



Executive Summary

Executive Summary

MWRA Mission

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

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

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

Overview

Each year, MWRA prepares a budget that reflects the best available information for anticipated expenditures and revenues. MWRA transmitted its FY12 Budget to the Advisory Board in February. The Advisory Board has sixty days to review, comment, and provide recommendations. MWRA also hosts a public hearing to solicit comments on the budget and community assessments from citizens in its service area. In June, MWRA's Board of Directors holds hearings on the budget to review recommendations by the Advisory Board and new information available since the budget was developed. Staff incorporates Board decisions from the hearings and presents a final budget for approval in June. The FY12 Budget was approved by the Board on June 29, 2011.

FY12 Budget Summary

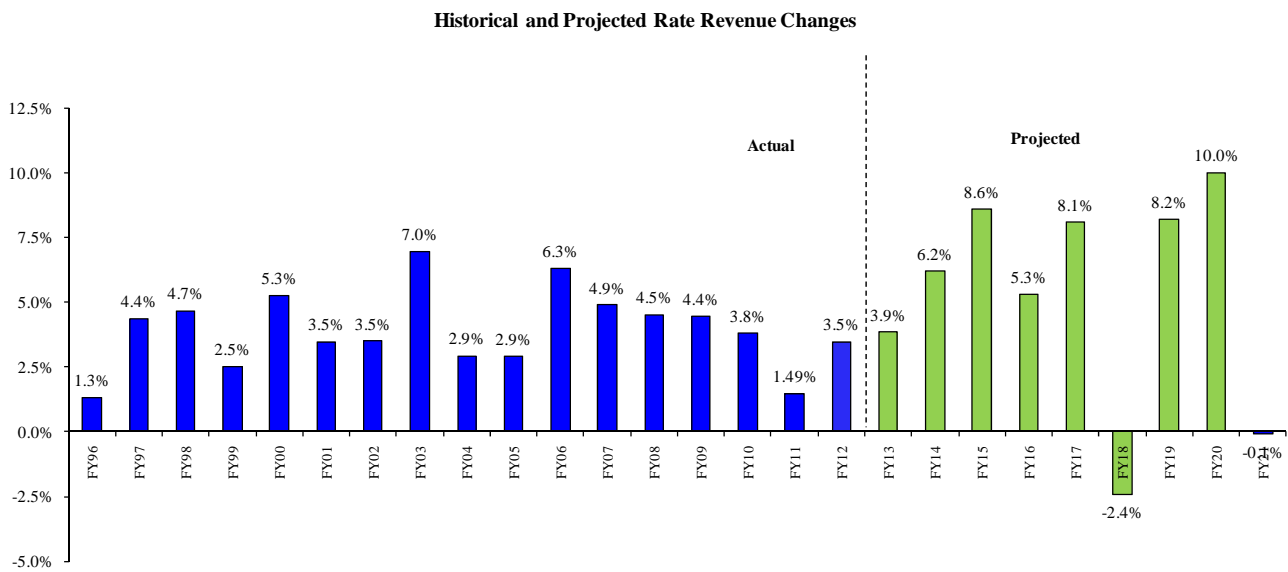
The FY12 Final Budget resulted in a 3.49% final assessment increase versus the 3.9% increase put forth in the FY12 Proposed CEB. MWRA was able to further reduce the Rate Revenue Requirement in the FY12 Final Budget by \$2.5 million by reducing Debt Service to reflect favorable liquidity contracts and swap transactions, coupled with higher investment income return, and the inclusion of \$350,000 in anticipated Debt Service Assistance funds.

Other measures that the Authority took to achieve the 3.49% rate increase include:

- Level funded directs with FY11 Approved Budget
- No wage increases in FY12 for union and non-union staff
- Targeted defeasance
- Use of reserves

However, these measures will not be sustainable in future years. The budget decisions made in the near term will have a long-term impact on the future. As MWRA rolls out year two of the three year strategy, it must keep to a multi-year rates management strategy and look beyond this three year snapshot to plan for what lies ahead.

Based on the FY12 Budget, projected future rate changes are depicted in the following chart:



Total expenses are \$618.2 million, \$17.7 million or 2.9% above FY11 actuals. Capital financing costs remain the largest component of the budget and account for 59.5% of total expenses. Debt Service Assistance (DSA) of \$350,000 is assumed for FY12. While capital financing costs remain the largest component of the budget, other escalating liabilities continue to put pressure on the operating budget.

Total expenses include \$368.0 million for capital financing costs, 59.5% of total costs, and \$250.2 million or 40.5% for operating expenses, of which \$209.3 million is for direct expenses and \$40.9 million is for indirect expenses. Total expenses increased by \$17.7 million over FY11 actuals, \$8.2 million of which comes from increased capital financing expense and \$9.9 million for higher operating expenses.

The \$8.2 million or 2.3% increase in capital financing expenses before offsets reflects debt service associated with the projected issuances of \$100 million of new money in May 2012 as well as new State Revolving Fund (SRF) debt of \$74.0 million to be issued in November 2011 and an additional \$50.0 million in June 2012. Offsetting these new issuances, are the impacts of the FY11 \$32.1 million defeasance, which is estimated to yield savings of approximately \$1.4 million in FY12 and FY13, respectively, \$26.4 million in FY14 and \$4.8 million in FY15.

The \$9.9 million increase in operating expenses from FY11 actuals is mainly due to the decision to make an additional \$1.9 million nominal contribution towards the Authority's Pension liability, increases for Wages and Salaries of \$1.8 million due to expectation that FY12 headcount will be higher than that experienced in FY11, Maintenance of \$1.5 million due to increased projects, Insurance of \$1.3 million due to FY11 accrual reversal of \$500,000 and lower claims in FY11, Watershed of \$867,000 mainly due to increased Payment In Lieu of Taxes (PILOT) expense, and Utilities of \$678,000 due to higher projected diesel purchases and pricing offset by lower electricity costs and increased self generation.

Total revenues of \$618.2 million are budgeted for FY12. The FY12 Final Rate Revenue Requirement is \$589.7 million, an increase of \$19.9 million or 3.49% over the FY11 Rate Revenue Requirement. FY12 non-rate revenues total \$28.5 million, a decrease of \$6.3 million or 18.2% from FY11 actuals mainly due to a \$3.9 million reduction in the use of Rate Stabilization and a \$2.5 million reduction in Other Revenue reflecting FY11 one time revenues for Federal Emergency Management Agency (FEMA) grant for Spring 2010 wet weather costs, workers' compensation excess carrier reimbursement, and utility refunds for overcharges. The FY12 non-rate revenue budget includes \$15.4 million for investment income, \$12.0 million in other user charges and other revenue - which includes an estimated \$1.4 million from the sale of renewable energy portfolio credits and participation in demand response programs, and the use of \$1.1 million in Rate Stabilization.

Table I-1 shows MWRA's FY12 Budget for revenue and expenses compared with FY11 and FY10 actual spending. Changes from FY11 to FY12 are described in the Revenue and Expense section of the Executive Summary.

Table I-1

| TOTAL MWRA | FY10 Actual | FY11 Actual | FY12 Final Budget | Change FY12 Final Budget vs FY11 Actual | |
|-----------------------------------|-----------------------|-----------------------|-----------------------|---|--------------|
| | | | | \$ | % |
| EXPENSES | | | | | |
| WAGES AND SALARIES | \$ 89,957,003 | \$ 88,505,698 | \$ 90,319,013 | \$ 1,813,315 | 2.0% |
| OVERTIME | 3,965,999 | 3,899,297 | 3,508,630 | (390,667) | -10.0% |
| FRINGE BENEFITS | 15,995,517 | 17,357,067 | 17,954,076 | 597,009 | 3.4% |
| WORKERS' COMPENSATION | 2,226,080 | 2,228,175 | 2,100,000 | (128,175) | -5.8% |
| CHEMICALS | 8,998,799 | 8,697,048 | 9,047,275 | 350,227 | 4.0% |
| ENERGY AND UTILITIES | 25,982,266 | 21,977,294 | 22,654,931 | 677,637 | 3.1% |
| MAINTENANCE | 25,561,320 | 27,964,126 | 29,470,020 | 1,505,894 | 5.4% |
| TRAINING AND MEETINGS | 94,865 | 127,569 | 251,550 | 123,981 | 97.2% |
| PROFESSIONAL SERVICES | 6,089,889 | 5,638,342 | 5,892,441 | 254,099 | 4.5% |
| OTHER MATERIALS | 4,811,574 | 4,327,538 | 4,765,482 | 437,944 | 10.1% |
| OTHER SERVICES | 22,477,713 | 23,551,456 | 23,323,074 | (228,382) | -1.0% |
| TOTAL DIRECT EXPENSES | \$ 206,161,025 | \$ 204,273,610 | \$ 209,286,493 | \$ 5,012,882 | 2.5% |
| INSURANCE | \$ 3,453,720 | \$ 1,002,044 | \$ 2,285,866 | \$ 1,283,822 | 128.1% |
| WATERSHED/PILOT | 23,349,465 | 24,709,345 | 25,576,274 | 866,929 | 3.5% |
| HEEC PAYMENT | 3,895,850 | 3,875,371 | 3,965,499 | 90,128 | 2.3% |
| MITIGATION | 1,447,883 | 1,474,834 | 1,528,705 | 53,871 | 3.7% |
| ADDITIONS TO RESERVES | (653,254) | (407,581) | 195,467 | 603,048 | -148.0% |
| RETIREMENT FUND | 5,621,259 | 5,342,856 | 7,340,438 | 1,997,582 | 37.4% |
| POSTEMPLOYMENT BENEFITS | 800,000 | - | - | - | N/A |
| TOTAL INDIRECT EXPENSES | \$ 37,914,923 | \$ 35,996,869 | \$ 40,892,249 | \$ 4,895,380 | 13.6% |
| DEBT SERVICE (before offsets) | \$ 363,937,694 | \$ 360,157,926 | \$ 368,329,918 | \$ 8,171,992 | 2.3% |
| VARIABLE RATE DEBT/OTHER | (18,708,191) | - | - | - | - |
| BOND REDEMPTION | - | - | - | - | - |
| DEBT SERVICE ASSISTANCE | - | - | (350,000) | (350,000) | N/A |
| TOTAL DEBT SERVICE | \$ 345,229,503 | \$ 360,157,926 | \$ 367,979,918 | \$ 7,821,992 | 2.2% |
| TOTAL EXPENSES | \$ 589,305,451 | \$ 600,428,405 | \$ 618,158,660 | \$ 17,730,256 | 3.0% |
| REVENUE & INCOME | | | | | |
| RATE REVENUE | \$ 561,431,000 | \$ 569,800,000 | \$ 589,700,000 | \$ 19,900,000 | 3.49% |
| OTHER USER CHARGES | 7,786,906 | 7,218,642 | 7,142,494 | (76,148) | -1.1% |
| OTHER REVENUE | 5,079,438 | 7,330,726 | 4,872,342 | (2,458,384) | -33.5% |
| RATE STABILIZATION | 7,312,438 | 5,029,744 | 1,091,781 | (3,937,963) | -78.3% |
| INVESTMENT INCOME | 15,222,741 | 15,193,091 | 15,352,043 | 158,952 | 1.0% |
| TOTAL REVENUE & INCOME | \$ 596,832,523 | \$ 604,572,202 | \$ 618,158,660 | \$ 13,586,457 | 2.2% |

FY11 Accomplishments:

- At Deer Island Treatment Plant, treated 99% of flow through secondary and met secondary permit limits at all times. Operated DITP without any NPDES Permit violations in FY11.
- Continue to leverage MWRA's self-generation assets and participation in the competitive energy markets 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 \$1.3 million for FY11. Deer Island also self-generated approximately 25% of the plant's total required power during that period.
- Managed FY11 spending to allow for a \$32.1 million defeasance which will be used to reduce the Rate Revenue Requirement in targeted future years, as part of the Authority's multi-year rate strategy.
- Successfully procured \$525.4 million in replacement Standby Bond Purchase Agreements increasing MWRA's diversity across banks.
- Continued to aggressively pursue any stimulus or grant funding opportunities. Received Federal Emergency Management Agency (FEMA) grants totaling approximately \$1.4 million for cost incurred during Spring 2010 wet weather events.
- Successfully supported the procurement, selection, and execution of the consultant contract for an agency-wide Staffing Assessment Study, and awarded an IT contract for the development of a 5-year Strategic Information Technology Plan.
- Commenced replacing 7+ year old personal computers with energy efficient models which contributes to the green computing model. Additionally, upgraded computers to Microsoft Office 2007.
- Developed a repair plan for the August 26th water leak adjacent to Shaft 5A in Weston. This included procurement of numerous contracts for pipe repair, field investigation, site restoration, and acceleration of the Hultman Aqueduct rehabilitation project.
- Completed audit of Southborough HVAC system and commenced audits in 14 more facilities.
- Procured new contract for the purchase of natural gas for the Carroll Water Treatment Plant (CWTP) and the Chelsea facility which resulted in approximate savings in excess of \$80,000. Nearly 63% of natural gas demand is at fixed cost.
- Revised Authority's standard insurance terms for construction contracts. Also, reviewed and revised methods for determining insurance requirements on construction and non-professional services contracts. These changes continue to appropriately protect and indemnify the Authority while improving clarity and increasing competition.

- The Operations Division spent \$24.6 million on maintenance of which \$12.9 million was for materials and \$11.7 million for services.
- In the water system, exercised 1,065 and replaced 30 mainline valves; exercised 539 blow-off valves; and surveyed 241 miles of water mains for leaks.
- In the wastewater system, inspected 36.3 miles and cleaned 39.3 miles of pipeline. Also inspected 703 structures and rehabilitated 129 manholes.
- Awarded the following major contracts in FY11: Purchase and Supply of Electricity Interval Accounts; Remote Headworks Upgrade Design; Deer Island Treatment Plant (DITP) Thermal Power Plant Dump Condenser; Site Work and Excavation Shaft 5; Emergency Repair of 120 Inch Pipe Shaft 5; Harbor and Outfall Monitoring; Lynnfield/Saugus Pipelines; Section 36 Watertown Waltham Connection Design; JCWTP Ultraviolet Disinfection Facilities; DITP Human Machine Interface; CWTP Second Gaseous Oxygen Line; Staffing Study; Liquidity Facility for Variable Rate Bonds; Northern Intermediate High (NIH) Redundant Pipeline Design; DITP Digated Sludge Overflow Piping; Fore River Railroad License and Operating Agreement; Agency-wide Insurance; Meter 70 Water Main; Dam Repairs Sudbury et al.; Purchase and Supply of Electric Power DITP; and Section 156 Sewer Rehab (Everett) Design Build.
- Advertised or received bids/proposals/statements for the following: Spot Pond Storage Facility Design Build; DITP North Main Pump Station Variable Frequency Drives; DITP Air Emissions Testing; NIH Stoneham-Reading Connection; and Five Year Strategic Information Technology Plan.
- The TRAC Department completed the following Environmental Protection Agency (EPA) required work for significant industrial users: 218 inspections, 185 monitoring events, and 358 samplings of connections. This department also issued or renewed 197 permits (significant industrial users SIU and non-SIU).
- Completed the security system installations at the Chelsea Headworks and Blue Hills Covered Storage Facilities.

FY12 Initiatives

- Continue close monitoring of financial markets to better position the Authority to take advantage of any opportunities to reduce debt financing obligations, refund bonds for savings, and maximize investment income.
- Manage the process for negotiating successor collective bargaining agreements with all five unions. Upon Board ratification, implement collective bargaining agreements.
- Participate in the evaluation of the impact of the Staffing Study recommendations and work with senior management and collective bargaining units to implement as needed specific recommendations adopted by the Board of Directors.
- Manage the first full year operations for the North Dorchester Bay odor control facility.

- Continue to implement and optimize SCADA in Wastewater Operations facilities.
- Continue to identify, assess, and implement initiatives to reduce energy demand and increase energy self-generation in MWRA's system. Pursue grant-funding and cost-sharing arrangements to defray costs of implementing these initiatives.
- Optimize staff resources, overtime, service contract scopes and use, and use of as-needed design contracts to complete routine and major maintenance projects.
- Pending approval by regulators, implement requirements of new NPDES Permits for DITP and Clinton Wastewater Treatment Plant.
- Implement revised harbor and outfall monitoring plan to reflect reduced scope.
- Initiate the development of a long term, detailed Strategic Information Technology Plan based on the IT Study to assess the MWRA's current business environment, system architecture, and strategic direction.

SOURCES AND USES OF FUNDS

MWRA funds its operations primarily through member community assessments. Funds supporting the current expense budget are not subject to appropriation with the exception of debt service assistance. Table I-2 shows MWRA's sources and uses of funds for the FY12 Budget.

Table I-2

| SOURCES & USES OF FUNDS* | | |
|------------------------------------|----------------|---------------|
| \$ in Millions | | |
| <i>Sources of Funds</i> | | |
| Other User Charges | \$7.1 | 1.2% |
| Other Revenue | 4.9 | 0.8% |
| Investment Income | 15.4 | 2.5% |
| Rate Revenue | 589.7 | 95.4% |
| Rate Stabilization | 1.1 | 0.2% |
| TOTAL REVENUE | \$618.2 | 100.0% |
| <i>Uses of Funds</i> | | |
| Total Expenses before | | |
| Debt Service Offsets | \$618.5 | |
| Less: | | |
| Debt Service Assistance | (0.4) | |
| Bond Redemption | 0.0 | |
| Sub-Total Net Expenses | 618.2 | |
| Capital Financing | 368.3 | 59.6% |
| Direct Expenses | 209.3 | 33.8% |
| Indirect Expenses | 40.9 | 6.6% |
| TOTAL EXPENSES | \$618.5 | 100.0% |
| TOTAL EXPENSES Less Offsets | \$618.2 | |

*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 reserve levels.

In the FY12 Final Budget, 95.4% of revenue is derived from rate revenue. The remaining 4.6% 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), penalties assessed to holders of sewer use permits, and other miscellaneous sources.

Rate Revenue

Under the FY12 Final Budget, the MWRA will raise \$589.7 million of its total revenue requirements from water and sewer assessments to member communities. Of the \$589.7 million, \$405.8 million will fund the sewerage system, an increase of 4.17% as compared to FY11; and \$183.9 million will fund the water system, an increase of 2.03% as compared to FY11.

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 FY12 Final Budget total \$7.1 million, a decrease of \$76,000 or 1.1% from FY11 actuals and includes \$3.9 million paid by the Chicopee Valley Aqueduct communities, \$1.3 million in water revenue collected from sewer ratepayers to offset the cost of water used for operation at Deer Island, \$651,000 in entrance fees paid by Stoughton and Wilmington, \$500,000 for the Commonwealth's partial reimbursement for Clinton Wastewater Treatment Plant expenses, and \$480,000 in water revenue and \$308,000 in sewer revenue to contract communities and others.

Other Revenue

Other Revenue is budgeted at \$4.9 million, a decrease of \$2.5 million or 33.5% from FY11 actuals. The high revenue in FY11 was due to the receipt of Federal Emergency Management Agency (FEMA) funding of \$1.4 million for fuel and overtime cost for Spring 2010 wet weather events and \$1.3 million for a variety of miscellaneous revenue items.

Other Revenue includes \$2.2 million in permit fees and penalties, in addition to \$1.4 million for the sale of Deer Island's Renewable Portfolio Credits and revenues for demand response programs.

Permit Fees and Penalties

The FY12 Budget includes \$2.2 million in fees charged to industries that discharge toxic materials into the MWRA sewer system. These permit fees partially offset the annual costs of permitting, inspecting, and monitoring these industries.

Miscellaneous Revenue

The FY12 Final Budget includes \$2.7 million in miscellaneous revenues of which \$1.4 million pertains to the Authority's energy programs for the sale of Renewable Portfolio Standard credits and participation in the demand response program, \$1.0 million for a large number of miscellaneous revenue items, and \$280,000 is for hydro-power generated at MWRA's facilities including the Cosgrove Intake facility.

Investment Income

MWRA earns income by investing reserves and fund balances in a variety of interest-yielding securities. The FY12 Final Budget includes \$15.4 million in investment income, an increase of \$159,000 or 1.0% from FY11 actuals. The FY12 short-term interest rate is 0.50%, matching the FY11 budgeted investment rate.

Non-Recurring Revenue

Non-Recurring Revenue is one-time revenue used in a given fiscal year to reduce assessments to member communities. In any fiscal year when annual revenues exceed expenses, MWRA may transfer the unexpended amount to the rate stabilization reserve. Within certain limits, MWRA may use this money to reduce the Rate Revenue Requirement in any subsequent year. Consistent with the requirements of its enabling act and its general bond resolution, MWRA treats transfers from the rate stabilization reserve as revenue in that fiscal year. For the FY12 Final Budget, \$1.1 million in Rate Stabilization fund usage is assumed.

Direct Program Expenses

The FY12 direct expense budget is \$209.3 million, an increase of \$5.0 million or 2.5% above FY11 actual spending. The principal drivers for the increases are Wages due to underspending in FY11 that is not projected to be sustained in FY12, Maintenance, Utilities due to higher diesel pricing offset by lower electricity pricing due to favorable contracts, and Fringe Benefits due to rising healthcare costs. 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.

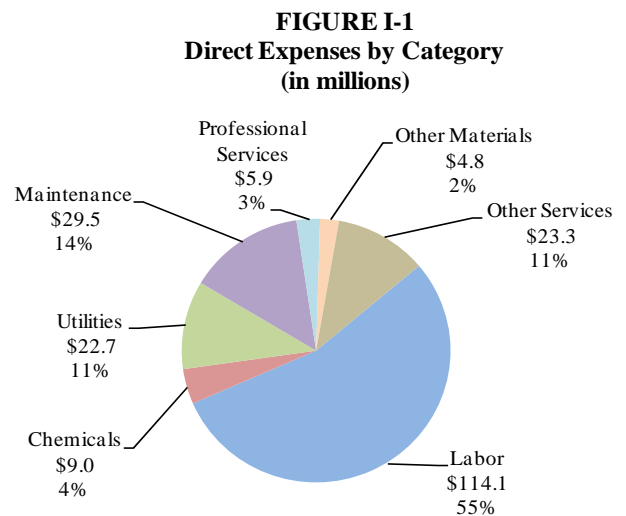
Line Item Budget Summary

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 (55%), followed then by maintenance (14%), and other services (11%), and energy and utilities (11%).

Within the labor cost category, Wages and Salaries account for \$90.3 million, \$1.8 million or 2.0% above FY11 actual spending. Of the \$90.3 million, \$88.8 million is for regular pay. The FY12 Budget assumes a staffing level of 1,210, with an average funded level of 1,205, which is five (5) positions fewer than funded in the FY11 Final 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 by 565 positions or 32% since the peak of 1,775 in March 1997 to budgeted staffing level of 1,210 for FY12.

As the Authority's major mandated capital initiatives near completion, maintenance expenses to preserve these operating assets will continue to grow. The FY12 Final Budget for maintenance is



\$29.5 million, an increase of \$1.5 million or 5.4%, compared to FY11 actual spending. This demonstrates the Authority's continued commitment to maintaining its core operation related to facilities and infrastructure.

The FY12 Budget includes \$23.3 million for other services, a decrease of \$228,000 or 1.0% from FY11 actual spending primarily due to the elimination of FY11 one-time accrual of \$1.5 million for GASB49 pollution remediation offset by increase of \$497,000 for Sludge Pelletization due to increased inflation indices and \$208,000 for Space/Lease Rental due to contract escalators and increased tax liability.

The FY12 Budget includes \$22.7 million for utilities, which is \$678,000 or 3.1% greater than FY11 actual spending. The increase for Utilities is primarily associated with a \$1.9 million increase for diesel fuel due to higher pricing and usage. In FY11, Deer Island did not utilize the Combustion Turbine Generators (CTGs) as much as planned so fuel purchases were delayed into FY12 due to sufficient inventory on hand and high market prices. Some of the increase for diesel fuel was offset by favorable electricity contract pricing for Deer Island and Field Operations profile accounts. The FY12 Electricity line item is \$1.3 million or 7.2% lower than FY11 actual spending. In addition to favorable contract electricity pricing the Authority has also been proactive in managing its energy expense through increased self-generation at Deer Island due to improved Steam Turbine Generator (STG) operation and new green initiatives along with efficiency improvements in Field Operations. It is important to note that the Authority's operations are highly energy intensive and that higher energy prices, particularly natural gas through its impact on electricity prices would have a significant impact on this budget. The FY12 Budget assumes funding of \$16.4 million for electricity, \$3.7 million for diesel fuel, \$1.8 million for water and \$549,000 for natural gas. The FY12 energy and utilities budget reflects the most recent pricing outlook based on energy futures and on the latest power purchase contracts for Deer Island, Carroll Water Treatment Plant, and other large FOD facilities. As a result of projected increased self-generation at Deer Island due to improved Steam Turbine Operations and new green energy initiatives, along with efficiency improvements in Field Operations, and favorable bid pricing, the total spending for utilities is lower than the FY11 Budget. In November 2010, a new 4 MW, three-year, fixed block power purchase agreement for the Authority's larger electrical accounts in Field Operations, including the Carrol Plant, went into effect whereby 80% of demand will be fixed. In May 2011, the Authority entered into a two-year power purchase agreement for Deer Island where the Authority purchased a fixed 10 MW block of power and will purchase the remaining plant energy demand in the real-time market. With the addition of this new contract, the MWRA has fixed pricing for over 60% of its electricity load, with remaining demand being purchased in the real-time market.

The FY12 Budget includes \$9.0 million for chemicals, an increase of \$350,000 or 4.0% from FY11 actual spending and is primarily due to price increases. The price increases are partially offset by lower dosing assumptions mainly for hydrofluosilicic acid due to changes in regulatory requirements. It should be noted that there is no funding included in the FY12 Final Budget for enterococcus compliance at Deer Island associated with the new National Pollutant Discharge Elimination System (NPDES) permit.

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 FY12 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

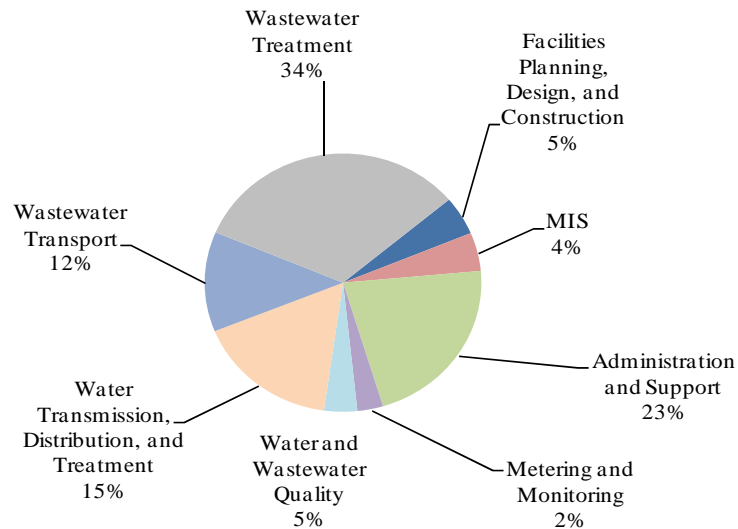
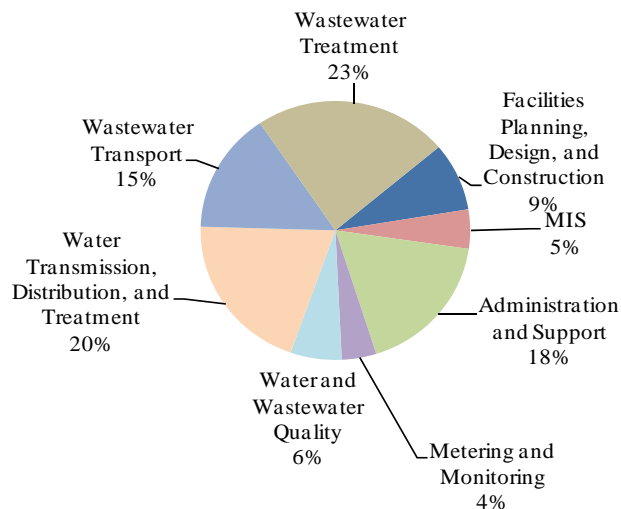


Figure I-3 below illustrates staffing by Functional Area and shows the breakdown of the 1,202 filled positions as of June 2011. Of the 1,202 positions, 58% are devoted to operating and maintaining the water and wastewater treatment and transport systems; 23% to administration and support and MIS functions, and 9% to facilities planning, design, and construction. Water and Wastewater Quality functions and Meter and Monitoring account for the remaining 10% of staff.

FIGURE I-3
Staffing by Functional Area



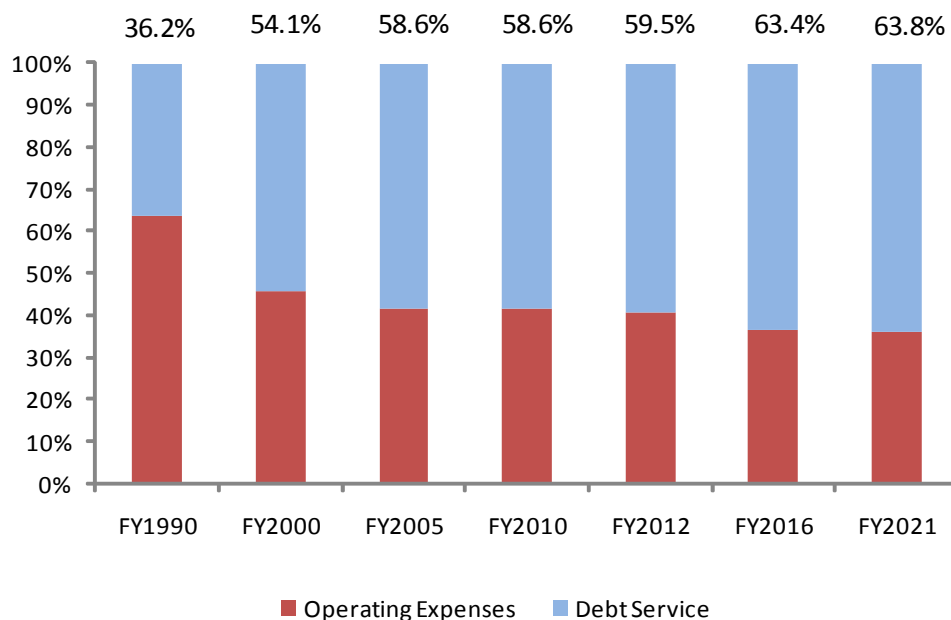
Capital Financing

Outstanding Debt and Debt Management

The \$7.5 billion spent on MWRA's modernization efforts to date, has relied heavily on debt financing. Total debt as of June 2011 was \$5.9 billion consisting of senior and subordinated debt, as well as Tax-Exempt Commercial Paper. The MWRA enjoys strong unenhanced senior debt ratings of Aa1, AA+, and AA+ from Moody's, Standard & Poor, and Fitch, respectively.

The Authority's debt service obligation as a percent of total expenses has increased from 36% in 1990 to 59.5% in the FY12 Current Expense Budget. Much of this debt service is for completed projects. MWRA's capital spending, from its inception, has been dominated by court-mandated projects, which in total have accounted for 80% of capital spending to date. Going forward, the majority of capital spending will be geared towards asset protection and water redundancy initiatives.

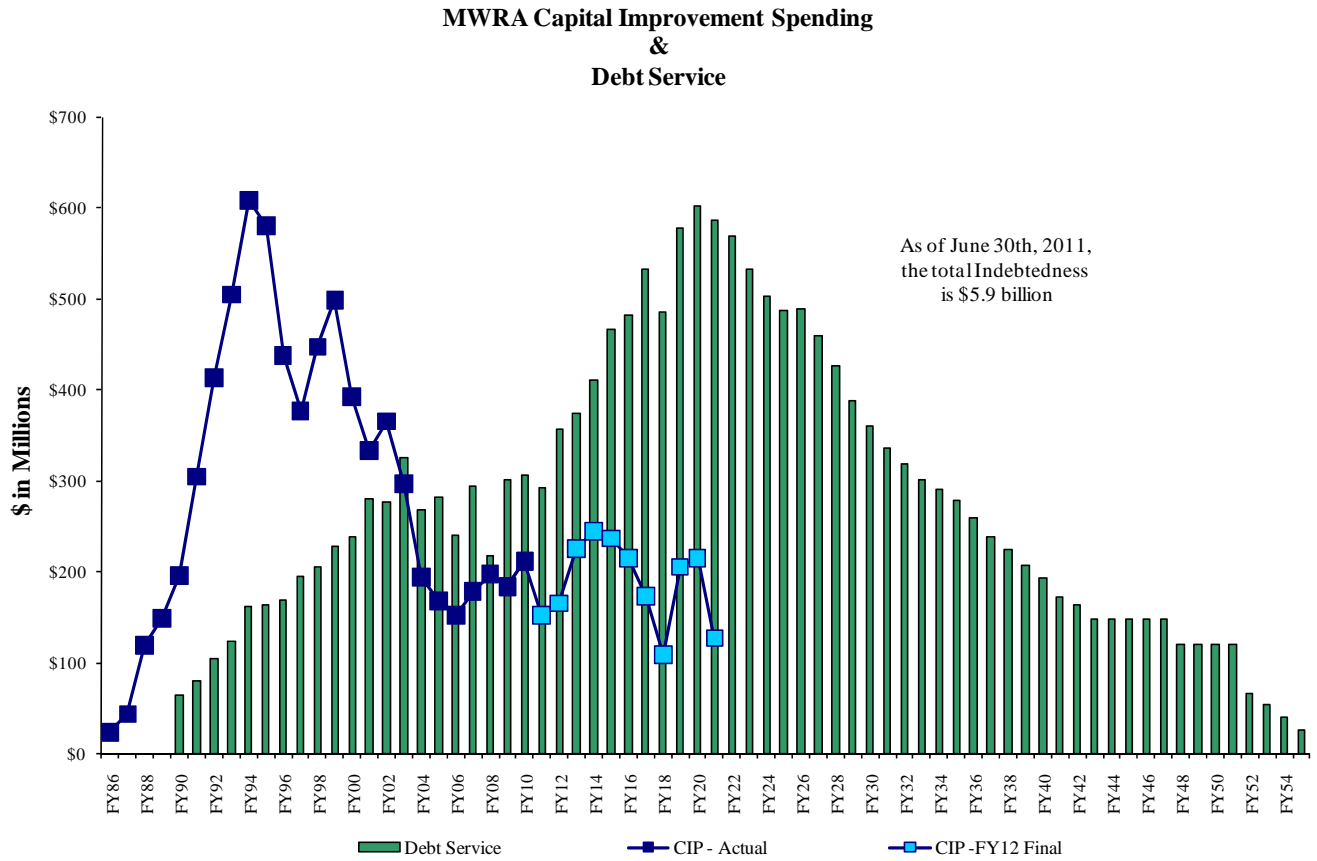
The graph on the following page depicts the growing proportion of capital financing as a percent of total expenses.



FY12 capital financing costs total \$368.0 million which reflects the \$350,000 in anticipated Debt Service Assistance (DSA).

The MWRA expects to finance the capital expenditures identified in the FY12 Capital Improvement Program (CIP) through the issuance of revenue bonds as provided for in the Enabling Act, and from the proceeds of federal and state grants and operating revenues. As of June, 2011, the MWRA's indebtedness included \$3.4 billion of senior revenue bonds, \$1.2 billion of subordinated revenue bonds, approximately \$1.1 billion of loans with the SRF and \$144 million of tax-exempt commercial paper notes.

The following graph illustrates the relationship between the MWRA’s CIP and outstanding debt as of June 2011.



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.

In June 2011, MWRA executed a \$32.1 million defeasance to achieve debt service reductions through the use of FY11 surplus funds. These actions will result in debt service reductions of \$1.4 million for FY12 and FY13, \$26.4 million in FY14, and \$4.8 million in FY15.

The FY12 Final capital financing costs totals \$368.0 million and remains the largest portion of the MWRA’s budget, accounting for 59.5% of total expenses. The FY12 Final capital financing costs increased (after offsets) by \$7.8 million or 2.2% compared with FY11 actual spending. The increase in MWRA’s debt service requirement is the result of new money issues in FY11 and projected FY12 issuances partially offset by the impact of the defeasance.

The FY12 capital financing budget includes:

- \$187.2 million in principal and interest payments on MWRA's senior fixed rate bonds. This amount includes \$1.9 million to support issuance of \$100.0 million in May 2012;
- \$94.6 million in principal and interest payments on subordinate bonds;
- \$72.7 million in principal and interest payments on SRF loans. This amount includes \$8.8 million to support issuances of \$74.0 million in November 2011 and \$50.0 million in June 2012;
- \$7.2 million to fund ongoing capital projects with current revenue;
- \$3.4 million to fund the interest expense related to the Local Water Pipeline Assistance Program; and
- \$3.2 million for the Chelsea Lease.

The FY12 Final Budget assumes a 3.25% interest rate for variable rate debt which is level funded with the FY11 assumption. While MWRA continues to experience unusually low interest rates, they are not reflective of historical averages and there is no guarantee that rates will stay low. The 20-year SIFMA interest rate average for variable rate debt is 2.54% and MWRA current average liquidity and remarketing costs are 77 basis points. The combination of these two costs results in an all-in average cost of approximately 3.31% which is 6 basis points higher than the budget assumption.

Table I-3 provides detail on the FY12 Final Budget 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 FY12 capital financing is for wastewater improvements. Current and future borrowings increasingly support improvements to the water system. A complete list of the Authority's indebtedness by series is presented in Appendix F.

| TABLE I-3 | | | | |
|---|---------------------------|---------------------------------|----------------|----------------|
| FY12 Final Current Expense Budget - Capital Financing Detail (as of 6/30/11) | | | | |
| \$ in Millions | | | | |
| | Amount Outstanding | Total FY12 Capital Costs | Sewer | Water |
| Total SRF ¹ Debt | \$1,104 | \$72.7 | \$57.9 | \$14.7 |
| Total Senior Debt | 3,415 | 187.2 | 117.0 | 70.2 |
| Total Subordinate Debt | 1,240 | 94.6 | 77.4 | 17.2 |
| Total SRF and Debt Service² | \$5,759 | \$354.5 | \$252.3 | \$102.2 |
| Water Pipeline Commercial Paper | 144 | 3.4 | 0.0 | 3.4 |
| Current Revenue/Capital ³ | | 7.2 | 5.4 | 1.8 |
| Capital Lease | | 3.2 | 2.0 | 1.2 |
| Sub-Total | \$144 | \$13.9 | \$7.4 | \$6.5 |
| Total Capital Financing (before Debt Service Offsets) | \$5,903 | \$368.3 | \$259.7 | \$108.6 |
| Debt Service Offsets: | | | | |
| Debt Service Assistance | | 0.4 | 0.3 | 0.0 |
| Total Capital Financing | \$5,903 | \$368.0 | \$259.4 | \$108.6 |

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

² Numbers may not add due to rounding.

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

Indirect Expenses

Indirect Expenses for FY12 total \$40.9 million, an increase of \$4.9 million or 13.6% compared to FY11 actual spending. Below are the highlights of major changes:

Insurance

MWRA purchases property and casualty insurance from external insurance carriers with a self-insured retention of \$2.5 million dollars and Worker's Compensation Excess insurance with a self-insured retention of \$500,000 per claim. The FY12 Final Budget includes \$2.3 million for Insurance, an increase of \$1.3 million or 128.1% from FY11 actuals. The budget includes \$1.7 million for premiums and fees and \$614,000 for the projected cost of claims made against the self-insured portion of MWRA coverage. MWRA mitigates the budgetary risk of self-insurance by maintaining an Insurance Reserve. The reserve, which was established as part of the Bond Resolution, requires that an independent insurance consultant review the funding level every three years and provide recommendations as to its adequacy. The Insurance Reserve Fund was reduced from \$19 million to \$14 million based on the recommended range provided in the most recent review prepared by the outside consultant. The released funds will be used to cover the costs associated with the May 2010 water main break and August 2010 water leak while the Authority pursues litigation to recover these expenses.

Watershed Reimbursement/PILOT

The Enabling Act directs MWRA to pay the Commonwealth of Massachusetts for several statutory obligations: Payment in Lieu of Taxes (PILOT) for Commonwealth-owned land in the watersheds, operating expenses of the Division of Water Supply Protection, and debt service costs for purchases of land around the supply reservoirs to protect the watersheds. The FY12 Final Budget includes \$25.6 million for the Division of Water Supply Protection (formerly MDC Division of Watershed Management), an increase of \$867,000 or 3.5% over FY11 actual spending. The budget is comprised of \$12.7 million for reimbursement of operating expenses, \$7.3 million for Payment in Lieu of Taxes (PILOT), and \$5.6 million for debt service expenses on prior land purchases financed by the Commonwealth.

Harbor Electric Energy Company (HEEC)

The FY12 Final Budget includes \$4.0 million for the Harbor Energy Electric Company (HEEC), an increase of \$90,000 or 2.3% compared with FY11 actual spending. This funding is for the repayment of the capital investment of the Deer Island electric cable and substation which provides electric power to the treatment plant.

Mitigation

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

Mitigation expenses are funded in the capital budget and in the current expense budget. The FY12 Final Budget includes \$1.5 million for community compensation for impacts, including \$800,000 for the City of Quincy and \$729,000 for the Town of Winthrop, based on Memoranda of Agreement with the communities.

Retirement System Contribution

The FY12 Budget includes a contribution to MWRA's retirement fund of \$7.3 million, an increase of \$2.0 million or 37.4% more than FY11 actual spending. The FY12 funding of \$7.3 million includes the required contribution of \$5.5 million and an optional contribution of \$1.9 million originally directed towards the Authority's Other Post Employment Benefit (OPEB) liability.

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

The Authority has complied with the GASB 45, *Accounting and Financial Reporting by Employers for Postemployment Benefits Other than Pensions (OPEB)*, by disclosing this liability in the year-end Financial Statements. The Authority's fiscal 2011 annual OPEB expense is calculated based on the

annual required contribution of the employer (ARC), an amount actuarially determined in accordance with the parameters of GASB Statement No. 45. The ARC represents a level of funding that, if paid on an on-going basis, is projected to cover the normal cost per year and amortize the unfunded actuarial liability over a period of thirty years. As part of the multi-year strategy to address its unfunded liabilities for OPEB and pension holistically, the Board approved a strategy to aggressively pay down our pension liability and upon reaching full funding move to address the OPEB obligation. Additional optional pension contributions were included in the FY08, FY09, FY10, and FY12 approved budgets in line with this funding strategy.

Operating Reserves

Funding for the Operating Reserve for FY12 is \$195,000 greater than FY11 actual spending. The Operating Reserve balance is in compliance with MWRA General Bond Resolution which requires a balance of one-sixth of annual operating expenses. Based on the FY12 Final Budget, the required balance is \$37.4 million versus the \$37.2 million required in FY11.

Community Profile and Assessments

MWRA provides wholesale water and sewer services to 61 communities or local bodies. Fifty-one local bodies purchase water supply services, and 45 local bodies purchase wastewater transport and treatment services. Thirty-five local bodies purchase both. Approximately 2.8 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 FY12 Final Budget, rate revenue from BWSC will account for 31% of MWRA's total rate revenue. Table I-4, on page I-18, lists MWRA communities, the services received, and the Final MWRA assessments for FY12.

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

Table I-5 on page I-19 presents the calculation of MWRA's FY12 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 FY12 Final 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. In April 2005, the MWRA installed a new wastewater metering system which has been used to generate sewer assessments since FY07.

Table I-4

Massachusetts Water Resources Authority
Final FY12 Water and Sewer Assessments

29-Jun-11

| MWRA Fully Served Water and Sewer Customers | Final FY11 Water Assessment | Final FY12 Water Assessment | Percent Change from FY11 | Final FY11 Sewer Assessment | Final FY12 Sewer Assessment | Percent Change from FY11 | Final FY11 Combined Assessment | Final FY12 Combined Assessment | Percent Change from FY11 |
|---|-----------------------------|-----------------------------|--------------------------|-----------------------------|-----------------------------|--------------------------|--------------------------------|--------------------------------|--------------------------|
| ARLINGTON | \$3,993,340 | \$4,111,254 | 3.0% | \$6,763,055 | \$7,190,694 | 6.3% | \$10,756,395 | \$11,301,948 | 5.1% |
| BELMONT | 2,183,280 | 2,253,543 | 3.2% | 4,234,838 | 4,490,781 | 6.0% | 6,418,118 | 6,744,324 | 5.1% |
| BOSTON (BWSC) | 67,381,413 | 66,577,763 | -1.2% | 109,888,745 | 115,180,467 | 4.8% | 177,270,158 | 181,758,230 | 2.5% |
| BROOKLINE | 5,310,862 | 5,175,607 | -2.5% | 11,279,012 | 12,047,440 | 6.8% | 16,589,874 | 17,223,047 | 3.8% |
| CHELSEA | 3,118,910 | 3,056,409 | -2.0% | 6,157,340 | 6,315,106 | 2.6% | 9,276,250 | 9,371,515 | 1.0% |
| EVERETT | 4,152,168 | 4,157,781 | 0.1% | 6,614,319 | 6,907,659 | 4.4% | 10,766,487 | 11,065,440 | 2.8% |
| FRAMINGHAM | 6,448,218 | 6,859,304 | 6.4% | 9,983,704 | 10,365,277 | 3.8% | 16,431,922 | 17,224,581 | 4.8% |
| LEXINGTON | 4,745,093 | 5,049,999 | 6.4% | 6,405,931 | 6,802,875 | 6.2% | 11,151,024 | 11,852,874 | 6.3% |
| MALDEN | 5,494,013 | 5,428,405 | -1.2% | 10,588,739 | 10,847,823 | 2.4% | 16,082,752 | 16,276,228 | 1.2% |
| MEDFORD | 5,061,181 | 5,063,263 | 0.0% | 10,350,919 | 10,794,857 | 4.3% | 15,412,100 | 15,858,120 | 2.9% |
| MELROSE | 2,093,320 | 2,278,579 | 8.9% | 5,245,603 | 5,382,210 | 2.6% | 7,338,923 | 7,660,789 | 4.4% |
| MILTON | 2,290,290 | 2,367,833 | 3.4% | 4,536,045 | 4,797,042 | 5.8% | 6,826,335 | 7,164,875 | 5.0% |
| NEWTON | 8,710,520 | 8,939,785 | 2.6% | 18,034,955 | 19,546,086 | 8.4% | 26,745,475 | 28,485,871 | 6.5% |
| NORWOOD | 2,875,398 | 3,181,474 | 10.6% | 5,561,031 | 5,770,472 | 3.8% | 8,436,429 | 8,951,946 | 6.1% |
| QUINCY | 9,387,744 | 9,306,539 | -0.9% | 17,150,548 | 17,658,232 | 3.0% | 26,538,292 | 26,964,771 | 1.6% |
| READING | 1,726,878 | 1,772,389 | 2.6% | 3,922,082 | 4,128,058 | 5.3% | 5,648,960 | 5,900,447 | 4.5% |
| REVERE | 4,086,484 | 4,159,759 | 1.8% | 9,553,669 | 9,203,347 | -3.7% | 13,640,153 | 13,363,106 | -2.0% |
| SOMERVILLE | 5,958,943 | 5,834,796 | -2.1% | 12,822,076 | 13,719,348 | 7.0% | 18,781,019 | 19,554,144 | 4.1% |
| STONEHAM | 2,710,209 | 2,877,398 | 6.2% | 4,036,494 | 4,253,379 | 5.4% | 6,746,703 | 7,130,777 | 5.7% |
| WALTHAM | 7,639,702 | 7,698,671 | 0.8% | 11,906,428 | 12,347,461 | 3.7% | 19,546,130 | 20,046,132 | 2.6% |
| WATERTOWN | 2,683,079 | 2,658,770 | -0.9% | 5,271,596 | 5,542,951 | 5.1% | 7,954,675 | 8,201,721 | 3.1% |
| WINTHROP | 1,239,532 | 1,240,299 | 0.1% | 2,871,107 | 3,125,822 | 8.9% | 4,110,639 | 4,366,121 | 6.2% |
| TOTAL | \$159,290,577 | \$160,049,620 | 0.5% | \$283,178,236 | \$296,417,387 | 4.7% | \$442,468,813 | \$456,467,007 | 3.2% |

| MWRA Sewer and Partial Water Customers | Final FY11 Water Assessment | Final FY12 Water Assessment | Percent Change from FY11 | Final FY11 Sewer Assessment | Final FY12 Sewer Assessment | Percent Change from FY11 | Final FY11 Combined Assessment | Final FY12 Combined Assessment | Percent Change from FY11 |
|--|-----------------------------|-----------------------------|--------------------------|-----------------------------|-----------------------------|--------------------------|--------------------------------|--------------------------------|--------------------------|
| CANTON | \$2,245,811 | \$2,215,262 | -1.4% | \$3,240,704 | \$3,250,840 | 0.3% | \$5,486,515 | \$5,466,102 | -0.4% |
| NEEDHAM | 265,017 | 610,028 | 130.2% | 5,043,945 | 5,291,080 | 4.9% | 5,308,962 | 5,901,108 | 11.2% |
| STOUGHTON | 560,611 | 628,192 | 12.1% | 4,209,243 | 4,438,406 | 5.4% | 4,769,854 | 5,066,598 | 6.2% |
| WAKEFIELD | 1,519,711 | 1,477,779 | -2.8% | 5,033,655 | 5,414,681 | 7.6% | 6,553,366 | 6,892,460 | 5.2% |
| WELLESLEY | 1,039,510 | 1,043,230 | 0.4% | 4,801,042 | 4,999,950 | 4.1% | 5,840,552 | 6,043,180 | 3.5% |
| WILMINGTON | 100,782 | 493,375 | 389.5% | 1,963,446 | 2,187,544 | 11.4% | 2,064,228 | 2,680,919 | 29.9% |
| WINCHESTER | 836,681 | 1,014,617 | 21.3% | 3,465,522 | 3,605,752 | 4.0% | 4,302,203 | 4,620,369 | 7.4% |
| WOBURN | 1,713,327 | 2,295,113 | 34.0% | 9,292,091 | 9,041,505 | -2.7% | 11,005,418 | 11,336,618 | 3.0% |
| TOTAL | \$8,281,450 | \$9,777,596 | 18.1% | \$37,049,648 | \$38,229,758 | 3.2% | \$45,331,098 | \$48,007,354 | 5.9% |

| MWRA Sewer-only Customers | Final FY11 Water Assessment | Final FY12 Water Assessment | Percent Change from FY11 | Final FY11 Sewer Assessment | Final FY12 Sewer Assessment | Percent Change from FY11 | Final FY11 Combined Assessment | Final FY12 Combined Assessment | Percent Change from FY11 |
|---------------------------|-----------------------------|-----------------------------|--------------------------|-----------------------------|-----------------------------|--------------------------|--------------------------------|--------------------------------|--------------------------|
| ASHLAND | | | | \$1,942,553 | \$1,996,318 | 2.8% | \$1,942,553 | \$1,996,318 | 2.8% |
| BEDFORD | | | | 2,872,853 | 2,951,458 | 2.7% | 2,872,853 | 2,951,458 | 2.7% |
| BRAINTREE | | | | 7,090,129 | 7,226,112 | 1.9% | 7,090,129 | 7,226,112 | 1.9% |
| BURLINGTON | | | | 4,447,740 | 4,736,577 | 6.5% | 4,447,740 | 4,736,577 | 6.5% |
| CAMBRIDGE | | | | 21,622,817 | 21,495,855 | -0.6% | 21,622,817 | 21,495,855 | -0.6% |
| DEDHAM | | | | 4,715,220 | 4,809,110 | 2.0% | 4,715,220 | 4,809,110 | 2.0% |
| HINGHAM SEWER DISTRICT | | | | 1,434,012 | 1,501,652 | 4.7% | 1,434,012 | 1,501,652 | 4.7% |
| HOLBROOK | | | | 1,379,633 | 1,425,395 | 3.3% | 1,379,633 | 1,425,395 | 3.3% |
| NATICK | | | | 4,346,280 | 4,460,551 | 2.6% | 4,346,280 | 4,460,551 | 2.6% |
| RANDOLPH | | | | 4,910,670 | 5,177,242 | 5.4% | 4,910,670 | 5,177,242 | 5.4% |
| WALPOLE | | | | 3,116,054 | 3,252,627 | 4.4% | 3,116,054 | 3,252,627 | 4.4% |
| WESTWOOD | | | | 2,158,037 | 2,268,632 | 5.1% | 2,158,037 | 2,268,632 | 5.1% |
| WEYMOUTH | | | | 9,316,303 | 9,865,795 | 5.9% | 9,316,303 | 9,865,795 | 5.9% |
| TOTAL | | | | \$69,352,301 | \$71,167,324 | 2.6% | \$69,352,301 | \$71,167,324 | 2.6% |

| MWRA Water-only Customers | Final FY11 Water Assessment | Final FY12 Water Assessment | Percent Change from FY11 | Final FY11 Sewer Assessment | Final FY12 Sewer Assessment | Percent Change from FY11 | Final FY11 Combined Assessment | Final FY12 Combined Assessment | Percent Change from FY11 |
|---------------------------|-----------------------------|-----------------------------|--------------------------|-----------------------------|-----------------------------|--------------------------|--------------------------------|--------------------------------|--------------------------|
| LYNNFIELD WATER DISTRICT | \$362,005 | \$424,008 | 17.1% | | | | \$362,005 | \$424,008 | 17.1% |
| MARBLEHEAD | 1,805,608 | 1,829,892 | 1.3% | | | | 1,805,608 | 1,829,892 | 1.3% |
| NAHANT | 303,713 | 323,512 | 6.5% | | | | 303,713 | 323,512 | 6.5% |
| SAUGUS | 2,972,346 | 2,896,537 | -2.6% | | | | 2,972,346 | 2,896,537 | -2.6% |
| SOUTHBOROUGH | 625,916 | 727,775 | 16.3% | | | | 625,916 | 727,775 | 16.3% |
| SWAMPSCOTT | 1,462,442 | 1,474,802 | 0.8% | | | | 1,462,442 | 1,474,802 | 0.8% |
| WESTON | 1,367,778 | 1,751,901 | 28.1% | | | | 1,367,778 | 1,751,901 | 28.1% |
| TOTAL | \$8,899,808 | \$9,428,427 | 5.9% | | | | \$8,899,808 | \$9,428,427 | 5.9% |

| MWRA Partial Water-only Customers | Final FY11 Water Assessment | Final FY12 Water Assessment | Percent Change from FY11 | Final FY11 Sewer Assessment | Final FY12 Sewer Assessment | Percent Change from FY11 | Final FY11 Combined Assessment | Final FY12 Combined Assessment | Percent Change from FY11 |
|-----------------------------------|-----------------------------|-----------------------------|--------------------------|-----------------------------|-----------------------------|--------------------------|--------------------------------|--------------------------------|--------------------------|
| DEDHAM-WESTWOOD WATER DISTRICT | \$781 | \$47,238 | 5948.4% | | | | \$781 | \$47,238 | 5948.4% |
| LYNN (LWSC) | 169,958 | 202,576 | 19.2% | | | | 169,958 | 202,576 | 19.2% |
| MARLBOROUGH | 2,390,943 | 2,966,308 | 24.1% | | | | 2,390,943 | 2,966,308 | 24.1% |
| NORTHBOROUGH | 793,981 | 747,515 | -5.9% | | | | 793,981 | 747,515 | -5.9% |
| PEABODY | 392,317 | 666,251 | 69.8% | | | | 392,317 | 666,251 | 69.8% |
| TOTAL | \$3,747,980 | \$4,629,888 | 23.5% | | | | \$3,747,980 | \$4,629,888 | 23.5% |
| SYSTEMS TOTAL | \$180,219,815 | \$183,885,531 | 2.03% | \$389,580,185 | \$405,814,469 | 4.17% | \$569,800,000 | \$589,700,000 | 3.49% |

Retail Charges

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

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

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

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

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

TABLE I-5
Calculation of the FY12 Rate Revenue Requirement
(000's)

| | Sewer | Water | Total |
|-----------------------------|-----------|-----------|-----------|
| Allocated Direct Expenses | \$145,298 | \$63,989 | \$209,286 |
| Allocated Indirect Expenses | \$11,784 | \$29,108 | \$40,892 |
| PLUS | | | |
| Capital Expenses: | | | |
| Debt Service (less offsets) | \$251,990 | \$102,132 | \$354,122 |
| Current Revenue for Capital | \$5,400 | \$1,800 | \$7,200 |
| Other Capital Expenses | \$1,988 | \$4,670 | \$6,658 |
| PLUS | | | |
| Non-Rate Revenue: | | | |
| Investment Income | -\$9,979 | -\$5,373 | -\$15,352 |
| Fees and Other Revenue | -\$3,962 | -\$8,053 | -\$12,015 |
| Rate Stabilization | \$3,295 | -\$4,387 | -\$1,092 |
| EQUALS | | | |
| Rate Revenue Requirement | \$405,814 | \$183,886 | \$589,700 |

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 FY12, community assessments will represent 95.4% 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 FY12 through FY21.

| Rates & Budget Projections | | | | | | | | | | |
|---|------------|------------|------------|------------|------------|------------|-------------|------------|------------|------------|
| FY12 Final CEB | FY2012 | FY2013 | FY2014 | FY2015 | FY2016 | FY2017 | FY2018 | FY2019 | FY2020 | FY2021 |
| Total Rate Revenue (\$ in Mil) | \$ 589,700 | \$ 612,958 | \$ 650,899 | \$ 706,920 | \$ 744,372 | \$ 804,428 | \$ 785,392 | \$ 849,849 | \$ 935,124 | \$ 934,327 |
| Rate Revenue Change from Prior Year (\$000) | \$ 19,900 | \$ 23,258 | \$ 37,941 | \$ 56,021 | \$ 37,452 | \$ 60,056 | \$ (19,035) | \$ 64,457 | \$ 85,274 | \$ (796) |
| Rate Revenue Increase | 3.49% | 3.9% | 6.2% | 8.6% | 5.3% | 8.1% | -2.4% | 8.2% | 10.0% | -0.1% |
| Use of Reserves (\$ in Mil) | \$ 1,092 | \$ - | \$ 12,000 | \$ 12,000 | \$ 12,000 | \$ 12,000 | \$ - | \$ 12,000 | \$ 8,717 | \$ - |

Estimated Household Bill

| | | | | | | | | | | |
|---|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| Based on water usage of 61,000 gallons per year | \$ 891 | \$ 933 | \$ 983 | \$ 1,051 | \$ 1,107 | \$ 1,172 | \$ 1,202 | \$ 1,278 | \$ 1,376 | \$ 1,418 |
| Based on water usage of 90,000 gallons per year | \$ 1,314 | \$ 1,377 | \$ 1,451 | \$ 1,551 | \$ 1,633 | \$ 1,730 | \$ 1,774 | \$ 1,885 | \$ 2,030 | \$ 2,092 |

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

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

The second largest budget factor is projected growth of base operating costs. The estimated \$88.4 million increase in direct expenses from FY12 to FY21 is primarily the result of an assumed annual inflation rate of 4.0%. Also, over the next ten years, there will be increases in direct expenses as a result of capital improvement projects. The largest increases will be for the operation of new facilities such as the North Dorchester Bay CSO which has incremental impacts that are reflected in the FY12 Budget.

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:

- Nominal Debt Service Assistance of \$350,000 is projected;
- Direct expense inflation rate of 4.0% starting in FY13;
- 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 30-year terms and 5.5% interest rates in FY12, 40-year terms and 5.75% rates in FY13, 40-year terms and 6.0% rates in FY14, and 40-year terms and 6.25% rates from FY15-30;
- Variable rate interest projected at 3.25% in FY12, 3.75% in FY13 and 4.0% thereafter.

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

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

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

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

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

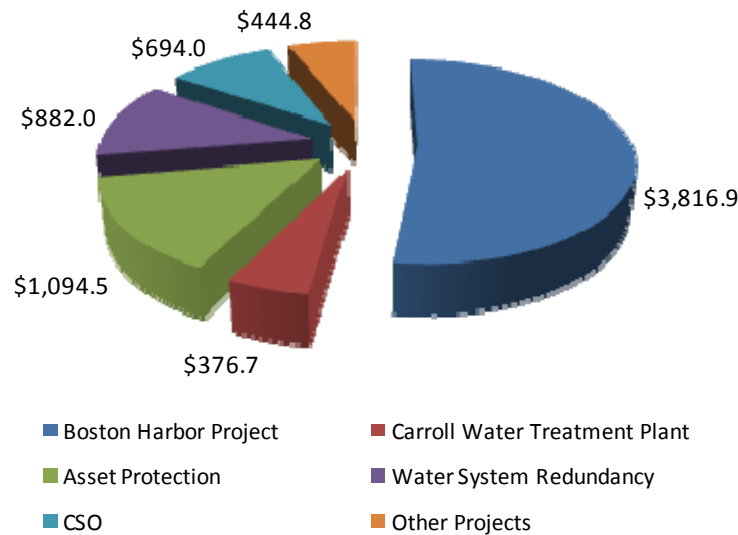
FY12 Capital Improvement Program

The FY12 Capital Improvement Program (CIP) budget totals \$5.5 billion, of which nearly \$3.3 billion has been expended through FY10 with a remaining balance of \$2.2 billion. The CSO program remains the largest remaining program initiative in terms of spending with an FY12 Budget of \$857.1 million of which \$710.9 million has been expended through FY10. The CSO Program represents \$305.8 million or 32.6% of Authority spending over the FY09-13 period.

The capital investment in the MWRA’s operating facilities has been primarily funded through long-term borrowings, and the debt service on these outstanding bonds is the largest portion of the Authority’s operating budget and is projected to grow even larger in future years.

Going forward, a greater proportion of the capital budget is designated for asset protection initiatives to preserve operating assets and critical long-term water redundancy projects. The long-term strategy for capital work is identified in the Authority’s Master Plan which was published in 2006 and serves as a road map for inclusion of projects in the CIP in every budget cycle.

The graph below highlights capital spending from 1986 through June 2010 by major programs:



As indicated previously, of the total \$7.4 billion expended through FY10, nearly 80% has funded court mandated projects such as the Boston Harbor Project, the MetroWest Supply Tunnel, the Carroll Water Treatment Plant (CWTP), and the Combined Sewer Overflow (CSO) program.

CIP Impact on 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. New facilities are adding operating costs of approximately \$840,000 and MIS program related maintenance initiatives are increasing operating costs by nearly \$783,000 by FY21. These increases will be more than offset by anticipated savings for energy initiatives at Deer Island, most notably the digester gas fueled Steam Turbine Generator (STG) upgrade as well as water and wastewater Alternative Energy Initiatives including solar, wind and hydroelectric power projects which will result in energy savings of approximately \$1.6 million over the next 10 years. The following table summarizes projected CIP impact by project over the next nine years, beginning in FY13.

| Fiscal Year | CEB Impacts (000) | | | | | | | | | |
|--|-------------------|--------------|----------------|----------------|--------------|------------|--------------|----------------|------------|------------------|
| | FY13 | FY14 | FY15 | FY16 | FY17 | FY18 | FY19 | FY20 | FY21 | Total |
| DI Asset Protection | \$0 | \$0 | (\$210) | (\$175) | (\$153) | \$0 | \$0 | (\$164) | \$0 | (\$703) |
| FERS Biofilter | 0 | 0 | 0 | (41) | 0 | 0 | 0 | 0 | 0 | (41) |
| Clinton Wastewater Treatment Plant/Aeration Efficiency Improvement | (36) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | (36) |
| Wastewater Alternative Energy Projects | (785) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | (785) |
| North Dorchester Bay | 0 | 0 | 0 | 0 | 426 | 0 | 0 | 0 | 0 | 426 |
| Total Wastewater (inflated) | (\$822) | \$0 | (\$210) | (\$216) | \$273 | \$0 | \$0 | (\$164) | \$0 | (\$1,140) |
| Carroll Water Treatment Plant | \$0 | \$216 | \$84 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$301 |
| Quabbin Water Treatment Plant | 39 | 14 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 53 |
| Wachusett Algae Treatment Facility | 0 | 0 | 0 | 29 | 30 | 0 | 0 | 0 | 0 | 60 |
| Alternative Energy | 0 | 0 | 0 | (154) | 0 | 0 | 0 | 0 | 0 | (154) |
| Total Water (inflated) | \$39 | \$230 | \$84 | (\$124) | \$30 | \$0 | \$0 | \$0 | \$0 | \$259 |
| Phase II: TRAC Replacement | \$0 | \$162 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$162 |
| Phase V: LIMS Replacement, GIS & OMS | 0 | 202 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 202 |
| SAN II | 0 | 0 | 112 | 0 | 0 | 0 | 0 | 0 | 0 | 112 |
| SAN III | 0 | 0 | 0 | 0 | 0 | 0 | 132 | 0 | 0 | 132 |
| NET 2020 | 0 | 54 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 54 |
| Telecommunications | 0 | 0 | 0 | 0 | 0 | 0 | 33 | 0 | 0 | 33 |
| NET 2020 DITP & Southborough | 0 | 0 | 0 | 88 | 0 | 0 | 0 | 0 | 0 | 88 |
| Total Business and Operations Support (inflated) | \$0 | \$418 | \$112 | \$88 | \$0 | \$0 | \$164 | \$0 | \$0 | \$783 |
| TOTAL MWRA | (\$783) | \$648 | (\$13) | (\$253) | \$303 | \$0 | \$164 | (\$164) | \$0 | (\$98) |

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 only received \$4.9 million in capital grants. In addition to participating in federal and state grant programs, the MWRA benefitted from the American Recovery and Reinvestment Act of 2009 which is projected to forgive approximately \$33.0 million in State Revolving Fund loan principal. In FY11, the Authority successfully applied for and received Federal Emergency Management Agency (FEMA) funding totaling \$1.4 million for diesel fuel and overtime costs related to the Spring 2010 rain events. The Authority will continue to pursue grant funding and take advantage of any possible program available to maximize grant funding opportunities.

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

MWRA Organization and History

The MWRA Enabling Act

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

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

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

History and Accomplishments

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

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

MWRA is also working to achieve compliance with an extensive consent order issued by the Massachusetts Department of Environmental Protection (DEP) mandating the steps necessary to achieve required improvements to the MWRA water system.

Since taking over operation and maintenance of the water and sewer systems from MDC, MWRA has increased annual investment in the system infrastructure from an average of \$11 million per year to an average of more than \$326 million per year between (FY90 to FY11). 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 \$420.0 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 \$8.0 million. In the following three years, the debt service allocation increased to \$9.6 million in FY06, \$19.0 million in FY07, and \$17.0 million in FY08. In light of the economic downturn in FY09, the Commonwealth was forced to eliminate the \$15.0 million appropriation in October 2008. The MWRA, after an aggressive budget cutting process, combined with favorable spending trends, was able to make-up this shortfall without a mid-year rate increase. For the FY12 Final Budget, \$350,000 in Debt Service Assistance is assumed.

Planning estimates for 2012 through 2021 forecast rate revenue requirement increases of 3.49% in FY12, 3.9% in FY13, 6.2% in FY14, 8.6% in FY15, 5.3% in FY16, 8.1% in FY17, and -2.4%, 8.2%, 10.0% and -0.1% in year FY18, FY19, FY20, and FY21 respectively.

In FY06, the MWRA formed a Rates Management Committee to evaluate the Authority's debt portfolio and credit structure to propose recommendations that deliver responsible short-term solutions for mitigating imminent rate spikes and long-term strategies for achieving predictable and sustainable rates. In line with the Board of Directors' strategy to deliver long-term predictable and sustainable rates for our 61 ratepayer communities, the MWRA initially preserved the scheduled use of its reserves for future years when projected rate increases are more significant. The changes to the indenture will release \$141.0 million in reserves that can be used to mitigate future rate increases, but the release date is now projected to be closer to FY16 based on current borrowing projections. While this is a sizable release, it is not the panacea that will address an average Rate Revenue Requirement increase of \$36.0 million over the next ten years.

The FY12 Budget:

- Continues to refine planning estimates assumptions to provide greater predictability of future assessments;
- Judiciously uses reserves to lower rate increases, but maintain adequate balances; and
- Continues a multi-year strategy initiated in FY11 to promote moderate and predictable rate increases over the FY11-FY13 horizon.

MWRA Organization

MWRA has four separate divisions and the Affirmative Action and Compliance Unit Department (AACU).

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. It includes the following departments: Office of Emergency Preparedness; Public Affairs; Internal Audit; and Planning and Coordination.

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 **Administration and Finance Division** was created in 2009 and is responsible for managing the finance and support service functions necessary to support daily operations of the Authority and insure the implementation of the Authority's long-term goals and strategies.

The Administration and Finance (A&F) Division is comprised of eleven departments: Director's Office; Rates and Budget; Treasury; Controller; Risk Management; Human Resources; Management Information Systems (MIS); Facilities Management; Fleet Services; Procurement; and Real Property and Environmental Management.

The Administration and Finance Division ensures that a variety of fiscal management systems are in place to monitor and control the Current Expense Budget (CEB) and Capital Improvement Program (CIP).

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 **Affirmative Action and Compliance Unit (AACU) Department** 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.

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, 2011 and 2010 are available online at www.mwra.com.