As noted last year, these are unusual and unique times financially; as such, they invite the Authority to revisit and review traditional practices. Investment strategies for the pension fund, for example, might be revisited in light of the economic crisis; for example, perhaps the Authority should extend its current position of not funding the OPEB liability to a large degree, or at all, until some measure of financial equilibrium is restored. (See also discussion on the Authority's Credit Rating Updates, under Capital Financing section.)

Additions to Reserves

The Authority's bond resolutions require three reserve funds: the operating reserve, the insurance reserve and the renewal and replacement reserve.

The operating reserve must equal two months of budgeted MWRA operating costs (which include direct expenses, insurance, mitigation payments, retirement fund deposits, other post-employment benefits, BECo/HEEC expense and the Chelsea lease payment). *The Advisory Board expects the Authority to make any necessary adjustments to the operating reserve additions based upon any additional operating expense reductions in the Final FY11 CEB.*

The insurance reserve, which is maintained to mitigate the budgetary risk of self-insurance, currently stands at $19 million. The Authority's insurance consultant has recently issued a new report (January 2010) on the adequacy of the Insurance Reserve Fund. The consultant has concluded that "…an acceptable range for the Fund level is in the range of $12 million to $15 million, with a conservative/maximum level of $17 million. … Should the Fund be drawn down due to losses, the minimum level for the fund should be $6 million. If the Fund reaches this level with use, it should be replenished over a 3-year period…" **The Advisory Board recommends that the Authority reconsider the funded level for the insurance reserve, and include excess amounts as one of the tools for addressing management of debt service and rate revenue requirements between now and 2022.** Revised insurance reserve levels could be lowered, over time, by up to $7 million.

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Table 18

Proposed Fiscal Year 2011 **MAINTENANCE EXPENSE SUMMARY** ($s)				
Line Item/Description	*Final FY10*	*Proposed FY11*	*Δ ($s)*	*Δ (%)*
Buildings and Grounds Expense	$3,634,089	$3,833,992	$199,903	5.5%
Materials and services for maintaining buildings and grounds.				
Automotive Expense	706,500	705,500	-1,000	-0.1%
Materials and services for maintaining vehicles.				
Plant and Machinery Expense	12,526,844	12,318,815	-208,029	-1.7%
Materials and services for maintaining plant and machinery expenses. (E.g. drive chains, facility painting and coating)				
Pipeline Expense	1,035,302	1,062,562	27,260	2.6%
Materials and services for maintaining pipeline.				
Specialized Equipment Expense	3,188,376	3,313,290	124,914	3.9%
Materials and services for specialized equipment. (E.g. grit screens, lab equipment repairs, sewer bucketing equipment)				
Computer Expense	2,592,561	3,069,008	476,447	18.4%
Includes materials services, software licenses and upgrades.				
Electrical Expense	3,718,975	3,563,035	-155,940	-4.2%
Materials and services for maintaining electrical systems.				
All Other Maintenance Expense	857,026	1,359,198	502,172	58.6%
Includes HVAC materials and services and purchase cards.				
TOTAL MAINTENANCE EXPENSE	**$28,259,673**	**$29,225,400**	**$965,727**	**3.4%**

Other Highlights

- Maintenance expense increases by $965,728 or 3.4%.

- Maintenance expense is 14% of all direct expenses.

- Nearly half of all maintenance is for Deer Island ($13.9 million).

- Another 34%, or $9.9 million, is for Field Operations, including the CWTP, headworks, CSO facilities, and water and wastewater pump stations.

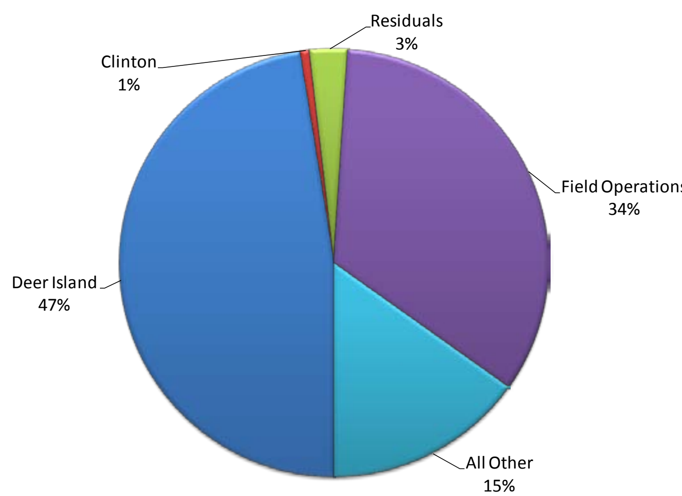

Chart 15

- All other Operations Division maintenance expense is $1.4 million and includes $0.8 million for the residuals plant plus $0.21 million for the Clinton Wastewater Treatment Plant.

- All other maintenance expense accounts for $4.4 million, or 15%, of total maintenance expense including $2.9 million for MIS and $0.31 million for lab services.

Overview: Maintenance

The Authority is proposing a budget of $29,225,400 for maintenance expense in FY11, an increase of 3.4% ($965,727) over the $28,259,673 budgeted for FY10. This category of expense has grown by 50% in the last five years, an increase of nearly $10 million. This growth reflects the fact that even the so-called "new" facilities are aging: major elements of the Deer Island Wastewater Treatment Plant are 15 years old and the Carroll Water Treatment Plant is now over five years old. As the agency completes these major facilities and upgrades of many others, it is moving increasingly into "maintenance mode" with its facilities and systems.

Maintenance spending is at the core of both the Current Expense and Capital Budgets. Some maintenance projects in the Current Expense Budget address immediate needs until a larger, more comprehensive capital project can be scoped and designed as part of the Capital Program. Some projects are ongoing, such as regular painting and coating of facilities and are considered components of the Current Expense Budget; others are periodic, such as pump or VFD replacements and are considered candidates for the Capital Budget. Still others appear in both budgets, depending on the their size and duration: most roof repair projects have been considered part of the Current Expense Budget, while more recently, larger roof repair and replacement projects meet the criteria for inclusion in the Capital Budget (discussed below).

Nearly half of all CEB maintenance spending is for the Deer Island Wastewater Treatment Plant, $13.9 million. Another 34%, or $9.9 million, supports maintenance spending for the Field Operations Department.

The Authority has been using a Reliability Centered Maintenance strategy (RCM) in identifying and prioritizing maintenance needs. RCM is a structured maintenance approach that rigorously analyzes systems' design, operational and maintenance strategies, and safety issues. The Authority states that by reviewing systems in their site-specific operating context, staff maintenance efforts can be more focused on maximizing value. Often, the result is a Preventive Maintenance (PM) Program that is less costly and more effective in maintaining system availability and long-term asset protection.

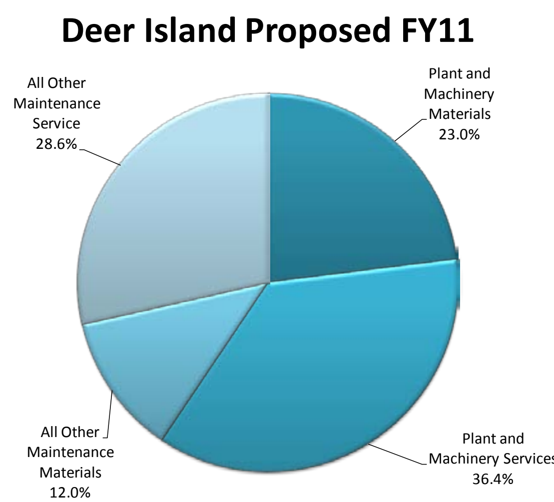

Chart 16

Deer Island Maintenance Spending

Of Deer Island's $13.88 million maintenance expenses, 65% is for maintenance services, the remaining 35% for maintenance materials. Spending is level-funded from the FY10 budgeted amount.

The largest category of expense within the Deer Island maintenance budget is for plant and machinery maintenance totaling $8.26 million. Together, plant and machinery materials and services represent nearly 60% of all Deer Island maintenance expense.

The budget for maintenance services totals $9.0 million and has two distinct groupings: specialty services ($5.57 million) and project services ($3.44 million). Projects are gradually shifting to more predictive and preventive maintenance, and less corrective maintenance.

Examples of projects planned are: facilities painting and coating (ongoing), rebuilding of aerators and reactor mixer gearboxes that have failed during the year, large motor repairs, replacement of obsolete elevator controllers, refurbishment of another two digester mixer assemblies, repair of hypochlorite trays and yearly insulation repairs. Also planned are phase 3 of the energy management program with NStar, boiler maintenance services, maintenance of the STG and hydropower facilities, maintenance of the CTGs and cryogenic facilities, elevator services, and maintenance of the wind turbines, among many other projects.

Deer Island capital projects represent $244.2 million for 68 contracts in the Capital Improvement Program for the cap period (FY09-13). Capital spending on the plant grows rapidly between FY09 and FY10, more than tripling from $14.2 million to $44.36 million. Spending on the plant from FY10 - FY12 averages $57.5 million per year.

Two large contracts dominate Deer Island capital spending: Primary and Secondary Clarifier Rehabilitation ($59.38 million, awarded January 2009) and North Main Pump Station Variable Frequency Drive (VFD) Replacements ($40.0 million of which $31.1 million is budgeted for the cap period; to be awarded fall 2010). Together these two contracts represent nearly 40% of all Deer Island capital spending during the cap period. Another six contracts with spending greater than $10 million bring the total to just under $154 million, or 63%, of all Deer Island capital spending. They are: Electrical Equipment Upgrade ($15.0 million of which $14.4 million is budgeted for the cap period), HVAC Equipment Replacement ($12.43 million of which $9.8 million is budgeted for the cap period), Digester Pipe Replacement ($11.5 million), Heat Loop Pipe Replacement ($11.23 million) and Power System Improvements ($9.5 million), and North Main Pump Station Motor Control Center ($7.09 million).

Energy projects, such as wind turbines, are budgeted as part of the Alternative Energy Initiatives under Business and Operations Support.

Table 19

Top Deer Island Projects During Cap Period FY09-13
($ millions)

Projects	Amount	Comments
Top Eight Projects, Over $5 Million		
Prim & Sec Clarifier Rehab	$59.38	Total project cost within cap; high priority
North Main PS VFD Replacement	31.11	Total project cost expected to increase to $45.0 million
Electrical Equipment Upgrade 3	14.38	
Digester Pipe Replacement	11.46	
Heat Loop Pipe Replacement	11.23	Three parts: $2.9 million awarded, two others still to be awarded
HVAC Equipment Replacement	9.84	Does not include design/ESDC costs
Power System Improvements	9.50	
North Main PS Motor Control Center	7.09	
subtotal	**$153.99**	
All Other Active Projects During Cap	**$90.24**	There are 55 other active Deer Island contracts during FY09-13
TOTAL	**$244.23**	During the FY09-13 period

Field Operations Department

Maintenance work performed by the Field Operations Department is budgeted at $9.88 million for FY11. The amount represents an increase of $997,189 or 11% over the FY10 budget. It reflects a $334,700 net increase in major projects and parts, a $239,442 net increase in day-to-day project needs (such as meter batteries) and an increase of $205,795 in service contract spending (including increases for instrumentation services, maintenance services for the new PIMS contract, overhead door maintenance and alarm services). Energy initiatives double to $660,052 and include HVAC and lighting improvements at a number of facilities including Chelsea.

A series of asset management projects are budgeted in the CIP under Interception and Pumping Asset Management (for wastewater projects) totaling $42.63 million for the cap period FY09-13 and under Other Waterworks Projects (for waterworks projects) totaling $1.42 million for the cap period. As facilities age, these projects will include more specific facility based projects and contracts, particularly for the Water Treatment Plant.

Table 20

Field Operations Department Asset Protection Projects With Spending During FY09-13 ($ millions)		
Project	Amount	Comments
Headworks Upgrades Construction	13.00	Expanded, total last estimate of $81.3 million to start FY13
Nut Island Mech & Elec Replacements	5.51	
Headworks Upgrades Design	3.62	Award expected spring 2010
Alewife Brook PS Rehab Construction	3.33	
Prison Point HVAC	3.17	
Columbus Park & Ward St HVAC	3.00	
Headworks Screens/Grit Construction	1.87	
PS/CSO Condition Assessment	1.75	
NIH Electric and Grit and Screenings	1.50	
Interceptor Renewal Construction #1	1.10	
Subtotal (Top 10 Projects)	**$37.85**	**Accounts for nearly 90% of FY09-13 spending**
All Other I&P FAMP	$4.78	
Total I&P FAMP	**$42.63**	Total contract cost is $86.9 million; remainder after FY13
Waterworks Facility Asset Protection	**$1.42**	Total contract cost is $4.813 million; remainder after FY13
TOTAL	**$44.05**	

A number of other waterworks pipeline and facility maintenance and rehabilitation projects are included under the category of Distribution and Pumping. Some $102.83 million is included in the CIP during the FY09-13 cap period. One of the largest recently awarded contracts is the Southern Spine Distribution Mains, Section 107 - Phase 2 contract for $14.565 million.

Residuals Maintenance

The Authority is budgeting $822,968 in the CEB for maintenance work at the residuals pelletizing plant at Fore River during FY11. Most of the funding, nearly $820,000, is for capital repair, replacement and improvement projects as called for in the New England Fertilizer Company (NEFCO) contract (which includes a specific level of maintenance work each year, adjusted for inflation).

The CIP includes $4.6 million for capital projects, studies and design contracts for the FY09-13 timeframe and anticipates significant future spending on elements of the plant, estimated at $143.3 million. Much of this projected spending – $83 million – is scheduled in the years after the next cap period. But more than $60 million is budgeted for the FY14-18 timeframe. The pellet plant is the second largest in the country (after Chicago).

Initial steps in framing the direction of future improvements or modifications to the plant include two studies currently underway. The first, a condition assessment of the pelletizing facility, started in March 2009, at a cost of $460,000. The consultant is assessing various facility support utilities and the condition of all major facility assets, as well as developing estimates of the useful life of the plant assets and recommendations for possible equipment replacement. Draft reports are being prepared and the project is expected to be completed by the summer. The second study is an assessment of technology and regulatory trends. The contract is out for bid, with award expected in June. The study is expected to last nine months and cost $600,000. It is expected to result in a conceptual plan to optimize the existing residuals processing operation and identify long term capital improvements, extending the useful life of the processing facilities for another 15 to 20 years.

The results of both studies are expected to help shape an updated approach to the capital project needs of the residuals program (including possible projects for residuals processing facilities at

Deer Island) for the FY12 CIP. The CIP also includes $4.0 million for design of upgrades for the residuals facility, to begin January 2012.

Clinton Wastewater Treatment Plant Maintenance

The Authority is budgeting $211,355 in the FY11 CEB for maintenance of the Clinton Wastewater Treatment Plant. The amount includes buildings and grounds maintenance supplies and services, an emergency pump for wet weather and plant and machinery materials and services. The capital program includes $2.77 million for the FY09-13 period, including funding for a digester cleaning and repair project, plant-wide concrete repair and aeration efficiency improvements. Additional funds for phosphorus removal and for storm damage cleanup and repairs can be expected to be added in the final FY11 CIP. In addition, a project to provide increased phosphorus removal, as may be required by the next NPDES permit, is under consideration; the capital cost estimate is $3.5 million.

Capitalization Policy

The Authority's capitalization policy states that: "Expenditures for tangible assets are included in the Capital Improvement Program and Budget if the expected cost of the individual asset or capital project is $100,000 or more and if the expected useful life is more than one year. Expenditures for intangible assets are capitalized if the expected cost is $100,000 or more and if the expected benefit period is three years or more. Annually recurring costs and expenditures for maintenance of assets are not capitalized, even if their costs may exceed $100,000."

The policy is subject to interpretation. One recent example is a Deer Island roof replacement project, which, unlike earlier phases, was a larger project involving several facilities with a cost of $2.3 million in FY09 and $1.23 million in FY10. The project had been budgeted in the CEB, but the project has since been assigned to the CIP.

Authority staff is revisiting the capitalization policy and approaches to asset capitalization.

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Table 21

Proposed Fiscal Year 2011 UTILITIES SUMMARY ($s)				
Line Item/Description	*Final FY10*	*Proposed FY11*	*Δ ($s)*	*Δ (%)*
Electricity	$19,397,600	$19,271,484	($126,116)	-0.7%
Most facilities are powered by electricity including DITP and CWTP.				
Diesel Fuel	2,177,377	2,145,911	-31,466	-1.4%
Heating, CTGs at DITP, and other backup generators.				
Water	1,608,179	1,758,727	150,548	9.4%
A "pass-through" cost to account for Water; self-supplied.				
Natural Gas	716,112	712,917	-3,195	-0.4%
Primarily used for heating various MWRA facilities				
All Other Utilities	172,948	168,139	-4,809	-2.8%
Oxygen, #2 fuel heating oil, propane, and all other utilities.				
TOTAL UTILITIES EXPENSES	**$24,072,216**	**$24,057,178**	**-$15,038**	**-0.1%**

Other Highlights

- Utilities expenses are essentially level-funded as are electricity, diesel fuel, and natural gas.
- Utilities costs represent 11.5% of all direct expenses.
- For electricity, the amount purchased decreases by just over 4%, due largely to increased self-generation, while the average price is assumed to increase by 4%.
- Nearly 70% of purchased electricity (kWh) powers the Deer Island Treatment Plant.
- Another 7% of purchased electricity (kWh) powers the Carroll Water Treatment Plant.
- Diesel fuel expense is essentially level-funded.
- Natural gas use at the Fore River pelletizing plant is part of the NEFCo monthly charge, under the Other Services budget category.

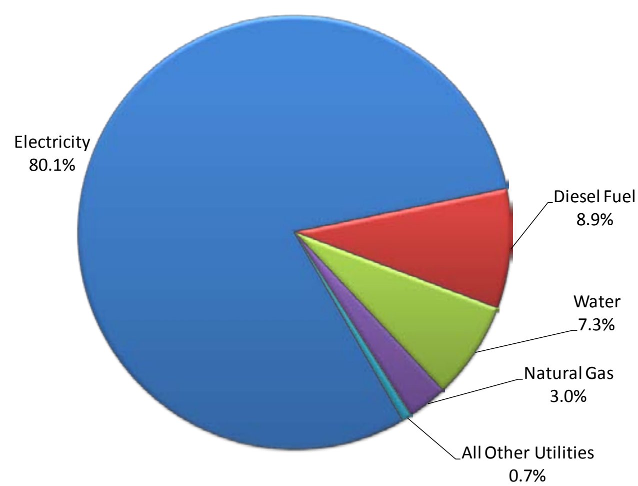

Chart 17

Overview: Utilities

At $24.1 million, the cost of Utilities is 11.5% of all direct expenses. The proposed budget is essentially level-funded from FY10, as are the key elements of utilities expense: electricity, diesel fuel, and natural gas. Water is a transfer cost; more than 77% of the dollar value of water used is at the Deer Island Treatment Plant.

Electricity

Electricity costs, which make up 11.5% of all direct expenses, have two components: the amount of electricity purchased and the unit price of electricity purchased. The Authority's proposed budget for electricity expense represents 80% of total utilities costs for FY10. Of that, just over 60% of electricity expense is for the Deer Island Treatment Plant (see Chart 18).

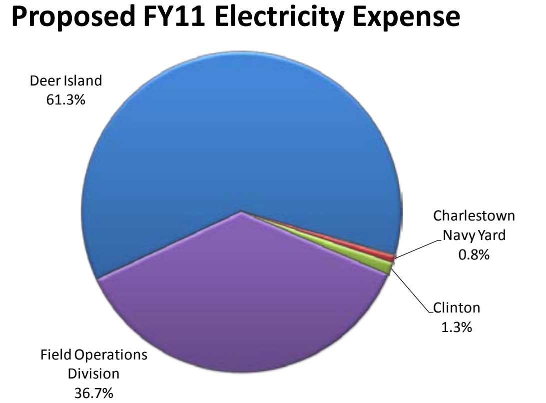

Chart 18

Usage

There are three components of usage: required usage – the total amount of electricity actually needed to run operations; avoided purchase – self-generated energy from alternative sources used for operations (e.g. wind, solar, STGs); avoided use – demand-side changes and reductions of use (e.g. energy-efficient equipment replacement).

The Authority's required usage has remained fairly constant over recent years but has declined slightly due to the continued pursuit of demand-side initiatives or installation of self-generation facilities (solar, wind, and hydropower). (See below.)

As noted in Table 22, the Authority's proposed FY11 budget indicates that it expects 28% of Deer Island's electricity to be self-generated, or under the avoided purchase category.

Table 22

	Required Usage (kWh)	Avoided Purchase (kWh)	Purchased Electricity (kWh)	Electricity Cost ($s)
Deer Island	162,252,125	44,845,946	117,406,179	$11,809,947
Field Operations Division	49,971,297	1,039,955	48,931,342	$7,064,728
Clinton	2,108,800	-	2,108,800	$249,217
Charlestown Navy Yard	764,524	8,520	756,004	$147,592
TOTAL	**215,096,746**	**45,894,421**	**169,202,325**	**$19,271,484**

Table 23 indicates the five sources of self-generation at Deer Island in the Proposed FY11 CEB, some of which relate directly to projects included in the Proposed FY11 CIP.

Table 23

DITP Avoided Purchase by Source	
STGs	31,938,259
CTGs	4,760,000
Hydro	5,600,687
Wind	2,300,000
Photovoltaic	247,000
TOTAL	**44,845,946**

The existing Steam Turbine Generators (STGs) generate over 28 million kWh in electricity; the capital project to upgrade the STGs would contribute an additional 5 million kWh. Some of this additional generation is assumed for FY11. More recently, staff note that the completion date of the additional STG capacity has been delayed, and the anticipated avoided purchases are expected to be revised downward somewhat for the final FY11 CEB.

Table 24

Alternative Energy Initiatives			
Energy Source	**Location**	**Funded**	**Avoided Purchase (kWh)**
Wind Turbines	Deer Island	Yes	2,300,000
	Nut Island	Yes	3,788,000
	CWTP	Study	2,430,000
	DeLauri P.S.	Yes	3,700,000
	Braintree-Weymouth P.S.	Study	2,896,000
	Norumbega	No	2,600,000
	Gillis P.S.	No	2,600,000
	Southborough	Study	2,537,000
	Chelsea Maintenance	No	Unavailable
STG	Deer Island (STG)	Existing	28,071,910
	Deer Island (Upgrade)	Yes	5,000,000
Photovoltaic	Deer Island (Phase I)	Yes	110,000
	Deer Island (Phase II)	Yes	174,000
	Deer Island (Phase III)	Yes	528,921
	CWTP	Yes	616,000
	Cottage Farm	No	131,400
	Union Park	No	105,000
	Nut Island	No	100,000
	Southborough	No	14,000
Hydroelectric	Deer Island	Existing	5,900,000
	Loring Road	Yes	1,200,000
	Wachusett	Grant	750,000
	Oakdale (Upgrade)	Yes	9,200,000
	Cosgrove	Existing	4,400,000
Digester Gas	Clinton	Existing	320,000
Existing			38,371,910
Potential New			41,100,321
TOTAL			**79,472,231**

The Authority is also preparing for a second phase to install additional wind capacity at Deer Island beginning in the fall 2010; completion is anticipated in the spring of 2012.

The Authority has installed solar panels at several locations at Deer Island and assumes increased output from a second phase of solar installation. A third phase was awarded this spring with a commercial operational date of one year from the start of the project.

Additionally, the Authority has sought to reduce the amount of electricity needed to conduct its operations – avoided use – by pursuing a number of demand-side changes and initiatives (See Table 25).

Table 25

Demand-Side Energy Initiatives			
Project	**Location**	**Funded**	**Avoided Use (kWh)**
Lighting Phase I	Deer Island	Yes	1,340,000
Lighting Phase II	Deer Island	Yes	1,260,000
Lighting Phase III	Deer Island	Yes	TBD
Lighting Phase IV	Deer Island	Yes	TBD
VFD Replacement	Deer Island	Yes	1,250,000
Energy Audits	Chelsea	Yes	600,000
Soda Ash Mixers Turned Off	CWTP	Existing	1,760,000
Pump Station Rehab	Various	Yes	1,105,824
South Station Pumps	Deer Island	Existing	1,300,000
Lighting Retrofits	CWTP	Existing	449,000
Energy Audits	Clinton	Existing	370,000
Energy Audits	Various	Planned	TBD
TOTAL			**9,434,824**

Pricing

The second component of the Authority's electricity costs is unit pricing. The Authority has some contracts that utilize fixed pricing. At Deer Island the supply contract awarded last spring has a base block component and variable pricing for the remainder. Budgeted price for FY11 is to rise by 5% to $0.101/kWh as compared to FY10 pricing. The Authority notes that with the award of the latest Deer Island contract in May 2009, the MWRA has fixed pricing for approximately 60% of its electric load with the remaining electricity demand being purchased in the real-time market.

Diesel Fuel

At $2.145 million, diesel fuel expenses make up almost 9% of the utilities budget. Expense for diesel is essentially level-funded from the FY10 CEB. Fuel costs for the vehicle fleet are budgeted under other materials, vehicle expense.

Diesel fuel costs at Deer Island are largely a function of assumptions about starting inventory, purchased amounts and timing of purchases.

Almost all diesel expenses for FOD are for wastewater operations: pumping, headworks, and CSOs, and are utilized largely for heating.

Table 26

Diesel Usage		
	Purchase (gal)	**Cost ($s)**
Deer Island	200,000	$500,000
Field Operations Division	598,513	1,645,912
Clinton	-	0
Charlestown Navy Yard	-	0
TOTAL	**798,513**	**$2,145,912**

The largest category of use of diesel fuel at Deer Island is for wet weather operation of the CTGs. The use of the CTGs during wet weather events arose following power outages at Deer Island in 2004 and 2005. Since then, the Authority has invested tens of millions of dollars in equipment repairs and upgrades, undertaken staff training, changed operating procedures, and hired new electricians. The Authority is much better positioned than before to avoid new outages or to start up the CTGs more quickly and reliably in the event of an outage in the future. In February 2010, the Authority experienced an outage and was able to restore power within minutes.

The Authority currently assumes purchase of 200,000 gallons of diesel fuel at $2.50 per gallon for Deer Island, the same amount as budgeted for FY10. However, the budget assumptions were arrived at before the extended wet weather of February and March.

The Authority reports purchase of 1.3 million gallons of fuel at a cost of $3.1 million to run the CTGs at Deer Island during the late February power outage and the March and April wet weather events. The amount was partially offset by avoided electricity purchases valued at an estimated $1.3 million. A third spring purchase is in progress.

The Authority estimates every ten hours of operation is the equivalent of approximately $67,500; operation over a 24-hour period would result in an expense of $162,000 and three days would be nearly $500,000. The budget assumptions will be updated for the final FY11 CEB.

Table 27

Proposed Fiscal Year 2011 **OTHER SERVICES SUMMARY** ($s)				
Line Item/Description	*Final FY10*	*Proposed FY11*	*Δ ($s)*	*Δ (%)*
Pelletization	$15,327,452	$14,041,266	-$1,286,186	-8.4%
NEFCo contract to process and dispose of sludge pellets				
Lease	3,051,649	3,333,658	282,009	9.2%
Charlestown ($1.6 million), Chelsea ($1.5 million), Marlborough Records Center ($145 thousand).				
Telephone	1,394,862	1,429,505	34,643	2.5%
Voice and data lines; Operations Division				
Grit and Screenings Removal	916,030	905,217	-10,813	-1.2%
Removal of grit and screened materials from various facilities.				
All Others	2,532,767	2,845,148	312,381	12.3%
Printing, membership dues/subscriptions, advertising; health/safety, police details; Advisory Board operations; various other services.				
TOTAL OTHER SERVICES EXPENSES	**$23,222,760**	**$22,554,794**	**-$667,966**	**-2.9%**

Other Highlights

- NEFCo contract runs from FY01-FY15.
- Grit and screenings are removed from Deer Island, headworks including Nut Island, certain pump stations, and CSO facilities.
- Police details increase from FY10 budgeted spending despite efforts to use civilian flaggers. Additional police details have been budgeted to conduct essential operations including valve exercising and wastewater meter maintenance, based upon actual FY10 experience under the civilian flagger program. Other capital construction-related use of police details is reflected in each capital project.
- Membership/dues/subscriptions spending rises slightly to $209,812 – a level that is still just over half of FY09 spending levels. Authority has maintained its elimination of funding for Water Environment Research Foundation (WERF) as part of an initiative to curtail spending.

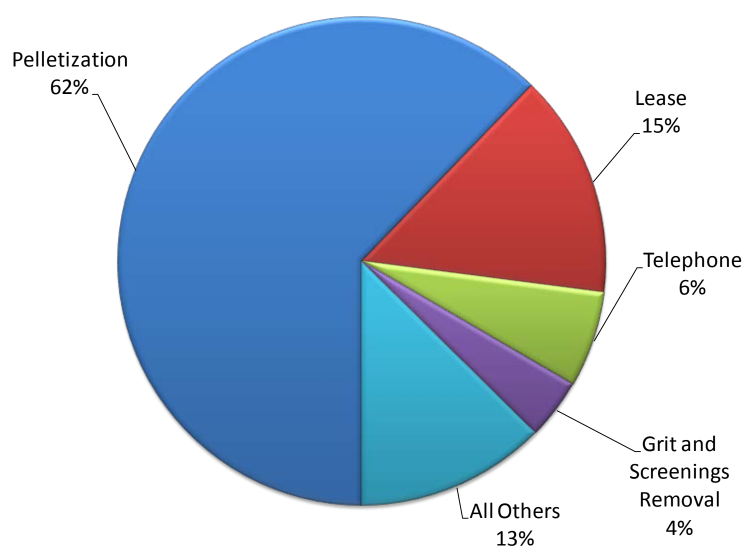

Chart 19

Overview: Other Services

The largest driver of the other services category of spending is pelletization, which makes up two-thirds of total category spending. Pelletization costs must be discussed in two contexts – in the short-term through the end of the current NEFCo contract, and the long-term costs beyond FY15. Short-term costs are directly tied to the amount of sludge processed, and the long-term costs will begin to be addressed through two projects in the Proposed FY11 CIP. Regarding the other line items in this category of expense, the Authority has largely had success in recent years in reducing costs. One other area of note is a discussion of the police details line item.

Pelletization

Pelletization is the largest component of the other services category of expenses. The Authority is proposing a budget of $14.04 million for FY11, an 8% ($1.29 million) decrease from the amount budgeted for FY10.

The issue of pelletization costs should be addressed in two timeframes: the short-term costs under the current NEFCo contract, and the long-term costs after the contract expires in FY15.

In the short-term, the only method of controlling pelletization costs is to reduce the amount of residuals being processed. The Proposed FY11 CEB includes an assumption that 106 tons-per-day (TPD) will be processed, the same assumption as for FY10. Staff estimates that for tonnages over the 90 tons per day base amount in the contract, a reduction of 1 TPD on an annual basis would be equivalent to the reduction to pelletization costs of $100,000 per year.

It should also be noted that one component of the pelletization costs is governed by adjustments to the Producer Price Index (PPI). Updated assumptions can be expected to be reflected in the final FY11 CEB.

Additionally, there are many long-term issues to consider with the Fore River facility. Most important will be the new costs associated with pelletization after the expiration of the NEFCo contract. Currently, the contract is financially beneficial for the Authority, particularly with the elimination of barging costs. NEFCo, or any other bidder, will undoubtedly seek a contract with a more favorable contract structure for the vendor. This means that costs for pelletization could increase post-FY15, depending on the structure of the contract.

This upcoming change may, however, provide the opportunity for the Authority to reexamine how it handles its residuals processing as a whole. As the Advisory Board has noted in previous *Comments*, some topics that could be considered include a cost-benefit analysis of continuing to privatize the function versus managing the process in-house, or perhaps considering the processing and disposal functions separately, contracting out for one, while retaining the other in-house.

The Proposed FY11 CIP includes a two-phased project that will be critical to these considerations. The first phase is a condition assessment of the Fore River facility, currently scheduled to begin this spring, which will undertake an evaluation of the current facility. The second phase will identify and evaluate any emerging or alternative technologies for pelletization and processing. Award of this second phase is expected this spring.

In preparation of the bid documents and scope of the second phase, the Authority has put together a partial list of technologies that could be considered as part of the emerging technologies analysis portion of this project. Among them are Sludge-To-Oil, which would subject sludge to high pressure and temperature to reduce volume and result in "e-fuel" with a high BTU value; Enhanced Gas

Production, which increases gas production for greater energy recovery; sludge reduction, which would reduce the quantity of sludge to be processed; sludge to liquid, which relies primarily upon heat recovery; gasification, which creates "syngas" from sludge; thermal solidification, which essentially melts sludge into glass; and cell destruction, which destroys up to 90% of solids, resulting in increased gas production and greater energy recovery.

The evaluation of these and other technologies provides an excellent opportunity for the Authority to redesign and restructure its operations to take advantage of new processes. Moreover, all of these technologies seem designed to reduce sludge quantities, increase energy recovery, and/or result in beneficial re-use products.

The Advisory Board continues to support the Authority's proactive approach by beginning this project half-way through the current NEFCo contract in anticipation of any structural or operational changes that may need to be undertaken. Given the potential of cost increases associated with residuals processing after the current contract expires, it would behoove the Authority **to explore and pursue any emerging technologies that could reduce the quantities of sludge being processed, and which provide a beneficial reuse product. Moreover, the Authority may need to work with the Legislature, to ensure the Authority receives "green credits" for any beneficial reuse products or additional energy generation from any resulting sludge byproduct.**

It should be noted that the Proposed FY11 CIP and Master Plan both include placeholder projects for any capital improvements identified in the condition and technology assessments. The Advisory Board expects that these projects will be more fully discussed with the next update of the Master Plan, which would need to be completed in FY12 for use in setting the next capital spending cap during FY13 (the Proposed FY14 budget process).

Lease

The portion of this line item attributable to the Chelsea lease pertains specifically to the operating and tax costs associated with the facility. Regarding the other facilities and leases, the Authority has continued to monitor its facility needs, reducing unnecessary leased space and lease costs. The Advisory Board expects that the Authority will continue monitoring this item for any potential reductions and savings.

Also included in lease expense are the costs of the Charlestown Navy Yard space, rental of some garage space, and lease of space in Marlborough for the Records Center.

Telephone Expense

Much as with lease costs, the Authority has continued to monitor this expense and reduce it whenever possible by consolidating telephone accounts. This expense is used not only for voice data lines, but also by several remote facilities.

Grit and Screenings

The Authority's proposed budget of $0.9 million for grit and screenings expenses decreases 1% from the FY10 budget. Actual spending in FY09 was $1.1 million following two low years in FY07 and FY08. Spending through March had been on target until the wet weather, which resulted in considerable flushing of the system, generating the second highest quantities in eight years. The proposed budget amount is based on the second year estimates (approximately 6,000 tons) and pricing from a new two-year contract that was approved in April 2009.

The contract is to haul and dispose of minor residuals from various MWRA wastewater facilities. Minor residuals are by-products of wastewater pre-treatment and primary/secondary treatment processes and include grit, screenings and scum screenings. A third of the amount is collected at Deer Island and the balance is from various other wastewater facilities, including Nut Island and the other headworks, CSO facilities, pump stations and the Chelsea Creek Screenhouse.

Police Details

The Proposed FY10 CEB budgets $0.32 million for police details, which represents an increase of just under $70,000 (28%) from the police details budget for FY10. The increase is a function of increased need for police details, after the Authority budgeted lower expense (and greater use of civilian flaggers) in the FY10 budget.

Of the three agencies most impacted by this executive order – Massachusetts Highway Department (MHD), the Department of Conservation and Recreation (DCR), and the MWRA – the Authority is the only one that does not own or control the roads that it works on. The Authority was the first of the three agencies to implement the new flagger regulations. As such, the agency has met with resistance and protests from local police when conducting its work, in some cases garnering media attention around what is considered by many to be a "hot button" issue, with multiple municipalities challenging the MWRA'S legal authority to perform work under the terms of the new regulations. In order to avoid confrontation while attempting to perform their scheduled assignment, the Authority has typically abandoned work at the disputed location and moved on to other assignments. As a result, the Authority has fallen measurably behind on its planned maintenance programs, particularly valve exercising and meter maintenance.

Moreover, there are additional costs that have impacted at least the initial cost-savings. Additional equipment (signs, cones, safety vests, protective wear, and uniforms) needed to be purchased, and staff trained to become flaggers since there were no certified flaggers in the state at the time of the implementation of this executive order. Additional "hidden" or trade-off costs include the fact that MWRA employees are being diverted from their other duties to act as flaggers. Because the Authority has largely utilized buildings and grounds staff, the effect wasn't as pronounced during the winter, but in warmer weather the impacts of diverting this staff will be more noticeable.

Beyond the Authority's maintenance programs, there is also the potential for these regulations to impact capital projects as well. Most projects won't be impacted because they are either grandfathered or they require police details (e.g. roads with high traffic volume and/or speed limits), but capital projects moving forward will be bid under the new regulations. If similar confrontations with police occur with capital projects, it could produce significant delays and complications. Unlike the maintenance program where the crew can be sent to other jobs and worksites, capital projects could potentially come to a halt during any police protests.

While it is admirable that the Authority has been trying to work under the new regulations issued by the Governor, this must be balanced with practicality. To fall significantly behind on maintenance is untenable. To potentially lose stimulus funds due to capital construction delays would also be untenable. The priority must be the execution of the Authority's basic functions, and only then institution of the new program. Until the Administration offers greater support and assistance to the Authority in facing the challenges of implementing this policy, the Authority should continue making decisions that best allow it to complete its work.

Other Services

Among this category of expenses are two projects involving invasive species. The first is $50,000 for the second year of a three-year contract to conduct annual physical control efforts to remove and prevent the spread of invasive aquatic plants in MWRA/DCR reservoirs. The second project is $125,000 for a new baseline survey of invasive species. The survey is to be conducted every three years. (See related discussion on Watershed Reimbursement/PILOT Payments/Debt Serviceunder the Indirect Expenses Section.)

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Table 28

Proposed Fiscal Year 2011 CHEMICALS SUMMARY ($s)				
Line Item/Description	*Final FY10*	*Proposed FY11*	*Δ ($s)*	*Δ (%)*
Soda Ash	$3,126,059	$3,244,447	$118,388	3.8%
Used primarily at the CWTP; some at Clinton WWTP.				
Sodium Hypochlorite	2,720,928	2,505,612	-215,316	-7.9%
Used for treatment at DITP ($2.1 million) and CWTP ($0.9 million). Nut Island switch to carbon reduced use, CWTP lower flows.				
Hydrofluosilic Acid	952,241	1,085,686	133,445	14.0%
Fluoride control at CWTP. Higher prices, somewhat lower water demand. Price increase slightly by lower flows.				
Liquid Oxygen	639,770	598,815	-40,955	-6.4%
Ozone generation at CWTP. Significant price decrease ($117K) offset by an increase in quantity for dosage (+$96K).				
Ferric/Ferrous Chloride	639,770	598,815	-40,955	-6.4%
For dechlorination of treated wastewater and water. Price increase and usage increased for new NPDES permit requirements.				
Sodium Bisulfite	427,857	590,487	162,630	38.0%
Added to sodium hypochlorite to form monochloramines for residual disinfection. Decrease in price and quantity due to lower flows.				
Aqua Ammonia	364,519	196,639	-167,880	-46.1%
For struvite and odor control at DITP.				
Sodium Hydroxide	237,556	175,878	-61,678	-26.0%
For odor control at DITP and headworks facilities. Reduced quantity due to switch to carbon odor control at Nut Island.				
All Other Chemicals	1,254,737	1,155,953	-98,784	-7.9%
For algae control; corrosion control in Framingham Relief Sewer.				
TOTAL CHEMICALS EXPENSES	**$10,363,437**	**$10,152,332**	**-$211,105**	**-2.0%**

Other Highlights

- Proposed chemicals budget is 5% of all proposed FY11 direct expenses.
- Chemicals budget decreases 2% from FY10 due largely to reductions in usage estimates partially offset by additional chemicals for enterococcus treatment at Deer Island due to expected start of new NPDES permit during the fourth quarter.
- Total Water Operations chemicals: $6,361,834
- Total DITP chemicals: $3,083,861
- Total Other Wastewater Transport Facilities chemicals: $427, 542 (the lowest in five years).
- Total Clinton chemicals: $240,693

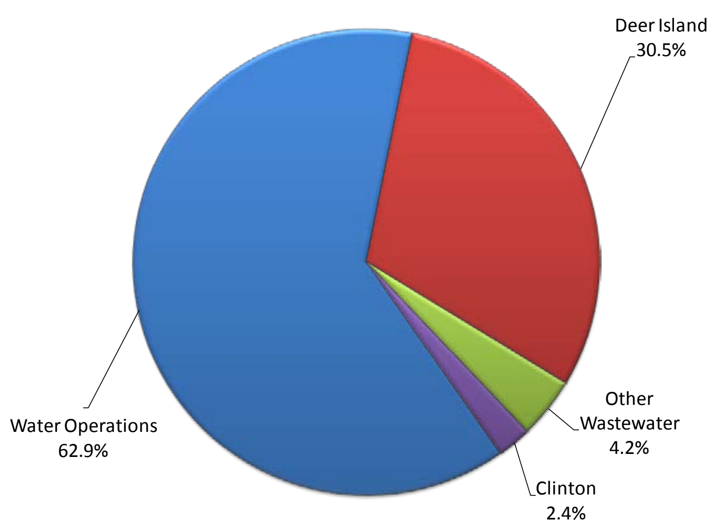

Chart 20

Overview: Chemicals

The Authority's proposed budget includes $10.15 million for chemicals, a decrease of 2%. The Authority states that the majority of the reduction results from dosage reductions partially offset by some price increases. Of the 17 chemicals used in Authority water and wastewater operations, the budgets for ten chemicals decreased, one stayed the same and six have increased. In sum, assumptions for both quantities to be purchased and pricing have declined.

NPDES Permit

The National Pollution Discharge Elimination System (NPDES) permit expired in August 2005, approaching five years ago. Typically, the Authority's proposed CEB's have assumed that the new NPDES permit would be in effect for a full year; therefore, they would include a full-year of increased treatment of enterococcus and the corresponding increase to chemical costs. One of the Advisory Board's routine recommendations since the NPDES permit expired was to reduce or eliminate this expense if it appeared unlikely to see a NPDES permit by the beginning of the fiscal year.

The Authority estimates that a full year of treatment to support the potential tighter treatment standard would add costs approaching $1 million. The potential for increased chemicals costs, as well as the potential for eased harbor and outfall monitoring requirements and costs are important considerations for the Authority's future budgets. (See also the Overview: Professional Services section.)

This year, the Authority has reduced its assumptions regarding additional chemical costs in the proposed budget. This is one more example of the steps the Authority took to submit an arguably "tight" proposed budget. The Authority took a risk in an area where it had historically remained conservative with its assumptions, and the Advisory Board commends them for making these decisions to control costs to the ratepayers. The proposed budget assumes just under one quarter of the year of higher sodium hypochlorite and sodium bisulfite usage to meet the potential stricter regulatory requirements of enterococcus compliance at Deer Island should a new NPDES permit be put into place during a portion of FY11.

Pricing

Additional risk for future chemicals budgets is price volatility. A number of chemical contracts are out for bid or expire during FY11. For example, some contracts for sodium hydroxide and for sodium bisulfite have recently or are currently out for bid; the proposed budget reflects assumptions for higher prices for these contracts. The two chemicals for which pricing is assumed to be measurably higher for FY11 are soda ash and hydrofluosilic acid in Water Operations. *The Advisory Board anticipates that the Authority will adjust chemicals prices to reflect updated pricing and delivery assumptions.*

Usage

Staff continues to implement controls to further optimize usage of chemicals, such as at Nut Island and in the Framingham Extension Sewer. Demand for certain chemicals is also impacted by certain flow or process conditions, such as the levels of struvite at Deer Island and the need for chemical treatment. *The Advisory Board expects the Authority to continue monitoring operations for potential dosage modifications and update quantity assumptions accordingly.*

Table 29

Proposed Fiscal Year 2011 **PROFESSIONAL SERVICES SUMMARY** ($s)				
Line Item/Description	*Final FY10*	*Proposed FY11*	*Δ ($s)*	*Δ (%)*
Lab and Testing Analysis	$2,217,468	$1,567,730	-649,738	-29.3%
Primarily harbor and outfall monitoring; some specialized outside lab services.				
Security	1,660,511	1,616,910	-43,601	-2.6%
Security and guard contracts.				
Engineering	785,000	908,000	123,000	15.7%
Specialized outside services such as dam inspection; beach nourishment studies for Deer Island; as needed engineering support.				
All Other Professional Services	1,240,234	1,213,415	-26,819	-2.2%
Legal services, audit services, Local Limits Study, communications; energy audits				
TOTAL PROFESSIONAL SERVICES EXPENSES	**$5,903,213**	**$5,306,055**	**-$597,158**	**-10.1%**

Other Highlights

- Lab and testing analysis has decreased by nearly 30%, due largely to a proposal to take additional harbor and outfall work in-house.
- Harbor and Outfall Monitoring (HOM) costs are linked to the NPDES permit. If a new permit comes into effect in FY11, a reduction in this line item is possible.
- All other professional services includes trustee and financial advisor services for the Finance Division; 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. Includes Local Limits Study updates for the anticipated new NPDES permits for Deer Island and Clinton.

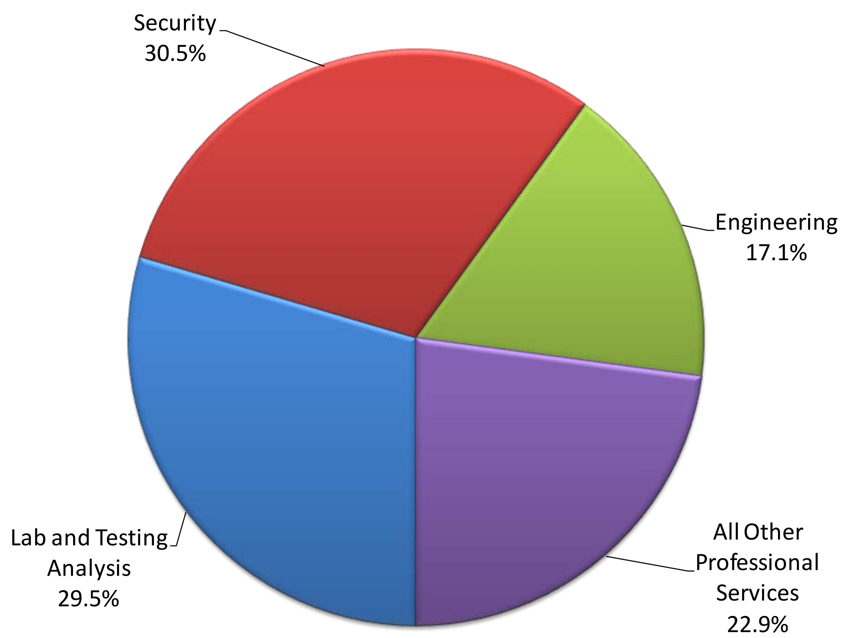

Chart 21

Overview: Professional Services

Reductions in several categories of professional services expense in recent years, most notably Laboratory and Testing Analysis and Security, have resulted in a proposed budget of $5.3 million, the lowest in at least five years. This is true, too, for these two largest categories, and has resulted in a shift in the relative share of all professional services spending, making security services now the largest area of spending.

Security Services

The proposed budget for professional services relating to the Office of Emergency Preparedness (OEP) is $1.62 million, a reduction of 3% ($43,601) from the FY10 budget and covers the costs of the security services contract for a number of Authority facilities. The Authority has worked to refine and reduce costs, and achieve scheduling and shift related efficiencies as evidenced by the 12% reduction ($222,000) from FY09 actual spending. A multi-year contract is currently out for bid, with bids due in mid-May 2010.

It should be noted that capital security costs are now almost entirely included as part of each individual capital project with authorization of the OEP.

Lab and Testing and Analysis

Over the years, the Advisory Board has supported the reconsideration of the shape, scope and budget for harbor and outfall monitoring (HOM) activities and the inclusion of the contingency plan in the NPDES permit.

The ENQUAD budget for professional services grew from $3.04 million in FY01 to $4.35 million in FY03, the highest year for the department. The first major review of the monitoring plan took place in 2003 and resulted in about $900,000 per year in savings. Spending has since gradually declined to below $3 million in FY07, and now the proposed FY11 budget for professional services spending is, at $1.5 million, the lowest since FY01. ENQUAD's proposed professional services budget is nearly $605,000 lower than the FY10 budget, a reduction of nearly 30%.

The Authority notes that the FY10 budget already reflected a partial year reduction for a revised and lowered scope of harbor and outfall monitoring. The proposed FY11 budget reflects a full year of the savings anticipated based on the revisions to the scope of work.

The Advisory Board has noted that the Authority has worked over recent years to modify and reduce the scope of some of the work, reducing the frequency of sampling and reporting of some parameters. The Authority noted that some discretionary spending was eliminated, several studies completed, and some monitoring was redesigned for improved efficiency. Other cost reductions have resulted from bringing some of the work in-house and from making modifications to the ambient monitoring plan.

Over the years, the Advisory Board expressed continuing concern about the level of spending for harbor and outfall monitoring. Many of the research and reporting requirements were very conservative and were set years ago, prior to the completion of the new Deer Island plant and the Central Laboratory. Some of the research parameters, testing requirements and reporting frequencies can be changed without compromising understanding of the receiving water conditions or effluent impacts. The Advisory Board recommended that the Authority revisit Harbor and Outfall Monitoring expense and revise assumptions for upcoming spending.

In the Authority's recent staff summary to the Board of Directors the Authority reports that based on eight years of extensive baseline monitoring data and eight years of extensive discharge monitoring data, the original monitoring questions have been answered. Results of the work performed to date confirm the extensive benefits of the Deer Island plant and related projects for the health of the harbor and the outfall area. The outfall and treatment plant are performing as well or better than predicted. Recent contaminant data collected from MWRA's final effluent show that the actual levels of most contaminants in the effluent are dramatically less than predicted in EPA's original 1988 planning estimates.

The total cost to MWRA since the outfall monitoring program began in 1992 is approximately $53 million in outside contracts, plus another $2.5 million for MWRA's laboratory expenses. Ambient monitoring requirements continue to cost MWRA more than $3 million per year (including contract and in-house expenses) to implement.

The Advisory Board supports the Authority's continuing efforts to pursue permit modifications that would result in lower monitoring and reporting costs for the MWRA as well as steps to bring some sampling and reporting work in-house, where doing so can be shown to be cost-effective. The Advisory Board also encourages the Authority to expand efforts to build on other institutional, agency and academic research programs to meet monitoring and reporting needs, as well as seeking alternative sources of funding.

As mentioned earlier, the NPDES permit (including the remaining HOM requirements) is nearly five years beyond its expiration. By the terms of the permit, the Authority continues to operate under the language of the expired permit until a new one is issued. This year, the Authority attempted to make interim changes to the old permit's monitoring requirements through an appeal to EPA.

The proposed FY11 budget document notes that regulatory approval of the changes sought by the Authority would result in savings of more than $900,000 per year.

Engineering Services

The Authority is proposing a budget of $908,000 for engineering services, primarily for as-needed services for the Deer Island and Field Operations Departments. Funding is also included for the Local Limits Study, assuming that the NPDES permit is issued, two beach nourishment studies in the Deer Island Department, and three dam-related projects: dam inspection, appurtenant structures inspection, and inspection technical services related to repairs. (See related discussion on Watershed Reimbursement/PILOT Payments/Debt Service in the Indirect Expenses section.)

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Table 30

Proposed Fiscal Year 2011 OTHER MATERIALS SUMMARY ($s)				
Line Item/Description	*Final FY10*	*Proposed FY11*	*Δ ($s)*	*Δ (%)*
Vehicle Expense	$1,170,535	$1,002,684	-167,851.00	-14.3%
Bulk gasoline, diesel purchases, mileage reimbursement, and some toll fees.				
Lab and Testing Supplies	731,922	757,323	25,401.00	3.5%
Supports Central Lab and TRAC.				
Vehicle Purchase/Replacements	600,000	600,000	0	0.0%
Purchases of vehicles and equipment under $100,000.				
Equipment/Furniture	236,230	375,230	139,000	58.8%
Miscellaneous equipment and furniture.				
Computer Hardware	556,387	791,386	234,999	42.2%
PCs, printers, plotters, and scanners.				
Office Supplies	180,725	184,264	3,539	2.0%
Office supplies including paper.				
All Others	1,127,848	1,187,821	59,973	5.3%
Includes postage, work clothes, and health and safety materials.				
TOTAL OTHER MATERIALS EXPENSES	**$4,603,647**	**$4,898,708**	**$295,061**	**6.4%**

Other Highlights

- Other materials spending is up 6.4% from FY10.
- Vehicle purchase/replacement is level-funded and has decreased nearly 50% from FY09 spending.
- Computer hardware has increased by 42%.
- Postage, lab and testing supplies and work clothes have either been level-funded or reduced or increased by less than 5%.

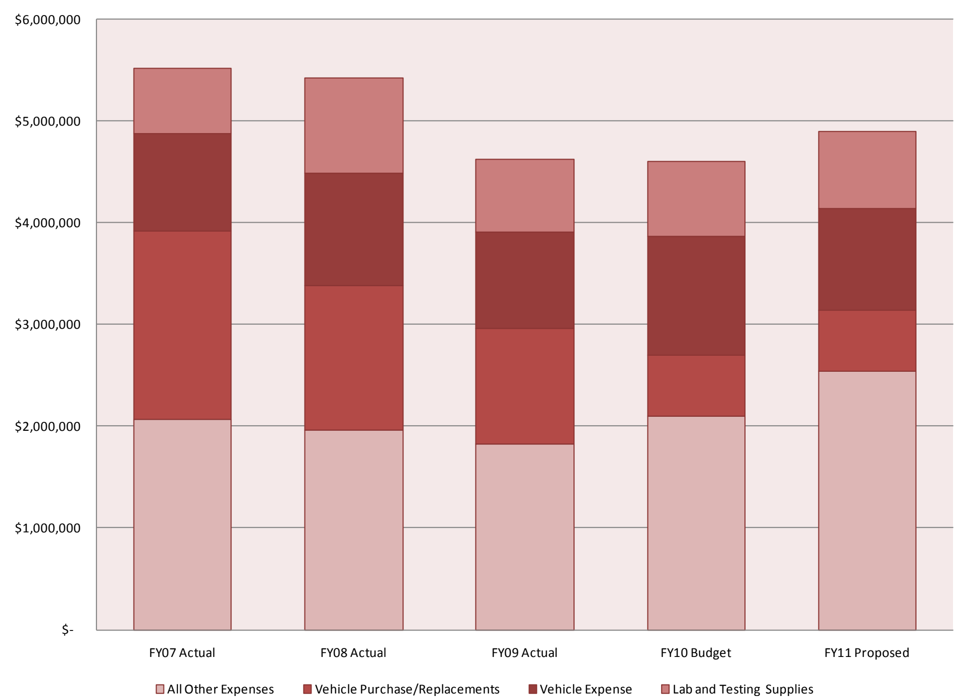

Chart 22

Overview: Other Materials

Vehicle Expense

The Authority is proposing to budget $1,002,684 for vehicle expense in FY11. The amount includes the purchase of bulk gasoline and bulk diesel, as well as some toll fees. The budget is based on recent fuel usage and fuel costs. The Authority continues to work to reduce consumption of fuel for its own fleet, by reducing idle times. Also, as part of efforts to optimize the fleet, nearly 250 vehicles are powered by alternative fuel.

Lab and Testing Supplies

Lab and testing supplies are budgeted at $757,323 for FY11, close to the budgets for FY10 and FY09. Spending had been reduced in the last two years as part of cost containment efforts; the proposed FY11 budget reflects a slight increase reflecting higher pricing. The budget is based on actual supply costs tracked to the individual test level.

Vehicle Purchase

Vehicle purchase expense in both FY10 and FY11 has been reduced by nearly one half from the FY09 budget of $1,150,000 to $600,000. This strategy will lengthen the replacement cycle; 45% of the fleet is seven or more years old. Over the years the Authority has reduced its fleet by 10% and among other steps has introduced a successful trade down strategy, reduced the number of domiciled vehicles and increased the vehicle pool. Postponed replacement of vehicles increases materials and services costs in the Fleet Services Department.

Equipment Purchases

Equipment Purchases are budgeted at $375,230 an increase from the $236,230 budgeted in FY10 but closer to spending levels for the previous two years. The budget more closely reflects the replacement needs of the agency, particularly the laboratory services department. Replacement equipment and instruments include an autosampler, ovens, meters, centrifuges and several obsolete instruments. Large equipment purchases are budgeted in the CIP.

Computer Hardware

Computer Hardware spending has been increased to $791,386 from the $556,387 budgeted in FY10 and is a demonstration of efforts to reprioritize spending decisions during the difficult economic conditions. Postponed purchases of such items as the toughbook computers impact efforts to strengthen data management in the field. New computers are more energy efficient.

At its meeting in April 2010, the MWRA Board of Directors approved the purchase of 780 personal computers, replacing units that were six or more years old. This large purchase of PCs underscored the difficult budgetary decisions that the Authority had made in recent years during difficult financial times; namely, MWRA staff recommended the approval by the Board of Directors of a deferral of some PC purchases in an effort to control costs in the short-term. At the April 2010 Board meeting, a motion was made for MWRA staff to develop a procurement strategy to implement a strategic plan for Information Technology (IT); the Board of Directors is scheduled to discuss this strategy at its May 2010 meeting.

The Advisory Board supports the initiative to undertake a comprehensive strategic plan for IT for the Authority. Moreover, the Advisory Board recommends that the Authority explore any potential practices or methods of generating cost-savings with regard to IT including, but not limited to "thin computing" for employees whose usage could be supported by such technology, cloud-based and open-source software and services (e.g. OpenOffice.org Office Suites and Google Apps). Many public entities are turning toward open source services, and as a public agency, the Authority should make a concerted effort to determine if any of these lower-cost options would meet the agency's needs, or at least the needs of a portion of its employees.

Office Supplies

Office Supplies are budgeted at $184,264 for FY11, within 2% of the amount budgeted for FY10. The amount remains the lowest in at least five years, and is an example of the many areas where the Authority continues to tighten spending in virtually every corner of the budget.

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Table 31

Proposed Fiscal Year 2011 **TRAINING AND MEETINGS SUMMARY** ($s)				
Line Item/Description	*Final FY10*	*Proposed FY11*	*Δ ($s)*	*Δ (%)*
Training and Meetings	$164,003	$231,783	67,780.00	41.3%
TOTAL TRAINING AND MEETINGS EXPENSES	**$164,003**	**$231,783**	**$67,780**	**41.3%**

Other Highlights

- Training and meetings expense is increased by 41% and nearly $68,000.
- The proposed budget is close to actual spending in FY08 before two years of sharply reduced spending.

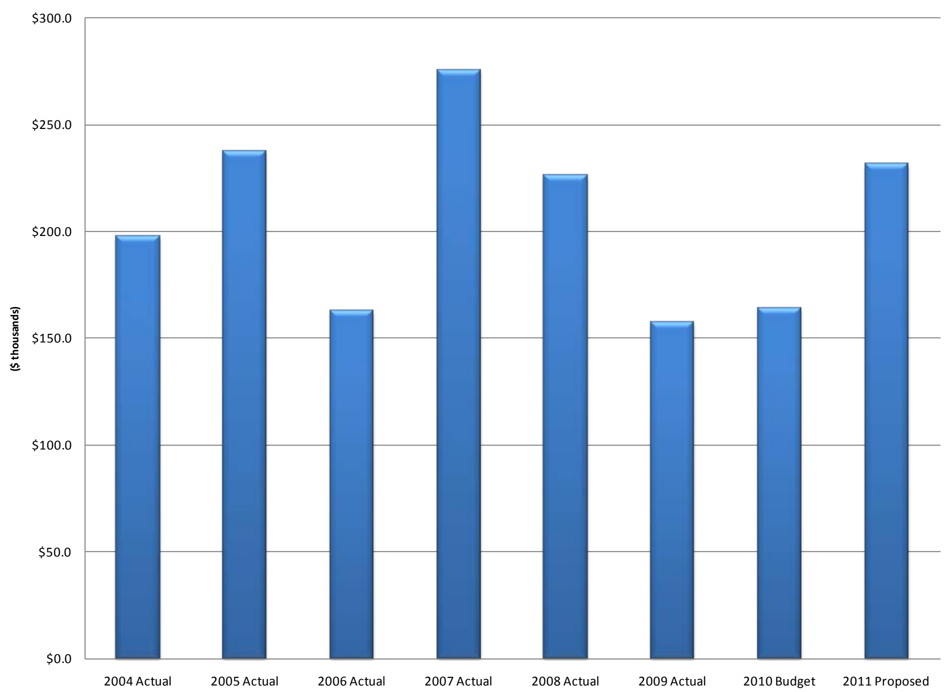

Chart 23

Overview: Training and Meetings

The Authority budgets for training and meetings costs that cover a variety of meetings, seminars, conferences, and training sessions. Most training and meeting expenses support maintaining professional license and certifications. Also funded are infrared and acoustic ultrasonic training sessions for Deer Island staff, annual boom deployment training, an annual meeting of the Water Security Congress on the security of drinking water infrastructure, out-of-state site audits, recertification and new technology training for the MIS Department, and law seminars.

The increase is primarily for training in the Field Operations Department on diagnostic equipment associated with the asset management program and on spill prevention and control procedures at operating facilities (as required by regulation).

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Table 32

Proposed Fiscal Year 2011 REVENUE SUMMARY ($s)				
Line Item/Description	*Final FY10*	*Proposed FY11*	*Δ ($s)*	*Δ (%)*
Rate Revenue	$561,431,000	$569,800,000	$8,369,000	1.5%
Revenue generated directly from member communities through annual assessments.				
Other User Charges	7,939,758	6,996,012	-943,746	-11.9%
From 20 customers including CVA communities; emergency water supply connections, and entrance fees.				
Hydropower Revenue	198,150	111,000	-87,150	-44.0%
Revenue generated from hydroturbines at Cosgrove.				
Permit Fees	1,780,003	1,946,766	166,763	9.4%
TRAC permit and monitoring fees.				
Penalties	220,100	220,000	-100	0.0%
Issued through the TRAC program.				
Payments from Commonwealth	0	0	0	0.0%
For chemical costs via statute.				
Miscellaneous Revenue	755,076	821,741	66,665	8.8%
Includes revenue from Fore River Railroad, antenna licenses, and other miscellaneous revenues.				
Revenue - Energy	1,418,407	1,657,906	239,499	16.9%
Includes Deer Island and CWTP demand-response payments; renewable portfolio credits for Deer Island.				
Other Revenue Subtotal	4,371,736	4,757,413	385,677	8.8%
Rate Stabilization	7,312,438	6,833,317	-479,121	-6.6%
From rate stabilization fund.				
Investment Income	15,197,396	14,449,961	-747,435	-4.9%
Interest on both short- and long-term investments.				
TOTAL REVENUE EXPENSES	**$596,252,328**	**$602,836,703**	**$6,584,375**	**1.1%**

Other Highlights

- Rate revenue has increased 1.49%.
- MWRA treats Debt Service Assistance receipts, when available, as an offset to capital financing expense rather than as revenue; bond redemption funds are treated as a credit to capital financing expense.
- Rate stabilization fund drawdown is reduced by 6.6% from FY10 to $6.83 million in FY11, and is currently projected at $2.36 million for FY12.

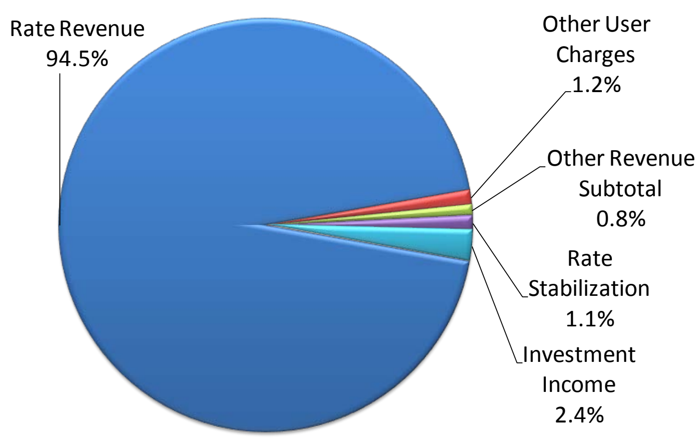

Chart 24

- The Authority projects that current rate stabilization funds will be fully utilized by FY17.
- The Authority assumes a short-term interest rate of 0.50% and a long-term rate of 4.0% for investment income.
- Chemical cost payments from the Commonwealth of $867,000 provided by statute for more than 20 years have been eliminated in FY10 and FY11.

Overview: Revenue

The Authority is proposing revenue receipts totaling $602.8 million. Just over 94.5% is to come from rate revenue, the remaining 5.5% is to come from other user charges, other revenue, rate stabilization funds, and investment income. (See Table 32.)

Each 1% increase in rate revenue in FY11 represents $5.6 million.

Other User Charges

Other user charges decrease 12% ($0.94 million) to just under $7.0 million for FY11.

Table 33

Other User Charges		
Westborough State Hospital	Scheduled to close	Individual users of water system
Fernald School	$112,209	
Commonwealth Zoological (State Zoo)	$29,613	
DCR Pools/Parks	$19,742	
Regis College	$50,060	Individual users of sewer system
NE Center for Children	$12,593	
Lancaster	$175,736	Income relating to Clinton Wastewater Treatment Plant costs
Worcester	$121,884	
Clinton	$500,000	
Chicopee	$2,600,434	CVA Communities
Wilbraham	$475,757	
South Hadley	$559,208	
WTP Residuals	$300,000	From nine water treatment plants
Wilmington	$29,021	For FY10 4th Quarter projected use
FAIR Charge (Entrance Fees)	$651,427	From Stoughton and Wilmington
Deer Island	$1,358,329	Transfer payment of sewer cost to water revenue
TOTAL	**$6,996,013**	

Among the charges in this category of revenue is $651,427 for entrance fees from Stoughton and Wilmington as well as payments from individual users of the water or sewer system and from Chicopee Valley communities and communities that are served by the Clinton Wastewater Treatment Plant. (See System Expansion section below for additional discussion of entrance fees.)

Other Non-Rate Revenue

Other non-rate revenue totals $4.76 million and includes permit fees and fines, hydropower revenue, energy program revenues and other miscellaneous revenues. Chemical cost reimbursement payments from the Commonwealth, part of a statewide program to reimburse wastewater plants for the (partial) cost of chemicals used in the treatment process, brought $867,000 in non-rate revenue each year. The payments have been eliminated in the FY10 and FY11 state budgets. (See Table 32.)

The Authority is budgeting $1.95 million for permit and monitoring fees charged to industries and other permitted customers that discharge toxic and other regulated wastes into the sewer system (incentive and other charges program). This amount represents a 9.4% increase from the $1.78 million budgeted in FY10. The Authority, following several years of gradually lower revenue receipts, noted that receipts are a function of the number of industrial users and that the number of photo processors in the service area had decreased as had some large users. During the summer 2009, the Authority updated the regulations to reflect average annual sewer rate increases, required changes from EPA and changes to certain language in the fee regulations to improve clarity. The changes included an across-the-board 4.5% increase to permit and monitoring charges in each of the fiscal years FY10, FY11, and FY12. The Authority has estimated that the changes will generate an additional $80,000 in FY10, $165,000 in FY11 and $250,000 in FY12 as compared to FY08 amounts.

Non-Recurring Revenue: Rate Stabilization Fund

The Authority's proposed use of the rate stabilization fund declines by 6.6% ($0.48 million) to $6.8 million in FY10. Over the years, the Authority has deposited year-end surplus funds into the rate stabilization fund and to the bond redemption fund (the use of which is treated as an offset to debt service – see section on Debt Service Offsets in the Capital Financing Section) and judiciously drawn down these funds to ease the pace of rate revenue increases.

The Authority has already reflected in the proposed budget the use of up to $24 million for a defeasance transaction scheduled this spring, which will benefit (reduce) scheduled debt service payments in FY11. As noted in the capital financing section, the Authority has typically not included any planned defeasance in its proposed budgets in years past. That they have done so this year again points toward the relatively "tight" budget it has submitted for review.

Additionally, in anticipation of increased debt service payments for upcoming years, the Authority has recently completed the restructuring of $75 million to provide budgetary savings for FY11, FY12, and FY13. With debt service projected to rise by $100 million between FY 2011 to FY 2014, the use of these stabilization funds will play a significant part in controlling even higher rate revenue requirements.

Indeed, a preservation of rate stabilization and bond redemption funds was a primary consideration for the Authority when proposing the Targeted Rate Relief Restructuring (TRRR). Of concern to the Advisory Board was the looseness of the terminology surrounding the rate stabilization and bond redemption funds as compared to the Authority's much more substantial and formally structured reserves. The Advisory Board feels it important to make clear this distinction: rate stabilization and bond redemption funds are not reserves in the same manner as the Authority's other reserves. The rate stabilization and bond redemption funds are made up of previous years' surplus funds. In essence, they are the sum total of overcharges to cities and towns when rate revenue exceeded budgeted expenditures for the year.

It should also be noted that like bond redemption funds, Debt Service Assistance funds (when available) are treated as an offset to debt service expense (see section on Debt Service Offsets in the Capital Financing Section). The House budget, recently released this spring, includes $500,000 for the statewide Debt Service Assistance program. Last year, when funding at the same level was expected to be available, the Authority assumed it would be eligible for $350,000 of the amount.

Investment Income

The Authority is assuming investment income of $14.45 million in FY11, a reduction of $0.75 million or 5% from FY10.

Sharply dropping interest rates are the reason for the dramatic multi-year decline in this key source of non-rate revenue (see Chart 25). The Authority is assuming interest rates associated with short-term investments at 0.50% and 4.0% for long-term investments. A change of 25 basis points is equivalent to $1.2 million.

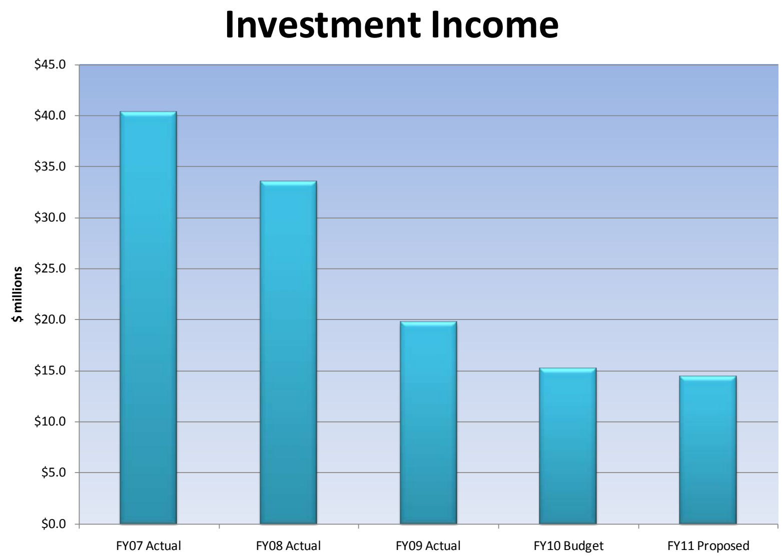

Chart 25

Rate Revenue

The Authority is proposing rate revenue receipts of $569.8 million – an increase of 1.49%, or $8.37 million. The amount is 94.5% of the Authority's proposed total revenue.

Despite many efforts – the major restructuring transaction of January 2007, more recent refinancing and restructuring transactions, and lower capital spending than in the 1990s -- rate revenue requirements continue to rise. This is due to continued measurable increases in annual debt service payments on the borrowings previously issued to support the capital program. According to the projections that accompany the proposed FY11 Current Expense Budget, rates are expected to rise by another $200 million by FY 2016 (See Chart 5).

Additional Sources of Revenue

According to the Authority's current projections, rate revenue approaches $950 billion by FY 2020. This represents a 68% increase over the FY10 rate revenue requirement. This only underscores the Advisory Board's position that the Authority needs to continue to explore additional sources of revenue as a means of controlling and reducing the annual rate revenue requirement, as well as continue to use other tools to manage total expenses.

System Expansion

Overview

The Advisory Board has long advocated for judicious expansion of the Authority's water service area. Recently the discussion around system expansion has centered around five basic areas of concern:

1. Streamlining the application process
2. Withdrawals (new communities)/releases (downstream to rivers)/reserves (amounts held in reserve for additional capacity should it be needed)
3. Smart Growth – a policy the Commonwealth is advocating for community development
4. Hatchery Pipeline Project
5. Incentives to join the MWRA

A facilitated discussion was held in March 2010 to discuss areas of consensus with regard to the five areas of concern.

Streamlining

The Advisory Board has strongly advocated for the streamlining of the membership application process. Some consensus was achieved with regard to undertaking one consolidated review of the donor basin, but many other elements related to the other areas of concern remain before a truly streamlined process is achieved.

Withdrawals/Releases/Reserves

In 2006, a study indicated that the Authority could easily sell an additional 12 MGD beyond its current amount (withdrawals), release 12 MGD downstream (releases), while still holding 12 MGD as a backup in case additional flow was necessary (reserves). This tripartite capacity has been the focus of discussion with regard to potential system expansion and downstream releases. However, the discussions around the system expansion policy have been ongoing long enough that almost five years' worth of additional system withdrawal data is now available. Indeed, since the study was conducted additional users, most recently the Town of Wilmington, have joined the system and yet system withdrawals are lower than in 2006 when the study for tripartite capacity was conducted. **Given the continuing trend for declining water use in the MWRA system since the most recent study was conducted, the Advisory Board recommends an updated evaluation of the safe yield for the tripartite capacity (withdrawals/releases/reserves).**

The financial benefits of judicious system expansion are two-fold. First, given the "zero-sum game" nature of the MWRA system any additional sales would have the benefit to existing member communities of spreading the costs over a larger base. Second, the Authority estimates that every 1 million gallons per day sold to a new customer would yield $5.0 million in one-time revenue through what has heretofore been referred to as the entrance fee.

Recent discussions about system expansion have discussed the entrance fee as a barrier or disincentive for potential member communities looking to enter the system. Some preliminary discussion had discussed potentially waiving or reducing the entrance fee in an effort to make joining the MWRA system more attractive to potential new members.

The Advisory Board feels that there is a misconception about the entrance fee by those seeking to join the MWRA water system – that it is a sort of "luxury" charge. Over time, the true nature of the entrance fee has tended to fade into the background. The entrance fee was carefully designed to recover the capital costs already made by existing members of the system. Its aim was to ensure that any new members benefiting from the billions of dollars of infrastructure investment would be paying its fair share of that investment. **Therefore, in an effort to refocus the issue and remind those involved in its discussion of the true purpose of the entrance fee, the Advisory Board recommends that the entrance fee be renamed the FAIR – Former Asset Investment Recovery – cost or charge to join the MWRA.**

Smart Growth

The Authority is currently awaiting additional feedback and information from the proponents of Smart Growth to determine next steps after the facilitated discussion.

Hatchery Pipeline Project

This CIP project – the Quabbin Release Pipeline – has been included in the proposed FY11 CIP to transfer oxygenated water to a trout fishery downstream of the Quabbin reservoir as well as to provide a method for downstream releases – one component of the tripartite capacity discussed above.

Because this project is tied directly to the discussion of system expansion and the development of a streamlined process, **the Advisory Board recommends that this project is not funded until the first FAIR charge under the new streamlined system expansion process is received.**

Incentives to Join the MWRA

Recent discussions about system expansion have centered on making it more attractive for potential communities to join the MWRA. In particular, the FAIR cost has been discussed as a financial disincentive to join the MWRA, and some suggestions have been made to waive the FAIR charge to attract new members. However, recalling that the FAIR cost as structured simply seeks to recover the some of the financial investment that the member communities have already made into the waterworks system's infrastructure, the Advisory Board cannot support the waiving of this charge. Indeed, if the FAIR charge were to be waived, it would beg the question about how to equitably treat the newer member communities who have already paid or are continued to pay FAIR charges.

However, perhaps some treatment of the FAIR charge can help mitigate the immediate financial impact on new communities. For example, instead of being required as an upfront payment, the FAIR charge could be distributed in a series of payments, as it had been in years past. Moreover, if the payment were made within a certain number of years (e.g. 10 years or less) perhaps the Authority could allow the payments to be interest free as an additional incentive. The Advisory Board's position is to regard the FAIR charge as a cost-recovery mechanism that promotes equitable treatment to the existing and future members communities. **As such, the Advisory Board recommends that the Authority explore financial incentives, including but not limited to those described herein, to attract new member communities to the waterworks system without undermining the cost-recovery purpose of the FAIR charge as currently structured.**

Dedicated Streams of Revenue

The recent Shaft 5A pipe break brought into focus the critical, but often forgotten, nature of waterworks infrastructure. While the Authority was able to maintain water pressure and flow for essential services including fire protection, the loss of easily accessible potable drinking water for almost 72 hours crippled many businesses, and negatively impacted over 2 million residents. There is no question the Authority acted in an exemplary fashion, turning what could have been a catastrophic water break into a success story in emergency management; however, the impacts of the water break were negligible to the worst-case scenario should another water infrastructure failure occur in the future. The Authority's Master Plan identified over $1.1 billion in waterworks system needs between FY07 and FY48[21] with ratepayers currently funding 95% of this projected cost. This only serves to underscore the need to develop additional dedicated streams of revenue to meet future infrastructure needs.

Several legislative solutions have been identified or are being pursued:

1) Expansion of the bottle deposit, as recommended in the Governor's budget last year, could raise $10 to $20 million each year.
2) A bottle bill tax modeled after Chicago's 5-cent tax on every bottled water container sold could generate up to $65 million annually for statewide water and sewer infrastructure needs.
3) Seek a change in the statute relating to the Commonwealth Sewer Rate Relief Fund to mirror the septic tax credit.
4) Continue to push for Debt Service Assistance even during these difficult economic times. As the economy recovers, over the next few years, seek Debt Service Assistance funding based on the statutory language. Full funding could provide MWRA with more than $60 million per year.

Legislative Changes

An additional change to existing legislation that could benefit the MWRA:

1) Removal of an archaic loophole in the PILOT payment program relating to lands in the Quabbin Reservoir watershed would eliminate duplicate Payments in Lieu of Taxes to watershed communities, saving over $425,000 each year.

Also under discussion has been the possibility of seeking new revenue through the sale of advertising space. Possible locations include the Norumbega Reservoir, along the Massachusetts Turnpike, and Deer Island, with its high visibility in Boston Harbor.

[21] In 2006 dollars, without Community Assistance Programs.

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LOOKING AHEAD: THE NEXT FOUR BIG THINGS

As one looks out over the horizon, the familiar imagery is to identify "the next big thing." For the Authority, four major challenges are coming to the forefront. They are: (1) water system redundancy, (2) wastewater and water system asset protection, (3) residuals processing technology and contract services and (4) management of debt service payments and rate revenue requirements between now and 2022.

Water System Redundancy

In early May, the Shaft 5A pipe break left 2 million residents in the Greater Boston area without potable drinking water for nearly 72 hours and forcing many businesses to either shut down or drastically modify their operations. The Authority's response to this crisis was nothing short of exemplary – quick, decisive, appropriate, and transparent throughout. Though the break could have been catastrophic for the area, the agency's emergency management plans and backup systems kept water pressure up, and kept non-potable water flowing for fire prevention services, as well as for many household uses with the appropriate steps taken for safety. While the crisis was certainly not good news, the "silver lining" was that it served as a testament to the agency's planning and its ability to marshal its resources effectively to mitigate and contain a major system failure.

The pipe break also had the effect of focusing public attention on the importance of waterworks infrastructure, which also had both a negative and a positive effect. The negative, of course, was that it underscored the danger of non-redundant lines and single points of failure, as well as the sheer severity such an impact on service could have. The positive effect was that it served to remind people of what the Advisory Board has long called the "forgotten infrastructure" and its important role in daily life.

While the events of early May have brought recent public attention to the issue of water system redundancy, the Authority has long been working on a number of components to ensure the appropriate levels of redundancy for the system, both transmission and storage projects. Among them are progress on a Long Term Transmission Redundancy Study, a Distribution Storage and Redundancy Plan for the Southern Extra High System, a Northern Intermediate High Assessment and Concept Plan, and rehabilitation of the Hultman Aqueduct.

Staff has already indicated that results of the Long Term Transmission Redundancy Study will be brought to the Board this spring. Given the recent service interruption, **the Authority should provide the Board with an overview of the several projects under way to ensure redundancy of the water system, sources of funding and phased schedules for completion, no later than the June Board meeting.**

Additionally, the Advisory Board supports any efforts the Authority makes to accelerate and prioritize redundancy projects where practicable.

Wastewater and Water System Asset Protection

The Authority is moving forward with a number of projects to maintain and enhance major wastewater and waterworks facilities, including the Deer Island Wastewater Treatment Plant and the Carroll Water Treatment Plant as well as a number of pump stations and other facilities and pipelines throughout the service area. Long overdue improvements to the wastewater headworks, certain pump stations and selected interceptor projects are now progressing. Also moving forward are water system pump station rehabilitation projects, and improvements to the water distribution system. These key asset protection projects are presented in the capital plan under a number of headings. **A presentation of the significant projects, their funding requirements and schedules should be made to the Board of Directors by September 2010.**

Residuals Process Technology and Contract Services

Despite the fact that the current contract for processing and disposing of wastewater residuals continues until December 2015, preparing for the next phase of services can be expected to require a long lead time. The Authority has initiated two studies of the utilities at the Fore River pelletizing facility and of different processing technologies that could be considered both for the pelletizing plant and for residuals processing at Deer Island. Authority staff anticipates reporting to the Board following the completion of the technology study, currently out for bid.

Managing Debt Service Payments and Rate Revenue Requirements

The schedule of debt service payments over the next ten or so years poses a significant challenge to the Authority. Between now and the year 2022, significant increases are expected for repaying the debt incurred for the Boston Harbor Project and other major capital projects. The Authority has taken important steps to addressing this challenge, including the refinancing of January 2007 and the borrowing plans for last spring and this spring, including targeted restructuring for budgetary savings. **The Advisory Board recommends the Authority further formalize these efforts by creating a working committee to consider the range of tools available to ensure a measured approach to meeting its rate revenue needs through 2022.** The committee should address ongoing opportunities to contain expenses, alternative sources of revenue, options for use of the anticipated release of excess reserves in 2014 (or so), and the balance between budget assumptions and the use of rate stabilization funds each year. Representatives on the working committee should include the Authority’s Bond Counsel, Financial Advisor and the Advisory Board.

LIST OF APPENDICES

Appendix A

List of Recommendations

1. The Advisory Board concurs with the 1.49% rate revenue requirement increase in the Authority's proposed FY11 CEB, and recommends that the final FY11 CEB be adopted with the same wholesale rate increase. (Page 11)

2. The Advisory Board recommends that the Local Water System Assistance Program be included in the Authority's final FY11 CIP as amended and voted by the Advisory Board at its meetings in March and April 2010. (Page 20)

3. Review planned spending for the final FY11 capital budget, to ensure the approved final budget is as realistic as possible. (Page 22)

4. Revisit planned spending and the cap calculation for FY13, with an eye to bringing the budget within the cap calculation guidelines. (Page 22)

5. Set broad guidelines for setting boundaries for the next cap period, aiming to limit the next cap to no more than $1.0 billion. (Page 22)

6. Conduct the DWSP's audit of the watershed forestry management program, using an outside, independent consultant/group/organization. (Page 37)

7. Reduce DWSP's expenses to mitigate the loss of revenues from any suspension of forestry sales. (Page 38)

8. Consider treating Watershed-related expenses currently funded in the Authority's CEB as a separate category as a subset of Watershed Reimbursement expenses, particularly if there are any benefits to doing so with regard to meeting the Authority's coverage requirements, which may yield overall budgetary savings. (Page 39)

9. Do not transfer the $2.8 million beyond the required pension payment for FY10 and redirect to the Rate Stabilization Fund. (Page 39)

10. Redirect the $0.8 million currently budgeted in the OPEB line item in FY10 to the Rate Stabilization Fund. (Page 39)

11. Reconsider the funded level for the insurance reserve, and include excess amounts as one of the tools for addressing management of debt service and rate revenue requirements between now and 2022. (Page 40)

12. Explore and pursue any emerging technologies that could reduce the quantities of sludge being processed, and which provide a beneficial reuse product. Work with the Legislature, if necessary, to ensure the Authority receives "green credits" for any beneficial reuse products or additional energy generation from any resulting sludge byproduct. (Page 52)

Appendix A

List of Recommendations (ctd.)

13. Explore any potential practices or methods of generating cost-savings with regard to IT including, but not limited to "thin computing" for employees whose usage could be supported by such technology, cloud-based and open-source software and services (e.g. OpenOffice.org Office Suites and Google Apps). (Page 61)

14. Update the evaluation of the safe yield for the waterworks system's tripartite capacity (withdrawals/releases/reserves). (Page 68)

15. Rename the entrance fee as the FAIR – Former Asset Investment Recovery – cost or charge to join the MWRA to focus the discussion around the true purpose of the entrance fee. (Page 68)

16. Do not fund the Hatchery Pipeline project until the first FAIR charge under the new streamlined system expansion process is received. (Page 69)

17. Explore financial incentives, including but not limited to those described in the discussion on page 69, to attract new member communities to the waterworks system without undermining the cost-recovery purpose of the FAIR charge as currently structured. (Page 69)

18. Provide the Board with an overview of the several projects under way to ensure redundancy of the water system, sources of funding and phased schedules for completion, no later than the June Board meeting. (Page 71)

19. Make a presentation of the significant asset protection projects, their funding requirements and schedules should be made to the Board of Directors by September 2010. (Page 71)

20. Creating a working committee including the Authority's Bond Counsel, Financial Advisor, and the Advisory Board to consider the range of tools available to ensure a measured approach to meeting its rate revenue needs through 2022. (Page 72)

Appendix B

List of Comments

1. The Advisory Board anticipates that the several categories of expense that can be used to meet coverage requirements as called for the bond covenants can be revisited and resized as part of the final budget process, including current revenue for the capital program. (Page 28)

2. The Advisory Board expects the Authority to approach contract negotiations during FY10 within the context of the financial challenges facing the Authority between FY11 and FY13 and the aim of managing personnel expenses during this timeframe. (Page 34)

3. The Advisory Board expects the Authority to update its staffing levels consistent with any recommendations from the staffing study. (Page 34)

4. The Advisory Board anticipates the Final FY11 budget will reflect the status of these developments. (Page 35)

5. The Advisory Board expects the Authority to make any necessary adjustments to the operating reserve additions based upon any additional operating expense reductions in the Final FY11 CEB. (Page 40)

6. The Advisory Board anticipates that the Authority will adjust chemicals prices to reflect updated pricing and delivery assumptions. (Page 56)

7. The Advisory Board expects the Authority to continue monitoring operations for potential dosage modifications and update quantity assumptions accordingly (Page 56)

8. The Advisory Board supports the Authority's continuing efforts to pursue permit modifications that would result in lower monitoring and reporting costs for the MWRA as well as steps to bring some sampling and reporting work in-house, where doing so can be shown to be cost-effective. The Advisory Board also encourages the Authority to expand efforts to build on other institutional, agency and academic research programs to meet monitoring and reporting needs, as well as seeking alternative sources of funding. (Page 59)

9. The Advisory Board supports any efforts the Authority makes to accelerate and prioritize redundancy projects where practicable. (Page 71)

Appendix C

	Total MWRA	FY10 Approved	FY11 Proposed	Change FY11 Proposed vs FY10 Approved Budget $	%
EXPENSES	Wages and Salaries	91,711,114	91,151,296	(559,818)	-0.6%
	Overtime	3,408,791	3,178,791	(230,000)	-6.7%
	Fringe Benefits	16,578,832	16,416,310	(162,522)	-1.0%
	Workers' Compensation	1,325,000	1,870,000	545,000	41.1%
	Chemicals	10,363,436	10,152,331	(211,105)	-2.0%
	Energy and Utilities	24,072,215	24,057,177	(15,038)	-0.1%
	Maintenance	28,259,673	29,225,401	965,728	3.4%
	Training and Meetings	164,003	231,783	67,780	41.3%
	Professional Services	5,903,213	5,306,055	(597,158)	-10.1%
	Other Materials	4,603,647	4,898,708	295,061	6.4%
	Other Services	23,222,760	22,554,794	(667,966)	-2.9%
	TOTAL DIRECT EXPENSES	**209,612,684**	**209,042,646**	**(570,038)**	**-0.3%**
	Insurance	2,316,000	2,216,000	(100,000)	-4.3%
	Watershed/PILOT	23,549,673	24,746,467	1,196,794	5.1%
	HEEC Payment	3,877,500	3,964,256	86,756	2.2%
	Mitigation	1,481,367	1,518,401	37,034	2.5%
	Addition to Reserves	(653,254)	(406,397)	246,857	-37.8%
	Retirement Fund	8,392,133	6,500,000	(1,892,133)	-22.5%
	Post-Employment Benefits	800,000		(800,000)	-100.0%
	TOTAL INDIRECT EXPENSES	**39,763,419**	**38,538,727**	**(1,224,692)**	**-3.1%**
	Debt Service (before offsets)	347,226,225	355,255,330	8,029,105	2.3%
	Bond Redemption	-	-	-	-
	Debt Service Assistance	(350,000)	-	350,000	-100.0%
	TOTAL DEBT SERVICE	**346,876,225**	**355,255,330**	**8,379,105**	**2.4%**
	TOTAL EXPENSES	**596,252,328**	**602,836,703**	**6,584,375**	**1.1%**
REVENUE AND INCOME	Rate Revenue	561,431,000	569,800,000	8,369,000	1.5%
	Other User Charges	7,939,758	6,996,012	(943,746)	-11.9%
	Other Revenue	4,371,736	4,757,414	385,678	8.8%
	Rate Stabilization	7,312,438	6,833,317	(479,121)	-6.6%
	Investment Income	15,197,396	14,449,960	(747,436)	-4.9%
	TOTAL REVENUE AND INCOME	**596,252,328**	**602,836,703**	**6,584,375**	**1.1%**

Appendix D

Line Item	FY10 Final	FY11 Proposed	$ Δ	% Δ	Description
Regular Pay	90,367,955	89,693,820	(674,135)	(0.7)	Base salaries for employees including longevity + sick leave buyback
Sick Pay			-	0.0	
Vacation Pay			-	0.0	
REGULAR PAY	90,367,955	89,693,820	(674,135)	(0.7)	
Shift Differential	195,746	188,561	(7,185)	(3.7)	incremental hourly pay for working offshift
Holiday Pay	257,919	266,079	8,160	3.2	incremental hourly pay for working on holidays
Other Temp. Employees	371,141	454,990	83,849	22.6	temporary or contract employees, contract chemists in Lab
Interns/Co-Ops	17,001	60,600	43,599	256.4	QA/QC database interns
Stand By Pay	501,352	487,246	(14,106)	(2.8)	on-call pay
WAGES AND SALARIES	**91,711,114**	**91,151,296**	**(559,818)**	**(0.6)**	
Overtime	3,365,049	3,138,363	(226,686)	(6.7)	
Overtime 1.5#			-	0.0	
Overtime 2.0#			-	0.0	
Shift OT Differential .75	43,743	40,428	(3,315)	(7.6)	
OT Retro Pay			-	0.0	
Overtime Training			-	0.0	
OVERTIME	**3,408,792**	**3,178,791**	**(230,001)**	**(6.7)**	
Overtime Meals	71,000	66,945	(4,055)	(5.7)	
Health Insurance	14,209,764	13,915,334	(294,430)	(2.1)	consistent with Governor's budget changes
Dental Insurance	959,050	995,013	35,963	3.7	legislation filed to join Commonwealth plan is in committee
Unemployment Insurance	60,000	160,000	100,000	166.7	
Medicare	1,248,018	1,248,018	-	0.0	
Tuition Reimbursement	31,000	31,000	-	0.0	
FRINGE BENEFITS	**16,578,832**	**16,416,310**	**(162,522)**	**(1.0)**	
Compensation Payments	765,000	1,150,000	385,000	50.3	
Medical Payments	490,000	650,000	160,000	32.7	medical claims
Other	70,000	70,000	-	0.0	legal fees, medical exams and reviews
WORKERS' COMPENSATION	**1,325,000**	**1,870,000**	**545,000**	**41.1**	
PERSONNEL COSTS	**113,023,738**	**112,616,397**	**(407,341)**	**(0.4)**	
Caustic Soda	10,860	10,860	-	0.0	odor control at DI thermal power plant
Soda Ash	3,126,059	3,244,447	118,388	3.8	corrosion control at water treatment plant
Sodium Hypochlorite	2,720,928	2,505,612	(215,316)	(7.9)	disinfection + odor control at DI, CWTP, Ware, Clinton, HW, CSO's
Hydrofluosilic Acid	952,241	1,085,686	133,445	14.0	fluoridation
Copper Sulfate	15,000	-	(15,000)	(100.0)	algae control in reservoir
Sodium Hydroxide	237,556	175,878	(61,678)	(26.0)	odor control and to elevate pH levels
Other	126,396	110,428	(15,968)	(12.6)	digester gas + boiler chemicals at DI, aluminum sulfate + lime at Cllinton
Polymer	348,474	285,511	(62,963)	(18.1)	sludge thickening at DI, Clinton
Sodium Bisulfite	427,857	590,487	162,630	38.0	dechlorinate at DI + CSO's, removal residual ozone at CWTP
Activated Carbon	273,600	298,960	25,360	9.3	odor control at DI
Ferrous Chloride	-	-	-	0.0	struvite control (alternates with ferric chloride depending on price)
Liquid Oxygen	639,770	598,815	(40,955)	(6.4)	disinfection at CWTP
Nitrogen	25,000	5,000	(20,000)	(80.0)	for purging of the gas system at DI
Carbon Dioxide	288,175	267,500	(20,675)	(7.2)	to increase pH + alkalinity level of water suppply at CWTP
Ferric Chloride	369,994	409,241	39,247	10.6	struvite control (alternates with ferrous chloride depending on price)
Hydrogen Peroxide	176,994	208,432	31,438	17.8	corrosion control at DI
Aqua Ammonia	364,519	196,880	(167,639)	(46.0)	secondary disinfection at CWTP
Nytrazyme	260,014	158,595	(101,419)	(39.0)	H2S control metro west wastewater pipelines
CHEMICALS	**10,363,437**	**10,152,332**	**(211,105)**	**(2.0)**	
Natural Gas	716,112	712,917	(3,195)	(0.4)	at various water + WW facilities
Electricity	19,397,600	19,271,484	(126,116)	(0.7)	three major contracts
Water	1,608,179	1,758,727	150,548	9.4	process water, DI , WW facilities, Clinton,
Oxygen	500	500	-	0.0	Metro maintenance
Acetelyn			-	0.0	
Other	64,652	60,184	(4,468)	(6.9)	DI Lab chemicals
#2 Fuel Oil Heating	30,000	29,360	(640)	(2.1)	Clinton treatment plant
Diesel Fuel	2,177,377	2,145,911	(31,466)	(1.4)	heating at various facilities, CTG operation DI
Propane	77,796	78,095	299	0.4	water operations, shaft 8
UTILITIES	**24,072,216**	**24,057,178**	**(15,038)**	**(0.1)**	
Building and Grounds Materials	813,276	860,951	47,675	5.9	concrete, crushed stone, gravel for water pipeline maintenance
Building and Grounds Service	2,820,813	2,973,038	152,225	5.4	janitorial services at DI, crane services
Automotive Materials	438,500	429,500	(9,000)	(2.1)	starters + alternators
Automotive Services	268,000	276,000	8,000	3.0	spring + suspension work
Plant & Mach. Mat'ls	6,614,520	6,187,247	(427,273)	(6.5)	grit piping + pods, burner replacement + boiler repair
Plant & Mach. Services	5,912,324	6,131,568	219,244	3.7	rebuild ozone generator at CWTP
Pipeline Materials	476,840	509,100	32,260	6.8	friction clamps, transitional couplings
Pipeline Services	558,462	553,462	(5,000)	(0.9)	manhole rehabilitation contract
Spec. Equip. Mat'ls	830,497	1,130,519	300,022	36.1	batteries, sewer bucketing materials
Spec. Equip. Services	2,357,879	2,182,771	(175,108)	(7.4)	instrumentation services for water, WW facilities
Computer Materials	356,676	371,754	15,078	4.2	PC supplies + parts, TIC/CADD materials
Computer Services	335,244	343,744	8,500	2.5	preventative maintenance on computer environmental controls
Comp. Software-Licenses/Upg	1,900,641	2,353,510	452,869	23.8	Lawson maintenance
HVAC Materials	469,546	601,046	131,500	28.0	materials for water + WW pump stations
HVAC Services	328,180	698,852	370,672	112.9	preventative maintenance at CWTP
Electrical Materials	983,975	1,092,375	108,400	11.0	as needed for pipe maintenance + WW CSO's
Electrical Services	2,735,000	2,470,660	(264,340)	(9.7)	high + medium voltage service at CWTP
Purchase Cards	59,300	59,300	-	0.0	

Appendix D

Line Item	FY10 Final	FY11 Proposed	$ Δ	% Δ	Description
ONGOING MAINTENANCE	**28,259,673**	**29,225,397**	**965,724**	**3.4**	
Trainings and Meetings	107,582	182,067	74,485	69.2	
OutoOfState Meetings/Briefings	2,850	2,500	(350)	(12.3)	
OutOfState Prof Assoc/Semi	9,408	8,048	(1,360)	(14.5)	
OutOfState Industry Assoc/	6,700	6,450	(250)	(3.7)	
Out of State Site Audits	7,500	2,500	(5,000)	(66.7)	
InState Overnight Meetings	1,725	1,725	-	0.0	
InState Local Meetings	25,978	26,293	315	1.2	
TM Other Consultants/Vendo	2,260	2,200	(60)	(2.7)	
TRAINING & MEETINGS	**164,003**	**231,783**	**67,780**	**41.3**	
Engineering	785,000	908,000	123,000	15.7	dam inspection, design support, beach nourishment study DI
Lab & Testing & Analysis	2,217,468	1,567,730	(649,738)	(29.3)	harbor + outfall monitoring, cryptosporidium testing
Legal	281,000	263,500	(17,500)	(6.2)	outside legal counsel
Audit	189,000	189,000	-	0.0	yearly audit, GASB
Communications	178,150	164,637	(13,513)	(7.6)	WAC, WSCAC
Other	587,184	591,378	4,194	0.7	energy consulting services, trustee bank services
Security	1,660,511	1,616,910	(43,601)	(2.6)	security service contract for Chelsea, DI, CWTP, CNY
Resident Inspection	1,400	1,400	-	0.0	backflow prevention inspection
Construction Services	3,500	3,500	-	0.0	Digsafe
PROFESSIONAL SERVICES	**5,903,213**	**5,306,055**	**(597,158)**	**(10.1)**	
Office Supplies	180,725	184,264	3,539	2.0	various office supplies
Postage	224,349	228,032	3,683	1.6	USPS, UPS, mailing CCR report
Lab & Testing Supp.	731,922	757,323	25,401	3.5	DI Lab supplies, DITP
Health/Safety	312,726	390,896	78,170	25.0	Lab gloves, roadwasy safety materials for flaggers, fall retrieval spare parts
Equip/Furniture	236,230	375,230	139,000	58.8	radios and related equipment, replacement light sensors
Veicle Purch./Replace	600,000	600,000	-	0.0	prioritized list most critical replacements
Work Clothes	348,047	332,317	(15,730)	(4.5)	work clothes, boots, jackets
Vehicle Expense	1,170,535	1,002,684	(167,851)	(14.3)	fuel, bulk diesel + gasoline, tolls
Other Materials	209,576	203,426	(6,150)	(2.9)	Clinton landfill gravel, oil spill containment supplies
Computer Hardware	556,387	791,386	234,999	42.2	PICS network equipment, toughbooks
Computer Software	22,000	22,000	-	0.0	SCADA computer software
Purchase Cards	11,150	11,150	-	0.0	
OTHER MATERIALS	**4,603,647**	**4,898,708**	**295,061**	**6.4**	
Printing Services	280,007	269,986	(10,021)	(3.6)	CCR, annual report, budget reports, TRAC industrial waste report
Health/Safety	366,000	390,500	24,500	6.7	ambuland, fire extinguisher, hazmat cleanup
Telephone	1,394,862	1,429,505	34,643	2.5	MIS voice + data, metering + monitoring
Mem/Dues/Sub	196,305	209,812	13,507	6.9	professional memberships + dues
Advertising	63,524	60,700	(2,824)	(4.4)	recruiting + contract advertising
Space Lease/Rentals	3,051,649	3,333,658	282,009	9.2	Chelsea + CNY rents
Moving/Freight	95,000	83,800	(11,200)	(11.8)	delivery + freight charges
Other Rentals	143,195	174,306	31,111	21.7	copier + mail equipment leases
Other Services	981,377	1,140,711	159,334	16.2	fax, copier + printer maintenance; oil boom service; aquatic plant control; remediation pr
Grit & Screenings Removal	916,030	905,217	(10,813)	(1.2)	grit, screenings + scum from DI, NI, other headworks, pump stations, CSO's
Sludge Pelletization	15,327,452	14,041,266	(1,286,186)	(8.4)	NEFCo contract to process + dispose of sludge pellets
Permit Fees	155,859	194,499	38,640	24.8	DI + Clinton; air quality permits
Police Details	251,500	320,834	69,334	27.6	construction projects, meter + value maintenance
Landfill Reservation Fee			-	0.0	now part of NEFCo contract responsibility
OTHER SERVICES	**23,222,760**	**22,554,794**	**(667,966)**	**(2.9)**	
OTHER DIRECT COSTS	**96,588,949**	**96,426,247**	**(162,702)**	**(0.2)**	**w/o Personnel-Related Costs**
DIRECT COSTS	**209,612,687**	**209,042,644**	**(570,043)**	**(0.3)**	**all Direct Expenses**
Premiums	1,786,000	1,786,000	-	0.0	
Payments/Claims	530,000	430,000	(100,000)	(18.9)	
INSURANCE	**2,316,000**	**2,216,000**	**(100,000)**	**(4.3)**	**estimate of annual renewal, vote in June**
Watershed Reimbursement	12,117,069	12,244,800	127,731	1.1	DCR costs less certain revenues
PILOT	6,500,000	6,892,834	392,834	6.0	payments in lieu of taxes
Watershed Debt Service	4,932,604	5,608,833	676,229	13.7	debt service on watershed land purchases
REIMBURSEMENTS	**23,549,673**	**24,746,467**	**1,196,794**	**5.1**	
State Revolving Fund - P &	60,553,233	69,933,072	9,379,839	15.5	SRF debt service on existing + estimated new borrowings
Revenue Bonds P&I	179,484,608	198,732,596	19,247,988	10.7	debt service on existing + planned new senior debt
Debt Service Assistance	(350,000)	-	350,000	(100.0)	estimated revenue is treated as an offset to debt service
Current Revenue/Capital	5,600,000	7,200,000	1,600,000	28.6	revenue is deposited in capital Construction Fund
Subordinate MWRA Debt	93,871,324	72,736,837	#######	(22.5)	principal + interest payments on existing variable rate debt
Local Water Pipeline CP	4,500,000	3,435,765	(1,064,235)	(23.6)	interest on commercial paper issued to support water pipeline loan program
Capital Lease	3,217,060	3,217,060	-	0.0	capital (mortgage) portion of Chelsea facility
Variable Debt Savings	-	-	-	0.0	budgeted lower than assumed variable debt interest rate of 4%
DEBT SERVICE	**346,876,225**	**355,255,330**	**8,379,105**	**2.4**	**total of all capital financing related expenses**
HEEC Agreement Capacity Ch	3,325,500	3,153,256	(172,244)	(5.2)	debt service payment for construction/installation of cross harbor cable
HEEC Agreement O&M Charge	552,000	810,998	258,998	46.9	operations/maintenance charge for cross harbor electric cable to DI
OTHER	**3,877,500**	**3,964,254**	**86,754**	**2.2**	
Mitigation, Quincy	770,888	790,160	19,272	2.5	payments to offset impacts of Authority facilities in Quincy
Mitigation, Winthrop	710,479	728,241	17,762	2.5	payments to mitigate impacts of DI + related activities
MITIGATION	**1,481,367**	**1,518,401**	**37,034**	**2.5**	
Operating Reserve	(653,254)	(406,396)	246,858	(37.8)	incremental addition to Operating Reserve due to increases in Operating Expenses
ADDITIONS TO RESERVE	**(653,254)**	**(406,396)**	**246,858**	**(37.8)**	

Appendix D

Line Item	FY10 Final	FY11 Proposed	$ Δ	% Δ	Description
Pension Expense	8,392,133	6,500,000	(1,892,133)	(22.5)	deposit to pension fund based on actuarial study plus increment to rebuild fund
PENSION EXPENSE	**8,392,133**	**6,500,000**	**#######**	**(22.5)**	
Post Employment Benefits	800,000	-	(800,000)	(100.0)	estimated lower health care contributions, consistent w/Governor's pFY10 budget
POST EMPLOYMENT BENEFITS	**800,000**	**-**	**(800,000)**	**(100.0)**	
INDIRECT COSTS	**386,639,644**	**393,794,056**	**7,154,412**	**1.9**	
OPERATING COSTS (Direct + Indirect)	**596,252,331**	**602,836,700**	**6,584,369**	**1.1**	
Rate Revenue	561,431,000	569,800,000	8,369,000	1.5	revenue based on rates charged to communities
RATE REVENUE	**561,431,000**	**569,800,000**	**8,369,000**	**1.5**	
Other User Charges	7,167,468	6,344,585	(822,883)	(11.5)	Clinton plant income, CVA payments, water treatment plant residuals charges
Entrance Fees	772,291	651,427	(120,864)	(15.7)	Stoughton, Dedham-Westwood Water District payments
OTHER USER CHARGES	**7,939,759**	**6,996,012**	**(943,747)**	**(11.9)**	
Hydro-power Revenue	198,150	111,000	(87,150)	(44.0)	income from hydropower facility at Cosgrove Intake
Permit Fees	1,780,003	1,946,766	166,763	9.4	TRAC fees for permitting + inspecting large industrial + other significant users
Surcharge - Emerg Water Su	-	-	-	0.0	payments from emergency water users including Wilmington
Penalties	220,100	220,000	(100)	(0.0)	payments for violations of sewer use regulations
Payments From Commonwealth	-	-	-	0.0	for costs of chemicals used for water + wastewater treatment
Miscellaneous Revenue	755,076	821,741	66,665	8.8	Fore River Railroad fees + leases, antenna licenses, pellet sales, other misc
Revenue -Energy	1,418,407	1,657,906	239,499	16.9	renewable portfolio credits, load reduction program
Profit (Loss) On Disp. Of E	-	-	-	0.0	sales of surplus equipment, see miscellaneous
Operating Grant	-	-	-	0.0	
OTHER REVENUE	**4,371,736**	**4,757,413**	**385,677**	**8.8**	
Rate Stabilization	7,312,438	6,833,317	(479,121)	(6.6)	to manage impacts of increased rate revenue requirement
RATE STABILIZATION	**7,312,438**	**6,833,317**	**(479,121)**	**(6.6)**	
Combined Reserves	4,244,219	3,640,779	(603,440)	(14.2)	income from short term + long term investments of monies in these various funds
Construction	887,112	505,359	(381,753)	(43.0)	income from short term + long term investments of monies in these various funds
Debt Service	907,881	707,958	(199,923)	(22.0)	income from short term + long term investments of monies in these various funds
Debt Service Reserves	6,755,008	7,940,076	1,185,068	17.5	income from short term + long term investments of monies in these various funds
Operating	803,603	705,387	(98,216)	(12.2)	income from short term + long term investments of monies in these various funds
Revenue	687,052	412,581	(274,471)	(39.9)	income from short term + long term investments of monies in these various funds
CORE	361,660	316,343	(45,317)	(12.5)	income from short term + long term investments of monies in these various funds
Redemption	550,861	221,478	(329,383)	(59.8)	income from short term + long term investments of monies in these various funds
INTEREST INCOME	**15,197,396**	**14,449,961**	**(747,435)**	**(4.9)**	**income from short term + long term investments of monies in these various fun**
TOTAL REVENUE	**596,252,329**	**602,836,703**	**6,584,374**	**1.1**	

Appendix E

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

Final FY09 to Proposed FY11 Comparison

	FY09	FY10	FY11	FY12	FY13	Total FY09-13
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%**	**($374.0)**

Appendix F

Cap Calculation versus Proposed FY11 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	$1,081.4
Contingency	15.6	13.8	12.0	12.1	11.4	64.9
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)	(24.6)
FY09-13 CAP	**$244.4**	**$264.1**	**$230.0**	**$207.1**	**$198.5**	**$1,144.1**

Proposed FY10 CIP

Proposed FY11 CIP Updated Spending Projections	FY09	FY10	FY11	FY12	FY13	Total FY09-13
Projected Expenditures	$182.2	$213.7	$229.1	$217.4	$236.8	$1,079.2
Contingency	0.0	12.1	12.0	11.3	14.2	49.6
Inflation on Unawarded Construction	0.0	0.0	0.7	3.9	10.0	14.6
Less: Chicopee Valley Aqueduct Projects	(0.6)	(1.0)	(0.8)	(6.5)	(7.2)	(16.1)
FY09-13 CAP	**$181.6**	**$224.8**	**$241.0**	**$226.1**	**$253.8**	**$1,127.3**

Change

Final FY09 to Proposed FY11 Comparison	FY09	FY10	FY11	FY12	FY13	Total FY09-13
Projected Expenditures	($47.8)	($38.0)	$4.8	$20.7	$58.1	($2.2)
Contingency	(15.6)	(1.7)	0.0	(0.8)	2.8	(15.3)
Inflation on Unawarded Construction	0.0	(0.5)	(2.1)	(3.9)	(1.3)	(7.8)
Less: Chicopee Valley Aqueduct Projects	0.6	0.9	8.3	3.0	(4.3)	8.5
FY09-13 CAP Δ ($)	**($62.8)**	**($39.3)**	**$11.0**	**$19.0**	**$55.3**	**($16.8)**
FY09-13 CAP Δ (%)	**-25.7%**	**-14.9%**	**4.8%**	**9.2%**	**27.9%**	**-1.5%**

Appendix G

Program / Project	Total Contract Amount	Payments Through FY09	FY09 Actuals	FY10	FY11	FY12	FY13	FY09-13
Total MWRA	5,087,879,551	3,043,161,666	182,238,802	213,694,471	229,095,320	217,443,773	236,775,439	1,079,247,805
S.1 Wastewater System Improvements	2,550,881,278	1,341,379,343	123,710,173	146,446,311	153,199,194	123,364,568	116,329,795	663,050,041
S.10 Interception & Pumping	794,998,680	494,968,270	6,801,490	5,616,080	16,965,634	20,450,771	34,943,541	84,777,516
102 Quincy Pump Facilities	25,908,059	25,908,077		completed project				
104 Braintree-Weymouth Relief Facilities	237,056,428	215,535,248	503,724	2,562,408	7,252,000	11,206,771	400,000	21,924,903
105 New Neponset Valley Relief	30,300,308	30,300,303		completed project				
106 Wellesley Ext Replacement	64,358,560	64,358,543		completed project				
107 Framingham Extension Relief Sewer	47,855,985	47,855,986		completed project				
127 Cummingsville Replacement Sewer	8,998,778	8,998,768	43,382	-	-	-	-	43,382
130 Siphon Structure Rehabilitation	2,612,634	939,770	-	-	-	-	84,000	84,000
132 Corrosion & Odor Control	14,646,680	3,002,809	-	-	-	65,000	260,000	325,000
136 West Roxbury Tunnel	88,733,285	8,918,302	38,500	554,408	632,000	631,000	9,756,000	11,611,908
137 Wastewater Central Monitoring	19,939,415	19,188,111	5,240,375	597,625	153,679	-	-	5,991,679
139 South System Relief Project	4,939,889	3,439,889	-	-	-	-	-	-
141 Wastewater Process Optimization	2,310,468	930,308	-	-	-	34,000	69,000	103,000
142 Wastewater Meter Sys-Equip Replace	26,578,429	5,142,724	53,959	135,705	-	60,000	540,000	789,664
143 Regional I / I Management Planning	168,987	168,987		completed project				
145 Facility Asset Protection	160,414,795	6,558,239	349,000	1,562,115	8,428,000	8,454,000	23,834,541	42,627,656
146 D.I. Cross Harbor Tunnel Inspection	5,000,000	-	-	-	-	-	-	-
147 Randolph Trunk Sewer Relief	750,000	-	-	-	-	-	-	-
S.25 Treatment	544,965,271	66,536,590	14,742,530	44,551,132	69,255,252	65,932,326	56,019,700	250,500,940
200 DI Plant Optimization	33,455,817	33,455,814	296,298	-	-	-	-	296,298
206 DI Treatment Plant Asset Protection	500,726,933	31,566,049	14,205,352	44,358,327	66,742,148	64,259,704	54,666,912	244,232,443
210 Clinton Wastewater Treatment Plant	3,115,343	493,343	148,560	50,000	942,750	1,193,000	436,250	2,770,560
211 Laboratory Services	7,667,178	1,021,384	92,320	142,805	1,570,354	479,622	916,538	3,201,639
S.12 Residuals	211,740,619	63,810,848		802,629	605,143	1,188,667	2,000,000	4,596,439
261 Residuals	63,810,848	63,810,848		completed project				
271 Residuals Asset Protection	147,929,771	-	-	802,629	605,143	1,188,667	2,000,000	4,596,439

Appendix G

Program / Project	Total Contract Amount	Payments Through FY09	FY09 Actuals	FY10	FY11	FY12	FY13	FY09-13
S.13 CSO	876,301,871	621,633,709	99,417,389	92,084,733	67,504,392	34,069,003	21,414,104	314,489,621
S.3520 MWRA Managed	433,993,220	335,866,585	66,416,412	66,390,449	23,399,258	3,661,006	1,631,488	161,498,613
339 North Dorchester Bay	222,508,432	177,531,111	38,489,017	23,426,064	17,277,683	3,032,086	1,241,488	83,466,338
347 East Boston Branch Sewer Relief	85,172,512	36,946,656	26,241,277	42,316,417	5,825,753	83,687	-	74,467,134
348 BOS019 Storage Conduit	14,287,800	14,287,582	(44,066)	219	-	-	-	(43,847)
349 Chelsea Trunk Sewer	29,779,319	29,779,319		completed project				
350 Union Park Detention Treatment Facility	49,583,407	49,583,407	(227,192)	-	-	-	-	(227,192)
353 Upgrade Existing CSO Facilities	22,385,200	22,385,201		-	-	-	-	-
354 Hydraulic Relief Projects	2,294,549	2,294,549		-	-	-	-	-
355 MWR003 Gate & Siphon	3,489,437	-	-	-	-	55,000	390,000	445,000
357 Charles River CSO Controls	4,492,564	3,058,760	1,957,376	647,749	295,822	490,233	-	3,391,180
S.3521 Community Managed	391,598,684	238,587,910	30,910,182	24,375,348	42,757,134	30,157,997	19,782,616	147,983,277
340 Dorch Bay Sewer Sep (Fox Point)	54,075,447	53,762,619	-	312,828	-	-	-	312,828
341 S. Dorch Bay Sewer Sep (Commercial Point)	64,319,136	58,046,589	3,156,000	1,012,931	-	2,630,000	2,629,616	9,428,547
342 Neponset River Sewer Separation	2,444,394	2,444,393		completed project				
343 Constitution Beach Sewer Separation	3,768,888	3,768,891		completed project				
344 Stony Brook Sewer Separation	44,198,623	44,486,256	(565,745)	(287,633)	-	-	-	(853,378)
346 Cambridge Sewer Separation	59,944,938	21,382,101	2,930,970	5,375,000	8,172,000	7,070,000	8,770,000	32,317,970
351 BWSC Floatables Controls	932,979	932,979		-	-	-	-	-
352 Cambridge Floatables Control	1,412,991	1,035,641	113,440	377,349	-	-	-	490,789
356 Fort Point Channel Sewer Separation	11,866,775	9,408,369	1,117,211	2,017,842	440,565	-	-	3,575,618
358 Morrissey Boulevard Drain	36,405,252	32,593,149	17,916,977	3,741,732	70,371	-	-	21,729,080
359 Reserved Channel Sewer Separation	78,566,778	4,271,920	1,554,926	5,147,014	22,151,000	11,852,000	8,383,000	49,087,940
360 Brookline Sewer Separation	24,024,168	3,082,392	1,810,792	1,787,499	10,564,000	8,590,277	-	22,752,568
361 Bulfinch Triangle Sewer Separation	9,638,315	3,372,611	2,875,611	4,890,786	1,359,198	15,720	-	9,141,315
324 CSO Support	50,709,967	47,179,214	2,090,795	1,318,936	1,348,000	250,000	-	5,007,731
S.14 Other Wastewater	122,874,837	94,429,926	2,748,764	3,391,737	(1,131,227)	1,723,801	1,952,450	8,685,525
128 I / I Local Financial Assistance	122,593,961	94,149,050	2,748,764	3,391,737	(1,131,227)	1,723,801	1,952,450	8,685,525
138 Sewerage System Mapping Upgrade	280,876	280,876	-	-	-	-	-	-
S.2 Waterworks System Improvements	2,431,930,439	1,655,269,485	52,854,753	54,329,392	58,477,516	83,089,422	113,983,144	362,734,227
S.16 Drinking Water Quality Improvements	647,627,501	526,438,396	17,848,444	15,266,177	6,162,533	29,104,059	33,498,280	101,879,493
542 John J. Carroll Water Treatment Plant	429,162,129	374,036,696	1,284,426	3,983,922	4,442,905	12,818,000	17,197,022	39,726,275
543 Quabbin Water Treatment Plant	17,488,035	10,175,395	31,873	534,281	292,890	4,718,059	1,717,410	7,294,513
544 Norumbega Covered Storage	106,674,147	106,674,146	101,670	-	-	-	-	101,670
545 Blue Hills Covered Storage	40,760,976	35,288,199	16,399,345	4,849,104	239,738	15,000	348,548	21,851,735
550 Spot Pond Storage Facility	53,542,214	263,960	31,130	5,898,870	1,187,000	11,553,000	14,235,300	32,905,300

Appendix G

Program / Project	Total Contract Amount	Payments Through FY09	FY09 Actuals	FY10	FY11	FY12	FY13	FY09-13
S.17 Transmission	990,857,513	679,220,740	6,336,282	20,304,228	20,693,441	17,615,560	28,540,150	93,489,661
597 Winsor Dam Hydroelectric/Pipeline Replace.	16,738,132	612,098	573,816	357,879	440,000	1,091,000	4,631,000	7,093,695
601 Sluice Gate Rehabilitation	9,158,418	9,158,411		completed project				
604 MetroWest Tunnel	699,719,257	634,287,680	486,854	12,567,545	16,016,000	10,216,000	14,296,650	53,583,049
615 Chicopee Valley Aqueduct Redundancy	8,666,747	8,605,254	33,651	61,492	-	-	-	95,143
616 Quabbin Transmission System	11,419,864	4,423,427	-	75,000	250,000	1,546,560	1,150,000	3,021,560
617 Sudbury / Weston Aqueduct Repairs	3,258,148	634,948	-	8,200	367,000	-	1,452,000	1,827,200
620 Wachusetts Res Spill Impr/Winsor Dam Rep	11,789,010	9,385,033	1,335,072	2,403,971	-	-	-	3,739,043
621 Watershed Land	19,000,000	11,857,500	3,650,500	3,800,000	1,000,000	850,000	1,492,500	10,793,000
623 Dam Projects	7,688,966	-	-	180,000	308,000	1,912,000	3,518,000	5,918,000
625 Long Term Redundancy	203,418,971	256,389	256,389	850,141	2,312,441	2,000,000	2,000,000	7,418,971
S.18 Distribution And Pumping	762,352,943	324,822,022	19,370,278	12,942,196	17,060,930	23,336,371	30,142,352	102,852,127
618 Northern High NW Trans Section 70-71	1,000,000	-	-	-	-	-	-	-
677 Valve Replacement	19,132,370	9,059,409	480,081	348,737	800,630	1,277,000	755,796	3,662,244
678 Boston Low Serv.-Pipe & Valve Rehab	23,690,867	23,690,863		completed project				
683 Heath Hill Road Pipe Replacement	19,364,776	19,364,786	(3,067)	-	-	-	-	(3,067)
689 James L. Gillis Pump Station	33,419,006	33,419,007		completed project				
692 NHS - Section 27 Improvements	3,179,276	123,646	-	-	-	-	-	-
693 NHS - Revere & Malden Pipeline Improve.	33,653,115	26,262,901	2,368,183	709,445	-	-	-	3,077,628
702 New Connecting Mains - Shaft 7 to WASM 3	61,519,385	5,388,384	69,658	632,622	2,003,891	2,520,826	400,000	5,626,997
704 Rehab of Other Pumping Stations	30,698,444	24,309,426	6,323,844	5,459,289	827,125	102,604	-	12,712,862
706 NHS - Connecting Mains from Section 91	2,360,194	2,360,194		completed project				
708 Nor Extra High Serv - New Pipelines	6,569,124	3,632,119	-	1,000	1,000	8,000	11,000	21,000
712 Cathodic Protection Of Distribution Mains	1,404,519	140,913	-	-	-	-	-	-
713 Spot Pond Supply Mains - Rehab	66,097,019	60,995,279	516,780	1,052	-	250,000	2,250,000	3,017,832
714 South. Extra High Sections 41 & 42	3,657,243	3,657,243		completed project				
719 Chestnut Hill Connecting Mains	25,601,214	17,461,614	-	-	-	305,000	406,000	711,000
720 Warren Cottage Line Rehab	1,204,821	1,204,821		completed project				
721 Southern Spine Distribution Mains	75,616,451	20,045,166	2,435,231	2,128,765	6,704,000	6,704,000	6,704,000	24,675,996
722 NIH Redundancy & Storage	90,862,597	727,139	93,166	603,352	1,207,536	7,130,973	16,034,221	25,069,248
723 Nor Low Service Rehab Section 8	19,670,783	1,563,863	1,505,880	791,274	-	25,000	35,000	2,357,154
S.724 Nor High Service - Pipeline Rehab	-	(1,600)	(1,600)	-	-	-	-	(1,600)
725 Hydraulic Model Update	598,358	598,358		completed project				
727 SEH Redundancy & Storage	93,841,194	6,586,658	4,919,389	241,553	151,473	1,048,000	1,479,833	7,840,248
730 Weston Aqueduct Supply Mains	130,501,252	60,976,990	76,129	1,900,617	1,440,275	961,319	2,021,000	6,399,340
731 Lynnfield Pipeline	7,634,742	536,102	23,381	124,490	3,925,000	3,003,649	45,502	7,122,022
732 Walnut St. & Fisher Hill Pipeline Rehab.	2,716,993	2,717,141	563,223	-	-	-	-	563,223
735 Section 80 Rehabilitation	8,359,200	-	-	-	-	-	-	-

Appendix G

Program / Project	Total Contract Amount	Payments Through FY09	FY09 Actuals	FY10	FY11	FY12	FY13	FY09-13
S.19 Other Waterworks	31,092,482	124,788,327	9,299,749	5,816,791	14,560,612	13,033,432	21,802,362	64,512,946
753 Central Monitoring System	16,992,422	15,704,996	38,051	87,000	366,000	834,427	-	1,325,478
763 Distribution Systems Fac Mapping	1,798,919	1,036,368	-	-	228,000	305,000	229,551	762,551
764 Local Water Infrastructure Rehab	7,487,758	7,487,762		completed project				
765 Local Water Pipeline Improve. Loan Program	-	100,337,831	9,261,698	5,705,611	13,460,612	11,758,005	20,816,811	61,002,737
766 Waterworks Facility Asset Protection	4,813,383	221,370	-	24,180	506,000	136,000	756,000	1,422,180
S.3 Business & Operations Support	105,067,834	46,512,838	5,673,876	12,918,768	17,418,610	10,989,783	6,462,500	53,463,537
881 Equipment Purchase	14,602,867	5,180,596	2,016,244	1,147,636	1,555,000	1,115,000	625,000	6,458,880
925 Technical Assistance	1,200,000	-	-	-	400,000	400,000	400,000	1,200,000
930 MWRA Facility - Chelsea	9,851,108	9,851,107	(35,800)	-	-	-	-	(35,800)
931 Business Systems Plan	36,700,321	23,419,981	1,411,901	1,831,300	2,046,464	2,404,576	1,298,000	8,992,241
932 Environmental Remediation	1,804,912	1,463,733	(4,467)	80,251	50,000	50,000	75,000	250,784
933 Capital Maintenance Planning & Develop.	9,199,084	4,413,566	694,186	1,630,373	1,955,145	1,200,000	-	5,479,704
934 MWRA Facilities Management & Planning	7,307,536	269,835	269,835	432,900	567,801	2,347,500	3,689,500	7,307,536
935 Alternative Energy Initiatives	24,402,006	1,914,020	1,321,977	7,796,308	10,844,200	3,472,707	375,000	23,810,192

Appendix H

FINAL FY10 CIP TO PROPOSED FY11 CIP INCREMENTAL BUDGET CHANGES ($000s)

Part A - Budget by Program Category

Program/Project	Final FY10	Proposed FY11	Incremental Change	% Change	Explanation
Total MWRA	$5,091,799	$5,210,600	$118,801	2.3%	Wastewater +$89.4M, Water +$2.3M, Business & Operations Support +$15.2M
Wastewater	$2,461,520	$2,550,881	$89,361	3.6%	
Interception & Pumping	$712,499	$794,999	$82,500	11.6%	I&P Facility Asset Protection +$73.4M, West Roxbury Tunnel +$11M, Braintree-Weymouth Relief Facilities ($1.2M).
Treatment	$536,461	$544,965	$8,504	1.6%	DI Treatment Plant Asset Protection +$10.3M, Laboratory Services ($1.8M).
Residuals	$211,681	$211,741	$60	0.0%	Residuals Asset Protection +$60K.
CSO	$878,004	$876,302	-$1,702	-0.2%	
MWRA Managed	$435,708	$433,993	-$1,715	-0.4%	Charles River CSO Controls ($1.2M), North Dorchester Bay ($933K), MWR003 Gate & Siphon +$650K, East Boston Branch Sewer Relief ($274K),
Community Managed	$392,088	$391,599	-$489	-0.1%	Cambridge Sewer Separation +$2M, Cambridge Floatables ($2.5M).
CSO Support	$50,208	$50,710	$502	1.0%	CSO Support +$502K.
Other	$122,875	$122,875	$0	0.0%	
Waterworks System Improvements	$2,429,609	$2,431,930	$2,321	0.1%	
Drinking Water Quality Improvements	$644,977	$647,627	$2,650	0.4%	Spot Pond Storage Facility +$1.4M, John J. Carroll Water Treatment Plant +$1.0M.
Transmission	$1,003,936	$990,858	-$13,078	-1.3%	MetroWest Tunnel Supply +$14.1M, Wachusett Reservoir Spillway Impr/Winsor Dam Repairs ($3.2M),Quabbin Transmission System +$2.7M, Winsor Dam Hydroelectric/Pipeline Replacement +$1.2M.
Distribution And Pumping	$749,935	$762,353	$12,418	1.7%	Spot Pond Supply Mains Rehab +$3.6M, SEH Redundancy & Storage +$2.2M, NIH Redundancy & Storage +$1.9M, Weston Aqueduct Supply Mains +$1.4M, Nor. Low Service Rehab Sect 8 +$471K, New Connecting Mains-Shaft 7 to WASM 3 ($436K).
Other	$30,761	$31,092	$331	1.1%	Central Monitoring System +$1M, Distribution Systems Fac. Mapping ($707K).
Business & Operations Support	$89,913	$105,068	$15,155	16.9%	Alternative Energy Initiatives +$10.3M, Equipment Purchase +$2.6M, Capital Maintenance Planning/Development +$2.1M.
Part B Total with Contingency					
Total MWRA without contingency	$4,981,042	$5,087,879	$106,837	2.1%	
Contingency	$110,757	$122,721	$11,964	10.8%	
Total CIP	$5,091,799	$5,210,600	$118,801	2.3%	

Appendix I

Ref No.	Program	Project	Subphase	Total Contract Amount	FY09-13 CAP	FY09-13 CAP
Wastewater Project Requests						
1	Interception & Pumping	Braintree-Weymouth Relief Facilities	Mill Cove Siphon Sluice Gates - Design & Construction	$600,000	$500,000	$100,000
2		I&P FAMP	Interceptor AP - Interceptor Renewal # 5 Milton Sections 607/609/610	$4,000,000		$4,000,000
3			Interceptor AP - Interceptor Renewal # 6 Chelsea Sections 12/14/15/62	$11,000,000		$11,000,000
4			New Neponset VFD Replacement	$300,000	$300,000	$0
Waterworks Project Requests						
5	Drinking Water Quality Improvements	John J. Carroll Water Treatment Plant	Technical Assistance No. 5	$563,000	$563,000	$0
6			Technical Assistance No. 6	$563,000	$563,000	$0
7		Quabbin Transmission System	CVA Intake Motorized Screen Replacement	$500,000		$500,000
8		Quabbin Transmission System	Wachusett Lower Gatehouse Roof, Masonry Restoration & Weatherproofing	$2,200,000		$2,200,000
9	Distribution And Pumping	Spot Pond Supply Mains - Rehab	Section 4 Webster Ave Bridge in Somerville Pipe Rehab Design	$500,000	$500,000	$0
			Section 4 Webster Ave Bridge in Somerville Pipe Rehab Construction	$1,500,000	$1,500,000	$0
10			Section 50 Pipe Rehab, Vicinity of Medford Housing Authority Design	$500,000	$500,000	$0
			Section 50 Pipe Rehab, Vicinity of Medford Housing Authority Design & Construction	$1,500,000		$1,500,000
11	Other Waterworks	Central Monitoring System	Winsor Dam Hi Line Replacement	$1,000,000	$1,000,000	$0
12		Local Water System Assistance Program	Loans	$200,000,000	$35,000,000	$165,000,000
			Repayments	($200,000,000)	($3,000,000)	-$197,000,000

Appendix I

Ref No.	Program	Project	Subphase	Total Contract Amount	FY09-13 CAP	FY09-13 CAP
Business & Ops Support Project Requests						
13	Business & Operations Support	Equipment Purchase	Front-End Loader	$210,000	$210,000	$0
14			High Lift Fork Loader (Lull)	$125,000	$125,000	$0
15		Alternative Energy Initiatives	Delauri Pump Station Wind	$4,750,000	$4,750,000	$0
16			JJ Carroll WTP Solar	$3,300,000	$3,300,000	$0
17			Deer Island Wind Phase II	$2,500,000	$2,500,000	$0

SUMMARY	Total Contract Amount	FY09-13 CAP	Beyond CAP
Total Wastewater Project Requests	**$15,900,000**	**$800,000**	**$15,100,000**
Total Waterworks Project Requests	**$8,826,000**	**$36,626,000**	**-$27,800,000**
Total Business & Ops Support Project Requests	**$10,885,000**	**$10,885,000**	**$0**
Total All New Projects Requests	**$35,611,000**	**$48,311,000**	**-$12,700,000**

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Boston Harbor - Vacant
Boston Harbor - Vacant
Connecticut River Basin - Vacant

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