

MASSACHUSETTS WATER RESOURCES AUTHORITY



Proposed Fiscal Year 2011 CURRENT EXPENSE BUDGET

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MASSACHUSETTS WATER RESOURCES AUTHORITY

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March 2010

Katherine Haynes Dunphy, Chairwoman
MWRA Advisory Board
11 Beacon Street
Boston, MA 02108

Dear Chairwoman Dunphy:

At the February 10, 2010 meeting the Board of Directors voted to transmit the FY11 Proposed Current Expense Budget to the Advisory Board for their review and comment.

In light of the current economic climate, MWRA and the Advisory Board have developed a multi-year rates management strategy in order to provide our customer communities with a modest rate increase in FY2011 and moderate, predictable rate increases in FY2012 and FY2013. The preliminary assessments reflect an average combined water and sewer rate revenue increase of 1.49% over FY2010 assessments - the lowest MWRA rate increase since 1996.

The goal of this multi-year strategy is to provide much needed rate relief in the short-term, preserve MWRA's high credit rating, and bridge the gap to FY2014 when we anticipate a sizeable release of reserves which will be available to mitigate rate increases going forward.

MWRA is continuing to cut costs wherever possible. Our direct expenses are level funded for the third year in a row, include no wage increases in FY2011 for union and non-union staff, and assumes a restructuring of \$75 million of debt to provide relief for the next three years.

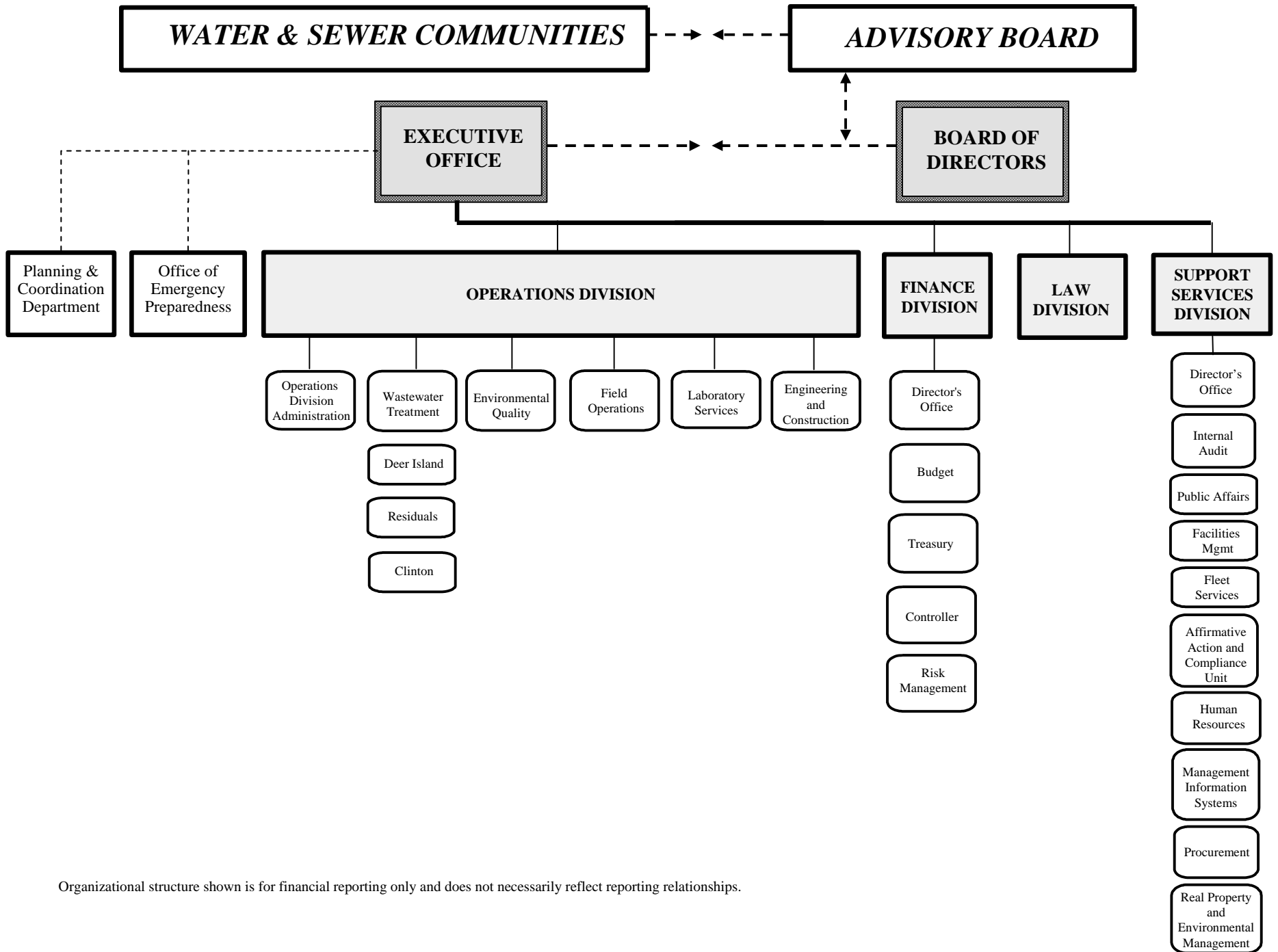
At \$602.8 million, total proposed expenses represent an increase of \$6.6 million or 1.1% over the FY10 budgeted expenses; however, the proposed budget recommends a reduction of \$1.8 million in operating expenses as result of aggressive cost control measures. The Authority is proposing to reduce debt service by \$31.4 million through a significant level of restructuring and a targeted defeasance resulting from the FY10 projected surplus.

Additional budget information and a copy of this document are available online at www.mwra.com. Questions or comments on this document should be directed to the MWRA Budget Department.

Thank you for your continued support.

Sincerely,

Frederick A. Laskey
Executive Director, MWRA



Organizational structure shown is for financial reporting only and does not necessarily reflect reporting relationships.

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Executive Summary

Executive Summary

MWRA Mission

The Massachusetts Water Resources Authority (MWRA) is an independent authority that provides wholesale water and sewer services to its member communities and funds its operations primarily through user assessments and charges. MWRA's mission is to provide reliable, cost-effective, high-quality water and sewer services that protect public health, promote environmental stewardship, maintain customer confidence, and support a prosperous economy. MWRA's long-term plan emphasizes improvements in service and systems and includes aggressive performance targets for operating the water and wastewater systems and maintaining new and existing facilities.

Parallel to MWRA's goal of carrying out its capital projects and operating programs is its goal of limiting rate increases by working in partnership with its member communities. The need to achieve and maintain a balance between these two goals continues to be the critical issue facing MWRA. A brief history and organizational summary of MWRA is included at the end of the Executive Summary.

During the year, MWRA measures actual performance on a monthly basis using various reporting tools. The monthly financial staff summary reports on actual spending versus the budget and provides summary explanations of the variances at the line item level. At least twice a year staff prepares projections for the year-end with a similar level of explanations. The performance indicator reports (the Orange and Yellow Notebooks) capture a variety of parameters regarding performance of each major functional area.

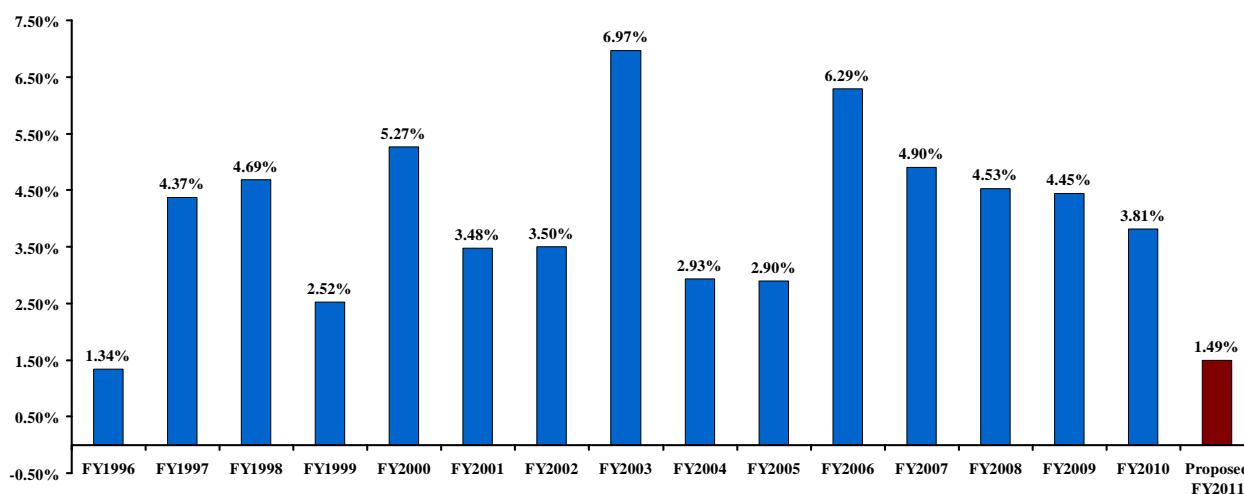
Overview

Each year, MWRA prepares a budget that reflects the best available information for anticipated expenditures and revenues. MWRA transmitted its FY11 Proposed Budget to the Advisory Board in February. The Advisory Board has sixty days to review, comment, and provide recommendations. MWRA also hosts a public hearing to solicit comments on the budget and community assessments from citizens in its service area. In June, MWRA's Board of Directors holds hearings on the budget to review recommendations by the Advisory Board and new information available since the budget was developed. Staff incorporate Board decisions from the hearings and present a final budget for approval in June.

FY11 Proposed Budget Summary

In recognition of the unprecedented budgetary challenges facing MWRA's member communities under the prevailing weak economy, the MWRA evaluated a variety of options to provide the lowest responsible rate increase in FY11 and moderate predictable rate increases through FY13. The FY11 Proposed Budget puts forth a 1.49% rate increase for FY11 which is the lowest rate increase in 15 years. As evidenced in the graph below, this is the lowest MWRA rate increase since 1996, a year in which the Authority received \$31.5 million in Debt Service Assistance (DSA) from the Commonwealth. For FY11, no Debt Service Assistance is assumed.

Historical Annual Rate Increases



The FY11 Proposed Budget recommends a combined increase in rates and charges of 1.49%. Total expenses are \$602.9 million, 1.1% above the FY10 Budget. Capital financing costs remain the largest component of the budget and account for 58.9% of total expenses. There are no offsets from Debt Service Assistance (DSA) assumed for FY11. Debt Service Assistance was reduced to \$350,000 in FY10 and later eliminated entirely in response to the State’s fiscal crisis. While capital financing costs remain the largest component of the budget, other escalating operating expenses continue to put pressure on the operating budget.

The Authority’s operations are energy intensive and rising energy costs over the past several years have put pressure on the operating budget. Utilities are the Authority’s third largest and most volatile line item in the direct expense category. As a result of increased self-generation at Deer Island due to improved Steam Turbine Generator (STG) operation and new green initiatives along with efficiency improvements in Field Operations, the total spending for utilities is budgeted at FY10 levels even with a 4% increase in commodity pricing for electricity. If oil and other energy prices continue to trade at current levels, the FY11 energy spending will nearly match budgeted FY10 energy spending; however, a return to more volatile energy markets would have a significant impact on this budget.

Total expenses include \$355.3 million for capital financing costs, 58.9% of total costs before offsets, and \$247.6 million or 41.1% for operating expenses, of which \$209.0 million is for direct expenses and \$38.5 million is for indirect expenses. Total expenses increased by \$6.6 million over the FY10 budget, \$8.4 million of which comes from increased capital financing expense offset by a \$1.8 million reduction in operating expenses.

The \$8.4 million net increase in capital financing expenses is the result of debt service associated with the projected issuances of \$100 million in May 2010 and \$80 million of revenue bonds in May 2011 as well as new State Revolving Fund (SRF) debt of \$57 million which is anticipated to be issued in May 2010 and an estimated issuance of \$85 million in FY11. Offsetting these new issuances, are the impacts of the defeasances completed in 2007, 2008 and 2009. These defeasances have decreased the FY10 through FY12 debt service requirements. Additionally, the FY11 Proposed Budget assumes the impact of restructuring \$75 million of certain maturities of the 2008 Series D & E bonds and the use of a projected

surplus in FY10 to defease up to \$23.6 million of debt service between FY11 and FY13.

The \$1.8 million reduction in operating expenses from the FY10 Budget includes \$570,000 for direct expenses and \$1.2 million in indirect expenses. The decline in direct expenses was primarily driven by revised indices for the Sludge Pelletization contract, a lower funded personnel headcount, and revised assumptions for Harbor and Outfall monitoring inspections based on preliminary discussions with the regulatory agencies. The decrease in indirect expenses of \$1.2 million reflects the \$1.9 million decrease in the Pension for retirement fund deposits based on an estimated actuarial report which recognizes the FY09 gains and a \$800,000 reduction for Other Post Employment Benefits (OPEB). These reductions are offset by an increase in Watershed/PILOT payments of \$1.2 million mainly due to increases for Payment in Lieu of Taxes (PILOT) estimates.

Total revenues of \$602.8 million are budgeted for FY11. The FY11 Proposed Rate Revenue Requirement is \$569.8 million, an increase of \$6.6 million or 1.49% over the FY10 Budget. The FY11 Proposed non-rate revenues total \$33.0 million, a decrease of \$1.8 million or 5.1% from the FY10 Budget which is primarily driven by a \$944,000 reduction in the Other User charges primarily due to a decrease for the Chicopee Valley Aqueduct (CVA) assessment due to a decrease in expenses and a prior period adjustment for FY09 expenses and the effect of the Town of Wilmington in the Rate Revenue base for the first time in FY11 and lower Investment Income of \$747,000. The FY11 Proposed non-rate revenue budget includes \$14.4 million for investment income, \$11.8 million in other user charges and other revenue - which includes an estimated \$1.7 million from the sale of renewable energy portfolio credits and demand response program, and the use of \$6.8 million in Rate Stabilization.

Table I-1 shows MWRA's FY11 Proposed Budget for revenue and expenses compared with the FY10 Budget and FY09 actual spending. Changes from FY10 to FY11 are described in the Revenue and Expense section of the Executive Summary.

Table I-1

TOTAL MWRA	FY09 Actual	FY10 Approved Budget	FY11 Proposed	Change FY11 Proposed vs FY10 Approved Budget	
				\$	%
EXPENSES					
WAGES AND SALARIES	\$ 88,624,447	\$ 91,711,114	\$ 91,151,296	\$ (559,818)	-0.6%
OVERTIME	2,990,600	3,408,791	3,178,791	(230,000)	-6.7%
FRINGE BENEFITS	16,579,652	16,578,832	16,416,310	(162,522)	-1.0%
WORKERS' COMPENSATION	1,841,638	1,325,000	1,870,000	545,000	41.1%
CHEMICALS	9,867,555	10,363,436	10,152,331	(211,105)	-2.0%
ENERGY AND UTILITIES	24,428,446	24,072,215	24,057,177	(15,038)	-0.1%
MAINTENANCE	27,443,721	28,259,673	29,225,401	965,728	3.4%
TRAINING AND MEETINGS	157,515	164,003	231,783	67,780	41.3%
PROFESSIONAL SERVICES	6,357,126	5,903,213	5,306,055	(597,158)	-10.1%
OTHER MATERIALS	4,630,791	4,603,647	4,898,708	295,061	6.4%
OTHER SERVICES	22,819,397	23,222,760	22,554,794	(667,966)	-2.9%
TOTAL DIRECT EXPENSES	\$ 205,740,888	\$ 209,612,684	\$ 209,042,646	\$ (570,038)	-0.3%
INSURANCE	\$ 1,994,022	\$ 2,316,000	\$ 2,216,000	\$ (100,000)	-4.3%
WATERSHED/PILOT	22,439,393	23,549,673	24,746,467	1,196,794	5.1%
SPECIAL PAYMENT OBLIGATION	53,743,500	-	-	-	
HEEC PAYMENT	4,142,047	3,877,500	3,964,256	86,756	2.2%
MITIGATION	1,416,686	1,481,367	1,518,401	37,034	2.5%
ADDITIONS TO RESERVES	1,743,337	(653,254)	(406,397)	246,857	-37.8%
RETIREMENT FUND	8,630,339	8,392,133	6,500,000	(1,892,133)	-22.5%
POSTEMPLOYMENT BENEFITS	-	800,000	-	(800,000)	-100.0%
TOTAL INDIRECT EXPENSES	\$ 94,109,324	\$ 39,763,419	\$ 38,538,727	\$ (1,224,692)	-3.1%
DEBT SERVICE (before offsets)	\$ 342,130,723	\$ 347,226,225	\$ 355,255,330	\$ 8,029,105	2.3%
VARIABLE RATE DEBT/OTHER	(11,309,667)	-	-	-	
BOND REDEMPTION	-	-	-	-	
DEBT SERVICE ASSISTANCE	-	(350,000)	-	350,000	-100.0%
TOTAL DEBT SERVICE	\$ 330,821,056	\$ 346,876,225	\$ 355,255,330	\$ 8,379,105	2.4%
TOTAL EXPENSES	\$ 630,671,268	\$ 596,252,328	\$ 602,836,703	\$ 6,584,375	1.1%
REVENUE & INCOME					
RATE REVENUE	\$ 540,819,000	\$ 561,431,000	\$ 569,800,000	\$ 8,369,000	1.49%
OTHER USER CHARGES	7,163,518	7,939,758	6,996,012	(943,746)	-11.9%
OTHER INCOME SPECIAL PMT	53,743,500	-	-	-	
OTHER REVENUE	7,210,575	4,371,736	4,757,414	385,678	8.8%
RATE STABILIZATION	5,073,365	7,312,438	6,833,317	(479,121)	-6.6%
INVESTMENT INCOME	19,769,035	15,197,396	14,449,960	(747,436)	-4.9%
TOTAL REVENUE & INCOME	\$ 633,778,993	\$ 596,252,328	\$ 602,836,703	\$ 6,584,375	1.1%

FY10 Accomplishments to Date

- Continued to manage through historically low yields on investments particularly short-term money market positions.
- Continued to hold high credit ratings from Standard and Poor's, Moody's Investor Service and Fitch Ratings.
- Continues to manage FY10 spending to allow for an estimated \$24 million defeasance with impacts on future Rate Revenue Requirements.
- The Authority aggressively pursued stimulus funding opportunities and obtained \$33 million of Federal stimulus funding for water and wastewater initiatives.
- Operated DITP without any NPDES Permit violations and treated 99% of flow through secondary and met secondary permit limits at all times during the first six months of FY10.
- Met all water quality disinfection standards in the drinking water system during the first six months of FY10.
- Managed eight permit agreements (three at Turkey Hill and five at Walnut Hill) including executing an amendment with Verizon, coordinating with the Town of Arlington, and improving invoicing system for maintenance reimbursements. Total revenue for the eight agreements is \$412,000 of which MWRA and the host community each receive half.
- Competitively bid CY09 Renewable Portfolio Standard certificates which resulted in FY10 revenue of \$328,975.
- Continued to leverage Deer Island's self-generation assets and participation in the competitive energy market to offset operating costs. The combined impact of participation in the Independent System Operators of New England (ISO-NE) load response program and the non-rate revenue from the sale of Renewable Portfolio Standards Program (RPS) resulted in net savings of \$728,000 year to date for FY10. Deer Island also self-generated 21% of the plant's total required power during this time period.
- Commenced operation of the new Blue Hills Covered Storage Tanks in August, 2009.
- Commenced acceptance testing and operations of two 600 kW wind turbines at DITP.

- Substantially completed the following projects:
 - Water System
 - Spot Pond Storage Facility Easement/Land Acquisition
 - Northern High Service – Revere & Malden Pipeline Improvement Construction-Revere Section 53
 - Wachusett Reservoir Spill Improvement/Winsor Dam Rehab Equipment Pre-Purchase
 - Northern Low Service Rehabilitation Section 8/Section 97A Construction
 - Wastewater System
 - Wastewater Central Monitoring Construction 2
 - DITP Asset Protection As-needed Design Phase 5-1 and 5-2
 - Interception & Pumping Facility Asset Protection Remote Headworks Concept Plan
 - North Dorchester Bay Tunnel Construction, Rescue, and Emergency Response
 - CSO Morrissey Boulevard Drain Design
- Recycled 50.06 tons of paper, 92.15 tons of scrap metal and 5,190 gallons of waste oil, generating \$16,083 in revenues.

SOURCES AND USES OF FUNDS

MWRA funds its operations primarily through member community assessments. Funds supporting the current expense budget are not subject to appropriation with the exception of debt service assistance. Table I-2 shows MWRA's sources and uses of funds for the FY11 Proposed Budget.

Table I-2

SOURCES & USES OF FUNDS*		
\$ in Millions		
<i>Sources of Funds</i>		
Other User Charges	\$7.0	1.2%
Other Revenue	4.8	0.8%
Investment Income	14.4	2.4%
Rate Revenue	569.8	94.5%
Rate Stabilization	6.8	1.1%
TOTAL REVENUE	\$602.8	100.0%
<i>Uses of Funds</i>		
Total Expenses before Debt		
Service Offsets	\$602.8	
Less:		
Debt Service Assistance	0.0	
Bond Redemption	0.0	
Sub-Total Net Expenses	602.8	
Capital Financing	355.3	58.9%
Direct Expenses	209.0	34.7%
Indirect Expenses	38.5	6.4%
TOTAL EXPENSES	\$602.8	100.0%
TOTAL EXPENSES Less Offsets	\$602.8	

REVENUE

MWRA is required by its enabling act to balance its budget each year by establishing user assessments for water and sewer services that provide funds sufficient to recover the cost of operations (excluding depreciation), maintenance and improvements, and debt service, as well as meeting required reserve levels.

In the FY11 Proposed Budget, 94.5% of revenue is derived from rate revenue. The remaining 5.5% of revenue will come from interest on investments, charges to other water and sewer customers, non-recurring revenue, annual charges to sewer system users with permits issued by MWRA's Toxic Reduction and Control Department (TRAC), penalties assessed to holders of sewer use permits, and other miscellaneous sources.

Rate Revenue

Under the FY11 Proposed Budget, MWRA will raise \$569.8 million of its total revenue requirements from water and sewer assessments to member communities. Of the \$569.8 million, \$389.6 million will fund the sewerage system, an increase of 1.89% as compared to FY10; and \$180.2 million will fund the water system, an increase of 0.63% as compared to FY10.

Non-Rate Revenue

Other User Charges

Other User Charges include revenues derived from the provision of water and sewer services to communities and other entities under special agreements. Other User Charges in the FY11 Proposed Budget total \$7.0 million and are composed of \$1.4 million in water revenue collected from sewer ratepayers to offset the cost of water used for operation at Deer Island, \$3.6 million paid by the Chicopee Valley Aqueduct communities, \$1.6 million in water revenue and \$363,000 in sewer revenue to contract communities and others, and \$651,000 in entrance fees paid by Stoughton and Wilmington.

Other Revenue

Other Revenue is budgeted at \$4.8 million, an increase of \$386,000 from the FY10 Budget mainly due to increased revenue for energy programs and increased monitoring fees. Other Revenue includes permit fees, penalties, hydro-power revenues, other miscellaneous revenues, and revenue from energy programs.

Permit Fees and Penalties

The FY11 Proposed Budget includes \$2.2 million in fees charged to industries that discharge toxic materials into the MWRA sewer system. These permit fees partially offset the annual costs of permitting, inspecting, and monitoring these industries.

Miscellaneous Revenue

The FY11 Proposed Budget includes \$2.6 million in miscellaneous revenues of which \$1.7 million pertains to the Authority's energy programs for the sale of Renewable Portfolio Standard credits and participation in the demand response program; \$111,000 is for hydro-power generation at the MWRA's Cosgrove Intake facility, and \$822,000 in other revenue.

Investment Income

MWRA earns income by investing reserves and fund balances in a variety of interest-yielding securities. The FY11 Proposed Budget includes \$14.4 million in investment income, a decrease of \$747,000 from the FY10 budget. The FY11 Proposed short-term interest rate is at 0.50%, 25 basis points less than the FY10 Budget rate of 0.75%. This assumption may still represent risk going forward, given that it is approximately 25-50 basis points higher than the current federal fund rate.

Non-Recurring Revenue

Non-Recurring Revenue is one-time revenue used in a given fiscal year to reduce assessments to member communities. In any fiscal year when annual revenues exceed expenses, MWRA may transfer the unexpended amount to the rate stabilization reserve. Within certain limits, MWRA may use this money to reduce the Rate Revenue Requirement in any subsequent year. Consistent with the requirements of its enabling act and its general bond resolution, MWRA treats transfers from the rate stabilization reserve as revenue in that fiscal year. For the FY11 Proposed Budget, \$6.8 million in Rate Stabilization fund usage is assumed.

Direct Program Expenses

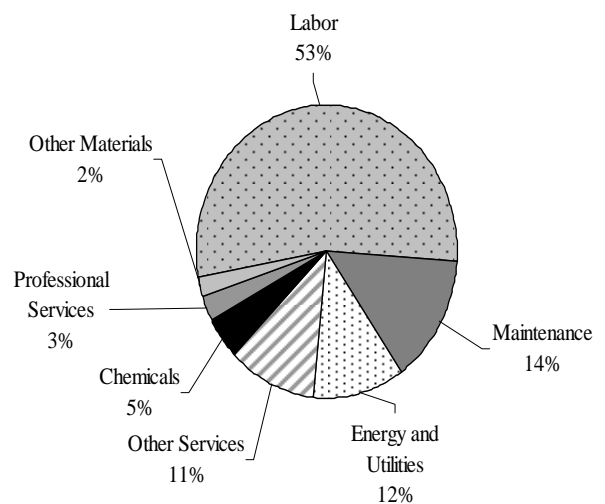
The FY11 Proposed direct program expense budget is \$209.0 million, a decrease of \$570,000 or 0.3% from the FY10 Budget. Revised indices for the Sludge Pelletization contract, a lower funded personnel headcount, and revised assumptions for Harbor and Outfall monitoring inspections based on preliminary discussions with the regulatory agencies are the principal drivers for the decrease. To address rising direct costs, the MWRA has actively moved to consolidate operation and maintenance facilities, reorganized and automated facilities, reduced leased space, sold surplus assets, negotiated competitive purchase agreements for energy and chemicals, and increased self-generation and utilization of digester gas for energy production.

Line Item Budget Summary

Figure I-1 combines related direct expense line items into general cost categories and shows that labor costs (wages and salaries, overtime, fringe benefits, workers' compensation and training and meetings) are the largest component of the direct expense budget (53%), followed then by maintenance (14%), energy and utilities (12%), and other services (11%).

Within the labor cost category, wages and salaries account for \$91.2 million, 0.6% lower than the FY10 Budget. Of the \$91.2 million, \$89.7 million is for regular pay. The proposed budget assumes a staffing level of 1,216 for FY11, offset by a 0.5% vacancy rate for a net average funded position count of 1,210, 12 fewer positions than the FY10 Budget. New hires and backfills of vacant positions will be managed in the aggregate and addressed on a case-by-case basis by senior management.

FIGURE I-1
Direct Expenses by Category - \$209.0 Million



Filled positions at MWRA have declined by 559 positions since the peak of 1,775 in March 1997 to 1,216 for FY11.

The proposed budget includes \$24.1 million for utilities, which is primarily level funded with the FY10 Budget. The budget assumes funding of \$19.3 million for electricity, \$2.1 million for diesel fuel, \$1.8 million for water and \$713,000 for natural gas. The FY11 Proposed energy and utilities budget reflects the most recent pricing outlook based on energy futures and on the latest power purchase contracts for Deer Island, the Carroll Water Treatment Plant and other large FOD facilities. Utilities are the Authority's third largest and the most volatile line item in the direct expense category. As a result of increased self-generation at Deer Island due to improved Steam Turbine operation and new green energy initiatives, along with efficiency improvements in Field Operations, the total spending for utilities is slightly lower than the FY10 Budget despite a 4% commodity price increase for electricity. In May 2009, the Authority entered into a 2-year power purchase agreement for Deer Island whereby they purchased a fixed 10 MW block of power and will purchase the remaining plant energy demand in the real-time market. With the addition of this new contract, the MWRA has fixed pricing for approximately 60% of its electric load with the remaining electricity demand being purchased in the real-time market.

As the Authority's major capital initiatives wind down, maintenance expenditures to preserve these operating assets and maintain its infrastructure will continue to grow. The FY11 maintenance budget is \$29.2 million, an increase of \$966,000 million or 3.4%, compared to the FY10 Budget. In comparison with FY09 actual spending, the increase is \$1.8 million or 6.5%. This demonstrates the Authority's continued commitment to maintaining its core operation related facilities and infrastructure.

The proposed budget includes \$22.6 million for other services, a decrease of \$668,000 or 2.9% from the FY10 Budget mainly due to reduced inflation assumptions for the sludge pelletization contract. The budget includes funding of \$14.0 million for sludge pelletization, \$3.3 million for Space/Lease rentals for the CNY and Chelsea facilities, and \$1.4 million for voice and data services.

The proposed budget includes \$10.2 million for chemicals, a decrease of \$211,000 or 2.0% from the FY10 Budget. The majority of the reduction results from dosage reductions partially offset by price increases. The FY11 Proposed Budget assumes one quarter of higher sodium bisulfite and sodium hypochlorite usage for regulatory requirements of enterococcus compliance at Deer Island.

Functional Area Budget Summary

For a broader perspective on MWRA's direct expense budget, Figure I-2 presents direct expenses by MWRA functional area and shows that 46% of the FY11 Proposed direct expense budget is for Wastewater Transport and Treatment costs, compared to 15% for Water Transmission, Treatment, and Distribution.

FIGURE I-2
Direct Expenses by Functional Area - \$209.0 Million

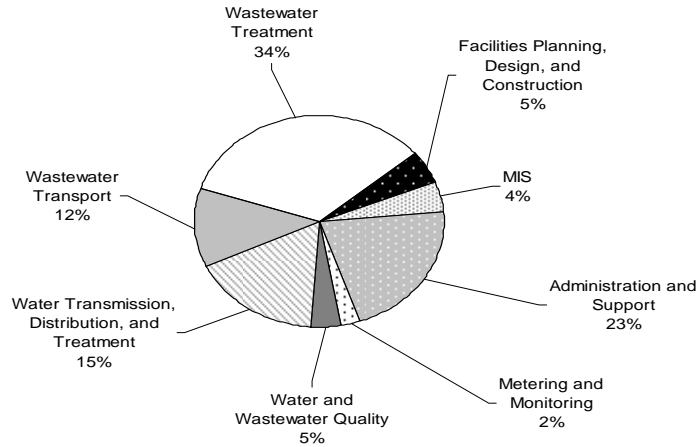
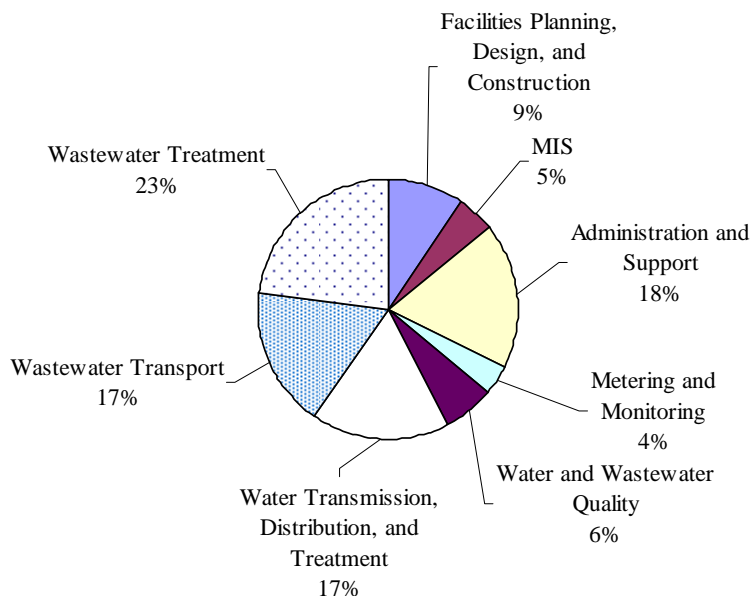


Figure I-3 illustrates staffing by Functional Area and shows the breakdown of the 1,207 filled positions as of December 2009. Of the 1,207 positions, 57% are devoted to operating and maintaining the water and wastewater treatment and transport systems; 23% to administration and support and MIS functions, and 9% to facilities planning, design, and construction. Water and Wastewater Quality functions and Meter and Monitoring account for the remaining 10% of staff.

FIGURE I-3
Staffing by Functional Area



Capital Financing

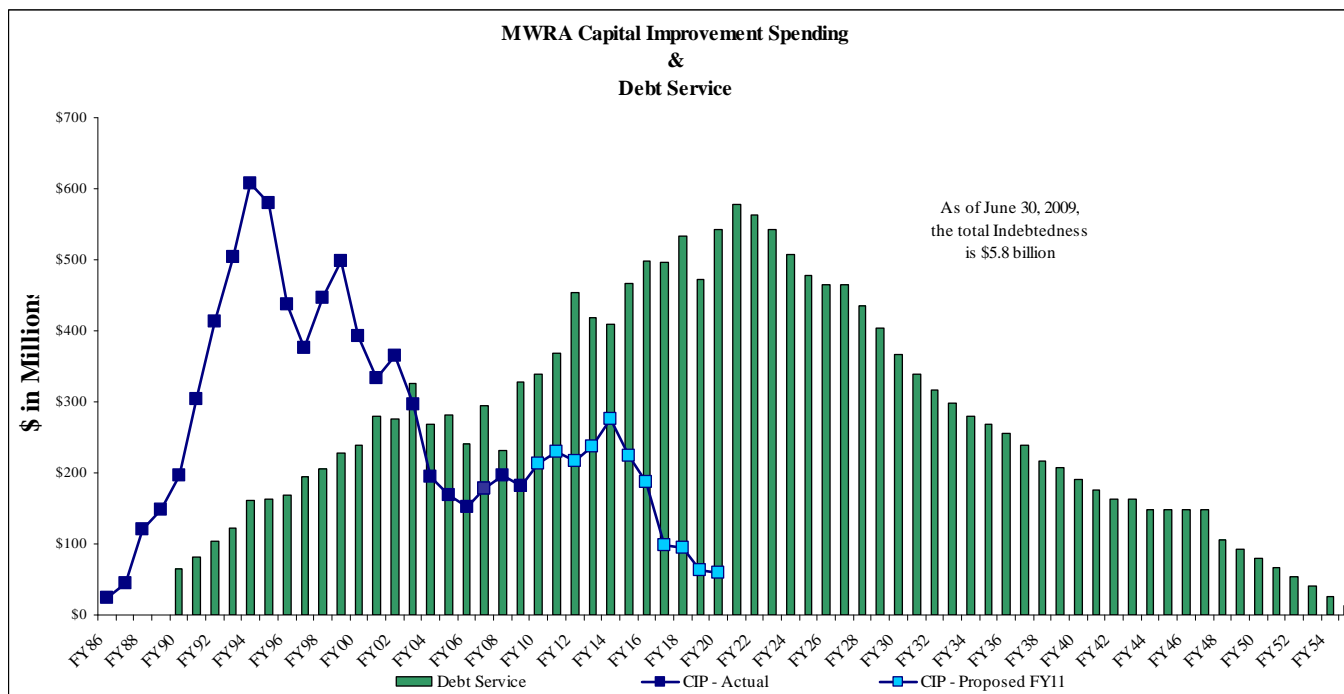
Outstanding Debt and Debt Management

The \$7.1 billion spent on MWRA’s modernization efforts to date, has relied heavily on debt financing. Total debt as of June 2009 was \$5.8 billion consisting of senior and subordinated debt, as well as Tax-Exempt Commercial Paper. The MWRA enjoys strong unenhanced senior debt ratings of Aa2, AA+, and AA from Moody’s, Standard & Poor, and Fitch, respectively.

The Authority’s debt service obligation as a percent of total expenses has increased from 36% in 1990 to 59% in the FY11 Proposed Current Expense Budget. Much of this debt service is for completed projects. MWRA’s capital spending, from its inception, has been dominated by court-mandated projects, which in total have accounted for 80% of capital spending to date. Going forward, the majority of capital spending will be geared towards asset protection and water redundancy initiatives.

The MWRA expects to finance the capital expenditures identified in the FY11 Proposed Capital Improvement Program (CIP) through the issuance of revenue bonds as provided for in the Enabling Act, and from the proceeds of federal and state grants and operating revenues. As of June 30, 2009, the MWRA’s indebtedness included \$3.2 billion of senior revenue bonds, approximately \$1.3 billion of subordinated revenue bonds, approximately \$1.1 billion of loans with the SRF and \$194 million of tax-exempt commercial paper notes.

The following graph illustrates the relationship between the MWRA’s CIP and outstanding debt as of June 2009.



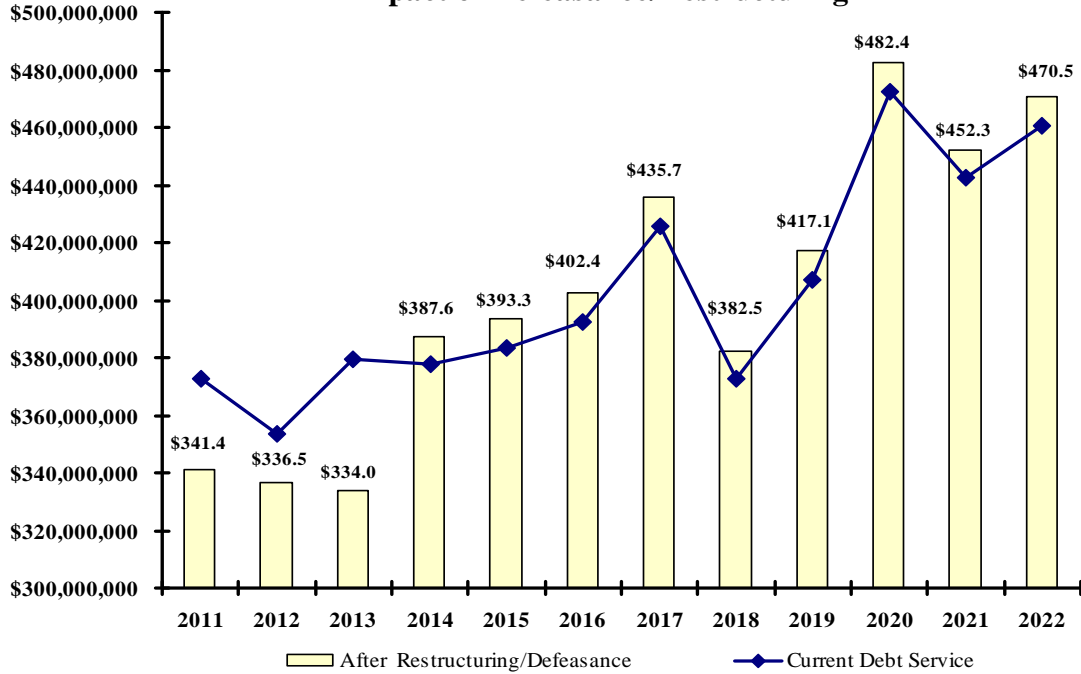
The Authority has actively managed its debt structure to take advantage of favorable interest rates. Tools used by the MWRA to lower borrowing costs and manage rates include maximizing use of the subsidized State Revolving Fund (SRF) debt, issuance of variable rate debt, current and advanced refunding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

The FY11 Proposed capital financing costs total \$355.3 million and remains the largest portion of the MWRA's budget, accounting for 58.9% of total expenses. The FY11 Proposed capital financing costs before offsets increased by \$8.4 million or 2.4% compared to the FY10 Budget. This increase in the MWRA's debt service requirement is the result of the new money which will be issued in FY10 and projected FY11 issuances partially offset by the impact of the restructuring and defeasance. The FY11 Proposed capital financing budget includes:

- \$198.7 million in principal and interest payments on MWRA's senior fixed rate bonds. This amount includes \$8.5 million to support issuances of \$100 million of new money in April 2010 and another \$80 million in May 2011;
- \$72.7 million in principal and interest payments on subordinate bonds;
- \$69.9 million in principal and interest payments on SRF loans. This amount includes \$11.2 million to support issuances of \$52 million in April 2010 and \$100 million in December 2010;
- \$7.2 million to fund ongoing capital projects with current revenue and to meet coverage requirements;
- \$3.4 million to fund the interest expense related to the Local Water Pipeline Assistance Program; and
- \$3.2 million for the Chelsea Lease.

The debt service budget assumes the impact of restructuring \$75.0 million of certain maturities of the 2008 Series D & E bonds and the use of a projected surplus in FY10 to defease up to \$23.6 million of debt service between FY11 and FY13. Over the FY11-13 timeframe, debt service will be reduced by \$93.5 million. The chart below details the impact of the restructuring and defeasance.

Impact of Defeasance/Restructuring



	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Current Debt Service	372.8	353.3	379.3	377.6	383.4	392.5	425.8	372.6	407.1	472.5	442.4	460.6
After Restructuring/Defeasance	341.4	336.5	334.0	387.6	393.3	402.4	435.7	382.5	417.1	482.4	452.3	470.5
Change	(31.4)	(16.8)	(45.3)	10.0	9.9	9.9	9.9	9.9	10.0	9.9	9.9	9.9

* \$ in Millions

Similarly in 2009, the Authority defeased approximately \$20 million in future debt service. The defeasance and redemption of these bonds decreased the FY10 and FY11 debt service requirements by approximately \$10.8 million and \$9.6 million, respectively. This defeasance was also accomplished using surplus funds.

The FY11 Proposed Budget assumes a 3.25% interest rate for variable rate debt which is 25 basis points lower than the FY10 assumption. The Authority’ variable rate debt assumption is comprised of three separate elements: the interest rate for the daily and weekly series, liquidity fees for the Standby Bond Purchase Agreement and Letter of Credit providers, and remarketing fees. While MWRA continues to experience unusually low interest rates, they are not reflective of historical averages and there is no guarantee that rates will stay low. The 20-year SIFMA interest rate average for variable rate debt is 3.03% and MWRA current average liquidity and remarketing costs are 67 basis points. The combination of these two costs results in an all-in average cost of approximately 3.70% which is 45 basis points higher than the budget assumption.

Table I-3 provides detail on the FY11 Proposed capital financing line item. Table I-3 also illustrates how upgrading the sewerage system has dominated the capital program to date. Nearly 70% percent of the Proposed FY11 capital financing is for wastewater improvements. Current and future borrowing increasingly support improvements to the water system. A complete list of the Authority's indebtedness by series is presented in Appendix F.

TABLE I-3				
FY11 Proposed Current Expense Budget - Capital Financing Detail (as of 12/31/09)				
\$ in Millions				
	Amount Outstanding	Total	Sewer	Water
Total SRF ¹ Debt	\$1,057	\$69.9	\$54.8	\$15.2
Total Senior Debt	3,193	198.7	126.3	72.4
Total Subordinate Debt	1,332	72.7	58.4	14.4
Total SRF and Debt Service²	\$5,582	\$341.4	\$239.4	\$102.0
Water Pipeline Commercial Paper	194	3.4	0.0	3.4
Current Revenue/Capital ³		7.2	5.4	1.8
Capital Lease		3.2	2.0	1.2
Sub-Total	\$194	\$13.9	\$7.4	\$6.4
Total Capital Financing (before Debt Service Offsets)	\$5,776	\$355.3	\$246.9	\$108.4
Debt Service Offsets:				
Debt Service Assistance		0	0	0
Total Capital Financing	\$5,776	\$355.3	\$246.9	\$108.4

¹ SRF debt service payments reflect net MWRA obligations after state and federal subsidies.

² Numbers may not add due to rounding.

³ Current Revenue/Capital is revenue used to fund ongoing capital projects.

Indirect Expenses

Indirect Expenses for FY11 total \$38.5 million, a decrease of \$1.2 million or 3.1% less than the FY10 Budget. Despite the significant increase for the Division of Conservation and Recreation (DCR), total Indirect Expenses are below the FY10 level. Below are the highlights of major changes:

Insurance

MWRA purchases property and casualty insurance from external insurance carriers and self-insures for the first \$2.5 million of property and general liability loss per occurrence. The MWRA also purchases Worker's Compensation Excess insurance with a self-insured limit of \$500,000 per claim. The FY11 Proposed Budget includes \$2.2 million for premiums, fees, and self-insured claims, a \$100,000 or 4.3% decrease from the FY10 Budget. The budget includes \$1.8 million for premiums and fees and \$430,000 for the projected cost of claims made against the self-insured portion of MWRA coverage. MWRA mitigates the budgetary risk of self-insurance by maintaining an Insurance Reserve. The reserve, which was established as part of the Bond Resolution, requires that an independent insurance consultant review the funding level every three years and provide recommendations as to its adequacy. The current funding

level of \$19.0 million has been determined to be acceptable and reasonable based on a FY07 Insurance Reserve Fund review performed by an outside insurance consultant. An updated Insurance Reserve adequacy review is currently underway.

Watershed Reimbursement/PILOT

The Enabling Act directs MWRA to pay the Commonwealth of Massachusetts for several statutory obligations: Payment in Lieu of Taxes (PILOT) for Commonwealth-owned land in the watersheds, operating expenses of the Division of Water Supply Protection, and debt service costs for purchases of land around the supply reservoirs to protect the watersheds. The FY11 Proposed Budget includes \$24.7 million for Division of Water Supply Protection (formerly MDC Division of Watershed Management), an increase of \$1.2 million or 5.1% over the FY10 Budget. The budget is comprised of \$12.2 million for reimbursement of operating expenses, \$6.9 million for Payment in Lieu of Taxes (PILOT), and \$5.6 million for debt service expenses on prior land purchases financed by the Commonwealth.

Harbor Electric Energy Company (HEEC)

The FY11 Proposed Budget includes \$4.0 million for the Harbor Energy Electric Company (HEEC), an increase of \$87,000 or 2.2% from the FY10 Budget. This funding is for the repayment of the capital investment of the Deer Island electric cable and substation which provides electric power to the treatment plant.

Mitigation

MWRA disburses mitigation funds to communities affected by MWRA projects or facilities pursuant to MWRA's Statement of Mitigation Principles and/or specific agreements with communities. MWRA mitigation may include relieving the direct impacts of construction, meeting environmental and regulatory requirements, long-term operating agreements, or community compensation for impacts over and above those addressed by other mitigation. In rare situations, where the extent and duration of the impact of a project or facility on a community is such that restoring the area to its pre-project state is insufficient to relieve the stress of MWRA's presence during the project, MWRA funds or contributes to improvements to affected areas.

Mitigation expenses are funded in the capital budget and in the current expense budget. The FY11 Proposed Budget includes \$1.5 million for community compensation for impacts, including \$790,000 for the City of Quincy and \$728,000 for the Town of Winthrop, based on Memoranda of Agreement with the communities.

Retirement System Contribution

The FY11 Proposed Budget includes a contribution to MWRA's retirement fund of \$6.5 million, a decrease of \$1.9 million or 22.5% versus the FY10 Budget. The FY11 funding of \$6.5 million is significantly lower than the minimum contribution of \$9.2 million required under the January 1, 2009 actuarial study. The FY11 Proposed Budget is based on an estimate which reflects recent market gains and a new January 1, 2010 evaluation which is currently being developed to formalize the revised contribution levels.

GASB 45 – Accounting and Reporting by Employers for Postemployment Benefits Other than Pensions

The Authority has complied with the GASB 45, *Accounting and Financial Reporting by Employers for Postemployment Benefits Other than Pensions (OPEB)*, by disclosing this liability in the year-end Financial Statements. As part of the multi-year strategy to address its unfunded liabilities for OPEB and pension holistically, the Board approved redirection of OPEB related expenses to the pension fund in the form of optional payments. In the past two years, the MWRA has redirected approximately \$10.4 million to the pension fund. However, given the current financial climate, there are no optional payments budgeted for the pension fund in FY11 and there is no budgeted OPEB funding.

Operating Reserves

Funding for the Operating Reserve for FY11 is \$406,000 lower than the FY10 Budget and reflects reduced expenses. The Operating Reserve balance is in compliance with MWRA General Bond Resolution which requires a balance of one-sixth of annual operating expenses. Based on the FY11 Proposed Budget, the required balance is \$37.2 million versus the \$37.6 million required in FY10.

Community Profile and Assessments

MWRA provides wholesale water and sewer services to 61 communities or local bodies. Forty-nine local bodies purchase water supply services, and 45 local bodies purchase wastewater transport and treatment services. Thirty local bodies purchase both. Approximately 2.8 million people, or 42% of the population of Massachusetts, live and work in the communities that purchase water and/or wastewater services from MWRA.

MWRA's largest single customer is the Boston Water and Sewer Commission (BWSC), which provides retail services in the City of Boston. In the FY11 Proposed Current Expense Budget, rate revenue from BWSC will account for 31% of MWRA's total rate revenue. Table I-4, on page I-18, lists MWRA communities, the services received, and the preliminary MWRA assessments for FY11.

Each year MWRA determines preliminary wholesale water and sewer assessments in February and final assessments in June before the beginning of the new fiscal year. These assessments must satisfy the statutory requirement that MWRA fully recover its budgeted water and sewer costs by apportioning net costs among its wholesale water and sewer customers.

Table I-5 on page I-19 presents the calculation of MWRA's FY11 Proposed Rate Revenue Requirement. The table shows that most of MWRA's current expenses are directly attributable to either water or sewer service costs, or to investment in the water or sewer systems. Expenses that support both systems are allocated to water or sewer assessments based on generally accepted cost allocation principles. The allocation methodology used in preparing the FY11 Proposed Budget was revised prior to FY02 to more accurately estimate the division of support costs between the water and sewer programs. Investment income and other revenues offset water and sewer expenses. The resulting net cost of water and sewer services is the amount MWRA recovers through water and sewer assessments.

Wholesale Assessment Methodology

MWRA calculates separate user assessments for water and sewer services. Budgeted water operating and capital costs are allocated based on each community's share of total water use for the most recent calendar year. The sewer assessment methodology allocates budgeted operating and maintenance costs based on share of wastewater flow and strength parameters, and capital costs based on proportion of maximum flow, strength, and population. MWRA uses three-year averaging of wastewater flows to calculate the flow-related components of wholesale sewer assessments. Flow averaging moderates the short-term impact of year-to-year changes in community flow, but does not eliminate the long-term impact of changes in each community's relative contribution to the total flow. Beginning in FY07, MWRA sewer assessments were allocated in part on flow data from the Authority's new wastewater metering system. MWRA began using flow data from the new metering system in April 2005.

MWRA Fully Served Water and Sewer Customers	Final FY10 Water Assessment	Preliminary FY11 Water Assessment	Percent Change from FY10	Final FY10 Sewer Assessment	Preliminary FY11 Sewer Assessment	Percent Change from FY10	Final FY10 Combined Assessment	Preliminary FY11 Combined Assessment	Percent Change from FY10
ARLINGTON	\$3,893,299	\$3,993,340	2.6%	\$6,732,264	\$6,761,270	0.4%	\$10,625,563	\$10,754,610	1.2%
BELMONT	2,094,622	2,183,280	4.2%	4,161,876	4,233,727	1.7%	6,256,498	6,417,007	2.6%
BOSTON (BWSC)	66,256,569	67,377,110	1.7%	108,380,160	109,902,866	1.4%	174,636,729	177,279,976	1.5%
BROOKLINE	5,216,987	5,310,862	1.8%	10,824,841	11,276,122	4.2%	16,041,828	16,586,984	3.4%
CHELSEA	2,978,069	3,118,910	4.7%	5,739,883	6,155,760	7.2%	8,717,952	9,274,670	6.4%
EVERETT	4,552,198	4,152,168	-8.8%	6,530,382	6,612,606	1.3%	11,082,580	10,764,774	-2.9%
FRAMINGHAM	6,531,365	6,448,218	-1.3%	9,517,520	9,981,088	4.9%	16,048,885	16,429,306	2.4%
LEXINGTON	4,482,551	4,745,093	5.9%	6,245,946	6,404,432	2.5%	10,728,497	11,149,525	3.9%
MALDEN	5,658,857	5,494,013	-2.9%	10,367,785	10,586,011	2.1%	16,026,642	16,080,024	0.3%
MEDFORD	4,761,277	5,061,181	6.3%	10,318,684	10,348,242	0.3%	15,079,961	15,409,423	2.2%
MELROSE	2,048,045	2,093,320	2.2%	5,148,514	5,244,247	1.9%	7,196,559	7,337,567	2.0%
MILTON	2,122,571	2,290,290	7.9%	4,520,576	4,534,855	0.3%	6,643,147	6,825,145	2.7%
NEWTON	8,662,740	8,710,520	0.6%	17,548,082	18,087,335	3.1%	26,210,822	26,797,855	2.2%
NORWOOD	3,017,939	2,875,398	-4.7%	5,565,811	5,559,616	-0.1%	8,583,750	8,435,014	-1.7%
QUINCY	9,360,041	9,387,744	0.3%	16,761,810	17,146,210	2.3%	26,121,851	26,533,954	1.6%
READING	1,737,501	1,726,878	-0.6%	3,844,457	3,921,051	2.0%	5,581,958	5,647,929	1.2%
REVERE	4,039,752	4,086,484	1.2%	8,782,042	9,551,140	8.8%	12,821,794	13,637,624	6.4%
SOMERVILLE	5,889,612	5,958,943	1.2%	12,507,364	12,818,822	2.5%	18,396,976	18,777,765	2.1%
STONEHAM	2,673,786	2,710,209	1.4%	3,963,348	4,035,449	1.8%	6,637,134	6,745,658	1.6%
WALTHAM	7,149,732	7,639,702	6.9%	11,731,972	11,903,366	1.5%	18,881,704	19,543,068	3.5%
WATERTOWN	2,807,488	2,683,079	-4.4%	5,149,170	5,270,203	2.4%	7,956,658	7,953,282	0.0%
WINTHROP	1,247,329	1,239,532	-0.6%	2,999,987	2,870,349	-4.3%	4,247,316	4,109,881	-3.2%
TOTAL	\$157,182,330	\$159,286,274	1.3%	\$277,342,474	\$283,204,767	2.1%	\$434,524,804	\$442,491,041	1.8%

MWRA Sewer and Partial Water Customers	Final FY10 Water Assessment	Preliminary FY11 Water Assessment	Percent Change from FY10	Final FY10 Sewer Assessment	Preliminary FY11 Sewer Assessment	Percent Change from FY10	Final FY10 Combined Assessment	Preliminary FY11 Combined Assessment	Percent Change from FY10
CANTON	\$2,316,722	\$2,245,811	-3.1%	\$3,256,556	\$3,239,776	-0.5%	\$5,573,278	\$5,485,587	-1.6%
NEEDHAM	427,332	265,017	-38.0%	5,028,493	5,042,674	0.3%	5,455,825	5,307,691	-2.7%
STOUGHTON	485,781	560,611	15.4%	4,013,770	4,208,150	4.8%	4,499,551	4,768,761	6.0%
WAKEFIELD	1,408,297	1,519,711	7.9%	4,942,223	5,032,362	1.8%	6,350,520	6,552,073	3.2%
WELLESLEY	831,203	1,039,510	25.1%	4,743,999	4,799,784	1.2%	5,575,202	5,839,294	4.7%
WILMINGTON	0	100,782	100.0%	1,985,771	1,962,929	-1.2%	1,985,771	2,063,711	3.9%
WINCHESTER	812,945	836,681	2.9%	3,366,865	3,469,502	3.0%	4,179,810	4,306,183	3.0%
WOBURN	\$2,670,355	\$1,713,327	-35.8%	9,931,347	9,290,253	-6.5%	12,601,702	11,003,580	-12.7%
TOTAL	\$8,952,635	\$8,281,450	-7.5%	\$37,269,024	\$37,045,430	-0.6%	\$46,221,659	\$45,326,880	-1.9%

MWRA Sewer-only Customers	Final FY10 Water Assessment	Preliminary FY11 Water Assessment	Percent Change from FY10	Final FY10 Sewer Assessment	Preliminary FY11 Sewer Assessment	Percent Change from FY10	Final FY10 Combined Assessment	Preliminary FY11 Combined Assessment	Percent Change from FY10
ASHLAND				\$1,869,649	\$1,942,030	3.9%	\$1,869,649	\$1,942,030	3.9%
BEDFORD				2,929,353	2,872,130	-2.0%	2,929,353	2,872,130	-2.0%
BRAINTREE				6,880,530	7,088,312	3.0%	6,880,530	7,088,312	3.0%
BURLINGTON				4,366,388	4,446,581	1.8%	4,366,388	4,446,581	1.8%
CAMBRIDGE				21,019,359	21,617,301	2.8%	21,019,359	21,617,301	2.8%
DEDHAM				4,740,776	4,714,000	-0.6%	4,740,776	4,714,000	-0.6%
HINGHAM SEWER DISTRICT				1,368,516	1,433,639	4.8%	1,368,516	1,433,639	4.8%
HOLBROOK				1,325,371	1,379,259	4.1%	1,325,371	1,379,259	4.1%
NATICK				4,219,801	4,345,113	3.0%	4,219,801	4,345,113	3.0%
RANDOLPH				4,821,993	4,909,365	1.8%	4,821,993	4,909,365	1.8%
WALPOLE				3,104,740	3,115,227	0.3%	3,104,740	3,115,227	0.3%
WESTWOOD				2,072,034	2,157,463	4.1%	2,072,034	2,157,463	4.1%
WEYMOUTH				9,010,767	9,313,871	3.4%	9,010,767	9,313,871	3.4%
TOTAL				\$67,729,277	\$69,334,291	2.4%	\$67,729,277	\$69,334,291	2.4%

MWRA Water-only Customers	Final FY10 Water Assessment	Preliminary FY11 Water Assessment	Percent Change from FY10	Final FY10 Sewer Assessment	Preliminary FY11 Sewer Assessment	Percent Change from FY10	Final FY10 Combined Assessment	Preliminary FY11 Combined Assessment	Percent Change from FY10
LYNNFIELD WATER DISTRICT	\$456,370	\$362,005	-20.7%				\$456,370	\$362,005	-20.7%
MARBLEHEAD	1,768,433	1,805,608	2.1%				1,768,433	1,805,608	2.1%
NAHANT	340,192	303,713	-10.7%				340,192	303,713	-10.7%
SAUGUS	2,700,713	2,972,346	10.1%				2,700,713	2,972,346	10.1%
SOUTHBOROUGH	666,245	625,916	-6.1%				666,245	625,916	-6.1%
SWAMPSCOTT	1,380,309	1,462,442	6.0%				1,380,309	1,462,442	6.0%
WESTON	1,438,311	1,367,778	-4.9%				1,438,311	1,367,778	-4.9%
TOTAL	\$8,750,573	\$8,899,808	1.7%				\$8,750,573	\$8,899,808	1.7%

MWRA Partial Water-only Customers	Final FY10 Water Assessment	Preliminary FY11 Water Assessment	Percent Change from FY10	Final FY10 Sewer Assessment	Preliminary FY11 Sewer Assessment	Percent Change from FY10	Final FY10 Combined Assessment	Preliminary FY11 Combined Assessment	Percent Change from FY10
DEDHAM-WESTWOOD WATER DISTRICT	\$7,234	\$781	-89.2%				\$7,234	\$781	-89.2%
LYNN (LWSC)	159,682	169,958	6.4%				159,682	169,958	6.4%
MARLBOROUGH	2,901,191	2,390,943	-17.6%				2,901,191	2,390,943	-17.6%
NORTHBOROUGH	823,787	793,981	-3.6%				823,787	793,981	-3.6%
PEABODY	312,793	392,317	25.4%				312,793	392,317	25.4%
TOTAL	\$4,204,687	\$3,747,980	-10.9%				\$4,204,687	\$3,747,980	-10.9%

SYSTEMS TOTAL	\$179,090,225	\$180,215,512	0.63%	\$382,340,775	\$389,584,488	1.89%	\$561,431,000	\$569,800,000	1.49%
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Retail Charges

As noted above, MWRA provides water and sewer services to communities on a wholesale basis. Each community then re-sells services on a retail basis. As a result, household water and sewer charges include each household's share of the community's MWRA water and sewer assessments, plus the community's own charges for the provision of local water and sewer services.

Each community independently establishes retail rates. When establishing local rates, community officials consider issues related to the pricing of services, level of cost recovery, and the local rate structure or methodology. Several factors contribute to a broad range of local rate structures in the MWRA service area:

- Differences in the extent to which water and sewer costs are supported through property taxes and other sources of revenue;
- Differences in the means by which communities finance investments in their own water and sewer systems; and
- Differences in communities' retail rate methodologies.

Some communities have flat unit rates, while others have inclining block rates. Local rates may also provide for differentials among classes of users, such as higher rates for commercial or industrial users, abatements to low-income or elderly residents, and adjusted sewer rates for customers with second meters used for lawn irrigation.

Additional information on rate structure within the member communities is available on the MWRA Advisory Board website as part of its annual retail rate survey.

TABLE I-5
Calculation of the PFY11 Rate Revenue Requirement
(000's)

	Sewer	Water	Total
Allocated Direct Expenses	\$146,661	\$62,381	\$209,043
Allocated Indirect Expenses	\$10,159	\$28,380	\$38,539
PLUS			
Capital Expenses:			
Debt Service (less offsets)	\$239,441	\$101,961	\$341,403
Current Revenue for Capital	\$5,400	\$1,800	\$7,200
Other Capital Expenses	\$2,009	\$4,644	\$6,653
PLUS			
Non-Rate Revenue:			
Investment Income	-\$9,615	-\$4,835	-\$14,450
Fees and Other Revenue	-\$4,471	-\$7,283	-\$11,753
Rate Stabilization	\$0	-\$6,833	-\$6,833
EQUALS			
Rate Revenue Requirement	\$389,584	\$180,216	\$569,800

Revenue and Expenditure Trends

Because MWRA is required by its enabling act to balance its budget and to establish annual assessments to cover all expenses, revenue must change in concert with the changes in expenses each year. The Rate Revenue Requirement in any year is the difference between MWRA expenses and other revenue sources, most notably investment income and debt service assistance from the Commonwealth (which directly reduces debt service expense). For FY11, community assessments will represent 94.5% of total revenue.

MWRA also updates its estimates of anticipated revenues and expenses over a multi-year planning horizon. These estimates provide a context for budget discussions and allow MWRA to consider multiple-year rates management implications and strategies as it evaluates alternative capital and operating budget options.

The table below and Appendix D (in more detail) present future rate revenue requirements for FY11 through FY20.

Rates & Budget Projections										
FY11 Proposed CEB	FY2011	FY2012	FY2013	FY2014	FY2015	FY2016	FY2017	FY2018	FY2019	FY2020
Total Rate Revenue (\$ in 000)	\$ 569,800	\$ 592,299	\$ 615,689	\$ 663,651	\$ 715,311	\$ 763,160	\$ 814,749	\$ 791,711	\$ 853,613	\$ 942,465
Rate Revenue Change from Prior Year (\$000)	\$ 8,369	\$ 22,499	\$ 23,390	\$ 47,962	\$ 51,660	\$ 47,849	\$ 51,588	\$ (23,037)	\$ 61,902	\$ 88,852
Rate Revenue Increase	1.49%	3.9%	3.9%	7.8%	7.8%	6.7%	6.8%	-2.8%	7.8%	10.4%
Use of Reserves (\$ in Mil)	\$ 6,833	\$ 2,359	\$ 1,543	\$ 32,624	\$ 16,316	\$ -	\$ 7,636	\$ -	\$ -	\$ -

Increasing debt service to finance the capital improvement program is the most important factor driving estimates of future budget increases. Over the past several years MWRA's tax-exempt commercial paper program, debt refinancing, federal grants, SRF loans, and Commonwealth debt service assistance have mitigated the impact on ratepayers of new capital spending. However, new water system improvements, for which there are fewer non-ratepayer sources of funding, and the impact of new financing will increase MWRA capital financing costs over the next several years.

MWRA employs rates management tools where available (e.g. refunding for savings, extended maturities on future borrowings, variable rate debt, and increased use of tax-exempt commercial paper) to help cushion and smooth the growth in capital financing expenses. Despite these initiatives, the size of the capital program will unavoidably continue to drive increases in community assessments.

The second largest budget factor is projected growth of base operating costs. The estimated \$84.4 million increase in direct expenses from FY11 to FY20 is primarily the result of an assumed inflation rate of 3.0% in FY12 and 4.0% annually thereafter. Also, over the next ten years, there will be increases in direct expenses as a result of capital improvement projects. The largest increases will be for the operation of new facilities such as the North Dorchester Bay CSO which will have incremental impacts beginning in FY12.

MWRA's planning estimates are projections based on a series of assumptions about future spending (operating and capital), interest rates, inflation, and other factors. The assumptions include:

- No Debt Service Assistance is projected;
- Direct expense inflation rate of 3.0% in FY12 and 4.0% thereafter;
- CIP inflation rate of 2.5%;

- Capital spending based on 85% of the CIP expenditure forecast with 10% (two-thirds of the 15% reduction) added back three years later;
- Long-term fixed rate debt issues with 40-year terms and 5% interest rates in FY11, 40-year terms 5.5% in FY12, and 40-year terms of 5.75% in FY13-30;
- Variable rate interest projected at 3.25% in FY11, 3.75% in FY12 and 4.0% thereafter.

MWRA uses the planning estimates to present a picture of what future rate increases might be and to test the impact of changes to assumptions. The planning estimates are not predictions of rate increases; rather, they provide the context and framework for the policy decisions that actually shape future Rate Revenue Requirements and increases.

The planning estimates generally use conservative assumptions to help communities plan for future payments to MWRA.

There are several areas where differences from planning estimate assumptions may alter projected increases:

- Changes in anticipated borrowing rates or expected investment income rates;
- The planning estimates do not factor in any positive year-end variances which may be used to defease debt or reserved to offset Rate Revenue Requirements in future years;
- More opportunities for SRF borrowing than expected; a dollar borrowed through the SRF at 2% replaces the need to borrow a dollar long-term at an assumed 5% rate;
- Debt refinancing opportunities;
- Capital spending; and
- Growth in direct expenses, greater than current assumptions is an area of increased concern. Many of the savings in prior years through staffing reductions, optimization of operations, and scope revisions to professional services are already reflected in the budget. More importantly, going forward the MWRA is faced with a growing need to maintain its facilities and ensure that adequate funding is available.

Managing rate increases in the coming years may involve tradeoffs between smaller increases in the upcoming fiscal year and significantly larger increases in subsequent years.

FY11 Proposed Capital Improvement Program

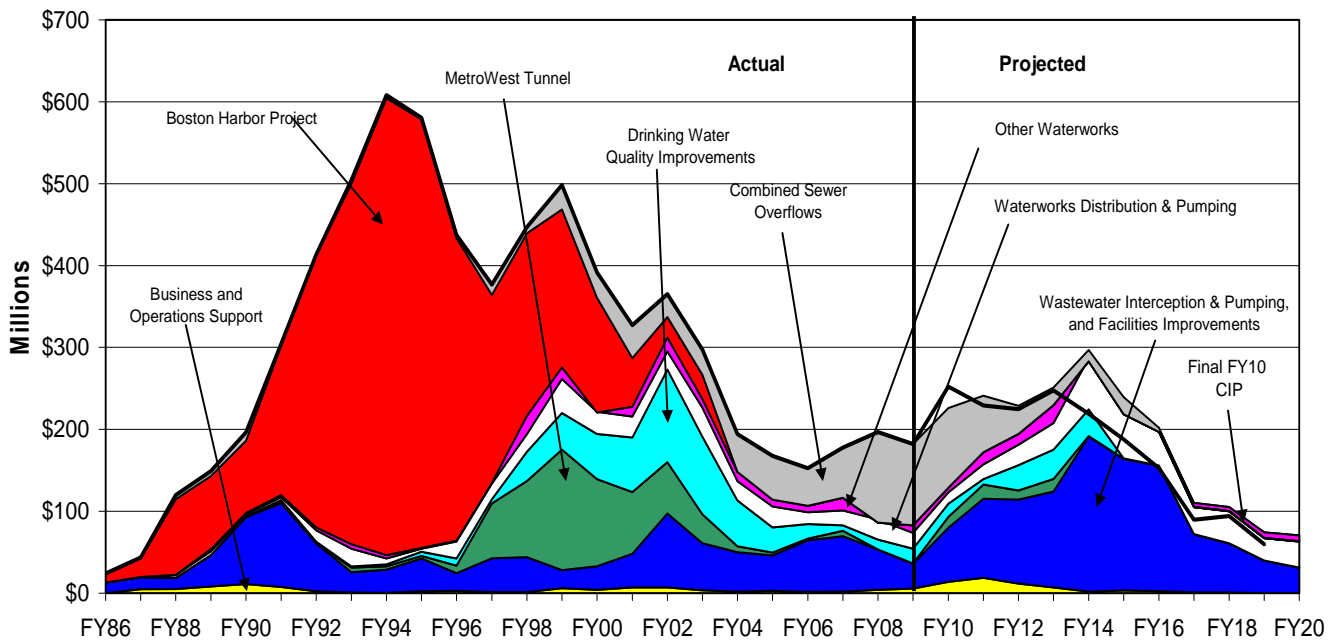
The FY11 Proposed Capital Improvement Program (CIP) budget totals \$5.1 billion, of which nearly \$3.1 billion has been expended through FY09 with a balance of \$2.0 billion remaining to be expended. The CSO program is the largest remaining program initiative in terms of spending with an FY11 Proposed Budget of \$876.3 million of which \$621.6 million has been expended through FY09. The CSO Program accounts for \$314.5 million or 29% of Authority spending over the FY09-13 period.

The capital investment in the MWRA's operating facilities has been primarily funded through the proceeds of \$5.8 billion in long-term borrowings, and the debt service on this indebtedness represents a significant and growing portion of the Authority's operating budget.

As the MWRA matures as an agency, a greater proportion of its capital budget is designated for Asset Protection initiatives, absent new regulatory mandates, to preserve these operating assets. This long-term strategy for capital work is identified in the Authority's Master Plan which was published in 2006 and serves as a road map for inclusion of projects in the CIP in every proposed budget cycle.

The graph below highlights major capital improvement spending by program categories, both completed (actual) and remaining (projected).

MWRA CAPITAL PROGRAM FY1986-2020



MWRA's Green Initiatives

Building upon its track record in sustainable resource use – most notably dramatic system-wide reductions in water demand, 100% beneficial reuse of sludge, self-generation of approximately 25% of Deer's Island power needs, and maximizing revenue through hydropower – MWRA continues to work aggressively to use its resources efficiently and reduce the environmental impacts of its daily operations. The FY11 Proposed Current Expense Budget (CEB) projects that Deer Island self-generation will grow to 28% mostly due to Steam Turbine Generation (STG) operation. The MWRA is on track to meet the Governor's initiative that 30% of power demand be met by green sources. Key initiatives now underway or planned for FY11 include the following:

- Design/build Request For Proposal to upgrade Deer Island STG generating an additional 5 million kwh/year of power from digester gas scheduled to go on-line September 2010.
- Second battery of 180 kW solar panels at Deer Island expected to go on-line Spring 2010.
- Installation of 1.5 MW wind turbines at Nut Island with a start up date of November 2011.
- Installation of a 1.5 MW wind turbine at the DeLauri pump station with a start up date of March 2011.
- Construction of 200 kW hydropower turbine/generator at Loring Road to generate 1.2 million kWh annually.
- Continue design/permitting of Wachusett Hydropower.
- Review the feasibility of a new hydro facility at Lonergan intake.
- Installation of 478 kW of solar power to be installed at Carroll Water Treatment Plant in March 2011.
- Conduct additional Wind Feasibility studies at various locations to assess if additional opportunities exist.
- Retrofit of diesel-powered vehicles and equipment and continued purchase of alternative fuel vehicles. Of the 378 vehicles in MWRA's fleet, 249 are powered by alternative fuel.
- Initial responses to comprehensive energy audits at the Water Treatment Plant, the Chelsea Facility, and Deer Island Treatment Plant facilities are already yielding energy savings.

MWRA will continue to assign high priority in its capital and current expense budgets to projects which demonstrate its commitment to energy efficiency and environmental sustainability and will seek to maximize grant funding to improve the economic efficiency of green energy projects.

Stimulus Funding

The MWRA will be awarded \$33.0 million in stimulus funding based on the American Recovery and Reinvestment Act (ARRA) signed by President Obama on February 17, 2009. This funding will be distributed through the State Revolving Fund (SRF) program and will be administered as principal forgiveness loans to fund eligible drinking and clean water projects. This program is projected to save the Authority an estimated \$40.9 million in debt service payments. Of the \$33.0 million in stimulus funding, \$9.2 million will support Green Infrastructure projects, specifically the Carroll Water Treatment Plant and Deer Island photovoltaic projects, Loring Road Hydroelectric conduit and the DeLauri Pump Station Wind Turbine initiative.

FY11 Proposed CIP

As shown in Table I-6 below, the MWRA's total capital budget is \$5.1 billion with an estimated \$3.1 billion spent through FY09 and \$2.0 billion remaining to be expended. Wastewater System Improvements represent \$1.2 billion or 59.2% of remaining spending. Budgeted spending for FY11 is \$229.1 million.

Table I-6

	Total Contract	Spending thru FY09	Remaining Balance	FY10	FY11	FY12	FY13	FY09-13	Beyond FY13
Wastewater	\$2,550.9	\$1,341.4	\$1,209.5	\$146.4	\$153.2	\$123.4	\$116.3	\$663.1	\$670.2
Waterworks	\$2,432.0	\$1,655.3	\$776.7	\$54.3	\$58.5	\$83.1	\$114.0	\$362.7	\$466.8
Business and Operations Support	\$105.1	\$48.6	\$56.5	\$12.9	\$17.4	\$11.0	\$6.5	\$53.5	\$8.7
Total MWRA	\$5,087.9	\$3,045.3	\$2,042.6	\$213.7	\$229.1	\$217.4	\$236.8	\$1,079.2	\$1,145.6

FY11 Proposed Capital Budget Highlights

The FY11 Proposed CIP is \$1.08 billion for fiscal years 2009-2013, and projected spending of \$1.15 billion beyond FY13 which is primarily driven by spending on new projects from the Master Plan. The FY14-18 spending window is \$879.5 million, but this forecast will grow in future budget cycles as additional Master Plan projects are incorporated into the CIP. The FY11 Proposed CIP includes a total of 99 new projects/sub-phases from the Master Plan, seven added in FY11 Proposed CIP, with the highest priority ratings totaling \$19.1 million. A total of \$1.06 billion in new projects has been added to the CIP since the Master Plan was adopted.

Highlights of Project Changes from the FY10 Final CIP to the FY11 Proposed CIP

The FY11 Proposed CIP represents updated spending and schedules for projects contained in the FY10 Final CIP and new spending on 17 new water and wastewater projects and subphases which total \$35.6 million. These additional projects and subphases represent those capital initiatives outside of the FY10 Final CIP that staff recommends as most essential to assure reliable service to MWRA's customers.

The FY11 Proposed CIP increased \$106.8 million or 2.1% above the FY10 Final CIP approved by the Board in June 2009, however, spending on projects in the FY09-13 CAP period decreased by \$10.5 million. The total project level increase is due to updated cost estimates of \$62.5 million, new project requests totaling \$35.6 million mainly for Interceptor Renewal and Alternative Energy initiatives, and updated inflation estimates of \$8.7 million. It is important to note that a new phase of the Local Water Pipeline Assistance Loan Program of \$200.0 million was added in the FY11 Proposed CIP. Although this loan program has a net zero impact on the CIP after the loans are repaid, it represents an additional \$32.0 million of spending in the FY09-13 timeframe.

Table I-7 describes the dollar and percent changes by major program between the FY10 Final and the FY11 Proposed CIP for the total project level and for the FY09-13 timeframe.

Table I-7

	FY10 Final	FY11 Proposed	\$ change	% change	FY09-13 \$ change	FY09-13 % change
Wastewater Systems Improvement	\$2,461.5	\$2,550.9	\$89.4	3.6%	-\$11.0	-1.6%
Waterworks System Improvement	\$2,429.6	\$2,431.9	\$2.3	0.1%	-\$12.2	-3.2%
Business and Operations Support	\$90.0	\$105.1	\$15.1	16.9%	\$12.7	31.1%
Total MWRA without contingency	\$4,981.1	\$5,087.9	\$106.8	2.1%	-\$10.5	-1.0%

Contingency

Contingency for each fiscal year is incorporated into the Capital Improvement Program to fund the uncertainties inherent in construction programs. MWRA uses a contingency budget to cover these costs in the event they exceed the Approved Budget. The contingency budget is calculated as a percentage of budgeted expenditure outlays. Specifically, contingency is 7% for non-tunnel projects and 15% for tunnel projects. The total contingency budget for the CIP (FY10-FY20) is \$123.1 million with \$49.6 million allocated to the FY09-13 timeframe.

	Total Budget	FY09	FY10	FY11	FY12	FY13	FY09-13	Beyond 13
Contingency	\$123.1	\$0.0	\$12.1	\$12.0	\$11.3	\$14.2	\$49.6	\$73.5

Major Planned Spending for Fiscal Year 2010

Capital spending in FY11 is estimated to be \$229.1 million. Spending will be driven by several large projects, including the ten projects listed below, which account for 79% of budgeted FY11 spending:

Table I-8

Project	Total Contract	FY11 Spending	%
S.206 DI Treatment Plant Asset Protection	500,727	66,742	29.1%
S.359 Reserved Channel Sewer Separation	78,567	22,151	9.7%
S.339 North Dorchester Bay	222,508	17,278	7.5%
S.604 MetroWest Tunnel/Lower Hultman Rehab	699,719	16,016	7.0%
S.765 Local Water Pipeline Imp. Loan Program	0	13,461	5.9%
S.935 Alternative Energy Initiatives	24,402	10,844	4.7%
S.360 Brookline Sewer Separation	24,024	10,564	4.6%
S.145 I&P Facility Asset Protection	160,415	8,428	3.7%
S.346 Cambridge Sewer Separation	59,945	8,172	3.6%
S.104 Braintree-Weymouth Relief Facilities	237,056	7,252	3.2%
Top 10 FY11 Spending	2,007,363	180,908	79.0%
FY11 Spending	5,087,875	229,096	100.0%

CIP Impact on Current Expense Budget Table I-9

In addition to the annual financing costs included in the Current Expense Budget, the Capital Improvement Program affects the annual operating budget when capital facilities come on-line and require adjustments to operating budgets. In prior years, completion of the Deer Island Treatment Plant, the Carroll Water Treatment Plant, and the residuals processing facility in Quincy resulted in significant increases in operating expenses. New facilities are adding operating costs of approximately \$900,000 and MIS program related maintenance initiatives are increasing operating costs by nearly \$800,000 by FY20. These increases will be more than offset by anticipated savings for energy initiatives at Deer Island, most notably the digester gas fueled Steam Turbine Generator (STG) upgrade as well as water and wastewater Alternative Energy Initiatives including solar, wind and hydroelectric power projects which will result in energy savings. The following table summarizes projected CIP impact by project over the next 10 years.

Fiscal Year	CEB Impacts (000)									
	FY12	FY13	FY14	FY15	FY16	FY17	FY18	FY19	FY20	Total
DI Asset Protection	(\$197)	(\$88)	(\$372)	(\$114)	\$0	\$0	\$0	(\$91)	(\$95)	(\$958)
FERS Biofilter	0	0	0	(20)	(21)	0	0	0	0	(41)
Clinton Wastewater Treatment Plant/Aeration Efficiency Improvement	(23)	(24)	0	0	0	0	0	0	0	(47)
Wastewater Alternative Energy Projects	(633)	(621)	0	0	0	0	0	0	0	(1,255)
North Dorchester Bay	464	0	0	0	0	439	0	0	0	902
Total Wastewater (inflated)	(\$390)	(\$734)	(\$372)	(\$135)	(\$21)	\$439	\$0	(\$91)	(\$95)	(\$1,400)
Carroll Water Treatment Plant	\$0	\$0	\$0	\$87	\$0	\$0	\$0	\$0	\$0	\$87
Quabbin Water Treatment Plant	0	40	14	0	0	0	0	0	0	54
Wachusett Algae Treatment Facility	0	0	0	23	24	0	0	0	0	47
Alternative Energy	(256)	0	0	(152)	0	0	0	0	0	(409)
Total Water (inflated)	(\$256)	\$40	\$14	(\$42)	\$24	\$0	\$0	\$0	\$0	(\$220)
Phase II: TRAC Replacement	\$61	\$0	\$167	\$0	\$0	\$0	\$0	\$0	\$0	\$228
Phase V: LIMS Replacement, GIS & OMS	0	0	208	0	0	0	0	0	0	208
SAN II	0	0	0	116	0	0	0	0	0	116
SAN III	0	0	0	0	0	0	0	136	0	136
NET 2020	0	0	56	0	0	0	0	0	0	56
Telecommunications	0	0	0	0	0	0	0	34	0	34
Total Business and Operations Support (inflated)	\$61	\$0	\$431	\$116	\$0	\$0	\$0	\$169	\$0	\$777
TOTAL MWRA	(\$586)	(\$694)	\$73	(\$61)	\$3	\$439	\$0	\$78	(\$95)	(\$843)

Capital Financing and Grant Revenues

In the past, MWRA has been able to finance approximately 20 percent of its capital spending with grant receipts, totaling approximately \$1.1 billion through FY03. However since FY03, the MWRA has received only \$4.9 million in capital grants. In addition to participating in federal and state grant programs, the MWRA will also benefit from the American Recovery and Reinvestment Act of 2009 which is projected to forgive approximately \$33 million in State Revolving Fund loan principal. The Authority will continue to pursue grant funding and take advantage of any possible program available to maximize grant funding opportunities.

MWRA expects to borrow the majority of funds necessary for future capital spending. Borrowing will include the issuance of fixed and variable rate revenue bonds; borrowing from the Commonwealth's Water Pollution Abatement Trust (also known as the State Revolving Loan Fund or SRF), and a tax-exempt commercial paper program.

MWRA Organization and History

The MWRA Enabling Act

MWRA was created by legislative act in 1984, and inherited the Sewerage and Waterworks Divisions of the Commonwealth of Massachusetts Metropolitan District Commission (MDC). In July 1985, MWRA assumed control of the water and sewer systems, including facilities, properties, and the right to utilize water withdrawn from system reservoirs. The Commonwealth, under the management of the MDC Watershed Management Division (now the Department of Conservation and Recreation – Division of Watershed Management), retained ownership of real property, including the reservoirs and watersheds.

The Enabling Act also established the MWRA Advisory Board to represent the cities and towns in the service area. The Advisory Board appoints three members of the MWRA Board of Directors, approves the extension of water and sewer services to additional communities, and reviews and makes recommendations on MWRA's annual Current Expense Budget and Capital Improvement Program.

In 1987, the legislature transferred responsibility to operate and maintain the Clinton Wastewater Treatment Plant from the Commonwealth to MWRA.

History and Accomplishments

In 1985, the U.S. District Court for Massachusetts found MDC in violation of numerous aspects of the federal Clean Water Act, and the responsibility for those violations passed to MWRA as successor to MDC. The court issued a detailed compliance schedule for actions to be taken by MWRA to achieve and maintain compliance with the Clean Water Act.

MWRA achieved all of the milestones in the schedule related to the construction of treatment facilities on Deer Island, and is working to achieve milestones with respect to implementation of its long term Combined Sewer Overflow (CSO) control plan. These achievements have made noticeable, measurable improvements in the quality of Boston Harbor and its beaches.

MWRA is also working to achieve compliance with an extensive consent order issued by the

Massachusetts Department of Environmental Protection (DEP) mandating the steps necessary to achieve required improvements to the MWRA water system.

Since taking over operation and maintenance of the water and sewer systems from MDC, MWRA has increased annual investment in the system infrastructure from an average of \$11 million per year to an average of more than \$350 million per year between (FY90 to FY08). This investment has greatly improved the operating efficiency of the existing water and sewer systems, protecting fresh water sources and improving the water quality in Boston Harbor.

MWRA Rates Management

Between FY96 and FY02 the MWRA limited rate revenue increases to an average of 3.6% annually as a result of debt service assistance from the Commonwealth, federal grants to support the Boston Harbor Project, lower borrowing costs, use of financing tools that delayed costs to later years, a favorable bid climate for construction projects, and aggressive efforts to control capital and operating costs.

As debt service costs resulting from mandated capital investment have steadily increased, MWRA's dependence on rising debt service assistance (DSA) allocations have similarly increased. DSA reached a high of \$52.9 million in FY02. In FY03, in response to a state-wide recession, debt service assistance was eliminated and as a result, MWRA was forced to have an unprecedented mid-year rate adjustment, increasing the rate increase from 2.9% to 6.9% as part of an overall strategy in response to cover the loss. The Authority cut \$420 million from its capital improvement program and \$47.2 million from the current expense budget through various budget cuts including layoffs. Reductions in debt service assistance result in greater reliance on reserves, budget cuts or a combination of these two elements. In response to a strengthening local economy, debt service assistance was restored in FY05 at the level of \$8 million. In the following three years, the debt service allocation increased to \$9.6 million in FY06, \$19.0 million in FY07, and \$17.0 million in FY08. In light of the economic downturn in FY09, the Commonwealth was forced to eliminate the \$15.0 million appropriation in October 2008. The MWRA, after an aggressive budget cutting process, combined with favorable spending trends, was able to make-up this shortfall without a mid-year rate increase. For the FY11 Proposed Budget, no Debt Service Assistance is assumed.

Planning estimates for 2011 through 2020 forecast rate revenue requirement increases of 3.9% annually for the next two years, 7.8%, 7.8%, 6.7%, 6.8%, -2.8%, 7.8%, and 10.4% in years 2014, 2015, 2016, 2017, 2018, 2019, and 2020 respectively.

In FY06, the MWRA formed a Rates Management Committee to evaluate the Authority's debt portfolio and credit structure to propose recommendations that deliver responsible short-term solutions for mitigating imminent rate spikes and long-term strategies for achieving predictable and sustainable rates. In line with the Board of Directors' strategy to deliver long-term predictable and sustainable rates for our 61 ratepayer communities, the MWRA initially preserved the scheduled use of its reserves for future years when projected rate increases are more significant.

In recognition of the unprecedented economic climate affecting MWRA's member communities and ratepayers is a multi-year problem, staff evaluated a variety of options to provide the lowest responsible rate increase in FY11 and moderate predictable rate increases through FY13.

The FY11 Proposed Budget:

- Refines planning estimates assumptions to provide greater predictability of future assessments for member communities;
- Judiciously uses reserves to lower rate increases, but maintain adequate balances;
- Responsibly restructures debt for relief; and
- Employs a multi-year strategy to mitigate rate increases in the following three years without potentially jeopardizing the Authority's high credit rating.

MWRA Organization

MWRA has historically had seven divisions. Based on the October 2009 Board approval, a new division was formed called Administration and Finance which includes the Finance units, Human Resources, MIS and the majority of the Support Division. This organization change will be reflected in the FY11 Final Budget.

Each division provides operations or support services to carry out MWRA's activities under the direction of the Executive Office. MWRA's organizational structure is included in the document before the Table of Contents.

The **Executive Office** provides centralized MWRA management, direction, and policy development. The budget includes funds for the Office of the Executive Director, the Board of Directors, the Advisory Board, and other advisory committees.

The MWRA created the **Office of Emergency Preparedness** in November 2005 by consolidating its security and emergency response functions throughout the agency. The Department is responsible for oversight of the security and emergency response policies and procedures, implementation of the Emergency Response Plan, and training of the Site Characterization Team.

The **Planning and Coordination Department** provides decision support on planning, policy and operations matters. It provides regulatory, public policy and public health advocacy for MWRA's drinking water and wastewater programs and administers financial assistance programs to improve the infrastructure of member communities.

The **Operations Division** operates the water and wastewater treatment systems; the water transmission and distribution system; the wastewater collection, transport, and combined sewer overflow (CSO) systems; and the residuals processing facility. It also provides laboratory and engineering and construction services; enforces sewer use regulations and seeks to limit the discharges of toxic materials; manages environmental studies of Boston Harbor and Massachusetts Bay; and monitors water quality.

The **Finance Division** is responsible for budgeting, rate setting, accounting, grants management, risk management, treasury activities, and securing financing to support the capital improvement program.

The **Law Division** provides legal counsel to all divisions on compliance with federal and state law, real estate matters, labor and employment law, litigation, and construction issues. Division attorneys provide or supervise through outside counsel the representation of MWRA in all litigation.

The **Support Services Division** oversees the central functions of communications and community relations, real property and environmental management, human resources, affirmative action, procurement, materials warehousing, occupational health and safety, internal audit, fleet services, computer system development and management, library and records management, and mail and employee shuttle services.

Statement of Financial Position

In accordance with its enabling act, each year MWRA submits annual reports to the Governor, the President of the State Senate, the House of Representatives, the Advisory Board, and the Chairs of the State Senate and House Committees on Ways and Means containing financial statements relating to its operations maintained in accordance with Generally Accepted Accounting Principles in the United States of America (GAAP) and, commencing with the annual reports for 1986, audited by independent certified public accountants. MWRA's audited financial statements at June 30, 2009 and 2008 are available online at www.mwra.com.



Executive Office
Budget

EXECUTIVE OFFICE

Proposed FY11 Current Expense Budget						
EXECUTIVE DIVISION						
LINE ITEM	FY08 Actual	FY09 Actual	FY10 Budget	FY11 Proposed	Change FY10 to PFY11	
WAGES & SALARIES	\$ 388,759	\$ 395,729	\$ 407,086	\$ 406,486	\$ (600)	-0.1%
OVERTIME	-	-	-	-	-	-
ONGOING MAINTENANCE	-	-	-	-	-	-
TRAINING & MEETINGS	985	-	1,110	700	(410)	-36.9%
PROFESSIONAL SERVICES	163,537	165,949	177,100	163,587	(13,513)	-7.6%
OTHER MATERIALS	3,546	3,474	1,385	3,585	2,200	158.8%
OTHER SERVICES	436,813	452,881	457,690	457,824	134	0.0%
TOTAL	\$ 993,640	\$ 1,018,033	\$ 1,044,371	\$ 1,032,182	\$ (12,189)	-1.2%

Proposed FY11 Current Expense Budget						
EXECUTIVE DIVISION by Department						
DEPARTMENT	FY08 Actual	FY09 Actual	FY10 Budget	FY11 Proposed	Change FY10 to PFY11	
EXECUTIVE OFFICE / BOARD OF DIRECTORS	\$ 396,195	\$ 402,381	\$ 412,593	\$ 413,783	\$ 1,190	0.3%
ADVISORY BOARD / OTHER COMMITTEES	597,445	615,652	631,778	618,399	(13,379)	-2.1%
TOTAL	\$ 993,640	\$ 1,018,033	\$ 1,044,371	\$ 1,032,182	\$ (12,189)	-1.2%

The **Executive Office** provides executive management and guides the implementation of MWRA policies established by the Board of Directors. It is responsible for developing and implementing specific goals and programs to achieve MWRA's primary mission of providing reliable and efficient water and sewer services, improving water quality, and for creating a framework within which all divisions can operate effectively. The Executive Office oversees a centralized MWRA-wide security program to preserve and protect MWRA facilities, systems and employees.

The Executive Office includes the Office of Emergency Preparedness and the Planning and Coordination Department, and has direct oversight of the Internal Audit, Public Affairs and AACU Department, which are funded as part of the Support Services budget.

FY11 Goals:

- Ensure delivery of reliable and cost-effective water and sewer services to customer communities.
- Ensure that water supply and wastewater collection and treatment preserve public health and protect natural resources.
- Continue to aggressively pursue renewable and sustainable energy resources to reduce the environmental impacts of daily operations, increase energy efficiencies and reduce overall operating costs.
- Garner support from key constituents for MWRA programs.

The Executive Office budget supports the Executive Director's Office (which includes the Board of Directors cost center), the MWRA Advisory Board and Advisory Committees cost centers. The Board of Directors formulates policies to guide MWRA actions and is responsible for major policy and fiscal decision-making. The MWRA Advisory Board was established by the Enabling Act to serve as a “watchdog” for MWRA’s customer communities. The Advisory Board makes recommendations to MWRA on annual expense budgets and capital improvement programs. In addition, the Advisory Board reviews and comments on MWRA reports, holds hearings on related matters, and makes recommendations to the Governor and the Legislature. The other advisory committees supported by this budget are the Water Supply Citizens' Advisory Committee and the Wastewater Advisory Committee. The Executive Office budget accounts for less than 1% of the FY11 Proposed Budget.

Budget Highlights:

- Total FY11 Proposed Budget of \$1,000,000, a decrease of \$12,000 or 1.2% from FY10 Budget.
- \$406,000 for **Wages and Salaries** represents 39.4% of the Executive Office budget. The proposed budget includes funding for four positions.
- \$455,000 or 44.3% of the Executive Office proposed budget is for the MWRA Advisory Board staff. The proposed budget supports its operating expenses, including wages and salaries, space rental and general administrative office materials and supplies and is level funded to the FY10 Budget.
- \$164,000 or 16% of the Executive Office proposed budget is for **Professional Services** to fund the Water Supply Citizens’ Advisory Committee and the Wastewater Advisory Committee.

OFFICE OF EMERGENCY PREPAREDNESS

Proposed FY11 Current Expense Budget OFFICE OF EMERGENCY PREPAREDNESS						
LINE ITEM	FY08 Actual	FY09 Actual	FY10 Budget	FY11 Proposed	Change FY10 to PFY11	
WAGES & SALARIES	\$ 240,963	\$ 335,281	\$ 396,375	\$ 356,154	\$ (40,221)	-10.1%
ONGOING MAINTENANCE	216,872	425,531	376,633	383,883	7,250	1.9%
TRAINING & MEETINGS	(1,177)	-	-	-	-	-
PROFESSIONAL SERVICES	1,812,091	1,838,392	1,660,223	1,616,610	(43,613)	-2.6%
OTHER MATERIALS	191,274	39,583	51,317	51,317	-	0.0%
OTHER SERVICES	8,232	9,305	20,820	21,252	432	2.1%
TOTAL	\$ 2,468,255	\$ 2,648,092	\$ 2,505,368	\$ 2,429,216	\$ (76,152)	-3.0%

The **Office of Emergency Preparedness (OEP)** was created in November 2005 to consolidate Authority-wide security and emergency response functions. It is responsible for oversight of the MWRA’s security and emergency response plans, policies and procedures; implementation and training for the Emergency Response Plan; and management, training, and outfitting of the Emergency Service Unit, which will respond to any intentional or accidental contamination of the water supply.

The Director of Emergency Preparedness reports directly to the Executive Director with a matrix reporting relationship to the Chief Operating Officer. In addition, the Safety/Security Manager for Deer Island will continue to report to the Deer Island Director with a matrix reporting relationship to the Director of Emergency Preparedness to include this major facility in all Authority-wide emergency-planning efforts.

FY11 Goals:

- Develop and implement policies and programs to provide security, critical infrastructure protection and emergency planning for the MWRA’s water and wastewater systems.
- Equip, train and command the Emergency Service Unit (ESU).
- Develop and exercise emergency plans and procedures.
- Manage and direct contract security guard and system maintenance contracts.

FY11 Initiatives:

- Continue the building of new Emergency Response Plans for all Wastewater facilities.
- Began procurement process for the new security services contract.
- Will increase the ESU and FOD capabilities to respond to spills inside Water and Wastewater facilities.
- Continue with the implementation of changing the MWRA radio system to new frequencies as part of the national frequency reallocation program.
- Started the process of outfitting the Nut Island Headworks with an integrated surveillance and security system and develop security specifications for the Ward Street and Columbus Park Headworks projects.

FY10 Accomplishments:

- Completed new security gates at DITP and Chelsea facilities.
- Using one of two Department of Homeland Security (DHS) grants, built and fielded a mobile emergency laboratory, equipped with a Gas Chromatography/Mass Spectrometer Unit in order to support field water quality incident response and fielded new multi gas monitors, funded with a separate DHS grant that will replace current gas meters.
- Completed the procurement process for a new security systems maintenance contract.
- Completed the security system installations at the Chelsea Headworks and Blue Hills Covered Storage Facilities.

Budget Highlights:

- Total FY11 Proposed Budget of \$2.4 million, is a decrease of \$76,000 or 3.0% from FY10 Budget, primarily due to a decrease in professional services.
- \$356,000 for **Wages and Salaries**, a decrease of \$40,000 or 10.1% from FY10 Budget, primarily due to the elimination of funds for staff whose salary is included in the Deer Island Operations budget. The Proposed Budget includes funding for four existing positions.
- \$384,000 for **Ongoing Maintenance**, a slight increase of \$7,000 or 1.9% from FY10 Budget, mainly to cover expected contractual increases in the security systems maintenance service contracts, programming and systems integrations services. The proposed budget includes funding of \$259,000 to cover the MWRA-wide security systems preventative maintenance and repair service, \$104,000 for MWRA-wide Security systems maintenance materials and equipment, including cameras, intrusion detection, card readers, and \$22,000 for the Intrusion alarm annual and semi-annual monitoring services contracts..
- \$1.6 million for **Professional Services**, a decrease of \$44,000 or 2.6% from FY10 Budget, primarily due to revised scope of security staffing at the DITP and CNY facilities. The FY11 Proposed Budget includes \$536,000 for security services contract for the Chelsea facility, \$574,000 for DITP facility, \$330,000 for the Carroll Water Treatment Plant, and \$29,000 for the CNY facility.
- \$51,000 for **Other Materials**, level funded to FY10 Budget. The proposed budget includes \$27,000 for Health and Safety equipment needs and \$19,000 for the annual operation and maintenance of equipment assigned to the Mobile Emergency Laboratory.
- \$21,000 for **Other Services**, a slight increase of \$400 or 2.1% over FY10 Budget. The proposed budget includes \$20,000 for mandatory monthly testing and inspection of Self-Contained Breathing Apparatus (SCBA).

PLANNING AND COORDINATION DEPARTMENT

Proposed FY11 Current Expense Budget PLANNING AND COORDINATION						
LINE ITEM	FY08 Actual	FY09 Actual	FY10 Budget	FY11 Proposed	Change FY10 to PFY11	
WAGES & SALARIES	\$ 1,927,749	\$ 1,997,711	\$ 2,047,452	\$ 2,037,752	\$ (9,700)	-0.5%
OVERTIME	601	-	-	-	-	-
FRINGE BENEFITS	6	-	-	-	-	-
TRAINING & MEETINGS	10,812	11,046	6,425	6,175	(250)	-3.9%
PROFESSIONAL SERVICES	600	44,790	600	600	-	0.0%
OTHER MATERIALS	136,269	139,285	150,093	152,425	2,332	1.6%
OTHER SERVICES	169,474	181,344	141,984	141,984	-	0.0%
TOTAL	\$ 2,245,511	\$ 2,374,176	\$ 2,346,554	\$ 2,338,936	\$ (7,618)	-0.3%

The **Planning and Coordination Department** provides regulatory, public policy and public health advocacy for MWRA’s drinking water and wastewater programs. It provides decision support on planning, policy and operations matters, using a range of technical and analytic tools. Staff administers financial assistance programs to improve the infrastructure of member communities and to promote water conservation. The Department integrates staff efforts and coordinates MWRA activities related to system and capital planning, infrastructure renewal, and watershed management (in conjunction with the Commonwealth’s Department of Conservation and Recreation, (DCR)); strategic business planning; agency-wide performance measurement; and industry research. The following functions comprise the Department’s primary responsibilities:

Mapping, Modeling, and Data Analysis - Technical staff develops and maintains the Geographic Information Systems (GIS) for the water and wastewater systems, including integration of field and engineering records into GIS for access by planning, engineering, and operations staff. Provides demand analysis and forecasting of water and wastewater flows for master planning and system operations; model reservoir operations, performs drought forecasting and planning; evaluates system expansion requests; and develops and maintains water and wastewater system models in support of master planning, system operations, and optimization.

System Planning and Renewal - Staff with expertise in engineering and planning is responsible for water and wastewater system master planning, infrastructure needs assessment, and capital project development. This work is done in coordination with staff across MWRA. Planning and Coordination staff review and process system expansion requests, water supply agreements, and emergency connection requests. Staff also assists the Operations Division on project siting, environmental reviews, and permitting, including impacts on MWRA facilities from other agency projects, and assists in the development of strategies for long-term emergency risk reduction and preparation for MWRA facilities and systems.

Regulatory and Policy Matters - Staff work with various regulatory entities to promote cost-effective rule setting that protects the environment and promotes public health. Senior staff members actively work with industry associations and other groups with interests and agendas consistent with MWRA’s to advance water and wastewater regulations that make environmental and economic sense. Senior staff conducts strategic policy research on a broad range of topics and staff conducts public health research, including outreach and water quality reporting and the annual Consumer Confidence Report (CCR). Staff also coordinates with DCR to ensure water protection.

Community Support Program - Staff are responsible for inflow/infiltration (I/I) and sanitary sewer overflows (SSO) policy development, implementation, and reporting, provide oversight of and reporting on MWRA leak detection regulations and demand management programs, and report on the portions of MWRA’s NPDES permit related to demand management and flow limitation activities. Staff administers community assistance programs

including sewer inflow/infiltration financial and technical assistance, water pipeline rehabilitation financial assistance, water distribution systems Best Management Practices technical assistance, water leak detection technical assistance, and water conservation grant programs.

FY11 Goals:

- Begin planning for the next iteration of the MWRA Master Plan and MWRA Business Plan.
- Continue to oversee the Loring Road hydro facility project during construction and advance other hydro projects toward design.
- Implement a MWRA water system expansion strategy pending the outcome of the March 2010 facilitated discussion.
- In conjunction with Engineering and Operations staff, continue to advance concept planning and design for capital projects, including storage and pipeline projects and development of long-term transmission and system redundancy options.
- Effectively communicate water quality information to customers and health officials.
- Coordinate with the Advisory Board to develop and implement a new \$200 million Local Water System Assistance Program. Continue to implement the water Local Pipeline Assistance Program to provide interest-free loans for local water projects, as well as outreach assistance for water conservation and water system leak detection and repair programs, and the Infiltration/Inflow (I/I) Local Financial Assistance Program to provide grants and interest-free loans for local I/I reduction and sewer system rehabilitation projects.

FY10 Accomplishments:

- Advanced the Loring Road hydroelectric project to construction award.
- With Engineering and Operations staff, developed a strategic concept for a pumping station alternative to provide redundancy for the Cosgrove Tunnel.
- Distributed \$6.1 million (grants and loans) for local sewer rehabilitation projects under the I/I Local Financial Assistance Program and \$9.6 million (loans) for local water quality projects under the Local Pipeline Assistance Program. A new phase of the Local Water Pipeline Assistance Improvement Program was included in the FY11 Proposed CIP.
- With MWRA Operations and DCR staff, developed a Draft 2010 Quabbin Boat Program in response to the discovery of zebra mussels in Laurel Lake.
- Continued to assist local communities to advance water conservation education and water system leak detection and repair. A total of 28 member sewer communities or housing authorities participated in a \$100,000 program (EPA SEP) to install low-flow toilet retrofits in municipal building or local housing authority properties.
- Effectively communicated water quality information to customers and health officials.
- In conjunction with Public Affairs, kicked off the Five Year Report process.

Budget Highlights:

- \$2.0 million is for **Wages and Salaries**, a decrease of \$9,700 or 0.5% from the FY10 Budget. The FY11 Proposed Budget includes funding for 19 full time and five part-time positions.
- \$6,000 is for **Training and Meetings**, a slight decrease of \$250 from FY10 Budget.
- \$600 is for **Professional Services**, level funded to FY10 Budget.
- \$152,000 is for **Other Materials**, an increase of \$2,000 or 1.6% over FY10 Budget, primarily due to anticipated increases in postage costs associated with the Consumer Confidence Report (CCR). The FY11 Proposed Budget includes \$124,500 for postage and mailing of the CCR, \$15,000 for water conservation kits, and \$10,000 for mapping supplies.
- \$142,000 is for **Other Services**, level funded to FY10 Budget. The FY11 Proposed Budget includes \$117,000 for printing the CCR, \$10,000 for printing Lead in tap water brochures, and \$10,000 for reprinting water conservation bill stuffers.



Operations Division
Budget

OPERATIONS DIVISION

Proposed FY11 Current Expense Budget OPERATIONS DIVISION						
LINE ITEM	FY08 Actual	FY09 Actual	FY10 Budget	FY11 Proposed	Change FY10 to PFY11	
WAGES & SALARIES	\$ 64,939,674	\$ 66,546,039	\$ 68,919,392	\$ 68,395,193	\$ (524,199)	-0.8%
OVERTIME	3,695,290	2,932,713	3,350,313	3,120,312	(230,001)	-6.9%
FRINGE BENEFITS	73,923	51,742	70,000	65,945	(4,055)	-5.8%
CHEMICALS	8,642,802	9,867,555	10,363,436	10,152,333	(211,103)	-2.0%
UTILITIES	25,768,591	24,294,274	23,904,588	23,906,585	1,997	0.0%
ONGOING MAINTENANCE	21,965,418	23,025,086	24,637,097	25,121,128	484,031	2.0%
TRAINING & MEETINGS	159,750	106,025	102,200	172,000	69,800	68.3%
PROFESSIONAL SERVICES	3,604,540	3,401,482	3,072,656	2,563,430	(509,226)	-16.6%
OTHER MATERIALS	3,875,200	3,303,935	2,956,018	3,175,008	218,990	7.4%
OTHER SERVICES	18,692,193	19,162,518	19,565,855	18,776,087	(789,768)	-4.0%
TOTAL	\$ 151,417,381	\$ 152,691,369	\$ 156,941,555	\$ 155,448,021	\$ (1,493,534)	-1.0%

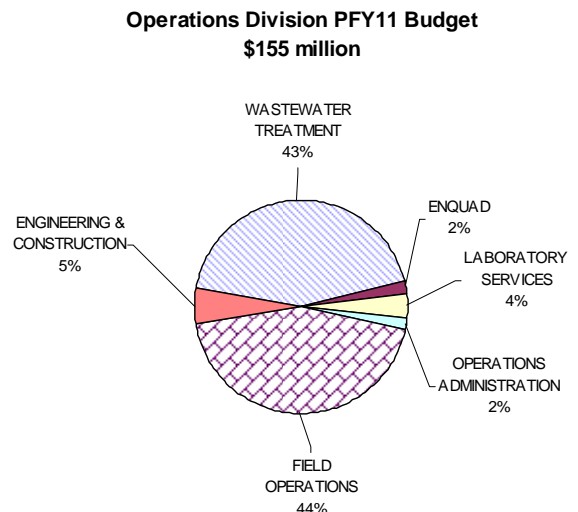
Proposed FY11 Current Expense Budget OPERATIONS DIVISION by Department						
DEPARTMENT	FY08 Actual	FY09 Actual	FY10 Budget	FY11 Proposed	Change FY10 to PFY11	
OPERATIONS ADMINISTRATION	\$ 3,508,180	\$ 3,338,066	\$ 2,665,046	\$ 2,494,269	\$ (170,777)	-6.4%
CSO PROGRAMS/ENERGY	(802)	-	-	-	-	-
WASTEWATER TREATMENT	66,740,245	67,870,718	69,158,298	67,477,284	(1,681,014)	-2.4%
FIELD OPERATIONS	63,727,381	64,484,723	67,735,401	68,741,383	1,005,982	1.5%
LABORATORY SERVICES	5,040,457	5,094,203	5,486,129	5,531,003	44,874	0.8%
ENQUAD	4,152,300	3,805,918	3,510,824	2,937,088	(573,736)	-16.3%
ENGINEERING & CONSTRUCTION	8,249,705	8,097,741	8,385,857	8,266,994	(118,863)	-1.4%
CAPITAL ENG & CONSTR.	(85)	-	-	-	-	-
TOTAL	\$ 151,417,381	\$ 152,691,369	\$ 156,941,555	\$ 155,448,021	\$ (1,493,534)	-1.0%

The **Operations Division** integrates wastewater and water system operations and maintenance, treatment, laboratory services, and engineering and construction functions, including implementation of the Combined Sewer Overflow (CSO) plan.

The FY11 Proposed Current Expense Budget (CEB) and existing structure of the Operations Division is shown in the pie chart to the right and described below.

The **Wastewater Treatment Department**, which accounts for 43% of the Operations Division budget, operates and maintains the Deer Island (DITP) and Clinton wastewater treatment plants and the Residuals Processing Facility at Fore River Staging Area (FRSA).

The **Field Operations Department (FOD)**, which accounts for 44% of the Operations Division budget, is responsible for operating, maintaining, and metering the water and wastewater transport systems. The department also manages the water treatment and wastewater pretreatment functions, including the Carroll Water Treatment Plant (CWTP).



The **Engineering and Construction Department** provides in-house engineering, consultant management, drafting, surveying, construction management, and other technical assistance required for the maintenance, repair, and rehabilitation of wastewater and waterworks systems.

The **Environmental Quality Department (EnQuad)** manages the monitoring of Boston Harbor and Massachusetts Bay water quality and oversees MWRA's compliance with its National Pollutant Discharge Elimination System (NPDES) permits.

The **Laboratory Services Department** supports various client groups in the Operations Division, in the Department of Conservation and Recreation (DCR), and in MWRA member communities, providing field sampling, laboratory testing and reporting services. Most of the testing is required to meet the strict guidelines of regulatory programs and permits including the Safe Drinking Water Act (SDWA) and MWRA's NPDES permits.

The **Operations Administration Department** provides oversight and general management support in the areas of finance, contract administration, and personnel. The Administration Department budget also includes funds for MWRA vehicle purchases and division-wide memberships.

The Operations Division's goals are to:

- Plan, develop, implement, and operate efficient, reliable, and economical water treatment and delivery and wastewater transport and treatment systems.
- Ensure compliance with state and federal drinking water quality and wastewater discharge regulations including the SDWA, the Clean Water Act, and NPDES permits.
- Plan and implement rehabilitation of existing facilities and construction of new facilities including pipelines, pump stations, storage facilities, and treatment facilities on schedules that allow for sufficient system capacity and performance.
- Dispose of wastewater treatment by-products in a cost-effective and environmentally sound manner.

Major FY10 Accomplishments Through December 2009

Operations, Energy, and New Facilities Start-ups:

- Commenced operation of the new Blue Hills Coverage Storage Tanks in August, 2009.
- Continued to monitor and modify operations of newer facilities including the Union Park CSO Detention Treatment Facility (start-up in Q3 FY07, operated in conjunction with BWSC) and Braintree-Weymouth Replacement Pump Station (start-up in Q4 FY08).
- Completed Phase I HVAC audit at MWRA's Chelsea office building. Also completed energy audits of eight FOD facilities. During remainder of FY10, staff will evaluate the reports from the audit and will commence implementation of recommendations. Also, MWRA will commence energy audits of 14 more facilities in FOD.
- Assisted the Procurement Department with the procurement of contracts to supply and deliver chemicals including sodium hypochlorite and sodium bisulfite at numerous facilities; aqua ammonia, soda ash and hydrofluorosilicic acid for the CWTP; and hydrogen peroxide, activated carbon, and ferric chloride for DITP.

- Completed the installation of upgraded pumps and metering for sodium hypochlorite and sodium bisulfite chemical feed systems to allow for more precise dosage control at lower levels. This will result in approximately 10% savings in chemical use for disinfection and dechlorination.
- Generated revenue at two water hydroelectric facilities including \$538,000 at the Oakdale Station and \$94,000 at the Cosgrove Station.
- Continued to leverage Deer Island's self-generation assets and participation in the competitive energy market to offset operating costs. The combined impact of participation in the Independent System Operators of New England (ISO-NE) load response program and the non-rate revenue from the sale of Renewable Portfolio Standards Program (RPS) resulted in net savings of \$728,000 year to date for FY10. Deer Island also self-generated 21% of the plant's total required power during this time period.
- Commenced acceptance testing and operations of two 600 kW wind turbines at DITP.
- Processed 105 average tons per day of sludge at the Pelletization Plant during the first six months of FY10.
- Continued to implement program to use flaggers for traffic control on MWRA projects.

Maintenance:

- The Operations Division spent \$11 million on maintenance of which \$4.9 million was for materials and \$6.1 million for services.
- Completed numerous major maintenance projects including the following:
 - o Procured and implemented numerous contracts or change orders for maintenance services including: Fuel Storage Tank Maintenance; Boiler and Water Heater Maintenance; Fire Alarm and Fire Sprinkler System Service; Crane Maintenance; Laser and Belt Alignment Training and Support (DITP); Oxygen Generation Facility Maintenance (DITP); Combustion Turbine Generators Service (DITP); Overhead Door Maintenance (DITP); Steam and Hydro Turbine Generator Maintenance; Instrumentation Maintenance for water and wastewater facilities; Electrical Systems Maintenance (CWTP); and Diesel Generator Maintenance
 - o In conjunction with the Boston Water and Sewer Commission, procured two year contract extension for management, operation, and maintenance of Union Park Pump Station/CSO facility.
 - o Rehabilitated the gas flares at the Deer Island digester complex. The flares provide better operational control and system feedback.
 - o Improved ferric/ferrous feed piping to the Deer Island digesters. The new piping configuration allows for the dosing of individual digesters instead of feeding all of the digesters with the same dosage. Staff anticipates a reduction in overall usage, while providing the maximum dosage to each individual digester thus reducing the potential for the formation of struvite.
 - o Significant progress on facility painting and coating repair at Deer Island.
 - o Continued to work with SCADA and Process Control to field-test automatic influent gate control via SCADA at three remote headwork facilities.
 - o Completed maintenance tasks for dam maintenance at the Norumbega Reservoir to continue to protect integrity of the structures.
 - o Successfully rewired the electrical feed at the Lexington Street Pump Station after an external bus duct failure.
 - o Installed total chlorine residual samplers at the Somerville Marginal CSO and Sampling building. These samplers will improve chemical dosage control for sodium hypochlorite and sodium bisulfite.
 - o Cleared approximately 30 water and wastewater easements in addition to clearing grounds at numerous MWRA facilities.

- At the Clinton Wastewater Treatment Plant, commenced review of consultant's report on condition of major plant components. Management will use this report to prioritize Clinton's maintenance and capital projects for at least the next decade.
- In the water system, exercised 177 and replaced 1 mainline valve; exercised 104 blow-off valves; and surveyed 159 miles of water mains for leaks.
- In the wastewater system, inspected 16.5 miles and cleaned 26.5 miles of pipeline. Also inspected 304 structures and rehabilitated 94 manholes.

Engineering, Construction, and Planning:

- Award of contracts or Notice to Proceed for numerous contracts including the following major projects:
 - Water System
 - Dam Projects Safety Modifications Design CA/RI
 - NIH Redundancy and Storage Short Term Improvements Design
 - Quabbin Transmission System Oakdale Phase IA Electrical
 - Weston Aqueduct Supply Mains (WASM) Section 28
 - New Connecting Mains Northeast Segment CP5
 - MetroWest Tunnel Lower Hultman Rehab CP6A
 - Loring Road Hydroelectric Project construction
 - CWTP Photovoltaic System Design and Installation
 - Southern Spine Distribution Mains Section 107 Phase 2 Construction
 - Wastewater System
 - Alternative Energy Initiatives DI Photovoltaic System Phase 1 Construction
 - DITP Asset Protection DI Digester Sludge Pump Replacement Construction
 - Alternative Energy Initiatives DeLauri Pump Station Wind Turbine Construction
 - Clinton Wastewater Treatment Plant Digester Cleaning and Rehab
 - DITP Asset Protection Gravity Thickener Improvements Construction
 - North Dorchester Bay Ventilation Building Construction
 - Business and Operations Support
 - Laboratory Services Central Lab Fume Hood Replacement Design
- Substantially completed the following projects:
 - Water System
 - Spot Pond Storage Facility Easement/Land Acquisition
 - NHS – Revere & Malden Pipeline Improvement Construction-Revere Section 53
 - Wachusett Reservoir Spill Improvement/Winsor Dam Rehab Equipment Pre-Purchase
 - Northern Low Service Rehab Section 8/Section 97A Construction
 - Wastewater System
 - Wastewater Central Monitoring Construction 2
 - DITP Asset Protection As-needed Design Phase 5-1 and 5-2
 - I&P Facility Asset Protection Remote Headworks Concept Plan
 - North Dorchester Bay Tunnel Construction, Rescue, and Emergency Response
 - CSO Morrissey Boulevard Drain Design

Environmental:

- The TRAC Department completed the following EPA-required work for significant industrial users: 111 inspections, 165 monitoring events, and 317 sampling of connections. This department also issued or renewed 146 permits (significant industrial users SIU and non-SIU).
- The TRAC Department submitted the Industrial Pretreatment Program Annual Report to the EPA for FY09.
- Continued to trouble-shoot implementation issues for new TRAC Pre-treatment Information Management System (PIMS).
- Authorized and published amendments to MWRA's regulations regarding adjudicatory proceedings, enforcement and administrative penalties, and sewer use.
- At DITP, treated 99% of flow through secondary and met secondary permit limits at all times. Operated DITP without any NPDES Permit violations during first six months of FY10.
- EnQuad carried out required environmental monitoring of Boston Harbor and Massachusetts Bay water column, sediments, fish and shellfish, and CSO receiving water quality, finalizing numerous technical reports in the first half of FY10 and presenting results to the Outfall Monitoring Science Advisory Panel (OMSAP) and public.
- EnQuad continued to prepare reports, analyses, and presentations of MWRA's proposed monitoring revisions and also participated in numerous meetings with regulators and reviewers to discuss the proposal. This will continue to be a focus of MWRA management and EnQuad staff during the remainder of FY10.
- Awarded one contract associated with the Harbor and Outfall Monitoring Program to provide environmental monitoring of outfall effects as required by MWRA's discharge permit for Deer Island Treatment Plant (DITP).
- Met all water quality disinfection standards in the drinking water system during the first six months of FY10.
- In conjunction with the Department of Conservation and Recreation (DCR), developed and implemented program for preventing spread of zebra mussels in the Authority's drinking water source supplies.
- The Department of Lab Services (DLS) provided routine laboratory services and analysis for approximately 137,000 tests and also provided as-needed analytical support for numerous projects on topics including the following: CWTP half-plant operation, Harbor and Outfall Monitoring fish and shellfish testing, DITP polymer vendor selection, and Somerville Marginal CSO facility special project.
- The Lab received DEP drinking water microbiology certification at the three water quality labs for a newly required Total Coliform Rule confirmation procedure and for Enterococcus bacteria that is now required for the Groundwater Monitoring Rule for communities using groundwater.

FY11 Operations Division Budget Highlights:

- The total FY11 Proposed CEB for the Operations Division is \$155.4 million, which is \$1.5 million or 1% less than the FY10 Budget. The FY11 Proposed Budget continues to reflect an intentional effort by MWRA management to contain rate increases through several strategies including curtailing spending on less critical items or services wherever possible and implementing efficiency improvements that will result in long-term sustainable reductions to the Operations Division's budget.

- Significant increases from the FY10 CEB include:
 - Net increase of \$484,000 or 2.0% for **Maintenance** primarily due to new service contracts, increases in the price and/or scope of several contracts to be re-bid during FY11, and additional projects required to rehabilitate aging facilities.
 - Net increase of \$219,000 or 7.4% for **Other Materials** due to increased spending for laboratory equipment replacements and health and safety supplies. MWRA deferred replacement of laboratory equipment in FY09 and FY10 as part of cost-curtailement efforts. The FY11 Proposed Budget restores spending to a level which allows for replacement of several pieces of equipment each year that have reached or exceeded their useful lives.
 - **Training and Meetings** increases by \$70,000 primarily for training in the Field Operations Department on diagnostic equipment associated with MWRA's asset management program and on spill prevention and control procedures at operating facilities as required by regulation.

- Significant decreases from the FY10 CEB include:
 - Net decrease of \$790,000 or 4% for **Other Services** primarily for inflation adjustments per the Residuals processing contract as compared to FY10 levels. The FY11 Proposed Budget is based on an average of 106 tons of sludge per day (TPD) which is level funded with the FY10 Budget and is consistent with monthly historical averages since the start-up of the Braintree-Weymouth Tunnel. This decrease is partially offset by increases for the Chelsea Facility lease due to inflation adjustments, new funding for a baseline survey of invasive species in the water reservoirs, and new funding for Global Positioning System (GPS) service fees to support use of this system in managing operations
 - Net decrease of \$524,000 for **Wages and Salaries** primarily due to fewer funded positions in FY11 versus FY10 Budget as a result of attrition and management controls on hiring. The Operations Division's Proposed FY11 CEB includes 933 funded permanent positions on average during the year, discounted by a .5% vacancy rate (approximately 5 positions) to reflect attrition, for a net funded position level of 928 which is approximately ten fewer positions than the 938 average funded in the FY10 CEB.
 - Net decrease of \$509,000 or 16.6% for **Professional Services** primarily due to continued reductions to the Harbor and Outfall Monitoring (HOM) Program. MWRA has formally requested that EPA revise the scope of required outfall and harbor monitoring requirements and has reflected the estimated full year impact (approximately - \$900,000) in the FY11 Proposed Budget.
 - Net decrease of \$230,000 or 7% for **Overtime** due to continued reduction of coverage overtime based on revised labor contracts and increased use of SCADA. Management also will continue to limit use of unplanned overtime to critical work and emergencies.
 - Decrease of \$211,000 or 2.0% for **Chemicals** primarily due to reductions in usage estimates associated with optimization initiatives and updated multi-year averages in operating facilities. This is partially offset by additional chemicals for enterococcus treatment at Deer Island due to the expected commencement of the new NPDES Permit during the fourth quarter of FY11.

- The FY11 Proposed Budget includes \$23.9 million or 15% of the Operations Division's total budget, for **Utilities**. This budget is essentially level-funded with the FY10 Budget due to decreases in electricity and diesel fuel, offset by an increase in water. The largest component of the Utilities budget is \$19.1 million for electricity, which is .6% less than the FY10 Budget. The slight decrease is the net effect of a 4% commodity price increase due to market conditions offset by projected savings from the implementation of additional conservation and self-generation projects. The water budget increase is primarily the result of an increase in MWRA's wholesale water rate at Deer Island as well as usage adjustments in Operations Division facilities based on multi-year averages.

- The FY11 Proposed Budget is subject to risk in the following areas: scope of the HOM Program (pending EPA approval), timing of the implementation of Deer Island's new NPDES permit, chemical and utility usage and

prices, potential impacts of the Deer Island cable relocation project, sludge quantities, and more than expected emergency-related maintenance and overtime needs.

Highlights of FY11 Initiatives

Operations, Energy, and New Facilities Start-ups:

- Plan for start-up of the North Dorchester Bay odor control facility and decommissioning of Fox and Commercial Point CSO facilities.
- Continue to implement and optimize SCADA in Wastewater Operations facilities.
- Continue to identify, assess, and implement initiatives to reduce energy demand and increase energy self-generation in MWRA's system. This includes completion of the construction and the use of additional wind and solar power at MWRA facilities and the implementation of recommendations from energy audits. Pursue grant-funding and cost-sharing arrangements to defray costs of implementing these initiatives.
- Self-generate 27.6% of Deer Island's required power through optimization of power generation assets, including the recently installed wind turbines and the STG back pressure system modifications.
- Procure new electricity supply contract for Deer Island.
- In conjunction with MIS, implement and optimize use of a Global Positioning System (GPS) in MWRA vehicles.

Engineering & Construction:

- Award numerous contracts and/or issue Notice To Proceeds including the following major contracts:
 - Water System
 - NIH Redundancy & Storage Section 89/29 Redundancy Design
 - Quabbin Water Treatment Plant UVWTP Construction
 - CWTP Existing Facilities Modifications
 - Wastewater System
 - DITP Asset Protection NMPS VFD Replacement Construction
 - DITP Asset Protection Cryogenics Plant – Equipment Replacement Construction
 - DITP Asset Protection Electrical Equipment Upgrade Construction 4
 - DITP Asset Protection HVAC Equipment Replacement Design/ESDC
 - DITP Asset Protection Barge Berth and Facility Replacement
 - DITP Asset Protection South System Pump Station Lube System Replacement
 - DITP Centrifuge Backdrive Replacement
 - Alternative Energy Initiatives DI Wind Phase II
 - Business and Operations Support
 - Laboratory Services Central Lab Fume Hood Replacements
- Substantially complete the following Capital Improvement Program design and construction phases
 - Water System
 - Alternative Energy Initiatives CWTP Solar Construction
 - Alternative Energy Initiatives Loring Road Hydro Construction
 - Long Term Redundancy Remote Vehicle Inspection of Quabbin Aqueduct
 - Long Term Redundancy Water Transmission Plan
 - WASM Section 28 Arlington CP1

- Rehab of Other Pumping Stations Design
- o Wastewater System
 - Alternative Energy Initiatives Delauri Pump Station Wind Construction
 - Braintree-Weymouth Relief Facilities Rehab Section 624
 - CSO Program Fort Point Channel Sewer Separation Construction
 - CSO Program Fort Point Channel Sewer Separation Design
 - CSO Program East Boston Branch Sewer Relief Construction
 - CSO Program North Dorchester Bay Dewater/Pump Station and Sewers
 - CSO Program North Dorchester Bay Design ESDC/Tunnel
 - CSO Program Bullfinch Triangle Sewer Separation Construction
 - CSO Program East Boston Branch Sewer Relief Sections 38 & 207 Replacement
 - CSO Program North Dorchester Bay Ventilation Building Construction
 - DITP Asset Protection Electrical Equipment Upgrade Construction 3
 - DITP Asset Protection Heat Loop Pipeline Replacement – Construction 3
 - DITP Asset Protection STG System Modifications Construction
 - I&P Facility Asset Protection Columbus Park and Ward Street HVAC Upgrade
 - I&P Facility Asset Protection Prison Point HVAC Upgrades
 - Residuals Asset Protection Condition Assessment
 - Wastewater Central Monitoring Design and Integration Services
- o Business and Operations Support
 - Laboratory Services Metals Lab Fume Hood Replacement Construction

Maintenance:

- Optimize staff resources, overtime, service contract scopes and use, and use of as-needed design contracts to complete routine and major maintenance projects.
- Continue work on numerous major projects at Deer Island including facility repainting and coating repairs, lighting equipment retrofits, Zurn boiler maintenance and repairs, electrical system maintenance, carbon absorber replacements, and critical equipment maintenance.
- Work on numerous projects in Field Operations including meter inspection and repairs, ozone generator rebuild, lighting efficiency upgrades in metro facilities, dam appurtenances inspections, grit pod replacements, and back-up pump control panel installations at wastewater pump stations.
- Continue work on multi-year initiative of replacing surge valves in water pump station facilities.
- Continue expanding use of Maximo (maintenance tracking software) in Field Operations Department facilities.
- Wherever appropriate, continue transition to use of flaggers versus police details on maintenance projects requiring traffic control.

Environmental:

- Pending approval by regulators, implement requirements of new NPDES Permits for DITP and Clinton Wastewater Treatment Plant.
- Pending approval by regulators, implement revised harbor and outfall monitoring plan to reflect reduced scope. Carry out the required outfall, harbor, and river monitoring, implement additional in-house data management

tasks, implement in-house preparation of interpretive reports, and deploy continuous monitoring instrumentation on the National Oceanic and Atmospheric Administration (NOAA) buoy.

- Ensure the permit-required outfall monitoring meets NPDES requirements, is scientifically credible, and is cost-effective.
- Continue to implement and optimize the new environmental information systems in TRAC and the Central Laboratory.
- Plan and implement the new round of NPDES-required Local Limit testing in TRAC to reassess industrial discharge limits. This work can commence after EPA issues the new NPDES permits.
- In conjunction with the DCR, continue to monitor, revise, and implement program for preventing spread of zebra mussels in the Authority's drinking water source supplies.
- Conduct periodic baseline invasive species monitoring at water reservoirs.
- Design and implement Spill Prevention Control and Countermeasure (SPCC) program at various operating facilities.

OPERATIONS ADMINISTRATION

Proposed FY11 Current Expense Budget OPERATIONS ADMINISTRATION						
LINE ITEM	FY08 Actual	FY09 Actual	FY10 Budget	FY11 Proposed	Change FY10 to PFY11	
WAGES & SALARIES	\$ 1,842,292	\$ 1,798,240	\$ 1,901,898	\$ 1,794,900	\$ (106,998)	-5.6%
OVERTIME	277	526	-	-	-	-
FRINGE BENEFITS	-	-	-	-	-	-
ONGOING MAINTENANCE	-	171	-	-	-	-
TRAINING & MEETINGS	1,815	-	2,200	2,200	-	0.0%
PROFESSIONAL SERVICES	-	23,844	60,000	-	(60,000)	-100.0%
OTHER MATERIALS	1,386,091	1,238,916	607,250	602,500	(4,750)	-0.8%
OTHER SERVICES	277,705	276,369	93,698	94,669	971	1.0%
TOTAL	\$ 3,508,180	\$ 3,338,066	\$ 2,665,046	\$ 2,494,269	\$ (170,777)	-6.4%

The **Operations Administration Department** is comprised of the Office of the Chief Operating Officer and Division level support staff. The department goal is to oversee, manage, and implement MWRA policies and procedures pertaining to the following functions: labor relations, finance, contract administration and general administration.

Budget Highlights:

- \$1.8 million for **Wages and Salaries**, which represents 72% of the FY11 Proposed Budget. The budget includes funding for 23 positions and a temporary employee to provide support for MWRA’s sustainability initiatives.
- **Professional Services** decreases due to the shift of funding to other departments for energy audits and electrical inspections of the Division’s facilities as required by the Massachusetts Department of Public Safety.
- \$602,500 for **Other Materials**, of which \$600,000 is for replacement of aged vehicles in MWRA’s fleet. This funding level continues to reflect efforts to contain rate increases by curtailing purchases. The FY11 vehicle budget of \$600,000 will allow MWRA to replace only the high priority vehicles that meet the eligibility criteria. Actual spending for vehicle purchases for FY02-FY09 is as follows:

FY02:	\$ 622,000	FY06:	\$ 717,381	FY10:	\$600,000
FY03:	\$ 120,000	FY07:	\$1,846,396		
FY04:	\$1,580,000	FY08:	\$1,425,758		
FY05:	\$1,237,289	FY09:	\$1,134,779		

From FY00 to FY03, MWRA limited replacement of vehicles pending completion of an extensive fleet review. In FY03 MWRA reduced the active fleet by more than 10% (from 561 to 496 vehicles) as a result of this initiative. For example, staff identified opportunities to meet the needs of the new waterworks system facilities through redeployment of existing vehicles rather than adding to the fleet. Analysis as of mid-FY10 indicates that approximately half of MWRA’s active, operable fleet will be seven years or older by the end of FY10.

- \$95,000 is for **Other Services** of which the majority is for Authority-wide memberships including the National Association of Clean Water Agencies, Association of Metropolitan Water Agencies, American Waterworks Association, and the Boston Harbor Association marine debris program. The significant decrease from FY09 spending is due to the discontinuation of numerous memberships, including the American Waterworks Research Foundation, as part of MWRA’s decision to curtail non-essential spending.

WASTEWATER TREATMENT

Proposed FY11 Current Expense Budget WASTEWATER TREATMENT						
LINE ITEM	FY08 Actual	FY09 Actual	FY10 Budget	FY11 Proposed	Change FY10 to PFY11	
WAGES & SALARIES	\$ 16,764,551	\$ 17,114,724	\$ 17,579,489	\$ 17,446,381	\$ (133,108)	-0.8%
OVERTIME	1,214,864	798,752	1,059,965	1,002,493	(57,472)	-5.4%
FRINGE BENEFITS	27,028	15,664	23,106	19,300	(3,806)	-16.5%
CHEMICALS	2,828,939	3,280,345	3,297,900	3,324,553	26,653	0.8%
UTILITIES	15,531,352	14,946,585	13,902,478	14,005,783	103,305	0.7%
ONGOING MAINTENANCE	14,118,592	14,459,802	15,414,628	14,915,376	(499,252)	-3.2%
TRAINING & MEETINGS	39,674	55,088	51,600	41,600	(10,000)	-19.4%
PROFESSIONAL SERVICES	104,988	387,342	472,188	484,700	12,512	2.6%
OTHER MATERIALS	665,675	403,706	504,178	552,961	48,783	9.7%
OTHER SERVICES	15,444,582	16,408,710	16,852,766	15,684,137	(1,168,629)	-6.9%
TOTAL	\$ 66,740,245	\$ 67,870,718	\$ 69,158,298	\$ 67,477,284	\$ (1,681,014)	-2.4%

Proposed FY11 Current Expense Budget WASTEWATER TREATMENT by Facility						
FACILITY	FY08 Actual	FY09 Actual	FY10 Budget	FY11 Proposed	Change FY10 to PFY11	
DEER ISLAND	\$ 48,776,728	\$ 49,020,875	\$ 49,887,353	\$ 49,981,203	\$ 93,850	0.2%
RESIDUALS	16,494,002	17,315,291	17,671,442	15,955,392	(1,716,050)	-9.7%
CLINTON	1,469,515	1,534,552	1,599,503	1,540,689	(58,814)	-3.7%
TOTAL	\$ 66,740,245	\$ 67,870,718	\$ 69,158,298	\$ 67,477,284	\$ (1,681,014)	-2.4%

The **Deer Island Treatment Plant**, the **Residuals Management Program**, and the **Clinton Treatment Plant** comprise the Wastewater Treatment Department. Together, the budgets for these programs represent 43% of the Operations Division's FY11 Proposed Budget and 32% of MWRA's FY11 Proposed direct expense budget.

Incoming wastewater from MWRA customer communities is piped to several headworks facilities where bricks, logs, and other large objects are screened out before the influent is transmitted to Deer Island through underground tunnels. At Deer Island, wastewater from the north system is pumped through chambers that remove grit and detritus for disposal in an off-island landfill. South system flows undergo preliminary treatment at the Nut Island headworks and are then pumped directly into the primary treatment facility, bypassing the grit removal chambers. The primary treatment facility consists of stacked clarifiers where scum rises to the top and the sludge settles to the bottom. Secondary reactors and clarifiers remove organic matter through biological and gravity treatment. Primary and secondary sludge and scum are thickened, anaerobically digested, and further thickened to reduce the volume of sludge before it is pumped through the Braintree-Weymouth tunnel to MWRA's Residuals Processing Facility at Fore River. Methane, a byproduct of anaerobic digestion, is used to fuel the plant's boilers, which produce steam to provide heat and generate electricity.

DEER ISLAND TREATMENT PLANT

Proposed FY11 Current Expense Budget DEER ISLAND TREATMENT PLANT						
LINE ITEM	FY08 Actual	FY09 Actual	FY10 Budget	FY11 Proposed	Change FY10 to PFY11	
WAGES & SALARIES	\$ 16,135,014	\$ 16,446,940	\$ 16,900,481	\$ 16,772,316	\$ (128,165)	-0.8%
OVERTIME	1,136,768	751,401	992,873	942,493	(50,380)	-5.1%
FRINGE BENEFITS	25,950	15,028	21,962	18,300	(3,662)	-16.7%
CHEMICALS	2,618,952	3,042,991	3,043,388	3,083,861	40,473	1.3%
UTILITIES	15,245,426	14,618,424	13,592,899	13,702,276	109,377	0.8%
ONGOING MAINTENANCE	12,280,634	12,854,386	13,885,171	13,881,053	(4,118)	0.0%
TRAINING & MEETINGS	37,527	55,088	50,000	40,000	(10,000)	-20.0%
PROFESSIONAL SERVICES	100,942	362,425	470,500	470,500	-	0.0%
OTHER MATERIALS	535,205	296,823	357,079	419,079	62,000	17.4%
OTHER SERVICES	660,310	577,369	573,000	651,325	78,325	13.7%
TOTAL	\$ 48,776,728	\$ 49,020,875	\$ 49,887,353	\$ 49,981,203	\$ 93,850	0.2%

Program Description and Goals:

The **Deer Island Treatment Plant** budget accounts for 32% of the Operations Division’s FY11 Proposed Budget. DITP has a primary treatment peak capacity of 1.27 billion gallons per day (bgd) and secondary treatment peak capacity of 700 million gallons per day (mgd).

Wastewater "influent" from MWRA customer communities arrives at the plant through four underground tunnels. Pumps then lift the influent 80 to 150 feet, depending on the tunnel, to the head of the plant. There are three pump stations. The pumping capacity at the Deer Island plant has dramatically increased the volume of wastewater that can be taken into the plant from the conveyance tunnels. This reduces back-ups and overflows throughout the system when wet weather causes peaking of system flows.

After pumping, north system flows pass through grit chambers that remove grit for disposal in an off-island landfill. South system flows are pre-treated for grit at the remote headworks on Nut Island and the intermediate pump station. Flow is routed to primary treatment clarifiers, which remove about half of the pollutants brought to the plant in typical wastewater (removes 50-60% of total suspended solids and up to 50% of pathogens and toxic contaminants). In the clarifiers, gravity separates sludge and scum from the wastewater.

In secondary treatment, reactors and clarifiers remove non-settleable solids through biological and gravity treatment. The biological process is a pure oxygen-activated sludge system, using microorganisms to consume organic matter that remains in the wastewater flow. Secondary treatment raises the level of pollution removal to over 85%. More than 150 tons of pure oxygen is manufactured each day at Deer Island's cryogenic facility to support the biological treatment process.

Sludge and scum from primary treatment are thickened in gravity thickeners. Sludge and scum from secondary treatment are thickened in centrifuges. Polymer is used in the secondary thickening process to increase its efficiency. Digestion occurs in 12 egg-shaped anaerobic digesters, each 90 feet in diameter and approximately 130 feet tall. Microorganisms naturally present in the sludge work to break sludge and scum down into methane gas, carbon dioxide, solid organic byproducts, and water. Digestion significantly reduces sludge quantity. The methane gas produced in the digesters is used in the plant's on-site power generating facility to save operating costs by reducing consumption of purchased energy. Digested sludge is pumped through the inter-island Braintree-Weymouth tunnel directly to the MWRA’s Pelletizing Facility at Fore River, where it is further processed into a fertilizer product.

Organizational Structure:

The Deer Island Plant has six major functional areas: Operations, Thermal Power Plant, Process Control, Maintenance, Capital Engineering, and Operations and Maintenance (O&M) Support.

- Operations manages the day-to-day operation of plant processing units, perform minor preventative maintenance activities, and oversee plant functions 24 hours per day, seven days per week.
- Thermal Power Plant staff manage and operate the Deer Island generation and thermal systems. Power Plant personnel provide 24 hour operation of the high-pressure, high temperature steam power plant. This facility is capable of producing up to 70 emergency megawatts of electrical power.
- Process Control manages and maintains the following programs in support of plant operations; real-time process instrumentation and control system (PICS), operational data system (OMS), plant performance monitoring and reporting programs, regulatory compliance programs including all plant permits, water quality, and air quality. The Process Control Unit provides the technical expertise for plant unit operations and routinely performs process optimization studies to help increase performance and reduce operating costs.
- Maintenance performs preventive and predictive maintenance and corrective repairs on all equipment, utilizing a computerized maintenance management system (CMMS) to coordinate scheduling with Operations. Staff has developed the Reliability Centered Maintenance (RCM) program, which has improved plant performance by applying maintenance resources where they are most effective. RCM analyzes the operating systems with the objective of ensuring that critical functions operate as required. Implementation of a preventive maintenance program using RCM helps reduce the cost of maintaining the plant and improve efficiency by anticipating when maintenance will be required. An on-island warehouse, managed by Procurement Department staff, ensures that there is adequate stock for maintenance repairs and plant operations.
- Capital Engineering provides technical support services for both the Operations and Maintenance Units. Staff is responsible for all aspects of plant engineering including developing, procuring, and implementing all service contracts, consultant designs, and capital improvement projects at Deer Island. This group also manages the on-island Technical Information Center, which provides services to the DITP community and external constituents, and ensures quick access to plant drawings and technical information for operational and maintenance needs.
- O&M Support Section is responsible for supporting the business needs of the plant. The Administration and Finance Unit provides financial and administrative support to meet daily operational needs of the plant. The Safety/Security Unit is responsible for ensuring a safe and healthful work environment for employees and minimizing MWRA's exposure to liability and property loss or damage.

The Deer Island Director's Office provides overall policy direction and support in the areas of public access and community agreements.

Operating Assumptions

Deer Island's FY11 Proposed Budget assumes treatment of an average flow of 362.3 mgd based on eight years of historical data. Sludge production is projected to be an average of 106 TPD of digested sludge pumped to FRSA (TSS basis) through the Braintree-Weymouth tunnel. This estimate is based on seven years of historical data adjusted to account for the discontinuation of the DSL centrifuges after start-up of the Braintree-Weymouth tunnel.

Deer Island's Proposed FY11 Proposed Budget accounts for the impact of self-generation of electricity from the steam turbine generator, combustion turbine generators, hydroelectric generators, wind turbine generators, and photovoltaic panels. In total, these assets will meet approximately 27.6% of the total energy requirements resulting in an avoided cost savings of approximately \$4.5 million.

Deer Island continues to comply with the conditions of the current NPDES Permit which expired in FY06. Given the uncertainty regarding the timing of the permit renewal from EPA, Deer Island's FY11 Proposed Budget assumes the new permit will not go into effect until the fourth quarter of FY11. When the new permit is issued, Deer Island's treatment process will be required to kill enterococcus in addition to fecal coliform to comply with revised regulatory requirements.

Budget Highlights:

- \$16.8 million for **Wages and Salaries**, a (\$128,000) or 0.8% decrease from the FY10 Budget. The FY11 Proposed Budget funds on average 232 permanent positions and it also includes a .5% vacancy rate to account for the effects of attrition. Also included is \$99,000 for stand-by pay to support operational and maintenance needs and \$50,000 for a temporary employee in engineering support.
- \$942,000 for **Overtime** for operational coverage, critical maintenance projects, and regulatory requirements (i.e. inspections). The FY11 Budget is \$50,000 or 5% less than the FY10 Budget primarily due to a reduction in planned overtime as part of MWRA's efforts to curtail spending.
- \$3.1 million for **Chemicals**, which is \$40,000 or 1.3% more than the FY10 Budget. The FY11 Budget reflects management's expectation that the new NPDES permit will be in effect for DI sometime early in the fourth quarter of FY11. The budget includes approximately \$240,000 for additional sodium bisulfite and sodium hypochlorite required to treat enterococcus when the new permit is in effect. This increase is partially offset by price decreases for sodium hypochlorite and polymer due to market conditions.
- \$13.7 million for **Utilities**, a \$109,000 or 0.8% increase from the FY10 Budget. The FY11 Budget includes \$11.8 million for electricity and \$500,000 for diesel fuel. The \$68,000 decrease for Electricity from the FY10 Budget is the net effect of projected price increases offset by reductions to purchased power requirements as a result of increased generation from wind turbines and STG modifications. The FY11 Budget assumes a full year of electricity unit pricing through a combination of spot market and fixed block pricing. The \$1.4 million budget for water is \$177,000 or 15% more than the FY10 Budget due to increases in the wholesale water rate and adjustments to projected usage to reflect multi-year averages.
- \$13.9 million for **Maintenance** including \$4.9 million for materials and \$9.0 million for services. The budget is level funded with the FY10 Budget. Of the total, 59% or \$8.2 million is for plant and machinery services and materials, \$2.9 million is for electrical system maintenance, and \$1.5 million is for building and grounds work.
- \$471,000 for **Professional Services**, which is level funded with the FY10 Budget. The FY11 Budget includes \$400,000 for as-needed engineering services to support CEB projects and \$50,000 for a beach nourishment study per regulatory requirements.

- \$419,000 for **Other Materials**, which is \$62,000 or 17.4% more than the FY10 Budget. The budget includes \$114,000 for work clothes, \$62,000 for vehicles expenses (tolls, mileage, and gas), and \$110,000 for health and safety materials. The \$50,000 budget increase for health & safety materials reflects actual spending trends associated with complying with prevailing safety standards.
- \$651,000 for **Other Services** includes the ambulance service contract \$260,000, permit fees \$105,000, HAZmat/safety services \$91,000, telephones \$78,000, fax/copier leasing and servicing \$68,000, and freight charges \$20,000.

RESIDUALS MANAGEMENT

Proposed FY11 Current Expense Budget RESIDUALS MANAGEMENT PROGRAM						
LINE ITEM	FY08 Actual	FY09 Actual	FY10 Budget	FY11 Proposed	Change FY10 to PFY11	
WAGES & SALARIES	\$ 102,663	\$ 103,200	\$ 109,268	\$ 108,881	\$ (387)	-0.4%
OVERTIME	-	-	-	-	-	-
FRINGE BENEFITS	-	-	-	-	-	-
UTILITIES	-	-	-	-	-	-
ONGOING MAINTENANCE	1,633,243	1,398,551	1,299,592	822,968	(476,624)	-36.7%
TRAINING & MEETINGS	2,147	-	1,500	1,500	-	0.0%
PROFESSIONAL SERVICES	1,458	-	-	7,500	7,500	-
OTHER MATERIALS	250	-	300	300	-	0.0%
OTHER SERVICES	14,754,241	15,813,540	16,260,782	15,014,243	(1,246,539)	-7.7%
TOTAL	\$ 16,494,002	\$ 17,315,291	\$ 17,671,442	\$ 15,955,392	\$ (1,716,050)	-9.7%

Program Description and Goals:

The **Residuals Management Program** manages the processing and disposal of approximately 106 dry tons per day (TSS) of sludge from the anaerobic digestion process at Deer Island, as well as the disposal of grit and screenings from all MWRA facilities. MWRA seeks to dispose of all sludge and grit and screenings in a reliable, economical, and environmentally sensitive manner.

- MWRA contracts with the New England Fertilizer Company (NEFCo) to operate the sludge processing facility, and to market and distribute sludge products. A 15-year contract with NEFCo became effective March 1, 2001 and will expire on December 31, 2015. Liquid sludge from Deer Island is pumped through the Braintree-Weymouth cross-harbor tunnel to the Fore River processing facility where it is dewatered, dried, and shipped by either rail or truck for use as fertilizer or to other appropriate disposal. MWRA is committed to the beneficial reuse of biosolids to the greatest extent practicable.

In FY05, major operational changes occurred regarding sludge processing at Deer Island. The Braintree-Weymouth cross-harbor tunnel came on-line in April 2005. The previous practice of thickening and barging sludge from Deer Island to Fore River ceased. Deer Island began pumping a much lower concentration of sludge (2.0% to 2.5% average total suspended solids) to the Residuals Processing Facility.

- MWRA is presently in the process of finishing a third-party independent condition assessment of the NEFCo facility. Management will use the information from this report to identify possible areas for additional maintenance and capital repair for funding in future budgets.
- The average dry tons per day (TSS) is budgeted at 106 tons per day, the same as the FY10 Budget.
- Grit and screenings (minor residuals) from MWRA's headworks and certain pump stations are collected and disposed of in landfills. MWRA contracts with a third party operator for this service. Minor residuals are by-products of wastewater pre-treatment and primary/secondary treatment processes and include grit, screenings and scum screenings. A two year contract with a new vendor started in May 2009.

Budget Highlights:

- The FY11 Proposed Budget includes \$109,000 for **Wages and Salaries**, which funds one position. This department also receives on-going management oversight and staff support from other departments of the MWRA including Deer Island, Treasury, and Operations Administration.

- \$823,000 is for **Maintenance**, the capital repair, replacement and improvement component of the NEFCo contract, which includes a specific level per year adjusted to account for inflation. The change from the FY10 Budget to FY11 Proposed Budget is due to a lower contractual amount for calendar year 2011 and also reductions in inflation based on market indices. The maintenance budget also includes a small amount for FRSA repairs.
- \$14 million or 88% of the FY11 Proposed Budget is for the **Sludge Pelletization** portion of the NEFCo contract. The FY11 Proposed Budget is \$1.3 million or 8% less than the FY10 Budget due to inflation decreases, primarily for natural gas. The FY11 Proposed Budget is based on an average of 106 tons per day (TPD) which is level funded with the FY10 Budget and is consistent with historical trends since the start-up of the Braintree-Weymouth Tunnel.
- \$905,000 of the FY11 Proposed Budget is for **Grit and Screenings** disposal, a decrease of \$11,000 from the FY10 CEB. The FY11 Proposed Budget assumes disposal quantities of 5,950 tons, which is based on multi-year historical averages but is approximately 3% less than FY09 actual quantities.
- \$38,000 of the budget is for **Permit Fees**, which includes \$35,000 for bi-annual sludge dryer stack testing as required by DEP.

CLINTON WASTEWATER TREATMENT PLANT

Proposed FY11 Current Expense Budget CLINTON WASTEWATER TREATMENT PROGRAM						
LINE ITEM	FY08 Actual	FY09 Actual	FY10 Budget	FY11 Proposed	Change FY10 to PFY11	
WAGES & SALARIES	\$ 526,875	\$ 564,583	\$ 569,740	\$ 565,183	\$ (4,557)	-0.8%
OVERTIME	78,096	47,352	67,092	60,000	(7,092)	-10.6%
FRINGE BENEFITS	1,077	636	1,143	1,000	(143)	-12.5%
CHEMICALS	209,988	237,353	254,513	240,693	(13,820)	-5.4%
UTILITIES	285,925	328,161	309,579	303,507	(6,072)	-2.0%
ONGOING MAINTENANCE	204,715	206,865	229,865	211,355	(18,510)	-8.1%
TRAINING & MEETINGS	-	-	100	100	-	0.0%
PROFESSIONAL SERVICES	2,588	24,917	1,688	6,700	5,012	296.9%
OTHER MATERIALS	130,220	106,884	146,799	133,582	(13,217)	-9.0%
OTHER SERVICES	30,031	17,801	18,984	18,569	(415)	-2.2%
TOTAL	\$ 1,469,515	\$ 1,534,552	\$ 1,599,503	\$ 1,540,689	\$ (58,814)	-3.7%

Program Description and Goals:

The **Clinton Wastewater Treatment Program** provides advanced sewage treatment services to the Town of Clinton and the Lancaster Sewer District. MWRA assumed formal operational responsibility for the Clinton plant in 1987. Since then MWRA has designed and constructed new primary, secondary, and advanced treatment facilities which incorporated rehabilitated portions of the existing plant with new construction. The new facilities, designed to meet all current and projected National Pollutant Discharge Elimination System (NPDES) discharge standards, was completed in 1992.

The plant provides secondary treatment using an activated sludge process in combination with advanced nutrient removal and dechlorination. The major facilities include a headworks, primary settling tanks, digesters, sludge processes, trickling filters, aeration tanks, secondary tanks, and a chemical addition building. The plant discharges its effluent into the South Nashua River in accordance with the discharge limits of the facility's NPDES permit which limits effluent flow to 3.01 mgd. The plant has a potential peak flow rate of 12 mgd and a 6 mgd peak 24 hour rate. Residual materials are pressed and transported to an MWRA-owned landfill for disposal. Staff also performs regular monitoring of the landfill site.

Budget Highlights:

- \$565,000 for **Wages and Salaries** represents 37% of the FY11 Proposed Budget. This funds seven positions and one part-time temporary contract clerical position.
- \$60,000 for **Overtime**, which is used to meet the 24 hour, 7 day per week emergency coverage requirement and to provide increased maintenance resulting from an aging facility.
- \$241,000 for **Chemicals** of which \$127,000 is used for sludge processing and disposal and \$114,000 is used for wastewater treatment. The reduction from FY10 to FY11 is due to the net effect of expected price changes and updated usage assumptions based on historical averages.
- \$304,000 for **Utilities** represents 20% of the FY11 Proposed Budget. This includes \$249,000 for electricity, \$29,000 for fuel oil, and \$25,000 for water.

- \$211,000 for **Maintenance** represents 14% of the FY11 Proposed Budget. The budget includes \$65,000 for major projects and the remainder for routine services and maintenance. The \$18,500 decrease from FY10 is due to the major project budget which is estimated to be less in FY11 than in FY10.
- \$134,000 for **Other Materials**, including \$121,000 for clean fill for the landfill operation. The reduction from FY10 to FY11 Proposed Budget is due to better estimates for the actual amount of clean fill material required for landfill coverage. Per regulatory directive, Clinton suspended the sludge reuse program for landfill coverage in FY09 so the FY10 Budget was developed with limited actual data.

FIELD OPERATIONS

Proposed FY11 Current Expense Budget FIELD OPERATIONS						
LINE ITEM	FY08 Actual	FY09 Actual	FY10 Budget	FY11 Proposed	Change FY10 to PFY11	
WAGES & SALARIES	\$ 33,397,317	\$ 34,567,080	\$ 35,894,652	\$ 35,674,986	\$ (219,666)	-0.6%
OVERTIME	2,275,528	2,001,173	2,058,432	1,981,943	(76,489)	-3.7%
FRINGE BENEFITS	45,366	35,498	44,945	44,945	-	0.0%
CHEMICALS	5,813,864	6,587,210	7,065,536	6,827,780	(237,756)	-3.4%
UTILITIES	10,216,796	9,327,360	9,974,457	9,877,619	(96,838)	-1.0%
ONGOING MAINTENANCE	7,637,475	8,341,580	8,884,799	9,881,988	997,189	11.2%
TRAINING & MEETINGS	76,299	35,326	37,000	116,800	79,800	215.7%
PROFESSIONAL SERVICES	625,450	458,458	344,060	487,060	143,000	41.6%
OTHER MATERIALS	932,189	767,292	950,090	975,254	25,164	2.6%
OTHER SERVICES	2,707,097	2,363,746	2,481,430	2,873,008	391,578	15.8%
TOTAL	\$ 63,727,381	\$ 64,484,723	\$ 67,735,401	\$ 68,741,383	\$ 1,005,982	1.5%

Proposed FY11 Current Expense Budget FIELD OPERATIONS by Program						
PROGRAM	FY08 Actual	FY09 Actual	FY10 Budget	FY11 Proposed	Change FY10 to PFY11	
TOXIC REDUCTION & CONTROL	\$ 3,381,274	\$ 3,410,288	\$ 3,597,929	\$ 3,535,306	\$ (62,623)	-1.7%
WASTEWATER OPERATIONS	11,439,765	11,399,949	12,283,869	11,708,069	(575,800)	-4.7%
WATER OPERATIONS & MAINT	20,669,390	21,527,412	22,573,789	26,741,150	4,167,361	18.5%
METRO MAINTENANCE	16,719,487	16,765,543	17,659,833	13,993,542	(3,666,291)	-20.8%
OPERATIONS SUPPORT	7,364,414	7,235,436	7,751,023	8,030,459	279,436	3.6%
FOD ADMIN	4,153,051	4,146,095	3,868,958	4,732,859	863,901	22.3%
TOTAL	\$ 63,727,381	\$ 64,484,723	\$ 67,735,401	\$ 68,741,385	\$ 1,005,984	1.5%

The primary goal of the **Field Operations Department (FOD)** is to provide high quality, uninterrupted water delivery and wastewater collection services to MWRA communities. The department is responsible for the treatment, transmission, and distribution of water from the Quabbin and Wachusett reservoirs to community water systems. It also manages the collection, transport, and screening of wastewater flow from MWRA communities to the Deer Island Treatment Plant as well as MWRA's industrial pretreatment, permitting, and monitoring program. FOD consists of six operating units: Toxic Reduction and Control, Wastewater Operations, Metropolitan Maintenance, Water Operations and Maintenance, Operations Support, and Administration.

The Toxic Reduction and Control (TRAC) Department operates a multi-faceted program to minimize and control the inflow of hazardous or toxic materials into the MWRA sewer system. TRAC operates MWRA's EPA approved Industrial Pretreatment Program and is responsible for all associated activities which include conducting inspections (approximately 700 annually), issuing permits (300 annually), conducting sampling (more than 2,000 events annually), and carrying out enforcement activities (approximately 400 annually). The program tracks more than 1,400 permitted facilities and 4,000 gas/oil separators. TRAC uses a software application, PIMS, to manage an extensive amount of industrial data on analytical test results, compliance status, and facility sampling and permitting requirements.

Wastewater Operations operates MWRA's wastewater transport facilities, including four continuously staffed headworks facilities; 12 fully automated pumping stations; and seven CSO facilities which are similarly un-staffed. The wastewater system is monitored and controlled from the operations control center (OCC) in Chelsea.

Water Operations and Maintenance is responsible for the treatment and delivery of approximately 207 mgd (three year average) of water from the Quabbin and Wachusett reservoirs to the community water systems. The

water system encompasses a service area from Chicopee in the western part of the state to Lynnfield, Wakefield, Marblehead, Norwood and Canton in the metropolitan area. This unit operates and maintains MWRA's western waterworks facilities, including the Carroll Water treatment Plant, the Metrowest Tunnel, the Ware Water Treatment Plant, the Cosgrove Intake Facility, the Norumbega Reservoir, and the covered storage facilities. There are two operations centers that provide for monitoring and control of the water system on a 24-hour per day basis. The Metropolitan Operations and Control Center (OCC) is located at MWRA's Chelsea facility and the Western Operations Center is located at the Carroll Water Treatment Plant.

Metropolitan Maintenance is responsible for maintenance of MWRA's wastewater and water systems and facilities within the Route 128 area. Staff maintain pipelines, valves, interceptors, pumps, facility equipment, buildings, and grounds. Metropolitan Maintenance staff maintain a waterworks network of approximately 300 miles of water mains, 4,800 valves, 18 miles of deep rock tunnels, ten pump stations, eight tunnel shafts, eleven distribution storage tanks and reservoirs; and a wastewater network of 240 miles of wastewater interceptors and appurtenances, 12 pump stations, four headworks, and five CSO facilities. In addition, this unit performs TV inspections of the wastewater interceptor system and leak detection.

Operations Support provides technical support to FOD in the areas of engineering, quality assurance, data management, metering, and monitoring. Engineering staff coordinates all engineering issues related to the operation of the water and wastewater systems. The Quality Assurance Unit monitors water treatment effectiveness, identifies treatment issues, and develops recommendations for water treatment improvements. Data management activities include performance reporting on water quality, development and maintenance of water quality treatment and optimization models, and tracking and analyzing chemical and hydraulic flow data. The Metering and Monitoring unit maintains 160 community water meters, 16 contract community water meters, 14 master water meters, and 237 wastewater meters. This unit collects meter data for operational and revenue generating purposes from the water and wastewater systems. It is also responsible for the maintenance of the water and wastewater Supervisory Control and Data Acquisition (SCADA) systems.

FOD Administration provides financial, administrative, planning, and policy oversight functions for the entire Field Operations Department.

Budget Highlights:

- \$35.7 million or 52% of the FY11 Proposed Budget is for **Wages and Salaries** of which \$34.9 million or 98% is for regular pay to fund 509 positions, three fewer positions than were funded in the FY10 Budget. The budget also includes a .5% vacancy rate to reflect the impact of attrition. Of the remaining budget, \$322,000 is for stand-by pay to support operational and maintenance needs; \$33,000 for interns for water quality, grounds maintenance, and engineering assistance to augment engineering staff; and \$109,000 for temporary employees including a temporary SCADA Tech, a Traffic Planner to assist with development of community traffic safety plans, and a MAXIMO technician.
- \$2.0 million or 2.9% of the FY11 Proposed Budget is for **Overtime**, which includes \$653,000 for operational coverage needs, \$750,000 for emergency related overtime, and \$578,000 for planned overtime for scheduled maintenance and training. Overtime is \$76,000 or 3.8% less than the FY10 Budget primarily due to reductions in coverage and planned overtime as part of MWRA's efforts to contain costs and optimize operations.
- \$6.8 million or 9.9% of the FY11 Proposed Budget is for **Chemicals**, of which \$6.4 million is for water treatment and \$428,000 is for wastewater treatment. The budget includes \$3.1 million for soda ash for alkalinity control, \$1.1 million for sodium hypochlorite and \$197,000 for aqua ammonia for disinfection, \$1.1 million for hydrofluosilic acid for fluoridation, \$599,000 for liquid oxygen for the CWTP ozone generation, \$234,000 for sodium bisulfite for dechlorination, \$268,000 for carbon dioxide to control water pH, and

\$159,000 for Nitrazyme and VX-456 for Framingham Extension Relief Sewer odor and corrosion control. The FY11 Proposed Chemicals budget is \$238,000 or 3.4% less than FY10 Budget primarily due to optimization initiatives at Nut Island and in the Framingham Extension Sewer.

- \$9.9 million or 14.4% of the FY11 Proposed Budget is for **Utilities**, including \$7.1 million for electricity, \$1.6 million for diesel fuel, \$713,000 for natural gas, and \$376,000 for water. The FY10 utility budget is \$97,000 or 1.0% less than FY10 CEB primarily due to reductions in usage estimates based on actual history of relatively new facilities and partial year benefits of energy conservation projects.
- \$9.9 million or 14.4% of the FY11 Proposed Budget is for **Maintenance**, including \$2.2 million in major projects, \$3.3 million in day-to-day projects, and \$3.7 million for services, and \$660,000 for energy initiatives. The FY11 Proposed Maintenance budget is \$997,000 or 11.2% more than the FY10 CEB due mainly to a significant increase in planned maintenance projects and improved capacity to complete the work as a result of a reorganization of the Metro Maintenance Department. Some of the major projects planned for FY11 include rebuilding the CWTP ozone generator, \$500,000, replacing grit piping and pods, \$240,000, replacing electrical breakers and transfer switches at Hayes, Caruso, and Prison Point, \$175,000, backup pump control panels at IPS, Squantum, and Quincy Pump Stations, \$125,000, and replacing surge valves at Lexington Street Pump Station, \$100,000. The budget also includes approximately \$660,000 for energy efficiency initiatives such as replacing pump station motors with variable frequency drives, and implementation of recommended HVAC and lighting efficiencies at various facilities.
- \$117,000 for **Training and Meetings** primarily to cover training required for job duties, health and safety compliance, and job-related licensures and certifications. The FY11 Proposed Budget is \$80,000 more than the FY10 Budget due to the inclusion of training on diagnostic equipment as part of FOD's continuing efforts to implement facility asset management programs in all facilities and on Spill Prevention.
- \$487,000 or 0.7% of the FY11 Proposed Budget is for **Professional Services**, including \$448,000 for engineering, which is made up of \$280,000 for as-needed engineering services, \$40,000 for the NPDES related Local Limits Study expected to be underway in FY11, and \$100,000 for dam inspection and engineering work related to dam repairs. Professional Services increased by \$143,000 or 41.6% from the FY10 Budget primarily due to the inclusion of three non-recurring items: inspection of appurtenant structures at MWRA dams \$50,000, spill prevention training evaluation \$28,000, and the final phase of energy audits at metropolitan facilities \$25,000. The budget also contains \$10,560 for lab and testing services related to water quality, and \$3,500 for the Dig Safe program.
- \$975,000 or 1.4% is for **Other Materials**, including \$330,000 for vehicle expenses for gas, mileage reimbursements and tolls; \$190,000 for work clothes; \$230,000 for health and safety supplies; and \$130,000 for lab and testing supplies. The FY11 Proposed Budget is \$25,000 or 2.6% more than the FY10 Budget primarily due to an increase in health and safety materials based on historical spending.
- \$2.8 million or 4.2% is for **Other Services**, including \$1.5 million for annual lease payments for the Chelsea office building, \$554,000 for telephone and SCADA needs at various facilities, \$319,000 for police details, and \$319,000 for Other Services of which the majority support Invasives control. The FY11 Proposed Budget is \$392,000 or 16.0% more than the FY10 Budget primarily due to a \$108,000 increase in the Chelsea rent and taxes, addition of a non-recurring \$125,000 for invasives species baseline monitoring at the water reservoirs, and \$100,000 for the implementation of a Global Positioning monitoring system.

LABORATORY SERVICES

Proposed FY11 Current Expense Budget LABORATORY SERVICES							
LINE ITEM	FY08 Actual	FY09 Actual	FY10 Budget	FY11 Proposed	Change FY10 to PFY11		
WAGES & SALARIES	\$ 3,691,792	\$ 3,853,465	\$ 4,062,822	\$ 4,021,131	\$ (41,691)	-1.0%	
OVERTIME	73,240	51,864	93,044	70,242	(22,802)	-24.5%	
FRINGE BENEFITS	808	387	1,200	1,200	-	0.0%	
UTILITIES	20,444	20,329	27,652	23,184	(4,468)	-16.2%	
ONGOING MAINTENANCE	200,812	209,999	327,385	313,295	(14,090)	-4.3%	
TRAINING & MEETINGS	4,381	832	2,000	2,000	-	0.0%	
PROFESSIONAL SERVICES	181,003	112,729	97,248	96,670	(578)	-0.6%	
OTHER MATERIALS	764,766	762,158	771,546	910,947	139,401	18.1%	
OTHER SERVICES	103,211	82,440	103,232	92,334	(10,898)	-10.6%	
TOTAL	\$ 5,040,457	\$ 5,094,203	\$ 5,486,129	\$ 5,531,003	\$ 44,874	0.8%	

The **Department of Laboratory Services (DLS)** goals are to provide high quality and responsive laboratory services to MWRA's water and wastewater treatment programs, including the Department of Conservation and Recreation (DCR) and the MWRA member water and wastewater communities. This includes timely and cost-effective laboratory tests to meet the strict testing guidelines required by all regulatory programs and permits, including the Safe Drinking Water Act (SDWA), Clean Water Act, and NPDES permits. The Department supports these functions at five locations: Chelsea, Southborough, Quabbin, the Central Laboratory at Deer Island, and the Clinton Wastewater Treatment Plant. Testing supports drinking water transmission and treatment processes, wastewater operations and control at Deer Island and Clinton, NPDES compliance, Massachusetts Bay outfall monitoring, TRAC, and wastewater residuals. DLS also conducts the Boston Harbor monitoring program, which involves regular sampling for nutrients, bacteria, and water quality parameters throughout Boston Harbor. Laboratory staff track and analyze results for submission to the Environmental Protection Agency and the Massachusetts Department of Environmental Protection.

Most MWRA laboratory testing is done in-house. Certain highly specialized or low volume tests are outsourced, such as tests for dioxins and radioactivity. In January 2004, MWRA brought most of the laboratory testing for the Harbor and Outfall Monitoring (HOM) in-house including the water column laboratory work and the monthly boat sampling of Massachusetts Bay to collect bacteria samples. In July 2004, MWRA brought laboratory testing of Quabbin and Wachusett Reservoirs and their tributaries for the Department of Conservation and Recreation in-house, including operation of the Quabbin Laboratory. MWRA anticipates additional significant changes to the Laboratory's work before the start of FY11 if regulators approve proposed reductions to the Harbor and Outfall Monitoring (HOM) program. Management assumes the reduced HOM program as proposed to EPA and DEP by MWRA will include no fish/shellfish samples, a limited number of benthic sediments samples, and fewer stations and test parameters in the water column task.

Budget Highlights:

- \$4.0 million or 73% of the FY11 Proposed Budget is for **Wages and Salaries**, of which \$3.9 million covers regular pay for 54 positions. The FY11 Proposed Budget also includes \$120,000 for up to three temporary employee positions primarily to cover peak workload and Harbor and Outfall Monitoring and Carroll Water Treatment Plant special testing. The decrease in Wages and Salaries from the FY10 Budget to the FY11 Proposed Budget is because the proposed scope reduction for HOM work will result in the need for two fewer temporary employees.

- \$23,000 is for **Utilities**, which consists of gases and cryogenic liquids used for various lab instruments. As of FY08, the budget for the Laboratory's diesel fuel and electricity is included in the DITP's budget versus in the Laboratory budget because the Lab shares a building with the Deer Island Plant.
- \$313,000 is for **Maintenance** which includes \$90,000 for Laboratory modifications, \$192,000 for equipment service contracts and \$9,350 for HVAC services to annually certify the fume hoods.
- The **Professional Services** budget of \$97,000 covers lab and testing analysis services. The Lab contracts out a variety of complex and/or low volume tests. Outside labs are used for emergencies, "second opinions", capacity constraints, and unavailability of specialized equipment or economic justification.
- \$911,000 is for **Other Materials** which includes \$546,000 for laboratory and testing supplies and \$295,000 for replacement of obsolete or older equipment. The budget for this line item increases by \$139,000 from FY10 to FY11 primarily because MWRA deferred purchase of Lab equipment replacements in FY09 and FY10 as part of cost containment efforts.
- The \$92,000 budget for **Other Services** primarily covers boat rental service on an as-needed basis, boat dockage for two boats, removing hazardous waste and courier service for shipping samples between laboratories.

ENVIRONMENTAL QUALITY

Proposed FY11 Current Expense Budget ENVIRONMENTAL QUALITY							
LINE ITEM	FY08 Actual	FY09 Actual	FY10 Budget	FY11 Proposed	Change FY10 to PFY11		
WAGES & SALARIES	\$ 1,328,722	\$ 1,371,796	\$ 1,392,875	\$ 1,419,225	\$ 26,350	1.9%	
OVERTIME	3,044	2,400	3,430	2,633	(797)	-23.2%	
FRINGE BENEFITS	-	-	-	-	-	-	
ONGOING MAINTENANCE	23	951	-	-	-	-	
TRAINING & MEETINGS	5,804	1,668	1,000	1,000	-	0.0%	
PROFESSIONAL SERVICES	2,692,210	2,418,808	2,099,160	1,495,000	(604,160)	-28.8%	
OTHER MATERIALS	3,047	4,002	5,130	15,030	9,900	193.0%	
OTHER SERVICES	119,450	6,293	9,229	4,200	(5,029)	-54.5%	
TOTAL	\$ 4,152,300	\$ 3,805,918	\$ 3,510,824	\$ 2,937,088	\$ (573,736)	-16.3%	

The **Environmental Quality Department (ENQUAD)** reports on environmental findings that may be linked to MWRA operations and projects. The department's main activities are monitoring sewage influent and effluent quality; monitoring the water quality of Boston Harbor, its tributary rivers, and Massachusetts Bay; managing data and entering quality data; and complying with the reporting requirements of MWRA's NPDES permits. MWRA submits these permit reports to state and federal regulators, the Outfall Monitoring Science Advisory Panel and its subcommittees, and several libraries; and, as required by the permits, MWRA posts many of these reports on its web site. All technical reports and several reports on water quality in the harbor and the bay are also posted on the web site.

Budget Highlights:

- \$1.4 million or 48% of the FY11 Proposed Budget is for **Wages and Salaries** for 17 positions, the same level as in FY10.
- \$1.5 million or 51% of the FY11 Proposed Budget is for **Professional Services** for outside laboratory testing and analysis associated with the Harbor and Outfall Monitoring (HOM) Program. This includes \$1.2 million for the HOM6, HOM7, and HOM8 contracts, which will be completed by several vendors. The balance of the budget covers the following contracts, most of which are partially funded through cost-sharing arrangements with other organizations:
 - o National Oceanic and Atmospheric Administration's National Data Buoy Center for required continuous monitoring
 - o Northeast Regional Assoc. of Coastal Ocean Observing Systems for buoy off Cape Ann
 - o Algae monitoring off Cape Ann on buoy
 - o Cape Cod Bay water quality monitoring
 - o Bays Eutrophication Model
 - o Biototoxicity testing for Deer Island Treatment Plant, Clinton Treatment Plant, and CSO facilities.

The significant decrease from the FY10 Budget to the FY11 Proposed Budget reflects MWRA's proposal to regulators to reduce the scope of HOM monitoring based on the favorable findings of eight years of monitoring data. The FY10 Budget includes a partial year reduction for this scope revision versus the full year impact as included in the FY11 Proposed Budget. Regulatory approval is pending and if it is granted, MWRA will save more than \$900,000 per year in monitoring costs due to the changes.

ENGINEERING AND CONSTRUCTION

Proposed FY11 Current Expense Budget ENGINEERING AND CONSTRUCTION						
LINE ITEM	FY08 Actual	FY09 Actual	FY10 Budget	FY11 Proposed	Change FY10 to PFY11	
WAGES & SALARIES	\$ 7,915,000	\$ 7,840,735	\$ 8,087,657	\$ 8,038,570	\$ (49,087)	-0.6%
OVERTIME	128,337	77,998	135,441	63,000	(72,441)	-53.5%
FRINGE BENEFITS	721	193	750	500	(250)	-33.3%
ONGOING MAINTENANCE	8,515	12,583	10,285	10,468	183	1.8%
TRAINING & MEETINGS	31,778	13,110	8,400	8,400	-	0.0%
PROFESSIONAL SERVICES	889	300	-	-	-	-
OTHER MATERIALS	124,318	127,861	117,824	118,316	492	0.4%
OTHER SERVICES	40,147	24,961	25,500	27,740	2,240	8.8%
TOTAL	\$ 8,249,705	\$ 8,097,741	\$ 8,385,857	\$ 8,266,994	\$ (118,863)	-1.4%

The **Engineering and Construction Department (ECD)** manages and coordinates the planning, design, and construction of system improvements that ensure a safe and adequate water supply and a reliable wastewater collection and treatment. Staff is organized into three units including Wastewater Engineering, Water Engineering, and Construction.

The department provides in-house engineering, consultant management (during the facilities planning, environmental review, design, and engineering services during construction stages of capital projects), drafting, surveying, construction management, and other technical assistance required for the maintenance, repair, and rehabilitation of wastewater and waterworks systems. The Wastewater Engineering Unit manages all wastewater design and engineering projects including CSO engineering activities. The unit also maintains the Design Information Services Center (DISC), which provides computer-aided design and drafting (CADD) and services. The Water Engineering Unit manages all water design and engineering projects as well as specialized technical services in electrical, structural, mechanical, and civil engineering disciplines. The Construction Unit provides contract management and resident inspection on all MWRA water and wastewater construction and rehabilitation projects, with the exception of Deer Island.

Budget Highlights:

- \$8 million for **Wages and Salaries** represents 97.2% of the FY11 Proposed Budget and includes funding for 90 positions (includes vacancy adjustment).
- \$63,000 for **Overtime** to cover resident inspection at construction sites after regular work hours to ensure monitoring of construction projects. Overtime is also used for unplanned design or survey needs, attendance at evening public meetings and meeting deadlines.
- \$10,000 for **Maintenance** which covers service contracts for the DISC Unit's specialized printers and plotters.
- \$118,000 for **Other Materials**, which includes \$99,000 for vehicle expense for staff traveling to construction sites, \$11,000 for office supplies, and \$5,000 for work clothes.
- \$28,000 for **Other Services** which includes \$6,000 for memberships and dues, \$10,000 for printing of in-house design plans and specifications, \$8,000 for telephone expenses, and \$1,500 for police details.



Law Division
Budget

LAW DIVISION

Proposed FY11 Current Expense Budget LAW DIVISION						
LINE ITEM	FY08 Actual	FY09 Actual	FY10 Budget	FY11 Proposed	Change FY10 to PFY11	
WAGES & SALARIES	\$ 1,687,100	\$ 1,657,976	\$ 1,686,516	\$ 1,687,416	\$ 900	0.1%
OVERTIME	1	-	-	-	-	-
TRAINING & MEETINGS	2,344	570	2,000	2,000	-	0.0%
PROFESSIONAL SERVICES	99,340	126,256	151,000	146,000	(5,000)	-3.3%
OTHER MATERIALS	9,021	7,952	9,314	9,314	-	0.0%
OTHER SERVICES	26,334	22,294	32,147	29,147	(3,000)	-9.3%
TOTAL	\$ 1,824,140	\$ 1,815,048	\$ 1,880,977	\$ 1,873,877	\$ (7,100)	-0.4%

The Law Division provides legal counsel to the Board of Directors, the Executive Director and staff on compliance with federal and state laws, regulations, court cases and administrative orders. Staff also handle and provide assistance with respect to litigation matters, real estate matters, labor/employment issues, and procurement and construction issues. The General Counsel interprets the MWRA Enabling Act and provides advice on conflict of interest and Code of Conduct issues. Division attorneys monitor the work of outside counsel when it is necessary to retain such services. The budget for the Division accounts for less than 1% of MWRA's FY11 Proposed Budget.

Law Division staff, though usually representing MWRA in a defensive posture, also work with Operations Division staff to effectuate cost recovery claims for design errors and omissions by MWRA design professionals. In addition, the Law Division assists in the early resolution of contractor and vendor claims prior to litigation so as to resolve them as favorably and early as possible thereby reducing or eliminating litigation costs and interest payable upon such claims were they to be litigated.

FY11 Goals:

- Timely and cost effective resolution of legal disputes involving MWRA, through litigation or alternative means of dispute resolution.
- High quality legal services to support the business and operational needs of MWRA in the areas of real estate, labor and employment, regulatory compliance, litigation, construction and business law.
- Advocacy of MWRA interests in new and developing regulatory issues.
- Continues to exhaust all opportunities to shift cost of legal representation to insurers and indemnitors and to litigate insurance coverage disputes as they arise, all in the interest of cost savings.

Budget Highlights:

- \$1.7 million for **Wages and Salaries**, an increase of \$900 or .1% from FY10 Budget.
- \$146,000 for **Professional Services**, a decrease of \$5,000 or 3.3 % from FY10 Budget.
- \$29,147 for **Other Services**, a decrease of \$3,000 or 9.3% from the FY10 Budget



Finance Division
Budget

FINANCE DIVISION

Proposed FY11 Current Expense Budget FINANCE DIVISION						
LINE ITEM	FY08 Actual	FY09 Actual	FY10 Budget	FY11 Proposed	Change FY10 to PFY11	
WAGES & SALARIES	\$ 3,031,855	\$ 3,244,173	\$ 3,344,029	\$ 3,504,552	\$ 160,523	4.8%
OVERTIME	38	197	-	-	-	-
ONGOING MAINTENANCE	85	14	0	0	-	-
TRAINING & MEETINGS	912	458	2,344	2,344	-	0.0%
PROFESSIONAL SERVICES	550,691	455,062	432,533	418,413	(14,120)	-3.3%
OTHER MATERIALS	6,597	6,091	6,000	6,500	500	8.3%
OTHER SERVICES	32,458	14,746	17,677	14,897	(2,780)	-15.7%
TOTAL	\$ 3,622,636	\$ 3,720,741	\$ 3,802,583	\$ 3,946,706	\$ 144,123	3.8%

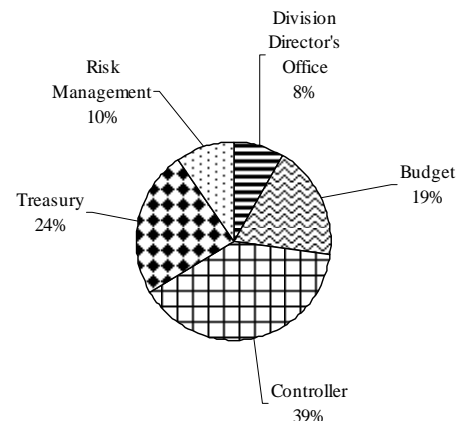
Proposed FY11 Current Expense Budget FINANCE DIVISION by Department						
DEPARTMENT	FY08 Actual	FY09 Actual	FY10 Budget	FY11 Proposed	Change FY10 to PFY11	
DIVISION DIRECTOR'S OFFICE	\$ 195,350	\$ 204,016	\$ 198,603	\$ 330,913	\$ 132,310	66.6%
BUDGET	658,072	698,082	744,308	743,957	(351)	0.0%
TREASURY	1,040,754	986,388	943,194	940,247	(2,947)	-0.3%
CONTROLLER	1,425,457	1,488,219	1,513,082	1,543,090	30,008	2.0%
RISK MANAGEMENT	303,003	344,036	403,396	388,499	(14,897)	-3.7%
TOTAL	\$ 3,622,636	\$ 3,720,741	\$ 3,802,583	\$ 3,946,706	\$ 144,123	3.8%

The **Finance Division** is responsible for overseeing rates and revenue management, budgeting, capital financing, accounting, disbursements, investments, insurance, grant and loan management and the processing and resolution of insurance claims. The Finance Division is comprised of four independent but related functions. These are Budget, Controller, Risk Management, and Treasury. The Finance Division performs critical financial support functions that ensure the daily operations of the Authority and improvements to its capital assets, including: timely and accurate processing of payments for goods and services, annual issuance of debt to fund essential capital projects, weekly distribution of payroll, and regular reporting on expenditures to MWRA management, the Advisory Board, and the Board of Directors. The Finance Division is also responsible for developing and implementing forward thinking, long-range investment and budget strategies that ensure adequate funding for capital projects and on-going operations while mitigating financial impact to ratepayers and ensuring the Authority's strong bond rating.

The FY11 Proposed Budget for the Finance Division accounts for less than 2% of MWRA's direct expense budget.

FY11 Goals:

- Ensure the fiscal strength of MWRA through judicious, informed, and farsighted allocation of resources.
- Develop strategies for minimizing increases in community assessments and charges.
- Maintain favorable credit ratings for MWRA's revenue bonds.
- Provide financial planning, control, and accountability for MWRA.



- Ensure effective, coordinated operating and capital budget planning throughout MWRA.

FY11 Initiatives

- Continue implementation of new computer application to support the Capital Improvement Program.
- Continue close monitoring of financial markets to better position the Authority to take advantage of any opportunities to maximize investment income and reduce debt financing obligations.
- Continue assessment and evaluation of sustainable cost savings opportunities throughout the organization.
- Continue to streamline administrative and payroll related processes.

FY10 Accomplishments

- Continued to manage through historically low yields on investments particularly short-term money market positions.
- Continued to hold high credit ratings from Standard and Poor's, Moody's Investor Service and Fitch Ratings.
- Continued providing more up-to-date, streamlined financial information to the Board of Directors and external constituencies on both the Current Expense Budget and Capital Improvement Program.
- Continues to manage FY10 budgetary spending to allow for an estimated \$24 million defeasance with impacts on future Rate Revenue Requirements.
- The Authority aggressively pursued stimulus funding opportunities and obtained \$33 million of Federal stimulus funding for water and wastewater initiatives.

DIVISION DIRECTOR'S OFFICE

Proposed FY11 Current Expense Budget FINANCE DIVISION DIRECTOR'S OFFICE						
LINE ITEM	FY08 Actual	FY09 Actual	FY10 Budget	FY11 Proposed	Change FY10 to PFY11	
WAGES & SALARIES	\$ 194,164	\$ 203,243	\$ 189,554	\$ 321,534	\$ 131,980	69.6%
TRAINING & MEETINGS	784	75	2,344	2,344	-	0.0%
OTHER MATERIALS	201	465	5,170	5,500	330	6.4%
OTHER SERVICES	201	233	1,535	1,535	-	0.0%
TOTAL	\$ 195,350	\$ 204,016	\$ 198,603	\$ 330,913	\$ 132,310	66.6%

The **Division Director's Office** oversees the centralized financial functions of rates development, revenue collection, budgeting, capital financing, accounting, disbursement and payroll processing, debt and investment management, grant and loan management, and risk management. The Director's Office ensures that all financial transactions are conducted in compliance with all rules and regulations and with the Authority's policies, procedures and contract terms and that the investment of all funds are consistent with the bond resolutions and regulations. The Director's Office manages the development and implementation of financial policy to uphold the efficient utilization of resources and control of all monies. The Director's Office provides advice and analysis to the Executive Director and the Board of Directors on all financial issues.

The division's continuing challenge in FY10 will be maintaining agency-wide focus on balancing the competing needs to minimize rate increases while ensuring the provision of critical MWRA services. This challenge is heightened by the elimination of Debt Service Assistance (DSA) which have dropped from over \$52 million in 2002 to \$0 in FY10.

FY11 Goals:

- Guide and coordinate division activities to support MWRA and Finance Division objectives.
- Provide central and administrative support to the division's departments.
- Continuously improve processes and performance for greater efficiency.
- Employ all management strategies available to mitigate rate revenue requirements to MWRA's communities.

Budget Highlights:

- FY11 Proposed Budget includes \$322,000 for **Wages and Salaries**, an increase of \$132,000 from the FY10 Budget due to the promotion of the Director of Finance to the Director of Administration and Finance as well as the transfer-in of the Deputy Director of Administration and Finance from Real Property. The proposed budget funds three positions.

BUDGET

Proposed FY11 Current Expense Budget							
BUDGET							
LINE ITEM	FY08 Actual	FY09 Actual	FY10 Budget	FY11 Proposed	Change FY10 to PFY11		
WAGES & SALARIES	\$ 639,818	\$ 690,966	\$ 740,878	\$ 741,657	\$ 779	0.1%	
TRAINING & MEETINGS	-	-	-	-	-	-	
PROFESSIONAL SERVICES	3,563	0	0	0	-	-	
OTHER MATERIALS	923	589	230	400	170	73.9%	
OTHER SERVICES	13,768	6,527	3,200	1,900	(1,300)	-40.6%	
TOTAL	\$ 658,072	\$ 698,082	\$ 744,308	\$ 743,957	\$ (351)	0.0%	

The **Budget Department** provides the financial analysis that allows MWRA to translate its goals, and legal and financial commitments into cost-effective annual and multi-year programs and budgets. Department staff works closely with divisional staff to coordinate development of the long-term Capital Improvement Program (CIP) and monitor the progress of capital projects compared to schedule and budget. Staff also coordinates development of MWRA's annual Current Expense Budget (CEB) and monitors spending compared to budget throughout the year. The Budget Department also manages the annual process of establishing water and sewer assessments to be paid by MWRA's member communities and planning estimates of future rate projections.

FY11 Goals:

- Continually enhance processes and the management of resources to deliver the proposed and final Capital Improvement Program and Current Expense Budgets timely and accurately.
- Adhere to all MWRA policies, procedures and administrative practices as well as all relevant statutory and regulatory authority and accounting and budgeting principles.
- Improve the quality and presentation of budget documents and regularly required reports while working to develop new reports that will aid the Authority's management and staff as well as the MWRA Advisory Board.

FY11 Initiatives:

- Recommended the lowest responsible rate increase to our member communities in fifteen years, in the FY11 Proposed Budget.
- Development of more refined planning estimates in the FY11 Proposed Budget.
- Development of staff skills for cross functionality between CIP and CEB.
- Assessment and evaluation of sustainable cost savings opportunities throughout the organization.

FY10 Accomplishments:

- First phase implementation of a new computer system application to support the Capital Improvement Program.
- Realized savings due to limited hard copy distribution of the CIP and CEB documents and production in-house versus outside printing.

- In line with the Divisions' paperless initiative, switched to PDF file distribution for monthly variance reports and Advisory Board briefing materials.

Budget Highlights:

- FY11 Proposed Budget includes \$742,000 for **Wages and Salaries**, an increase of \$1,000 or 0.1% from the FY10 Budget. The proposed budget funds eight positions.
- \$1,900 is for **Other Services**, a decrease of \$1,300 or 40.6% from the FY10 Budget, mostly due to a reduction in funds to cover the cost of printing a limited number of budget documents and reports.

CONTROLLER

Proposed FY11 Current Expense Budget CONTROLLER						
LINE ITEM	FY08 Actual	FY09 Actual	FY10 Budget	FY11 Proposed	Change FY10 to PFY11	
WAGES & SALARIES	\$ 1,227,866	\$ 1,285,844	\$ 1,321,152	\$ 1,351,940	\$ 30,788	2.3%
OVERTIME	-	-	-	-	-	-
ONGOING MAINTENANCE	-	14	-	-	-	-
TRAINING & MEETINGS	-	350	-	-	-	-
PROFESSIONAL SERVICES	195,500	198,124	189,000	189,000	-	0.0%
OTHER MATERIALS	596	2,809	300	300	-	0.0%
OTHER SERVICES	1,495	1,078	2,630	1,850	(780)	-29.7%
TOTAL	\$ 1,425,457	\$ 1,488,219	\$ 1,513,082	\$ 1,543,090	\$ 30,008	2.0%

The **Controller Department** consists of the Accounting, Accounts Payable, and Payroll units. The department has the responsibility for ensuring integrity within the financial accounting system and integration among the three functions. The department is also responsible for the appropriate treatment, classification and reporting of the MWRA's assets, liabilities, revenues and expenditures in accordance with accounting principles generally accepted in the United States of America.

FY11 Goals:

- Implement process efficiencies in all department units.
- Enhance controls to safeguard Authority assets and ensure accurate and timely reporting.

FY11 Initiatives:

- Implement electronic timesheet approval to continue paperless initiative.
- Replace manually prepared employee leave calendar with automated product.

FY10 Accomplishments:

- Supported implementation of Lawson Absence Management software enhancement for employee leave tracking and reporting.
- Developed new Fixed Asset Capitalization Form to better capture new asset components and asset retirements.

Budget Highlights:

- \$1.4 million for **Wages and Salaries**, an increase of \$31,000 or 2.3% from the FY10 Budget mostly due to a salary adjustment for one position based on the current Position Control Register (PCR) and step increases. The proposed budget funds 19 positions which is level funded from the FY10 Budget.
- \$189,000 for **Professional Services**, level funded from the FY10 Budget. The proposed FY11 Budget reflects anticipated costs associated with the annual financial statement audit, the A-133 Single Audit related to the receipt of federal funds, and the actuarial services related to GASB 45 Other Post Employment Benefits.

RISK MANAGEMENT

Proposed FY11 Current Expense Budget RISK MANAGEMENT							
LINE ITEM	FY08 Actual	FY09 Actual	FY10 Budget	FY11 Proposed	Change FY10 to PFY11		
WAGES & SALARIES	\$ 277,312	\$ 315,369	\$ 357,946	\$ 358,049	\$ 103	0.0%	
TRAINING & MEETINGS	-	-	-	-	-	-	
PROFESSIONAL SERVICES	25,178	28,145	45,000	30,000	(15,000)	-33.3%	
OTHER MATERIALS	63	53	-	-	-	-	
OTHER SERVICES	450	469	450	450	-	0.0%	
TOTAL	\$ 303,003	\$ 344,036	\$ 403,396	\$ 388,499	\$ (14,897)	-3.7%	

The **Risk Management Department** formerly included in Treasury was established as a stand alone department during FY06.

The department is responsible for all MWRA insurance and risk management functions and reports to the Finance Division Director. Department staff manage all administrative functions relating to the initial reporting, processing and resolution of construction contract claims and self-insured auto, general liability, and property damage claims. Department staff are responsible for annual procurement, renewals and maintenance of all Authority-wide insurance policies and programs and also for managing all aspects of MWRA's Contractor Insurance Certificate program. Department staff serves as a liaison to insurance industry participants including brokers, insurers, insurance consultants, attorneys and all MWRA departments.

FY11 Goals:

- Process self-insured automobile, general liability, property damage and construction contract claims in an efficient and timely manner.
- Secure the timely, cost effective renewal of Authority-wide insurance contracts.
- Minimize MWRA's exposure to financial loss stemming from contractor and vendor activities by establishing insurance requirements and monitoring compliance.

Budget Highlights:

- FY11 Proposed Budget is \$388,000 of which \$358,000 is for **Wages & Salaries**. The proposed budget funds four positions, the same as the FY10 Budget.
- \$30,000 for **Professional Services** includes funds for an insurance consultant, a decrease of \$15,000 or 33.3% from the FY10 Budget.

TREASURY

Proposed FY11 Current Expense Budget						
TREASURY						
LINE ITEM	FY08 Actual	FY09 Actual	FY10 Budget	FY11 Proposed	Change FY10 to PFY11	
WAGES & SALARIES	\$ 692,696	\$ 748,751	\$ 734,499	\$ 731,372	\$ (3,127)	-0.4%
OVERTIME	38	197	-	-	-	-
ONGOING MAINTENANCE	85	0	0	0	-	-
TRAINING & MEETINGS	128	33	0	0	-	-
PROFESSIONAL SERVICES	326,450	228,793	198,533	199,413	880	0.4%
OTHER MATERIALS	4,813	2,175	300	300	-	0.0%
OTHER SERVICES	16,544	6,439	9,862	9,162	(700)	-7.1%
TOTAL	\$ 1,040,754	\$ 986,388	\$ 943,194	\$ 940,247	\$ (2,947)	-0.3%

The **Treasury Department** secures funds for ongoing operations and capital programs in addition to processing cash disbursements. Department staff collects revenue, disburses funds, and manages grant and loan programs in addition to debt issuance and investments.

FY11 Goals:

- Manage MWRA's debt portfolio to achieve sustainable and predictable rate increases.
- Maximize investment return while maintaining compliance with the General Revenue Bond Resolution, security and liquidity.

FY10 Accomplishments:

- Treasury has managed through historically low yields on investments particularly short-term money market positions. In response, Treasury has identified those funds that can be invested longer-term without disrupting liquidity needs and rebate-arbitrage considerations. Investing longer has curtailed the loss of investment income due to these extraordinary low interest rates.
- The Finance Division applied for and received approval of Federal Stimulus funding of \$33 million as of March 11, 2010 administered through the Commonwealth. Treasury will continue to comply with the newly established procedures for receipt of funds and the forgiveness of repayment including specific reporting requirements.

Budget Highlights:

- \$731,000 for **Wages and Salaries**, a decrease of \$3,000 or 0.4% from the FY10 Budget. The proposed budget funds ten positions, the same as the FY10 Budget.
- \$199,000 for **Professional Services**, level funded from FY10 Budget. The proposed budget includes funds for trustee services and arbitrage consulting services.



Support Services Division
Budget

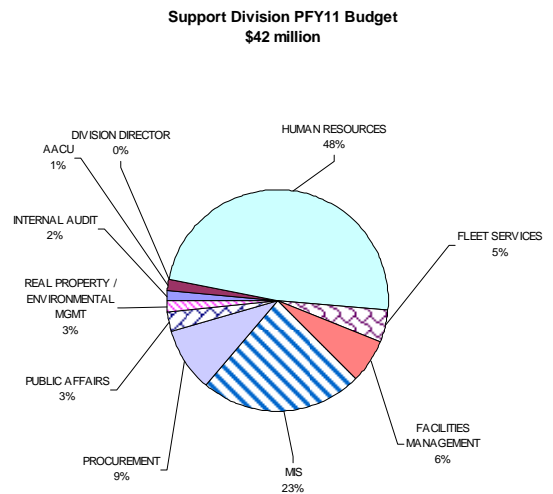
SUPPORT SERVICES DIVISION

Proposed FY11 Current Expense Budget SUPPORT DIVISION						
LINE ITEM	FY08 Actual	FY09 Actual	FY10 Budget	FY11 Proposed	Change FY10 to PFY11	
WAGES & SALARIES	\$ 14,236,309	\$ 14,447,539	\$ 14,910,263	\$ 14,763,743	\$ (146,520)	-1.0%
OVERTIME	74,730	57,690	58,479	58,478	(1)	0.0%
FRINGE BENEFITS	15,520,254	16,527,910	16,508,832	16,350,365	(158,467)	-1.0%
WORKERS' COMPENSATION	1,159,464	1,841,638	1,325,000	1,870,000	545,000	41.1%
UTILITIES	206,427	134,173	167,629	150,592	(17,037)	-10.2%
ONGOING MAINTENANCE	4,226,440	3,993,090	3,245,943	3,720,390	474,447	14.6%
TRAINING & MEETINGS	52,369	39,417	49,924	48,564	(1,360)	-2.7%
PROFESSIONAL SERVICES	439,462	325,197	409,101	397,415	(11,686)	-2.9%
OTHER MATERIALS	1,205,556	1,130,472	1,429,520	1,500,559	71,039	5.0%
OTHER SERVICES	2,726,711	2,976,307	2,986,587	3,113,603	127,016	4.3%
TOTAL	\$ 39,847,722	\$ 41,473,433	\$ 41,091,278	\$ 41,973,709	\$ 882,431	2.1%

Proposed FY11 Current Expense Budget SUPPORT DIVISION by Department						
DEPARTMENT	FY08 Actual	FY09 Actual	FY10 Budget	FY11 Proposed	Change FY10 to PFY11	
DIVISION DIRECTOR	\$ 230,560	\$ 238,308	\$ 192,279	\$ -	\$ (192,279)	-100.0%
INTERNAL AUDIT	583,631	587,516	616,740	628,194	11,454	1.9%
PUBLIC AFFAIRS	1,272,500	1,117,615	1,250,527	1,212,463	(38,064)	-3.0%
FACILITIES MANAGEMENT	2,279,899	2,514,224	2,362,949	2,714,167	351,218	14.9%
FLEET SERVICES	1,918,209	1,883,704	2,130,461	2,001,657	(128,804)	-6.0%
AACU	574,779	593,677	610,935	604,236	(6,699)	-1.1%
HUMAN RESOURCES	18,678,844	20,372,112	19,943,186	20,315,582	372,396	1.9%
MIS	8,940,973	9,059,021	9,220,972	9,857,024	636,052	6.9%
PROCUREMENT	4,621,381	4,415,886	3,905,430	3,931,214	25,784	0.7%
REAL PROPERTY / ENVIRONMENTAL MGMT	746,946	691,372	857,799	709,172	(148,627)	-17.3%
TOTAL	\$ 39,847,722	\$ 41,473,435	\$ 41,091,278	\$ 41,973,709	\$ 882,431	2.1%

The **Support Services Division** oversees the central functions of communications and community relations, real property and environmental management, human resources, affirmative action, procurement, materials warehousing, occupational health and safety, internal audit, fleet services, computer system development and management, library and records management, and mail and employee shuttle services. The division also manages the Charlestown Navy Yard headquarters.

The division budget includes ten departments: Division Director, Internal Audit, Public Affairs, Facilities Management, Fleet Services, Affirmative Action and Compliance Unit (AACU), Human Resources, Management Information Systems (MIS), Procurement, and Real Property and Environmental Management (RPEM). Internal Audit, Public Affairs, and AACU, funded as part of the Support Services budget, report to the MWRA's Executive Director. The \$42.0 million FY11 Proposed Budget accounts for 20.0% of MWRA's direct expense budget. The division budget includes \$16.4 million for fringe benefits for all MWRA personnel; \$1.9 million for workers' compensation claims and medical expenses; and \$1.6 million for lease, taxes insurance, and operating and maintenance costs for the Charlestown Navy Yard (CNY) headquarters. Net of these agency-wide expenses, the Support Services Division budget accounts for 10.6% of direct expenses.



INTERNAL AUDIT

Proposed FY11 Current Expense Budget INTERNAL AUDIT							
LINE ITEM	FY08 Actual	FY09 Actual	FY10 Budget	FY11 Proposed	Change FY10 to PFY11		
WAGES & SALARIES	\$ 569,213	\$ 581,055	\$ 605,304	\$ 616,888	\$ 11,584		1.9%
OVERTIME	7	-	-	-	-		-
TRAINING & MEETINGS	10,092	3,306	7,738	7,738	-		0.0%
OTHER MATERIALS	2,501	2,050	2,400	2,400	-		0.0%
OTHER SERVICES	1,818	1,105	1,298	1,168	(130)		-10.0%
TOTAL	\$ 583,631	\$ 587,516	\$ 616,740	\$ 628,194	\$ 11,454		1.9%

The **Internal Audit Department** monitors the efficiency and integrity of MWRA operations by auditing financial and program operations; reviewing compliance with accounting and management control systems, laws and regulations; and coordinates the formulation and revisions to MWRA policies and procedures. Internal Audit also monitors MWRA contracts through its contract audit program, including approval of provisional consultant indirect cost rates and subsequent audit of consultant billings; performs labor burden reviews, construction change orders and claim audits, and vendor audits.

FY11 Goals:

- Encourage more economical and efficient operations, adhere to sound management procedures, and use controls designed to safeguard MWRA assets.
- Assure that automated and supporting manual management information systems have secure data control environments and to provide accurate and useful management information.
- Assure that contractors and consultants doing business with MWRA have adequate accounting and billing systems to provide current, complete, and accurate cost and price information and project invoicing.

FY10 Accomplishments:

- Identified \$451,511 in savings related to: incurred cost audits \$119,759; construction labor burden reviews \$185,997; and other contractor and vendor assignments \$145,755.
- Issued final audit reports on the review of Fixed Asset Accounting, the BWSC CSO Financial Assistance Agreement (FAA) Eligible Costs, Construction Change Order Pricing, and completed three incurred cost assignments, eight preliminary construction reviews, a vendor audit, a prevailing wage review, and true-ups of CY2008 billings by Harbor Energy Electric Company (HEEC) and BWSC under its CSO FAA.

Budget Highlights:

- Total FY11 Proposed Budget of \$628,000, an increase of \$11,500 or 1.9% over the FY10 Budget.
- \$617,000 for **Wages and Salaries**, an increase of \$11,500 or 1.9% over the FY10 Budget, primarily due to reclassification of four positions. The proposed budget includes funding for six full time and two part-time positions.
- \$7,700 for **Training and Meetings**, level funded from the FY10 Budget.

PUBLIC AFFAIRS

Proposed FY11 Current Expense Budget PUBLIC AFFAIRS							
LINE ITEM	FY08 Actual	FY09 Actual	FY10 Budget	FY11 Proposed	Change FY10 to PFY11		
WAGES & SALARIES	\$ 1,207,344	\$ 1,024,857	\$ 1,158,781	\$ 1,130,717	\$ (28,064)	-2.4%	
OVERTIME	128	-	-	-	-	-	
TRAINING & MEETINGS	2,409	1,747	315	315	-	0.0%	
PROFESSIONAL SERVICES	1,113	1,630	1,050	1,050	-	0.0%	
OTHER MATERIALS	26,672	37,585	20,550	20,550	-	0.0%	
OTHER SERVICES	34,834	51,796	69,831	59,831	(10,000)	-14.3%	
TOTAL	\$ 1,272,500	\$ 1,117,615	\$ 1,250,527	\$ 1,212,463	\$ (38,064)	-3.0%	

The **Public Affairs Department** is the institutional link to all MWRA constituencies. The **Intergovernmental Affairs Section** works for passage of legislation necessary to carry out MWRA’s mission, monitors legislation, responds to inquiries by elected and appointed officials, and pursues funding from the state legislature for MWRA projects.

The **Community Relations Section** deals directly with cities and towns in the service area, responds to inquiries about MWRA, proactively incorporates community concerns into MWRA project work, coordinates outreach and education initiatives to highlight MWRA programs, and provides technical expertise for specific projects and initiatives. Community Relations staff also work in conjunction with Planning and Coordination Department staff to ensure compliance with state and local regulations and restrictions.

The **Communications Section** manages media relations, issues press releases and responds to information requests, oversees the design and distribution of MWRA publications, manages the web site, and provides design, editorial, and graphics services for other sections of MWRA.

The **Education Section** is responsible for curriculum development, teacher training workshops, as well as providing school education materials on water quality, water conservation, wastewater topics, and environmental issues.

FY11 Goals:

- Enhance overall public understanding of MWRA’s mission, goals, and benefits to the public through extensive outreach and effective communication.
- Develop and implement proactive strategies for educating and informing key MWRA constituencies and the public at large about MWRA’s mission, projects and progress, and promote understanding for associated costs.
- Gain public support for MWRA programs and projects, and respond to the needs and concerns of elected and appointed public officials.
- Provide support to MWRA staff to ensure that MWRA projects meet regulatory requirements, and provide input to regulatory agencies in order to ensure MWRA interests are recognized during the development of regulations.

Budget Highlights:

- Total FY11 Proposed Budget of \$1.2 million, a decrease of \$38,000 or 3% from the FY10 Budget.
- \$1.1 million for **Wages and Salaries**, a decrease of \$28,000 or 2.4% from the FY10 Budget. The proposed budget includes funding for 14 positions.
- \$80,000 for **Other Materials** and **Other Services**, a decrease of \$10,000 from the FY10 Budget, includes funds associated with the publication of MWRA's Annual Report, production of materials to inform the public about MWRA activities and to educate school children, teachers and environmental organizations about the importance of MWRA's programs to public health and the environment.

FACILITIES MANAGEMENT

Proposed FY11 Current Expense Budget FACILITIES MANAGEMENT						
LINE ITEM	FY08 Actual	FY09 Actual	FY10 Budget	FY11 Proposed	Change FY10 to PFY11	
WAGES & SALARIES	\$ 393,292	\$ 391,067	\$ 321,507	\$ 516,162	\$ 194,655	60.5%
OVERTIME	25,262	21,347	23,000	23,000	-	0.0%
FRINGE BENEFITS	303	301	-	-	-	-
UTILITIES	203,714	132,126	164,629	147,592	(17,037)	-10.3%
ONGOING MAINTENANCE	25,602	15,549	39,400	39,400	-	0.0%
TRAINING & MEETINGS	-	67	-	-	-	-
PROFESSIONAL SERVICES	-	-	-	-	-	-
OTHER MATERIALS	135,569	108,177	116,233	113,933	(2,300)	-2.0%
OTHER SERVICES	1,496,157	1,845,590	1,698,180	1,871,595	173,415	10.2%
TOTAL	\$ 2,279,899	\$ 2,514,224	\$ 2,362,949	\$ 2,711,682	\$ 348,733	14.8%

Proposed FY11 Current Expense Budget FACILITIES MANAGEMENT SUPPORT by Area						
AREA	FY08 Actual	FY09 Actual	FY10 Budget	FY11 Proposed	Change FY10 to PFY11	
FRSA	\$ 70,618	\$ -	\$ -	\$ -	\$ -	-
FACILITIES MANAGEMENT	1,792,100	2,097,649	2,015,334	2,170,412	155,078	7.7%
ADMINISTRATIVE SERVICES	417,181	416,575	347,615	541,270	193,655	55.7%
TOTAL	\$ 2,279,899	\$ 2,514,224	\$ 2,362,949	\$ 2,711,682	\$ 348,733	14.8%

The Facilities Management Department provides a range of support services to MWRA staff located at the Charlestown Navy Yard (CNY).

Facilities Management is responsible for coordinating site management activities at CNY. Staff institute maintenance procedures, respond to facilities requests from building occupants, coordinate workspace planning, provide office furnishings, and develop and implement appropriate measures to ensure the safety of MWRA staff and protect and preserve MWRA assets.

In addition, staff provides administrative and office support services that facilitate efficient use of MWRA resources. These responsibilities include providing and managing the motor pools at Chelsea and CNY, copying and printing services, general office equipment repairs, transportation, mail and courier services, and receptionist coverage at CNY.

FY11 Goals:

- Provide a safe and well-maintained working environment for all MWRA staff at CNY and provide appropriate space for staff by coordinating workspace planning, design, and furniture acquisitions.
- Maintain the CNY facilities to prevent loss or deterioration of MWRA assets.
- Implement facility programs in conjunction with MWRA recycling and resource conservation efforts.
- Support efforts to limit the fleet size while meeting operational needs by providing reliable motor pool and transportation services.

FY10 Accomplishments:

- Implemented recommendations from FY09 energy audit at CNY Headquarters.
- Continuing to work with the landlord to implement facility improvements as provided in our lease contract. Improvements in FY10 include carpeting replacement, bathroom and kitchen updates.
- Worked with departments to implement savings in our mail program by utilizing the most efficient shipping methods for large mailings in order to offset rising postal and shipping rates.
- Continuing to work with MIS and equipment providers to implement multi-function technology as copiers and printers are due for replacement. By utilizing this technology it is possible to replace up to four individual units (printer, copier, scanner and fax) with one piece of equipment that performs all of these functions providing savings in floor space, power, equipment maintenance and production costs (cost per page).

Budget Highlights:

- The FY11 Proposed Budget of \$2.7 million reflects an increase of \$349,000 or 14.8% as compared to the FY10 Budget. This increase is due to staffing changes and the cost for leased space in Marlboro adjacent to the CWTP for the Records Center and limited Warehouse facilities.
- \$516,000 for **Wages and Salaries** reflects an increase of \$195,000 or 60.5% from the FY10 Budget due to staffing reassignments and inclusion of funding for temporary employees. The budget supports seven positions.
- \$23,000 for **Overtime** for coverage of facility maintenance and support services is level funded with the FY10 Budget.
- \$148,000 for **Utilities** reflects a decrease of \$17,000 or 10.3% as compared to the FY10 Budget. This change is based on current spending trends and utility pricing.
- \$39,000 for **Ongoing Maintenance** is level funded with the FY10 Budget. This line item includes funding for facility and equipment maintenance and services including HVAC, plumbing and electrical services.
- \$114,000 for **Other Materials** reflects a decrease of \$2,000 or 2.0% as compared to the FY10 Budget. This line item includes funding for postage, supplies and special furniture and equipment required to respond to Americans with Disabilities Act (ADA) requests and other medically required accommodations.
- \$1.9 million for **Other Services** reflects an increase of \$173,000 or 10.2%, as compared to the FY10 Budget. This item includes funding rental and operating costs for CNY headquarters facility and the Marlboro Records Center and Warehouse space.

FLEET SERVICES

Proposed FY11 Current Expense Budget FLEET SERVICES						
LINE ITEM	FY08 Actual	FY09 Actual	FY10 Budget	FY11 Proposed	Change FY10 to PFY11	
WAGES & SALARIES	\$ 658,619	\$ 682,909	\$ 736,170	\$ 747,766	\$ 11,596	1.6%
OVERTIME	18,773	19,718	17,800	17,800	-	0.0%
FRINGE BENEFITS	911	401	1,000	1,000	-	0.0%
UTILITIES	2,316	1,857	3,000	3,000	-	0.0%
ONGOING MAINTENANCE	703,892	724,540	743,750	765,750	22,000	3.0%
TRAINING & MEETINGS	-	-	-	-	-	-
OTHER MATERIALS	530,164	451,210	624,202	461,802	(162,400)	-26.0%
OTHER SERVICES	3,534	3,069	4,539	4,539	-	0.0%
TOTAL	\$ 1,918,209	\$ 1,883,704	\$ 2,130,461	\$ 2,001,657	\$ (128,804)	-6.0%

Fleet Services manages and maintains MWRA's motor vehicle and equipment fleet. The goal of the Fleet Services Department is to maintain MWRA's vehicle and equipment fleet to minimize downtime and extend the life of the assets. Fleet Services also manages the Chelsea fuel facility, the gas card program and the development and processing of specifications for new vehicles and equipment.

FY11 Goals:

- Continue to cost effectively maintain Authority fleet of vehicles or pieces of equipment.

FY10 Accomplishments:

- Developed specifications for 26 new replacement vehicles or pieces of equipment. Twelve (12) of these units are alternative fuel or hybrid models, consistent with the Authority's goal of purchasing environmentally friendly products. One emergency service vehicle was outfitted with equipment as part of a grant from the Department of Homeland Security.
- As part of the Authority's environmental goals, eight large diesel powered units were retrofitted with Diesel Oxidation Catalyst (DOC) devices which reduce greenhouse gas emissions.
- MWRA is rated as one of the largest bio-fuel users by the Massachusetts Alternative Fuel Coalition (MAFC). The Authority continues to fuel diesel powered vehicles/equipment with bio-diesel.
- Prepared the documentation for the surplus sale of 65 vehicles and pieces of equipment and worked with the Procurement Department for the auction and disposal of the vehicles.
- Continuing to work with MIS staff on the implementation of a Maximo system upgrade which includes a transportation module specifically designed for a fleet environment.
- Development and implementation of Federal Communications Commission (FCC) mandated frequency re-banding project with Motorola and Nextel is underway.

Budget Highlights:

- The FY11 Proposed Budget of \$2.0 million reflects a decrease of \$128,000 or 6.0% as compared to the FY10 Budget.

- \$748,000 for **Wages & Salaries**, an increase of \$12,000 or 1.6% as compared to the FY10 Budget, which supports 12 positions.
- **Ongoing Maintenance** budget of \$766,000 reflects an increase of \$22,000 or 3% as compared to the FY10 Budget. The budget includes funds for automotive materials and services to maintain MWRA's vehicle fleet. The increase supports anticipated higher State vehicle inspection costs.
- \$462,000 for **Other Materials** a decrease of \$162,000 or 26% as compared to the FY10 Budget. The FY11 Proposed Budget includes funds for vehicle/equipment fueling which is based on FY08, FY09, and FY10 fuel usage and recent fuel costs. The reduction to this expense is due to lower fuel prices and lower fuel usage. Fleet Services procures bulk fuels from state contracts while continuing to meet all governmental alternative fuel directives.

AFFIRMATIVE ACTION and COMPLIANCE

Proposed FY11 Current Expense Budget AFFIRMATIVE ACTION & COMPLIANCE UNIT							
LINE ITEM	FY08 Actual	FY09 Actual	FY10 Budget	FY11 Proposed	Change FY10 to PFY11		
WAGES & SALARIES	\$ 569,845	\$ 591,924	\$ 604,769	\$ 600,104	\$ (4,665)	-0.8%	
OVERTIME	-	-	-	-	-	-	
TRAINING & MEETINGS	2,384	180	3,360	2,000	(1,360)	-40.5%	
OTHER MATERIALS	2,079	1,176	2,174	1,500	(674)	-31.0%	
OTHER SERVICES	471	397	632	632	-	0.0%	
TOTAL	\$ 574,779	\$ 593,677	\$ 610,935	\$ 604,236	\$ (6,699)	-1.1%	

The **Affirmative Action and Compliance Unit (AACU)** develops, administers, and monitors compliance of Affirmative Action Plan programs and policies by ensuring equal opportunity and non-discrimination in employment and equitable access of Minority/Women Business Enterprises (MBE/WBE) in Authority procurement activities.

FY11 Goals:

- Assist divisions and departments in the implementation of MWRA’s affirmative action program and promote MWRA’s policy of non-discrimination for all persons in or recruited into its work force.
- Maintain internal audit and reporting systems adequate to monitor MWRA’s accomplishments of goal attainment in identified underutilized job groups for minorities and female representation.
- Communicate to managers and supervisors MWRA's commitment to its equal opportunity policies and affirmative action programs.
- Provide for the equitable participation of minority and women-owned businesses in procurement opportunities and ensure that minorities and women are represented in the labor force on construction contracts, and coordinate with other public entities regarding state and federal requirements.
- Assist divisions and departments in the understanding and implementation of MBE/WBE program policies and practices and monitor and report on contractor compliance and expenditures.

FY10 Accomplishments:

- Provided management guidance for all personnel selection committee hiring processes as part of a proactive strategy to ensure adherence to the Authority’s fair employment practices.
- Conducted numerous compliance audits on MWRA construction projects and assisted Administration and Finance in securing an additional \$735,000 in funding via the American Recovery and Reinvestment Act (ARRA).

Budget Highlights:

- Total FY11 Proposed Budget is \$604,000 of which \$600,000 is for **Wages and Salaries**. The wages and salaries line is \$5,000 less than the FY10 Budget and includes funding for eight existing positions.

HUMAN RESOURCES

Proposed FY11 Current Expense Budget HUMAN RESOURCES						
LINE ITEM	FY08 Actual	FY09 Actual	FY10 Budget	FY11 Proposed	Change FY10 to PFY11	
WAGES & SALARIES	\$ 1,521,409	\$ 1,640,764	\$ 1,664,783	\$ 1,659,671	\$ (5,112)	-0.3%
OVERTIME	607	298	-	-	-	-
FRINGE BENEFITS	15,518,599	16,526,977	16,507,832	16,349,365	(158,467)	-1.0%
WORKERS' COMPENSATION	1,159,464	1,841,638	1,325,000	1,870,000	545,000	41.1%
ONGOING MAINTENANCE	6	-	-	-	-	-
TRAINING & MEETINGS	3,972	4,886	3,963	3,963	-	0.0%
PROFESSIONAL SERVICES	438,349	323,568	407,551	395,865	(11,686)	-2.9%
OTHER MATERIALS	16,922	13,802	18,395	15,420	(2,975)	-16.2%
OTHER SERVICES	19,516	20,179	15,662	21,298	5,636	36.0%
TOTAL	\$ 18,678,844	\$ 20,372,112	\$ 19,943,186	\$ 20,315,582	\$ 372,396	1.9%

Proposed FY11 Current Expense Budget HUMAN RESOURCES by Area						
AREA	FY08 Actual	FY09 Actual	FY10 Budget	FY11 Proposed	Change FY10 to PFY11	
EMPLOYEE/COMP/BEN	\$ 599,015	\$ 593,013	\$ 638,507	\$ 623,512	\$ (14,995)	-2.3%
LABOR RELATIONS	899,147	992,591	1,009,013	1,010,776	1,763	0.2%
TRAINING	469,511	389,848	424,603	422,884	(1,719)	-0.4%
CENTRALIZED FRINGE BENEFITS	16,711,171	18,396,660	17,871,063	18,258,410	387,347	2.2%
TOTAL	\$ 18,678,844	\$ 20,372,112	\$ 19,943,186	\$ 20,315,582	\$ 372,396	1.9%

The **Human Resources Department** is comprised of the following three units:

The **Employment, Compensation, Benefits and HRIS Unit** coordinates and oversees all external recruitment and selection activities including hiring, lateral transfers and promotions to meet the business needs of MWRA; develops and coordinates MWRA compensation and benefits strategies and programs; and ensures the proper processing and recording of personnel actions. The compensation function also ensures that all MWRA employees possess the necessary licenses and certifications required by their positions. The **Labor Relations Unit** is responsible for fulfilling MWRA's collective bargaining and contract administration obligations under Massachusetts' public sector collective bargaining law, its workers' compensation responsibilities, and its responsibilities for employee occupational safety and health. The **Training Unit** develops, coordinates, delivers, and evaluates MWRA technical and professional development training programs and other programs designed to improve employee knowledge, skills, productivity, and the quality of workplace interaction. It is responsible for oversight and tracking of MWRA performance evaluation programs, Employee Assistance, and Tuition Reimbursement programs. In addition, the Human Resources Department includes the **Centralized Fringe Benefits** cost center, which includes the budgets for fringe benefits for all MWRA employees as well as for mandatory payments for unemployment expenses and Medicare.

FY11 Goals:

- Attract and retain a qualified high-performance workforce, hire and promote qualified minority and female employees, and offer a competitive total compensation package (salary and benefits) to all employees.
- Maintain effective relationships with the unions representing the MWRA workforce while protecting and enhancing management flexibility. Ensure that collective bargaining objectives are met, support MWRA initiatives by designing and implementing appropriate labor relations strategies, create an environment that fosters safety consciousness and productive work, maximize the number of early returns to work by employees

who have incurred on-the-job injuries or illnesses, and aggressively manage the Workers' Compensation Program to reduce costs.

FY11 Initiatives:

- Manage the process for negotiating and implementing successor collective bargaining agreements with all five unions.
- Support the collective bargaining negotiation process with data analysis, costing analysis and wage and benefit survey data collection and analysis.
- Provide additional training for Unit 3 Supervisory, Administrative Certificate Program (ACP) and Productivity Improvement Program (PIP) training.
- Continue to develop a certification training program for Medium Voltage Electrical staff.
- Continue to automate and streamline human resources processes including recruitment and hiring processes.
- Human Resources will be renewing the International Association for Continuing Education and Training (IACET) certification for continued authorization to offer official Continuing Education Units (CEU's).

FY10 Accomplishments:

In FY10, the accomplishments of the Human Resources Department includes the following:

- Successfully supported the Authority's efforts in defending itself in several arbitration hearings.
- Communicated and administered the Healthcare Contribution Program which resulted in several retirements and a corresponding reduction in Authority headcount.
- Performed the training, design, testing and data conversion activities needed to implement a new module in the Lawson System which allow for a reduction in customization.
- Implemented mid-year changes to the Health Insurance rates.
- Negotiated an amendment for the MWRA Dental Program and managed the implementation of the program.
- Working with Procurement, procured and selected a vendor for workers' compensation third-party administration.
- Implemented the State Ethics information and Testing program Authority-wide.
- Conducted Authority-wide Harassment Prevention Training.
- Delivered Administrative Certification Program (ACP) training and Productivity Improvement Program (PIP) training.
- Worked with MIS to develop an electronic process for employees to provide a required acknowledgement of the State Ethics Commission's Summary of the Conflict of Interest Law.

Budget Highlights:

- \$1.7 million for **Wages and Salaries**, a decrease of \$5,000 or 0.3% as compared to the FY10 Budget, includes funding for 21 positions.
- \$16.0 million for **Fringe Benefits**, a decrease of \$158,000 or 1.0% as compared to FY10 Budget. The budget includes \$14.0 million for health insurance costs, \$1.2 million for Medicare taxes, \$995,000 for dental insurance costs and union health and welfare fund contributions, \$160,000 for unemployment insurance payments, and \$31,000 for tuition reimbursement.
- **Health Insurance** budget decreased 2.0% primarily due to changes in GIC employer/employee cost share levels effective August 1, 2009 and a reduction in coverage and premiums effective February 1, 2010. The FY11 Proposed Budget includes the GIC health insurance cost of \$14.0 million. Dental insurance is 3.8% higher than the FY10 Budget due to a projected increase in dental insurance premiums. Unemployment insurance increased significantly as compared to FY10 Budget due to federally mandated extensions in unemployment benefits. Medicare and Tuition Reimbursement for FY11 are both level funded.
- \$1.9 million for **Workers' Compensation** budget, an increase of \$545,000 as compared to the FY10 Budget due to the unusually high number of claimants who have applied for and received accidental disability retirements. Human Resources is responsible for the management of this program as well as coordination with the third-party administrator.
- \$396,000 for **Professional Services**, a decrease of \$12,000 or 2.9% from the FY10 Budget. The FY11 Proposed Budget includes \$180,320 for professional development and technical training, \$107,500 for workers' compensation claims administration and legal services, \$45,000 for arbitration expenses, \$39,045 for medical evaluation services, \$12,000 for the Employee Assistance Program and \$12,000 for Specialized Investigation Services.

MANAGEMENT INFORMATION SYSTEMS (MIS)

Proposed FY11 Current Expense Budget						
MIS						
LINE ITEM	FY08 Actual	FY09 Actual	FY10 Budget	FY11 Proposed	Change FY10 to PFY11	
WAGES & SALARIES	\$ 5,112,092	\$ 5,072,951	\$ 5,322,344	\$ 5,268,112	\$ (54,232)	-1.0%
OVERTIME	2,207	2,704	2,679	2,678	(1)	0.0%
FRINGE BENEFITS	-	-	-	-	-	-
ONGOING MAINTENANCE	2,536,201	2,736,556	2,462,793	2,915,240	452,447	18.4%
TRAINING & MEETINGS	29,046	19,403	23,823	23,823	-	0.0%
OTHER MATERIALS	386,998	395,277	558,538	798,376	239,838	42.9%
OTHER SERVICES	874,429	832,130	850,795	848,795	(2,000)	-0.2%
TOTAL	\$ 8,940,973	\$ 9,059,021	\$ 9,220,972	\$ 9,857,024	\$ 636,052	6.9%

The **MIS Department** provides MWRA with the information processing capacity necessary to carry out its mission. Applications in use range from financial to operational, and enhance MWRA's ability to access data and improve internal controls, reporting, and management performance. In addition to computing systems, the department also provides library and records management services.

In FY11, MIS will continue to provide three categories of services:

- Day-to-day routine activities required for applications and systems to work. These services include preventive maintenance; replacement programs; minicomputer, server, network, and voice equipment availability; back-up and recovery; accounts payable and payroll generation; period closings; and scheduled report productions. Up-time goals based on industry norms have been established, as well as schedules for annual replacement programs. Cyber Security will continue to be a major work item in FY11.
- Responsive services are provided as a result of calls for assistance, training, troubleshooting, repair of systems or requests for materials, research, and records. A variety of performance measures have been adopted based on business impact and problem type. For example, the target response rate to close any of the aforementioned types of calls is 90% within three days, except for calls regarding system outages, the target for which is 100% within one business day. Staff also tracks backlogs, average closure rates, and rolling averages to ensure responsiveness.
- Developmental services respond to requests for new or enhanced products, services, reports, and applications. These requests are generally turned into projects with plans, defined deliverables, and agreed upon schedules. All activities seek to balance business demands with costs. Measurement is based on timely completion of milestones and a +/- 10% of budget and scheduled target is established for all major projects. In addition, for projects with large capital or budget requirements, a customization cap is established and reported on.

FY11 Goals:

The goal of MIS is to support more than 1,000 MWRA users, including those at the Charlestown Navy Yard (CNY), Chelsea, Deer Island, Southboro, Carroll Water Treatment Plant and other remote sites, by ensuring that:

- Existing applications, hardware, and network resources are cost-effectively maintained, supported, upgraded, and replaced.
- Information system development efforts are consistent with the MWRA Master Plan, reflecting management priorities.
- System security and integrity are maintained.

- Flexible tools and system capabilities are provided consistent with industry standards and norms.

FY11 Initiatives:

During FY11, the MIS Department will focus on the following areas:

- Continue to explore and implement new technologies for security of desktop and mobile devices; network infrastructure, operating systems and cyber security
- Implement Lawson Mobile Supply Chain Module (MSCM). MSCM will be used by warehouse personnel to scan inventory items when they are received into and issued out of the warehouse. In addition, MIS staff will continue enhancements to the Time Entry System by providing Electronic time sheet approval to staff.
- Implement “green computing” initiatives focused on server consolidations through server virtualization and Storage Area Network (SAN) technology.
- Review additional Web platforms to provide infrastructure services, information, applications and business processes.
- Voice Over IP (VOIP): Explore the concept of Unified Communications – PBX migration to IP communications.
- Review new network technologies for implementation of Net2020 infrastructure.
- Upgrade the Contract Management System which will allow staff to use the latest version of the software and Oracle development tools and database.
- Upgrade Data Resource Management (DRM) Oracle Database servers to version 11G and implement Oracle Real Application Cluster (RAC).
- Start CROMERR Project, which will enhance PIMS web based submission programs (Web SMR).
- Replacement of InfoStar Legacy System with state of the art document management system.
- Upgrade LanDesk Application.
- Upgrade Visual Studio to 2010 version & Upgrade 30 old Web Applications to use IIS server 7.5 with .NET framework.
- Upgrade PC’s to Office 2007
- Upgrade Exchange Server 2007

FY10 Accomplishments:

- **Infrastructure:**
 - Ruggedized laptops for the FOD group were configured for security protection (data encryption, Cyber Angel/Tracking, USB port restrictions). Arc Reader has been installed as viewer to allow user access to GIS Data such as pipe and valve information.
 - PC Upgrades- PC's are purchased annually under the CEB and generally are forecasted to have a useful life of approximately 5 years. In FY10, if approved, MIS is will replace all 7+ year old PCs with energy efficient rated PC's contributing to the green computing model.
 - Completed Phase I Virtualization of DRM development servers.
 - Telephones: Configured a new external call-in number and voicemail message system to handle staff absentee calls during a pandemic emergency. A total of 111 phones for staff across 19 departments were configured.
 - Telecommunications: Nextel/Sprint completed an installation of Bi-directional amplifiers (BDA's) at the Deer Island Treatment Plant. The existing infrastructure that propagates external and in-building signal strength was expanded by an additional 340,000 square feet of coverage to include the underground galleries throughout Deer Island. This enhancement will provide more reliable cellular, direct connect and e-mail communications that were previously not dependable.

- **Applications:**
 - Successfully Completed Lawson Upgrade migration, testing and revisions to nearly all MWRA customized objects and Lawson Absence Management Module, which enhances the Payroll accruals.
 - Developed web-based prototypes for organizational-based dissemination of management reports and data.
 - Successfully upgraded Hyperion Application. MIS and Budget departments completed the move of our current CIP budget users from Oracle Financial Analyzer (OFA) to Hyperion Pillar (Oracle's replacement application).
 - Develop and implemented various web applications such as: Employee Acknowledgement Application for Conflict of Interest Law; and Employee Availability Tracking for pandemic occurrence.
 - Enhanced Lawson data migration scripts that use Oracle to export production data to the disaster recovery server every evening after the close of business; updated documentation.
 - WWQ & OMS Data Warehouses were put into production with data transfers from Labware LIMS.
 - GIS/PIMS Integration: The second beta version of AppGeo's GIS/PIMS custom integration was delivered. GIS/PIMS integration enables TRAC to perform GIS inquiries from PIMS showing upstream and downstream contaminant monitoring and results; the project is nearing completion.
 - TRAC completed their Annual Report to EPA for the Industrial Pretreatment Program using the PIMS application; also completed generation of annual fees & submitted permits to industries.
 - Completed initial configuration of the new Magic helpdesk system and began the user testing period.
 - Successfully updated 4,000 records on the Maximo Item Table to synchronize Maximo Data to Lawson Data.

Budget Highlights:

- The FY11 Proposed Budget of \$9.8 million reflects an increase of \$636,000 or 6.9% as compared to the FY10 Budget, primarily due to changes in **Ongoing Maintenance and Other Materials** as described below.
- \$5.2 million for **Wages and Salaries** a decrease of \$54,000 or -1.0% as compared to the FY10 Budget. The FY11 Proposed Budget includes funds for 62 positions.
- \$2.9 million for **Ongoing Maintenance** for license and maintenance fees to support administrative, operations, and database applications used by MWRA staff. The increase is due to FY11 CIP impacts on the proposed budget. This represents an increase of \$452,000 or 18.4% as compared to the FY10 Budget.
- \$850,000 for **Other Services** includes a decrease of \$2,000 or -0.2% as compared to the FY10 Budget.
- \$798,000 for **Other Materials** reflects an increase of \$240,000 or 42.9% as compared to the FY10 Budget primarily due to funding for Global Positioning System (GPS) devices to meet user needs during FY11.
- \$24,000 for **Training and Meetings** is level funded with the FY10 Budget.

PROCUREMENT

Proposed FY11 Current Expense Budget						
PROCUREMENT						
LINE ITEM	FY08 Actual	FY09 Actual	FY10 Budget	FY11 Proposed	Change FY10 to PFY11	
WAGES & SALARIES	\$ 3,450,924	\$ 3,695,123	\$ 3,723,727	\$ 3,750,511	\$ 26,784	0.7%
OVERTIME	27,347	13,597	15,000	15,000	-	0.0%
FRINGE BENEFITS	441	231	-	-	-	-
UTILITIES	398	189	-	-	-	-
ONGOING MAINTENANCE	960,738	516,446	-	-	-	-
TRAINING & MEETINGS	3,096	7,184	7,725	7,725	-	0.0%
OTHER MATERIALS	103,050	118,932	84,608	84,608	-	0.0%
OTHER SERVICES	75,387	64,184	74,370	73,370	(1,000)	-1.3%
TOTAL	\$ 4,621,381	\$ 4,415,886	\$ 3,905,430	\$ 3,931,214	\$ 25,784	0.7%

The **Procurement Department** includes three units. The **Purchasing Unit** operates a competitive purchasing system for the procurement of materials, goods, and non-professional services in accordance with MWRA policies and procedures. The **Contract Management Unit** reviews, drafts, and negotiates contracts, amendments, and change orders for all professional, non-professional, and construction services contracts. Staff directs the bid, review, and selection process, and maintains a contracts database. The **Materials Management Unit** manages an Authority-wide inventory control and management system for better control, storage, distribution, and accounting of MWRA's inventory. The unit manages three regional warehouses/distribution centers that support all MWRA activities.

FY11 Goals:

- Procure materials, equipment, supplies, and construction, professional, and non-professional services in a timely, efficient, and openly competitive process in accordance with MWRA policies and procedures, including those related to meeting affirmative action goals.
- Maintain centralized, efficient, cost-effective management of spare parts and operating supplies inventory.
- Provide timely and high quality services to initiating divisions to enable MWRA programs to meet their public, production, and schedule responsibilities.
- Maintain a recycling program in order to contain MWRA operating costs by removing recyclable materials from the waste stream.

FY10 Accomplishments

- Competitively bid CY09 Renewable Portfolio Standard certificates which resulted in year-to-date FY10 revenue of \$328,975.
- Awarded the following major contracts in FY10 to date: WASM3 (CP-5); Hultman Aqueduct Interconnections (CP-6A); Section 28 Brattle Court; Immediate Dam Repairs Design; South Boston CSO Ventilation Building; Quabbin/Winsor Power Station Upgrade Design; Oakdale Electrical Upgrade Design; Financial Advisor; Southern Spine Distribution (Sec. 107); Loring Road Hydroelectric; Harbor & Outfall Monitoring; DeLauri Pump Station Wind Turbine; CWTP Solar; and CWTP UV Equipment Pre-selection. To date, 13 projects totaling more than \$ 33.0 million are eligible for stimulus funding.

- Advertised or received bids/proposals for the following to date: Spot Pond Owner's Representative; Alewife Brook Pump Station Rehab Design; Remote Headworks Design; DITP Solar Power Purchase; Security Equipment Maintenance; Audit Services; and Investment Banking Services.
- Revised Authority standard General Conditions.
- Worked across divisions to implement federal stimulus compliance.
- Began posting professional service and energy procurement opportunities on Comm-PASS, the state's internet-based procurement system.
- Procured Authority's vehicle purchases at the beginning of Fiscal Year 2010, allowing for ample production and on-time delivery of vehicles.
- The Purchasing Unit, working with the Materials Management unit, created a bid package combining 190 safety supply items resulting in a fixed price contract with no cost increases over the next three years.
- The Purchasing Unit, along with Internal Affairs staff worked with both the new safety supply vendor and the office supply vendor to set up the vendor's computerized invoicing system to accurately reflect discounted contract pricing.
- The Purchasing Unit, to encourage vendors to offer Prompt Payment Discounts (PPD), has inserted PPD language into all Purchasing bids, including a form for the vendor to enter the PPD.
- Purchasing staff worked with Accounts Payable staff to encourage the use of Electronics Funds Transfer (EFT). EFT language is now located in the header section of all purchase orders.
- The Purchasing Unit bid the annual copy paper contract and received a more favorable cost than that listed on the State Blanket contract.
- The Purchasing Unit competitively bid the supply of bituminous concrete after the expiration of the State Blanket contract. Previously, MWRA had been paying an average of \$66.00 per ton for bituminous concrete under the State contract. The new MWRA contract price of \$57.89 per ton is a decrease of \$8.11 per ton (with a projected savings over the term of the contract of \$16,220). It can be noted that Mass DOT is currently paying a per-ton price ranging from a high of \$74.00 per ton to a low of \$66.00 per ton, depending on location for bituminous concrete. The new contract also includes a prompt payment discount.
- The Materials Management and Purchasing units worked with the Office of Emergency Preparedness (OEP) to update the Authority's Emergency Plan as it pertains to a possible H1N1 outbreak to ensure that materials will be on hand and available in case of an emergency event.
- Working with the Recycling committee, Purchasing staff continue to seek out environmentally friendly products, among them recycled toners, batteries, copy paper, hybrid vehicles and bio-fuels.
- Recycled 50.06 tons of paper, 92.15 tons of scrap metal and 5,190 gallons of waste oil, generating \$16,083 in revenues.

Budget Highlights:

- The FY11 Proposed Budget of \$3.9 million represents a \$26,000 or 0.7% increase over the FY10 Budget; includes \$3.8 million to support **Wages and Salaries** for 51 positions.
- Other Materials of \$85,000, is level funded with the FY10 Budget. Funding mainly supports centralized office supply purchases of \$77,000.
- Other Services of \$73,000, a decrease of \$1,000 or 1.3% from the FY10 Budget. Funding supports Advertising and Printing/Duplicating for contract documents and specifications.

REAL PROPERTY and ENVIRONMENTAL MANAGEMENT

Proposed FY11 Current Expense Budget							
REAL PROPERTY / ENVIRONMENTAL MANAGEMENT							
LINE ITEM	FY08 Actual	FY09 Actual	FY10 Budget	FY11 Proposed	Change FY10 to PFY11		
WAGES & SALARIES	\$ 523,474	\$ 529,345	\$ 581,953	\$ 471,328	\$ (110,625)	-19.0%	
OVERTIME	399	26	-	-	-	-	
TRAINING & MEETINGS	1,370	2,643	3,000	3,000	-	0.0%	
PROFESSIONAL SERVICES	-	-	500	500	-	0.0%	
OTHER MATERIALS	1,534	2,264	1,970	1,970	-	0.0%	
OTHER SERVICES	220,169	157,094	270,376	232,374	(38,002)	-14.1%	
TOTAL	\$ 746,946	\$ 691,372	\$ 857,799	\$ 709,172	\$ (148,627)	-17.3%	

The Real Property and Environmental Management Department negotiates the purchase or lease of real estate and land necessary to support MWRA's capital projects and operations and manages the disposition of surplus real property. Staff participate in site selection, and negotiate acquisitions or easements. In addition, staff have developed and are maintaining the Real Property database, the compilation of more than 100 years of easements and land rights for the water and sewer systems. Department staff manage environmental regulatory compliance at MWRA facilities and also provide special expertise and assistance to MWRA staff regarding air quality and hazardous material issues. Assistance includes management of oil and hazardous materials site assessment and remediation, and air emission permits negotiation and preparation and submittal of quarterly/annual monitoring reports.

FY11 Goals:

- Acquire the real property needed to complete MWRA's major capital projects in a timely and cost-effective manner; manage the disposition of surplus real property in an efficient manner; and provide staff and others with current information regarding MWRA's real property rights.
- Manage the centralized environmental management program, providing technical assistance regarding hazardous waste management, air quality compliance, and related issues during all phases of MWRA projects; monitor and provide assistance in maintaining environmental regulatory compliance at MWRA facilities.

FY11 Initiatives

- Establish data collection procedures for greenhouse gas emissions and prepare and submit greenhouse gas emissions reports for DITP and the Biosolids Processing Facility in accordance with 310 CMR 7.71.
- Complete updates of spill prevention, control and countermeasure plans for 8 MWRA facilities and conduct associated training.
- Coordinate with DITP staff and DEP to complete the permit renewal process for the DITP Clean Air Act Operating Permit.

FY10 Accomplishments

- Staff acquired land and easements for the Northern Low Service Storage near Spot Pond.
- Managed eight (8) permit agreements (three at Turkey Hill and five at Walnut Hill) including executing an amendment with Verizon, coordinating with the Town of Arlington, and improving invoicing system for maintenance reimbursements. Total revenue for the eight agreements is \$412,000 of which MWRA and the host community each receive half.
- Managing fee assessment for 8M permits on MWRA fee controlled land. Currently collecting approximately \$35,000 per year.
- Staff acquired easements to support projects such as the North Dorchester Bay. Staff is in the process of acquiring property rights for the Rehabilitation of Braintree-Weymouth Interceptor and Lynnfield-Saugus Pipeline.
- Continued to provide technical support, including regulatory liaison, for the remediation of PCBs at the Wachusett Dam. The Dam Face and Soil Remediation contract was awarded January 14, 2009, remediation is complete and closeout documentation is being prepared.
- A successor contract to the MWRA Underground Storage Tank Maintenance and Inspection contract was awarded on December 1, 2009 , with the addition of third party inspections in accordance with 527 CMR 9.00.
- Submitted emergency generator certifications for new units at Brattle Court PS, Blue Hills Covered Storage, and Chelsea Screen House.
- Submitted Notices of Intent for the Cosgrove Power Station and Oakdale Power Station under the Hydroelectric Generating Facilities General Permit to discharge wastewater. Prepared and submitted Carroll WTP surface water discharge permit application.
- Provided technical and environmental regulatory support regarding contaminated soil and groundwater issues on various design and construction projects, including Stoneham Low Service Covered Storage, DeLauri Pump Station Wind Turbine, Water Pump Station and Remote Headworks Rehabilitation, East Boston Branch Sewer, North Dorchester Bay CSO Tunnel and Section 53 and 97A Water Main Replacement projects, Deer Island Wind Turbines, Southern Spine Distribution Mains, West Roxbury Tunnel, Northern Intermediate High Short Term Improvements, DITP Underground Storage Tank (UST) Removals, Oakdale Power Station Electrical Upgrade, DITP Heat Loop Project, East Boston Branch Sewer, Phase VII Valve Replacements, Lynnfield/Saugus Pipeline, Sudbury Aqueduct Short Term Repairs, Cosgrove Transformer Replacement, and Asbestos Abatements at Shaft 9 Somerville and Hingham Pumping Station Isolation Gate.
- Completed air emissions source testing on Deer Island West Odor Control facility. Received approval from Department of Environmental Protection (DEP) on December 8, 2009 for an increase in sludge processing rate at the Biosolids Processing Facility.

Budget Highlights:

- The FY11 Proposed Budget of \$709,000 represents a decrease of \$149,000 or 17.3% as compared to the FY10 Budget.
- **Wages and Salaries** of \$471,000 includes funding for five positions, a decrease of \$111,000 or 19.0% as compared to the FY10 budget due to the transfer of the Deputy Director of Admin and Finance position to the Finance Division.
- \$232,000 for **Other Services** is a decrease of \$38,000 or 14.1% as compared to the FY10 Budget. This decrease is due to a minor decrease in the cost of the UST Maintenance contract for FY11, as well as the elimination of funding for two projects, the Gillis PS Long Term Monitoring (next activity in FY14), and the Chicopee Valley Aqueduct (CVA) Intake Building PCB Cleanup, which will be completed in FY10.



Appendices

APPENDIX A

DIRECT EXPENSE BUDGET LINE ITEM DESCRIPTIONS

Introduction

MWRA's direct expense budget funds the annual expenses of its operating and support divisions. Though the direct expense budget constitutes less than half of MWRA's total budget, it is these expenses which directly support the provision of water and sewer services to MWRA's customers. The direct expense budget includes the annual costs of operating the water and sewer systems, and funds the policy direction, administrative, financial, and legal support services for MWRA's ongoing operations. The direct expense budget also includes the personnel costs for management and oversight of MWRA's extensive capital programs.

There are 11 line items in the division budgets. The line items are:

Wages and Salaries - This line item includes funds for regular pay, shift differential, holiday pay, and standby pay for MWRA staff, as well as funds for interns and temporary staff.

Overtime - This line item includes funds for overtime related to operations, maintenance, emergencies, and training.

Fringe Benefits - This line item includes funds for health and dental insurance, unemployment compensation, Medicare, and overtime meals.

Workers' Compensation - This line item includes funds for compensation payments, medical payments, and settlements of compensation claims.

Chemicals - This line item includes funds for the chemicals used in water and wastewater treatment, such as chlorine, sodium hypochlorite, soda ash, sodium bisulfite, and hydrofluosilicic acid.

Utilities - This line item includes funds for electricity, diesel fuel, and other utilities such as water and sewer services paid by MWRA to the towns in which it operates facilities.

Maintenance - This line item includes funds to purchase materials and services for the maintenance of MWRA's plants and machinery, water and sewer pipelines, grounds, and buildings.

Training and Meetings - This line item covers the costs of staff training, meetings, and professional seminars.

Professional Services - This line item funds outside consultants supporting MWRA activities, including engineering and construction services, laboratory and testing contracts, computer system consultants, and legal and audit services.

Other Materials - This line item includes funds for office materials, equipment, postage, laboratory supplies, MWRA vehicles, work clothes, and computer hardware and software.

Other Services - This line item includes funds for space leasing, health and safety initiatives, removal of grit and screenings from the sewerage system, and the contracted operation of MWRA's residuals processing plant.

Sections II – VI present summaries of the MWRA’s seven division budgets with a detailed description of program budgets and highlights within each division section. Based on the October 2009 Board approval, a new division was formed called Administration and Finance which includes the Finance units, Human Resources, MIS and the majority of the Support Division. This organization change will be reflected in the FY11 Final CEB.

APPENDIX B

BUDGET PROCESS AND TIMETABLE

MWRA operates on a fiscal year that starts July 1. The Current Expense Budget development process begins in September and, as described below, continues through a series of interactive reviews and revisions until June, when the Board of Directors approves the final budget. Throughout the formal budget process, MWRA staff maintain an ongoing dialogue with the Board of Directors and Advisory Board to discuss issues, the status of budget development, and other concerns.

MONTH	ACTIVITY
September – November	Divisions receive budget targets, guidelines, and manuals for the development of budget requests, and can begin to access MWRA’s interactive budgeting system.
December	After the divisions return their budget requests, Rates and Budget Department staff begin the financial management process by consolidating the authority-wide budgets, developing briefing materials for senior management and identifying major budget issues.
January	The Executive Director, supported by senior management, determines proposed funding levels required to meet service priorities. Staff may seek appropriate policy direction from the Board.
February	MWRA transmits the Proposed Current Expense Budget to the Advisory Board for a 60-day review, during which time MWRA staff meet with Advisory Board staff, respond to questions, and provide updated information on plans and prices.
March – May	MWRA hosts public hearings to solicit comments on the proposed budget and community assessments from citizens in its service area. The Advisory Board reviews the proposed budget and transmits comments and recommendations to the MWRA.
June	The Board of Directors holds a hearing on the proposed budget and the Advisory Board’s comments and recommendations. The Board of Directors adopts a final Current Expense Budget and a schedule of final wholesale water and sewer assessments.

APPENDIX C

MASSACHUSETTS WATER RESOURCES AUTHORITY BUDGET AND ASSESSMENT POLICIES AND PROCEDURES

**(Revised August 2003 to incorporate changes to capital budget section of Management
Policies adopted by the Board of Directors June 11, 2003)**

These policies and procedures govern certain budget, assessment, and rates management practices at the Massachusetts Water Resources Authority (MWRA). Policies and procedures may be amended from time to time, provided that changes in provisions governing reporting to or approvals by the Board of Directors or the Advisory Board must be approved by the Board of Directors. If any sections of these policies and procedures are at variance with requirements of MWRA's financing agreements, the latter shall govern.

ASSESSMENT POLICIES AND PROCEDURES

Basis of MWRA Assessments

MWRA is required by its Enabling Act to establish assessments which, with other revenues, provide sufficient funds each year to pay all current expenses, debt service, and obligations to the Commonwealth; to pay all costs of maintenance, replacement, improvements, extension, and enlargement of the sewer and waterworks systems; to create and maintain reserve funds; and to provide amounts required by financing agreements. These assessments are adopted by MWRA based on the rate revenue requirements set forth in the Current Expense Budget.

Costs Recovered

MWRA capitalizes certain of its asset costs in accordance with its capitalization policy. Capital expenditures are planned as set forth in the Capital Improvement Program and are recovered through assessments in accordance with MWRA financing agreements. The Current Expense Budget provides detailed information on capital and debt costs, additions to reserves, and all operations and maintenance costs to be recovered with current revenue.

Sources of Current Revenue

MWRA recovers most of its current expenses from users of the services it provides. In addition to rate revenue requirements, budgeted current revenue includes anticipated fines, fees, investment income on certain fund balances, and payments for contracted services. MWRA is committed to seeking additional sources of current revenue.

Coverage Requirements

MWRA's financing agreements include coverage requirements which provide that each year revenue less operating expenses (net revenue) must be more than the amount required for debt service payments on outstanding bonds. The primary bond coverage requirement is that net revenue must be 120 percent of required debt service fund deposits for bonds outstanding excluding subordinated bonds. The secondary coverage requirement is that net revenue must be 110 percent of required debt service fund deposits for all bonds outstanding, including subordinated bonds. Revenue must be raised annually to meet the primary and secondary bond coverage requirements and may be used for additions to reserves or for payment of obligations to the Commonwealth. Amounts remaining after these uses are used to pay capital costs in order to reduce the need for future borrowing or to reduce current debt service costs. In addition, MWRA has a supplemental bond coverage requirement that amounts contained in its Community Obligation and Revenue Enhancement (CORE) Fund shall equal 10 percent of required debt service fund deposits for bonds outstanding, excluding subordinated bonds. Amounts required to be on deposit in the CORE Fund are recovered through assessments as necessary.

Budget Surpluses

In any year in which current revenue exceeds both current expenses on a budget basis and amounts required to meet bond coverage tests, the amount of over-recovery is deposited first to reserve funds, if any, which are below the level specified in any financing agreements, and second into MWRA's rate stabilization fund or bond redemption fund. Amounts deposited in these funds are used to offset rate requirements in subsequent years. Use of rate stabilization and bond redemption fund amounts is carried out in furtherance of MWRA's budgeting objectives and in accordance with its financing agreements. MWRA consults with the Advisory Board concerning use of amounts in the funds.

Budgeting and Assessment Objectives

MWRA intends to follow prudent budgeting practices, and has the following objectives in developing budgets and community assessments:

1. To minimize total costs, consistent with MWRA's statutory responsibilities to provide effective, environmentally sound wholesale water delivery and wastewater collection and treatment services;
2. To minimize the cost of debt;
3. To avoid single year assessment spikes by prudent management of cost and assessment increases, and
4. To support inter-generational equity by avoiding unfair assessment burdens on either current or future ratepayers.

Allocation of Costs and Revenue to Systems

Most of MWRA's current expenses are directly attributable to either water or sewerage service costs or to investment in either the water or sewerage systems. Expenses which support both systems (indirect system costs) are allocated to the water or sewer system based on generally accepted cost allocation principles. Investment, contract, and other income offsets water and sewerage expenses on either a direct or allocated, indirect basis. The resulting net cost of water and sewerage services is the amount to be recovered through water and sewer assessments.

Allocation of Rate Revenue Requirements to User Assessments

Users of MWRA wholesale water and sewerage services are assessed for those services according to MWRA's water and sewer assessment methodologies. Assessments for water services are computed by MWRA based on metered water use for the immediately preceding calendar year. The total assessment is allocated based on each community's share of water delivered in the immediately preceding calendar year.

Assessments for sewer services are computed on the basis of a combination of metered wastewater flow and loads, and population.

- O&M costs are allocated based on total annual metered wastewater flow, and total annual average strength, septage, and high strength flow loads.
- Capital (or debt service) costs are allocated based on a combination of metered wastewater flow and loads, and population. One-quarter of capital costs are allocated based on maximum month flow, and total annual average strength, septage, and high strength flow loads. The remaining three-quarters of capital costs are allocated based on population. Half of the population allocation is based on census population and half is based on contributing population.

Schedule and Procedure for Adoption of Assessments

During the preparation of the proposed Current Expense Budget, required water and sewer rate revenue is determined, and a preliminary calculation of the allocation of costs to user-specific assessments is made. This information is provided to MWRA customers to assist them in their own fiscal planning. As provided in the Enabling Act, the proposed Current Expense Budget and preliminary assessments undergo statutory review, including public hearings and review by MWRA's Advisory Board. Further refinements of projected expenses and revenues also occur during this period. If review and analysis of the proposed Current Expense Budget results in lower projected expenses or higher projected revenue, some or all of such savings from preliminary estimates of assessments can be included in the adopted budget as additions to the rate stabilization fund and used to reduce rate revenue requirements in subsequent years. Alternatively, some or all of such savings can be used to reduce final assessments to customers below preliminary estimates.

The Current Expense Budget and final water and sewer assessments are adopted in June for the fiscal year beginning in July. The budget adopted in June may differ from the proposed budget as a result of review and further refinement of the proposed budget, although final assessments adopted by MWRA must be sufficient to recover water and sewer rate revenue requirements specified in the adopted budget. Final water and sewer rate requirements and their allocation to users may thus change from preliminary estimates. In addition, any individual community's final assessment may be higher or lower than the preliminary estimate, both because of changes in the factors which affect the allocation of assessments among wholesale customers, and because of differences between MWRA's proposed and final budgets as approved by the Board of Directors.

Review and Dispute Resolution Process

MWRA annually determines preliminary and final assessments for water and sewer services in February and June prior to the beginning of the new fiscal year. These assessments must satisfy the requirement that MWRA fully recover its water and sewer costs by apportioning total costs as assessments among its wholesale water and sewer customers pursuant to its water and sewer rate methodologies and to certain specified data including:

- Calendar year metered water volume and metered wastewater flow obtained from MWRA's water and wastewater metering systems;
- Federal and state community census statistics, and sewer population estimates and other information supplied on Customer Service Update forms and Municipal Discharge Permits; and
- High strength user monitoring data and estimates of community septage volumes as obtained by MWRA's Toxic Reduction and Control Department.

The review and dispute resolution process provides MWRA's wholesale customers with the opportunity to review and comment on the reasonableness of the data used to calculate preliminary water and sewer assessments. During the year, MWRA provides its customers with monthly summaries of water and wastewater flow data distributed, at a minimum, on a bimonthly basis. Because annual metered water and wastewater flows are major components for establishing water and sewer charges for each community, customers are strongly encouraged to review this data closely upon receipt and raise questions with MWRA staff concerning the data. MWRA expects that prompt customer review and comment on meter data will result in the resolution of most water and wastewater metering questions and assure the most consistency between preliminary assessments in February and final assessments announced in June. Community contributions of high strength flow and septage, and population data are made available with the release of preliminary assessments in February.

If after an initial review a community believes that specific data used to calculate assessments should be reevaluated, a community may submit a written objection to the Executive Director with a copy to the Rates Manager or their designee. The objection must be signed by the local

official on record with MWRA as responsible for water or sewer services in the city, town, or district. The objection should state the community's concern with the data used to calculate community assessments, and should also include information and technical data to support the community's objection.

In order for any data adjustments to be incorporated into the allocation of final fiscal year assessments, all objections to data used to calculate preliminary assessments must be received no later than the date of the final public hearing on the proposed budget and preliminary assessments, held pursuant to Section 10 of the MWRA Enabling Act. MWRA staff will review and evaluate the merits of all written objections. Customers are notified in writing of the results of this review prior to the release of final assessments.

Adjustments to preliminary data, if any, are not retroactive beyond the applicable calendar year for proposed assessments. Final fiscal year assessments are calculated incorporating adjustments, if any, resulting from the review and objection process, and final rate revenue requirements as adopted by the Board of Directors.

Written objection(s) may also be submitted following the adoption of final fiscal year assessments, but no later than the end of the fiscal year for which the assessments are applicable. Objections submitted in this manner must also be directed to the Executive Director with a copy to the Rates Manager or their designee.

Following MWRA staff review, adjustments to assessments resulting from the challenge of rate basis data that are submitted following the adoption of final fiscal year assessments will be applied to the subsequent year's assessments. Customers are notified in writing of the results of this review and any assessment adjustments prior to the release of the subsequent year's assessments.

Water and Sewer Assessment Payment Schedule

MWRA adopts a schedule of assessments and a schedule of payments annually. Any adjustments for prior years resulting from the review and objection process are apportioned to each of the scheduled payment amounts. No interest is paid or billed by MWRA for previous year's adjustments.

Assessments are payable to MWRA in ten equal installments due on the first day of August, September, October, November, December, February, March, April, May, and June.

Interest Charge on Delinquent Payments

For payments received after a payment due date MWRA levies an interest charge of one percent per month or 0.033 percent per day. Interest charges do not accrue until 30 days after the bills are mailed to MWRA's customer communities. Interest charges are added to subsequent regular billings.

Retail Rates

MWRA assessments are for MWRA's provision of wholesale services. Local bodies which receive wholesale services in turn provide retail services to their users at the local level.

MWRA encourages its customers to establish retail rates which:

1. Recover the full cost of providing local water and/or sewerage services, including both direct costs and an allocation or estimate of indirect costs,
2. Charge users of local water and/or sewerage services in a manner which demonstrates to customers that increased use of services results in increased user costs,
3. Comply with MWRA policies directed to conservation of water; elimination of infiltration and inflow of surface water and ground water into the sewage collection, treatment, and disposal system; and removal or pretreatment of industrial wastes, and
4. To the extent consistent with #1 and #2, provide assistance to low income users through lifeline rates.

CAPITALIZATION POLICY

It is the policy of MWRA that capitalization of expenditures conform with generally accepted accounting principles. Under such guidelines, MWRA has adopted the provisions of the Financial Accounting Standards Board's Statement No. 71, "Accounting for the Effects of Certain Types of Regulation," which is intended to assure that utility revenues are appropriately matched with incurred costs. Capital expenditures create assets or extend their useful lives. Assets are valued at their cost and provide benefits over an extended period of time. Sources of funds for capital expenditures include grants, proceeds of MWRA borrowing, loans, and current revenue.

Asset value created by MWRA is of two kinds. One is the value of tangible assets either created or increased through MWRA capital investments. Such assets include land, buildings, plant, equipment, and the system infrastructure for water and wastewater. The cost of such fixed asset investment includes not only purchase, rehabilitation, and construction cost, but also ancillary expenses necessary to make productive use of the asset. Ancillary costs can include, but are not limited to, costs for planning studies, professional fees, transportation charges, site preparation expenditures, and legal fees and claims directly attributable to the asset.

The second kind of asset value created by MWRA investment is the value of intangible assets. While such investment does not result in tangible MWRA assets, it does create a benefit to MWRA and its users over several years. Such assets include the cost of MWRA efforts to establish base-line leak detection information for the water systems of MWRA customers. The cost of providing water consumption-limiting devices to households is another example.

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 though their cost may exceed \$100,000. Examples of such maintenance expenditures include replacement of vehicles or computers, replacement of inoperable valves or other equipment before the anticipated useful life has been reached, and pipeline or interceptor repairs that do not add significant life to the underlying asset.

RESERVES FUNDED FROM CURRENT REVENUE

Operating Reserve

The operating reserve has been established to provide a source of funds to be used to pay operating expenses of the sewer or water systems should there not be sufficient funds otherwise available for that purpose. Bond agreements specify that the fund level shall not be less than one-sixth of MWRA's annual operating expenses.

Insurance Reserve

The insurance reserve has been established to provide funds to restore, replace, or reconstruct lost or damaged property or facilities of the water or sewer system. It provides funds reserved against risks for which MWRA does not currently maintain insurance. This self-insurance reduces the cost MWRA might otherwise incur for purchased insurance policies. MWRA periodically evaluates the level of its insurance reserve and every three years a consulting engineer or an insurance consultant recommends an appropriate insurance reserve fund requirement. Between FY2005 and FY2007, the budget included an increase of \$1 million to increase the reserve to \$19 million. The current funding level of \$19.0 million has been determined to be acceptable and reasonable based on a FY07 Insurance Reserve Fund review performed by an outside insurance consultant. The next Insurance Reserve Fund review is scheduled for FY10 and is currently in progress. A final recommendation is due in March 2010.

Renewal and Replacement Reserve

The renewal and replacement reserve has been established to fund a required capital improvement which is not provided for by moneys otherwise available. Amounts may not be withdrawn until MWRA has specified the project to which the amount will be applied and its estimated cost and estimated completion date. It must also certify that such expenditure is reasonably required for the continued operation of the systems or for maintenance of revenues and that other provisions have not been made for funding such expenditures. Every three years, MWRA receives recommendations from a consulting engineer as to the adequacy of the renewal and replacement reserve fund requirement. During FY2000, based on the recommendation of its consulting engineer, MWRA reduced the size of the renewal and replacement reserve to \$35 million from \$50 million. The most recent review by the consulting engineer was prepared in December 2005. The recommended reserve remained at \$35 million.

CURRENT EXPENSE BUDGET MANAGEMENT POLICIES AND PROCEDURES

A. Budget Allocations

Budget Contingency Holdbacks

After the Board of Directors adopts the Current Expense Budget each year, the Executive Director, the Chief Operating Officer, or a division director may reserve between two percent and four percent of a division's approved budget as a budget contingency to be expended only upon approval of the Executive Director. The contingency holdback may be from any line item or cost center or combinations thereof, and any amount reserved as a budget contingency is not to be included in the monthly budget allocation process described below. The Administration and Finance Committee will be notified of all budget contingency holdback amounts.

Monthly Allocation of the Annual Current Expense Budget

Initial monthly allocations are made for purposes of adopting and filing an operating budget in accordance with MWRA's financing agreements. Before the end of the first reporting period of the fiscal year, divisions, with the assistance of the Rates and Budget Department, allocate the approved budget, less any holdbacks, by month. The allocations set forth planned expenditures and accruals for each of the 12 months of the year to be compared to actual expenditures and accruals as reported in MWRA's monthly variance reports.

B. Budget Variance Monitoring and Analysis

At the close of each monthly accounting period, the Treasury Department prepares MWRA financial statements. The Rates and Budget Department then prepares monthly variance reports that compare planned to actual revenues and expenses.

Variance Analysis

Division directors and staff review variance reports and explain variances between planned and actual expenditures as requested by the Rates and Budget Department. Variance explanations are prepared as needed, usually at the end of each quarter of the fiscal year. At least twice each year MWRA staff prepare forecasts of year-end expenditures and revenue. Barring extraordinary circumstances, division directors are responsible for controlling spending within the overall division budget. The Rates and Budget Department reviews all variances and projections so that appropriate measures may be taken to ensure that overall spending is within the MWRA's budget.

Variance explanations are submitted to the Rates and Budget Department in accordance with the schedule developed by the Rates and Budget Department. Each month the Rates and Budget Department prepares a summary of budget variances for inclusion in the Management Indicators Report (Yellow Notebook). The Rates and Budget Department also prepares a monthly staff summary (except for July and August) to the Board of Directors describing major budget

variances and a quarterly budget variance report for inclusion in the Board of Directors Report on Key Indicators of MWRA Performance (Orange Notebook). At least twice a year, the Rates and Budget Department prepares a staff summary to the Board of Directors on year-end projections of revenue and expenses.

C. Budget Amendments

An amendment to an MWRA Current Expense Budget is defined as follows:

A proposed change in an adopted budget or a proposed budget transmitted to the MWRA Advisory Board in accordance with Section 8(b) of Chapter 372 of the Acts of 1984 which meets any of the following criteria:

1. Any increase in total current expenses.
2. An increase of five percent or more in total division expenses.
3. An increase in any expense line item (subsidiary account) of 15 percent or more if that line item is at least 2.5 percent of total current expenses.
4. An addition or deletion of a specific new program or initiative, the cost of which is greater than one percent of total current expenses, unless the addition or deletion has been specifically recommended by the Advisory Board.

The Executive Director, with the concurrence of the Chairman of the Board of Directors and the Chairman of the Administration and Finance Committee of the Board of Directors, submits proposed amendments to the Advisory Board for comment and recommendation. At the end of the Advisory Board 30-day review period, the Board of Directors may take action on the amendment.

CAPITAL BUDGET MANAGEMENT POLICIES AND PROCEDURES

General Guidelines

The Authority shall periodically adopt and revise capital facility programs for the Waterworks and Sewer Systems and capital budgets based on these programs. The Authority shall consult in the preparation of its capital facility programs for the Sewer and Waterworks Systems with the Authority's Advisory Board and the Executive Office of Environmental Affairs, and may consult with other agencies of federal, state and local government concerned with the programs of the Authority. Proposed capital facility programs and capital expenditure budgets for said systems shall be submitted to the Advisory Board for such consultation no less than sixty days prior to adoption or revision by the Authority. The Authority shall prepare a written response to reports submitted to it by the Advisory Board, which response shall state the basis for any substantial divergence between the actions of the Authority and the recommendations contained in such reports of the Advisory Board. The Authority shall capitalize expenditures in accordance with

generally accepted accounting principles. Capital expenditures will be planned in accordance with Authority financing agreements and policies for amortization of capital costs.

Capital Budget Contingency

A contingency for each fiscal year is incorporated into the Capital Improvement Program for the purpose of providing for unanticipated or unpredictable expenditures under the CIP spending cap.

Capital Budget Monitoring and Reporting

The Authority shall continually monitor the progress of capital projects for purposes of managerial control and decision-making and for financial planning and management. Two capital budget variance analysis reports will be provided to the Board of Directors, one for the first six months of a year and one at year-end. The reports will include planned project schedules and budgets compared to actual performance. The reports will highlight any major changes, either in scope or budget, of any project. Based on these reports, staff may recommend to the Board of Directors revisions, if appropriate, to the annual and five-year caps based upon said changes. In addition, capital budget progress reports shall be provided to the Board of Directors on a regular basis, both as project specific updates and in Quarterly Orange Notebook reports that shall include discussions of project progress compared to schedules. Monthly Financial Summary reports shall include discussions of capital expenditures compared to budget.

Capital Budget Spending Cap

Beginning in June 2003, the Board of Directors established a five-year Capital Budget Spending cap and annual caps for each year within the cap period. Spending for any year in the cap period may, with Board approval, vary within plus or minus 20% of the annual cap, as long as total spending for the five-year period does not exceed the five-year cap. Before the end of each five-year cap period, the Board will adopt a cap for the next five-year period and annual caps for each year in the period. The Board established the second five-year cap for the FY09-13 period at its June 2008 meeting.

Expenditures in Excess of the Spending Cap

In the event of unanticipated spending requirements, the Executive Director may recommend to the Board of Directors that annual expenditures exceed an annual cap by more than 20% or that five-year expenditures exceed the current five-year CIP spending cap. In such an event, a proposed plan to adjust the five-year cap or any of the annual caps will be presented to the Board. Any such proposed plan will be submitted to the MWRA Advisory Board for review and comment for a period of thirty days. At the end of the thirty-day period, the Board of Directors may take action on the proposed plan.

APPENDIX D

MWRA Planning Estimates FY2011 to FY2020

	FY2011	FY2012	FY2013	FY2014	FY2015	FY2016	FY2017	FY2018	FY2019	FY2020
COMBINED UTILITIES										
EXPENSES										
Direct Expenses	\$209,043	\$214,728	\$222,624	\$231,601	\$240,805	\$250,440	\$260,896	\$271,332	\$282,263	\$293,458
Indirect Expenses	38,539	40,555	47,238	49,569	49,707	49,585	51,728	53,403	55,442	58,296
Capital Financing (before offsets)	<u>355,255</u>	<u>369,942</u>	<u>382,840</u>	<u>456,137</u>	<u>482,755</u>	<u>506,053</u>	<u>554,183</u>	<u>511,993</u>	<u>562,412</u>	<u>639,225</u>
Sub-Total Expenses	\$602,837	\$625,225	\$652,701	\$737,307	\$773,267	\$806,078	\$866,807	\$836,727	\$900,117	\$990,980
Debt Service Assistance	0	0	0	0	0	0	0	0	0	0
Bond Redemption Savings	0	0	0	(25,833)	(7,021)	0	0	0	0	0
Variable Rate Savings	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
Total Expenses	\$602,837	\$625,225	\$652,701	\$711,474	\$766,246	\$806,078	\$866,807	\$836,727	\$900,117	\$990,980
REVENUE & INCOME										
Non-Member and Other Revenue	\$11,753	\$12,954	\$13,322	\$13,588	\$14,023	\$14,520	\$14,802	\$15,146	\$15,510	\$16,021
Interest Income	14,450	17,613	22,147	27,443	27,616	28,397	29,621	29,870	30,994	32,493
Rate Stabilization	<u>6,833</u>	<u>2,359</u>	<u>1,543</u>	<u>6,791</u>	<u>9,296</u>	<u>0</u>	<u>7,636</u>	<u>0</u>	<u>0</u>	<u>0</u>
Total Other Revenue	\$33,037	\$32,926	\$37,012	\$47,823	\$50,935	\$42,917	\$52,058	\$45,016	\$46,504	\$48,514
Total Rate Revenue	\$569,800	\$592,299	\$615,689	\$663,651	\$715,311	\$763,160	\$814,749	\$791,711	\$853,613	\$942,465
Rate Revenue Increase	1.49%	3.9%	3.9%	7.8%	7.8%	6.7%	6.8%	-2.8%	7.8%	10.4%
Estimated Annual Household Charge **										
Based on water use of 61k gpy (weighted)	\$834	\$871	\$913	\$965	\$1,027	\$1,092	\$1,149	\$1,177	\$1,250	\$1,344
Based on water use of 90k gpy (weighted)	\$1,230	\$1,286	\$1,346	\$1,423	\$1,516	\$1,612	\$1,696	\$1,737	\$1,845	\$1,983
WASTEWATER UTILITY										
EXPENSES										
Direct Expenses	\$146,661	\$150,714	\$156,021	\$162,183	\$168,615	\$175,339	\$182,784	\$190,095	\$197,722	\$205,537
Indirect Expenses	10,159	12,158	16,601	17,341	16,721	15,784	17,092	16,879	17,988	19,898
Capital Financing (before offsets)	<u>246,850</u>	<u>258,084</u>	<u>263,507</u>	<u>309,152</u>	<u>325,455</u>	<u>336,222</u>	<u>378,483</u>	<u>330,463</u>	<u>362,109</u>	<u>403,896</u>
Sub-Total Wastewater Expenses	\$403,670	\$420,956	\$436,129	\$488,676	\$510,790	\$527,345	\$578,359	\$537,438	\$577,819	\$629,331
Debt Service Assistance	0	0	0	0	0	0	0	0	0	0
Bond Redemption Savings	0	0	0	(5,783)	0	0	0	0	0	0
Variable Rate Savings	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
Total Wastewater Expenses	\$403,670	\$420,956	\$436,129	\$482,893	\$510,790	\$527,345	\$578,359	\$537,438	\$577,819	\$629,331
REVENUE & INCOME										
Non-Member and Other Revenue	\$4,471	\$4,574	\$4,677	\$4,813	\$4,938	\$5,057	\$5,213	\$5,289	\$5,445	\$5,617
Interest Income	9,615	10,062	12,725	16,160	16,633	17,177	18,034	17,903	18,371	19,166
Rate Stabilization	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
Total Other Revenue	\$14,086	\$14,636	\$17,402	\$20,973	\$21,571	\$22,235	\$23,247	\$23,192	\$23,817	\$24,783
Wastewater Rate Revenue	\$389,584	\$406,320	\$418,727	\$461,921	\$489,219	\$505,110	\$555,112	\$514,245	\$554,002	\$604,548
Rate Revenue Increase	1.89%	4.3%	3.1%	10.3%	5.9%	3.2%	9.9%	-7.4%	7.7%	9.1%
Estimated Annual Household Charge **										
Based on water use of 61k gpy (weighted)	\$498	\$522	\$544	\$582	\$613	\$640	\$684	\$684	\$725	\$773
Based on water use of 90k gpy (weighted)	\$735	\$770	\$803	\$859	\$905	\$944	\$1,009	\$1,010	\$1,070	\$1,140
WATER UTILITY										
EXPENSES										
Direct Expenses	\$62,381	\$64,014	\$66,603	\$69,418	\$72,190	\$75,101	\$78,112	\$81,237	\$84,541	\$87,921
Indirect Expenses	28,380	28,397	30,636	32,228	32,986	33,801	34,636	36,523	37,454	38,398
Capital Financing (before offsets)	<u>108,405</u>	<u>111,858</u>	<u>119,333</u>	<u>146,985</u>	<u>157,301</u>	<u>169,831</u>	<u>175,700</u>	<u>181,530</u>	<u>200,303</u>	<u>235,329</u>
Sub-Total Water Expenses	\$199,166	\$204,269	\$216,572	\$248,631	\$262,476	\$278,733	\$288,448	\$299,290	\$322,298	\$361,648
Debt Service Assistance	0	0	0	0	0	0	0	0	0	0
Bond Redemption Savings	0	0	0	(20,050)	(7,021)	0	0	0	0	0
Variable Rate Savings	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
Total Water Expenses	\$199,166	\$204,269	\$216,572	\$228,581	\$255,456	\$278,733	\$288,448	\$299,290	\$322,298	\$361,648
REVENUE & INCOME										
Non-Member and Other Revenue	\$7,283	\$8,380	\$8,645	\$8,776	\$9,085	\$9,463	\$9,589	\$9,856	\$10,065	\$10,404
Interest Income	4,835	7,551	9,421	11,283	10,983	11,220	11,587	11,967	12,623	13,327
Rate Stabilization	<u>6,833</u>	<u>2,359</u>	<u>1,543</u>	<u>6,791</u>	<u>9,296</u>	<u>0</u>	<u>7,636</u>	<u>0</u>	<u>0</u>	<u>0</u>
Total Other Revenue	\$18,951	\$18,290	\$19,610	\$26,850	\$29,364	\$20,683	\$28,811	\$21,824	\$22,688	\$23,731
Water Rate Revenue	\$180,216	\$185,979	\$196,962	\$201,731	\$226,092	\$258,050	\$259,637	\$277,466	\$299,611	\$337,917
Rate Revenue Increase	0.63%	3.2%	5.9%	2.4%	12.1%	14.1%	0.6%	6.9%	8.0%	12.8%
Estimated Annual Household Charge **										
Based on water use of 61k gpy (weighted)	\$336	\$350	\$369	\$383	\$414	\$453	\$466	\$493	\$525	\$571
Based on water use of 90k gpy (weighted)	\$495	\$516	\$544	\$565	\$611	\$668	\$687	\$727	\$774	\$843

** Annual household charges are estimated for communities that receive full water and wastewater services from MWRA weighted by the number of households in each of these core communities. Based on community responses to the MWRA Advisory Board's Annual Water and Sewer Retail Rate Survey dated December 2008.

APPENDIX E

GLOSSARY OF FINANCIAL AND OPERATING TERMS

8M permit: Permission granted by MWRA to persons who wish to construct property improvements on land either adjoining or overlapping MWRA property interests. Permission may be conditioned on various operational and/or engineering concerns.

Accrued Costs: Adjustments to paid expenditures to account for materials or services received but for which payment has not been made.

Activated Sludge: The sludge that results when primary effluent is mixed with bacteria-laden sludge and then agitated and aerated to promote biological treatment.

Advanced Waste Treatment: Wastewater treatment beyond the secondary or biological stage that includes the removal of nutrients such as phosphorus and nitrogen and the removal of a higher percentage of suspended solids and organic matter than primary treatment.

Advisory Board: The agency that represents the interests of MWRA's 61 user communities to the Board of Directors in an advisory capacity in accordance with the provisions of MWRA's Enabling Act. The Advisory Board elects three members of the Board of Directors, reviews and comments on MWRA's CIP and CEB, and approves the addition of new communities to the wastewater and water systems.

Aerobic: In the presence of oxygen.

Anaerobic: Life or processes such as bacteria that digest sludge that require, or are not destroyed by, the absence of oxygen.

AOC: Assimilable Organic Carbon - One measure of the "food" available to bacteria within a water system. More complex carbon compounds can become assimilable when oxidized by strong disinfectants.

ARRA: American Recovery and Reinvestment Act of 2009 – principal forgiveness loans distributed based on the Department of Environmental Protection's Intended Use Plan.

Ash: The inert material remaining after the combustion of wastewater sludge. Ash is either wet or dry depending on combustion system design.

Bacteria: One-celled microscopic organisms commonly found in the environment. Bacteria can be harmful, such as pathogens or helpful and perform a variety of biological treatment processes.

BDOC: Biologically Degradable Organic Carbon - Another, more precise, measure of the "food" available to bacteria within a water system.

BGD: Billion gallons per day.

Biofilm: Growth of various bacteria within a water distribution system on the pipe walls. Biofilm growth can contribute to iron corrosion, colored water, poor taste, excessive chlorine demand, and complications with coliform testing.

Blow-off valves: Valves operated during pipeline repair to de-water (drain) a portion of a pipeline.

BOD: Biochemical Oxygen Demand - An indicator of the amount of biodegradable contaminants in wastewater.

Board of Directors: The 11-member governing board of MWRA.

Bond Resolution: A document adopted by the Board of Directors that governs MWRA's issuance of revenue bonds and sets forth its obligations to bondholders.

Boston Harbor Project: An extensive plan of activities which MWRA developed and implemented to construct new wastewater treatment facilities in response to a federal court order to comply with the provisions of the U.S. Clean Water Act.

Business Systems Plan (BSP): The strategic planning framework for MWRA's management information systems. The BSP is updated annually to reflect ongoing business requirements, new opportunities identified by ongoing MWRA strategic planning efforts, technology changes, and user requests.

BWSC: Boston Water and Sewer Commission - The agency responsible for providing water and sewer services to the City of Boston, MWRA's largest customer.

CAC: Citizens' Advisory Committee.

CADD: Computer aided drafting and design.

Capital Improvement Program (CIP): A plan which identifies and estimates the nature, schedule, cost, and financing of long-term assets that MWRA intends to build or acquire during a specific period.

Capital Investment: Development of a facility or other asset that adds to the long-term value of an organization.

CDF: Cosgrove Disinfection Facility

Cathodic Protection: A form of corrosion protection that is particularly effective against galvanic corrosion. Galvanic corrosion occurs when pipe metal is in the presence of other metals while immersed in water. The interaction of these elements causes an electric current to flow away from the pipe, taking electrons with it and pitting the pipe as a result. Cathodic protection reverses the current, thereby stopping the corrosion.

Centrifuge: A machine that uses centrifugal force to separate substances of different densities and remove moisture. MWRA uses centrifuges at the Deer Island Wastewater Treatment Plant to de-water sludge.

CFM: Cubic Feet per Minute - A measure of the quantity of a liquid flowing through a pipe.

Chloramination: The process of adding chloramine to drinking water. Chloramine, a form of chlorine and ammonia, is used as a residual disinfectant because it lasts longer in the water distribution system than primary disinfectants.

Chloramine: A long lasting residual disinfectant created by combining measured amounts of chlorine and ammonia. Chloramine forms fewer disinfection by-products than chlorine.

Chlorination: The process of adding chlorine to drinking water to inactivate pathogens.

Chlorine: A relatively strong primary disinfectant, effective against bacteria, *giardia*, and viruses, but not *cryptosporidium*. Concerns exist about the health effects of its by-products, some of which are or will be regulated.

Clarifiers: Settling tanks or basins in which wastewater is held for a period of time, during which heavier solids settle to the bottom and lighter materials float to the surface.

Clean Water Act: A law passed by Congress in 1972, and subsequently amended, which sets national standards for pollution reduction, permits discharges from wastewater treatment plants, and promotes achievement of the national goal that all surface waters be "fishable and swimmable."

Cleaning and Lining: Cleaning and cement lining of unlined cast iron water mains to improve hydraulic capacity and extend useful life.

CMMS (Computerized Maintenance Management System): *Maximo* is the computerized maintenance management system which is an essential component of successful asset management. This system is an important tool used in refining the long term maintenance strategy to ensure proper maintenance and replacement of plant assets.

Coliform bacteria: A group of lactose fermenting bacteria, which while not of direct health concern, are used as a first line indicator of potential problems. See fecal coliform and *E.coli*.

Comminutor - A machine or process that pulverizes and reduces solids to minute particles.

Commonwealth Debt Service Assistance (DSA): Funds appropriated by the Commonwealth to offset MWRA capital financing expenses.

Commonwealth Reimbursements: Income received from the Commonwealth of Massachusetts as reimbursement for certain chemical and operational costs in accordance with prevailing legislation.

Community Obligation and Revenue Enhancement (CORE) Fund: A fund established by MWRA's bond resolution that is used to provide insurance against delays by communities in paying charges due to MWRA.

Composting: The process of converting wastewater treatment residuals to a soil-like humus material often used in the horticultural industry. The process involves the aerobic breakdown of the residuals and the addition of sawdust or wood chips.

Corrosion Control: Adjustments to the chemistry of treated water to reduce its ability to dissolve lead, copper, or other metals. Corrosion control can include adjustments to pH and alkalinity, as well as the addition of corrosion inhibitors such as phosphates.

Coverage Requirement: Requirement of MWRA's bond resolution which provides that each year, revenue less operating expenses (net revenue) must be more than the amount required for debt service payments on outstanding bonds.

CP (Construction Package): Major construction projects such as the Carroll Water Treatment Plant or the North Dorchester Bay CSO project will package individual construction contracts for particular areas of work.

Cross-Connection: A point at which potable water piping is connected to a non-potable water source creating an opportunity for the introduction of pollutants into the potable water.

Cryogenic oxygen plant: MWRA operates a cryogenic oxygen-based facility as part of its secondary wastewater treatment program at Deer Island.

Cryptosporidium: A protozoan parasite that can cause severe gastrointestinal disease in healthy individuals, and may be fatal to people with compromised immune systems. Cryptosporidia exist in the environment as hard walled oocysts that are very resistant to chlorination, but can be inactivated by disinfection with ozone or ultraviolet light.

CSO: Combined Sewer Overflow – An overflow point in a combined sewer system that collects both sewage and storm water runoff for wastewater treatment. During rainstorms, systems can become overloaded, with the excess discharged directly into surface waters from CSO pipes. In the metropolitan Boston area there are approximately 63 CSOs that currently discharge into rivers or Boston Harbor.

CSO Facilities: MWRA has six facilities that intercept the flow from CSO pipes and provide wastewater treatment prior to discharge. The CSO facilities have some capacity to store flow and pump it to the Deer Island plant after rainstorms end.

CT: Concentration x Contact Time - A measure of disinfection effectiveness established under the Surface Water Treatment Rule. CT is the product of the concentration of disinfectant [C] and the time it has been in contact with the water [T]. Required CT varies by type of disinfectant, organism, temperature, and pH.

CTG (Combustion Turbine Generator): CTGs are used to generate electricity during planned cable outages, wet weather operations and for participation in price response events.

Current Expense Budget: A financial plan that estimates the revenues and expenses associated with MWRA's operations for a fiscal year.

C-Value: The carrying capacity of a water main for a specified length and pressure drop that is determined by its diameter and resistance to flow. The friction coefficient "C" of the main is often used as a measure of flow resistance. C-values for new pipe are about 120 for water mains that are 6 to 16-inches in diameter, and 130 and 140 for larger diameter mains.

DAF: Dissolved Air Flotation - A process of adding super saturated air into water to cause coagulated solids to rise to the top to be skimmed off. DAF replaces conventional gravity sedimentation (clarification) and is particularly cost-effective for low turbidity waters subject to periodic algae blooms.

DBP: Disinfection By-products - Complex compounds formed by the use of oxidizing agents such as chlorine or ozone in waters containing organic matter.

D/DBP Stage 1: Disinfectants/Disinfection By-products, Stage 1 Rule – Promulgated 11/1998, and effective 1/2002, this rule set DBP limits at 80 parts per billion for Trihalomethanes and 60 parts per billion for Haloacetic Acids, averaging all samples over four quarters.

D/DBP Stage 2: Disinfectants/Disinfection By-products Stage 2 Rule-. The rule further regulates the amount of DBPs allowed in water. The 80/60 values set in Stage 1 will now apply to each individual sample location in a "Locational Running Annual Average".

Debt Service: In a given fiscal year, the amount of money necessary to pay interest and principal on outstanding notes and revenue bonds.

DEP: Department of Environmental Protection - The Massachusetts agency that regulates water pollution control, water supplies, and waterways and dispenses federal and state grant funds to support these activities.

Department: A sub-unit of an MWRA division.

Department of Conservation and Recreation (DCR): Created in 2003 through the merger of the Metropolitan District Commission and the Department of Environmental Management, DCR manages the Commonwealth's diverse parks system and protects and enhances natural resources and outdoor recreational opportunities throughout Massachusetts.

De-watering: The process of removing water from wastewater treatment residuals. De-watered sludge has the appearance of mud or wet soil material.

Diffusers: A system of shafts, rising from the end of MWRA's effluent outfall tunnel to the seabed, that disperses treated wastewater over a large area.

Digesters: Tanks for the storage and anaerobic or aerobic decomposition of organic matter present in sludge.

Direct Program Expenses: Costs directly associated with providing services or performing activities.

Disinfection, Primary: The inactivation (killing) of pathogenic organisms in a water system by the use of chemical or other disinfection agents.

Disinfection, Residual: The presence of a measurable residual of disinfectant within a water distribution system to help control bacterial re-growth and guard against contamination.

Dissolved Oxygen (DO): A measure of the amount of oxygen in a given amount of water. Adequate levels of DO are needed to support aquatic life. Low dissolved oxygen concentrations can result from inadequate wastewater treatment.

Division: A major organizational unit within MWRA, encompassing the activities and resources for providing a major service or function.

Division of Watershed Management (DWM): A division of the Metropolitan District Commission (MDC) responsible for watershed management activity. MWRA reimburses the Commonwealth for the cost of DWM's operations.

DLS (Department of Laboratory Services): Laboratory Services is a full service analytical testing and consulting group within the MWRA that primarily serves client groups primarily within the Operations Division. The analytical services that Laboratory Services provides include wet chemistry, metals, organics, and microbiology testing. Related services include field sampling, technical consultation, and contract laboratory management.

DMR (Discharge Monitoring Report): Monthly reports submitted to federal and state regulators. MWRA monitors the effluent (treated sewage) that is discharged into Massachusetts Bay, to ensure that it meets the standards set out in the NPDES permit. Analytical support to the effluent monitoring program is provided by the Department of Laboratory Services.

E.coli: A normal inhabitant of the digestive tract of mammals. The presence of *E.coli* indicates probable contamination by fecal matter.

Effluent: Treated wastewater discharged from a treatment plant.

EIR: Environmental Impact Report – A document prepared in adherence with the Massachusetts Environmental Policy Act (MEPA) to review the environmental impact of projects and ensure opportunities for public review and comment.

EIS: Environmental Impact Statement – A document prepared in adherence with the National Environmental Policy Act to review the environmental impact of projects and ensure opportunities for public review and comment.

Enabling Act: Legislation (Chapter 372 of the Acts of 1984) that established MWRA and define its purpose and authority as of January 1, 1985.

ENF: Environmental Notification Form - The first step in the MEPA process.

EOC: Emergency Operations Center

EOEA: Executive Office of Environmental Affairs - The Massachusetts cabinet office that oversees state environmental agencies.

EPA: Environmental Protection Agency - The federal government agency responsible for environmental enforcement and investigation.

ESWTR: Enhanced Surface Water Treatment Rule - A federal rule is being promulgated in three stages:

1) Interim Enhanced Surface Water Treatment Rule (IESWTR): The IESWTR was promulgated in 1998 and tightened the requirements for the operation of water filtration plants in large systems to take a first step toward controlling *cryptosporidium* in source waters. IESWTR also added *cryptosporidium* to the list of issues considered within watershed protection plans for unfiltered systems.

2) LT1ESWTR primarily extends the IESWTR to smaller systems

3) LT2ESWTR: further tightens the standards for the operation of filtration plants and add requirements for 99% inactivation of *cryptosporidium* and the use of two primary disinfectants for unfiltered systems. The concept of proportional treatment, with less treatment required for cleaner sources, will be implemented as part of the rule.

Eutrophication: Nutrient enrichment of a lake or other water body typically characterized by increased growth of planktonic algae and rooted plants. Eutrophication can be accelerated by wastewater discharges and polluted runoff.

Expenditures: Payments for goods and services received.

Expenses: Costs associated with the operating activities of a period, including expenditures and accrued costs.

Facility Information System (FIS): The management information system at the Deer Island Treatment Plant.

Fecal coliform bacteria: A group of bacteria used as a primary indicator organism for potential contamination from human or animal waste. Also called thermo-tolerant bacteria. Specific organisms in the group may or may not be of health concern (see *E.coli*).

Filtration: A water treatment process involving the removal of suspended particulate matter by passing the water through a porous medium such as sand or carbon.

Fiscal Year: The 12-month financial period used by MWRA that begins July 1 and ends June 30 of the following calendar year. MWRA's fiscal year is numbered according to the calendar year in which it ends.

Flash coat: A light coat of shotcrete used to cover minor blemishes on a concrete surface.

FOD (Field Operations Department): Department within the Operations Division created to provide high quality, uninterrupted water delivery and wastewater collection services to MWRA communities. The department is responsible for the treatment, transmission, and distribution of water from the Quabbin and Wachusett reservoirs to community water systems. It also manages the collection, transport, and screening of wastewater flow from MWRA communities to the Deer Island Treatment Plant as well as MWRA's industrial pretreatment, permitting, and monitoring programs.

Force Main: A pressure pipe joining the pump discharge at a water or wastewater pumping station with a point of gravity flow.

FRSA (Fore River Staging Area): The site of the Sludge-Fertilizer Plant.

Giardia: A protozoan parasite that can cause severe gastrointestinal disease, although there is medical treatment available. *Giardia* exist in the environment as hard-walled cysts, and are moderately resistant to chlorine disinfection.

Goal: A statement in general terms of a desired condition, state of affairs, or situation. Goals, which are long-term in nature and not usually directly measurable, provide general direction for the activities of operating units.

Graphitization: A corrosion mechanism that alters the molecular structure of the carbon/iron matrix of cast iron pipe. During the process, iron atoms are forced away from the metal leaving behind an unstable carbon matrix. The result is a weakened pipe, easily susceptible to ruptures. High frequency in the number of breaks causes leakage to be a major problem of graphitized pipe.

Grit: Sand-like materials that quickly settle out of wastewater.

Groundwater: A body of water beneath the surface of the ground. Groundwater is made up primarily of water that has seeped down from the surface.

HAA: Haloacetic Acids - A class of disinfection by-products related to chlorine disinfection. HAAs are regulated under D/DBP Stage 1 Rule at 60 ppb.

Harbor Electric Energy Company (HEEC): A subsidiary of NStar which installed a cross harbor power cable and built a sub-station to provide power for construction and operation of the new Deer Island Treatment Plant.

Head House: A structure containing the control gates to a conduit such as a sewer pipeline.

Headworks: A preliminary treatment structure or device, usually including a screening and de-gritting operation, that removes large or heavy materials such as logs and sand from wastewater prior to primary treatment.

Heavy Metals: Metals such as lead, silver, gold, mercury, bismuth, and copper that can be precipitated by hydrogen sulfide in an acid solution.

HOM (Harbor Outfall Monitoring): A comprehensive program to provide pre-discharge data that helps to predict and then to measure the effect of Deer Island outfall discharge on the marine ecosystem.

ICC: Interim Corrosion Control Facility - A facility located in Marlborough which the MWRA is in the process of converting into a Maintenance facility.

Incentives and Other Charges: A fee system designed to help recover permitting, inspecting, and monitoring costs incurred by MWRA's TRAC Program and provide incentives to permitted users to reduce discharges.

Indirect Expenses: Costs not directly associated with providing services or performing activities.

Infiltration/Inflow (I/I): The problem of clean water flows entering sewers resulting in diminished pipe capacity for sanitary flows and in costly pumping and treatment of unnecessarily large wastewater volumes. Infiltration is groundwater that leaks into the sewerage system through pipe joints and defects. Inflow, primarily a wet-weather phenomenon, refers to water that enters sewers from improperly connected catch basins, sump pumps, land and basement drains, and defective manholes. Inflow also enters through improperly closed or defective tidegates during high tides.

Influent: The flow of water that enters the wastewater treatment process.

Insurance Reserve: A fund established to adequately reserve against risks for which MWRA does not currently maintain insurance.

Interceptors: The large pipes that convey wastewater from collection systems to treatment plants.

Investment Income: Income derived by investing certain operating and reserve fund balances in interest-yielding securities in accordance with the provisions of MWRA's bond resolution.

ISO - NE (Independent System Operator of New England): Non-profit wholesale operator of the regional grid system. The MWRA receives payment from ISO-NE when Deer Island removes itself from the grid. Deer Island participates in the Load Response Program offered by ISO-NE which is a program that pays larger commercial and industrial electricity consumers to “shed load” during grid peaks. There are several programs available such as price, demand response and load response. Deer Island constantly evaluates the options and participates in the most advantageous program.

Carroll Water Treatment Plant (CWTP): Water treatment facility for waters from Quabbin and Wachusett Reservoirs with capacity of 405 mgd using ozonation as a primary disinfectant.

Labor Costs: Direct costs of employing permanent and temporary personnel, including wages, salaries, overtime pay, fringe benefits, and workers' compensation.

Land Application: The use of wastewater treatment residuals on land for agricultural benefits.

Landfilling: The disposal of residuals by burial. Modern landfills have double liners, leachate collection systems, and other design features to protect against groundwater contamination.

LCR: Lead and Copper Rule – A federal rule that set an action level for lead and copper at “worst case” consumer taps. Optimized corrosion control, notification, education, and lead service replacements are all components of compliance plans.

Leachate: Water that drains from a landfill after having been in contact with, and potentially contaminated by, buried residuals. Modern landfills are designed to collect leachate for subsequent treatment.

Limnology: The scientific study of physical, chemical, meteorological, and biological conditions in fresh waters.

LIMS: Laboratory Information and Management System – An automated database system used to transfer information between MWRA’s Central Laboratory to its client groups and to process information obtained by the Central Laboratory to monitor substances that enter and leave the MWRA wastewater system. Use of LIMS removes the potential for human error in the sampling process by bar coding samples, eliminating the need to transcribe sample data, producing pre-printed project-specific sample check-off forms for field crews, and automating testing through pre-set test codes and project-specific parameters.

LOX (Liquid Oxygen): Liquid oxygen is used together with electrical energy to generate ozone at the Carroll Water Treatment Plant.

Mapping Protocols: Sets of specifications defining the content and format of data to be collected.

MCL: Maximum Contaminant Level - The highest level of a contaminant that is allowed in drinking water. MCLs are set as close to MCLGs as feasible using the best available control technology.

MCLG: Maximum Contaminant Level Goal - The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety.

Massachusetts Environmental Policy Act (MEPA) Unit: A unit of the Commonwealth's Executive Office of Environmental Affairs responsible for implementation of the state environmental review process.

Methane: A colorless, nonpoisonous, flammable gas produced as a by-product of anaerobic sludge processing. At Deer Island, MWRA uses methane as fuel to provide heat and hot water and to generate electricity.

MGD: Million gallons per day.

MIS: Management Information Systems

Mission: A description of the fundamental purposes and major activities of an operating unit or program.

Mitigation: Financial remuneration or non-financial considerations that MWRA provides to communities to alleviate the negative effects of major construction projects.

Molybdenum (Mo): A metallic element that resembles chromium and tungsten in many properties, and is used in strengthening and hardening steel. Mo is a trace element in plant and animal metabolism.

NACWA (Nation Association of Clean Water Agencies): NACWA represents the interests of publicly owned wastewater treatment plants. NACWA is involved in all areas of water quality protection including the development of environmental legislation and assisting federal regulatory agencies in the implementation of environmental programs.

NEFCo: New England Fertilizer Company - The contractor responsible for the operation of processing sludge into fertilizer pellets at MWRA's residuals processing plant located in Quincy. NEFCo is also responsible for marketing and distributing the pellets and disposing of any product that is not marketable.

National Pollutant Discharge Elimination System (NPDES) Permit: A permit issued by EPA in conjunction with DEP that governs wastewater discharges into surface waters.

NHS (Northern High Service): Project that involves a series of pipeline improvements in the Northern High Service Area.

Nitrification: An aerobic process in which bacteria changes the ammonia and organic nitrogen in wastewater into oxidized nitrogen (usually nitrate). Second-stage BOD is sometimes referred to as the nitrification stage (first-stage BOD is called the carbonaceous stage). Also, a similar process in the water distribution system, where ammonia from chloramine can be used by nitrifying bacteria, resulting in a reduced chlorine residual, and the potential for additional bacteria growth.

OCC: Metropolitan Operations Control Center, located at MWRA's Chelsea Facility.

OEP (Office of Emergency Preparedness): The Office of Emergency Preparedness has oversight over security, exercises, emergency operations, planning, the Emergency Services Unit and critical infrastructure protection.

OMS (Operations Management Systems): OMS correlates PICS data with laboratory analysis to track and analyze plant process performance with regard to the plant's discharge permit from EPA and DEP and with respect to cost effective operation.

Operating Reserve: A fund established to adequately reserve for operating contingencies, required by MWRA's bond resolution to be not less than one-sixth of the its annual operating expenses.

Organic Matter: Material containing carbon, the cornerstone of plant and animal life. It originates from domestic and industrial sources.

Other User Charges: Revenue received per agreements MWRA has for provision of water, sewer, and other services to entities other than communities which are charged assessments.

Outfall: The place where effluent is discharged into receiving waters.

Ozonation: The application of ozone to water, wastewater, or air, generally for the purposes of disinfection or odor control. The new Carroll Water Treatment Plant (CWTP) employs the ozonation process to inactivate pathogens, including *cryptosporidium*, with lower levels of DBPs.

Ozone: A strong disinfectant made from oxygen and electrical energy. Ozone is effective against *cryptosporidium*.

Pathogens: Harmful organisms, often called germs that can cause disease. Waterborne pathogens (or the diseases they cause) include *giardia*, *cryptosporidium*, cholera, typhoid, *E.coli*, Hepatitis A, *legionella*, and MAC.

Payments in Lieu of Taxes (PILOT): Amounts which MWRA pays each fiscal year to cities and towns for land owned by the Commonwealth in the Quabbin, Ware River, Wachusett, and

Sudbury watersheds. Consistent with the provisions of MWRA's Enabling Act, these payments are based on the past commitments of the Commonwealth of Massachusetts.

Penalty Revenue: Revenue derived from penalties assessed by MWRA to violators of its sewer use regulations.

Performance Measure: An indicator of the work and/or service provided, defined by output, work or service quality, efficiency, effectiveness, or productivity.

Performance Objective: A statement of proposed accomplishments or attainments that is short-term in nature and measurable.

PICS (Process Instrumentation and Control System): PICS provides real-time operations data from systems throughout the plant (including system status, flow, etc.).

Plume: The rising discharge of treated wastewater effluent from a treatment plant outfall pipe.

Preliminary Treatment: The process of removing large solid objects, sticks, gravel, and grit from wastewater.

Pretreatment: The reduction or elimination of pollutant properties in wastewater prior to discharge into a sewer system.

Primacy: Primary enforcement authority for Federal Safe Drinking Water Act regulations delegated to a state by the Environmental Protection Agency (EPA).

Primary Treatment: A wastewater treatment process that takes place in a rectangular or circular tank and allows substances in wastewater that readily settle or float to be separated from the water being treated. Primary treatment results in 50-60% removal of suspended solids and 30-34% removal of BOD.

Program: An organized group of activities and the resources to carry them out, aimed at achieving one or more related objectives.

Rate Revenue: Revenue received from annual assessments of communities within MWRA's service area for water and sewer services.

Rate Stabilization Reserve: A fund established by the Board of Directors that is used to reduce rate revenue requirements. MWRA finances this reserve with unexpended or surplus funds available from the Current Expense Budget at the end of each fiscal year.

RCM (Reliability Centered Maintenance): A maintenance strategy adopted in FY00 for critical systems. RCM is a failure modes and effects process that involves maintenance, operations and engineering staff in the development of preventative maintenance and operation plans for plant systems.

Relief Sewer: A sewer built to carry flows in excess of the capacity of an existing sewer.

RGGI: Regional Greenhouse Gas Initiative

Remote Headworks: The initial structures and devices of a treatment plant set apart by some distance from the plant site.

Renewal and Replacement Reserve: A fund established to adequately reserve for the cost of capital improvements not provided for by funds available through the Capital Improvement Program or the Current Expense Budget.

Residuals: The by-products of the wastewater treatment process, including scum (floatables), grit and screenings, primary sludge, and secondary sludge.

Revenue Bonds: Bonds payable from a specific source of revenue and which do not pledge the full faith and credit of the issuer.

RPS (Renewable Portfolio Standards): State policies which mandate a state to generate a percent of its electricity from renewable resources. The MWRA enrolled the steam turbine generator (STG) in the Massachusetts RPS program. The electricity produced is derived from digester gas burned in the boilers. The MWRA is issued electronic certificates for each megawatt hour of electricity produced from the digester gas, which is considered renewable energy. RPS credits are a source of revenue for the MWRA.

Safe Yield Model: The equation used to determine the maximum dependable draft that can be made continuously on a source of supply during a period of years during which the probable driest period or period of greatest deficiency in water supply is likely to occur.

SAMS: Sewerage Analysis and Management System – A database which contains specifications of the location, size, and condition of MWRA wastewater interceptors and appurtenances and which produces maps for use by MWRA and outside parties.

Sanitary Sewers: In a separate system, pipes that carry only domestic wastewater.

SCADA: Supervisory Control and Data Acquisition - Equipment for monitoring and controlling water or wastewater facilities remotely.

SCBA: Self-contained breathing apparatus.

Screenings: Large items such as wood and rags that are collected from wastewater in coarse screens prior to primary treatment.

Scum: Floatable materials such as grease, oil, and plastics that are skimmed from the surface of wastewater as it flows through large settling tanks.

SDWA: Safe Drinking Water Act - A Federal law enacted in 1986 and amended in 1996 that requires EPA to establish national primary drinking water regulations for water suppliers which consist of MCLs or treatment techniques.

Secondary Treatment: Usually following primary treatment, secondary treatment employs microorganisms to reduce the level of BOD and suspended solids in wastewater.

Sedimentation Tanks: Settling tanks where solids are removed from sewage. Wastewater is pumped to the tanks where the solids settle to the bottom or float on the top as scum. The scum is skimmed off the top, and solids on the bottom are pumped out for further treatment and/or final disposal.

Seeding: The initial filling of sludge into digesters.

Sensitive user: A member of a group within the general population likely to be at greater risk than the general population of adverse health effects due to exposure to contaminants in drinking water. Sensitive users include infants, children, pregnant women, the elderly, and individuals with histories of serious illness.

Septic Tanks: Tanks used for domestic wastes when a sewer line is not available to carry them to a treatment plant. Periodically, the septage is pumped out of the tanks, usually by commercial firms, and released into a wastewater treatment system.

Shotcrete: Mortar or concrete conveyed through a hose and projected at high velocity onto a surface; also known as air-blown mortar, pneumatically applied sprayed mortar, or gunned concrete.

Siphon: A closed conduit, a portion of which lies above the hydraulic grade line, resulting in a pressure less than atmospheric and requiring a vacuum within the conduit to start flow. A siphon utilizes atmospheric pressure to effect or increase the flow of water through the conduit.

Slip Lining: Insertion by pushing or pulling of lines fabricated of plastic, concrete cylinder pipe, reinforced concrete, or steel through existing conduits from access pits.

Sludge: Material removed by sedimentation during primary and secondary treatment. Sludge includes both settled particulate matter and microorganisms and is the single largest component of wastewater residuals. At the time sludge is removed during the treatment process, it contains only 0.5% to 5% solid content by weight. It has the appearance of muddy water.

Sodium Hypochlorite (NaOCl): A liquid form of chlorine that MWRA uses as the primary chemical in the disinfection and odor processes at the Deer Island Treatment Plant, and as the disinfectant at the Cosgrove and Ware water disinfection facilities. MWRA currently uses sodium hypochlorite at the Carroll Water Treatment Plant (CWTP) and other wastewater Field Operations facilities.

Storm Sewers: Separate systems of pipes that carry only water runoffs from roofs, streets, and parking lots during storms.

Surcharging: Loads on a system beyond those normally anticipated; also, the height of wastewater in a sewer manhole above the crown of the sewer when the sewer is flowing completely full.

Suspended Solids: The particulate matter contained in wastewater.

SWTR: Surface Water Treatment Rule – A Federal rule promulgated in 1989 that affects all utilities using surface waters or waters under the influence of surface waters. SWTR requires filtration unless certain criteria on source water quality, watershed control, and disinfection effectiveness can be met (see also ESWTR).

Telemetry: Remote measuring or monitoring devices connected to a central monitoring station via telephone lines.

TCR: Total Coliform Rule – A federal rule that requires monitoring of water distribution systems for coliform bacteria and chlorine residual. No more than 5% of the coliform samples in a month can be positive.

TOC: Total Organic Carbon - A measure of the amount of organic material in water. Often used as a surrogate for disinfectant demand or DBP precursors.

Transition: A short section of conduit used as a conversion section to unite two conduits having different hydraulic elements.

TTHM: Total Trihalomethanes - A class of disinfection by-products, related to primarily chlorine disinfection (see D/DBP Rule).

TRAC: Toxic Reduction and Control – The department responsible for MWRA's industrial pretreatment program.

TSS (Total Suspended Solids): A measure of the settleable solids and non-settleable solids in wastewater. During the primary treatment process, flows are routed to primary treatment clarifiers that remove about half of the pollutants brought to the plant in typical wastewater (50-60% of total suspended solids and up to 50% of pathogens and toxic contaminants are removed).

United States Geological Survey (USGS): The federal agency that collects Geographic Information System (GIS) data for developing mapping protocols.

Vector Jet Truck: A vehicle used to clean and/or remove blockages from sewer lines by pushing and/or pulling fluids in the sewer.

VMM: Vehicle Management and Maintenance – The program responsible for management and maintenance of MWRA's vehicles and heavy equipment.

WASM (Weston Aqueduct Supply Mains): Project involving the rehabilitation of the four Weston Aqueduct Supply Mains that carry water to MWRA's service area. When complete, they will transmit about one-third of the water to MWRA's service area and the City tunnel will carry the remaining two-thirds.

Wastewater: The water carried by sewers serving residences and businesses that enters wastewater facilities for treatment.

Wastewater Treatment Plant (WTP): A facility containing a series of tanks, screens, filters, and other equipment and processes for removing pollutants from wastewater.

Watershed Reimbursement: An amount that MWRA pays to the Department of Conservation and Recreation (DCR) each fiscal year for maintaining and managing the primary sources of MWRA's water supply (watersheds) in accordance with the laws of the Commonwealth of Massachusetts. The amount of the reimbursement is determined by prevailing legislation.

WERF (Water Environment Research Foundation): WERF is a not for profit organization that seeks to promote the development and application of sound science to water quality issues. WERF subscribers include municipal and regional water and wastewater utilities, industrial corporations, and environmental engineering firms that share a commitment to cost-effective water quality solutions.

Wholesale Water and Sewer Services: Potable water and wastewater collection, transport, delivery, and treatment services that MWRA provides to communities. Communities provide the same services directly to retail customers or end users.

WOCC: Western Operations Control Center.

APPENDIX F
FY11 Proposed Current Expense Budget - Capital Financing Detail (as of 12/31/09)

	Projected Outstanding as of 12/31/09	Total	Sewer	Water
SRF¹				
Unrefunded (93A, 93D, 95A,98C)	\$ 13,455,000	\$ 30,000	\$ 30,000	
1999E Sewer	15,140,141	384,520	384,521	-
1999E Water		572,085	-	572,085
1999F	306,800,000	15,250,219	15,250,219	-
2000E Sewer	68,452,108	2,845,247	2,845,247	-
2000E Water		570,301	-	570,301
2001C Water	3,956,831	251,431	-	251,431
2001D Sewer	5,833,658	377,758	377,758	-
2001D Water		81,139	-	81,139
2002H Sewer	101,175,000	3,108,232	3,108,232	-
2002H Water		1,534,201	-	1,534,201
2002I Sewer	2,216,803	104,715	104,715	-
2002I Water		1,503	-	1,503
2003A	1,095,636	71,344	-	71,344
2003B	3,323,713	225,686	-	225,686
2003C Sewer	44,035,638	1,491,749	1,491,749	-
2003C Water		965,362	-	965,362
2004C Sewer	10,711,849	542,235	542,235	-
2004C Water		92,375	-	92,375
2004D Sewer	65,614,045	3,840,372	3,840,372	-
2004D Water		642,724	-	642,724
2005C Sewer	7,281,780	420,043	420,043	-
2005C Water		69,382	-	69,382
2005D Sewer	71,730,278	3,396,042	3,396,042	-
2005D Water		808,032	-	808,032
2005E Sewer	398,196	24,961	24,961	-
2005E Water		5,479	-	5,479
2006C Sewer	7,913,323	489,067	489,067	-
2006D Sewer	86,057,575	3,747,168	3,747,168	-
2006D Water		1,620,269	-	1,620,269
2006E Sewer	473,977	22,883	22,883	-
2006E Water		10,281	-	10,281
2007C Sewer	6,668,045	312,297	312,297	-
2007C Water		197,935	-	197,935
2007D Sewer	22,387,065	1,153,047	1,153,047	-
2007E Sewer	76,677,065	3,303,093	3,303,093	-
2007E Water		1,267,061	-	1,267,061
2008G Sewer	6,719,278	408,859	408,859	-
2008G Water		82,602	-	82,602
2009C Sewer	116,852,780	5,771,560	5,771,560	-
2009C Water		1,895,870	-	1,895,870
2009D Sewer	12,266,005	651,418	651,418	-
2009D Water		86,114	-	86,114
2010 SRF (FY10) Sewer		1,972,667	1,972,667	-
2010 SRF (FY10) Water		2,062,584	-	2,062,584
2010 SRF (FY11) Sewer		5,107,095	5,107,095	-
2010 SRF (FY11) Water		2,064,065	-	2,064,065
Total SRF Debt	\$ 1,057,235,789	\$ 69,933,072	\$ 54,755,247	\$ 15,177,825

APPENDIX F
FY11 Proposed Current Expense Budget - Capital Financing Detail (as of 12/31/09)

	Projected Outstanding as of 12/31/09	Total	Sewer	Water
MWRA Senior Debt				
1993C New/Refunding	44,720,000	5,991,492	5,242,555	748,936
1997D Refunding	14,210,000	852,600	801,444	51,156
1998A New	52,525,000	2,494,938	1,663,300	831,638
1998B Refunding	24,675,000	1,087,075	1,043,592	43,483
2002B New	74,415,000	3,809,031	380,903	3,428,128
2002J Refunding	347,835,000	42,494,613	38,245,151	4,249,461
2002J New	200,000,000	10,000,000	5,000,000	5,000,000
2003D New	113,340,000	5,510,288	1,836,579	3,673,709
2004A New	104,870,000	5,249,419	393,706	4,855,712
2004B Refunding	49,390,000	2,469,500	2,160,813	308,688
2005A Refunding	390,275,000	19,563,863	8,803,738	10,760,124
2005B Refunding	80,290,000	4,014,500	1,338,033	2,676,467
2006A New	200,000,000	9,376,800	-	9,376,800
2006B Refunding	264,945,000	12,755,300	9,566,475	3,188,825
2007A New	200,000,000	9,033,188	1,535,642	7,497,546
2007B Refunding	647,950,000	34,017,375	28,574,595	5,442,780
2009A New	98,000,000	7,647,150	5,735,363	1,911,788
2009B Refunding	285,200,000	16,175,194	11,646,140	4,529,054
FY10 New Money (May 2010)		6,954,736	3,477,368	3,477,368
FY11 New Money (May 2011)		1,575,000	787,500	787,500
Potential Defeasance/Restructuring		(2,339,463)	(1,898,273)	(441,190)
Total Senior	\$ 3,192,640,000	\$ 198,732,596	\$ 126,334,623	\$ 72,397,973
Subordinate Debt				
1999B (variable)	72,600,000	2,359,500	1,415,700	943,800
2002C Refunding (variable)	70,575,000	2,293,688	764,486	1,529,202
2002D Refunding (variable)	56,450,000	2,589,062	2,589,062	-
2008A Refunding	337,675,000	14,701,446	12,937,272	1,764,174
2008B Refunding	123,130,000	4,001,725	840,362	3,161,363
2008C Refunding	189,200,000	15,196,114	14,588,269	607,845
2008D Refunding	73,140,000	44,750,536	44,750,536	-
2008E Refunding	224,770,000	12,375,691	11,385,636	990,055
2008F Refunding	184,910,000	6,009,575	540,862	5,468,713
Potential Defeasanc/Restructuring		(31,540,500)	(31,460,940)	(79,560)
Total Subordinate Debt	\$ 1,332,450,000	\$ 72,736,837	\$ 58,351,246	\$ 14,385,591
Total SRF & MWRA Debt Service²	\$ 5,582,325,789	\$ 341,402,505	\$ 239,441,117	\$ 101,961,389
Water Pipeline Commercial Paper	\$ 194,000,000	\$ 3,435,765	\$ -	\$ 3,435,765
Current Revenue/Capital ³		7,200,000	5,400,000	1,800,000
Capital Lease		3,217,060	2,009,299	1,207,761
Sub-Total	\$ 194,000,000	\$ 13,852,825	\$ 7,409,299	\$ 6,443,526
Total Capital Financing (before Debt Service Offsets)	\$ 5,776,325,789	\$ 355,255,330	\$ 246,850,416	\$ 108,404,915
Debt Service Offsets				
Debt Service Assistance		-	-	-
Total Capital Financing	\$ 5,776,325,789	\$ 355,255,330	\$ 246,850,416	\$ 108,404,915

¹ SRF debt service payments reflect net MWRA obligations after state and federal subsidies.

² Numbers may not add due to rounding.

³ Current Revenue/Capital is revenue used to fund ongoing capital projects.

