

MASSACHUSETTS WATER RESOURCES AUTHORITY



Proposed Fiscal Year 2010 CURRENT EXPENSE BUDGET

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MASSACHUSETTS WATER RESOURCES AUTHORITY

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March 2009

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

Dear Chairwoman Dunphy:

This letter transmits to the Advisory Board MWRA's Proposed Current Expense Budget (CEB) for Fiscal Year 2010. The MWRA Board of Directors approved the transmittal at its February 11, 2009 meeting.

The Proposed FY10 CEB recommends an average combined water and sewer rate increase of 4.8% based on a proposed rate revenue requirement is \$566.8 million. The Proposed CEB includes \$7.0 million of Debt Service Assistance, which represents MWRA's estimated share of the \$10 million statewide appropriation for FY10 tied to the Governor's proposal to expand the Bottle Bill, and projected use of \$10.3 million of reserve funds.

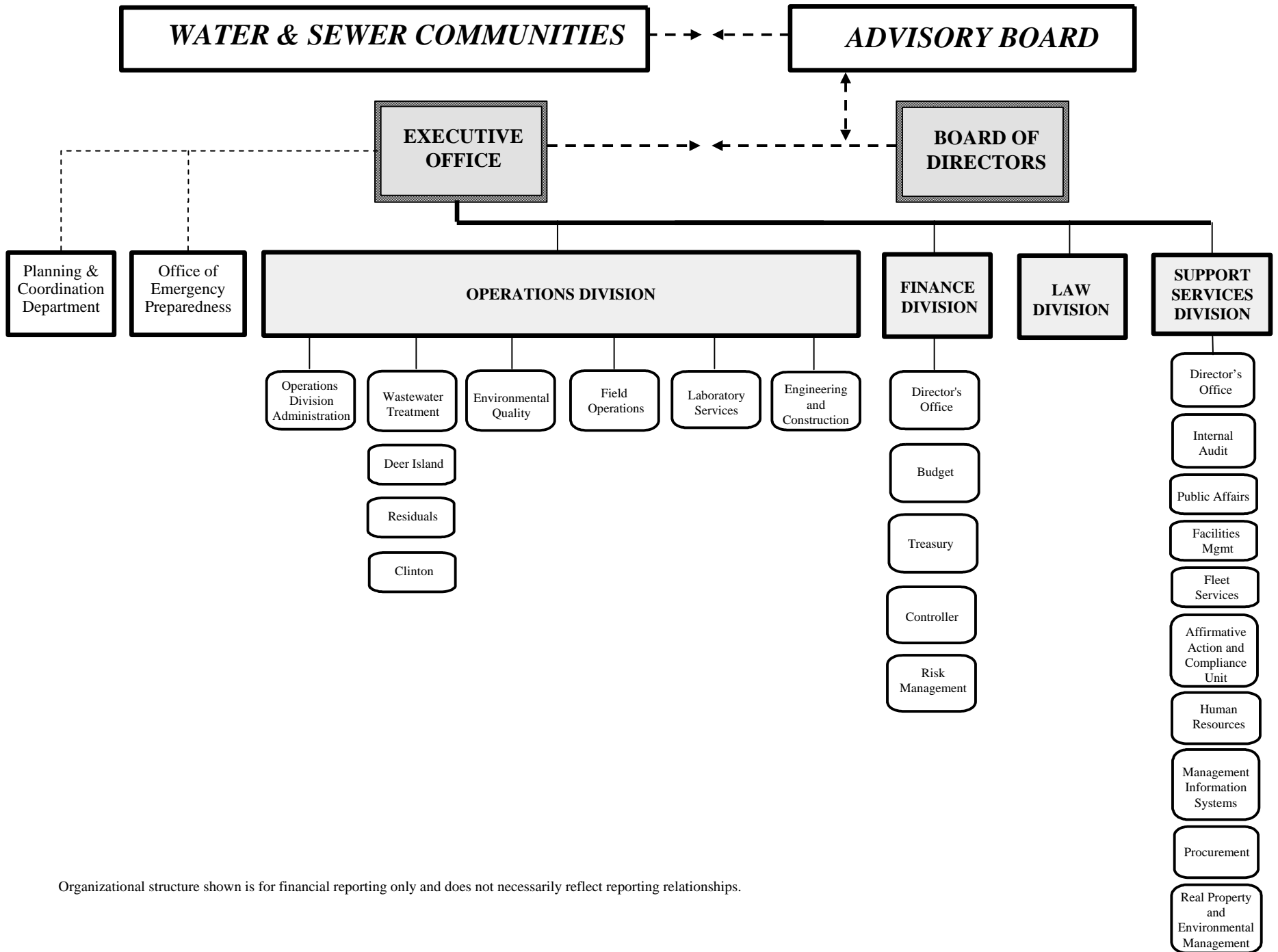
At \$610.5 million, total proposed expenses represent an increase of \$31.3 million or 5.3% over FY09 budgeted expenses; however, the proposed budget recommends a reduction of \$5.7 million in operating expenses, the lower direct and indirect expense reductions are the result of aggressive cost cutting measures, lower energy prices and reductions to contributions to the retirement fund and operating reserves. This reduction is overwhelmed by the over \$36 million increase for debt service. Approximately 58% or \$354.4 million of the proposed expenses is for debt service. The Authority is proposing to reduce debt service by \$10 million through a targeted defeasance resulting from the FY09 projected surplus. Lower projected interest rates for FY10 would yield a \$7.2 million reduction in investment income with interest income falling for a second consecutive year.

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. We look forward to working closely with the Advisory Board during the review period and receiving your comments and recommendations on the Proposed FY10 CEB.

Sincerely,

Frederick A. Laskey
Executive Director



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 prepare projections for the year-end with a similar level of explanations. The performance indicator reports (quarterly in the Orange Notebook) 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 proposed budget to the Advisory Board in February. The Advisory Board then 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.

The Proposed FY10 Budget totals \$610.5 million before offsets of \$7.0 million in debt service assistance (DSA) for a net total expense of \$603.5 million. This budget is \$24.2 million or 4.2% above the FY09 original budget. It is important to note that in October 2008 the Governor exercised his Section 9C powers to address lower state revenues and eliminated the Authority's share of debt service assistance. To address the loss of \$11.25 million in state support, the Authority amended its FY09 budget in January with budget reductions avoiding a mid-year rate increase, cutting direct expenses by \$6.3 million, indirects by \$1.5 million, and debt service by \$3.5 million due to delayed new issuance. While capital financing costs remain the largest component of the CEB, other escalating expenses such as higher chemical pricing, increased maintenance needs, higher other post employment benefits and healthcare costs continue to put pressure on the operating budget.

The Authority's operations are energy intensive and rising energy costs over the past few fiscal years have put extreme pressure on the operating budget. The recent retreat of energy pricing has produced some relief on energy and utility expenditures for FY10. Energy and utility expense accounts for 12.1% of

direct operating costs, down from the 13.8% budgeted in FY09. These expenses have decreased 12.6% from the original FY09 budget as energy prices have dropped due to lower energy consumption in the current recession. If oil and other energy prices continue to trade at current levels, the FY10 energy budget will be lower than the original FY09 budget; however, a return to more volatile energy markets will have a significant impact on this budget. The Deer Island Treatment Plant (DITP), Carroll Water Treatment Plant (CWTP) and other large Field Operations (FOD) facilities purchase blocks of power in the variable rate market. Approximately 77% of the Authority's energy requirement is purchased in the variable rate market. Some of this market risk is mitigated by the Authority's power generating assets. Deer Island and the Carroll Plant have 52 MW and 8 MW of generating capacity, respectively. The FY09 budget assumes that Deer Island will purchase approximately 79% of its electricity requirement in the real time energy market. The remaining 21% of the plant's electricity requirements will be met through on-site generation. Of this amount, 79% will be generated from the steam turbine generator (STG) through the burning of digester gas in the boilers, 17% will be from the hydro-power facility, and 4% will be from the combustion turbine generator (CTG), through a combination of exercise and load response.

Total expenses include \$354.4 million for capital financing costs, 58.1% of total costs before offsets, and \$256.1 million or 41.9% for operating expenses, of which \$214.5 million is for direct expenses and \$41.6 million is for indirect expenses. Total expenses increased by \$24.2 million over the original FY09 budget, \$29.9 million for capital financing expense which was partially offset by a \$5.7 million reduction in operating expenses.

The \$29.9 million increase in capital financing expenses reflects a \$25.6 million increase in debt service and a \$4.3 million decline in debt service assistance over the FY09 original budget. It is important to note that the increase of debt service would have been \$36.0 million, however the Authority is proposing to reduce debt service by \$10.0 million through a targeted defeasance resulting from the FY09 projected surplus. Higher debt service is the result of \$175 million in senior debt issued in February 2009 and projected new senior debt of \$100 million expected to be issued in May 2010. In addition, new SRF loans of \$122 million and \$60 million to be issued in March 2009 and November 2009, respectively, also contributed to the rise in debt service. Finally, offsetting these new issues, the Authority continues to benefit from the May 2007 and June 2008 defeasances of approximately \$41 million and \$18 million, respectively. These defeasances have decreased the FY09 through FY12 debt service requirements. Combined debt service savings are \$7.4 million in FY09, \$9.6 million in FY10, \$6.8 million in FY11, and \$45.2 million in FY12.

The \$5.7 million decrease in operating expenses includes \$1.4 million for direct expenses and \$4.3 million for indirect expenses. The decrease in direct expenses primarily reflects lower projected energy costs. The decline in indirect expenses includes a \$3.5 million reduction in retirement funding, a \$2.6 million reduction in contributions to the operating reserve, partially offset by a \$1.4 million increase in funding for GASB 45 Postemployment Benefits.

The Proposed rate revenue requirement for FY10 is \$566.8 million, an increase of 4.8% over the FY09 rate revenue requirement. The Proposed FY10 non-rate revenue totals \$36.7 million, a decrease of \$1.8 million from the original FY09 budget. The change, primarily results from a \$7.2 million decrease in projected investment earnings due to a projected 125 basis point drop in investment rate assumptions as the federal funds rate has been reduced to 0.0-0.25%. It is important to note that \$10.3 million in rate stabilization funds are projected to be used in FY10, \$5.2 million more than in FY09. The Proposed FY10 non-rate revenue budget includes \$13.3 million for investment income, \$7.9 million in other user charges, and \$5.2 million in other revenue.

Table I-1 shows MWRA's Proposed FY10 Budget for revenue and expenses compared with the FY09 original budget and FY08 actual spending. Changes from FY09 to FY10 are described in the Revenue and Expense section of the Executive Summary.

Table I-1

**Proposed FY10 Current Expense Budget
EXPENSES and REVENUES**

TOTAL MWRA	FY08 Actual	FY09 Original	FY10 Proposed	Change FY10 Proposed to FY09 Original Budget	
				\$	%
EXPENSES					
WAGES AND SALARIES	\$86,452,409	\$90,676,105	\$ 92,200,261	\$ 1,524,156	1.7%
OVERTIME	3,770,660	3,906,671	3,508,791	(397,880)	-10.2%
FRINGE BENEFITS	15,594,183	16,462,542	16,072,161	(390,381)	-2.4%
WORKERS' COMPENSATION	1,159,464	1,325,000	1,325,000	-	0.0%
CHEMICALS	8,642,802	9,876,380	11,304,992	1,428,612	14.5%
ENERGY AND UTILITIES	25,975,019	29,724,532	25,988,079	(3,736,453)	-12.6%
MAINTENANCE	26,408,816	28,089,127	29,387,611	1,298,484	4.6%
TRAINING AND MEETINGS	225,995	290,913	173,203	(117,710)	-40.5%
PROFESSIONAL SERVICES	6,670,261	7,252,264	6,226,213	(1,026,051)	-14.1%
OTHER MATERIALS	5,427,462	5,170,041	4,138,597	(1,031,444)	-20.0%
OTHER SERVICES	22,092,301	23,145,528	24,164,016	1,018,488	4.4%
TOTAL DIRECT EXPENSES	\$ 202,419,372	\$ 215,919,103	\$ 214,488,924	\$ (1,430,179)	-0.7%
INSURANCE	\$2,191,342	\$2,450,000	\$ 2,625,000	\$ 175,000	7.1%
WATERSHED/PILOT	23,216,874	23,083,385	23,599,674	516,289	2.2%
HEEC PAYMENT	4,132,778	4,161,027	3,877,500	(283,527)	-6.8%
MITIGATION	1,409,987	1,445,234	1,481,367	36,133	2.5%
ADDITIONS TO RESERVES	471,506	2,790,504	210,954	(2,579,550)	-92.4%
RETIREMENT FUND	4,258,645	11,906,836	8,392,132	(3,514,704)	-29.5%
POSTEMPLOYMENT BENEFITS*	7,098,896	-	1,400,000	1,400,000	
TOTAL INDIRECT EXPENSES	\$45,836,987	\$45,836,987	\$ 41,586,627	\$ (4,250,360)	-9.3%
DEBT SERVICE (before offsets)	\$329,340,228	\$328,779,672	\$ 354,426,403	\$ 25,646,731	7.8%
VARIABLE RATE DEBT/OTHER	\$6,522,527	\$0	-	-	
BOND REDEMPTION		0	-	-	
DEBT SERVICE ASSISTANCE	(16,980,026)	(11,250,000)	(7,000,000)	4,250,000	-37.8%
TOTAL DEBT SERVICE	\$318,882,729	\$317,529,672	\$ 347,426,403	\$ 29,896,731	9.4%
TOTAL EXPENSES	\$ 567,139,091	\$ 579,285,765	\$ 603,501,954	\$ 24,216,189	4.2%
REVENUE & INCOME					
RATE REVENUE	\$517,797,832	\$540,819,000	\$ 566,821,000	\$ 26,002,000	4.8%
OTHER USER CHARGES	14,796,257	7,576,985	7,910,980	333,995	4.4%
OTHER REVENUE	7,815,283	5,389,387	5,228,762	(160,625)	-3.0%
RATE STABILIZATION	0	5,073,365	10,279,966	5,206,601	102.6%
INVESTMENT INCOME	33,516,949	20,427,025	13,261,246	(7,165,779)	-35.1%
TOTAL REVENUE & INCOME	\$573,926,324	\$579,285,765	\$ 603,501,954	\$ 24,216,189	4.2%

* Transferred to Pension Fund in FY09.

FY09 Accomplishments

- Treasury continued to manage through unprecedented events in the financial markets. The bankruptcy of Lehman Brothers and the exiting of UBS Securities from the municipal marketplace required the development of new business partnerships to replace Lehman and UBS. With these new banking relationships, Treasury has increased MWRA's diversity and reduced the business risk exposure to any one bank.
- Finance Division secured a credit rating upgrade from Standard and Poor's from AA to AA+ during a chaotic credit market. Ratings from Moody's Investor Service and Fitch Ratings were affirmed at Aa2 and AA respectively. Higher credit ratings are associated with lower risk by investors. The lower risk is typically reflected in lower interest rates for borrowers like MWRA.
- Provided more up-to-date financial information to the Board of Directors and external constituencies on both the Current Expense Budget and Capital Improvement Program.
- Developed an Amended FY09 CEB which identified savings to offset the loss of Debt Service Assistance without a mid-year rate increase to communities.
- Converted over two hundred employees to paperless pay stubs.
- Deer Island continued to leverage its 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 \$800,000 for the first half of FY09. Deer Island also self-generated 21% of the plant's total required power during this time period.
- Competitively bid CY08 Renewable Portfolio Standard certificates which resulted in FY09 revenue of \$487,000 to date.
- Completed phase II of Deer Island's lighting equipment and controls retrofit project. Completion of the first two phases of this project will save approximately \$250,000 per year due to reduced power usage.
- Completed implementation of Phase I energy audit recommendations at MWRA's Chelsea office building. Work involved installing energy-efficient lighting which is expected to save \$30,000 annually in energy costs.
- Awarded the following major contracts in the first half of FY09: design and installation of two wind turbines at Deer Island; sale of DITP Enterprise Engines; fast-track contract for the removal of PCBs at Wachusett Dam; and Water Transmission Redundancy Plan.
- Advertised or received bids/proposals for the following: West Roxbury Tunnel Design Services; DITP Primary and Secondary Clarifier Rehabilitation; North Dorchester Bay Pumping Station and Sewers.
- Working with the Recycling Committee, Purchasing staff sought out environmentally friendly products, most notably recycled toners, 30% recycled copy paper and hybrid vehicles. Recycled 60.15 tons of paper, 148.21 tons of scrap metal and 5, 215 gallons of waste oil, generating \$24,500 in revenues.
- At the Carroll Water Treatment Plant (CWTP), continued implementation of process modifications to address previous water quality issues and/or to save energy (approximately -\$200,000 per year).
- At DITP, treated 96% of flow through secondary and met secondary permit limits at all times. Operated DITP without any NPDES Permit violations so far through FY09.

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 and minor reimbursements from the Commonwealth of Massachusetts. Table I-2 shows MWRA's sources and uses of funds for the Proposed FY10 Budget.

Table I-2

SOURCES & USES OF FUNDS*		
\$ in Millions		
<i>Sources of Funds</i>		
Other User Charges	\$7.9	1.3%
Other Revenue	5.2	0.9%
Investment Income	13.3	2.2%
Rate Revenue	566.8	93.9%
Rate Stabilization	10.3	1.7%
TOTAL REVENUE	\$603.5	100.0%
<i>Uses of Funds</i>		
Total Expenses before Debt		
Service Offsets	\$610.5	
Less:		
Debt Service Assistance	(7.0)	
Bond Redemption	0.0	
Sub-Total Net Expenses	603.5	
Capital Financing	354.4	58.1%
Direct Expenses	214.5	35.1%
Indirect Expenses	41.6	6.8%
TOTAL EXPENSES	\$610.5	100.0%
TOTAL EXPENSES Less Offsets	\$603.5	
*May not add up due to rounding		

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 reserves levels.

In the Proposed FY10 Budget, 93.9% of revenue is derived from rate revenue. The remaining 6.1% 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), reimbursements from the Commonwealth, penalties assessed to holders of sewer use permits, and other miscellaneous sources.

Rate Revenue

Under the Proposed FY10 Budget, MWRA will raise \$566.8 million of its total revenue requirements from water and sewer assessments to member communities. Of the \$566.8 million, \$387.7 million will fund the sewerage system, an increase of 7.5% as compared to FY09; and \$179.1 million will fund the water system, a decrease of 0.6% as compared to FY09.

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 Proposed FY10 Budget totals \$7.9 million and is composed of \$1.3 million in water revenue collected from sewer

ratepayers to offset the cost of water used for operation at Deer Island, \$4.0 million paid by the Chicopee Valley Aqueduct communities, \$1.0 million in water revenue and \$0.5 million in sewer revenue to contract communities and others, and \$0.6 million in entrance fees paid by Stoughton and the Dedham-Westwood Water District.

Other Revenue

Other Revenue is budgeted at \$5.2 million. This includes permit fees, penalties, hydro-power revenues, Commonwealth reimbursements, and other miscellaneous revenues.

Permit Fees and Penalties

The Proposed FY10 Budget includes \$2.0 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.

Reimbursements from the Commonwealth of Massachusetts

The budget includes \$867,000 from the Commonwealth that MWRA is entitled to receive by statute as reimbursement for the cost of chemicals used in the wastewater treatment process.

Miscellaneous Revenue

The Proposed FY10 Budget includes \$2.5 million in miscellaneous revenues of which \$1.5 million pertains to Deer Island's energy programs for the sale of Renewable Portfolio Standard Credits and participation in the demand response program; \$226,000 is for hydro-power generation at the MWRA's Cosgrove Intake facility, and \$607,000 in other revenue.

Investment Income

MWRA earns income by investing reserves and fund balances in a variety of interest-yielding securities. The Proposed FY10 Budget includes \$13.3 million in investment income, a decrease of \$7.2 million from the original FY09 budget. The Proposed FY10 short-term interest rate is at 0.75%, 125 basis points less than the FY09 budget assumption. While this is a significant reduction from FY09, this rate assumption is 75 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.

Direct Program Expenses

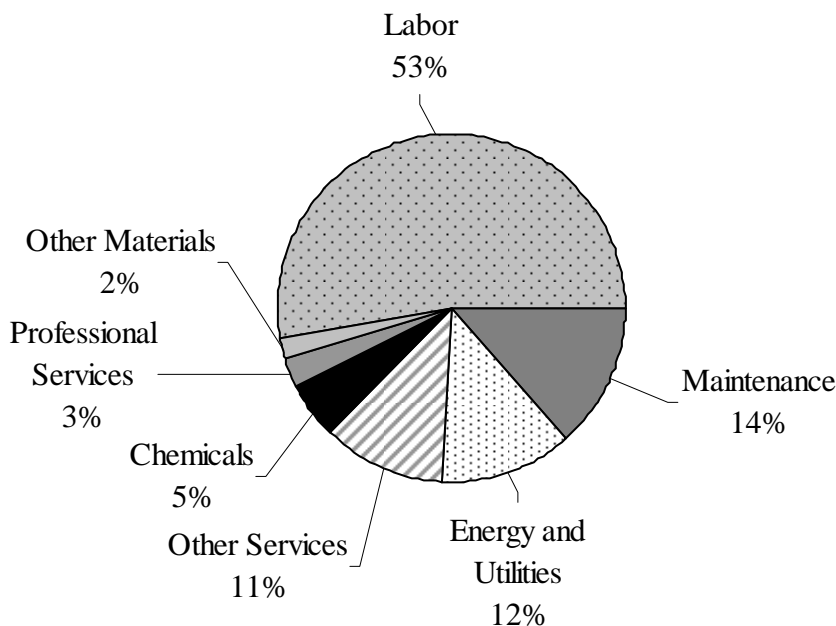
The Proposed FY10 direct program expense budget is \$214.5 million, a decrease of \$1.4 million or 0.7% below the original FY09 budget. Lower forecasted energy prices, \$3.7 million below the FY09 budget, offset higher costs for wages and salaries, maintenance, and chemicals. To address rising direct 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%).

FIGURE I-1
Direct Expenses by Category - \$214.5 Million



Within the labor cost category, wages and salaries account for \$92.2 million, 1.7% higher than the FY09 budget. Of the \$92.2 million, \$90.8 million is for regular pay. The proposed budget assumes an average staffing level of 1,229 for Fiscal Year 2010, 24 fewer positions than FY09 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.

Filled positions at MWRA have declined from a peak of 1,775 in March 1997 to the targeted year-end staffing level of 1,222 for FY10.

The Final budget for utility expenses is \$26.0 million, a \$3.7 million, or 12.6%, decrease compared with the FY09 budget. The decrease reflects lower energy pricing due in part to lower energy demand in the

weak economy which is projected well into FY10. Budgeted kwh pricing has dropped from \$0.1265/kwh in FY09 to a conservative \$0.1168/kwh in FY10. Actual electricity pricing in FY09 is approaching \$0.10/kwh. Additionally, the Authority plans to take advantage of the current lower diesel prices and top off all storage tanks before the end of FY09. The Proposed FY10 energy and utilities budget reflects the pricing outlook based on energy futures and on the latest bids for Deer Island, the Carroll Water Treatment Plant and other large FOD facilities.

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 FY10 maintenance budget is \$29.4 million, an increase of \$1.3 million, or 4.6%, compared to the original FY09 budget.

The Deer Island FY10 maintenance budget \$15.1 million, a \$0.6 million or 3.8% increase as compared with FY09 original budget, and the Field Operations budget for FY10 is \$8.7 million, an increase of \$0.9 million or 11.2%, compared with FY09 budget. The proposed funding also covers maintenance for computer systems, software licenses, security system maintenance, and fleet services.

The proposed FY10 budget for other services is \$24.2 million. Major components of this cost category include \$15.9 million for MWRA’s residuals processing contract and \$3.0 million for lease payments, (consisting of \$1.6 million for the Charlestown Navy Yard and \$1.4 million for the Chelsea facility).

The Proposed budget includes \$11.3 million for chemicals, an increase of \$1.4 million or 14.5% from the FY09 budget. The majority of the variance is the result of price increases. Budget increases of \$788,000, \$295,000, and \$122,000 reflect higher prices for sodium hypochlorite, aqua ammonia, and hydrofluosilicic acid. The Authority does not assume any new changes in FY10 regulatory requirements for enterococcus compliance at Deer Island which could result in usage increases for sodium bisulfite and sodium hypochlorite.

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 Proposed FY10 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 - \$214.5 Million**

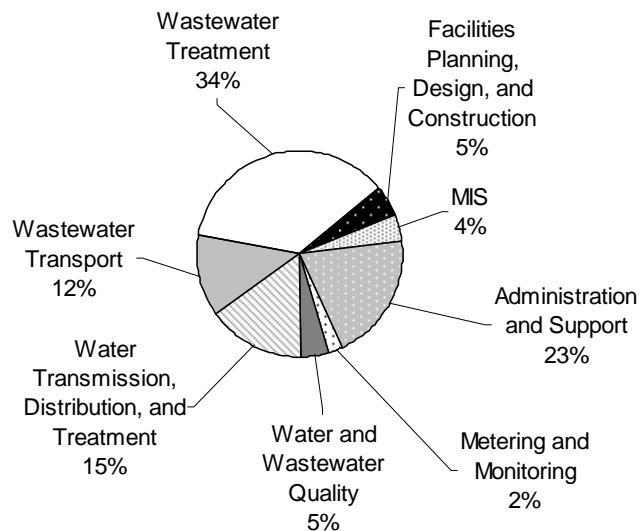
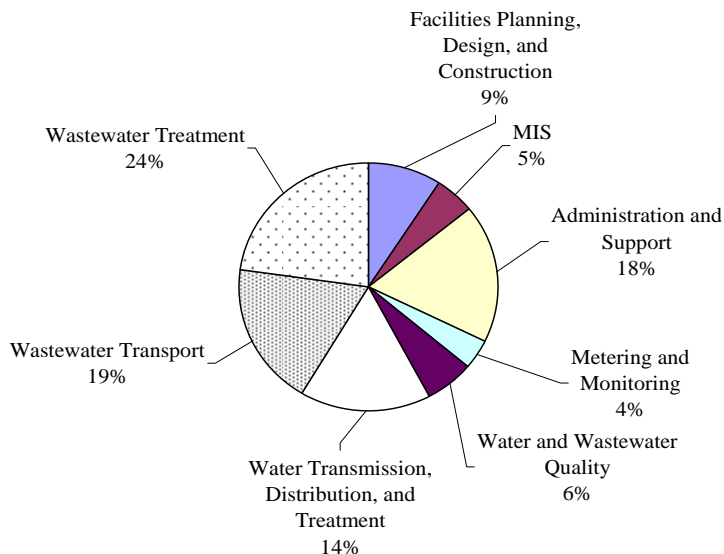


Figure I-3 below illustrates staffing by Functional Area as of December 2008 and shows that of 1,235 filled positions, 57% are devoted to operating and maintaining the water and wastewater treatment and transport systems; 23% to administration and support and MIS functions, and 9% to facilities planning, design, and construction. Water and Wastewater Quality functions, and metering and monitoring, particularly Boston Harbor and Massachusetts Bay monitoring activities and industrial discharge and enforcement programs, account for 10% of all staff.

FIGURE I-3
Staffing by Functional Area



Capital Financing

Outstanding Debt and Debt Management

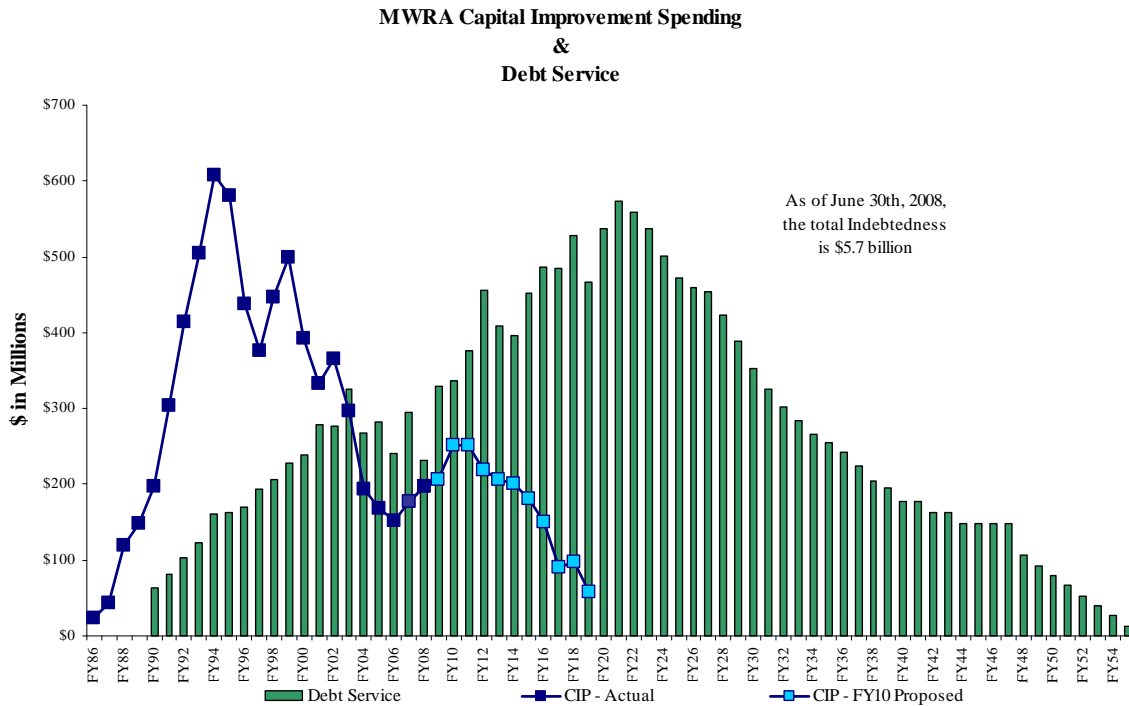
The \$7.0 billion spent on MWRA’s modernization efforts to date, has relied heavily on debt financing. Total debt as of June 2008 reached \$5.7 billion consisting of senior and subordinated revenue bonds, SRF debt, and tax-exempt commercial paper. The Authority is significantly leveraged with long-term debt representing 70.5% of total assets, but the stability and predictability of operating cash flows can support a leveraged capital structure. The MWRA enjoys strong unenhanced senior debt ratings of Aa2, AA+, and AA from Moody’s, S&P, and Fitch, respectively. S&P upgraded the Authority in January 2009 from AA to AA+ citing MWRA’s “strong management, which has generated a trend of satisfactory reserves and solid liquidity over a multi-year period while successfully implementing numerous large construction projects.”

The Authority’s debt service obligation as a percent of total expenses before offsets has increased from 36.0% in 1990 to 58.1% in the Proposed FY10 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.

The MWRA expects to finance the capital expenditures identified in the MWRA CIP through the issuance of its revenue bonds as provided in the MWRA Act, and from the proceeds of federal and state grants and

operating revenues. As of June 30, 2008, the MWRA's indebtedness included \$3.1 billion of senior revenue bonds, approximately \$1.4 billion of subordinated revenue bonds, approximately \$996 million of loans with the SRF and \$191 million of tax-exempt commercial paper notes.

The following graph illustrates the relationship between the MWRA's Capital Improvement Program and outstanding debt as of June 2008.



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.

As part of the \$1.2 billion variable rate demand bond refunding, approximately \$34.6 million of subordinated debt service reserves were released to reduce outstanding principal. In addition to the reserve release, approximately \$51.7 million in sinking fund installments were re-amortized to provide budget relief between FY09 and FY15 in line with the long-term rates management strategy. This time period coincides with the projected adoption of amendments to Bond Resolution which will decrease reserve fund requirements.

On June 19, 2008, the Authority defeased \$17.9 million in bonds. The defeasance of these bonds will decrease the FY09 through FY12 debt service requirements. The savings in FY09 are approximately \$5.3 million, \$4.8 million in FY10 and FY11, and \$4.9 million in FY12. This defeasance was accomplished using debt service funds made available from the FY08 surplus, including the Town of Reading's entrance fee and Bond Redemption funds.

The Proposed Fiscal Year 2010 capital financing costs total \$354.4 million (before offsets), and remains the largest portion of the MWRA's operating expenses, accounting for 58.1% of total expenses before debt service offsets. The FY10 budget includes \$7.0 million for Debt Service Assistance from the Commonwealth.

The Proposed FY10 budget assumes a 4.0% interest rate for variable rate debt which is at the same level as in FY09. The unusually low interest rates being experienced right now can be characterized as a dislocation in the marketplace – albeit a positive one. These rates are not reflective of historical averages and there is no guarantee that rates will stay low. Should a spike occur or a return to more traditional rates and staff's assumption are too low a sizable deficit could arise – as in FY08. A deficit in debt service, without a corresponding operating expense underspending or the receipt of unanticipated revenues, has residual effects more severe than overspending in other line items where we assume risk. The exposure is greater based on: the obvious financial impact, the potential to not meet coverage requirements, and the possibility of jeopardizing our bond rating. Failure to meet coverage would be a material violation of the General Bond Resolution requiring a material event filing, affect MWRA's bond rating - likely resulting in a downgrade, and impact MWRA's ability to pass the additional bonds test which is required to issue any new debt.

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 variable interest rates are currently very low, the fee portion of this equation has grown as a result of dramatic changes in market conditions and escalating costs for liquidity. The compilation of these costs, which can range as high as 105 basis points above the base interest rate, must be considered in developing MWRA's variable rate debt service assumption. The Securities Industry and Financial Markets Association (SIFMA) 10- year and 20-year averages are 2.52% and 3.12% respectively and are exclusive of the additional costs associated with fees. In addition, MWRA's average annual rates, including all costs, was 3.82% in FY07 and 4.2% in FY08. The 4% interest rate assumption is in line with recent fiscal year actual costs and assumes risk if market conditions return to more traditional interest rates.

Table I-3 provides detail on the Proposed FY10 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 FY10 capital financing is for wastewater improvements. Current and future borrowing increasingly supports improvements to the water system. A complete list of the Authority's indebtedness by series is presented in Appendix F.

TABLE I-3
Proposed FY10 Current Expense Budget - Capital Financing Detail (as of 6/30/10)
\$ in Millions

	Amount Outstanding	Total	Sewer	Water
Total SRF ¹ Debt	\$1,088	\$60.1	\$48.4	\$11.7
Total Senior Debt	3,235	178.7	104.9	73.7
Total Subordinate Debt	1,367	102.8	85.9	16.8
Total SRF and Debt Service²	\$5,691	\$341.5	\$239.3	\$102.2
Water Pipeline Commercial Paper	194	4.1	0.0	4.1
Current Revenue/Capital ³		5.6	4.2	1.4
Capital Lease		3.2	2.1	1.1
Sub-Total	\$194	\$12.9	\$6.3	\$6.6
Total Capital Financing (before Debt Service Offsets)	\$5,885	\$354.4	\$245.6	\$108.8
Debt Service Offsets:				
Variable Rate Savings		0.0	0.0	0.0
Debt Service Assistance		(7.0)	(6.5)	(0.4)
Total Capital Financing	\$5,885	\$347.4	\$239.1	\$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. The amount is partly determined by MWRA's bond covenant requirements.

The Proposed FY10 capital financing costs before offsets increased by \$25.6 million or 7.8% compared to FY09. This increase in MWRA's debt service requirement is the result of the new money issued in FY09 and projected FY10 issues. The FY10 capital financing budget includes:

- \$178.7 million in principal and interest payments on MWRA's senior fixed rate bonds. This amount includes \$18.3 million to support issuances of \$175 million in February 2009 and \$100 million in May 2010.
- \$102.8 million in principal and interest payments on subordinate bonds.
- \$60.1 million in principal and interest payments on SRF loans. This amount includes \$9.5 million to support issuances of \$122 million in March 2009 and \$60 million in November 2009.
- \$5.6 million to fund ongoing capital projects with current revenue and to meet coverage requirements.
- \$4.1 million to fund the interest expense related to the Local Water Pipeline Assistance Program.

- \$3.2 million for the Chelsea Lease.

Indirect Expenses

The Proposed FY10 Budget includes \$41.6 million for indirect expenses, \$4.3 million below the FY09 budget of \$45.8 million. The decrease reflects the combined impact of a lower operating reserve contribution and a reduction in retirement funding.

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 \$0.5 million per claim. The Proposed FY10 Budget includes \$2.6 million for premiums, fees, and self-insured claims, \$0.2 million above the original FY09 budget. The budget includes \$1.9 million for premiums and fees and \$0.7 million for the projected costs 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. No changes to the insurance reserve are planned for FY10.

Watershed Reimbursement/PILOT

The Enabling Act directs MWRA to pay the Commonwealth of Massachusetts for several statutory obligations: payments 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 Proposed FY10 Budget includes \$6.4 million, \$12.3 million, and \$4.9 million respectively for these items. Collectively these represent an increase of \$0.5 million over the FY09 budget.

Harbor Electric Energy Company (HEEC)

Harbor Electric Energy Company (HEEC), a subsidiary of NStar, installed the cross harbor power cable and built the power substation to supply electric power for construction and operation of the Deer Island Treatment Plant. MWRA is repaying HEEC's capital investment on a 25-year schedule. The budget includes \$3.9 million for the estimated FY10 payment, comprised of \$3.3 million for capacity charges and \$0.6 million for maintenance expenses, representing a \$0.3 million or 6.8% decrease from the FY09 budget.

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 Proposed FY10 Budget includes \$1.5 million for community compensation for impacts, including \$0.8 million for the City of Quincy and \$0.7 million for the Town of Winthrop, based on Memoranda of Agreement with the communities.

Retirement System Contribution

The Proposed FY10 Budget includes a contribution to MWRA's retirement fund of \$8.4 million, a decrease of \$3.5 million compared to the original FY09 budget. The FY10 funding of \$8.4 million includes the mandated contribution of \$5.6 million based on the latest actuarial report performed January 1, 2007 and an additional payment of \$2.8 million to assist in making up for FY08 losses. The January 1, 2007 actuarial valuation defines the mandated contribution for FY09 and FY10 and the next actuarial report, based on January 1, 2009, will impact FY11 and FY12. In FY08, the Retirement Board voted to adopt a new methodology of assessing retirement liability that would be in line with other 105 Chapter 32 retirement systems in the Commonwealth. Under this new methodology, MWRA Employees' Retirement System funding level decreased from a fully funded level to 85% funding, resulting in an unfunded liability and a 17 year amortization schedule to achieve 100% funding. The MWRA board has elected to retire this unfunded pension liability on an accelerated basis before fully funding its GASB 45 obligation. Continuing to pursue this course of action will shorten the unfunded pension amortization schedule. The future revenue freed by the lower required annual pension appropriation coupled with the prepayment funding levels already built into the rate base will enable the MWRA to redirect these available funds to the OPEB liability (please refer to GASB 45 Other Postemployment Benefits Other than Pensions section below), once full funding of the pension liability is achieved.

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

The Authority adopted GASB 45, *Accounting and Financial Reporting by Employers for Postemployment Benefits Other than Pensions* in FY08, recognizing that this obligation represents a large future liability for the health insurance costs of retirees. However during FY08, the Authority opted to delay the establishment of an irrevocable trust for these benefits to allow time for a better definition of the program and then adopt the optimal funding mechanism.

In July 2008, the MWRA's Board of Directors voted that the \$7.1 million appropriated for OPEB for FY08 be applied to shorten the amortization schedule for the previously mentioned unfunded pension liability resulting from a revised assessment methodology. The use of these funds to pay down the unfunded pension liability maximizes potential financial returns without establishing an irrevocable trust and maximizes the Board's flexibility for future decisions regarding OPEB funding. No OPEB contribution was budgeted for FY09, however \$6.6 million originally planned for OPEB was redirected to the pension fund. In FY10 the nominal amount of \$1.4 million is included in the budget for OPEB which may be fully offset by lower healthcare costs if the new healthcare funding formula proposed by the Governor is approved. The proposed method will result in higher employee contributions based on a three tiered salary based system versus the current hire date method. The decision not to pre-fund its

GASB obligation in years FY08 through FY10 will result in a unfunded pension liability of over \$40 million by the end of fiscal 2010.

The MWRA has two large unfunded postemployment liabilities, the pension fund and the actuarially established OPEB liability. Addressing the unfunded pension liability first is sensible because the yield on pension assets should be higher and the MWRA will keep its options open in the short-term until a long-term OPEB strategy is developed. This strategy to methodically address the MWRA's dual unfunded postemployment liabilities demonstrates fiscal responsibility and has been favorably received by rating agencies and investors as evidenced by the recent upgrade to AA+ by Standard & Poors.

Operating Reserves

Operating reserve requirement increases by \$0.2 million for FY10 is in compliance with the requirement of the MWRA General Bond Resolution which requires a balance of one-sixth of annual operating expenses. Based on the Proposed FY10 CEB, the required balance is \$38.5 million at the end of 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 2.6 million people, or 43% 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 Proposed FY10 Current Expense Budget, rate revenue from BWSC will account for 31% of MWRA's total rate revenue. Table I-4, on page I-16, lists MWRA communities, the services received, and the preliminary MWRA assessments for FY10.

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-17 presents the calculation of MWRA's Proposed FY10 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 Proposed FY10 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.

Table I-4

Massachusetts Water Resources Authority
Preliminary FY10 Water and Sewer Assessments
Includes \$7.0M in Debt Service Assistance

10-Feb-09

MWRA Fully Served Water and Sewer Customers	Final FY09 Water Assessment	Preliminary FY10 Water Assessment	Percent Change from FY09	Final FY09 Sewer Assessment	Preliminary FY10 Sewer Assessment	Percent Change from FY09	Final FY09 Combined Assessment	Preliminary FY10 Combined Assessment	Percent Change from FY09
ARLINGTON	\$3,798,111	\$3,893,882	2.5%	\$6,367,419	\$6,818,476	7.1%	\$10,165,530	\$10,712,358	5.4%
BELMONT	2,232,215	2,094,936	-6.1%	3,912,441	4,220,564	7.9%	6,144,656	6,315,500	2.8%
BOSTON (BWSC)	65,521,627	66,251,569	1.1%	103,137,432	109,923,839	6.6%	168,659,059	176,175,408	4.5%
BROOKLINE	5,198,049	5,217,769	0.4%	10,299,870	10,981,100	6.6%	15,497,919	16,198,869	4.5%
CHELSEA	2,750,255	2,978,515	8.3%	4,928,138	5,809,639	17.9%	7,678,393	8,788,154	14.5%
EVERETT	4,187,928	4,552,881	8.7%	6,187,367	6,619,229	7.0%	10,375,295	11,172,110	7.7%
FRAMINGHAM	6,525,095	6,531,740	0.1%	8,846,214	9,633,793	8.9%	15,371,309	16,165,533	5.2%
LEXINGTON	4,565,881	4,483,223	-1.8%	5,855,209	6,337,141	8.2%	10,421,090	10,820,364	3.8%
MALDEN	5,465,015	5,659,706	3.6%	9,664,493	10,514,156	8.8%	15,129,508	16,173,862	6.9%
MEDFORD	4,737,121	4,765,908	0.6%	9,654,660	10,461,730	8.4%	14,391,781	15,227,638	5.8%
MELROSE	2,118,630	2,048,352	-3.3%	4,814,755	5,221,848	8.5%	6,933,385	7,270,200	4.9%
MILTON	2,428,933	2,125,145	-12.5%	4,353,853	4,581,217	5.2%	6,782,786	6,706,362	-1.1%
NEWTON	8,620,195	8,664,039	0.5%	16,260,200	17,808,175	9.5%	24,880,395	26,472,214	6.4%
NORWOOD	3,131,158	3,018,392	-3.6%	5,402,950	5,646,080	4.5%	8,534,108	8,664,472	1.5%
QUINCY	9,455,292	9,361,445	-1.0%	15,857,588	16,996,107	7.2%	25,312,880	26,357,552	4.1%
READING	1,636,165	1,737,761	6.2%	3,555,143	3,894,818	9.6%	5,191,308	5,632,579	8.5%
REVERE	3,890,130	4,040,358	3.9%	7,560,677	8,893,756	17.6%	11,450,807	12,934,114	13.0%
SOMERVILLE	5,860,187	5,890,495	0.5%	11,843,075	12,671,957	7.0%	17,703,262	18,562,452	4.9%
STONEHAM	2,783,131	2,674,187	-3.9%	3,729,778	4,018,769	7.7%	6,512,909	6,692,956	2.8%
WALTHAM	7,131,291	7,150,804	0.3%	10,890,696	11,900,987	9.3%	18,021,987	19,051,791	5.7%
WATERTOWN	2,683,187	2,807,909	4.6%	4,748,683	5,214,175	9.8%	7,431,870	8,022,084	7.9%
WINTHROP	1,225,716	1,247,516	1.8%	2,569,630	3,035,881	18.1%	3,795,346	4,283,397	12.9%
TOTAL	\$155,945,312	\$157,196,532	0.8%	\$260,440,271	\$281,203,437	8.0%	\$416,385,583	\$438,399,969	5.3%

MWRA Sewer and Partial Water Customers	Final FY09 Water Assessment	Preliminary FY10 Water Assessment	Percent Change from FY09	Final FY09 Sewer Assessment	Preliminary FY10 Sewer Assessment	Percent Change from FY09	Final FY09 Combined Assessment	Preliminary FY10 Combined Assessment	Percent Change from FY09
CANTON	\$2,262,620	\$2,317,069	2.4%	\$3,242,180	\$3,301,719	1.8%	\$5,504,800	\$5,618,788	2.1%
NEEDHAM	1,061,719	427,396	-59.7%	4,893,374	5,095,980	4.1%	5,955,093	5,523,376	-7.2%
STOUGHTON	535,066	485,854	-9.2%	3,735,159	4,068,553	8.9%	4,270,225	4,554,407	6.7%
WAKEFIELD	1,443,087	1,408,508	-2.4%	4,688,936	5,014,327	6.9%	6,132,023	6,422,835	4.7%
WELLESLEY	853,387	831,327	-2.6%	4,568,401	4,807,900	5.2%	5,421,788	5,639,227	4.0%
WINCHESTER	895,066	813,067	-9.2%	3,132,581	3,408,803	8.8%	4,027,647	4,221,870	4.8%
WOBURN	2,960,077	2,670,755	-9.8%	9,578,547	10,095,793	5.4%	12,538,624	12,766,548	1.8%
TOTAL	\$10,011,022	\$8,953,976	-10.6%	\$33,839,178	\$35,793,075	5.8%	\$43,850,200	\$44,747,051	2.0%

MWRA Sewer-only Customers	Final FY09 Water Assessment	Preliminary FY10 Water Assessment	Percent Change from FY09	Final FY09 Sewer Assessment	Preliminary FY10 Sewer Assessment	Percent Change from FY09	Final FY09 Combined Assessment	Preliminary FY10 Combined Assessment	Percent Change from FY09
ASHLAND				\$1,721,023	\$1,890,237	9.8%	\$1,721,023	\$1,890,237	9.8%
BEDFORD				2,779,636	2,974,381	7.0%	2,779,636	2,974,381	7.0%
BRAINTREE				6,744,131	7,037,379	4.3%	6,744,131	7,037,379	4.3%
BURLINGTON				4,055,100	4,425,201	9.1%	4,055,100	4,425,201	9.1%
CAMBRIDGE				19,830,036	21,333,055	7.6%	19,830,036	21,333,055	7.6%
DEDHAM				4,650,140	4,808,843	3.4%	4,650,140	4,808,843	3.4%
HINGHAM SEWER DISTRICT				1,323,016	1,387,146	4.8%	1,323,016	1,387,146	4.8%
HOLBROOK				1,219,867	1,339,876	9.8%	1,219,867	1,339,876	9.8%
NATICK				3,941,631	4,267,976	8.3%	3,941,631	4,267,976	8.3%
RANDOLPH				4,601,421	4,882,595	6.1%	4,601,421	4,882,595	6.1%
WALPOLE				2,914,620	3,143,745	7.9%	2,914,620	3,143,745	7.9%
WESTWOOD				1,964,562	2,096,923	6.7%	1,964,562	2,096,923	6.7%
WEYMOUTH				8,776,895	9,125,921	4.0%	8,776,895	9,125,921	4.0%
WILMINGTON				1,768,207	2,010,739	13.7%	1,768,207	2,010,739	13.7%
TOTAL				\$66,290,285	\$70,724,017	6.7%	\$66,290,285	\$70,724,017	6.7%

MWRA Water-only Customers	Final FY09 Water Assessment	Preliminary FY10 Water Assessment	Percent Change from FY09	Final FY09 Sewer Assessment	Preliminary FY10 Sewer Assessment	Percent Change from FY09	Final FY09 Combined Assessment	Preliminary FY10 Combined Assessment	Percent Change from FY09
LYNNFIELD WATER DISTRICT	\$439,487	\$456,438	3.9%				\$439,487	\$456,438	3.9%
MARBLEHEAD	1,828,854	1,768,698	-3.3%				1,828,854	1,768,698	-3.3%
NAHANT	351,096	340,243	-3.1%				351,096	340,243	-3.1%
SAUGUS	2,851,597	2,701,118	-5.3%				2,851,597	2,701,118	-5.3%
SOUTHBOROUGH	751,303	666,345	-11.3%				751,303	666,345	-11.3%
SWAMPSCOTT	1,416,222	1,380,516	-2.5%				1,416,222	1,380,516	-2.5%
WESTON	1,646,079	1,438,526	-12.6%				1,646,079	1,438,526	-12.6%
TOTAL	\$9,284,638	\$8,751,884	-5.7%				\$9,284,638	\$8,751,884	-5.7%

MWRA Partial Water-only Customers	Final FY09 Water Assessment	Preliminary FY10 Water Assessment	Percent Change from FY09	Final FY09 Sewer Assessment	Preliminary FY10 Sewer Assessment	Percent Change from FY09	Final FY09 Combined Assessment	Preliminary FY10 Combined Assessment	Percent Change from FY09
DEDHAM-WESTWOOD WATER DISTRICT	\$15,572	(\$3)	-100.0%				\$15,572	(\$3)	-100.0%
LYNN (LWSC)	220,195	159,706	-27.5%				220,195	159,706	-27.5%
MARLBOROUGH	3,392,651	2,901,626	-14.5%				3,392,651	2,901,626	-14.5%
NORTHBOROUGH	852,523	823,910	-3.4%				852,523	823,910	-3.4%
PEABODY	527,353	312,840	-40.7%				527,353	312,840	-40.7%
TOTAL	\$5,008,294	\$4,198,079	-16.2%				\$5,008,294	\$4,198,079	-16.2%

SYSTEMS TOTAL	Final FY09 Water Assessment	Preliminary FY10 Water Assessment	Percent Change from FY09	Final FY09 Sewer Assessment	Preliminary FY10 Sewer Assessment	Percent Change from FY09	Final FY09 Combined Assessment	Preliminary FY10 Combined Assessment	Percent Change from FY09
SYSTEMS TOTAL	\$180,249,266	\$179,100,471	-0.6%	\$360,569,734	\$387,720,529	7.5%	\$540,819,000	\$566,821,000	4.8%

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;
- 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 PFY10 Rate Revenue Requirement
(000's)

	Sewer	Water	Total
Allocated Direct Expenses	\$158,115	\$56,374	\$214,489
Allocated Indirect Expenses	\$14,084	\$27,503	\$41,587
PLUS			
Capital Expenses:			
Debt Service (less offsets)	\$232,731	\$101,778	\$334,509
Current Revenue for Capital	\$4,200	\$1,400	\$5,600
Other Capital Expenses	\$2,148	\$5,169	\$7,317
PLUS			
Non-Rate Revenue:			
Investment Income	-\$8,683	-\$4,578	-\$13,261
Fees and Other Revenue	-\$5,075	-\$8,065	-\$13,140
Rate Stabilization	-\$9,799	-\$481	-\$10,280
EQUALS			
Rate Revenue Requirement	\$387,721	\$179,100	\$566,821

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 FY10, community assessments will represent 93.9% 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 FY10 through FY19.

Rates & Budget Projections - Based on \$7.0M of Debt Service Assistance										
Proposed FY10 CEB	FY2010	FY2011	FY2012	FY2013	FY2014	FY2015	FY2016	FY2017	FY2018	FY2019
Total Rate Revenue (\$ in Mil)	\$ 566,821	\$ 602,735	\$ 640,903	\$ 681,509	\$ 713,070	\$ 749,281	\$ 784,123	\$ 850,080	\$ 818,485	\$ 883,702
Rate Revenue Change from Prior Year (\$000)	\$ 26,002	\$ 35,914	\$ 38,168	\$ 40,607	\$ 31,560	\$ 36,211	\$ 34,842	\$ 65,957	\$ (31,594)	\$ 65,217
Rate Revenue Increase	4.8%	6.3%	6.3%	6.3%	4.6%	5.1%	4.7%	8.4%	-3.7%	8.0%
Use of Reserves (\$ in Mil)	\$ 10,280	\$ 36,120	\$ 6,077	\$ 15,700	\$ 3,339	\$ -	\$ -	\$ -	\$ -	\$ -

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 recent financing strategies (i.e. restructuring debt to defer the repayment of principal) will increase MWRA capital financing costs over the next several years.

MWRA employs rates management tools where available (e.g. 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 \$91.8 million increase in direct expenses from FY10 to FY19 is primarily the result of an assumed inflation rate of 4.0% annually. In addition, while direct operating expenses are projected to decrease by 0.7% in FY10, expenses for chemicals and maintenance are projected to increase by 14.5% and 4.6% respectively. Also, over the next ten years there will be an increase in direct expenses as a result of capital improvement projects. The largest increases will be for operation of new facilities.

Completion of the North Dorchester Bay CSO project will have incremental impacts beginning in FY12, and ultraviolet technology licensing fees for the Carroll Water Treatment Plant will result in \$1.3 million of additional expenses beginning in FY14.

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:

- Debt Service Assistance projected to be level funded at \$7.0 million;
- Direct expense inflation rate of 4.0%;
- 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 6% interest rates (5% in FY10);
- Variable rate interest projected at 4.00% in FY10 and beyond;

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;
- 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 6%;
- Debt refinancing opportunities;
- Capital spending;
- Growth in direct expenses, greater than current assumptions of 4.0% is an area of increased concern. Increases in chemicals, maintenance and health care are reflected in the Proposed FY10 Budget. 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.

Proposed FY10 Capital Improvement Program

Overview

MWRA was created by the Massachusetts legislature in 1985 and since that time has invested over \$7.0 billion to modernize and improve the wastewater and waterworks systems serving its member communities. Of the total expenditures to date, nearly three-fourths have supported improvements to the wastewater treatment, interceptor, pumping, and combined sewer overflow systems. The remaining fourth has supported waterworks treatment, transmission, distribution, and water supply protection improvements. The Proposed FY10 CIP budget totals \$5.0 billion, of which \$3.1 billion is projected to be expended through FY09 and a remaining balance of \$1.9 billion.

MWRA's sewage treatment system has undergone a nearly complete transformation under the federally mandated, \$3.8 billion Boston Harbor Project. Now complete, the project included: a new Deer Island Treatment Plant with primary and secondary treatment capabilities; a new 5-mile Inter-Island Tunnel that combined two separate sewer systems into one; a sludge-to-fertilizer facility; and a 9.5-mile Effluent Outfall Tunnel to discharge treated wastewater away from shallow Boston Harbor into deeper waters and the stronger currents of Massachusetts Bay.

MWRA's Integrated Water Supply Improvement program is a \$1.7 billion series of projects that consists of aggressive watershed protection, modernized water treatment facilities and distribution system improvements including construction of covered storage facilities and pipeline rehabilitation projects. This program is nearly complete and includes the \$430.2 million John J. Carroll Water Treatment Plant, a state-of-the-art ozonation facility with capacity to treat 405 mgd of drinking water, which was completed in 2005 pursuant to the Safe Drinking Water Act (SDWA). The plant treats water delivered from the Wachusett Reservoir with ozonation and chloramination. The plan also includes the 17.6-mile MetroWest Supply Tunnel which was placed in service in November 2004. The new tunnel greatly enhances the security, capacity and reliability of MWRA's entire water transmission system. Prior to 2004, the MWRA relied on a single 1940's-era surface aqueduct, the Hultman Aqueduct, to serve all of metropolitan Boston. With its leaks and aging valves, the Hultman has been taken off-line for major repairs. Before the MetroWest Tunnel, failure of the Hultman could have caused nearly complete interruption of Boston's water supply. This would have been a disaster for the region's public health, safety and economy.

In 1987, MWRA entered a stipulation in the Federal District Court Order in the Boston Harbor Case by which it accepted responsibility for developing and implementing a long-term CSO control plan for all combined sewer overflows hydraulically connected to MWRA's system, including the outfalls owned and operated by the communities of Boston, Cambridge, Chelsea, Somerville, and a small section of Brookline. Since then, MWRA has conducted site-specific and watershed-based planning to meet short-term control requirements pursuant to federal regulations and develop a long-term control plan to bring the Boston area CSOs into compliance with the Federal Clean Water Act and State Water Quality Standards.

With the completion of the Deer Island facilities and the winding down of the Water Supply Improvement program, the MWRA now spends a proportionately large part of its CIP budget on the

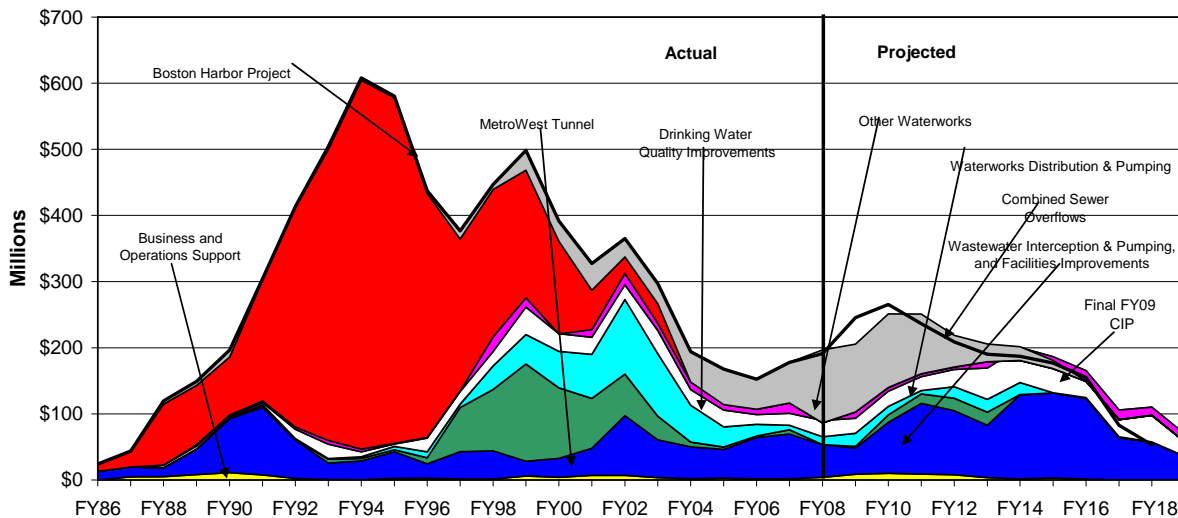
Combined Sewer Overflow (“CSO”) projects mandated by state and federal agencies. The CSO program represents the largest program initiative in terms of spending with an FY10 budget of \$106.3 million and accounts for more than 34% of Authority spending over the FY09-13 period.

To arrive at the Proposed FY10 CIP, the Authority identified the needs of the programs taking into account the mandated project timeframes, the recommendations of the Master Plan, and the current budgetary practices. Since 1985, over 80% of the Authority’s spending has been on court mandated projects. Going forward, the mandated projects account for 46% of the projected FY09-13 spending.

As the MWRA matures as an agency, a greater proportion of its capital budget will be designated for Asset Protection and Maintenance initiatives, absent new regulatory mandates, to preserve these operating assets. The design of this long-term strategy for capital work is identified in the Authority’s Master Plan.

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

MWRA CAPITAL PROGRAM FY86-19



Proposed FY10 CAPITAL IMPROVEMENT PROGRAM Actual and Projected Expenditures

Expended To-Date	Projected Expenditures Beyond FY09
\$7.0 billion	\$1.9 billion

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 biosolids, 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, respond appropriately to climate change, and reduce the environmental impacts of its daily operations. 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 FY09 include the following:

- A comprehensive “green energy” initiative that is expected to bring solar, wind and hydroelectric power either alone or in combination to a number of MWRA facilities.
- Design build RFP to upgrade Deer Island STG for an additional 5.4 MW of power from digester gas scheduled to go on-line March 2010.
- 100 kw solar panels at Deer Island began generating power in May FY08.
- FAA approval for 2 - 660kw wind turbines at Deer Island with funding of \$4.0 million and an estimated completion date of November 2009.
- Retrofitting of diesel-powered vehicles and equipment and continued purchase of alternative fuel vehicles.
- Comprehensive energy audits at the John Carroll Water Treatment Plant, the Chelsea Facility, and Deer Island Treatment Plant facilities.
- The MWRA is currently exploring wind energy initiatives at Nut Island, Carroll Water Treatment Plant and the Maintenance Facility in Southboro. Additionally, we are also pursuing new hydropower opportunities at Loring Road Covered Storage Facility and Wachusett Dam.

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.

In preparation of potential funding from the Federal stimulus package, the Authority submitted a list of clean energy initiative projects to the Commonwealth for its consideration. The Energy related projects are itemized under the Business and Operations Support section of the FY10 CIP.

PROPOSED FY10 CIP

As shown in Table 1, the MWRA's total capital budget is \$5.0 billion with an estimated \$3.1 billion spent through FY09 and \$1.9 billion remaining to be expended. Wastewater System Improvements represent 58.4% or \$1.1 billion of remaining spending. Budgeted spending for FY10 is \$238.0 million.

Table 6

Program	Total Contract	Spending thru FY08	Remaining Balance	FY09	FY10	FY11	FY12	FY13	FY09-13	Expenditures Beyond FY13
Wastewater System Improvements	\$2,454.1	\$1,216.1	\$1,238.0	\$131.9	\$170.3	\$181.5	\$125.8	\$86.7	\$696.1	\$541.8
Interception & Pumping	717.4	487.3	230.1	9.2	4.3	28.0	16.0	23.5	81.0	\$149.1
Treatment	510.1	51.8	458.3	18.8	59.5	66.4	61.2	35.8	241.6	\$216.7
Residuals	212.4	63.8	148.6	0.2	1.3	1.6	2.1	1.3	6.6	\$0.0
CSO	927.3	522.2	405.1	102.6	106.4	87.8	47.2	26.7	370.6	\$34.5
Other	86.9	91.0	-4.2	1.0	-1.1	-2.3	-0.7	-0.6	-3.6	\$0.0
Waterworks System Improvements	2,415.6	1,598.9	816.7	64.8	58.1	50.0	74.1	103.7	350.6	\$466.1
Drinking Water Quality Improvements	641.8	508.5	133.3	19.9	12.3	4.9	16.3	18.0	71.3	\$62.0
Transmission	994.1	672.9	321.2	12.6	18.8	21.0	29.9	31.7	113.9	\$207.2
Distribution And Pumping	749.0	302.0	447.0	23.0	21.1	19.7	24.4	44.6	132.8	\$314.2
Other	30.8	115.5	(84.7)	9.3	5.9	4.4	3.5	9.4	32.6	(\$117.3)
Business & Operations Support	86.2	42.9	43.3	8.6	9.6	8.3	7.6	3.2	37.3	\$6.0
Total MWRA w/o Contingency	\$4,955.9	\$2,858.0	\$2,098.0	\$205.3	\$238.0	\$239.8	\$207.5	\$193.6	\$1,084.1	\$1,013.9

FY10 Capital Highlights

The Proposed FY10 CIP is \$1,084.1 million for fiscal years 2009-2013, and net projected spending of \$1,013.9 million for fiscal years 2014 and beyond which is primarily driven by spending on new projects from the Master Plan. FY14-18 spending is \$667.4 million, but this forecast will grow in future budget cycles as additional Master Plan projects are incorporated. The Proposed FY10 CIP includes a total of 90 new projects/subphases from the Master Plan, 12 added in FY10, with the highest priority ratings totaling \$1,009.2 million.

Highlights of Project Changes from the Final FY09 CIP to the Proposed FY10 CIP

The Proposed FY10 CIP represents updated spending and schedules for projects contained in the FY09 CIP and new spending on 15 new water and wastewater projects and subphases totaling \$25.2 million. These additional projects and subphases represent those capital initiatives outside of the FY09 CIP that staff recommend as most essential to assure reliable service to MWRA’s customers.

The Proposed FY10 CIP increased \$88.3 million or 1.8% above the Final FY09 CIP approved by the Board in June 2008, however, spending on projects in the FY09-13 cap period increased by only \$2.7 million. The overall increase of \$88.3 million was driven by inflationary adjustments of \$16.5 million, addition of new projects of \$25.2 million, and revised spending estimates for existing projects of \$46.6 million, the largest of which are for Deer Island Asset Protection of \$19.7 million, Southern Extra High Redundancy of \$13.4 million, Braintree Weymouth Relief Facilities of \$9.4 million, Interception & Pumping Asset Protection of \$8.1 million offset by a decrease to West Roxbury Tunnel of \$9.8 million for favorable design bids.

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

Table 7

	Final FY09	Proposed FY10	\$ Chge.	% Chge.	FY09-13 \$ Chge.	FY09-13 % Chge.	Beyond FY13 \$ Chge.
Wastewater System Improvements	\$2,409.4	\$2,454.1	\$44.7	1.9%	\$31.8	4.8%	\$22.3
Waterworks System Improvements	2,378.6	2,415.6	37.0	1.6%	-35.2	-9.1%	75.8
Business & Operations Support	79.7	86.2	6.6	8.3%	6.1	19.5%	3.0
Total MWRA w/o Contingency	\$4,867.7	\$4,955.9	\$88.3	1.8%	\$2.7	0.2%	\$101.1

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 ten-year CIP (10-19) is \$105.0 million with \$46.9 million allocated to the FY09-13 timeframe. The Proposed FY10 contingency budget is \$8.3 million or 7.3% under the Final FY09 level.

	Total Budget	FY09	FY10	FY11	FY12	FY13	FY09-13	Beyond 13
Contingency	\$105.0	\$0.0	\$13.0	\$10.9	\$11.0	\$11.9	\$46.9	\$58.0

CIP Impact on the Current Expense Budget

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. Improved systems will increase annual operating costs by over \$700,000 by FY19 with operating costs savings of \$1.5 million offset by higher operating cost for ultra violet water treatment at Carroll Water Treatment Plant and investment in new information technology. The largest increase over the next five year period results from the licensing fee for the ultra violet treatment at the Carroll Water Treatment Plant beginning in FY14 for \$1.2 million. Energy saving initiatives at Deer Island including upgrade of the digester gas fueled steam turbine generation (STG) system will reduce operating costs by nearly \$1.8 million by FY14. The following table summarizes projected CIP impact by project over the next 10 years.

Table 8

Fiscal Year	CEB Impacts (000)									
	FY11	FY12	FY13	FY14	FY15	FY16	FY17	FY18	FY19	Total
DI Energy	(\$602)	(\$250)	(\$758)	(\$210)	\$0	\$0	\$0	\$0	\$0	(\$1,819)
FERS Biofilter	0	0	0	(125)	0	0	0	0	0	(125)
Clinton Wastewater Treatment Plant/Aeration Efficiency Improvement	0	(53)	0	0	0	0	0	0	0	(53)
North Dorchester Bay	0	450	0	0	0	0	0	0	0	450
Charles River CSO Controls	0	0	0	0	0	0	0	0	0	0
Total Wastewater (inflated)	(\$602)	\$147	(\$758)	(\$335)	\$0	\$0	\$0	\$0	\$0	(\$1,547)
Carroll Water Treatment Plant	0	0	0	1,150	0	0	0	0	0	1,150
Quabbin Water Treatment Plant	0	0	165	0	0	0	0	0	0	165
Wachusett Algae Treatment Facility	0	0	0	0	20	20	0	0	0	40
Water Storage Tanks	0	0	0	0	0	0	0	0	0	0
NIH Storage	0	0	0	0	0	0	0	0	0	0
Water Hydro Projects	0	0	0	0	0	0	0	0	0	0
Gillis Redundant Pump Station	0	0	0	0	0	0	0	0	0	0
Total Water (inflated)	\$0	\$0	\$165	\$1,150	\$20	\$20	\$0	\$0	\$0	\$1,355
Phase II: TRAC Replacement	150	0	0	0	0	0	0	0	0	150
Phase II: SAN & CPU's for TRAC and LIMS	90	0	0	0	0	0	0	0	0	90
Phase V: LIMS Replacement, GIS & OMS	138	0	0	187	0	0	0	0	0	325
Phase VI: Lawson, MS Licensing & Carroll Water Treatment Plant	62	0	0	0	0	0	0	0	0	62
SAN II	0	0	0	0	100	0	0	0	0	100
SAN III	0	0	0	0	0	0	0	0	100	100
NET 2020	0	0	0	50	0	0	0	0	0	50
Computer Center - OCC Infrastructure	0	0	0	0	0	0	0	0	0	0
Telecommunications	0	0	0	0	0	0	0	0	25	25
Laboratory Instrument Data Mgmt.	0	0	0	0	0	0	0	0	0	0
Corporate Server Infra & Doc. Distribution	0	0	0	0	0	0	0	0	0	0
Total Business and Operations Support (inflated)	\$440	\$0	\$0	\$237	\$100	\$0	\$0	\$0	\$125	\$902
TOTAL MWRA	(\$162)	\$147	(\$593)	\$1,051	\$120	\$20	\$0	\$0	\$125	\$709

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. The Authority will continue to pursue grant funding, but does not expect future receipts to be a significant source of capital funding.

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 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. The FY10 budget includes \$7.0 million for debt service representing MWRA's estimated share of the proposed Bottle Bill put forth by the Governor.

Planning estimates for FY11 through 2019 forecast rate revenue requirement increases of 6.3% annually for the next three years, 4.6%, 5.1%, 4.7%, 8.4%, -3.7%, and 8.0% in years 2014, 2015, 2016, 2017, 2018, and 2019, respectively. With the prospect of higher rate increases in the future, the MWRA, the Advisory Board, and its member communities have aggressively pursued rate relief in the form of larger debt service assistance payments from the State Legislature and will continue this effort to secure future rate relief.

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.

MWRA must ensure that its operating and capital costs are kept to a minimum, and that every dollar adds to the value of water and sewer services. MWRA has taken several steps toward this end.

- MWRA continues to limit increases in ongoing operating costs. The Proposed FY10 direct expense budget is only \$31.2 million more than spending in FY00. This represents annual increases of 1.8%, well below inflation. When adjusted for inflation, direct expenses have actually declined by more than \$59 million since FY00. Costs to operate new facilities, higher utility costs, healthcare costs and increased maintenance have been offset by reductions in the workforce, controlling and optimizing chemical use, and other materials.
- MWRA seeks to maximize savings in the deregulated electricity market, and now competitively procures most of its power needs.
- MWRA is working to reduce labor costs wherever appropriate. The budget assumes an average staffing level of 1,229 for Fiscal Year 2010. This staffing level represents a decrease of more than 500 filled positions (over 29%) from peak staffing levels in 1997.

- MWRA uses a variety of financing tools including variable rate debt, tax-exempt commercial paper, interest rate swaps, refundings, and tender offers to take advantage of particular market conditions and appropriate maturity schedules to reduce annual debt service costs.
- MWRA continues to aggressively seek additional SRF assistance.
- Finally, MWRA uses rate stabilization funds and bond redemption funds in the context of its longer-term rate smoothing strategy.

In addition to carefully managing operating costs, MWRA will continue to explore additional financing strategies to manage assessment increases in a fiscally responsible manner.

MWRA Organization

MWRA has seven divisions. 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, 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, 2008 and 2007 are available online at www.mwra.com.



Executive Office
Budget

EXECUTIVE OFFICE

Proposed FY10 Current Expense Budget EXECUTIVE DIVISION						
LINE ITEM	FY07 Actual	FY08 Actual	FY09 Original	FY10 Proposed	Change FY09 to PFY10	
WAGES & SALARIES	\$ 376,563	\$ 388,759	\$ 397,981	\$ 407,086	\$ 9,105	2.3%
OVERTIME	-	-	-	-	-	-
ONGOING MAINTENANCE	-	-	-	-	-	-
TRAINING & MEETINGS	129	985	1,110	1,110	-	0.0%
PROFESSIONAL SERVICES	160,597	163,537	173,647	100	(173,547)	-99.9%
OTHER MATERIALS	2,354	3,546	1,385	1,385	-	0.0%
OTHER SERVICES	436,934	436,813	456,751	462,690	5,939	1.3%
TOTAL	\$ 976,577	\$ 993,640	\$ 1,030,874	\$ 872,371	\$ (158,503)	-15.4%

Proposed FY10 Current Expense Budget EXECUTIVE DIVISION						
LINE ITEM	FY07 Actual	FY08 Actual	FY09 Original	FY10 Proposed	Change FY09 to PFY10	
EXECUTIVE OFFICE / BOARD OF DIRECTORS	\$ 382,213	\$ 396,195	\$ 403,500	\$ 412,593	\$ 9,093	2.3%
ADVISORY BOARD / OTHER COMMITTEES	594,364	597,445	627,374	459,778	(167,596)	-26.7%
TOTAL	\$ 976,577	\$ 993,640	\$ 1,030,874	\$ 872,371	\$ (158,503)	-15.4%

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.

The goals of the Executive Office are to:

- 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.
- 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 Proposed FY10 direct expense budget.

Budget Highlights:

- Total Proposed FY10 Budget of \$872,000, a decrease of \$159,000 or 15.4% from FY09 Final, primarily due to the elimination of funds for the Water Supply Citizen's Advisory Committee (\$119,000) and Wastewater Advisory Committee (\$58,000).
- \$407,000 for **Wages and Salaries** represents 46.6% of the Executive Office budget. The proposed budget includes funding for four positions.
- \$460,000 or 52.6% of the Executive Office final budget is for the MWRA Advisory Board staff. The proposed budget which supports its operating expenses, including wages and salaries, space rental and general administrative office materials and supplies increased by \$6,000.
- **Professional Services** which totaled \$174,000 in FY09 is eliminated for the Water Supply Citizens' Advisory Committee and Wastewater Advisory Committee. Logistical support will be provided through Advisory Board staff by increasing their budget by \$5,000.

OFFICE OF EMERGENCY PREPAREDNESS

Proposed FY10 Current Expense Budget OFFICE OF EMERGENCY PREPAREDNESS							
LINE ITEM	FY07 Actual	FY08 Actual	FY09 Original	FY10 Proposed	Change FY09 to PFY10		
WAGES & SALARIES	\$ 298,277	\$ 240,963	\$ 335,765	\$ 396,376	\$ 60,611	18.1%	
ONGOING MAINTENANCE	185,006	216,872	461,633	376,633	(85,000)	-18.4%	
TRAINING & MEETINGS	5,371	(1,177)	2,200	1,200	(1,000)	-45.5%	
PROFESSIONAL SERVICES	-	1,812,091	1,935,899	1,660,223	(275,676)	-14.2%	
OTHER MATERIALS	2,165	191,274	48,717	51,317	2,600	5.3%	
OTHER SERVICES	1,452	8,232	22,548	20,820	(1,728)	-7.7%	
TOTAL	\$ 492,271	\$ 2,468,255	\$ 2,806,762	\$ 2,506,569	\$ (300,193)	-10.7%	

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 and the Managing Director. During FY09, one position was transferred to this Office. 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.

The goals of the Office of Emergency Preparedness are to:

- 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.
- Develop and exercise emergency plans and procedures.
- Manage and direct contract security guard and system maintenance contracts.

FY09 Mid-Year Accomplishments:

- Completed the \$811,000 Tank Intrusion contract.
- Established a new boom deployment capability, including boat, trailers and a new support truck, for the Emergency Service Unit/Metro Ops boom deployment teams.
- Integrated the DITP security system into the larger Authority-wide security system.
- Revised Emergency Response Plans for all MWRA Dams.
- Installation of DITP security gate.

Highlights of FY10 Initiatives

- Continue the process of combining the existing contract security alarm services for the MWRA's wastewater facilities into a master contract, to be replaced over time as facilities are integrated into the Authority-wide security-monitoring system.
- Expand Emergency Service Unit (ESU) capabilities at the Weston Reservoir and continue to expand the training program for the ESU's boom deployment and mobile lab capabilities.
- Complete the outfitting, training and deployment of the new ESU Mobile Emergency Lab.
- Maintain Authority-wide consolidated security guard services contract and prepare bid specifications for a new contract.
- Integrate the physical security and technology components of five water pump stations, the Chelsea Screen House, the Intermediate Pump Station (IPS) and the Blue Hills Covered Storage Project with the Authority security system as these stations come on line.
- Implement the transition of the MWRA radio system to new frequencies as part of the national frequency reallocation program.
- Commence construction of a new security gate at the Chelsea facility.

Budget Highlights:

- Total Proposed FY10 Budget of \$2.5 million, is a decrease of \$300,000 or 10.7% from FY09 Original Budget, primarily due to decrease in professional services and maintenance lines.
- \$396,000 is for **Wages and Salaries**, an increase of \$61,000 or 18.1% over FY09 Budget, primarily due to inclusion of an additional staff member and contractual increases in wages and salaries. The Proposed budget includes funding for five positions.
- \$377,000 is for **Ongoing Maintenance**, a decrease of \$85,000 from FY09 Budget, primarily due to the elimination of funding for maintenance and replacement DITP security equipment, scheduled to be done in FY09. The proposed budget includes level-funding of \$250,000 to cover the MWRA-wide security systems preventative maintenance and repair service, \$100,000 for MWRA-wide Security systems maintenance materials and equipment, including cameras, intrusion detection, card readers, and \$5,000 to support Metro Facilities security fence and locks.
- \$1.7 million is for **Professional Services**, a decrease of \$276,000 from FY09 Budget, primarily due to revised scope of security staffing at the DITP and CNY facilities due to budget constraints. The Proposed FY10 Budget includes \$522,000 for security services contract for the Chelsea facility, \$591,000 for DITP facility, \$323,000 for the Carroll Water Treatment Plant, \$73,000 for the CNY facility, \$85,000 for the Account Manager, and \$19,000 for a Roving Guard to provide security services at various facilities during emergencies and construction projects. The proposed budget also includes \$47,000 for the purchase/lease of three Patrol Vehicles as specified by the security service contract, billed at 1/36th of total price (\$141,295) on a monthly basis. These vehicles will be turned over to MWRA at the end of the three-year service contracts.

- \$51,000 is for **Other Materials**, an increase of \$3,000 over FY09 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 is for **Other Services**, a decrease of \$2,000 from FY09 Budget. The proposed budget includes \$20,000 for mandatory monthly testing and inspection of Self-Contained Breathing Apparatus (SCBA).

PLANNING AND COORDINATION DEPARTMENT

Proposed FY10 Current Expense Budget						
PLANNING DIVISION						
LINE ITEM	FY07 Actual	FY08 Actual	FY09 Original	FY10 Proposed	Change FY09 to PFY10	
WAGES & SALARIES	\$ 1,880,699	\$ 1,927,749	\$ 1,982,582	\$ 2,047,462	\$ 64,880	3.3%
OVERTIME	393	601	-	-	-	-
FRINGE BENEFITS	12	6	-	-	-	-
TRAINING & MEETINGS	18,113	10,812	23,156	6,425	(16,731)	-72.3%
PROFESSIONAL SERVICES	7,109	600	16,600	600	(16,000)	-96.4%
OTHER MATERIALS	129,290	136,269	146,875	150,093	3,218	2.2%
OTHER SERVICES	141,195	169,474	163,319	141,984	(21,335)	-13.1%
TOTAL	\$ 2,176,811	\$ 2,245,511	\$ 2,332,532	\$ 2,346,564	\$ 14,032	0.6%

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 maintain 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. Provide demand analysis and forecasting of water and wastewater flows for master planning and system operations; model reservoir operations, perform drought forecasting and planning; evaluate system expansion requests; and develop and maintain 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.

FY09 Mid-Year Accomplishments:

- Promoted MWRA-wide energy and sustainability initiatives through the Energy and Sustainability Task Force. Advanced design and began the licensing process (Federal Energy Regulatory Commission) for the Loring Road hydroelectric facility, and submitted a grant application for \$375,000 for design and construction of the Wachusett hydro project (in January 2009, MWRA was notified of the grant award.)
- Identified MWRA projects for consideration for expected federal stimulus funding (projects were submitted to the Commonwealth of Massachusetts in January 2009).
- In conjunction with Engineering staff, identified short-term risk reduction measures for the Northern Intermediate High system that can be advanced to final design and construction. With Engineering and Operations staff, kicked-off planning, including extensive modeling activities, to address long-term transmission system redundancy.
- Continued a comprehensive analysis of fifteen climate change models to advance understanding of potential impacts on the MWRA water system.
- Continued advocacy-related research and analysis in support of MWRA water system expansion.
- Distributed \$4.5 million (grants and loans) for local sewer rehabilitation projects under the I/I Local Financial Assistance Program and \$12.1 million (loans) for local water quality projects under the Local Pipeline Assistance Program.
- Continued to assist local communities to advance water conservation education and water system leak detection and repair. Pilot programs for low-flow toilet retrofits in municipal buildings (351 toilet retrofits) and two community water audits were completed using an \$80,000 grant obtained for MADEP.
- Effectively communicated water quality information to customers and health officials.

Highlights of FY10 Initiatives

- Continue to promote MWRA-wide energy and sustainability initiatives and long-term research related to climate change.
- Advance the Loring Road hydro facility project into construction and proceed with detail design and permitting of the Wachusett hydro project.
- Track the status of MWRA projects selected by the Commonwealth for federal stimulus funding to ensure that MWRA maximizes available funding.
- In conjunction with EOEEA and others, develop and implement an MWRA water system expansion strategy.
- 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 implement a new \$40 million phase 7 for the I/I Local Financial Assistance Program that will provide an additional \$18 million in grants and \$22 million in interest-free loans for local sewer rehabilitation projects.
- 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.
- In conjunction with Public Affairs staff and others, prepare and submit the Five Year Report to the Legislature

Budget Highlights:

- \$2.0 million is for **Wages and Salaries**, an increase of \$65,000 or 3.3% over FY09 Original Budget, primarily due to contractual increases in wages and salaries. The Proposed FY10 Budget includes funding for 20 full time and four part-time positions.
- \$6,000 is for **Training and Meetings**, a decrease of \$17,000 from FY09 Budget, primarily due to budget restraints, and limiting funding for out-of-state travel to the department director who holds a leadership position in a national organization.
- \$600 is for **Professional Services**, a decrease of \$16,000 from FY09 Budget, primarily due to the elimination of one-time matching funds for a DEP water conservation grant and funding for Mapping services for GIS updates.
- \$150,000 is for **Other Materials**, an increase of \$3,000 or 2.2% over FY09 Budget, primarily due to postage costs associated with the Consumer Confidence Report. The Proposed FY10 Budget includes \$121,000 for postage and mailing of the Consumer Confidence Report (CCR), \$15,000 for water conservation kits, and \$10,000 for mapping supplies.
- \$142,000 is for **Other Services**, a decrease of \$21,000 or 13.1% from FY09 Budget, reflecting a shorter CCR report. The Proposed FY10 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 FY10 Current Expense Budget OPERATIONS DIVISION						
LINE ITEM	FY07 Actual	FY08 Actual	FY09 Original	FY10 Proposed	Change FY09 to PFY10	
WAGES & SALARIES	\$ 62,236,989	\$ 64,939,674	\$ 68,117,169	\$ 69,380,099	\$ 1,262,930	1.9%
OVERTIME	3,738,312	3,695,290	3,833,556	3,450,312	(383,244)	-10.0%
FRINGE BENEFITS	76,965	73,923	77,011	77,555	544	0.7%
CHEMICALS	7,266,880	8,642,802	9,876,380	11,304,992	1,428,612	14.5%
UTILITIES	23,877,201	25,768,590	29,496,921	25,820,452	(3,676,469)	-12.5%
ONGOING MAINTENANCE	22,206,984	21,965,418	24,339,933	25,717,097	1,377,164	5.7%
TRAINING & MEETINGS	190,922	159,750	174,079	110,200	(63,879)	-36.7%
PROFESSIONAL SERVICES	5,066,978	3,604,540	4,067,557	3,572,656	(494,901)	-12.2%
OTHER MATERIALS	4,175,795	3,875,200	3,588,092	2,876,268	(711,824)	-19.8%
OTHER SERVICES	18,185,623	18,692,193	19,419,726	20,415,459	995,733	5.1%
TOTAL	\$ 147,022,649	\$ 151,417,380	\$ 162,990,424	\$ 162,725,090	\$ (265,334)	-0.2%

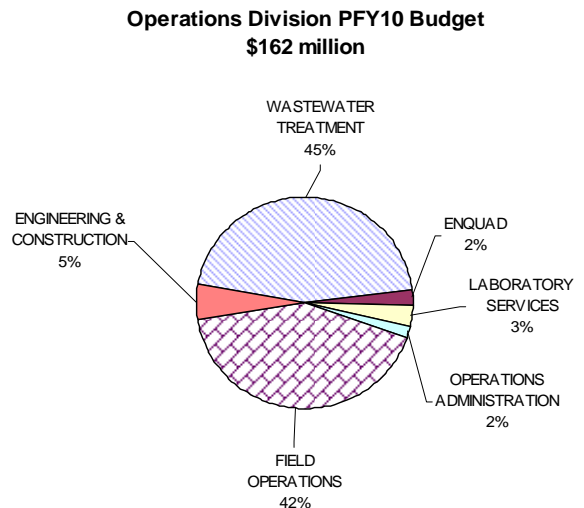
Proposed FY10 Current Expense Budget OPERATIONS DIVISION by Department						
DEPARTMENT	FY07 Actual	FY08 Actual	FY09 Original	FY10 Proposed	Change FY09 to PFY10	
OPERATIONS ADMINISTRATION	\$ 3,911,975	\$ 3,508,179	\$ 3,099,357	\$ 2,680,028	\$ (419,329)	-13.5%
CSO PROGRAMS/ENERGY	(886)	(802)	-	-	-	-
WASTEWATER TREATMENT	65,900,649	66,740,245	73,910,423	73,473,085	(437,338)	-0.6%
FIELD OPERATIONS	60,031,796	63,727,381	67,641,489	68,739,092	1,097,603	1.6%
LABORATORY SERVICES	5,244,556	5,040,457	5,585,424	5,486,176	(99,248)	-1.8%
ENQUAD	4,084,769	4,152,300	4,350,578	3,960,819	(389,759)	-9.0%
ENGINEERING & CONSTRUCTION	7,849,790	8,249,705	8,403,153	8,385,890	(17,263)	-0.2%
CAPITAL ENG & CONSTR.	-	(85)	-	-	-	-
TOTAL	\$ 147,022,649	\$ 151,417,380	\$ 162,990,424	\$ 162,725,090	\$ (265,334)	-0.2%

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 Proposed FY10 Current Expense Budget 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 45% 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**, which accounts for 42% 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, 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 FY09 Accomplishments Through December 2008

Operations, Energy, and New Facilities Start-ups:

- 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), BOS019 CSO facility (start-up in FY07), and Braintree-Weymouth Replacement Pump Station (start-up in Q4 FY08).
- At the Carroll Water Treatment Plant (CWTP), continued implementation of process modifications to address water quality issues and/or to save energy (approximately -\$200,000 per year).
- Completed implementation of Phase I energy audit recommendations at MWRA's Chelsea office building. Work involved installing energy-efficient lighting which is expected to save \$30,000 annually in energy costs.
- Assisted the Procurement Department with the procurement of contracts to supply and deliver chemicals including sodium hypochlorite at numerous facilities; carbon dioxide and sodium bisulfite at the CWTP; and polymer and hydrogen peroxide at the DITP.

- Generated revenue at two water hydroelectric facilities including \$600,000 at the Oakdale Station and \$146,000 at the Cosgrove Station.
- Deer Island continued to leverage its 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 \$800,000 for the first half of FY09. Deer Island also self-generated 21% of the plant's total required power during this time period.
- Completed phase II of Deer Island's lighting equipment and controls retrofit project. Completion of the first two phases of this project will save approximately \$250,000 per year due to reduced power usage.
- Processed at the Pelletization Plant an average of 110 tons per day of sludge during the first six months of FY09.
- Conducted training and ordered equipment to support transition to use of flaggers for traffic control on MWRA projects.

Maintenance:

- The Operations Division spent \$12.8 million on maintenance of which \$5.9 million was for materials and \$6.9 million for services.
- Completed numerous major maintenance projects including the following:
 - o Replaced internal linings to two sodium hypochlorite tanks at Deer Island Wastewater Treatment Plant.
 - o At the Clinton Wastewater Treatment Plant, repaired digester recirculating pump motors, replaced backflow preventer valves, and installed a new control card and weatherproof enclosure on the soda ash filter system.
 - o Roof replacement on several buildings at the Deer Island facilities.
 - o Significant progress on facility painting and coating repair at Deer Island.
 - o Procured and implemented numerous service contracts including: Concrete/Steel Restoration and Coating, Boiler Maintenance, and Centrifuge Services at DITP; Instrumentation Maintenance for water and wastewater facilities.
 - o At the Carroll Water Treatment Plant, replaced inverter cooling fans on four power supply units for the ozone generators, replaced parts on all variable speed motors that drive the chemical metering pumps, and finished numerous maintenance tasks associated with half-plant operations.
 - o Performed quarterly testing on Chestnut Hill Emergency Pump Station pumps.
 - o Installed and repaired fencing at the Fells Reservoir to enhance security.
 - o Completed several projects to support operation and/or implementation of SCADA in MWRA facilities. Work included upgrading Shaft 9A, installing 90 feet of conduit in Shaft 8, and reviewing new screen data configuration and set points for two headwork facilities.
 - o Continued with on-going work on dam maintenance to protect integrity of the structures.
- In the water system, exercised 218 and replaced 11 mainline valves; exercised 123 blow-off valves; and surveyed 159 miles of water mains for leaks.
- In the wastewater system, inspected 15 miles and cleaned 20 miles of pipeline. Also inspected 600 structures and rehabilitated 37 manholes.

Engineering, Construction, and Planning:

- Water System accomplishments include:
 - Issued Notice to Proceeds for: Long-Term Water Transmission Redundancy Plan, CWTP UV Design ESDC/RI; Installation of Closed-Loop Cooling System at CWTP; Northern High Service Revere and Malden Pipeline Improvement Construction (Revere Section 23)
 - Professional Services Award: Ware Disinfection Facility UV Disinfection Facilities Design and CSRI, Water Transmission Redundancy Plan.
 - Construction Contract Awards: Section 97A Water Main Extension, Installation of Closed Loop Cooling System at CWTP.
 - Construction contract substantial completions: Wachusett Reservoir Spillway Improvements/Winsor Dam Repairs Construction; Wachusett Dam PCB Removal; SEH University Avenue Water Main Construction; Valve Replacement Construction 6; and Southern Spine Distribution Mains Section 107 Phase I Construction.
- Wastewater System major achievements include;
 - The City of Cambridge issued Notice to Proceed with design work for three of five projects that comprise the Alewife Brook Plan which is part of MWRA's CSO Program.
 - Construction Contract Awards: East Boston Branch Sewer Relief Sections 255 and 256; Brookline Sewer Separation Construction 1 (managed by Town of Brookline); Bulfinch Triangle Sewer Separation Construction (managed by BWSC).
 - Construction Contract Substantial Completions: Cummingsville Replacement Sewer Modifications; I&P Facility Asset Protection Section 160; Stony Brook Sewer Separation Design CS/RI; BOS019 Storage Conduit Construction Management Services.
- Deer Island's achievements include:
 - Issued Notice to Proceed for Grit Air Handler Replacement project.
 - Awarded contracts for Two Wind Turbines Generators (furnish, design, and installation); Primary and Secondary Clarifier Rehabilitation Project ESDC/REI Services; Digested Sludge Overflow Piping and DSL Pump Replacement ESDC and REI services; Metals Lab Fume Hood Replacement Design and ESRI; Switchgear Relay Upgrade; and STG System Modifications Design.
 - Substantially completed the following projects: Sodium Hypochlorite Tanks 2 & 4 Reline; two phases of As-Needed Design.
- MWRA's contractor for the North Dorchester Bay project completed the 10,382 foot-long 17 foot diameter, soft ground tunnel six months ahead of the contract schedule in August, 2008.
- Assisted with preparation and submission of project requests for funding from the emerging federal economic stimulus program.

Environmental:

- Conducted staff training and commenced use of TRAC Department's new information systems. Staff also made substantial progress in trouble-shooting implementation issues after system "went live" in August, 2008.
- The TRAC Department completed the following EPA-required work for significant industrial users: 102 inspections, 194 monitoring events, and 335 sampling of connections. This department also issued or renewed 158 permits including significant industrial users (SIU), non-SIU, and municipal permits.
- The TRAC Department submitted the Industrial Pretreatment Program Annual Report to the EPA for FY08.

- Awarded two contracts of the Harbor and Outfall Monitoring Program to provide environmental monitoring of outfall effects as required by MWRA's discharge permit for DI.
- At DITP, treated 96% of flow through secondary and met secondary permit limits at all times. Operated DITP without any NPDES Permit violations so far through FY09.
- The Lab provided routine laboratory services and analysis for approximately 133,000 tests and also provided as-needed analytical support for numerous projects on topics such as the large semi-annual Lead and Copper Rule testing, Clinton influent special characterization, harbor and outfall monitoring benthic sediment samples, testing CWTP residue during half-plant main maintenance, profiling tests at the CWTP, and adding Hanscom Air Force Base as a regular Total Coliform Rule customer.
- The Lab made substantial progress in configuring the new Laboratory Information Management System (LIMS) which will be implemented later in FY09 and in 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 19 technical reports to date in FY09 and presenting results to the Outfall Monitoring Science Advisory Panel (OMSAP) and public.
- Met all water quality disinfection standards in the drinking water system so far through FY09.

FY10 Operations Division Budget Highlights:

- The total Proposed FY10 Budget for the Operations Division is \$162.7 million, which is \$0.3 million or .2% less than the FY09 Original Budget. The Proposed FY10 Budget reflects an intentional effort by MWRA management to contain rate increases through several strategies including curtailing spending on less critical items or services wherever possible, implementing efficiency improvements that will result in long-term sustainable reductions to the Operations Division's budget.
- Significant increases from the FY09 CEB include:
 - o Net increase of \$1.4 million for **Maintenance** primarily due to new service contracts, increases in the price and/or scope of several contracts to be re-bid before or during FY10, and additional projects required to rehabilitate aging facilities.
 - o Net increase of \$1.3 million for **Wages and Salaries** primarily due to collective bargaining agreements offset by fewer filled positions during FY10 than in FY09 due to plans to reduce headcount through attrition. The Operations Division's Proposed FY10 Budget funds 943 positions on average during the year.
 - o Increase of \$1.2 million for **Chemicals** primarily due to price increases for numerous chemicals including sodium hypochlorite, aqua ammonia, soda ash, and sodium hydroxide. These increases are offset by a reduction (approx -\$350,000) for the costs associated with enterococcus treatment at Deer Island. The FY09 Budget included funds for three months of treatment assuming start-up of the new permit by April 2009 whereas the Proposed FY10 Budget is based on information indicating start-up is more likely in early FY11.
 - o Net increases of \$996,000 for **Other Services** primarily for inflation adjustments of \$1.5 million per the residuals processing contract as compared to FY09 levels and quantity and inflation adjustments for grit and screenings disposal \$92,000 based on trends. The Proposed FY10 Budget is based on an average of 106 tons of sludge per day (TPD) which is consistent with FY09 budget assumptions and monthly historical averages since the start-up of the Braintree-Weymouth Tunnel. These increases are offset by decreases to Memberships and Dues \$302,000 and Police Details \$101,000. As part of efforts to curtail spending, MWRA is reducing individual memberships for employees, discontinuing two research-related corporate memberships, and limiting travel to only critical training, vendor visits, or meetings. The decrease for police details reflects MWRA's planned use of more flaggers in FY10 as a result of legislation passed in FY09.

- Significant decreases from the FY09 Original Budget include:
 - **Utilities** of \$3.7 million primarily due to lower price projections for FY10 for natural gas, electricity, and diesel fuel. The Proposed FY10 Budget also reflects approximately \$730,000 in savings from several energy projects including process changes at the CWTP, lighting retrofits at DITP and the Chelsea office building, and solar panels at DITP.
 - Net decrease of \$495,000 for **Professional Services** primarily due to reductions to the Harbor and Outfall Monitoring Program \$303,000 and Other Professional Services \$125,000. The Proposed FY10 Budget for outfall monitoring includes less funding for as-needed task order work than in FY09 based on actual levels of use. It also reflects efforts to reduce costs by bringing work in-house. The reduction in Other Professional Services is primarily due to less funding for energy audits since most of the work will be completed in FY09.
 - Net decrease to **Overtime** \$383,000 primarily due to efforts to reduce operational coverage requirements in Wastewater facilities. Also reflects decision to curtail maintenance overtime in FY10 by limiting use to highest priority projects or work that can only be completed during low-flow periods.
- The Proposed FY10 Budget is also subject to risk in the following areas: 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, and more than expected emergency-related maintenance and overtime needs.

Highlights of FY10 Initiatives

Operations, Energy, and New Facilities Start-ups:

- Continue to identify and implement optimization opportunities at relatively new facilities including Braintree-Weymouth Replacement Pump Station, Union Park CSO Detention Treatment Facility, and BOS019 CSO facility.
- Continue to implement 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 feasibility study, implementation, and the use of wind-power at MWRA facilities. Pursue grant-funding and cost-sharing arrangements to defray costs of implementing these initiatives.
- Provide 24% of Deer Island's power requirements through self-generation.
- Continue optimization of energy and chemical usage at the CWTP based on the recommendations from the energy audit and water quality expert panel.

Engineering & Construction:

- Fast-track work wherever possible on projects that receive funding from the federal economic stimulus program.
- Award numerous contracts for the Wastewater System including the following:
 - Deer Island North Main Pump Station VFD Replacement
 - Reserved Channel Sewer Separation BWSC Contract 3A
 - Reserved Channel Sewer Separation BWSC Contract 3B
 - Nut Island Mechanical and Electrical Replacements
 - Deer Island HVAC Equipment Replacement
 - Reserved Channel Sewer Separation BWSC Contract 1 (Outfall Repairs)

- o I&P Facility Asset Protection Headworks Upgrades Design
 - o Alternative Energy Initiatives Nut Island Wind
 - o North Dorchester Bay ROCF Construction
 - o Deer Island Fire Alarm System Replacement
- Award numerous contracts for the Water System including the following:
 - o Southern Spine Distribution Mains Section 107 Phase 2
 - o Lynnfield Pipeline Phase 2 Construction
 - o Carroll Water Treatment Plant Existing Facilities Modifications – CP7
 - o NIH Short Term Improvements Design
 - o Immediate Dam Repair Design
 - o Sudbury Aqueduct Short Term Repair Construction
 - o Cosgrove Transformer Replacement Construction
 - o CWTP Gaseous Oxygen Pipe Construction
 - o Shaft 12 and Winsor Pipe Design
 - o Oakdale Phase 1A Electrical Design
 - o Walnut Hill Tank Repair Design
- Complete the following Capital Improvement Program design and construction phases for the Wastewater System:
 - o I&P FAMP phases including Melrose Sewer, Remote Headworks Concept Plan, Hingham Pump Station Isolation Gate Construction, NI Headworks Fire Alarm Wire.
 - o DITP FAMP phases including Grit Air Handler Replacement, Digester Sludge Pump Replacement Construction, Expansion Joint Repair Construction 2, Misc VFD Replacements, Low Voltage Lighting Replacement, STG System Modifications Design and Construction.
 - o Residuals Condition Assessment and Reliability Study.
 - o CSO North Dorchester Bay Tunnel Contract.
 - o I/I Grants Phase IV.
- Complete the following Capital Improvement Program design and construction phases for the Water System:
 - o Wachusett Dam and Spillway Design.
 - o Wachusett PCB Remediation Phase 2 Construction.
 - o CWTP Ancillary Modifications 3 & 4 Design.
 - o CWTP UV Validation.
 - o Blue Hills Covered Storage Design/Build.
 - o Winsor Power Station Chapman Valve Construction.
 - o Weston Aqueduct Supply Main Section 28 Construction.
 - o Section 97A Pipeline Construction.
 - o NHS Section 53 Revere Construction.
 - o Rehab of 5 Pump Stations.

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, building roof replacement, lighting equipment retrofits, Zurn boiler maintenance and repairs, digas compressor rebuilds, reactor mixer gearbox rebuilds, and elevator controller replacement.

- Work on numerous projects in Field Operations including meter inspection and repairs, ozone generator rebuild, pump station VFD inspection and repairs, Nash Hill Tank cleaning, and ozone stone replacement.
- 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:

- Advocate with regulators for the adoption of a reduced scope of the harbor and outfall monitoring plan to account for eight years of post-outfall data.
- 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.
- Implement the first full year of use of the new TRAC-IS. For the Laboratory Information Management System (LIMS), continue to implement the new system in conjunction with MIS.
- Plan for the start-up in early FY11 of 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 DITP NPDES permit.

OPERATIONS ADMINISTRATION

Proposed FY10 Current Expense Budget OPERATIONS ADMINISTRATION						
LINE ITEM	FY07 Actual	FY08 Actual	FY09 Original	FY10 Proposed	Change FY09 to PFY10	
WAGES & SALARIES	\$ 1,912,784	\$ 1,842,292	\$ 1,599,604	\$ 1,901,880	\$ 302,276	18.9%
OVERTIME	16	277	-	-	-	-
FRINGE BENEFITS	-	-	-	-	-	-
ONGOING MAINTENANCE	(231)	-	-	-	-	-
TRAINING & MEETINGS	625	1,814	3,529	2,200	(1,329)	-37.7%
PROFESSIONAL SERVICES	-	-	75,000	75,000	-	0.0%
OTHER MATERIALS	1,855,134	1,386,091	1,161,400	607,250	(554,150)	-47.7%
OTHER SERVICES	143,647	277,705	259,824	93,698	(166,126)	-63.9%
TOTAL	\$ 3,911,975	\$ 3,508,179	\$ 3,099,357	\$ 2,680,028	\$ (419,329)	-13.5%

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:

- \$1.9 million for **Wages and Salaries**, which represents 71% of the Proposed FY10 CEB. The budget includes funding for 24.5 positions (includes vacancy adjustment) and a temporary employee to provide support for MWRA’s sustainability initiatives. The \$302,000 increase from the FY09 Budget is due to wage increases and the shift of vacancy rate adjustments for attrition to the department level instead of consolidating them in the Operations Admin department.
- **Professional Services** includes \$50,000 for energy audits of the division’s facilities and as-needed professional assistance with the procurement of electricity contracts. The budget also includes \$25,000 to cover electrical inspections of the Division’s facilities as required by the Massachusetts Department of Public Safety.
- \$607,000 for **Other Materials**, a decrease of \$554,000 compared to the FY09 Budget primarily due to fewer vehicle replacements planned for FY10 versus FY09. This is the result of efforts to contain rate increases by curtailing costs. The Proposed FY10 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-FY08 is as follows:

FY02:	\$ 622,000
FY03:	\$ 120,000
FY04:	\$1,580,000
FY05:	\$1,237,289
FY06:	\$ 717,381
FY07:	\$1,846,396
FY08:	\$1,425,758
FY09 CEB:	\$1,150,000

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-FY09 indicated that approximately half of MWRA's active, operable fleet will be seven years or older during FY10.

- \$94,000 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, and American Waterworks Association. The \$166,000 decrease from the FY09 Budget is due to the discontinuation of numerous memberships as part of MWRA's decision to curtail non-essential spending. The major decrease from FY09 to FY10 is for participation in the American Waterworks Research Foundation.

WASTEWATER TREATMENT

Proposed FY10 Current Expense Budget WASTEWATER TREATMENT						
LINE ITEM	FY07 Actual	FY08 Actual	FY09 Original	FY10 Proposed	Change FY09 to PFY10	
WAGES & SALARIES	\$ 16,132,014	\$ 16,764,551	\$ 17,759,553	\$ 17,729,300	\$ (30,253)	-0.2%
OVERTIME	1,177,058	1,214,864	1,177,331	1,059,966	(117,365)	-10.0%
FRINGE BENEFITS	25,282	27,028	24,787	25,105	318	1.3%
CHEMICALS	2,353,539	2,828,939	3,229,442	3,849,942	620,500	19.2%
UTILITIES	14,959,308	15,531,352	18,329,795	15,466,222	(2,863,573)	-15.6%
ONGOING MAINTENANCE	14,542,271	14,118,592	16,178,443	16,673,664	495,221	3.1%
TRAINING & MEETINGS	84,074	39,674	71,100	51,600	(19,500)	-27.4%
PROFESSIONAL SERVICES	981,675	104,988	537,188	572,188	35,000	6.5%
OTHER MATERIALS	423,512	665,675	453,894	445,428	(8,466)	-1.9%
OTHER SERVICES	15,221,916	15,444,582	16,148,890	17,599,670	1,450,780	9.0%
TOTAL	\$ 65,900,649	\$ 66,740,245	\$ 73,910,423	\$ 73,473,085	\$ (437,338)	-0.6%

Proposed FY10 Current Expense Budget WASTEWATER TREATMENT by Facility						
FACILITY	FY07 Actual	FY08 Actual	FY09 Original	FY10 Proposed	Change FY09 to PFY10	
DEER ISLAND	\$ 48,202,996	\$ 48,776,729	\$ 55,459,727	\$ 53,476,693	\$ (1,983,034)	-3.6%
RESIDUALS	16,460,289	16,494,003	16,875,446	18,447,380	1,571,934	9.3%
CLINTON	1,237,364	1,469,513	1,575,250	1,549,012	(26,238)	-1.7%
TOTAL	\$ 65,900,649	\$ 66,740,245	\$ 73,910,423	\$ 73,473,085	\$ (437,338)	-0.6%

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 45% of the Operations Division's Proposed FY10 Budget and 34% of MWRA's FY10 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 FY10 Current Expense Budget DEER ISLAND						
LINE ITEM	FY07 Actual	FY08 Actual	FY09 Original	FY10 Proposed	Change FY09 to PFY10	
WAGES & SALARIES	\$ 15,585,586	\$ 16,135,014	\$ 17,105,192	\$ 17,050,301	\$ (54,891)	-0.3%
OVERTIME	1,123,069	1,136,768	1,118,343	1,000,974	(117,369)	-10.5%
FRINGE BENEFITS	24,474	25,951	23,962	23,962	-	0.0%
CHEMICALS	2,187,772	2,618,952	3,031,561	3,605,313	573,752	18.9%
UTILITIES	14,705,747	15,245,426	17,995,978	15,130,393	(2,865,585)	-15.9%
ONGOING MAINTENANCE	12,629,991	12,280,634	14,559,850	15,115,171	555,321	3.8%
TRAINING & MEETINGS	84,074	37,527	68,000	50,000	(18,000)	-26.5%
PROFESSIONAL SERVICES	966,959	100,942	515,500	570,500	55,000	10.7%
OTHER MATERIALS	376,989	535,205	381,356	357,079	(24,277)	-6.4%
OTHER SERVICES	518,335	660,310	659,985	573,000	(86,985)	-13.2%
TOTAL	\$ 48,202,996	\$ 48,776,729	\$ 55,459,727	\$ 53,476,693	\$ (1,983,034)	-3.6%

Program Description and Goals:

The **Deer Island Treatment Plant** budget accounts for 33% of the Operations Division's Proposed FY10 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. 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 Proposed FY10 Budget assumes treatment of an average flow of 365.4 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 FY10 Budget accounts for the impact of self-generation of electricity from the steam turbine generator, combustion turbine generators, and the hydroelectric facility. In total, use of these assets will meet approximately 24% of the total energy requirements resulting in an avoided cost savings of approximately \$4.6 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 Proposed FY10 Budget assumes the new permit will not go into effect until after FY10. 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:

- \$17.1 million for **Wages and Salaries**, a \$54,000 or 0.3% decrease from the FY09 Budget primarily due to contractual increases offset by fewer funded positions in FY10 than in FY09. The Proposed FY10 Budget includes 236 funded positions, four less position than funded in the FY09 Budget. Also included is \$97,000 for stand-by pay to support operational and maintenance needs and \$78,000 for temporary employees for engineering support and painting.
- \$1.0 million for **Overtime** for operational coverage, critical maintenance projects, regulatory requirements (i.e. inspections), and emergencies. The Proposed FY10 Budget is -\$117,000 or 10% less than the FY09 Budget primarily due to changes to operational coverage requirements and the curtailment of maintenance overtime.
- \$3.6 million for **Chemicals**, a \$574,000 or 19% increase from the FY09 Budget primarily due to price increases for sodium hypochlorite, sodium hydroxide and activated carbon. These chemical price increases are offset by a decrease (approximately -\$350,000) for the cost of enterococcus treatment associated with the new permit. The permit was originally anticipated to be issued in the fourth quarter of FY09 but is now expected to be delayed to FY11.
- \$15.1 million for **Utilities**, a \$2.9 million or 16% decrease from the FY09 Budget. The Proposed FY10 Budget includes \$13.1 million for electricity and \$582,000 for diesel fuel. Electricity is \$2.1 million less than the FY09 Budget primarily due to price decreases. The Proposed FY10 Budget continues to assume a full year of electricity unit pricing under a spot market contract. Diesel fuel decreases by \$865,000 as a result of price reductions and plans to buy less fuel in FY10 than in FY09 due to projected FY09 year-end inventory levels. The Proposed FY10 Budget also includes \$1.3 million for water. The budget is the same as FY09 because expected price increases will be offset by less usage as a result of successful water use reduction initiatives that have been implemented at DI.

- \$15.1 million for **Maintenance** including \$4.9 million for materials and \$10.2 million for services. The budget is \$555,000 or 3.8% greater than the FY09 Budget primarily due to increased maintenance needs (i.e. painting and coating repair, equipment retrofiting) associated with an aging facility. Also, the budget includes expected price increases for service contracts that will be rebid before or during FY10.
- \$571,000 for **Professional Services**, a \$55,000 increase from the FY09 Budget due to greater use of as-needed design services to support CEB maintenance projects. As of FY09, MWRA changed budgeting practices to more appropriately reflect the on-going cost of asset management by charging the expenditures associated with maintenance-related work to the CEB vs the CIP as in the past. DI's Proposed FY10 CEB includes \$500,000 for as-needed engineering services.
- \$357,000 for **Other Materials** of which \$114,000 is for work clothes, \$66,500 for vehicles expenses (tolls, mileage, and gas), and \$60,000 for health and safety materials. The Proposed FY10 is \$24,000 or 6.4% less from the FY09 Budget primarily due to decreases in office supplies and safety equipment.
- \$573,000 for **Other Services** primarily for the ambulance service contract \$240,000, permit fees \$105,000, telephones \$40,000, fax/copier leasing and servicing \$40,000, HAZmat services \$40,000, and freight charges \$20,000. The Proposed FY10 Budget is \$87,000 less than the FY09 Budget primarily due to the actual cost of the ambulance contract, plus efforts to curtail non-critical expenditures.

RESIDUALS MANAGEMENT

Proposed FY10 Current Expense Budget							
RESIDUALS							
LINE ITEM	FY07 Actual	FY08 Actual	FY09 Original	FY10 Proposed	Change FY09 to PFY10		
WAGES & SALARIES	\$ 100,796	\$ 102,663	\$ 105,533	\$ 109,266	\$ 3,733		3.5%
OVERTIME	-	-	-	-	-		-
FRINGE BENEFITS	-	-	-	-	-		-
UTILITIES	-	-	-	-	-		-
ONGOING MAINTENANCE	1,660,085	1,633,243	1,296,549	1,328,628	32,079		2.5%
TRAINING & MEETINGS	-	2,147	3,000	1,500	(1,500)		-50.0%
PROFESSIONAL SERVICES	13,028	1,459	-	-	-		-
OTHER MATERIALS	318	250	300	300	-		0.0%
OTHER SERVICES	14,686,062	14,754,241	15,470,064	17,007,686	1,537,622		9.9%
TOTAL	\$ 16,460,289	\$ 16,494,003	\$ 16,875,446	\$ 18,447,380	\$ 1,571,934		9.3%

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. 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.

- The average dry tons per day (TSS) is budgeted at 106 tons per day, the same as the FY09 CEB.
- 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. The current two year contract with the vendor started in May 2007 and the new contract is will be rebid before the end of FY09.
- Historically MWRA had a long term (30 year) contract required by law to provide reserve landfill capacity for disposal of sludge as a back-up in the event of any problems with the primary disposal methods. During FY06 MWRA applied for and was granted permission by the Federal District Court to terminate this contract effective March 31, 2006 on the basis of demonstrated reliability of its primary residuals program. This resulted in an \$817,000 annual savings for the Authority. NEFCo remains contractually obligated to provide back-up disposal capability, and will meet this obligation by maintaining a list of disposal sites. In FY09, NEFCo had to exercise this back-up plan for 40 days while fire-related repairs were being made to the facility.

Budget Highlights:

- \$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.
- \$1.3 million or 7% of the Proposed FY10 Budget 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 Proposed FY10 Budget for the NEFCo contract is \$32,000 or 2.5% more than the FY09 Budget of which \$103,000 is due to inflationary adjustments, offset by a \$61,000 reduction in the base NEFCo contract. The maintenance budget also includes a small amount for FRSA repairs.
- \$15.9 million or 86% of the Proposed FY10 Budget is for **Sludge Pelletization**. All but \$4,500 of the \$1.5 million increase from the FY09 Budget is the effect of inflationary adjustments per NEFCo's contract (inflation linked to current indexes). The FY10 Proposed Budget is based on an average of 106 tons per day (TPD) consistent with historical trends.
- \$1.1 million or 6% of the Proposed FY10 Budget is for **Grit and Screenings** disposal, an increase of \$92,000 or 9% from the FY09 Budget. The Proposed FY10 Budget quantity of 5,765 tons is based on historical averages and assumes the new contract prices will be 5% higher than the current contract.
- \$2,600 of the Proposed FY10 Budget is for **Permit Fees**, a decrease of \$38,000 from the FY09 Budget. The FY09 Budget included \$37,500 for sludge dryer stack testing of two trains required by DEP to be performed every two years.

CLINTON WASTEWATER TREATMENT PLANT

Proposed FY10 Current Expense Budget CLINTON						
LINE ITEM	FY07 Actual	FY08 Actual	FY09 Original	FY10 Proposed	Change FY09 to PFY10	
WAGES & SALARIES	\$ 445,633	\$ 526,875	\$ 548,828	\$ 569,732	\$ 20,904	3.8%
OVERTIME	53,988	78,096	58,988	58,992	4	0.0%
FRINGE BENEFITS	808	1,077	825	1,143	318	38.5%
CHEMICALS	165,767	209,987	197,881	244,629	46,748	23.6%
UTILITIES	253,562	285,925	333,817	335,829	2,012	0.6%
ONGOING MAINTENANCE	252,196	204,715	322,044	229,865	(92,179)	-28.6%
TRAINING & MEETINGS	-	-	100	100	-	0.0%
PROFESSIONAL SERVICES	1,688	2,588	21,688	1,688	(20,000)	-92.2%
OTHER MATERIALS	46,205	130,220	72,238	88,049	15,811	21.9%
OTHER SERVICES	17,517	30,030	18,841	18,985	144	0.8%
TOTAL	\$ 1,237,364	\$ 1,469,513	\$ 1,575,250	\$ 1,549,012	\$ (26,238)	-1.7%

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:

- \$570,000 for **Wages and Salaries** represents 37% of the Proposed FY10 Budget. This funds seven positions and one part-time temporary contract clerical position.
- \$59,000 for **Overtime**, consistent with the FY09 budget, represents 4% of the Proposed FY10 Budget. Overtime is used to meet the 24 hour, 7 day per week emergency coverage requirement and to provide increased maintenance resulting from an aging facility.
- \$245,000 for **Chemicals** represents 16% of the Proposed FY10 Budget. This is a \$47,000 or 24% increase from the FY09 Budget. Sodium bisulfate increases \$31,000 or 124% due to compliance requirements for dechlorinating the effluent of residual chlorine. Other changes include soda ash \$13,000 or 13% due to price increases and historical usage, sodium hypochlorite \$8,000 or 53% due to prices, polymer \$4,000 or 53% due to a change in the type of polymer used due to thickening difficulty of the digested sludge prior to pressing, offset by aluminum sulfate \$9,000 assuming lower phosphorous effluent limits. The budget assumes any effect of a new NPDES permit will not occur until FY11.

- \$336,000 for **Utilities** represents 22% of the Proposed FY10 Budget. This is a \$2,000 increase from the FY09 Budget reflecting minor price adjustments in electricity, water, and heating fuel.
- \$230,000 for **Maintenance** represents 15% of the Proposed FY10 Budget. This is a \$92,000 or 29% decrease from the FY09 Budget primarily due to the inclusion last year of \$86,000 for the first phase of inspecting and cleaning Clinton's two digesters. That project will be funded in the CIP in FY10 due to a change in scope.
- \$88,000 for **Other Materials**, including \$73,500 for clean fill for the landfill operation. The Proposed FY10 Budget is \$16,000 or 22% more than the FY09 Budget due to suspension of the sludge reuse program for mixing and covering at the landfill. Per regulatory directive, this change in practice has increased the quantity and budget for fill material.

FIELD OPERATIONS

Proposed FY10 Current Expense Budget FIELD OPERATIONS						
LINE ITEM	FY07 Actual	FY08 Actual	FY09 Original	FY10 Proposed	Change FY09 to PFY10	
WAGES & SALARIES	\$ 31,787,874	\$ 33,397,317	\$ 35,213,548	\$ 36,205,490	\$ 991,942	2.8%
OVERTIME	2,441,917	2,275,528	2,501,391	2,158,430	(342,961)	-13.7%
FRINGE BENEFITS	50,685	45,366	50,500	50,500	-	0.0%
CHEMICALS	4,913,341	5,813,864	6,646,938	7,455,050	808,112	12.2%
UTILITIES	8,765,861	10,216,796	11,139,201	10,326,579	(812,622)	-7.3%
ONGOING MAINTENANCE	7,222,109	7,637,475	7,825,596	8,705,763	880,167	11.2%
TRAINING & MEETINGS	90,698	76,299	70,000	45,000	(25,000)	-35.7%
PROFESSIONAL SERVICES	1,166,442	625,450	500,560	279,060	(221,500)	-44.3%
OTHER MATERIALS	902,493	932,189	966,700	929,090	(37,610)	-3.9%
OTHER SERVICES	2,690,376	2,707,097	2,727,055	2,584,130	(142,925)	-5.2%
TOTAL	\$ 60,031,796	\$ 63,727,381	\$ 67,641,489	\$ 68,739,092	\$ 1,097,603	1.6%

Proposed FY10 Current Expense Budget FIELD OPERATIONS by Program						
PROGRAM	FY07 Actual	FY08 Actual	FY09 Original	FY10 Proposed	Change FY09 to PFY10	
TOXIC REDUCTION & CONTROL	\$ 3,180,877	\$ 3,381,274	\$ 3,530,258	\$ 3,567,944	\$ 37,686	1.1%
WASTEWATER OPERATIONS	10,408,745	11,439,765	12,725,575	12,531,468	(194,107)	-1.5%
WATER OPERATIONS & MAINT	19,389,090	20,669,390	21,756,853	22,992,686	1,235,833	5.7%
METRO MAINTENANCE	15,480,625	16,719,487	17,470,678	17,672,136	201,458	1.2%
OPERATIONS SUPPORT	7,108,356	7,364,414	7,804,117	7,785,696	(18,421)	-0.2%
FOD ADMIN	4,464,103	4,153,051	4,354,008	4,189,162	(164,846)	-3.8%
TOTAL	\$ 60,031,796	\$ 63,727,381	\$ 67,641,489	\$ 68,739,092	\$ 1,097,603	1.6%

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 (about 700 annually), issuing permits (300 annually), conducting sampling (more than 2,000 events annually), and carrying out enforcement activities (about 400 annually). The program tracks over 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 unstaffed. Commercial Point and Fox Point CSO facilities, having been taken off line in FY08, were decommissioned during FY09.

Water Operations and Maintenance is responsible for the treatment and delivery of approximately 220 mgd 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. Additionally, this unit maintains MWRA's western waterworks facilities, including the Ware Water Treatment Plant, the Cosgrove Intake Facility, and the Norumbega Reservoir. This unit also oversees covered storage facilities and operates the MetroWest Tunnel and Carroll Water Treatment Plant (CWTP). 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 maintains pipelines, valves, interceptors, pumps, facility equipment, buildings, and grounds. Metropolitan Maintenance staff maintains 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, ten distribution storage tanks and reservoirs, and 240 miles of wastewater interceptors and appurtenances, 12 pump stations, four headworks, and seven 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 future 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:

- \$36.2 million or 53% of the Proposed FY10 Budget is for **Wages and Salaries** of which \$35.7 million or 98% is for regular pay to fund 515 positions, four fewer positions than were funded in FY09. The budget also includes \$350,098 for stand-by pay to support operational and maintenance needs, \$28,000 for interns primarily for quality assurance support in Waterworks, and \$75,000 for temporary employees for Maximo (maintenance software), TRAC document coordination, and water quality sampling. The wages and salaries line item is \$992k more than the FY09 Budget primarily due to contractual increases for wages.
- The Proposed FY10 Budget funds \$2.2 million for **Overtime**, including \$728,000 for operational coverage needs, \$707,000 for emergency related overtime, and \$683,000 for planned overtime for scheduled maintenance. Overtime is \$343,000, or 13.7%, less than the FY09 Budget primarily due to a reorganization of shift work in Wastewater Operations, which should reduce use of coverage overtime.
- \$7.5 million or 10.8% of the FY10 Budget is for **Chemicals**, of which \$6.7 million is for water treatment and \$679,000 is for wastewater treatment. The budget includes \$3.0 million for soda ash for alkalinity control, \$1.4 million for sodium hypochlorite for disinfection, \$963,000 for hydrofluosilicic acid for fluoride control, \$587,000 for liquid oxygen for the CWTP ozone generation, \$495,000 for aqua ammonia for dechlorination, \$263,000 for carbon dioxide to control the water pH, and \$249,000 for nitrazyme for Framingham Extension Relief Sewer odor and corrosion control. Chemicals increase by \$808,000 or 12.2% from the FY09 Budget

primarily due to price increases for aqua ammonia \$295,000, sodium hypochlorite \$219,000, and hydrofluosilicic acid \$122,000, and sodium bisulfite \$119,000.

- \$10.3 million or 15.0% of the Proposed FY10 Budget is for **Utilities**, including \$7.3 million for electricity, \$1.7 million for diesel fuel, \$754,000 for natural gas, and \$407,000 for water. Utilities decrease \$813,000, or 7%, compared with the FY09 Budget primarily due to a recent decline in prices for diesel fuel \$438,000, electricity \$405,000, and natural gas \$107,000.
- \$8.7 million or 12.7% of the Proposed FY10 Budget is for **Maintenance**, including \$2.1 million in major projects, \$2.9 million in day-to-day projects, and \$3.6 million for services. Maintenance increases by \$880,000 or 11.2%, compared to the FY09 Budget due to new initiatives in ongoing maintenance and a significant increase in the costs of many service contracts. Some of the major projects planned for FY10 include rebuilding the CWTP ozone generator \$225,000, replacing pump station motors with variable frequency drives \$200,000, replacement of surge valves \$100,000, and HVAC efficiency upgrades to the Chelsea office building \$80,000 which will result in lower utility usage, .
- \$279,000 of the Proposed FY10 Budget is for **Professional Services**, including \$265,000 for engineering, \$10,000 for lab and testing, and \$3,500 for the Dig Safe program. Professional Services decreases \$221,500 compared with the FY09 Budget due mainly to cost containment initiatives related to the loss of debt service assistance.
- \$929,000 is for **Other Materials**, including \$325,000 for vehicle expenses for gas, mileage reimbursements and tolls, \$204,000 for work clothes, \$201,000 for health and safety supplies, and \$125,000 for lab and testing supplies. Other Materials decreases by \$38,000, or 3.9%, from the FY09 Budget mainly due to the deferral to future years of \$48,000 for laptop computers for field staff to enter maintenance data into the Maximo system. This deferral is the result of cost containment initiatives in FY10.
- \$2.6 million is for **Other Services**, including \$1.4 million for annual lease payments for the Chelsea office building, \$549,000 for telephone and SCADA needs at various facilities, \$340,000 for required traffic details, and \$32,000 for permit fees. Costs for traffic details are down due to a gubernatorial order to replace police details with civilian flaggers wherever practical.

LABORATORY SERVICES

Proposed FY10 Current Expense Budget LABORATORY SERVICES							
LINE ITEM	FY07 Actual	FY08 Actual	FY09 Original	FY10 Proposed	Change FY09 to PFY10		
WAGES & SALARIES	\$ 3,573,983	\$ 3,691,792	\$ 3,958,102	\$ 4,062,869	\$ 104,767		2.6%
OVERTIME	52,746	73,240	87,125	93,044	5,919		6.8%
FRINGE BENEFITS	486	808	1,200	1,200	-		0.0%
UTILITIES	152,032	20,444	27,925	27,652	(273)		-1.0%
ONGOING MAINTENANCE	435,303	200,812	325,414	327,385	1,971		0.6%
TRAINING & MEETINGS	1,029	4,381	6,500	2,000	(4,500)		-69.2%
PROFESSIONAL SERVICES	79,639	181,003	184,231	97,248	(86,983)		-47.2%
OTHER MATERIALS	866,336	764,766	884,468	771,546	(112,922)		-12.8%
OTHER SERVICES	83,002	103,211	110,459	103,232	(7,227)		-6.5%
TOTAL	\$ 5,244,556	\$ 5,040,457	\$ 5,585,424	\$ 5,486,176	\$ (99,248)		-1.8%

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 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 and regularly prepare compliance reports 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. In FY09 and FY10, management expects to continue this trend by bringing in-house the Fish and Shellfish testing for Massachusetts Bay.

Budget Highlights:

- \$4.1 million or 74.1% of the Proposed FY10 Budget is for **Wages and Salaries**, of which \$3.7 million is regular pay for the funding of 53 positions. The Proposed FY10 Budget also includes \$185,000 for up to five temporary employee positions primarily to cover peak workload and Harbor and Outfall Monitoring and Carroll Water Treatment Plant special testing. The temporary employees will also help cover workload during implementation of the Laboratory Information Management System (LIMS) in FY10.
- \$28,000 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.

- \$327,000 is for **Maintenance** which includes \$90,000 for Laboratory modifications, \$213,000 for equipment service contracts and \$10,000 for HVAC services to annually certify the fume hoods.
- The **Professional Services** budget of \$97,000 (a decrease of 47.2%) covers lab and testing analysis services. Decreased spending is due to in-house testing for fats, oils, and grease (FOG). 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.
- \$772,000 is for **Other Materials** including \$545,000 for laboratory supplies and \$175,000 for replacement of obsolete or older equipment. As part of broader cost curtailment efforts, this department will defer replacement of two laboratory instruments (totaling \$100,000) to future years.
- \$110,000 for **Other Services** primarily covers boat rental service on an as-needed basis, boat dockage for two boats, and courier service for shipping samples between laboratories and removing hazardous waste.

ENVIRONMENTAL QUALITY

Proposed FY10 Current Expense Budget ENVIRONMENTAL QUALITY						
LINE ITEM	FY07 Actual	FY08 Actual	FY09 Original	FY10 Proposed	Change FY09 to PFY10	
WAGES & SALARIES	\$ 1,233,001	\$ 1,328,722	\$ 1,425,445	\$ 1,392,870	\$ (32,575)	-2.3%
OVERTIME	3,281	3,044	4,879	3,430	(1,449)	-29.7%
FRINGE BENEFITS	-	-	-	-	-	-
ONGOING MAINTENANCE	1,639	23	-	-	-	-
TRAINING & MEETINGS	2,585	5,804	7,050	1,000	(6,050)	-85.8%
PROFESSIONAL SERVICES	2,840,422	2,692,210	2,770,576	2,549,160	(221,416)	-8.0%
OTHER MATERIALS	977	3,047	6,030	5,130	(900)	-14.9%
OTHER SERVICES	2,864	119,450	136,598	9,229	(127,369)	-93.2%
TOTAL	\$ 4,084,769	\$ 4,152,300	\$ 4,350,578	\$ 3,960,819	\$ (389,759)	-9.0%

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. The department also periodically produces the printed State of Boston Harbor Report.

Budget Highlights:

- \$1.4 million or 35.2% of the Proposed FY10 Budget is for **Wages and Salaries** for 17 positions, the same level as the FY09 budget.
- \$2.5 million or 64% of the Proposed FY10 Budget is for **Professional Services** for outside laboratory testing and analysis. The proposed budget provides total funding of \$2.4 million for the Harbor and Outfall Monitoring (HOM) Program including \$1.5 million for the HOM6 contract, which will be completed through contracts with two vendors (Battelle and AECOM Marine and Coastal Center) and \$0.8 million for HOM7. The balance of the funds covers the following:
 - o follow-on cost-sharing contract with the National Oceanic and Atmospheric Administration's National Data Buoy Center for required continuous monitoring
 - o MA Bay Eutrophication Model
 - o chlorophyll and algae monitoring
 - o membership in the Gulf of Maine Ocean Observation System monitoring program and
 - o biotoxicity testing for Clinton WWTP, CSO facilities, and the Deer Island Treatment Plant.
- The Proposed FY10 Budget for **Other Services** is \$9,200, which is \$127,000 less than the FY09 Budget primarily because MWRA has discontinued membership in the Water Environment Research Foundation as part of an initiative to curtail costs and contain rate increases.

ENGINEERING AND CONSTRUCTION

Proposed FY10 Current Expense Budget ENGINEERING AND CONSTRUCTION							
LINE ITEM	FY07 Actual	FY08 Actual	FY09 Original	FY10 Proposed	Change FY09 to PFY10		
WAGES & SALARIES	\$ 7,597,332	\$ 7,915,000	\$ 8,160,918	\$ 8,087,690	\$ (73,228)		-0.9%
OVERTIME	63,295	128,337	62,831	135,441	72,610		115.6%
FRINGE BENEFITS	512	721	524	750	226		43.1%
ONGOING MAINTENANCE	5,893	8,515	10,480	10,285	(195)		-1.9%
TRAINING & MEETINGS	11,911	31,778	15,900	8,400	(7,500)		-47.2%
PROFESSIONAL SERVICES	(750)	889	-	-	-		-
OTHER MATERIALS	127,780	124,318	115,600	117,824	2,224		1.9%
OTHER SERVICES	43,817	40,147	36,900	25,500	(11,400)		-30.9%
TOTAL	\$ 7,849,790	\$ 8,249,705	\$ 8,403,153	\$ 8,385,890	\$ (17,263)		-0.2%

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:

- \$8.1 million for **Wages and Salaries** represents 96.4% of the Proposed FY10 Budget and includes funding for 89.5 positions (includes vacancy adjustment).
- \$135,000 for **Overtime**, \$62,000 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. For FY10, an additional \$73,000 is included to provide weekend resident inspection services for the East Boston micro-tunneling project.
- \$10,000 for **Maintenance** which covers service contracts for the DISC Unit's specialized printers and plotters.
- \$118,000 for **Other Materials**, which includes \$98,000 for vehicle expense for staff traveling to construction sites, \$11,000 for office supplies and \$5,000 for work clothes.
- \$26,000 for **Other Services** which includes \$6,000 for memberships and dues, \$10,000 for printing of in-house design plans and specifications, \$7,000 for cell phones, and \$1,500 for police details.



Law Division
Budget

LAW DIVISION

Proposed FY10 Current Expense Budget LAW DIVISION						
LINE ITEM	FY07 Actual	FY08 Actual	FY09 Original	FY10 Proposed	Change FY09 to PFY10	
WAGES & SALARIES	\$ 1,649,990	\$ 1,687,100	\$ 1,745,529	\$ 1,686,491	\$ (59,038)	-3.4%
OVERTIME	40	1	-	-	-	-
TRAINING & MEETINGS	2,788	2,344	3,748	2,000	(1,748)	-46.6%
PROFESSIONAL SERVICES	150,409	99,340	126,000	151,000	25,000	19.8%
OTHER MATERIALS	7,347	9,021	5,539	9,314	3,775	68.2%
OTHER SERVICES	29,779	26,334	34,500	33,500	(1,000)	-2.9%
TOTAL	\$ 1,840,353	\$ 1,824,140	\$ 1,915,316	\$ 1,882,305	\$ (33,011)	-1.7%

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 FY09 direct expense 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.

Law Division goals include:

- 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.

Budget Highlights:

- \$1.7 million for **Wages and Salaries**, a decrease of \$59,000 or 3.4% from the FY09 Budget.
- \$151,000 for **Professional Services**, an increase of \$25,000 or 19.8 % from FY09 budgeted spending based upon revised needs assessment.
- The Law Division continues to exhaust all opportunities to shift the cost of legal representation to insurers and indemnitors and to litigate insurance coverage disputes as they arise, all in the interest of cost savings.



Finance Division
Budget

FINANCE DIVISION

Proposed FY10 Current Expense Budget FINANCE DIVISION						
LINE ITEM	FY07 Actual	FY08 Actual	FY09 Original	FY10 Proposed	Change FY09 to PFY10	
WAGES & SALARIES	\$ 2,920,430	\$ 3,031,855	\$ 3,339,106	\$ 3,322,173	\$ (16,933)	-0.5%
OVERTIME	486	38	-	-	-	-
ONGOING MAINTENANCE	0	85	0	0	-	-
TRAINING & MEETINGS	2,652	912	7,795	2,344	(5,451)	-69.9%
PROFESSIONAL SERVICES	129,631	550,691	452,300	432,533	(19,767)	-4.4%
OTHER MATERIALS	8,547	6,597	10,127	6,000	(4,127)	-40.8%
OTHER SERVICES	17,768	32,458	25,081	17,677	(7,404)	-29.5%
TOTAL	\$ 3,079,514	\$ 3,622,636	\$ 3,834,409	\$ 3,780,727	\$ (53,682)	-1.4%

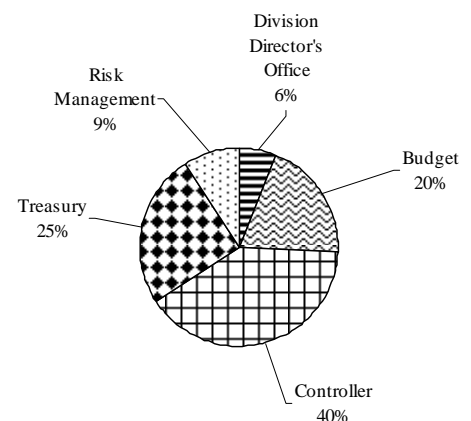
Proposed FY10 Current Expense Budget FINANCE DIVISION by Department						
DEPARTMENT	FY07 Actual	FY08 Actual	FY09 Original	FY10 Proposed	Change FY09 to PFY10	
DIVISION DIRECTOR'S OFFICE	\$ 213,438	\$ 195,349	\$ 254,361	\$ 235,333	\$ (19,028)	-7.5%
PLANNING/COORDINATION	110	-	-	-	-	-
BUDGET	680,218	658,073	792,872	744,307	(48,565)	-6.1%
TREASURY	502,745	1,040,754	965,631	943,185	(22,446)	-2.3%
CONTROLLER	1,393,264	1,425,457	1,487,615	1,513,087	25,472	1.7%
RISK MANAGEMENT	289,739	303,003	333,930	344,815	10,885	3.3%
TOTAL	\$ 3,079,514	\$ 3,622,636	\$ 3,834,409	\$ 3,780,727	\$ (53,682)	-1.4%

The **Finance Division** is responsible for overseeing rates and revenue management, budgeting, capital financing, accounting, disbursements, investments, 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 Proposed FY10 Budget for the Finance division accounts for less than 2% of MWRA's direct expense budget.

Finance Division 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.

FY09 Accomplishments

- Treasury continued to manage through unprecedented events in the financial markets. The bankruptcy of Lehman Brothers and the exiting of UBS Securities from the municipal marketplace required the development of new business partnerships to replace Lehman and UBS. With these new banking relationships, Treasury has increased MWRA's diversity and reduced the business risk exposure to any one bank.
- Finance Division secured a credit rating upgrade from Standard and Poor's from AA to AA+ during a chaotic credit market. Ratings from Moody's Investor Service and Fitch Ratings were affirmed at Aa2 and AA respectively. Higher credit ratings are associated with lower risk by investors. The lower risk is typically reflected in lower interest rates for borrowers like MWRA.
- Provided more up-to-date financial information to the Board of Directors and external constituencies on both the Current Expense Budget and Capital Improvement Program.
- Developed an Amended FY09 CEB which identified savings to offset the loss of Debt Service Assistance without a mid-year rate increase to communities.
- Converted over two hundred employees to paperless pay stubs.

FY10 Initiatives

- Assessment and evaluation of sustainable cost savings opportunities throughout the organization.
- Implementation of new support system for the Capital Improvement Program.
- Continue close monitoring of financial markets and take advantage of any opportunities to maximize investment income and reduce debt financing obligations.
- Continue to streamline administrative and payroll related processes.
- Maximize opportunities for the stimulus package.

DIVISION DIRECTOR'S OFFICE

Proposed FY10 Current Expense Budget FINANCE DIVISION DIRECTOR'S OFFICE						
LINE ITEM	FY07 Actual	FY08 Actual	FY09 Original	FY10 Proposed	Change FY09 to PFY10	
WAGES & SALARIES	\$ 210,528	\$ 194,163	\$ 249,866	\$ 226,284	\$ (23,582)	-9.4%
TRAINING & MEETINGS	2,288	784	2,345	2,344	(1)	0.0%
OTHER MATERIALS	171	201	415	5,170	4,755	1145.8%
OTHER SERVICES	451	201	1,735	1,535	(200)	-11.5%
TOTAL	\$ 213,438	\$ 195,349	\$ 254,361	\$ 235,333	\$ (19,028)	-7.5%

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 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 reduction and added uncertainty of state debt service assistance (DSA) payments which have dropped from over \$52 million in 2002 to as little as zero in FY03 and FY09, to help close State budget shortfall. The loss of this support can happen within a budget cycle. DSA in FY10 is projected at \$7 million.

Goals:

- Guide and coordinate division activities to support MWRA and Finance Division objectives.
- Provide central and administrative support to the division's departments.

Budget Highlights:

- Proposed FY10 Budget includes \$226,000 for **Wages and Salaries**, a decrease of \$24,000 or 9.4% from the FY09 Original Budget due to the elimination of the Acting Administrative Manager position and the transfer of one position to Risk Management. The final budget funds two positions.

BUDGET

Proposed FY10 Current Expense Budget BUDGET						
LINE ITEM	FY07 Actual	FY08 Actual	FY09 Original	FY10 Proposed	Change FY09 to PFY10	
WAGES & SALARIES	\$ 669,306	\$ 639,818	\$ 781,721	\$ 740,877	\$ (40,844)	-5.2%
TRAINING & MEETINGS	-	-	450	-	(450)	-100.0%
PROFESSIONAL SERVICES	0	3,563	0	0	-	-
OTHER MATERIALS	5,409	923	570	230	(340)	-59.6%
OTHER SERVICES	5,503	13,769	10,131	3,200	(6,931)	-68.4%
TOTAL	\$ 680,218	\$ 658,073	\$ 792,872	\$ 744,307	\$ (48,565)	-6.1%

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 divisions' 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.

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.

FY09 Accomplishments:

- Provided more up-to-date financial information to the Board of Directors and external constituencies on both the Current Expense Budget and Capital Improvement Program.
- Developed an Amended FY09 CEB which identified savings to offset the loss of Debt Service Assistance without a mid-year rate increase to communities.
- Eliminated a vacant position as a result of realigning responsibilities.

FY10 Initiatives:

- Assessment and evaluation of sustainable cost savings opportunities throughout the organization.
- Implementation of new support system for the Capital Improvement Program
- Development of staff skills for cross functionality between CIP and CEB

Budget Highlights:

- Proposed FY10 Budget includes \$741,000 for **Wages and Salaries**, a decrease of \$41,000 or 5.2% from the FY09 Original Budget due to the elimination of one position and one vacancy. Also included is the transfer in of the Assistant Manger of Rates position from Treasury. The proposed budget funds eight positions.
- \$3,200 is for **Other Services**, a decrease of \$7,000 or 68.4% from the FY09 Original Budget, due to the elimination of funds for forecasting services from Global Insight for inflation projections as well as a reduction in funds to cover the costs of printing a limited number of budget documents and reports.

CONTROLLER

Proposed FY10 Current Expense Budget CONTROLLER							
LINE ITEM	FY07 Actual	FY08 Actual	FY09 Original	FY10 Proposed	Change FY09 to PFY10		
WAGES & SALARIES	\$ 1,176,542	\$ 1,227,866	\$ 1,290,328	\$ 1,321,157	\$ 30,829		2.4%
OVERTIME	-	-	-	-	-		-
TRAINING & MEETINGS	313	-	500	-	(500)		-100.0%
PROFESSIONAL SERVICES	215,500	195,500	189,000	189,000	-		0.0%
OTHER MATERIALS	629	596	4,242	300	(3,942)		-92.9%
OTHER SERVICES	280	1,495	3,545	2,630	(915)		-25.8%
TOTAL	\$ 1,393,264	\$ 1,425,457	\$ 1,487,615	\$ 1,513,087	\$ 25,472		1.7%

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.

Goals:

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

FY09 Accomplishments:

- Converted over two hundred employees to paperless pay stubs.
- Negotiated extension of professional services contract without increase in annual fee

FY10 Initiatives:

- Enact paperless processes for payroll pay stubs and time sheets.
- Pay employee reimbursements through direct deposit.

Budget Highlights:

- \$1.3 million for **Wages and Salaries**, an increase of \$31,000 or 2.4% from the FY09 Original Budget is due to the reinstatement of the Accounting Manager position from an Acting Controller position. The final budget funds 18 positions, one less than FY09.
- \$189,000 for **Professional Services**, level funded from FY09 Original Budget. The Proposed FY10 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 FY10 Current Expense Budget RISK MANAGEMENT						
LINE ITEM	FY07 Actual	FY08 Actual	FY09 Original	FY10 Proposed	Change FY09 to PFY10	
WAGES & SALARIES	\$ 266,119	\$ 277,312	\$ 286,505	\$ 299,365	\$ 12,860	4.5%
TRAINING & MEETINGS	-	-	1,500	-	(1,500)	-100.0%
PROFESSIONAL SERVICES	23,261	25,178	45,000	45,000	-	0.0%
OTHER MATERIALS	59	63	-	-	-	-
OTHER SERVICES	300	450	925	450	(475)	-51.4%
TOTAL	\$ 289,739	\$ 303,003	\$ 333,930	\$ 344,815	\$ 10,885	3.3%

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 manages 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.

Goals:

- Process 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:

- Proposed FY10 Budget is \$345,000 of which \$299,000 is for **Wages & Salaries**. The proposed budget funds four positions, one more than the FY09 Budget due to the transfer of the Risk Management Coordinator position from the Director's Office.
- \$45,000 for **Professional Services** includes funds for an insurance consultant, level funded from the FY09 Original Budget.

TREASURY

Proposed FY10 Current Expense Budget TREASURY							
LINE ITEM	FY07 Actual	FY08 Actual	FY09 Original	FY10 Proposed	Change FY09 to PFY10		
WAGES & SALARIES	\$ 597,935	\$ 692,696	\$ 730,686	\$ 734,490	\$ 3,804	0.5%	
OVERTIME	486	38	-	-	-	-	
ONGOING MAINTENANCE	0	85	0	0	-	-	
TRAINING & MEETINGS	50	128	3,000	0	(3,000)	-100.0%	
PROFESSIONAL SERVICES	(109,130)	326,450	218,300	198,533	(19,767)	-9.1%	
OTHER MATERIALS	2,170	4,813	4,900	300	(4,600)	-93.9%	
OTHER SERVICES	11,234	16,544	8,745	9,862	1,117	12.8%	
TOTAL	\$ 502,745	\$ 1,040,754	\$ 965,631	\$ 943,185	\$ (22,446)	-2.3%	

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.

Goals:

- Manage MWRA's debt portfolio to achieve sustainable and predictable rate increases.

FY09 Accomplishments:

- Treasury continued to manage through unprecedented events in the financial markets. The bankruptcy of Lehman Brothers and the exiting of UBS Securities from the municipal marketplace required the development of new business partnerships to replace Lehman and UBS. With these new banking relationships, Treasury has increased MWRA's diversity and reduced the business risk exposure to any one bank.
- Finance Division secured a credit rating upgrade from Standard and Poor's from AA to AA+ during a chaotic credit market. Ratings from Moody's Investor Service and Fitch Ratings were affirmed at Aa2 and AA respectively. Higher credit ratings are associated with lower risk by investors. The lower risk is typically reflected in lower interest rates for borrowers like MWRA.

Budget Highlights:

- \$734,000 for **Wages and Salaries**, an increase of \$4,000 or 0.5% from the FY09 Original Budget. The proposed budget funds ten positions, one more than the FY09 Budget due to the hiring of two Financial Planner positions and the transfer out of the Assistant Manager of Rates position to the Rates and Budget Department.
- \$199,000 for **Professional Services**, a decrease of \$20,000 or 9.1% from FY09 Original Budget. The proposed budget includes funds for trustee services and arbitrage consulting services.



Support Services Division
Budget

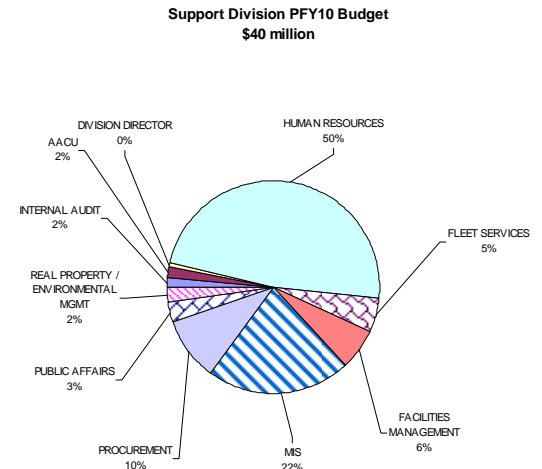
SUPPORT SERVICES DIVISION

Proposed FY10 Current Expense Budget SUPPORT DIVISION						
LINE ITEM	FY07 Actual	FY08 Actual	FY09 Original	FY10 Proposed	Change FY09 to PFY10	
WAGES & SALARIES	\$ 13,671,269	\$ 14,236,309	\$ 14,757,973	\$ 14,960,576	\$ 202,603	1.4%
OVERTIME	93,209	74,730	73,115	58,478	(14,637)	-20.0%
FRINGE BENEFITS	15,043,560	15,520,254	16,385,531	15,994,606	(390,925)	-2.4%
WORKERS' COMPENSATION	1,235,814	1,159,464	1,325,000	1,325,000	-	0.0%
UTILITIES	351,321	206,427	227,611	167,628	(59,983)	-26.4%
ONGOING MAINTENANCE	3,522,714	4,226,440	3,287,560	3,293,881	6,321	0.2%
TRAINING & MEETINGS	55,459	52,369	78,825	49,924	(28,901)	-36.7%
PROFESSIONAL SERVICES	349,285	439,462	480,263	409,101	(71,162)	-14.8%
OTHER MATERIALS	1,190,744	1,205,556	1,369,307	1,029,520	(339,787)	-24.8%
OTHER SERVICES	2,810,354	2,726,711	3,023,603	3,086,585	62,982	2.1%
TOTAL	\$ 38,323,729	\$ 39,847,722	\$ 41,008,788	\$ 40,375,299	\$ (633,489)	-1.5%

Proposed FY10 Current Expense Budget SUPPORT DIVISION by Department						
DEPARTMENT	FY07 Actual	FY08 Actual	FY09 Original	FY10 Proposed	Change FY09 to PFY10	
DIVISION DIRECTOR	\$ 223,883	\$ 230,560	\$ 237,418	\$ 192,275	\$ (45,143)	-19.0%
INTERNAL AUDIT	550,914	583,631	592,301	616,743	24,442	4.1%
PUBLIC AFFAIRS	1,219,402	1,272,500	1,213,820	1,250,531	36,711	3.0%
FACILITIES MANAGEMENT	2,835,483	2,279,899	2,488,840	2,512,954	24,114	1.0%
FLEET SERVICES	1,596,618	1,918,209	2,287,491	2,130,456	(157,035)	-6.9%
AACU	555,273	574,779	592,036	610,932	18,896	3.2%
HUMAN RESOURCES	18,143,093	18,678,844	19,848,494	19,428,955	(419,539)	-2.1%
MIS	8,727,087	8,940,973	9,005,080	8,868,877	(136,203)	-1.5%
PROCUREMENT	3,841,264	4,621,381	3,874,308	3,905,443	31,135	0.8%
REAL PROPERTY / ENVIRONMENTAL MGMT	630,712	746,946	869,000	858,133	(10,867)	-1.3%
TOTAL	\$ 38,323,729	\$ 39,847,722	\$ 41,008,788	\$ 40,375,299	\$ (633,489)	-1.5%

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 \$40.3 million FY10 Budget accounts for 18.8% of MWRA's direct expense budget. The division budget includes \$16.0 million for fringe benefits for all MWRA personnel; \$1.7 million for lease, taxes insurance, and operating and maintenance costs for the Charlestown Navy Yard (CNY) headquarters and the Marlboro Records Center and Warehouse; and \$1.3 million for workers' compensation claims and medical expenses. Net of these agency-wide expenses, the Support Services Division budget accounts for 10.0% of direct expenses.



DIVISION DIRECTOR

Proposed FY10 Current Expense Budget DIVISION DIRECTOR							
LINE ITEM	FY07 Actual	FY08 Actual	FY09 Original	FY10 Proposed	Change FY09 to PFY10		
WAGES & SALARIES	\$ 222,590	\$ 230,097	\$ 236,064	\$ 190,921	\$ (45,143)		-19.1%
OVERTIME	-	-	-	-	-		-
FRINGE BENEFITS	-	-	-	-	-		-
ONGOING MAINTENANCE	221	-	-	-	-		-
TRAINING & MEETINGS	-	-	-	-	-		-
OTHER MATERIALS	368	67	450	450	-		0.0%
OTHER SERVICES	704	396	904	904	-		0.0%
TOTAL	\$ 223,883	\$ 230,560	\$ 237,418	\$ 192,275	\$ (45,143)		-19.0%

The **Division Director Department** consists of management and administrative staff.

The goals of the Division Director's Department are to:

- Provide comprehensive administrative, professional and technical support services to all divisions to create a cooperative framework within which MWRA can operate effectively.
- Ensure proper and effective communication between MWRA and the communities served, other agencies, and state and local officials.

Budget Highlights:

- The Proposed FY10 Budget of \$192,000 is a decrease of \$45,000 or 19.1% as compared to the FY09 original budget. This decrease is due to adjustments to the Wages & Salaries line in support of the new headcount target.

INTERNAL AUDIT

Proposed FY10 Current Expense Budget INTERNAL AUDIT							
LINE ITEM	FY07 Actual	FY08 Actual	FY09 Original	FY10 Proposed	Change FY09 to PFY10		
WAGES & SALARIES	\$ 539,094	\$ 569,213	\$ 579,053	\$ 605,307	\$ 26,254		4.5%
OVERTIME	-	7	-	-	-		-
TRAINING & MEETINGS	9,118	10,092	9,738	7,738	(2,000)		-20.5%
OTHER MATERIALS	2,217	2,501	2,400	2,400	-		0.0%
OTHER SERVICES	485	1,818	1,110	1,298	188		16.9%
TOTAL	\$ 550,914	\$ 583,631	\$ 592,301	\$ 616,743	\$ 24,442		4.1%

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 coordinating 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. Internal Audit reports to the MWRA's Executive Director.

The Internal Audit Department's goals are to:

- 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.

FY09 Mid-Year Accomplishments:

- Identified \$1,479,704 in savings related to preliminary consultant reviews (\$93,139), incurred cost audits (\$95,379), construction labor burden reviews (\$71,303), construction claims (\$525,691), other contractor and vendor assignments (\$344,779), and internal audits and management advisory services (\$349,413).
- Issued final audit reports on the Local Pipeline Assistance and Infiltration/Inflow Community Assistance Programs, Buyer Practices and completed five incurred cost assignments, six preliminary construction reviews, two vendor audits, and a true-up of CY2007 BWSC CSO billings.

Budget Highlights:

- Total Proposed FY10 Budget of \$617,000, an increase of \$24,000 or 4.1% over FY09 Budget, for staff to perform internal audits, management advisory services, preliminary review and incurred cost audits, and consultant disclosure statement reviews.
- \$605,000 for **Wages and Salaries**, an increase of \$26,000 or 4.5% over FY09 Budget, primarily due to contractual increases in wages and salaries. The proposed budget includes funding for six full time and two part-time positions.

- \$7,700 for **Training and Meetings**, a decrease of \$2,000 or 20.5% from FY09 Budget, of which 32% is for travel to consultant offices to perform incurred cost audits of billings for design and engineering services.

PUBLIC AFFAIRS

Proposed FY10 Current Expense Budget PUBLIC AFFAIRS							
LINE ITEM	FY07 Actual	FY08 Actual	FY09 Original	FY10 Proposed	Change FY09 to PFY10		
WAGES & SALARIES	\$ 1,148,137	\$ 1,207,344	\$ 1,111,557	\$ 1,158,785	\$ 47,228		4.2%
OVERTIME	-	128	-	-	-		-
TRAINING & MEETINGS	1,045	2,409	3,665	315	(3,350)		-91.4%
PROFESSIONAL SERVICES	1,683	1,113	1,050	1,050	-		0.0%
OTHER MATERIALS	15,432	26,672	17,850	20,550	2,700		15.1%
OTHER SERVICES	53,105	34,834	79,698	69,831	(9,867)		-12.4%
TOTAL	\$ 1,219,402	\$ 1,272,500	\$ 1,213,820	\$ 1,250,531	\$ 36,711		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 to all grade levels school education materials on water quality, water conservation, wastewater topics, and environmental issues. Public Affairs reports to the Executive Director.

The goals of the Public Affairs Department are to:

- 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 Proposed FY10 Budget of \$1.3 million, an increase of \$37,000 or 3.0% from FY09 Budget.
- \$1.2 million for **Wages and Salaries**, an increase of \$47,000 or 4.2% from FY09 Budget, primarily due to contractual increases in wages and salaries. The proposed budget supports 14 positions.
- \$90,000 for **Other Materials** and **Other Services**, a decrease of \$7,000 or 8% from FY09 Budget, includes funds associated with the publication of MWRA's Annual Report and 5-Year Progress Report, as well as 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 FY10 Current Expense Budget FACILITIES MANAGEMENT						
LINE ITEM	FY07 Actual	FY08 Actual	FY09 Original	FY10 Proposed	Change FY09 to PFY10	
WAGES & SALARIES	\$ 370,907	\$ 393,292	\$ 400,155	\$ 371,513	\$ (28,642)	-7.2%
OVERTIME	30,320	25,261	25,000	23,000	(2,000)	-8.0%
FRINGE BENEFITS	126	303	-	-	-	-
UTILITIES	349,873	203,715	226,111	164,628	(61,483)	-27.2%
ONGOING MAINTENANCE	86,715	25,602	39,400	39,400	-	0.0%
TRAINING & MEETINGS	-	-	-	-	-	-
PROFESSIONAL SERVICES	(1)	-	-	-	-	-
OTHER MATERIALS	87,935	135,569	121,233	116,233	(5,000)	-4.1%
OTHER SERVICES	1,909,608	1,496,157	1,676,941	1,798,180	121,239	7.2%
TOTAL	\$ 2,835,483	\$ 2,279,899	\$ 2,488,840	\$ 2,512,954	\$ 24,114	1.0%

Proposed FY10 Current Expense Budget FACILITIES MANAGEMENT SUPPORT by Area						
AREA	FY07 Actual	FY08 Actual	FY09 Original	FY10 Proposed	Change FY09 to PFY10	
FRSA	\$ 217,332	\$ 70,618	\$ -	\$ -	\$ -	-
FACILITIES MANAGEMENT	2,216,599	1,792,100	2,060,577	2,115,333	54,756	2.7%
ADMINISTRATIVE SERVICES	401,552	417,181	428,263	397,621	(30,642)	-7.2%
TOTAL	\$ 2,835,483	\$ 2,279,899	\$ 2,488,840	\$ 2,512,954	\$ 24,114	1.0%

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.

The goals of the Facilities Management Department are to:

- 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.

FY09 Accomplishments

- Support energy reduction efforts by installing devices such as timers and motion sensors for lighting in shared areas.
- Work with the landlord to implement facility improvements as provided in our lease contract. Improvements include bathroom and kitchen updates.
- Work 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.

Budget Highlights:

- The FY10 Proposed Budget of \$2.5 million, is an increase of \$24,000 or 1.0% as compared to FY09 original budget.
- \$372,000 for **Wages and Salaries**, a decrease of \$29,000 or 7.2% from FY09 original budget. The budget supports seven positions. This item is reduced to comply with the new initiative to manage headcount through attrition.
- \$23,000 for **Overtime** for coverage of facility maintenance and support services, a decrease of \$2,000 or 8.0% as compared to the FY09 original budget.
- \$165,000 for **Utilities**, a decrease of \$61,000 or 27.2% as compared to FY09 original budget. The decrease reflects lower electricity pricing.
- \$39,000 for **Ongoing Maintenance** is level funded with FY09 original budget. This line item includes funding for facility and equipment maintenance and services including HVAC, plumbing and electrical services.
- \$116,000 for **Other Materials**, a decrease of \$5,000 or 4.1% as compared to FY09 original budget.
- \$1.8 million for **Other Services**, an increase of \$121,000 or 7.2%, as compared to the FY09 original budget. The increase is due to the contractual increase in rental and operating costs for CNY headquarters facility and also reflects the cost for a new lease for temporary space in Marlboro to house the Records Center and Warehouse.

FLEET SERVICES

Proposed FY10 Current Expense Budget FLEET SERVICES							
LINE ITEM	FY07 Actual	FY08 Actual	FY09 Original	FY10 Proposed	Change FY09 to PFY10		
WAGES & SALARIES	\$ 650,257	\$ 658,619	\$ 733,201	\$ 736,166	\$ 2,965	0.4%	
OVERTIME	13,774	18,773	30,000	17,800	(12,200)	-40.7%	
FRINGE BENEFITS	598	911	1,800	1,000	(800)	-44.4%	
UTILITIES	1,331	2,316	1,500	3,000	1,500	100.0%	
ONGOING MAINTENANCE	666,280	703,892	747,250	743,750	(3,500)	-0.5%	
TRAINING & MEETINGS	-	-	-	-	-	-	
OTHER MATERIALS	462,616	530,164	769,202	624,202	(145,000)	-18.9%	
OTHER SERVICES	(198,238)	3,534	4,538	4,538	-	0.0%	
TOTAL	\$ 1,596,618	\$ 1,918,209	\$ 2,287,491	\$ 2,130,456	\$ (157,035)	-6.9%	

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.

FY09 Accomplishments

- Developed specifications for 36 new / replacement vehicles / equipment. Twenty Five (25) of these units are alternative fuel or hybrid models, consistent with the Authority's goal of purchasing environmentally friendly products. One emergency service unit was purchased with a grant from the Department of Homeland Security.
- As part of the Authority's environmental goals, 11 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. The Authority continues to fuel diesel powered vehicle/equipment with bio-diesel.
- Prepared the documentation for the surplus sale of 104 vehicles and equipment and worked with the procurement department for the auction and disposal of the vehicles.
- Continued to work with MIS staff on the design and 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 Proposed FY10 Budget of \$2.1 million reflects a decrease of \$157,000 or 6.9% as compared to the FY09 budget
- \$736,000 for **Wages & Salaries**, an increase of \$3,000 or 0.4% as compared to FY09 budget supports 12 positions. The increase is attributed to contractual increases.

- **Ongoing Maintenance** budget of \$744,000, a decrease of \$3,500 or 0.5% as compared to FY09 budget. The budget includes funds for automotive materials & services to maintain MWRA's vehicle fleet.
- \$624,000 for **Other Materials** is a decrease of \$145,000 as compared to FY09 budget. The FY10 Budget includes funds for vehicle/equipment fueling which are based on FY08 and FY09 fuel usage and recent fuel costs. Fleet Services procures bulk fuels from state contracts while continuing to meet all governmental alternative fuel directives.

AFFIRMATIVE ACTION and COMPLIANCE

Proposed FY10 Current Expense Budget AFFIRMATIVE ACTION & COMPLIANCE UNIT						
LINE ITEM	FY07 Actual	FY08 Actual	FY09 Original	FY10 Proposed	Change FY09 to PFY10	
WAGES & SALARIES	\$ 552,953	\$ 569,845	\$ 586,444	\$ 604,766	\$ 18,322	3.1%
OVERTIME	-	-	-	-	-	-
TRAINING & MEETINGS	1	2,384	3,360	3,360	-	0.0%
OTHER MATERIALS	2,119	2,079	1,800	2,174	374	20.8%
OTHER SERVICES	200	471	432	632	200	46.3%
TOTAL	\$ 555,273	\$ 574,779	\$ 592,036	\$ 610,932	\$ 18,896	3.2%

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.

The goals of the Affirmative Action and Compliance Unit are to:

- 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.

Budget Highlights:

- Total Proposed FY10 Budget of \$611,000, an increase of \$19,000 or 3.2% over FY09 Budget, primarily due to contractual increases in wages and salaries. The Proposed budget includes funding for eight positions.

HUMAN RESOURCES

Proposed FY10 Current Expense Budget HUMAN RESOURCES						
LINE ITEM	FY07 Actual	FY08 Actual	FY09 Original	FY10 Proposed	Change FY09 to PFY10	
WAGES & SALARIES	\$ 1,484,995	\$ 1,521,409	\$ 1,588,273	\$ 1,664,778	\$ 76,505	4.8%
OVERTIME	69	607	437	-	(437)	-100.0%
FRINGE BENEFITS	15,042,497	15,518,599	16,383,731	15,993,606	(390,125)	-2.4%
WORKERS' COMPENSATION	1,235,814	1,159,464	1,325,000	1,325,000	-	0.0%
ONGOING MAINTENANCE	28	6	900	-	(900)	-100.0%
TRAINING & MEETINGS	3,820	3,972	7,514	3,963	(3,551)	-47.3%
PROFESSIONAL SERVICES	347,875	438,349	478,713	407,551	(71,162)	-14.9%
OTHER MATERIALS	25,156	16,922	27,560	18,395	(9,165)	-33.3%
OTHER SERVICES	2,839	19,516	36,366	15,662	(20,704)	-56.9%
TOTAL	\$ 18,143,093	\$ 18,678,844	\$ 19,848,494	\$ 19,428,955	\$ (419,539)	-2.1%

Proposed FY10 Current Expense Budget HUMAN RESOURCES by Area						
AREA	FY07 Actual	FY08 Actual	FY09 Original	FY10 Proposed	Change FY09 to PFY10	
EMPLOYEE/COMP/BEN	\$ 567,473	\$ 599,015	\$ 664,476	\$ 638,506	\$ (25,970)	-3.9%
LABOR RELATIONS	862,639	899,147	961,840	1,009,008	47,168	4.9%
TRAINING	387,848	469,511	475,114	424,603	(50,511)	-10.6%
CENTRALIZED FRINGE BENEFITS	16,325,133	16,711,171	17,747,064	17,356,838	(390,226)	-2.2%
TOTAL	\$ 18,143,093	\$ 18,678,844	\$ 19,848,494	\$ 19,428,955	\$ (419,539)	-2.1%

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.

The goals of the Human Resources Department are to:

- 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.

FY09 Accomplishments

In FY09, the accomplishments of the Human Resources Department included:

- Successfully negotiated with trades and maintenance unions changes in staffing assignments for FOD Wastewater Operations' Operations Control Center and Headworks facilities.
- Developed and delivered the first Flagger Training Program certified by the Massachusetts Highway Department. A total of 157 employees were trained and certified as flaggers.
- Implemented a new voluntary life insurance program.
- Performed the training, testing, and data conversion activities needed to implement an upgrade to the Lawson System.
- Initiated the procurement for the MWRA Dental Program and managed the implementation of the program.
- Documented HRIS procedures for key compensation and benefits actions.
- Continued to automate and streamline human resources processes including recruitment and hiring processes.
- Successfully implemented a new injury and illness reporting system including the first submission to the State of Massachusetts summarizing work-related injuries and illnesses in 2008.
- Implemented the second round of Mechanical Certification Training.
- Delivered NFPA 701 (National Fire Protection Training) to electrical staff as the initial training course for Medium Voltage Certification Training.
- Formulated bargaining strategy for FY10 collective bargaining negotiations for the five bargaining unions.
- Delivered Unit 3 Supervisory training, Administrative Certification Program (ACP) training and Productivity Improvement Program (PIP) training.

FY10 Initiatives

- Negotiate and implement successor collective bargaining agreement 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.
- Provide Harassment Prevention training for MWRA employees.
- 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.
- Implement the second round of Mechanical Certification Training.

Budget Highlights:

- \$1.7 million for **Wages and Salaries**, an increase of \$77,000 or 4.8% as compared to the FY09 Budget, includes funding for 21 positions.
- \$16.0 million for **Fringe Benefits**, a decrease of \$390,000 or 2.4% as compared to the FY09 Budget. The budget includes \$13.7 million for MWRA's share of health insurance costs, \$1.2 million for MWRA's share of Medicare taxes, \$960,000 for MWRA's share of dental insurance costs and union health and welfare fund contributions, \$60,000 for unemployment insurance payments, and \$31,000 for tuition reimbursement.

- **Health insurance** budget decreased by 3.6%. The FY10 proposed budget assumes that GIC health insurance cost sharing is revised in FY10. Dental insurance is 6.2% higher than the FY09 Budget due to a projected increase in dental insurance premiums. Medicare is 5.0% higher than FY09 Budget which reflects estimated expenses of contractual salary increases in FY10. Unemployment insurance and Tuition Reimbursement for FY10 are both level funded.
- \$1.3 million for **Workers' Compensation** was level funded for FY10, Human Resources is responsible for the management of this program as well as coordination with the third-party administrator.
- \$408,000 for **Professional Services**, a decrease of \$71,000 or 14.9% lower than the FY09 Budget. The Proposed FY10 Budget includes \$180,000 for professional development and technical training, \$110,000 for workers' compensation claims administration, \$55,000 for arbitration expenses, \$38,000 for medical evaluation services, \$12,000 for the Employee Assistance Program, and \$12,000 for Specialized Investigation Services.

MANAGEMENT INFORMATION SYSTEMS (MIS)

Proposed FY10 Current Expense Budget						
MIS						
LINE ITEM	FY07 Actual	FY08 Actual	FY09 Original	FY10 Proposed	Change FY09 to PFY10	
WAGES & SALARIES	\$ 4,983,333	\$ 5,112,092	\$ 5,277,767	\$ 5,322,312	\$ 44,545	0.8%
OVERTIME	1,112	2,207	2,678	2,678	-	0.0%
FRINGE BENEFITS	-	-	-	-	-	-
ONGOING MAINTENANCE	2,392,647	2,536,201	2,500,010	2,510,731	10,721	0.4%
TRAINING & MEETINGS	34,522	29,046	43,823	23,823	(20,000)	-45.6%
OTHER MATERIALS	489,177	386,998	340,234	158,538	(181,696)	-53.4%
OTHER SERVICES	826,296	874,429	840,568	850,795	10,227	1.2%
TOTAL	\$ 8,727,087	\$ 8,940,973	\$ 9,005,080	\$ 8,868,877	\$ (136,203)	-1.5%

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 FY10 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 FY10.
- 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. MIS-generated projects based on infrastructure limitations, and changing technology. All activities seek to balance business demands with costs and the desire to be neither leading nor lagging in the use of technology. Measurement is based on timely completion of milestones and a +/- 10% of budget and schedule 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.

The goal of MIS is to support more than 1,000 MWRA users, including those at the Charlestown Navy Yard, 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.

Highlights of FY10 Goals:

During FY10 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 two new Lawson modules: Absent Management System and Lawson Business Intelligence (LBI) and enhance the Time Entry System.
- Implement “green computing” initiatives focused on server consolidations through server virtualization and 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.

Budget Highlights:

- The Proposed FY10 Budget of \$8.9 million reflects a decrease \$136,000 or 1.5% as compared to the FY09 original budget, primarily due to changes in **Wages and Salaries, Ongoing Maintenance, Training and Meetings** and **Other Materials** as described below.
- \$5.3 million for **Wages and Salaries** an increase of \$45,000 or 1.0% as compared to FY09 Budget. The FY10 Proposed Budget funds 63 positions.
- \$2.5 million for **Ongoing Maintenance** for license and maintenance fees to support administrative, operations, and database applications used by MWRA staff. This represents an increase of \$11,000 or 0.4% as compared to FY09 original budget.
- \$24,000 for **Training and Meetings** reflects a decrease of \$20,000 or 45.6% as compared to FY09 original budget.
- \$159,000 for **Other Materials** reflects a decrease of \$182,000 or 53.4% as compared to FY09 original budget primarily due to adjustments to PCs, hardware and peripheral items deferred for later purchase to better meet FY10 budgeting goals.
- \$851,000 for **Other Services** includes an increase of \$10,000 or 1.2% as compared to the FY09 original budget due to the inclusion of Text Messaging within the telecommunications expenses.

FY09 Accomplishments

- Infrastructure:
 - Network Enhancements: - Implemented new backup enhancement solutions that eliminate the need for the physical local backup at Southborough. This solution will enable the backup of planned storage growth at CWTP. Upgraded memory on the 3 core switches at Chelsea, CNY and DI and upgraded all network gigabit switches to the latest code and added a new network switch to Chelsea's Maintenance building to accommodate networking requirements.
 - Blackberry Business Continuity Solution – A new blackberry server was installed at DITP providing site failure protection for blackberry services. The previous manual solution existing only in Chelsea has been replaced by real-time data replication and process automation. This new solution improves the recovery time and reduces the probabilities of data loss.
 - Data Network Upgrade- Completed the upgrade of the wide area data network that connects 14 MWRA sites. This network redesign will take advantage of Verizon's multi path technology, which will provide monthly cost saving of 10%-15%, with an added benefit of increased network availability. As an example, this was achieved by adding a secondary network path to CNY.
 - Ruggedized laptops for the Water Pipeline Inspection group were configured for security protection (data encryption, Cyber Angel/Tracking, USB port restrictions). Arc Reader has been installed as viewer to allow users access to GIS Data such as pipe and valve information.
 - Green Computing - Researched and designed a solution for consolidation of infrastructure servers in the Chelsea data center that utilizes the latest blade technology reducing energy consumption and carbon footprint. An RFM for hardware and software support has been submitted to Procurement and implementation of the solution is targeted for Q3/4. In addition to energy savings, the server maintenance cost savings project to be over \$40K over a five year period.
 - PC Upgrades- PCs are purchased annually under the CEB and generally are forecasted to have a useful life of approximately 5 years. In FY09 an additional 150 PC's were purchased and installed with the assistance of Hub Tech resources an HP support vendor. These PC's replaced older models with energy efficient rated PC's contributing to the green computing model.

- Applications:
 - Lawson Upgrade - December offered an opportunity to parallel test the 5th week payroll exception (occurs 4 times a year) on the new system. All payroll reports tied out with our production run. Full cycle (4 week) user parallel payroll testing is scheduled to begin in February. Completed another full test pass of the Lawson version 8 to 9 upgrade procedures that will be used migrate live data to the new system when we go live. Completed migration, testing and revisions to nearly all MWRA customized objects. Lawson Upgrade scheduled to go-live Memorial Day weekend.
 - Developed web-based prototypes for organizational-based dissemination of management reports and data.
 - Contract Application Upgrade: MIS and Budget departments started a new project to move our current CIP budget users from Oracle Financial Analyzer (OFA) to Hyperion Pillar (Oracle's replacement application). In October the documentation for the current system was reviewed and consolidated and will be used to conduct a gap analysis.
 - LIMS: The execution of the Conference Room Pilot for the new Laboratory Information Management System (LIMS) was successfully completed. End user training for phase one (Southboro Water System Lab) of go live is on target for February. Water Quality Data Warehouse: The newly developed data warehouse being used for accessing LabWare LIMS and old WQ3 data was tested by the Southboro Water Quality group. User Acceptance testing was successful with data from both systems being retrieved and verified as accurate.
 - PIMS (TRAC-IS Replacement): The TRAC department went live with the new Pretreatment Information Management System (PIMS) on August 18. This system replaces the legacy TRAC-IS

application that has been in use since February 1992. PIMS is fully supported by the vendor, Inflection Point Solutions and MIS staff and is running on a fully supported hardware platform. In addition, the new PIMS successfully executed the annual permit fees process by TRAC.

- GIS: Applied Geographics Inc. (AGI) was awarded a contract to develop an integration framework for the new Pretreatment Information Management System (PIMS) and GIS. This project is for the development of a standard web-based viewer that will be integrated with the new Pretreatment Information Management System (PIMS). This effort will be the foundation for subsequent integration projects between GIS and many of MWRA's information systems.

PROCUREMENT

Proposed FY10 Current Expense Budget PROCUREMENT							
LINE ITEM	FY07 Actual	FY08 Actual	FY09 Original	FY10 Proposed	Change FY09 to PFY10		
WAGES & SALARIES	\$ 3,210,896	\$ 3,450,924	\$ 3,683,605	\$ 3,723,740	\$ 40,135		1.1%
OVERTIME	47,422	27,347	15,000	15,000	-		0.0%
FRINGE BENEFITS	339	441	-	-	-		-
UTILITIES	117	398	-	-	-		-
ONGOING MAINTENANCE	376,824	960,738	-	-	-		-
TRAINING & MEETINGS	5,635	3,096	7,725	7,725	-		0.0%
OTHER MATERIALS	103,596	103,050	86,608	84,608	(2,000)		-2.3%
OTHER SERVICES	96,435	75,387	81,370	74,370	(7,000)		-8.6%
TOTAL	\$ 3,841,264	\$ 4,621,381	\$ 3,874,308	\$ 3,905,443	\$ 31,135		0.8%

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.

The goals of the Procurement Department are to:

- 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.

FY09 Accomplishments

- Competitively bid CY08 Renewable Portfolio Standard certificates which resulted in FY09 revenue of \$487,000 to date.
- Awarded the following major contracts in the first half of FY09: design and installation of two wind turbines at Deer Island; sale of DITP Enterprise Engines; fast-track contract for the removal of PCBs at Wachusett Dam; and Water Transmission Redundancy Plan.
- Advertised or received bids/proposals for the following: West Roxbury Tunnel Design Services; DITP Primary and Secondary Clarifier Rehabilitation; North Dorchester Bay Pumping Station and Sewers.

- Developed with Operations contract provisions to implement Excavation and Trench Safety regulations and Road Flagger and Police Detail regulations.
- Procured Authority's vehicle purchases at the beginning of Fiscal Year 2009, allowing for ample production and on-time delivery of vehicles.
- The Purchasing Unit, working with the Materials Management unit, utilized the enhanced reporting capabilities of Lawson to combine common multiple item purchases in order to create blanket contracts.
- Working with the Recycling Committee, Purchasing staff sought out environmentally friendly products, most notably recycled toners, 30% recycled copy paper and hybrid vehicles
- The Purchasing Unit worked with Internal Audit staff and the new Plumbing Supply vendor to set up the vendor's computerized invoicing system to reflect and include all % discounts and discounted unit pricing.
- The purchasing Unit analyzed the Authority's paper use and bid the new paper contract at an amount 15% less than last year.
- Purchasing Staff utilized the State Contract for fuel oil to lock in on February 20, 2009, at a favorable price of \$1.48 per gallon for 420,000 gallons of fuel oil for DITP.
- Recycled 60.15 tons of paper, 148.21 tons of scrap metal and 5, 215 gallons of waste oil, generating \$24,500 in revenues.

Budget Highlights:

- The Proposed FY10 Budget of \$3.9 million represents a 0.8% increase over FY09 original budget; includes \$3.7 million to support **Wages and Salaries** for 51 positions.
- Other Materials of \$85,000, a decrease of \$2,000 or 2.3% from FY09 budget. Funding mainly supports centralized office supply purchases of \$77,000.
- Other Services of \$74,000, a decrease of \$7,000 or 8.6% from FY09 budget. Funding supports Advertising of \$53,000 and Printing/Duplicating of \$10,000 fro contract documents and specifications.

REAL PROPERTY and ENVIRONMENTAL MANAGEMENT

Proposed FY10 Current Expense Budget							
REAL PROPERTY / ENVIRONMENTAL MANAGEMENT							
LINE ITEM	FY07 Actual	FY08 Actual	FY09 Original	FY10 Proposed	Change FY09 to PFY10		
WAGES & SALARIES	\$ 508,106	\$ 523,474	\$ 561,854	\$ 582,287	\$ 20,433		3.6%
OVERTIME	511	399	-	-	-		-
TRAINING & MEETINGS	1,318	1,370	3,000	3,000	-		0.0%
PROFESSIONAL SERVICES	(272)	-	500	500	-		0.0%
OTHER MATERIALS	2,128	1,534	1,970	1,970	-		0.0%
OTHER SERVICES	118,921	220,169	301,676	270,376	(31,300)		-10.4%
TOTAL	\$ 630,712	\$ 746,946	\$ 869,000	\$ 858,133	\$ (10,867)		-1.3%

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 manages 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.

The goals of the Real Property and Environmental Management Department are to:

- 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.

FY09 Accomplishments

- Renegotiated one antenna lease agreement with communication companies for use of space at MWRA water tanks at Turkey Hill (Arlington) and Walnut Hill (Lexington) raising annual rate from \$30,000 each to \$50,000 each increasing the total annual revenue to \$250,000 of which half is shared with the host community. Collected all outstanding permit arrears. Active negotiations are continuing to expand this program.
- Managing fee assessment for 8M permits on MWRA fee controlled land. Currently collecting approximately \$35,000 per year.
- Staff acquired property rights to support projects such as the Hultman Interconnections and East Boston Branch Sewer Relief Project during FY08. Staff acquired additional necessary easements for East Boston Branch (Hultman) during FY09 due to routing changes. Also negotiated easement rights and a license with 7-11 in Somerville for Meter 32 improvements.

- Continued to provide technical support, including regulatory liaison, for the ongoing remediation of PCBs at the Wachusett Dam and Cosgrove Intake Facility. The approval for the abatement plan for both facilities was issued by EPA on August 29, 2007. A third plan for PCB abatement of the Dam face and soil was approved by EPA on September 9, 2008.
- Completed PCB Abatement at the Oakdale Transformer Yard. Prepared a PCB abatement plan for the Spring Street Pumping Station facility, and received EPA approval for the plan on July 24, 2008.
- Prepared a Spill Prevention, Countermeasures and Control (SPCC) Plan for the Braintree-Weymouth Replacement Pumping Station.
- Provided training to staff regarding the regulatory requirements for the new Braintree-Weymouth Replacement Pumping Station Emergency Generator. Submitted certification documents to DEP.
- Provided technical and environmental regulatory support regarding contaminated soil and groundwater issues on various design and construction projects, including North Dorchester Bay CSO Tunnel and Section 53 and 97A Water Main Replacement projects, Blue Hills Covered Storage, Deer Island Wind Turbines, Cottage Farm Inflow Controls, Southern spine Distribution Mains, University Ave. Water Main, East Boston Branch Sewer, SCADA Upgrades, Norumbega Chlorine Bldg Demolition, Phase VII Valve Replacements, Lynnfield/Saugus Pipeline, Sudbury Aqueduct Short Term Repairs, Cosgrove Transformer Replacement, and Asbestos abatements at Shaft Somerville and Hingham Pumping Station Isolation Gate.
- Submitted a CO2 Budget Emission Control Application to DEP for the Deer Island Treatment Plant combustion turbines in accordance with the Regional Greenhouse Gas Initiative (RGGI). DEP approve the Plan on January 7, 2009. Made initial purchase of CO2 allowances in accordance with the Emission Control Plan through participation in the second RGGI auction of CO2 allowances.

FY10 Initiatives

- Procure a successor contract to the MWRA Underground Storage Tank Maintenance and Inspection contract, with the addition of third party inspections in accordance with 527 CMR 9.00.
- Coordinate compliance with 310 CMR 7.71, Reporting of Greenhouse Gas Emissions.

Budget Highlights:

- The FY10 Proposed Budget of \$858,000 represents a decrease of \$11,000 or 1.3% as compared to the FY09 original budget.
- **Wages and Salaries** budget of \$582,000 includes funding for six positions. The increase of \$20,000 or 3.6% is primarily due to contractual wage increases.
- \$270,000 for **Other Services** is a decrease of \$31,000 or 10.40% as compared to the FY09 original budget. This decrease is due primarily to the completion of the Lake Cochituate Groundwater Monitoring project in FY09. A final report closing out the site will be issued in FY09. This reduction is partially offset by an increase in the cost of the UST Maintenance contract with the addition to the scope of work of third party inspections of underground storage tanks as required by new regulations.



Appendices

APPENDIX A

DIRECT EXPENSE BUDGET LINE ITEMS

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 five division budgets with a detailed description of program budgets and highlights within each division section.

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.

Beginning in FY2001, 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 45 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.

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 will establish 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 FY2010 to FY2019										
	FY2010	FY2011	FY2012	FY2013	FY2014	FY2015	FY2016	FY2017	FY2018	FY2019
EXPENSES										
Direct Expenses	\$214,489	\$222,900	\$231,975	\$240,588	\$251,441	\$261,645	\$272,136	\$283,022	\$294,342	\$306,294
Indirect Expenses	41,587	49,828	50,809	51,682	53,883	53,447	55,385	56,879	57,414	59,216
Capital Financing (before offsets)	<u>354,426</u>	<u>398,665</u>	<u>397,652</u>	<u>441,307</u>	<u>455,790</u>	<u>480,040</u>	<u>503,665</u>	<u>558,741</u>	<u>515,781</u>	<u>568,387</u>
Sub-Total Expenses	\$610,502	\$671,394	\$680,437	\$733,577	\$761,114	\$795,133	\$831,186	\$898,642	\$867,537	\$933,897
Debt Service Assistance	(7,000)	(7,000)	(7,000)	(7,000)	(7,000)	(7,000)	(7,000)	(7,000)	(7,000)	(7,000)
Bond Redemption Savings	0	(24,083)	0	(8,771)	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 Expenses	\$603,502	\$640,311	\$673,437	\$717,806	\$754,114	\$788,133	\$824,186	\$891,642	\$860,537	\$926,897
REVENUE & INCOME										
Non-Member and Other Revenue	\$13,140	\$13,467	\$14,218	\$14,468	\$14,801	\$15,078	\$15,360	\$15,580	\$15,782	\$15,862
Interest Income	13,261	12,071	12,239	14,899	22,904	23,774	24,703	25,982	26,269	27,333
Rate Stabilization	<u>10,280</u>	<u>12,038</u>	<u>6,077</u>	<u>6,930</u>	<u>3,339</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
Total Other Revenue	\$36,681	\$37,576	\$32,534	\$36,297	\$41,044	\$38,851	\$40,063	\$41,562	\$42,051	\$43,195
Total Rate Revenue	\$566,821	\$602,735	\$640,903	\$681,509	\$713,070	\$749,281	\$784,123	\$850,080	\$818,485	\$883,702
Rate Revenue Increase	4.8%	6.3%	6.3%	6.3%	4.6%	5.1%	4.7%	8.4%	-3.7%	8.0%
Estimated Annual Household Charge **										
Charge based on 61,000 gpy (weighted)	\$809	\$846	\$899	\$947	\$1,000	\$1,053	\$1,106	\$1,174	\$1,195	\$1,263
Charge based on 90,000 gpy (weighted)	\$1,193	\$1,248	\$1,327	\$1,398	\$1,475	\$1,553	\$1,633	\$1,732	\$1,763	\$1,863
WASTEWATER										
EXPENSES										
Direct Expenses	\$158,115	\$164,137	\$170,859	\$176,854	\$183,733	\$191,166	\$198,813	\$206,765	\$215,036	\$223,760
Indirect Expenses	14,084	18,151	18,327	18,490	19,787	18,876	17,535	18,305	17,972	18,878
Capital Financing (before offsets)	<u>245,620</u>	<u>282,224</u>	<u>274,785</u>	<u>303,408</u>	<u>304,847</u>	<u>316,355</u>	<u>326,501</u>	<u>374,123</u>	<u>324,583</u>	<u>376,118</u>
Sub-Total Wastewater Expenses	\$417,818	\$464,511	\$463,972	\$498,752	\$508,368	\$526,397	\$542,849	\$599,194	\$557,591	\$618,757
Debt Service Assistance	(6,540)	(6,566)	(6,470)	(6,498)	(6,460)	(6,463)	(6,441)	(6,506)	(6,439)	(6,484)
Bond Redemption Savings	0	(5,783)	0	0	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	\$411,278	\$452,163	\$457,502	\$492,253	\$501,908	\$519,933	\$536,408	\$592,688	\$551,152	\$612,273
REVENUE & INCOME										
Non-Member and Other Revenue	\$5,075	\$5,083	\$5,085	\$5,091	\$5,091	\$5,094	\$5,097	\$5,107	\$5,100	\$5,110
Interest Income	8,683	7,807	8,194	9,966	14,900	15,273	15,653	16,477	16,327	17,048
Rate Stabilization	<u>9,799</u>	<u>6,798</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	\$23,557	\$19,688	\$13,279	\$15,056	\$19,991	\$20,367	\$20,750	\$21,584	\$21,427	\$22,159
Wastewater Rate Revenue	\$387,721	\$432,474	\$444,223	\$477,197	\$481,917	\$499,566	\$515,658	\$571,104	\$529,725	\$590,115
Rate Revenue Increase	7.5%	11.5%	2.7%	7.4%	1.0%	3.7%	3.2%	10.8%	-7.2%	11.4%
Estimated Annual Household Sewer Charge **										
Charge based on 61,000 gpy (weighted)	\$483	\$519	\$540	\$572	\$592	\$618	\$645	\$691	\$692	\$743
Charge based on 90,000 gpy (weighted)	\$712	\$766	\$797	\$845	\$873	\$912	\$951	\$1,020	\$1,021	\$1,096
WATER										
EXPENSES										
Direct Expenses	\$56,374	\$58,763	\$61,116	\$63,734	\$67,708	\$70,479	\$73,323	\$76,256	\$79,306	\$82,534
Indirect Expenses	27,503	31,678	32,482	33,193	34,095	34,572	37,850	38,574	39,442	40,338
Capital Financing (before offsets)	<u>108,807</u>	<u>116,442</u>	<u>122,867</u>	<u>137,899</u>	<u>150,943</u>	<u>163,685</u>	<u>177,164</u>	<u>184,618</u>	<u>191,197</u>	<u>192,268</u>
Sub-Total Water Expenses	\$192,684	\$206,883	\$216,465	\$234,825	\$252,746	\$268,736	\$288,337	\$299,448	\$309,946	\$315,140
Debt Service Assistance	(460)	(434)	(530)	(502)	(540)	(537)	(559)	(494)	(561)	(516)
Bond Redemption Savings	0	(18,300)	0	(8,771)	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 Water Expenses	\$192,224	\$188,148	\$215,934	\$225,553	\$252,206	\$268,199	\$287,777	\$298,954	\$309,385	\$314,624
REVENUE & INCOME										
Non-Member and Other Revenue	\$8,065	\$8,384	\$9,133	\$9,377	\$9,710	\$9,983	\$10,263	\$10,473	\$10,682	\$10,752
Interest Income	4,578	4,264	4,044	4,934	8,004	8,501	9,050	9,505	9,942	10,284
Rate Stabilization	<u>481</u>	<u>5,240</u>	<u>6,077</u>	<u>6,930</u>	<u>3,339</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
Total Other Revenue	\$13,124	\$17,888	\$19,254	\$21,241	\$21,053	\$18,484	\$19,313	\$19,978	\$20,625	\$21,036
Water Rate Revenue	\$179,100	\$170,261	\$196,680	\$204,312	\$231,153	\$249,715	\$268,465	\$278,976	\$288,761	\$293,588
Rate Revenue Increase	-0.6%	-4.9%	15.5%	3.9%	13.1%	8.0%	7.5%	3.9%	3.5%	1.7%
Estimated Annual Household Water Charge **										
Charge based on 61,000 gpy (weighted)	\$326	\$327	\$359	\$375	\$408	\$435	\$462	\$482	\$503	\$520
Charge based on 90,000 gpy (weighted)	\$481	\$483	\$530	\$553	\$602	\$641	\$681	\$712	\$742	\$767

**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 November 2007.

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.

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 environment 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 near Walnut Hill, where MWRA adjusts pH and alkalinity to reduce the leaching of lead from home plumbing.

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 2000 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
Proposed FY10 Current Expense Budget - Capital Financing Detail (as of 6/30/10)

	Projected Outstanding as of 6/30/10	Total	Sewer	Water
SRF¹				
Unrefunded	\$ 16,300,000	\$ 32,844	\$ 32,844	
1999E Sewer	15,997,384	382,187	382,187	-
1999E Water		556,468	-	556,468
1999F	318,875,000	15,644,060	15,644,060	-
2000E Sewer	70,838,190	2,789,895	2,789,895	-
2000E Water		571,479	-	571,479
2001C Water	3,925,726	251,136	-	251,136
2001D Sewer	6,339,799	368,243	368,243	-
2001D Water		79,350	-	79,350
2002H Sewer	104,870,000	3,105,464	3,105,464	-
2002H Water		1,531,877	-	1,531,877
2002I Sewer	2,288,374	101,966	101,966	-
2002I Water		1,478	-	1,478
2003A	1,163,275	71,557	-	71,557
2003B	3,323,713	224,315	-	224,315
2003C Sewer	45,711,000	1,357,260	1,357,260	-
2003C Water		963,843	-	963,843
2004C Sewer	11,057,350	539,291	539,291	-
2004C Water		92,653	-	92,653
2004D Sewer	68,294,022	3,840,240	3,840,240	-
2004D Water		645,899	-	645,899
2005C Sewer	7,548,409	417,451	417,451	-
2005C Water		69,429	-	69,429
2005D Sewer	74,347,448	3,398,449	3,398,449	-
2005D Water		809,085	-	809,085
2005E Sewer	423,083	24,961	24,961	-
2005E Water		5,479	-	5,479
2006C Sewer	8,164,842	487,279	487,279	-
2006D Sewer	89,710,868	3,749,999	3,749,999	-
2006D Water		1,622,370	-	1,622,370
2006E Sewer	497,198	22,883	22,883	-
2006E Water		10,281	-	10,281
2007C Sewer	7,088,875	367,889	367,889	-
2007C Water		200,750	-	200,750
2007D Sewer	22,973,223	1,153,794	1,153,794	-
2007E Sewer	79,319,505	3,305,350	3,305,350	-
2007E Water		1,268,189	-	1,268,189
2008G Sewer	7,061,241	409,901	409,901	-
2008G Water		82,677	-	82,677
2008H Sewer (March 2009)	122,106,480	4,364,250	4,364,250	-
2008H Water (March 2009)		1,818,200	-	1,818,200
2009 SRF Sewer (Fall 2009)		2,526,875	2,526,875	-
2009 SRF Water (Fall 2009)		795,000	-	795,000
Total SRF Debt	\$ 1,088,225,005	\$ 60,062,045	\$ 48,390,530	\$ 11,671,515

APPENDIX F
Proposed FY10 Current Expense Budget - Capital Financing Detail (as of 6/30/10)

	Projected Outstanding as of 6/30/10	Total	Sewer	Water
MWRA Senior Debt				
1993C Refunding/New	48,095,000	5,985,725	5,237,509	748,216
1997D Refunding	122,015,000	6,242,850	6,117,993	124,857
1998A	100,355,000	4,766,863	3,177,924	1,588,938
1998B Refunding	102,800,000	9,834,550	9,441,168	393,382
2002B	74,415,000	3,809,031	380,903	3,428,128
2002J Refunding	347,835,000	18,574,613	16,717,151	1,857,461
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	403,790,000	28,885,063	9,387,645	19,497,417
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 (Feb 2009 New Money)	175,000,000	10,625,000	5,312,500	5,312,500
FY10 New Money (May 2010)		7,511,111	3,755,556	3,755,556
Defeasance Assumption		(10,000,000)	(5,000,000)	(5,000,000)
Total Senior	\$ 3,235,090,000	\$ 178,661,174	\$ 104,934,192	\$ 73,726,981
Subordinate Debt				
1999B (variable)	72,600,000	2,904,000	1,742,400	1,161,600
2002C Refunding (variable)	70,575,000	2,823,000	940,906	1,882,094
2002D Refunding (variable)	66,450,000	2,778,786	2,778,786	-
2008A Refunding	338,005,000	15,486,558	13,628,171	1,858,387
2008B Refunding	124,595,000	4,930,083	1,035,318	3,894,766
2008C Refunding	194,900,000	11,119,153	10,674,387	444,766
2008D Refunding	83,615,000	44,747,962	44,747,962	-
2008E Refunding	224,770,000	10,577,531	9,731,328	846,202
2008F Refunding	191,705,000	7,419,050	667,715	6,751,336
Total Subordinate Debt	\$ 1,367,215,000	\$ 102,786,124	\$ 85,946,973	\$ 16,839,151
Total SRF & MWRA Debt Service²	\$ 5,690,530,005	\$ 341,509,343	\$ 239,271,695	\$ 102,237,647
Water Pipeline Commercial Paper	\$ 194,000,000	\$ 4,100,000	\$ -	\$ 4,100,000
Current Revenue/Capital ³		5,600,000	4,200,000	1,400,000
Capital Lease		3,217,060	2,166,036	1,051,024
Sub-Total	\$ 194,000,000	\$ 12,917,060	\$ 6,366,036	\$ 6,551,024
Total Capital Financing (before Debt Service Offsets)	\$ 5,884,530,005	\$ 354,426,403	\$ 245,637,731	\$ 108,788,671
Debt Service Offsets				
Variable Rate Savings		\$ -	\$ -	\$ -
Debt Service Assistance		(7,000,000)	(6,540,343)	(459,657)
Total Capital Financing	\$ 5,884,530,005	\$ 347,426,403	\$ 239,097,388	\$ 108,329,014

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. The amount is partly determined by MWRA's bond covenant requirements.