



Executive Summary

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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 transmits its proposed budget to the Advisory Board in March. The Advisory Board then has sixty days to review, comment, and provide recommendations on the proposed budget. 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 Final FY09 Budget totals \$590.5 million before offsets of \$11.25 million in debt service assistance (DSA) for a net total expense of \$579.3 million. This budget is \$15.2 million or 2.7% above FY08 actuals. While capital financing costs remain the largest component of the CEB, other escalating expenses such as higher utility and chemical pricing, increased maintenance needs and higher operating reserve requirements continue to put pressure on the operating budget.

The Authority's operations are energy intensive and rising energy prices are contributing to increased chemical and utility costs. Utility expense accounts for 11.4% of operating costs, up from the 10.6% reported in FY08. Utility expense has increased 14.4% from FY08 actuals. If oil and other energy prices continue to rise, the budget could be adversely affected. 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. In FY08, Deer Island purchased approximately 79% of its electricity requirement in the real time energy market. The remaining 21% of the plant's electricity requirements were met through on-site generation. Of this amount, 81% was generated from the steam turbine generator (STG) through the burning of digester gas in the boilers, 16% was from the hydro-power facility, and 3% was from the combustion turbine generator (CTG), through a combination of exercise and load response. The Authority is also investigating alternative energy sources including wind and solar power opportunities at several facilities to promote additional self-generation.

The MWRA's Final FY09 Budget is \$579.3 million after offsets. The Final budget includes \$11.25 million of Debt Service Assistance from the Commonwealth.

Total expenses include \$328.8 million for capital financing costs, 55.7% of total costs, and \$261.7 million or 44.3% for operating expenses, of which \$215.9 million is for direct expenses and \$45.8 million is for indirect expenses. Total expenses increased by \$15.2 million over FY08 actuals, \$16.6 million for operating expenses which was partially offset by a \$1.4 million net reduction in capital financing expense.

The \$1.4 million reduction in capital financing expenses reflects a \$5.7 million reduction in debt service assistance offset by a \$7.1 million decline in debt service, reflecting revised interest rate assumptions for the variable rate debt and commercial paper used in the refunding. In addition to these reductions, the Authority also benefits from the impacts of 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 requirement. 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 \$16.6 million increase in operating expenses includes \$13.5 million for direct expenses and \$3.1 million for indirect expenses. The increase in direct expenses reflects increases in labor agreements, maintenance, utilities and chemicals. The increase in indirect expenses includes \$1.1 million in additional funding for the operating reserve and \$1.0 million increase in pension expense reflecting revised actuary assumptions.

The Final rate revenue requirement for FY09 is \$540.8 million, an increase of 4.45% over the FY08 rate revenue requirement.

The Final FY09 non-rate revenue totals \$38.5 million, a decrease of \$17.7 million from FY08 actuals. The change, primarily results from a \$13.1 million decrease in projected investment earnings due to a projected 250 basis point drop in investment rate assumptions as the fed funds rate has dropped 225 basis point since September 2007. It is important to note that \$5.1 million in rate stabilization funds are projected to be used in FY09. The Final FY09 non-rate revenue budget includes \$20.4 million for investment income, \$7.6 million in other user charges, \$2.0 million in permit fees and penalties, \$1.7 million from the sale of renewable energy portfolio credits and participation in energy load reduction programs, \$0.9 million from the Commonwealth for chemical rebates and \$0.8 for other miscellaneous revenue items.

Table I-1 on the following page shows MWRA's Final FY09 Budget for revenue and expenses by line item compared with FY08 and FY07 actual spending. Changes from FY08 to FY09 are described in the Revenue and Expense section of the Executive Summary and in the divisional sections of this document.

Table I-1

**Final FY09 Current Expense Budget
EXPENSES and REVENUES**

TOTAL MWRA	FY07 Actual	FY08 Actual	FY09 Final	Change FY09 Final to FY08 Actuals	
				\$	%
EXPENSES					
WAGES AND SALARIES	\$ 83,034,216	\$ 86,452,409	\$ 90,676,105	\$ 4,223,696	4.9%
OVERTIME	3,832,439	3,770,660	3,906,671	136,011	3.6%
FRINGE BENEFITS	15,120,537	15,594,183	16,462,542	868,359	5.6%
WORKERS' COMPENSATION	1,235,814	1,159,464	1,325,000	165,536	14.3%
CHEMICALS	7,266,880	8,642,802	9,876,380	1,233,578	14.3%
ENERGY AND UTILITIES	24,228,522	25,975,019	29,724,532	3,749,513	14.4%
MAINTENANCE	25,914,704	26,408,816	28,089,126	1,680,310	6.4%
TRAINING AND MEETINGS	275,433	225,995	290,913	64,918	28.7%
PROFESSIONAL SERVICES	5,864,009	6,670,261	7,252,264	582,003	8.7%
OTHER MATERIALS	5,516,242	5,427,462	5,170,042	(257,420)	-4.7%
OTHER SERVICES	21,623,105	22,092,301	23,145,528	1,053,227	4.8%
TOTAL DIRECT EXPENSES	\$ 193,911,901	\$ 202,419,372	\$ 215,919,103	\$ 13,499,731	6.7%
INSURANCE	\$ 2,454,247	\$ 2,191,342	\$ 2,450,000	\$ 258,658	11.8%
WATERSHED/PILOT	20,900,539	23,216,874	23,083,385	(133,489)	-0.6%
HEEC PAYMENT	4,221,585	4,132,778	4,161,027	28,249	0.7%
MITIGATION	1,383,482	1,409,987	1,445,234	35,247	2.5%
ADDITIONS TO RESERVES	3,118,693	471,506	2,790,504	2,318,998	491.8%
RETIREMENT FUND	4,094,362	4,258,645	11,906,836	7,648,191	179.6%
POSTEMPLOYMENT BENEFITS	-	7,098,896	-	(7,098,896)	-100.0%
BUDGET RESERVE	-	-	-	-	-
TOTAL INDIRECT EXPENSES	\$ 36,172,908	\$ 42,780,028	\$ 45,836,987	\$ 3,056,959	7.1%
DEBT SERVICE (before offsets)	\$ 341,693,795	\$ 329,340,228	\$ 328,779,672	\$ (560,556)	-0.2%
VARIABLE RATE DEBT	(4,295,441)	6,522,527	-	(6,522,527)	-100.0%
BOND REDEMPTION	-	-	-	-	-
DEBT SERVICE ASSISTANCE	(18,937,082)	(16,980,026)	(11,250,000)	5,730,026	-33.7%
TOTAL DEBT SERVICE	\$ 318,461,272	\$ 318,882,729	\$ 317,529,672	\$ (1,353,057)	-0.4%
TOTAL EXPENSES	\$ 548,546,079	\$ 564,082,129	\$ 579,285,762	\$ 15,203,633	2.7%
REVENUE & INCOME					
RATE REVENUE	\$ 495,358,764	\$ 517,797,832	\$ 540,819,000	\$ 23,021,168	4.45%
OTHER USER CHARGES	8,870,839	14,796,257	7,576,979	(7,219,278)	-48.8%
OTHER REVENUE	6,245,992	7,815,283	5,389,393	(2,425,890)	-31.0%
RATE STABILIZATION	-	-	5,073,365	5,073,365	-
INVESTMENT INCOME	40,262,125	33,516,949	20,427,025	(13,089,924)	-39.1%
TOTAL REVENUE & INCOME	\$ 550,737,720	\$ 573,926,321	\$ 579,285,762	\$ 5,359,441	0.9%

FY08 Accomplishments

- Successfully refunded \$1.2 billion of Variable Rate Debt Bonds (VRDBs) and Auction Rate Securities (ARS), completely exiting the ARS market in the largest bond transaction in Authority history.
- Began trading variable rate debt obligations on the Authority's own strong credit rating for the first time.
- Commenced operation of the new Braintree-Weymouth Replacement Pump Station and discontinued operation of the Commercial Point and Fox Point CSO facilities in preparation for decommissioning in FY09.
- Implemented monitoring program throughout CWTP, made treatment plant process and physical modifications, and convened an expert panel to review MWRA's actions and augment recommendations for addressing water quality issues at the Carroll Water Treatment Plant (CWTP).
- Designed and installed a roof-mounted photovoltaic system at the Deer Island Treatment Plant. Procured flex fuel vehicles, hybrids, and bio-diesel vehicles. The Authority is rated as one of the largest bio-fuel users in the Commonwealth. Competitively bid Renewable Portfolio Standard certificates which resulted in FY08 revenue of \$1.6 million. Completed replacement of 500 CRT monitors with energy saving LCD monitors.
- Operated DITP without any NPDES Permit violations for FY08.
- Awarded the following major contracts in FY08: design and installation of a roof-mounted photovoltaic system at Deer Island; fast-track contracts for the removal of PCBs at Cosgrove Intake, Shaft A and Wachusett Dam; East Boston Branch Relief Sewer Construction; Wastewater Transport SCADA Phase II; JCWTP Ultra Violet Design Services.
- Reduced the terms of the North Dorchester Bay temporary easements at the Bayside Expo/Boston Teachers Union property from three years to one while maintaining contractor flexibility resulting in savings of approximately \$185,000 and certain East Boston Branch Sewer Relief Project temporary easements from 2 years to 6 months resulting in significant cost savings.
- Prepared PCB Abatement Plans for the Oakdale Transformer Yard and the CVA Intake Facility. EPA issued approvals for the plans on March 3, 2008 and May 13, 2008 respectively.

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 Final FY09 Budget.

Table I-2

SOURCES & USES OF FUNDS*		
\$ in Millions		
<i>Sources of Funds</i>		
Other User Charges	\$7.6	1.3%
Other Revenue	5.4	0.9%
Investment Income	20.4	3.5%
Rate Revenue	540.8	93.4%
Rate Stabilization	5.1	0.9%
TOTAL REVENUE	\$579.3	100.0%
<i>Uses of Funds</i>		
Total Expenses before		
Debt Service Offsets	\$590.5	
Less:		
Debt Service Assistance	(11.3)	
Bond Redemption	0.0	
Sub-Total Net Expenses	579.3	
Capital Financing	328.8	55.7%
Direct Expenses	215.9	36.6%
Indirect Expenses	45.8	7.8%
TOTAL EXPENSES	\$590.5	100.0%
TOTAL EXPENSES Less Offsets	\$579.3	
*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 Final FY09 Budget, 93.4% of revenue is derived from rate revenue. The remaining 6.6% 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 Final FY09 Budget, MWRA will raise \$540.8 million of its total revenue requirements from water and sewer assessments to member communities. Of the \$540.8 million, \$360.6 million will fund the sewerage system, an increase of 3.2% as compared to FY08; and \$180.2 million will fund the water system, an increase of 7.1% as compared to FY08.

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 Final FY09 Budget totals \$7.6 million and is composed of \$1.3 million in water revenue collected from sewer ratepayers to offset the cost of water used for operation of the Deer Island, \$3.8 million paid by the Chicopee Valley Aqueduct communities, \$1.4 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 \$5.4 million. This includes permit fees, penalties, hydro-power revenues, Commonwealth reimbursements, and other miscellaneous revenues.

Permit Fees and Penalties

The Final FY09 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 Final FY09 Budget includes \$2.5 million in miscellaneous revenues of which \$1.7 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 \$626,000 in other revenue.

Investment Income

MWRA earns income by investing reserves and fund balances in a variety of interest-yielding securities. The Final FY09 Budget includes \$20.4 million in investment income, a decrease of \$13.1 million from FY08 actual spending due to the 250 basis point drop in projected investment rates. The Final FY09 short-term interest rate is projected at 2.0% versus a 4.5% rate in the FY08 budget.

Non-Recurring Revenue

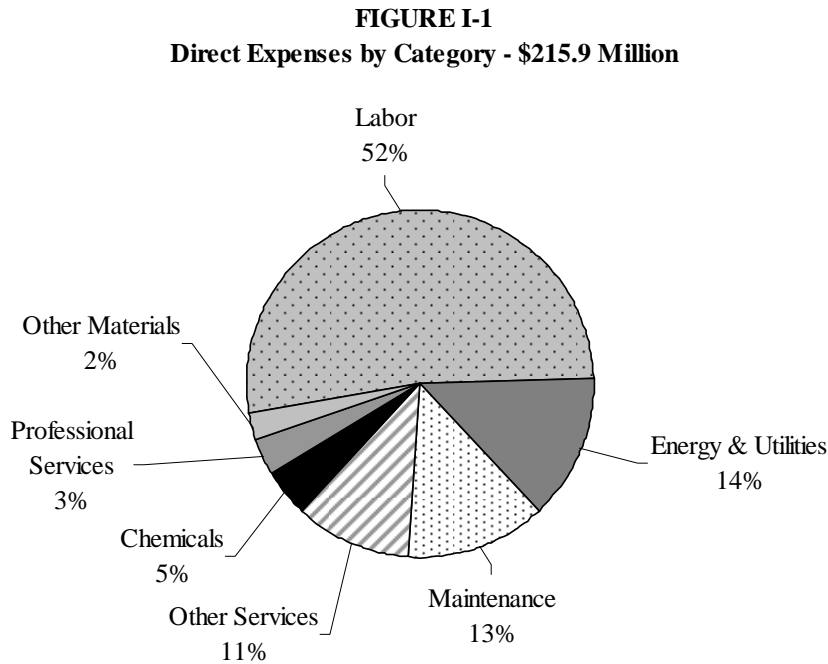
Non-Recurring Revenue is one-time revenue used in a given fiscal year to reduce assessments to member communities. In any fiscal year when annual revenues exceed expenses, MWRA may transfer the unexpended amount to the rate stabilization reserve. Within certain limits, MWRA may use this money to reduce 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 Final FY09 direct program expense budget is \$215.9 million, an increase of \$13.5 million or 6.7% over FY08 actuals. The increase includes higher costs for wages and salaries, health insurance, energy and utilities, 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. Generally, the budget presents expenses by line item and program. The divisional sections of this document discuss program budget changes in greater detail.

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, and workers' compensation) are the largest component of the direct expense budget (52%), followed then by energy and utilities (14%), maintenance (13%), and other services (11%).



Within the labor cost category, wages and salaries account for \$90.7 million, 4.9% higher than FY08 actuals. Of the \$90.7 million, \$89.2 million is for regular pay. The Final budget assumes a staffing level of 1,255 for Fiscal Year 2009, which matches the FY08 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 target staffing level of 1,255 for FY09.

The Final budget for utility expenses is \$29.7 million, a \$3.7 million, or 14.4%, increase compared with FY08 actuals. The increase is primarily due to a \$2.1 million or 9.7% increase in electricity mainly due to higher pricing in FY09. These increases are offset by decreases for water at Deer Island due to revised needs assessment and a reduction of anticipated funding for Regional Greenhouse Gas Initiative (RGGI) credits to reflect the most current information about this emerging program.

The Final FY09 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. Seventy-seven percent (77%) of the Authority's power requirement is purchased on the variable rate market and therefore is exposed to the fluctuations of the market.

As the Authority’s major capital initiatives wind down, maintenance expenditures to preserve these operating assets and maintain its infrastructure will continue to grow. The FY09 maintenance budget is \$28.1 million, an increase of \$1.7 million, or 6.4%, compared to FY08 actuals. The largest increase is at Deer Island and relates mostly to increased service contracts. The Deer Island FY09 maintenance budget \$14.6 million, a \$2.3 million, or 18.6% increase from FY08 actuals, and the Field Operations budget for FY09 is \$7.8 million, an increase of \$0.2 million or 2.5%, compared with FY08 actuals. The proposed funding also covers maintenance for computer systems, software licenses, security system maintenance, and fleet services.

The Final budget for other services is \$23.1 million. Major components of this cost category include \$14.4 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 Final budget includes \$9.9 million for chemicals, an increase of \$1.2 million or 14.3% from FY08 actuals. The majority of the variance is the result of price increases. Budget increases of \$270,000 and \$85,000 reflect higher prices for hydrofluosilicic acid and soda ash, respectively in Field Operations. The new regulatory requirement for enterococcus compliance at Deer Island resulted in usage increases for sodium bisulfite and sodium hypochlorite of \$380,000. Ferrous chloride usage increased \$129,000 to better control struvite formation at Deer Island.

Functional Area Budget Summary

For a broader perspective on MWRA's direct expense budget, Figure I-2 presents direct expenses by MWRA functional area and shows that 46% of the Final FY09 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 - \$215.9 Million

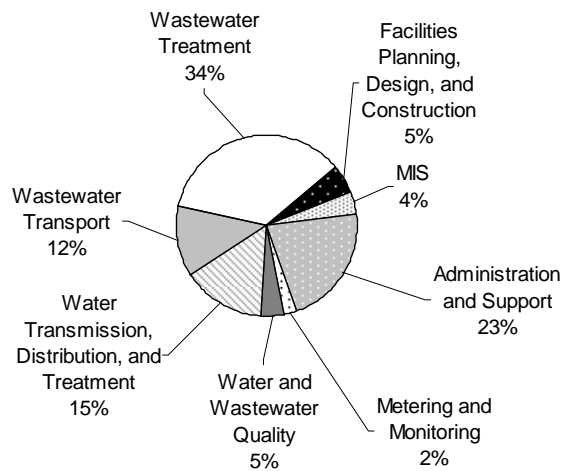
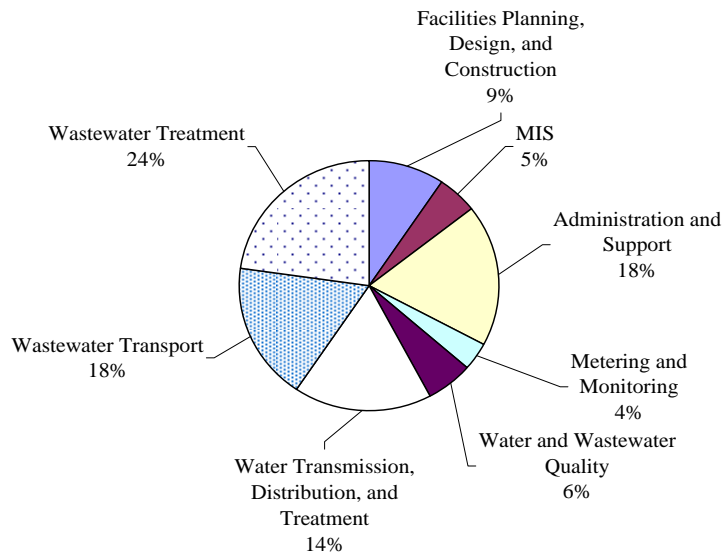


Figure I-3 below illustrates staffing by Functional Area as of June 2008 and shows that of 1,233 filled positions, 56% are devoted to operating and maintaining the water and wastewater treatment and transport systems; 23% to administration and support and MIS functions, and 9% to facilities planning, 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

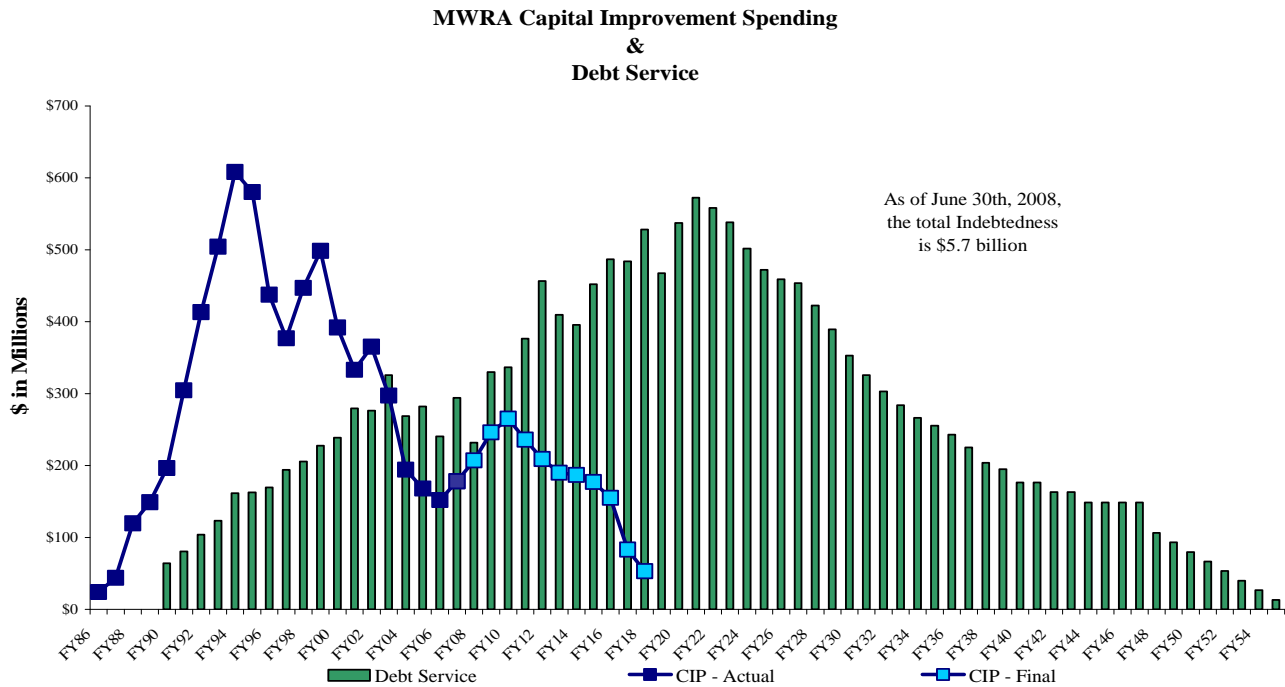
Outstanding Debt and Debt Management

The \$6.9 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.

The Authority's debt service obligation as a percent of total expenses has increased from 36% in 1990 to 56% in the Final FY09 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 \$997 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 a result of the disruption in the variable rate bond market caused by the credit downgrades to the bond insurers, the MWRA refunded all of its insured Variable Rate Demand Bonds (VRDB) and Auction Rate Securities (ARS). As part of the \$1.2 billion 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.

Fiscal Year 2009 capital financing costs total \$328.8 million (before offsets), which reflects the May 2008 Refunding. Debt service remains the largest portion of the MWRA's operating expenses, accounting for 55.7% of total expenses before debt service offsets. The FY09 budget includes \$11.25 million for Debt Service Assistance from the Commonwealth.

For FY09, the budget assumes a 4.0% interest rate for variable rate debt compared to 4.7% for FY08. If interest rates increase to levels higher than anticipated, offsetting adjustments will have to be achieved elsewhere in the budget. If interest rates during the year are lower, the savings will be used to reduce the Rate Revenue Requirement in future years.

Table I-3 provides detail on the Final FY09 capital financing line item. Table I-3 also illustrates how upgrading the sewerage system has dominated the capital program to date. Sixty-six percent of the FY09 capital financing costs (before debt service offsets) are 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.

	Amount Outstanding	Total	Sewer	Water
Total SRF ¹ Debt	\$996	\$54.2	\$44.0	\$10.2
Total Senior Debt	3,077	176.2	101.1	75.0
Total Subordinate Debt	1,395	87.5	60.1	27.4
Total SRF and Debt Service²	\$5,468	\$317.9	\$205.3	\$112.6
Water Pipeline Commercial Paper	191	3.2	0.0	3.2
Current Revenue/Capital ³		4.5	3.4	1.1
Capital Lease		3.2	2.2	1.1
Sub-Total	191	\$10.9	\$5.5	\$5.4
Total Capital Financing (before Debt Service Offsets)	\$5,659	\$328.8	\$210.8	\$118.0
Debt Service Offsets:				
Variable Rate Savings		0.0	0.0	0.0
Debt Service Assistance		(11.3)	(10.2)	(0.4)
Total Capital Financing	\$5,659	\$317.5	\$200.0	\$117.5

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.

Indirect Expenses

The Final FY09 Budget includes \$45.8 million for indirect expenses, an increase of \$3.1 million or 7.1% over FY08 actual spending. The increase includes a \$2.3 million increase in the Operating Reserve.

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 Final FY09 Budget includes \$2.5 million for premiums and fees, \$0.3 million above FY08 actual spending. The budget includes \$1.8 million for premiums 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 FY09.

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 Final FY09 Budget includes \$5.9 million, \$12.2 million, and \$4.9 million respectively for these items. Collectively these represent an decrease of \$0.1 million over FY08 actuals.

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 \$4.2 million for the estimated FY09 payment, comprised of \$3.4 million for capacity charges and \$0.8 million for maintenance expenses.

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 Final FY09 Budget includes \$1.4 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 Final FY09 Budget includes a contribution to MWRA's retirement fund of \$11.9 million, an increase of \$7.6 million compared to FY08 actual spending. During 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. This methodology change

accounts for \$1.1 million of the \$7.6 million increase. The increase of \$6.5 million is due to redirecting the initial FY09 Other Postemployment Benefits (OPEB) funding to the pension fund. 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 the full funding of pension 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 postemployment benefits.

In July 2008, the MWRA's Board of Directors voted that funds appropriated for OPEB in the FY08 Final and FY09 Proposed budgets be used to shorten the amortization schedule for the 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 preserves the Board's flexibility for future decisions regarding OPEB funding.

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 will be higher and the MWRA will keep its options open in the short-term until a long-term OPEB strategy is developed. This option demonstrates MWRA's fiscal responsibility and should be favorably received by rating agencies and investors.

Operating Reserves

Funding for the Operating Reserve for FY09 of \$1.7 million 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 Final FY09 CEB, the required balance is \$39.3 million at the end of FY09.

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 communities purchase both. Approximately 2.6 million people, or 42% of the population of Massachusetts, live and work in the communities that purchase water and/or wastewater services from MWRA.

MWRA's largest single customer is the Boston Water and Sewer Commission (BWSC), which provides retail services in the City of Boston. In the Final FY09 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 Final MWRA assessments for FY09.

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-15 presents the calculation of MWRA's Final FY09 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 Final FY09 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
Final FY09 Water and Sewer Assessments
Includes \$11.25M in Debt Service Assistance

25-Jun-08

MWRA Fully Served Water and Sewer Customers	Final FY08 Water Assessment	Final FY09 Water Assessment	Percent Change from FY08	Final FY08 Sewer Assessment	Final FY09 Sewer Assessment	Percent Change from FY08	Final FY08 Combined Assessment	Final FY09 Combined Assessment	Percent Change from FY08
ARLINGTON	\$3,635,597	\$3,798,111	4.5%	\$6,383,391	\$6,367,419	-0.3%	\$10,018,988	\$10,165,530	1.5%
BELMONT	1,820,717	2,232,215	22.6%	3,853,748	3,912,441	1.5%	5,674,465	6,144,656	8.3%
BOSTON (BWSC)	63,979,766	65,521,627	2.4%	98,687,572	103,137,432	4.5%	162,667,338	168,659,059	3.7%
BROOKLINE	4,843,966	5,198,049	7.3%	10,011,208	10,299,870	2.9%	14,855,174	15,497,919	4.3%
CHELSEA	2,622,102	2,750,255	4.9%	4,746,257	4,928,138	3.8%	7,368,359	7,678,393	4.2%
EVERETT	4,149,900	4,187,928	0.9%	6,103,714	6,187,367	1.4%	10,253,614	10,375,295	1.2%
FRAMINGHAM	6,135,546	6,525,095	6.3%	8,690,797	8,846,214	1.8%	14,826,343	15,371,309	3.7%
LEXINGTON	4,117,775	4,565,881	10.9%	5,630,863	5,855,209	4.0%	9,748,638	10,421,090	6.9%
MALDEN	5,197,166	5,465,015	5.2%	9,284,922	9,664,493	4.1%	14,482,088	15,129,508	4.5%
MEDFORD	4,637,124	4,737,121	2.2%	9,335,845	9,654,660	3.4%	13,972,969	14,391,781	3.0%
MELROSE	2,073,594	2,118,630	2.2%	4,638,409	4,814,755	3.8%	6,712,003	6,933,385	3.3%
MILTON	2,196,171	2,428,933	10.6%	4,368,070	4,353,853	-0.3%	6,564,241	6,782,786	3.3%
NEWTON	7,744,282	8,620,195	11.3%	16,011,280	16,260,200	1.6%	23,755,562	24,880,395	4.7%
NORWOOD	2,664,525	3,131,158	17.5%	5,416,848	5,402,950	-0.3%	8,081,373	8,534,108	5.6%
QUINCY	8,675,891	9,455,292	9.0%	15,225,088	15,857,588	4.2%	23,900,979	25,312,880	5.9%
READING ¹	1,536,924	1,636,165	6.5%	3,410,216	3,555,143	4.2%	4,947,140	5,191,308	4.9%
REVERE	3,711,064	3,890,130	4.8%	7,237,597	7,560,677	4.5%	10,948,661	11,450,807	4.6%
SOMERVILLE	5,416,384	5,860,187	8.2%	11,802,980	11,843,075	0.3%	17,219,364	17,703,262	2.8%
STONEHAM	2,570,311	2,783,131	8.3%	3,623,787	3,729,778	2.9%	6,194,098	6,512,909	5.1%
WALTHAM	6,518,480	7,131,291	9.4%	10,567,428	10,890,696	3.1%	17,085,908	18,021,987	5.5%
WATERTOWN	2,551,548	2,683,187	5.2%	4,627,713	4,748,683	2.6%	7,179,261	7,431,870	3.5%
WINTHROP	1,206,885	1,225,716	1.6%	2,454,240	2,569,630	4.7%	3,661,125	3,795,346	3.7%
TOTAL	\$148,005,718	\$155,945,312	5.4%	\$252,111,973	\$260,440,271	3.3%	\$400,117,691	\$416,385,583	4.1%

MWRA Sewer and Partial Water Customers	Final FY08 Water Assessment	Final FY09 Water Assessment	Percent Change from FY08	Final FY08 Sewer Assessment	Final FY09 Sewer Assessment	Percent Change from FY08	Final FY08 Combined Assessment	Final FY09 Combined Assessment	Percent Change from FY08
CANTON	\$1,752,541	\$2,262,620	29.1%	\$3,342,320	\$3,242,180	-3.0%	\$5,094,861	\$5,504,800	8.0%
NEEDHAM	958,624	1,061,719	10.8%	4,911,005	4,893,374	-0.4%	5,869,629	5,955,093	1.5%
STOUGHTON	429,813	535,066	24.5%	3,620,218	3,735,159	3.2%	4,050,031	4,270,225	5.4%
WAKEFIELD	1,465,661	1,443,087	-1.5%	4,643,094	4,688,936	1.0%	6,108,755	6,132,023	0.4%
WELLESLEY	505,698	853,387	68.8%	4,453,740	4,568,401	2.6%	4,959,438	5,421,788	9.3%
WINCHESTER	692,181	895,066	29.3%	3,140,264	3,132,581	-0.2%	3,832,445	4,027,647	5.1%
WOBURN	1,979,251	2,960,077	49.6%	9,106,235	9,578,547	5.2%	11,085,486	12,538,624	13.1%
TOTAL	\$7,783,769	\$10,011,022	28.6%	\$33,216,876	\$33,839,178	1.9%	\$41,000,645	\$43,850,200	7.0%

MWRA Sewer-only Customers	Final FY08 Water Assessment	Final FY09 Water Assessment	Percent Change from FY08	Final FY08 Sewer Assessment	Final FY09 Sewer Assessment	Percent Change from FY08	Final FY08 Combined Assessment	Final FY09 Combined Assessment	Percent Change from FY08
ASHLAND				\$1,651,164	\$1,721,023	4.2%	\$1,651,164	\$1,721,023	4.2%
BEDFORD				2,662,238	2,779,636	4.4%	2,662,238	2,779,636	4.4%
BRAINTREE				6,564,038	6,744,131	2.7%	6,564,038	6,744,131	2.7%
BURLINGTON				3,845,017	4,055,100	5.5%	3,845,017	4,055,100	5.5%
CAMBRIDGE				18,475,398	19,830,036	7.3%	18,475,398	19,830,036	7.3%
DEDHAM				4,682,605	4,650,140	-0.7%	4,682,605	4,650,140	-0.7%
HINGHAM SEWER DISTRICT				1,274,442	1,323,016	3.8%	1,274,442	1,323,016	3.8%
HOLBROOK				1,209,004	1,219,867	0.9%	1,209,004	1,219,867	0.9%
NATICK				3,993,641	3,941,631	-1.3%	3,993,641	3,941,631	-1.3%
RANDOLPH				4,482,219	4,601,421	2.7%	4,482,219	4,601,421	2.7%
WALPOLE				2,809,378	2,914,620	3.7%	2,809,378	2,914,620	3.7%
WESTWOOD				1,996,235	1,964,562	-1.6%	1,996,235	1,964,562	-1.6%
WELMOUTH				8,762,733	8,776,895	0.2%	8,762,733	8,776,895	0.2%
WYMLINGTON				1,768,169	1,768,207	0.0%	1,768,169	1,768,207	0.0%
TOTAL				\$64,176,281	\$66,290,285	3.3%	\$64,176,281	\$66,290,285	3.3%

MWRA Water-only Customers	Final FY08 Water Assessment	Final FY09 Water Assessment	Percent Change from FY08	Final FY08 Sewer Assessment	Final FY09 Sewer Assessment	Percent Change from FY08	Final FY08 Combined Assessment	Final FY09 Combined Assessment	Percent Change from FY08
LYNNFIELD WATER DISTRICT	\$362,549	\$439,487	21.2%				\$362,549	\$439,487	21.2%
MARBLEHEAD	1,629,117	1,828,854	12.3%				1,629,117	1,828,854	12.3%
NAHANT	332,081	351,096	5.7%				332,081	351,096	5.7%
SAUGUS	2,715,030	2,851,597	5.0%				2,715,030	2,851,597	5.0%
SOUTHBOROUGH	602,437	751,303	24.7%				602,437	751,303	24.7%
SWAMPSCOTT	1,348,647	1,416,222	5.0%				1,348,647	1,416,222	5.0%
WESTON	1,281,195	1,646,079	28.5%				1,281,195	1,646,079	28.5%
TOTAL	\$8,271,056	\$9,284,638	12.3%				\$8,271,056	\$9,284,638	12.3%

MWRA Partial Water-only Customers	Final FY08 Water Assessment	Final FY09 Water Assessment	Percent Change from FY08	Final FY08 Sewer Assessment	Final FY09 Sewer Assessment	Percent Change from FY08	Final FY08 Combined Assessment	Final FY09 Combined Assessment	Percent Change from FY08
DEDHAM-WESTWOOD WATER DISTRICT ¹	\$34	\$15,572	45700.0%				\$34	\$15,572	45700.0%
LYNN (LWSC)	219,006	220,195	0.5%				219,006	220,195	0.5%
MARLBOROUGH	2,738,567	3,392,651	23.9%				2,738,567	3,392,651	23.9%
NORTHBOROUGH	790,421	852,523	7.9%				790,421	852,523	7.9%
PEABODY	484,131	527,353	8.9%				484,131	527,353	8.9%
TOTAL	\$4,232,159	\$5,008,294	18.3%				\$4,232,159	\$5,008,294	18.3%
SYSTEMS TOTAL	\$168,292,702	\$180,249,266	7.1%	\$349,505,130	\$360,569,734	3.2%	\$517,797,832	\$540,819,000	4.45%

¹ The Dedham-Westwood Water District and the Town of Reading became partially served MWRA water communities in FY07. Reading became fully served in FY08.

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 FY09 Rate Revenue Requirement
(000's)

	Sewer	Water	Total
Allocated Direct Expenses	\$160,456	\$55,463	\$215,919
Allocated Indirect Expenses	\$17,865	\$27,972	\$45,837
PLUS			
Capital Expenses:			
Debt Service (less offsets)	\$194,492	\$112,115	\$306,608
Current Revenue for Capital	\$3,375	\$1,125	\$4,500
Other Capital Expenses	\$2,182	\$4,240	\$6,422
PLUS			
Non-Rate Revenue:			
Investment Income	-\$12,545	-\$7,882	-\$20,427
Fees and Other Revenue	-\$5,255	-\$7,711	-\$12,966
Rate Stabilization	0	-\$5,073	-\$5,073
EQUALS			
Rate Revenue Requirement	\$360,570	\$180,249	\$540,819

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 FY09, community assessments will represent 93.3% of total revenue.

MWRA regularly updates its estimates of anticipated revenues and expenses over a multi-year planning horizon. These planning estimates provide a context for budget discussions and a planning tool for MWRA and those affected by its rate revenue requirements and also allow MWRA to consider multiple-year rates management implications and strategies as it evaluates alternative capital and operating budget decisions.

The table below and Appendix D (in more detail) present future rate revenue requirements for FY09 through FY18.

Rates & Budget Projections - Based on \$11.25M of Debt Service Assistance										
Final FY09 CEB	FY2009	FY2010	FY2011	FY2012	FY2013	FY2014	FY2015	FY2016	FY2017	FY2018
Total Rate Revenue (\$ in Mil)	\$ 540,819	\$ 571,473	\$ 603,909	\$ 638,123	\$ 674,242	\$ 712,466	\$ 751,273	\$ 787,565	\$ 852,820	\$ 822,363
Rate Revenue Change from Prior Year (\$000)	\$ 23,021	\$ 30,654	\$ 32,435	\$ 34,214	\$ 36,120	\$ 38,223	\$ 38,807	\$ 36,292	\$ 65,255	\$ (30,457)
Rate Revenue Increase	4.45%	5.7%	5.7%	5.7%	5.7%	5.7%	5.4%	4.8%	8.3%	-3.6%
Use of Reserves (\$ in Mil)	\$ 5,073	\$ 11,449	\$ 29,618	\$ 2,984	\$ 19,319	\$ 6,203	\$ -	\$ -	\$ -	\$ -

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 \$94.9 million increase in direct expenses from FY09 to FY18 is primarily the result of an assumed inflation rate of 4.0% annually. In addition, in order to account for anticipated increases in expenses for FY09, labor is projected to grow by 3.2%, while chemicals and maintenance are forecast to rise by 8.8% and by 9.2%, 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. Also, \$1.4 million inflated in additional costs projected in FY14 for the Carroll Plant for ultraviolet technology licensing fees.

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 \$15.0 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 (4.5% in FY09);
- Variable rate interest projected at 4.00% in FY09 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 utilities, chemicals, maintenance and health care are reflected in the Final FY09 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.

Final FY09 Capital Improvement Program

Overview

MWRA was created by the Massachusetts legislature in 1985 and since that time has invested over \$6.9 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 Final FY09 CIP budget totals \$4.9 billion, of which \$2.9 billion has been expended, and \$2.0 billion remains. FY09 spending is projected to be \$230.0 million.

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 \$431.0 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.

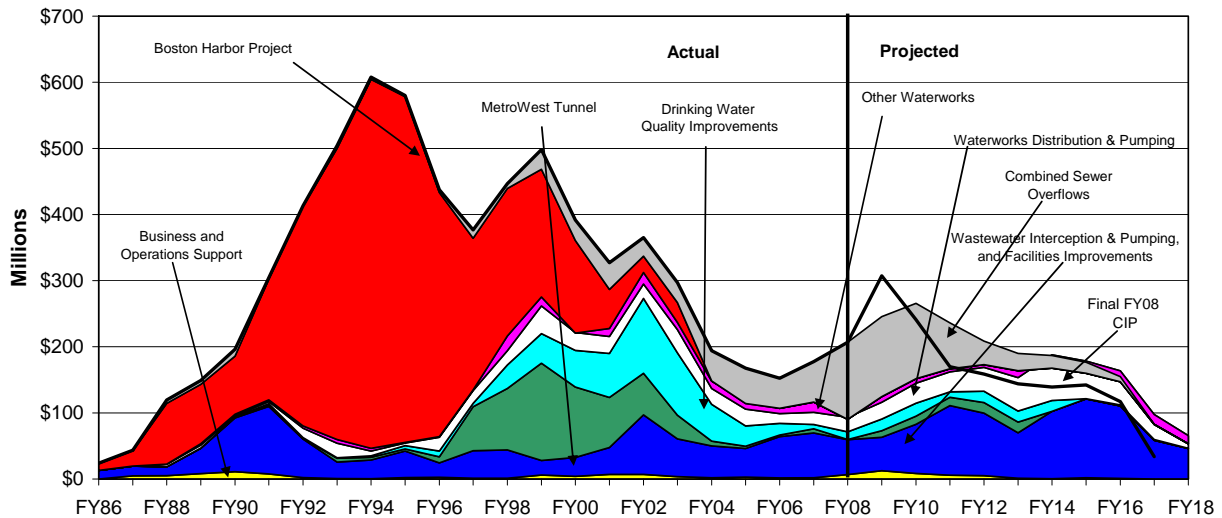
With the completion of the Deer Island facilities and the winding down of the Water Supply Improvement program, the MWRA now spends a proportionately large part of its CIP budget on the Combined Sewer Overflow ("CSO") projects mandated by state and federal agencies. The CSO program encompasses 35 projects with a total budget of \$924.6 million with projected spending of \$528.4 million through FY08 and a remaining balance of \$396.2 million. Twenty-three (23) of the 35 projects contained in the

MWRA's CSO Control Plan are complete, and four additional projects are in construction. In July 2006, the MWRA awarded the first of two construction contracts comprising the North Dorchester Bay CSO Storage Tunnel and Related Facilities. This \$148.9 million contract, is the single largest component of the MWRA's CSO Control Plan and involves constructing a 2.1-mile long soft-ground tunnel to capture CSO and stormwater flows which currently discharge along the swimming beaches of South Boston. Of the remaining eight projects, five are currently in design and design of the final three projects are scheduled to commence in 2008.

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 FY86-18



**Final FY09 CAPITAL IMPROVEMENT PROGRAM
Actual and Projected Expenditures**

Expended To-Date	Projected Expenditures Beyond FY08
\$6.9 billion	\$2.0 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 5.5 MW of power from digester gas to be released by early 2009.
- 100 kw solar panels at Deer Island began generating power in May FY08.
- FAA approval for 2 - 250kw wind turbines at Deer Island with funding budgeted in the FY09 CIP.
- 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.

FINAL FY09 CIP

As shown in Table 6 on the following page, the MWRA's total capital budget is \$4.9 billion with an estimated \$2.9 billion spent through FY08 and \$2.0 billion remaining to be expended. Wastewater System Improvements represent 59.4% or \$1.2 billion of remaining spending. Budgeted spending for FY09 is \$230.0 million.

Table 6

(\$ in millions)	Total Contract Amount	Projected Pmts Thr. FY08	Remaining Balance 6/30/08	FY09	FY10	FY11	FY12	FY13	FY09-13 Expenditures	Expenditures Beyond FY13
Wastewater System Improvements	\$2,409.4	\$1,225.5	\$1,183.9	\$150.3	\$172.2	\$154.6	\$109.1	\$78.1	\$664.4	\$519.6
Interception & Pumping	702.6	489.9	212.8	10.8	8.8	20.5	28.8	27.6	96.5	116.3
Treatment	482.9	51.4	431.5	28.0	54.8	66.7	42.4	21.9	213.7	217.8
Residuals	212.4	63.8	148.6	0.9	0.9	1.4	2.1	1.3	6.6	142.0
CSO	924.6	528.4	396.2	113.0	109.3	67.7	35.5	26.2	351.7	44.5
Other Wastewater	86.9	92.0	-5.2	-2.3	-1.6	-1.6	0.3	1.1	-4.1	-1.1
Waterworks System Improvements	2,378.6	1,602.6	776.0	67.9	71.6	64.1	82.8	99.4	385.8	390.3
Drinking Water Quality Improvements	641.1	508.6	132.5	16.5	18.4	7.7	16.0	15.6	74.3	58.2
Transmission	989.6	675.6	313.9	19.1	18.3	23.7	29.1	25.9	116.1	197.8
Distribution & Pumping	717.2	302.7	414.5	23.9	28.1	28.5	33.7	47.4	161.6	252.9
Other Waterworks	30.7	115.6	-84.9	8.3	6.8	4.2	4.0	10.4	33.7	-118.6
Business & Operating Systems	79.7	45.4	34.2	11.9	7.9	5.5	4.7	1.2	31.3	3.0
Total MWRA w/o Contingency	4,867.7	2,873.5	1,994.2	230.0	251.7	224.3	196.7	178.7	1,081.4	912.8

FY09 Capital Highlights

The Final FY09 CIP is \$1,081.4 million for fiscal years 2009-2013, and net projected spending of \$912.8 million for fiscal years 2014 and beyond which is primarily driven by spending on new projects from the Master Plan. The FY14-18 spending estimate will grow in future budget cycles as additional Master Plan projects are incorporated. The Final FY09 CIP includes 78 projects/subphases from the Master Plan with the highest priority ratings totaling \$986.2 million.

Highlights of Project Changes from the Final FY08 CIP to the Final FY09 CIP

The Final FY09 CIP represents updated spending and schedules for projects contained in the FY08 CIP and new spending on 18 new water and wastewater projects and subphases totaling \$36.7 million. These additional projects and subphases represent those capital initiatives outside of the FY08 CIP that staff recommend as most essential to assure reliable service to MWRA’s customers.

The Final FY09 CIP approved by the Board of Directors increased \$311.4 million above the Final FY08 CIP of which \$149.9 million is in the FY09-13 timeframe. The Wastewater System Improvements budget increased \$199.8 million with most of the increased expenditures falling in the FY09-13 timeframe. The CSO program continues to drive wastewater spending with an overall budget increase of \$113.2 million, of which \$73.8 million is in the FY09-13 timeframe. This federally mandated program is to be completed by December 2015 followed by a performance report due December 2020. The Waterworks System Improvements capital budget increased \$100.3 million fueled by increased spending in Distribution and Pumping of \$87.1 million with most of this spending beyond FY13.

Table 7

MWRA Capital Program \$ in Millions	Final FY08 CIP	Final FY09 CIP	\$ Chge.	% Chge.	FY09-13 \$ Chge.	Beyond FY13 \$ Chge.
Wastewater System Improvements	\$2,209.6	\$2,409.4	\$199.8	9.0%	\$153.6	\$17.4
Waterworks System Improvements	2,278.3	2,378.6	100.3	4.4%	(17.5)	146.5
Business & Operations Support	68.4	79.7	11.3	16.5%	13.7	(0.6)
Total MWRA	4,556.3	4,867.7	311.4	6.8%	149.9	163.3

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 expenditures outlays. The total contingency budget for the ten-year CIP (09-18) is \$113.3 million with \$64.8 million available in the FY09-13 time frame.

	Total Budget	FY09	FY10	FY11	FY12	FY13	FY09-13	Beyond FY13
Contingency Budget	\$113.3	\$15.6	\$13.8	\$12.0	\$12.1	\$11.4	\$64.8	\$48.5

The Final FY09 contingency budget is \$45.7 million or 28.7% under the Final FY08 level reflecting revised contingency assumptions in light of projected spending levels and reduction of contingency on non-tunnel related expenditures from 10% to 7% (contingency factor applied to tunnel expenditures remains unchanged at 15%). Underspending throughout the capital improvement program has resulted in no net usage of contingency funds over the FY04-08 period.

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 \$2.3 million by FY18 with increase of \$123,000, \$149,000, and \$227,000, in FY10, FY11 and FY14, respectively for Laboratory Information and Management System (LIMS) replacement, Geographic Information System (GIS), and Operations Management System (OMS). North Dorchester Bay is expected to go on-line in FY12 and increase annual operating costs by \$422,000. 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 \$1.4 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 \$1.0 million by FY14. The following table summarizes projected CIP impact by project over the next 10 years.

Table 8

FISCAL YEAR	Impacts of CIP Projects (000's)									
	FY10	FY11	FY12	FY13	FY14	FY15	FY16	FY17	FY18	Total
Deer Island Energy	\$0	\$0	-\$56	-\$877	\$0	\$0	\$0	\$0	\$0	-\$934
FERS Biofilter	0	0	0	0	-158	0	0	0	0	-158
North Dorchester Bay CSO	0	0	422	0	0	0	0	0	0	422
Charles River CSO Controls	5	0	0	0	0	0	0	0	0	5
TOTAL WASTEWATER (inflated)	\$5	\$0	\$366	-\$877	-\$158	\$0	\$0	\$0	\$0	-\$665
John J. Carroll Water Treatment Plant	\$104	\$0	\$0	\$0	\$1,399	\$0	\$0	\$0	\$0	\$1,503
Quabbin Water Treatment Plant	0	0	0	193	32	0	0	0	0	225
Wachusett Algae Treatment Facility	0	0	0	0	0	25	26	0	0	52
Water Storage Tanks	208	0	0	0	0	0	0	0	0	208
TOTAL WATER (inflated)	\$312	\$0	\$0	\$193	\$1,431	\$25	\$26	\$0	\$0	\$1,987
Phase II: TRAC Replacement	\$0	\$162	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$162
Phase II: SAN & CPU's for TRAC and LIMS	0	97	0	0	0	0	0	0	0	97
Phase V: LIMS Replacement, GIS & OMS	123	149	0	0	227	0	0	0	0	499
Phase VI: Lawson, MS Licensing & Carroll Water Treatment Plant	0	67	0	0	0	0	0	0	0	67
SAN II	0	0	0	0	0	127	0	0	0	127
NET 2020	0	0	0	0	61	0	0	0	0	61
TOTAL BUSINESS AND OPERATIONS SUPPORT (inflated)	\$123	\$476	\$0	\$0	\$288	\$127	\$0	\$0	\$0	\$1,013
TOTAL MWRA	\$440	\$476	\$366	-\$684	\$1,560	\$152	\$26	\$0	\$0	\$2,336

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 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. This allocation increased over the next two fiscal years, rising to \$10 million in FY06, \$18.75 million in FY07, and \$17.25 million in FY08. At this time, the Authority's budgets includes \$11.25 million in Debt Service Assistance in FY09 and subsequent years.

Planning estimates for FY10 through 2018 forecast rate revenue requirement increases of 5.7% annually for the next five years, 5.4%, 4.8%, 8.3%, and -3.6% in 2015, 2016, 2017, and 2018, 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 Final FY09 direct expense budget is only \$32.9 million more than spending in FY00. This represents annual increases of 1.9%, well below inflation. When adjusted for inflation, direct expenses have declined by more than \$40 million since FY00. Costs to operate new facilities, higher utility costs, healthcare costs and increased maintenance have been offset by reduction 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 a staffing level of 1,255 for Fiscal Year 2009. 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 five 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, 2007 and 2006 are available online at www.mwra.com.