



Massachusetts Water Resources Authority

Presentation to the

**Wastewater Advisory Committee &
Water Advisory Committee**

Fiscal Year 2013

Proposed

Current Expense and Capital Improvement Budget

Overviews

April 6, 2012



AGENDA - CEB & CIP Budgets at a Glance

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FY13 Proposed CEB & CIP Budgets at a Glance

FY13 Proposed CEB (in millions)

Rate Revenue Requirement	\$612.6	3.9% increase from FY12	
Direct Expenses	\$217.1	Rate Revenue	\$612.6
Indirect Expenses	\$45.2	Investment Income	\$13.6
Capital Financing (net)	<u>\$377.5</u>	Other Revenue	<u>\$13.7</u>
Total Expenses	\$639.9	Total Revenue	\$639.9

FY13 Proposed CIP

Total Budget	\$5.5 billion
Spending thru FY10	<u>\$3.4 billion</u>
Remaining Balance	\$2.1 billion
FY09-13 spending	\$888.7 million
FY09-13 spending cap	\$898.8 million < \$1.144 billion 5-year spending cap



Massachusetts Water Resources Authority

Current Expense Budget



Fiscal Year 2011 Current Expense Budget Year-End Results

Fiscal Year 2011 : June 30, 2011				
Expenses	YTD Budget	YTD Actual	YTD Variance	%
Direct Expenses	209,612,684	204,273,610	(5,339,074)	-2.5%
Indirect Expenses	37,958,852	35,996,869	(1,961,983)	-5.2%
Debt Service	354,326,676	360,157,926	5,831,250	1.6%
TOTAL EXPENSES	\$ 601,898,212	\$ 600,428,405	\$ (1,469,807)	-0.2%
TOTAL REVENUE	\$ 601,898,212	\$ 604,576,853	\$ 2,678,641	0.4%
REVENUE LESS EXPENSES	\$ -	\$ 4,148,448	\$ 4,148,448	

- Surplus of \$4.1 million, after \$32.1 million defeasance, was deposited into the Rate Stabilization Fund.
- Debt Service values above include the use of \$32.1 million of FY11 funds to execute a defeasance of approximately \$22.6 million of principal on senior bonds in June 2011 and a redemption of \$7 million of subordinate bonds on July 2011.
 - Reduced debt service by \$34.0 million between FY12 and FY15.
- Coverage through 12 months of FY11 was 191% for Senior and 120% for Subordinate.



Fiscal Year 2012 Current Expense Budget through February

Fiscal Year 2012 year-to-date February				
Expenses	Budget	Actual	Variance	%
Direct Expenses	\$132,330,304	\$130,103,239	-\$2,227,064	-1.7%
Indirect Expenses	\$29,784,136	\$29,279,262	-\$504,874	-1.7%
Debt Service	\$241,793,664	\$241,793,664	\$0	0.0%
TOTAL EXPENSES	\$403,908,104	\$401,176,165	-\$2,731,939	-0.7%
TOTAL REVENUE	\$415,962,200	\$417,377,791	\$1,415,591	0.3%
REVENUE LESS EXPENSES	\$12,054,096	\$16,201,627	\$4,147,531	

Direct Expense underspending is due to lower maintenance, workers' compensation, wages and salaries, professional services, and fringe benefits offset by higher utilities and other services.

Indirect Expense underspending is mainly due to lower insurance expenses and FY11 Watershed accrual.

Debt Expense is at budgeted levels. During FY12, a defeasance account was established for year-to-date debt service savings. These funds will be used to defease debt in FY12 which will provide critical rate relief in the next few years.

Defeasance account balance as of end of February is \$11.1 million.



FY12 Defeasance Account

- At the January 2012 meeting, the Board authorized the establishment of an account to deposit all surplus debt service funds each month.
- As of the end of January 2012, there was \$8.6 million transferred to the defeasance account.
- Those funds will all be used in June 2012 to execute a defeasance to provide targeted rate relief in FY14-16 with some benefit in FY13.
- Until the actual execution of the defeasance at the end of the fiscal year, these funds remain available for other uses should conditions change.



FY13 Proposed Current Expense Budget

The FY13 budget holds to the 3.9% rate increase commitment made during the development of the FY11 budget as part of a three-year strategy to keep rates manageable and predictable during this challenging period.

MWRA has level funded direct expenses for the last four years and has significantly reduced debt service in the near term through restructuring and defeasing debt. However, these actions are not sustainable over time.

The budget decisions made in the near term will have a long-term impact on the future. As the MWRA rolls out the final year of the three-year strategy, we must continue to look beyond this three-year snapshot to plan for what lies ahead.



FY13 Proposed Current Expense Budget (continued)

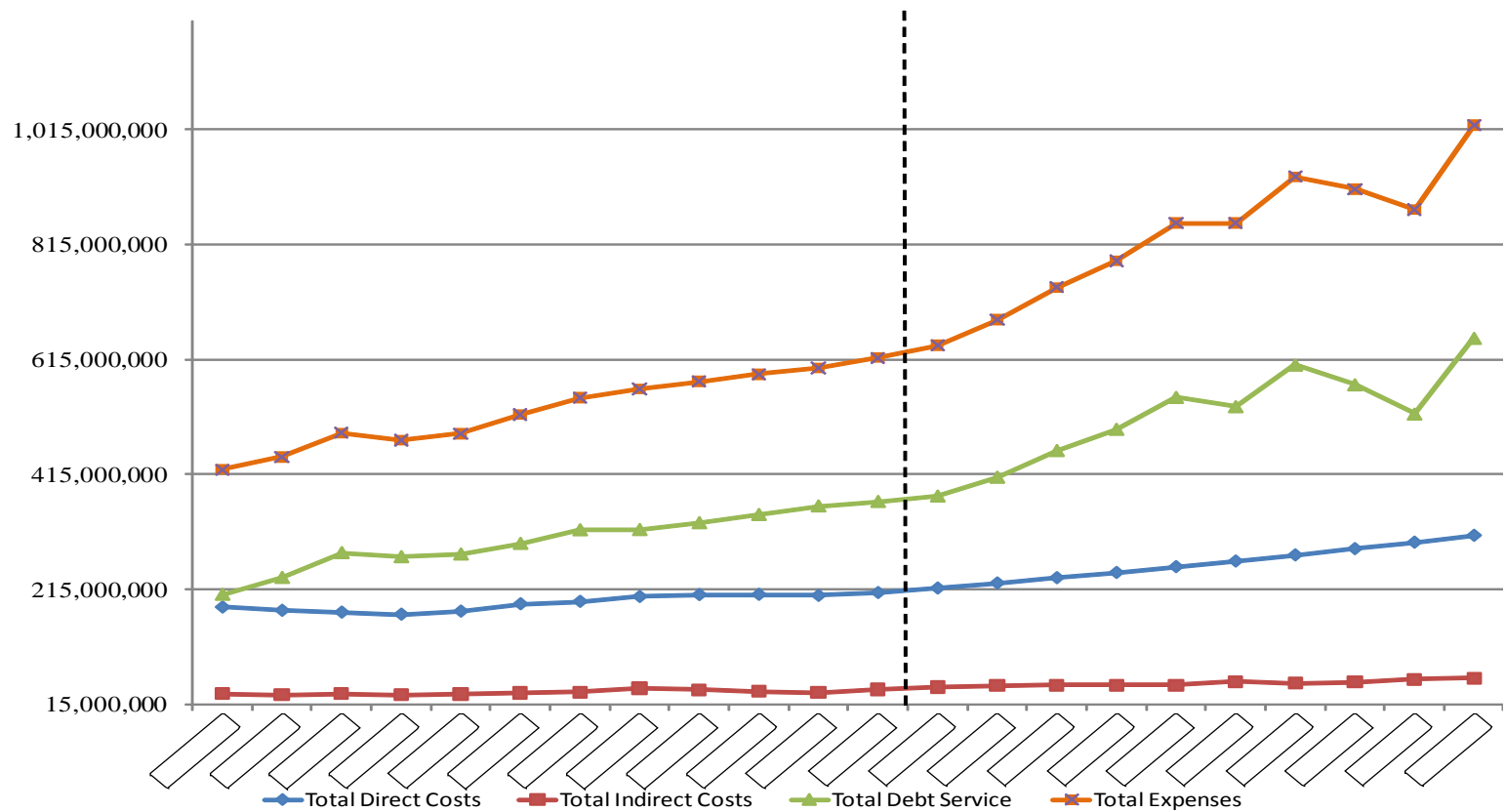
Major FY13 Proposed Budget assumptions include:

- Staffing is reduced by 10 positions to a headcount of 1,200, at a funding level of 1,195;
- Reflects \$1.6 million benefit in FY13 of a targeted defeasance for FY14, FY15, and FY16;
- Includes \$4.7 million for OPEB consistent with the FY12 planning estimates;
- No use of Rate Stabilization or Bond Redemption is planned for FY13 consistent with the planning estimates;
- Assumes no Debt Service assistance consistent with the House 2 budget; and
- No release of reserves related to the changes to Bond Indenture are included.



10 Year Historical and Projected Spending Chart

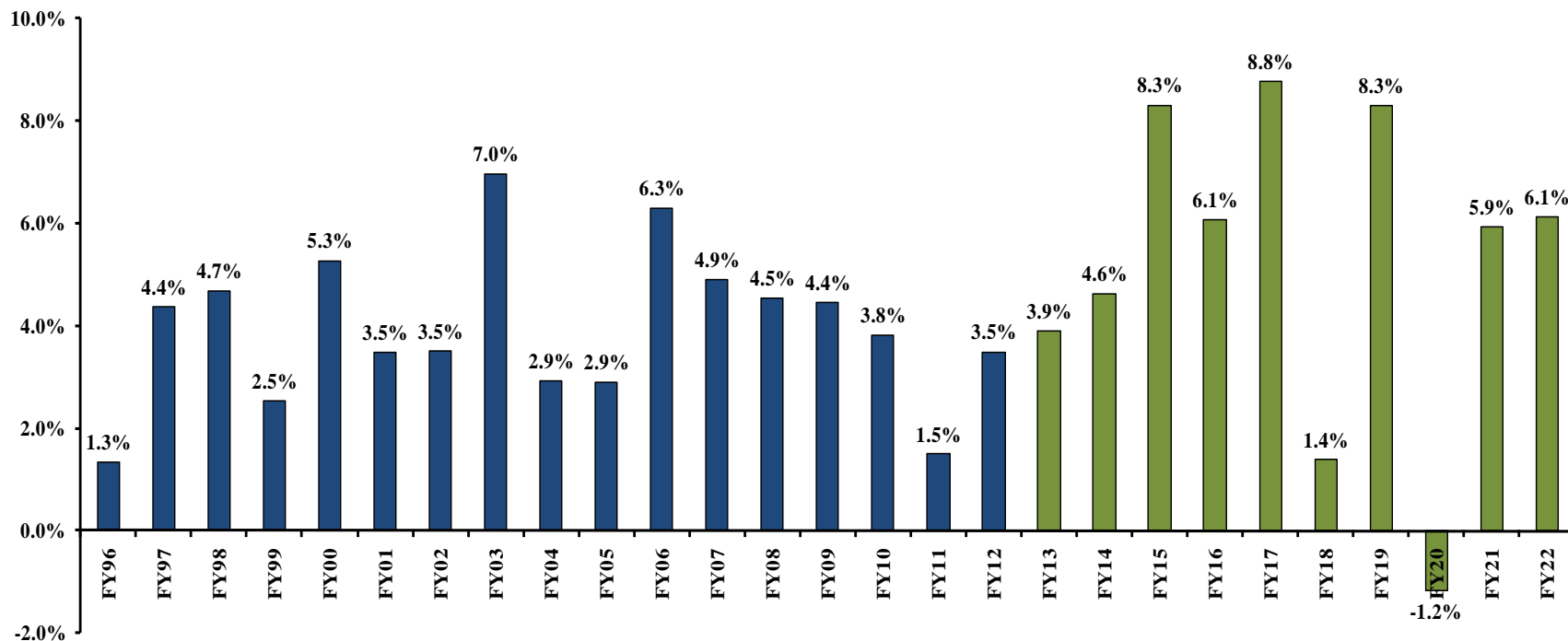
MWRA
Historicals Trend - Total Expenses
FY2001 - FY2011 Actuals, FY12 Budget,
FY2013 - 2022 Projection based on FY13 Proposed Budget





FY13 Proposed CEB Challenges

Historical & Projected Rate Increases





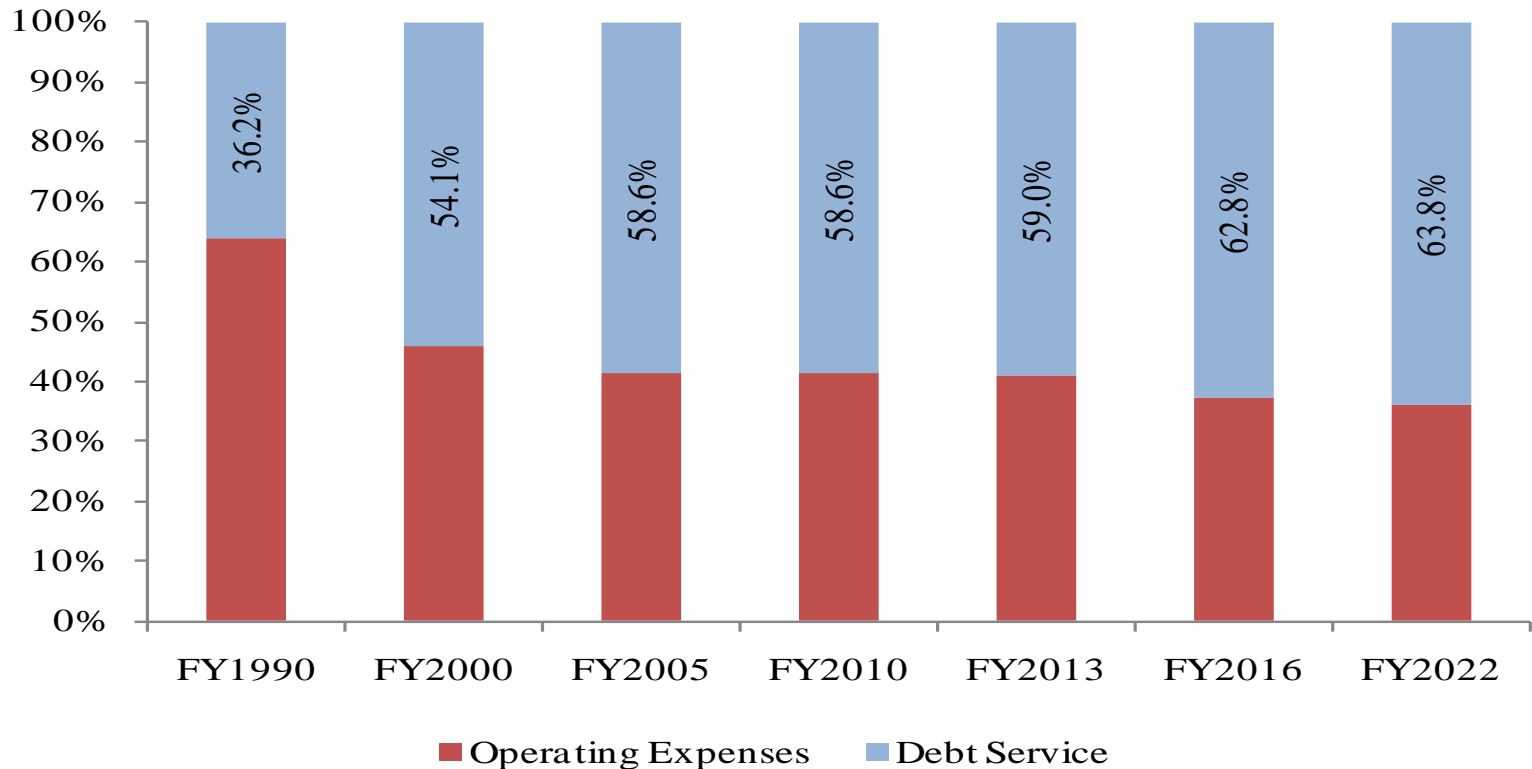
FY13 Proposed Current Expense Budget

The reality of meeting MWRA's financial goals is an operating budget heavily weighted by its debt obligations.

	FY13 Proposed Budget	% of Total Budget
Direct Expenses	\$ 217,135,952	34%
Indirect Expenses	\$ 45,225,222	7%
Total Debt Service (after offsets)	\$ 377,496,538	59%
Total Expense	\$ 639,857,711	
Rate Revenue	\$ 612,617,103	96%
Non-Rate Revenue	\$ 27,240,608	4%
Total Revenue	\$ 639,857,711	



Debt Service is the Largest Portion of CEB and continues to grow





Planning Estimates

Planning Estimates based on the FY13 Proposed Budget

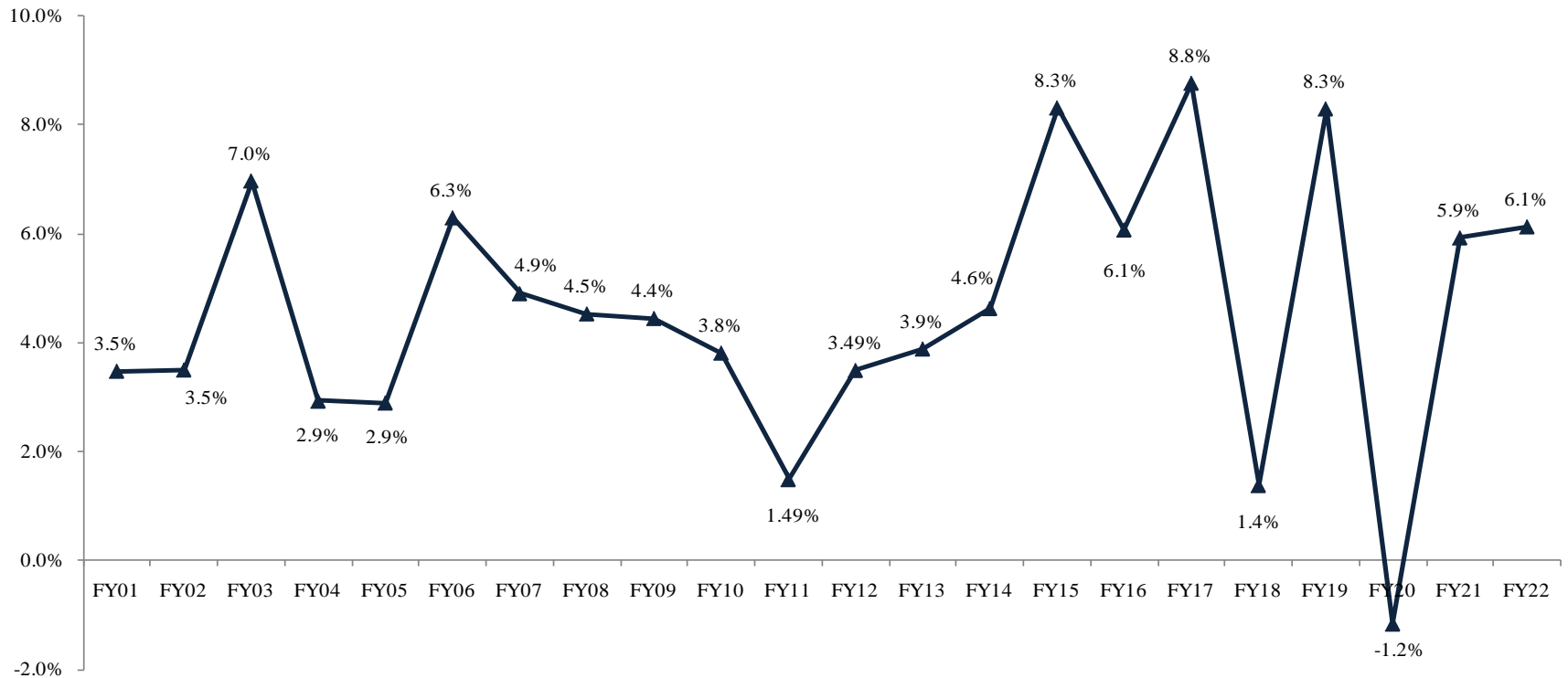
	Change to Capital Finance Budget from Prior Year	Change to Rate Revenue Requirement from Prior Year	% of Capital Finance to Rate Revenue Change
FY2012	13,653	19,900	68.6%
FY2013	9,517	22,917	41.5%
FY2014	27,738	28,349	97.8%
FY2015	48,733	53,244	91.5%
FY2016	37,989	42,128	90.2%
FY2017	54,976	64,505	85.2%
FY2018	(13,561)	11,070	-122.5%
FY2019	60,699	67,301	90.2%
FY2020	(22,447)	(10,186)	220.4%
FY2021	41,491	51,477	80.6%
FY2022	38,700	56,391	68.6%
AVERAGE FY13-FY22	28,384	38,720	73.3%

The 73.3% is the average increase per year related to Debt Service.



Rate Revenue Increases as Percent

Rate Revenue Requirement Increases Based on the FY13 Proposed CEB





Long-Term Management of Rates and Charges

Based on FY12 Approved Current Expense Budget

<u>Fiscal Year</u>	<u>FY12</u>	<u>FY13</u>	<u>FY14</u>	<u>FY15</u>	<u>FY16</u>	<u>FY17</u>	<u>FY18</u>	<u>FY19</u>	<u>FY20</u>	<u>FY21</u>
Rate Revenue Requirement (in millions)	\$589.7	\$613.0	\$650.9	\$706.9	\$744.4	\$804.4	\$785.4	\$849.8	\$935.1	\$934.3
Rate Revenue Increase	3.49%	3.9%	6.2%	8.6%	5.3%	8.1%	-2.4%	8.2%	10.0%	-0.1%
Household Rate										
Based on Water Use of 61,000 Gallons	\$891	\$933	\$983	\$1,051	\$1,107	\$1,172	\$1,202	\$1,278	\$1,376	\$1,418
Based on Water Use of 90,000 Gallons	\$1,314	\$1,377	\$1,451	\$1,551	\$1,633	\$1,730	\$1,774	\$1,885	\$2,030	\$2,092

Based on FY13 Proposed Current Expense Budget

<u>Fiscal Year</u>	<u>FY12</u>	<u>FY13</u>	<u>FY14</u>	<u>FY15</u>	<u>FY16</u>	<u>FY17</u>	<u>FY18</u>	<u>FY19</u>	<u>FY20</u>	<u>FY21</u>
Rate Revenue Requirement (in millions)	\$589.7	\$612.6	\$641.0	\$694.2	\$736.3	\$800.8	\$811.9	\$879.2	\$869.0	\$920.5
Rate Revenue Increase	3.49%	3.9%	4.6%	8.3%	6.1%	8.8%	1.4%	8.3%	-1.2%	5.9%
Household Rate										
Based on Water Use of 61,000 Gallons	\$891	\$925	\$969	\$1,034	\$1,092	\$1,161	\$1,213	\$1,289	\$1,313	\$1,391
Based on Water Use of 90,000 Gallons	\$1,314	\$1,365	\$1,430	\$1,525	\$1,611	\$1,713	\$1,790	\$1,902	\$1,937	\$2,052



Use of Reserves in Long-Term Rates Management Strategy

- After depositing \$4.1 million of the FY11 surplus into the Rate stabilization account MWRA had a total of \$74.0 million in Rate Stabilization and Bond Redemption funds
 - \$41.1 million in Rate Stabilization Fund
 - Use cannot exceed 10% of the year’s senior debt service
 - \$32.9 million in Bond Redemption Fund
 - Monies in this fund can only be used to retire or prepay outstanding debt.
- Projected reserve usage below is based on approved FY12 Current Expense Budget, which reflects MWRA’s new practice of limiting anticipated reserve use at no more than \$12 million per year. The numbers do not include the deposit of \$4.1 million to Rate Stabilization in FY12.

Fiscal Year	Rate Stablization	Bond Redemption	Fiscal Year End Balance
2012	\$ 1,092	\$ -	\$ 68,717
2013	\$ -	\$ -	\$ 68,717
2014	\$ 6,920	\$ 5,080	\$ 56,717
2015	\$ 9,463	\$ 2,537	\$ 44,717
2016	\$ 10,157	\$ 1,843	\$ 32,717
2017	\$ 9,324	\$ 2,676	\$ 20,717
2018	\$ -	\$ -	\$ 20,717
2019	\$ -	\$ 12,000	\$ 8,717
2020	\$ -	\$ 8,717	\$ -
Total	\$ 36,956	\$ 32,853	



FY13 Proposed CEB – Direct Expenses

Direct Expenses \$ in Millions	FY12 Budget	FY13 Proposed Budget	\$ Change	% Change
Wages and Salaries	\$ 90.3	\$ 94.1	\$ 3.8	4.2%
Overtime	3.5	3.7	0.2	5.0%
Fringe Benefits	18.0	18.8	0.8	4.7%
Workers' Compensation	2.1	2.1	-	0.0%
Chemicals	9.0	10.4	1.3	14.6%
Energy and Utilities	22.7	24.0	1.3	5.8%
Maintenance	29.5	28.3	(1.1)	-3.9%
Training and Meetings	0.3	0.4	0.1	53.3%
Professional Services	5.9	5.8	(0.1)	-2.1%
Other Materials	4.8	5.6	0.8	17.6%
Other Services	23.3	24.0	0.7	2.9%
TOTAL DIRECT EXPENSES	\$ 209.3	\$ 217.1	\$ 7.8	3.8%



FY13 Proposed Direct Expenses

Direct Expenses increased \$7.8 million or 3.8% from FY12 Budget due to the following:

- Increases for Wages and Salaries of \$3.8 million for cost of living increases offset by lower funded headcount;
- Increases for Chemicals of \$1.3 million mainly for anticipated new regulatory requirements for enterococcus compliance;
- Increases for Utilities of \$1.3 million mainly for increased diesel fuel requirements based on anticipated usage levels and electricity due to increased transportation charges;



FY13 Proposed Direct Expenses (continued)

- Increases for Fringe Benefits of \$849,000 for anticipated healthcare costs;
- Increases for Other Materials of \$838,000 mainly for vehicle replacements; and
- Increases for Other Services of \$676,000 mainly for utility indices associated with the Sludge Pelletization contract.



FY13 Proposed CEB – Indirect Expenses

Indirect Expenses \$ in Millions	FY12 Budget	FY13 Proposed Budget	\$ Change	% Change
Insurance	\$ 2.3	\$ 2.0	\$ (0.2)	-10.8%
Watershed/PILOT	25.6	26.4	0.9	3.4%
HEEC	4.0	3.7	(0.2)	-5.6%
Mitigation	1.5	1.6	0.0	2.5%
Addition to Reserves	0.2	1.0	0.8	396.7%
Retirement Fund*	7.3	5.8	(1.6)	-21.7%
Postemployment Benefits	-	4.7	4.7	
TOTAL	\$ 40.9	\$ 45.2	\$ 4.3	10.6%

* If the Authority were to transfer the OPEB funding of \$4.7 million to the Pension system as in past years, the Retirement Fund would reflect a \$3.2 million increase over FY12.



FY13 Proposed Indirect Expenses

Indirect Expenses increased \$4.3 million or 10.6% from the FY12 Budget due to the following:

- Funding of the Authority's Other Post Employment Benefit (OPEB) obligation of \$4.7 million, consistent with the FY12 planning estimates;
- Increased Watershed expenses of \$857,000 mainly due to increased Operating Expenses and Payment in Lieu of Taxes (PILOT);
- Increased Operating Reserve requirements of \$775,000; and
- Decreased Pension Fund expense of \$1.6 million due to the FY12 optional payment of \$1.9 million offset by an increase in the mandatory required contribution of \$261,000.



MWRA Retirement System and Other Post Employment Benefits

- As of January 1, 2011, MWRA's Retirement System was 87.6% funded.
 - The unfunded liability stands at \$42.2 million
- Current schedule has Retirement System fully funded by 2024.
- Optional prepayment to Retirement System.
 - In FY12, MWRA made an optional payment to the Retirement System of \$1.9 million.
 - During FY08 and FY09, MWRA transferred approximately \$10.4 million in optional payments to the Retirement System.
- MWRA's Other Post Employment Benefits liability at the end of FY10 was \$46.1 million and grew to \$60.2 million by June 30, 2011.



Risk/Opportunities include:

- Utility and chemical pricing;
- Changing regulatory requirements;
- Debt financing and investment income interest rates; and
- Lower than proposed healthcare cost increases.



Indenture Change Reserves Release

- MWRA began the process of amending its General Bond Resolution in 2007 to update it to reflect MWRA's current financial position.
- One of the amendments will change certain reserve requirements allowing for the release of funds from the Debt Service Reserve Fund, Community Obligation Revenue Enhancement Fund (CORE), and the Renewal and Replacement Fund.

Reserve Account	Current Balance	Released due to Final Maturity	Post Amendment	Release as Result of Amendment
Debt Service Reserve	\$ 236,753,422	\$ 24,951,775	\$ 144,185,767	\$ 67,615,880
CORE	\$ 20,676,552		\$ -	\$ 20,676,552
Renewal & Replacement	\$ 35,000,000		\$ 10,000,000	\$ 25,000,000
			Total	\$ 113,292,432

* Debt Service Reserve release is based on current reserve balance.

- MWRA estimates these amendment changes to take effect at some point between FY15 and FY16 depending on availability of refundings and new money issuances.
- Amendment requires that releases from the Debt Service Reserve Fund be used to defease outstanding bonds.



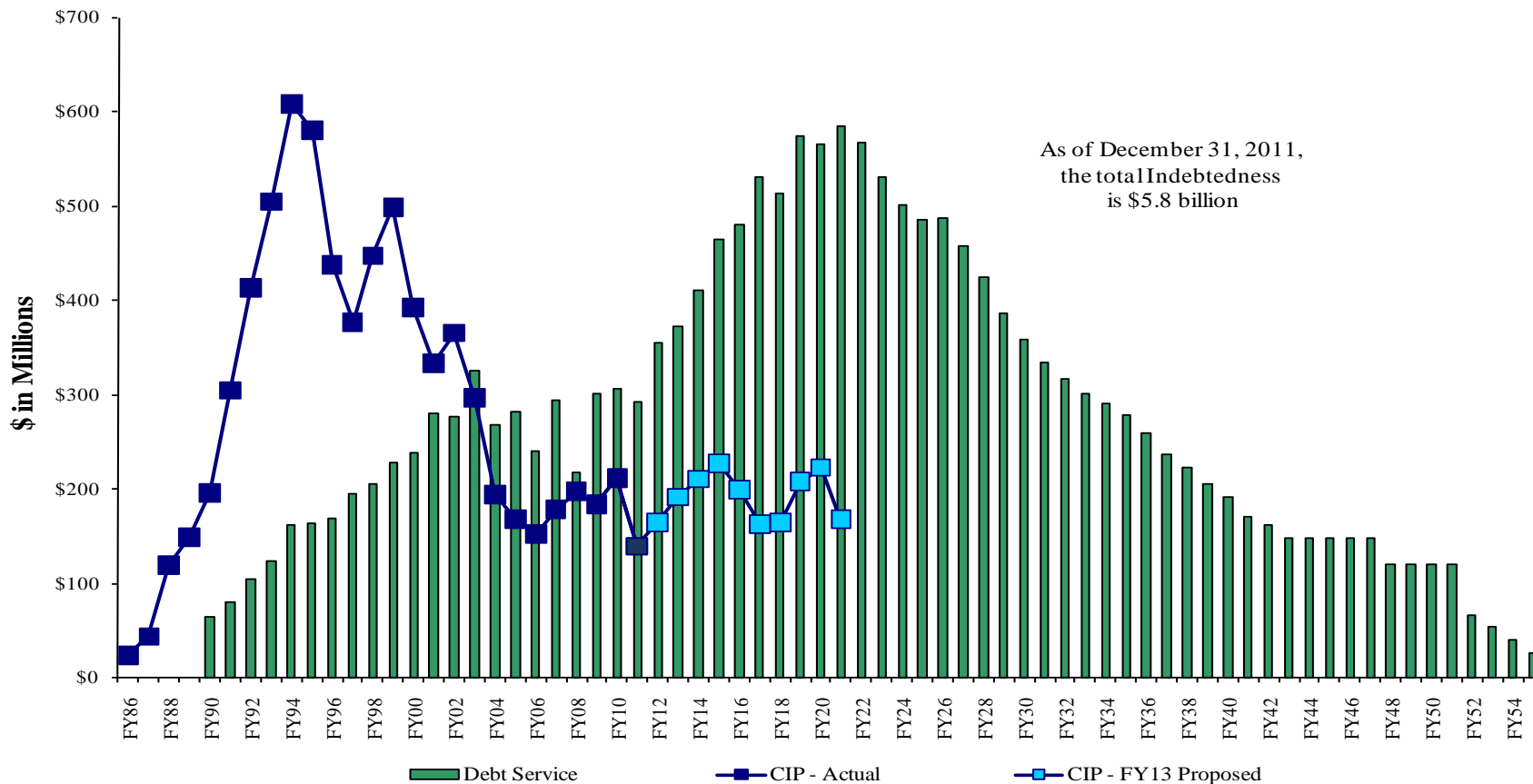
Challenges

- Variable rates are unpredictable;
- Debt Service Assistance appropriations and funding levels are uncertain;
- Federal budget cuts will lower SRF funding;
- On-going Pension and OPEB obligations;
- Limited restructuring opportunities in the near term;
- Existing CIP program spending will increase indebtedness; and
- Improvement in the economy will bring about price increases.



CIP Spending and Debt Service

MWRA Capital Improvement Spending & Debt Service





Possible Options

The MWRA acknowledges the demanding economic times and further recognizes that there are limited tools available to address its growing obligations without impacting our core mission.

- Reduce Capital spending;
- Reduce headcount;
- Defer principal payments on new issuances beyond 2015;
- Ignore OPEB obligations;
- Cut Maintenance;
- Maximize Non-Rate Revenue; and
- System expansion initiatives.



Convene a Long-Term Rates Management Committee to develop strategies and evaluate options for the best use of future reserves;

Measured and responsible level of rate increases.



MWRA ASSESSMENT METHODOLOGIES





How is the Rate Revenue Requirement allocated to
MWRA communities?



MWRA ASSESSMENT METHODOLOGIES

MWRA's metro-system assessment methodologies allocates the annual (fiscal year) rate revenue requirement to the 55 communities and local bodies served by MWRA's metropolitan water and sewer utilities.

Proposed Fiscal Year 2013 Current Expense Budget

<u>EXPENSES (000's):</u>	<u>TOTAL</u>	<u>WATER</u>	<u>SEWER</u>
Direct Expenses	\$217,136	\$ 65,550	\$151,586
Indirect Expenses	\$ 45,225	\$ 30,721	\$ 14,505
Capital Expenses	<u>\$377,497</u>	<u>\$113,612</u>	<u>\$263,884</u>
Total Expenses	\$639,858	\$209,883	\$429,974
Other Revenue/Offsets	<u>\$ 27,241</u>	<u>\$ 13,505</u>	<u>\$ 13,736</u>
Rate Revenue Requirement	\$612,617	\$196,378	\$416,239



WATER UTILITY ASSESSMENT

The Rate Revenue Requirement (RRR) for the MWRA Water Utility is allocated to member communities using the amount of metered water provided to each community in the most recent calendar year relative to the system as a whole.

Example:

$$\frac{\text{Community's Total Water Use}}{\text{Total Metro System-Wide Water Use}} = \text{Community's System Share}$$

$$\text{Water Utility RRR} \times \text{Community's System Share} = \text{Assessment}$$



MWRA ASSESSMENT METHODOLOGIES

WATER UTILITY ASSESSMENT

<u>Community</u>	<u>CY2011 Water Use</u>	<u>System Share</u>	<u>PFY2013 Assessment¹</u>
Boston (BWSC)	66.048 (mgd)	36.54%	\$71,754,837
Quincy	8.935 (mgd)	5.04%	\$ 9,904,072
Newton	8.760 (mgd)	4.94%	\$ 9,709,358
Waltham	7.040 (mgd)	3.97%	\$ 7,803,542
Framingham	6.712 (mgd)	3.79%	\$ 7,439,936
SYSTEM TOTAL²	177.170 (mgd)	100%	\$196,378,471

¹ Includes prior-year adjustments

² Includes only the rates-based communities in the metropolitan water system.



SEWER UTILITY ASSESSMENT

MWRA's Sewer Assessment Methodology was developed by a 13-member community-based committee, assisted by MWRA staff, the MWRA Advisory Board and independent rate consultants.

The methodology was approved by the MWRA Advisory Board, MWRA Board of Directors, MA DEP, and was implemented in FY1996.

The methodology allocates the annual rate revenue requirement to the 43 communities and local bodies served by MWRA's sewer utility.



SEWER UTILITY ASSESSMENT

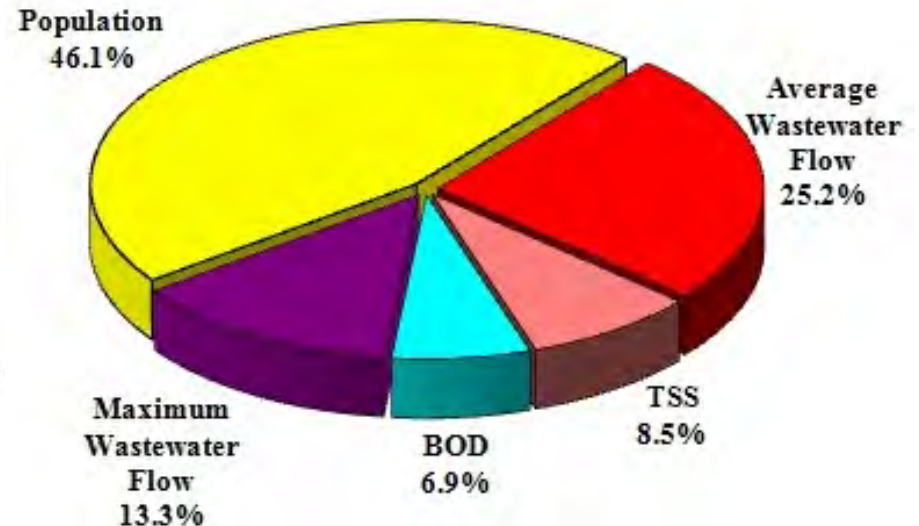
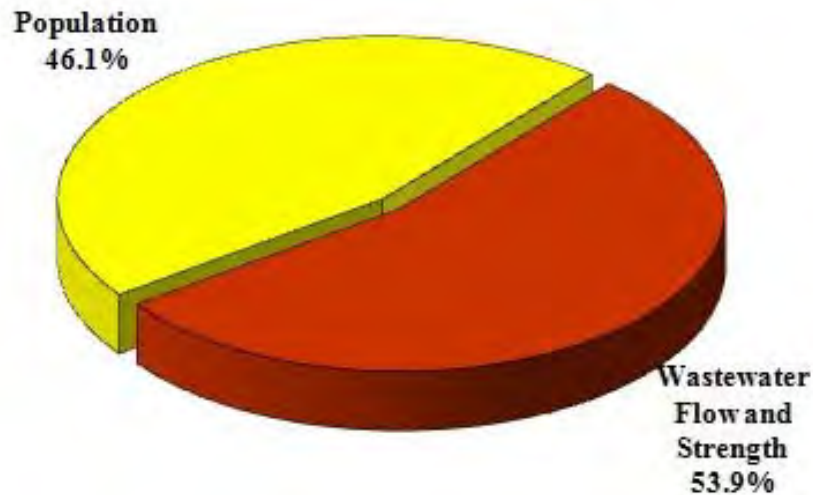
The sewer utility rate revenue requirement is allocated to member communities based primarily on each community's respective share of:

- Wastewater flow (average of 3 most recent calendar years)
- Total Population (source: U.S. Census Bureau)
- Sewered Population (as reported by each community)



SEWER UTILITY ASSESSMENT

Based on the PFY2013 budget, on average 54% of the PFY2013 sewer assessment was allocated based on flow and strength of flow, and 46% based on population.





SEWER UTILITY ASSESSMENT

There are different allocation basis used for:

- Operating and Maintenance Expenses
- Capital Expenses



SEWER UTILITY ASSESSMENT

Operating and Maintenance Expense Allocation

100% of operating and maintenance expenses are allocated using average daily metered wastewater flow (3 year average) and corresponding strength of flow.

Flow averaging smoothes the impact of year-to-year fluctuations in community wastewater flow.



SEWER UTILITY ASSESSMENT

Capital Expense Allocation

75% of capital expenses are allocated based on share of system-wide population.

25% is allocated using average maximum monthly wastewater flow and strength of flow parameters.



MWRA ASSESSMENT METHODOLOGIES

SEWER UTILITY ASSESSMENT

<u>Community</u>	<u>Share of Average Daily Sewer Flow</u>	<u>Population Share</u>	<u>PFY2013 Assessment</u>	<u>Share of System Assessment</u>
Boston (BWSC)	29.03%	28.23%	\$117,651,583	28.27%
Cambridge	5.44%	4.81%	\$ 21,006,052	5.05%
Newton	5.40%	3.89%	\$ 20,151,919	4.84%
Quincy	4.47%	4.22%	\$ 18,276,621	4.39%
Somerville	3.27%	3.46%	\$ 14,040,683	3.37%
SYSTEM TOTAL	339.89 (mgd)	2.2M	\$416,238,634	100%



CHICOPEE VALLEY AQUEDUCT ASSESSMENT

MWRA's Chicopee Valley Aqueduct (CVA) system assessment methodology allocates annual (fiscal year) CVA expenses to the 3 communities and local bodies served by the Chicopee Valley Aqueduct.

FY13 Proposed CVA Current Expense Budget

<u>EXPENSES:</u>	<u>TOTAL</u>
CVA Direct Expenses	\$ 755,610
Allocated MWRA Water Utility Expenses	\$ 622,038
Allocated MWRA Indirect Expenses	\$ 469,985
Capital Expenses	<u>\$ 2,739,076</u>
FY13 Proposed CVA Expenses	\$ 4,586,710



CHICOPEE VALLEY AQUEDUCT ASSESSMENT

Annual (fiscal year) CVA expenses are allocated to member communities using the amount of metered water provided to each community relative to the system as a whole.

Example:

$$\frac{\text{Community's Total Water Use}}{\text{Total CVA System Water Use}} = \text{Community's System Share}$$

$$\text{CVA Expenses} \times \text{Community's System Share} = \text{Base Assessment}$$



CHICOPEE VALLEY AQUEDUCT ASSESSMENT

<u>Community</u>	<u>CY2011 Water Use</u>	<u>System Share</u>	<u>PFY13 Base Assessment</u>	<u>Prior Fiscal Year Adjustments¹</u>	<u>Preliminary FY13 Assessment</u>
Chicopee	5.351 (mgd)	70.8%	\$3,245,461	-\$127,241	\$3,118,220
S. Hadley F.D. #1	1.147 (mgd)	15.2%	\$ 695,785	-\$ 27,365	\$ 668,420
Wilbraham	1.064 (mgd)	14.1%	\$ 645,464	-\$ 23,595	\$ 621,869
SYSTEM TOTAL	7.563 (mgd)	100%	\$4,586,710	-\$178,201	\$4,408,509

¹ Based on budget to actual expenses for prior fiscal year(s).



Massachusetts Water Resources Authority

Fiscal Year 2013 Proposed Capital Improvement Program





Capital Improvement Summary & Completed Projects

Since its creation in 1986, the MWRA has expended \$7.5 billion to modernize and improve its infrastructure with \$2.1 billion remaining to be expended in the FY13 Proposed Budget.

Some of the major spending has included:

- Deer Island Treatment Plant - \$3.8 billion
- CSO - \$754.7 million to date
- MetroWest Tunnel - \$669.8 million to date
- Carroll Water Treatment Plant – \$378.2 million to date



Capital Improvement Program – Shift from Mandated Projects

Approximately 80% of the spending to date has been for mandated projects, most notably the Combined Sewer Overflow (CSO) program.

Having nearly completed the first phase of its mission, the Authority now must preserve its operating assets and establish redundancy to ensure continuous operations.

- Going forward the majority of spending will support the following:

Asset Protection

Water Redundancy

Pipeline Replacement and Rehabilitation

Energy Initiatives



Capital Improvement Program – Shift from Mandated Projects (continued)

	Total Contract	FY09-13	FY14-18	Beyond 18
Asset Protection	\$ 1,907.6	\$ 281.2	\$ 516.0	\$ 475.0
Carroll WTP	428.0	39.5	15.8	-
Water Redundancy	1,827.6	149.6	359.4	456.0
CSO	836.0	312.1	25.9	0.4
Other	521.4	106.4	47.0	(126.6)
Total	\$ 5,520.7	\$ 888.7	\$ 964.1	\$ 804.9
Asset Protection	34.6%	31.6%	53.5%	59.0%
Carroll WTP	7.8%	4.4%	1.6%	0.0%
Water Redundancy	33.1%	16.8%	37.3%	56.7%
CSO	15.1%	35.1%	2.7%	0.1%
Other	9.4%	12.0%	4.9%	-15.7%
Total	100.0%	100.0%	100.0%	100.0%

Spending on Asset Protection and Water Redundancy will increase substantially in the coming years.



Asset protection and management projects are defined as the rehabilitation, repair, replacement, or upgrade of an existing asset or infrastructure to preserve good working condition and ensure efficient operation of the overall system.

- Asset protection expenditures are projected to increase from 31.6% for FY09-13 time period to 53.5% for the FY14-18 time period.



Redundancy

Redundancy is critical in achieving the desirable high degree of reliability of the water system both in the event of emergencies and to allow parts of the system to come off-line for regular inspection and rehabilitation.

- Water System Redundancy expenditures are projected to increase from 16.8% for the FY09-13 time period to 37.3% for the FY14-18 time period.



Fiscal Year 2011 Capital Improvement Program Year-End Results

\$ in Millions	Budget	Actuals	\$ Var.	% Var.
Wastewater System Improvements				
Interception & Pumping	12,573,617	15,104,973	2,531,356	20.1%
Treatment	49,249,537	29,774,658	-19,474,879	-39.5%
Residuals	693,723	-14,402	-708,125	N/A
CSO	69,171,170	43,809,030	-25,362,139	-36.7%
Other	-1,252,023	3,329,847	4,581,871	N/A
Total Wastewater System Improvements	130,436,024	92,004,107	-38,431,916	-29.5%
Waterworks System Improvements				
Drinking Water Quality Improvements	4,925,160	2,446,153	-2,479,006	-50.3%
Transmission	20,158,768	24,637,064	4,478,296	22.2%
Distribution & Pumping	17,746,179	12,678,185	-5,067,993	-28.6%
Other	15,360,608	-865,887	-16,226,494	-105.6%
Total Waterworks System Improvements	58,190,715	38,895,516	-19,295,198	-33.2%
Business & Operations Support	18,623,289	8,383,977	-10,239,311	-55.0%
Total MWRA	207,250,028	139,283,601	-67,966,426	-32.8%

Spending through year-end totaled \$139.3 million which was \$68.0 million or 32.8% below budget. After accounting for programs not directly under MWRA's control, most notably the Local Water Pipeline program, the Inflow and Infiltration (I/I) program, and the community managed Combined Sewer Overflow (CSO's) projects, the variance is \$35.2 million or 17.0%.



FY11 Capital Improvement Program Year-End Results (continued)

The main reasons for year-to-date underspending are:

- Combined Sewer Overflow program - \$25.4 million mostly for Cambridge Sewer Separation of \$7.0 million due to project delays, Reserved Channel of \$6.2 million due to lower awards than budgeted, and Brookline Sewer Separation Construction of \$6.2 million due to lower award and contract delays.
- Treatment - \$19.5 million mostly due to contract delays for North Main Pump Station VFD Replacement of \$4.4 million, Process Instrumentation Control System (PICS) of \$1.9 million, Miscellaneous VFD replacements of \$1.7 million, and DITP Switchgear Replacement Construction of \$1.5 million offset by overspending on Heat Loop Pipe Replacement of \$981,000.
- Waterworks Other - \$16.2 million due to Local Water Pipeline community requests for loans being lower than budgeted.



FY11 Capital Improvement Program Year-End Results (continued)

- Business and Operations Support - \$10.2 million mainly attributable to Alternative Energy projects of \$6.6 million due to delay of the Charlestown Wind construction project and the halting of the Nut Island Wind project.
- Watershed land purchases - \$2.5 million related to timing.

Some of the year-to-date underspending is offset by overspending of \$4.5 million in Transmission due to Hultman accelerated schedule and contractor progress and greater than budgeted spending for the Infiltration and Inflow (I/I) Program of \$4.6 million.



Fiscal Year 2012 Capital Improvement Program through February

\$ in Millions	Budget	Actuals	\$ Var.	% Var.
Wastewater System Improvements				
Interception & Pumping	4,891,559	5,140,078	248,519	5.1%
Treatment	20,624,102	16,188,076	-4,436,026	-21.5%
Residuals	396,985	0	-396,985	N/A
CSO	26,425,753	29,340,380	2,914,628	11.0%
Other	2,376,112	2,066,797	-309,314	N/A
Total Wastewater System Improvements	54,714,511	52,735,334	-1,979,177	-3.6%
Waterworks System Improvements				
Drinking Water Quality Improvements	9,868,403	8,910,736	-957,666	-9.7%
Transmission	12,179,953	13,347,602	1,167,649	9.6%
Distribution & Pumping	6,612,583	10,390,023	3,777,441	57.1%
Other	5,929,928	-1,145,697	-7,075,624	-119.3%
Total Waterworks System Improvements	34,590,867	31,502,665	-3,088,201	-8.9%
Business & Operations Support	5,093,202	4,741,212	-351,990	-6.9%
Total MWRA	94,398,580	88,979,211	-5,419,368	-5.7%

Spending through February totaled \$89.0 million which is \$5.4 million or 5.7% below budget. After accounting for programs not directly under MWRA's control, most notably the Local Water Pipeline program, the Inflow and Infiltration (I/I) program, and the community managed Combined Sewer Overflow (CSO's) projects, the variance is \$911,000 or 1.0%.



FY12 Capital Improvement Program through February (continued)

The main reasons for year-to-date underspending are:

- Local Water Pipeline Assistance Program of \$6.8 million – due to lower than anticipated requests for funding from communities.
- Wastewater Treatment of \$4.4 million - due to lower award and delay for North Main Pump Station Variable Frequency Drive Construction and project delays such as the Digester Module 1 & 2 Pipe Replacement, As-needed Design Contracts, Process Information Control System (PICS) Replacement, and Clarifier Flushing System.
- Drinking Water Program of \$958,000 – mainly due to lower award for the Spot Pond Design/Build contract.

The year-to-date underspending is offset by overspending of \$3.8 million in Water Distribution and Pumping program mainly due to greater than budgeted spending for Northern Intermediate High Redundancy & Storage – Reading/Stoneham Interconnections and Lynnfield Pipeline and \$2.9 million in the Wastewater Combined Sewer Overflow (CSO) program mainly due to the timing of payments for the Brookline Sewer Separation.



Fiscal Year 2009 – 2013 Base-Line Cap

FY09-13 Base-Line Cap Overview

- Current Cap of \$1.1438 billion for FY09-13 was established by the Board in June 2008.

Base-Line Cap		FY09	FY10	FY11	FY12	FY13	Total FY09-13
		Projected Expenditures	\$230.0	\$251.7	\$224.3	\$196.7	\$178.7
	Contingency	15.6	13.8	12.0	12.1	11.4	64.8
	Inflation on Unawarded Construction	0.0	0.5	2.8	7.8	11.3	22.4
	Less: Chicopee Valley Aqueduct Projects	(1.2)	(1.9)	(9.1)	(9.5)	(2.9)	(24.8)
	FY09-13 Base-Line Cap	\$244.4	\$264.1	\$230.0	\$207.0	\$198.4	\$1,143.8

- Annual spending may vary by +/- 20%, as long as total spending for the five years does not exceed the Cap.



Fiscal Year 2013 Proposed CIP (FY09-13 Spending Cap)

- Currently projecting to spend \$898.8 million, which is \$245.0 million or 21.4% less than the Base-Line Cap.

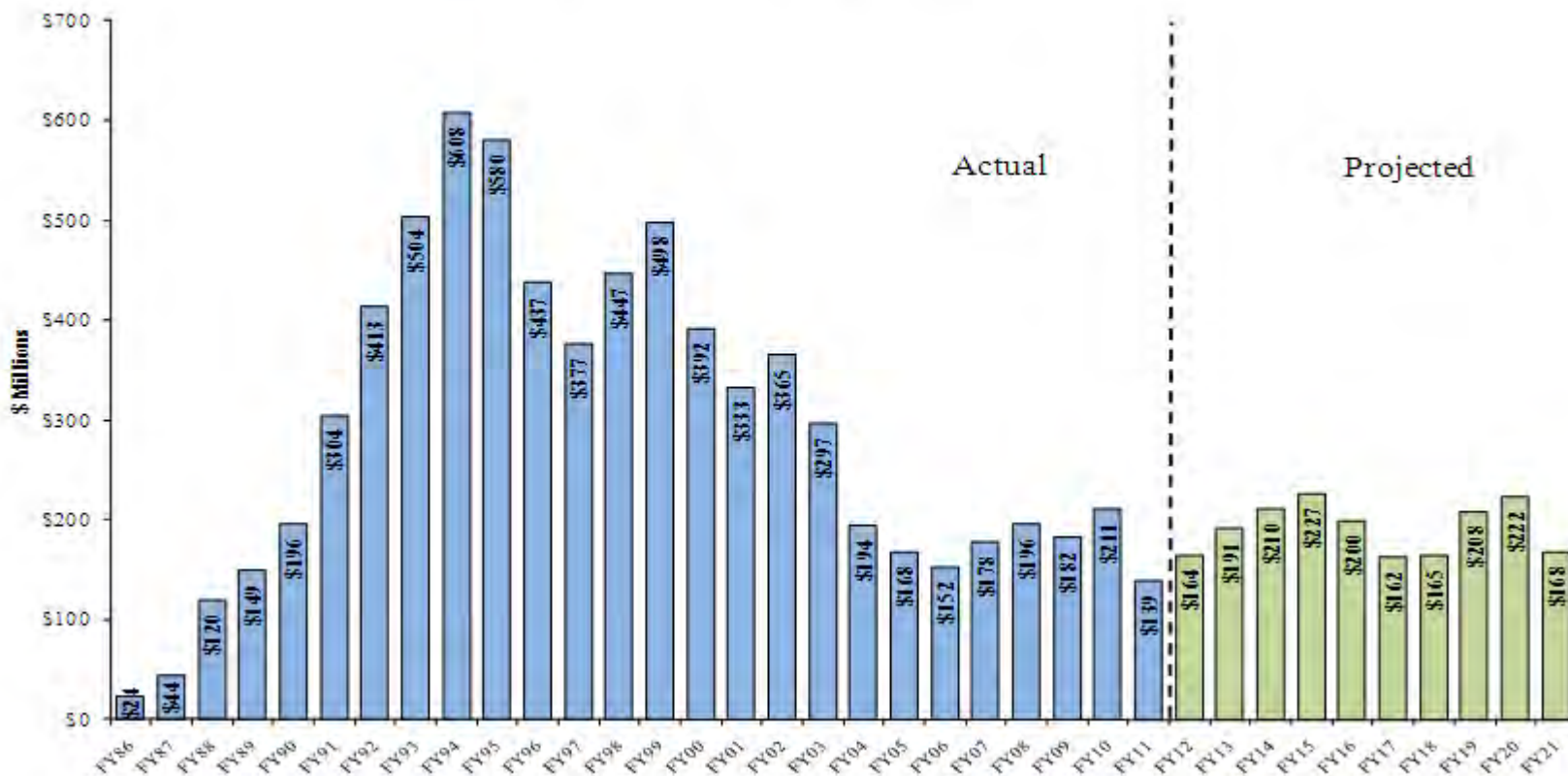
FY13 Proposed		FY09	FY10	FY11	FY12	FY13	Total FY09-13
	Projected Expenditures	\$182.2	\$211.4	\$139.3	\$164.3	\$191.4	\$888.7
Contingency	0.0	0.0	0.0	7.2	9.7	16.8	
Inflation on Unawarded Construction	0.0	0.0	0.0	0.0	1.5	1.5	
Less: Chicopee Valley Aqueduct Projects	(0.6)	(0.5)	(0.9)	(0.8)	(5.4)	(8.2)	
FY13 Proposed FY09-13 Cap	\$181.6	\$210.9	\$138.4	\$170.7	\$197.2	\$898.8	

FY13 Proposed - Base-Line Cap		FY09	FY10	FY11	FY12	FY13	Total FY09-13
	Projected Expenditures	(\$47.8)	(\$40.2)	(\$85.0)	(\$32.5)	\$12.7	(\$192.7)
Contingency	(15.6)	(13.8)	(12.0)	(4.9)	(1.7)	(48.0)	
Inflation on Unawarded Construction	0.0	(0.5)	(2.8)	(7.8)	(9.7)	(20.8)	
Less: Chicopee Valley Aqueduct Projects	0.6	1.4	8.3	8.8	(2.5)	16.6	
FY09-13 Cap (\$ Change)	(\$62.8)	(\$53.2)	(\$91.6)	(\$36.3)	(\$1.2)	(\$245.0)	
FY09-13 Cap (% Change)	-25.7%	-20.1%	-39.8%	-17.6%	-0.6%	-21.4%	



MWRA Historical Capital Spending 1986-2021

MWRA Capital Spending

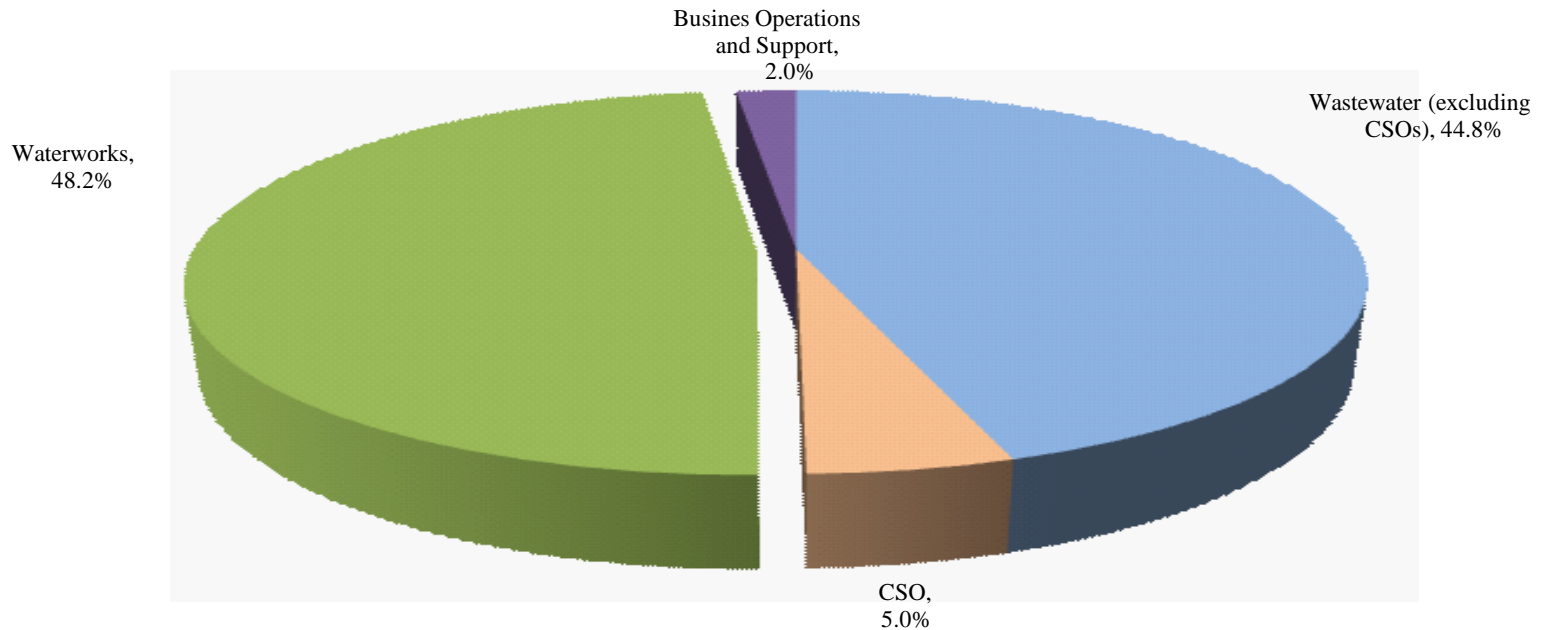




FY13 Proposed Capital Improvement Program Summary

FY13 Proposed Capital Improvement Program Summary

- FY09-13 expenditures are projected at \$898.8 billion.
- The FY13 Proposed CIP future spending is \$2.1 billion.





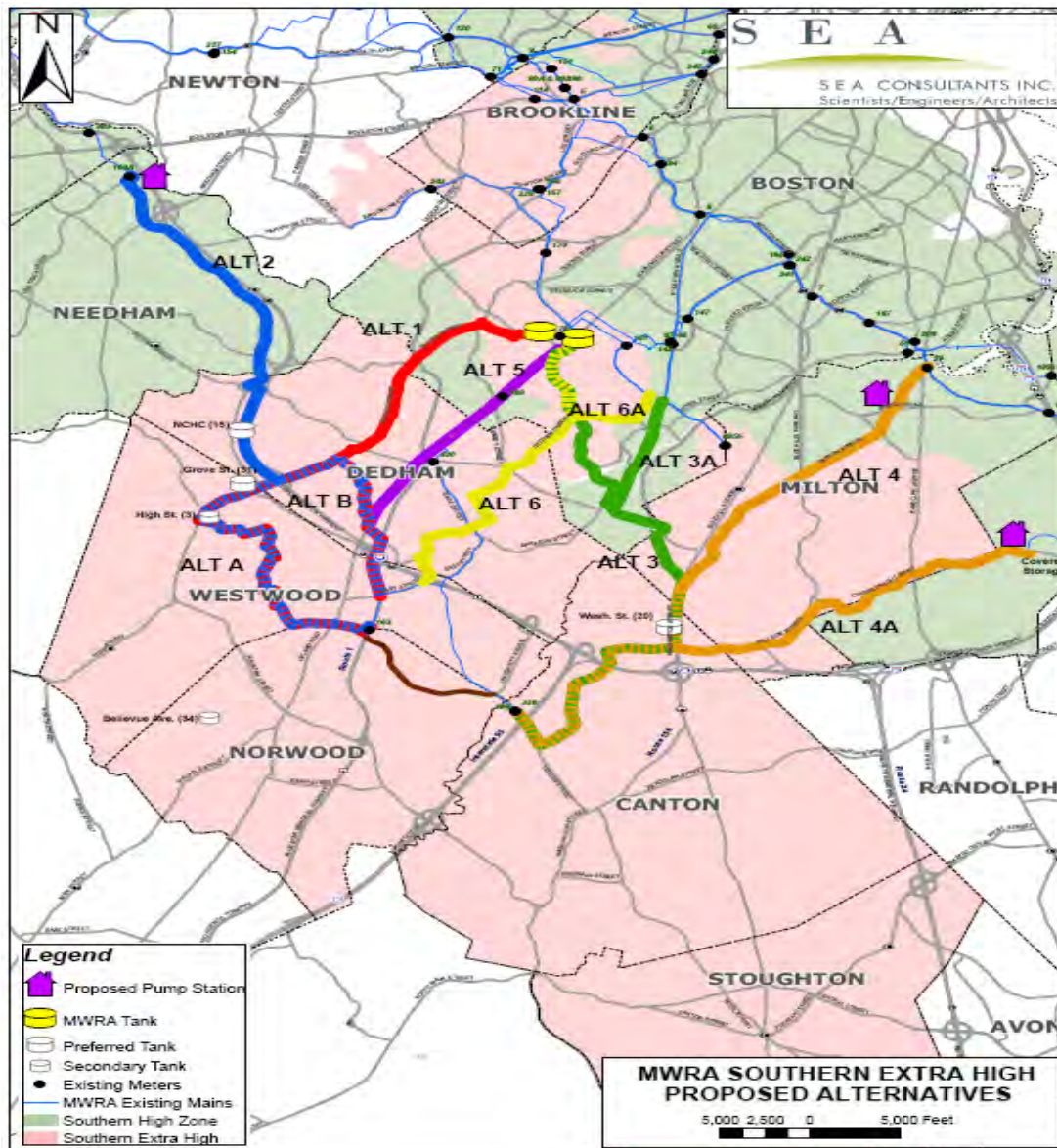
Significant Upcoming Projects

The FY13 budget includes significant projects which will require further deliberation and strategic direction from the Board:

- Southern Extra High
- Northern Intermediate High
- Headworks Upgrades



Southern Extra High Redundancy Alternatives

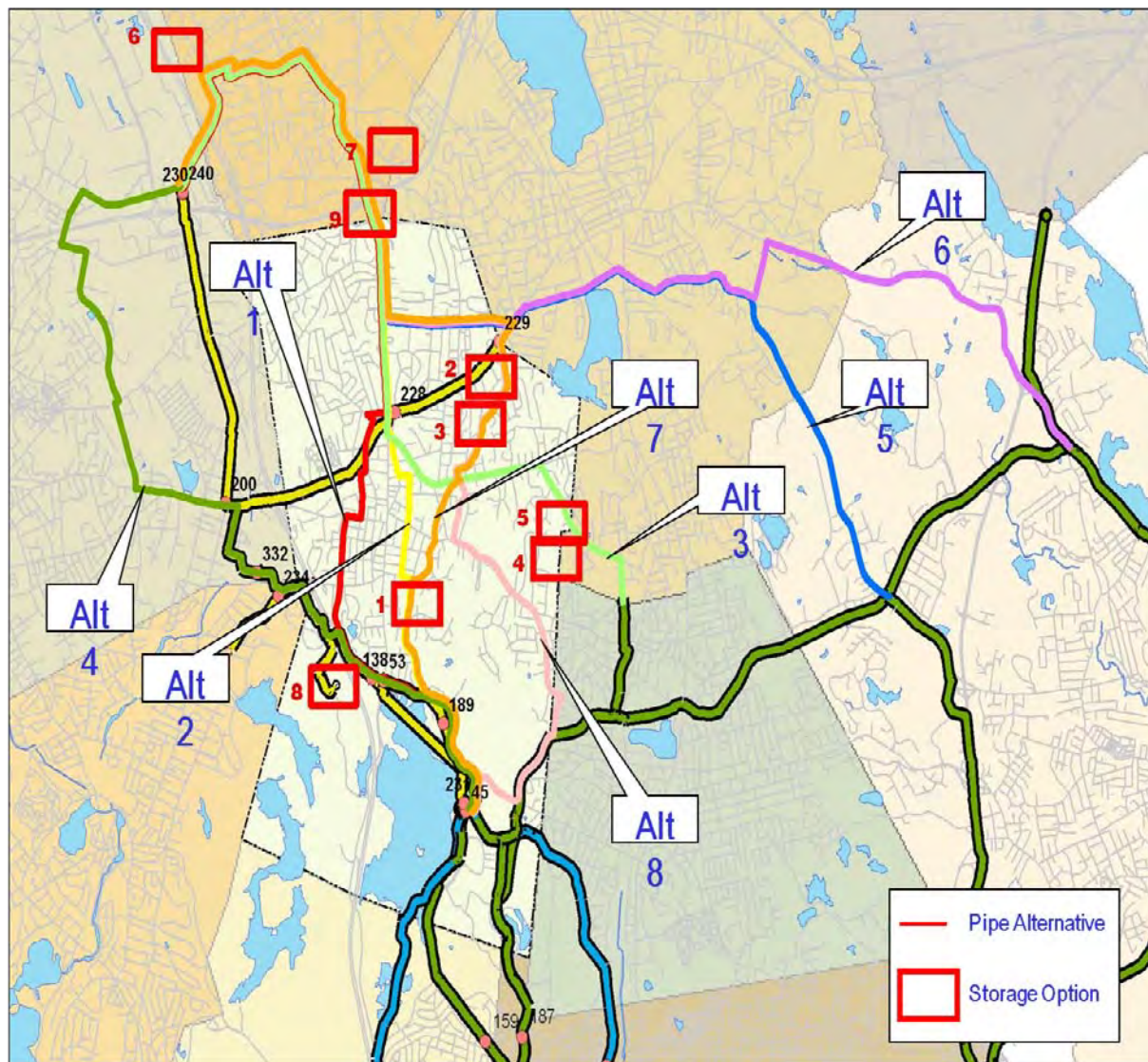


Total Budget	\$101.8M
Spending Through FY11	\$ 6.7M
Remaining Spending	\$ 95.2M
FY09-13 Spending	\$ 5.3M
FY13 Spending	\$ 0.2M



Northern Intermediate High Redundancy Alternatives

Total Budget	\$ 82.5M
Spending Through FY11	\$ 1.5M
Remaining Spending	\$ 81.0M
FY09-13 Spending	\$ 9.1M
FY13 Spending	\$ 4.9M





Headworks Upgrades



Chelsea Creek

Columbus Park

Ward Street

Total Budget	\$163.7M
Spending Through FY11	\$ <u>1.0M</u>
Remaining Spending	\$162.7M
FY09-13 Spending	\$ 2.6M
FY13 Spending	\$ 0.8M



Headworks Upgrades



Chelsea Creek



Ward Street



Columbus Park



Major Facility Issues to be Addressed



- **Influent Sluice Gates** (4 per facility) are used continuously during storm events to maintain max flows and protect the facility.
- Existing Gates are at the end of their useful life.
- Existing Gates do not sit against the influent wall resulting in spraying wastewater during choking operations.



- **Climber Screens** (4 per facility) currently require extensive maintenance.
- Screens fail frequently during storm events. If a standby screen is unavailable, additional facility choking is required or bypass of the screening channel over the floor is required.
- Climber screen will be replaced with Catenary screens.



Major Facility Issues to be Addressed



Replacement of Grit Collection and Conveyance Systems

- Replacement of chains and flights.
- Conveyance system will be replaced (currently use high pressure air to shoot grit and screening to dumpsters at street level). Final alternative yet to be selected.





Major Facility Issues to be Addressed



- HVAC Systems require replacement as they are failing and inefficient.
- Wet Scrubber Odor Control Systems requiring chemical and water will be replaced by Carbon Beds.
- Redundancy and flexibility in HVAC and Odor Control will be provided to ensure worker safety and treatment of odorous air.



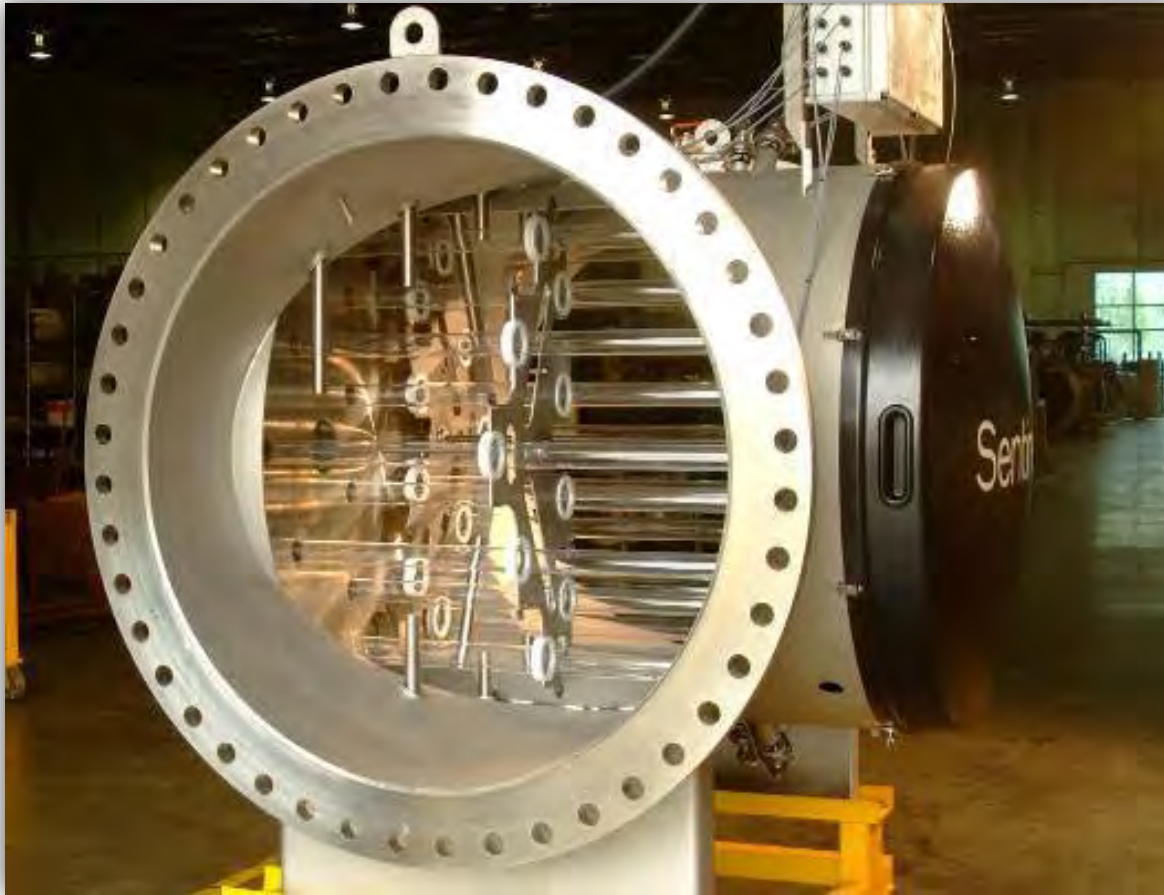
Spot Pond Storage Tank and Pump Station



Total Budget	\$ 59.2M
Spending Through FY11	\$ <u>5.7M</u>
Remaining Spending	\$ 53.5M
FY09-13 Spending	\$ 28.0M
FY13 Spending	\$ 17.5M



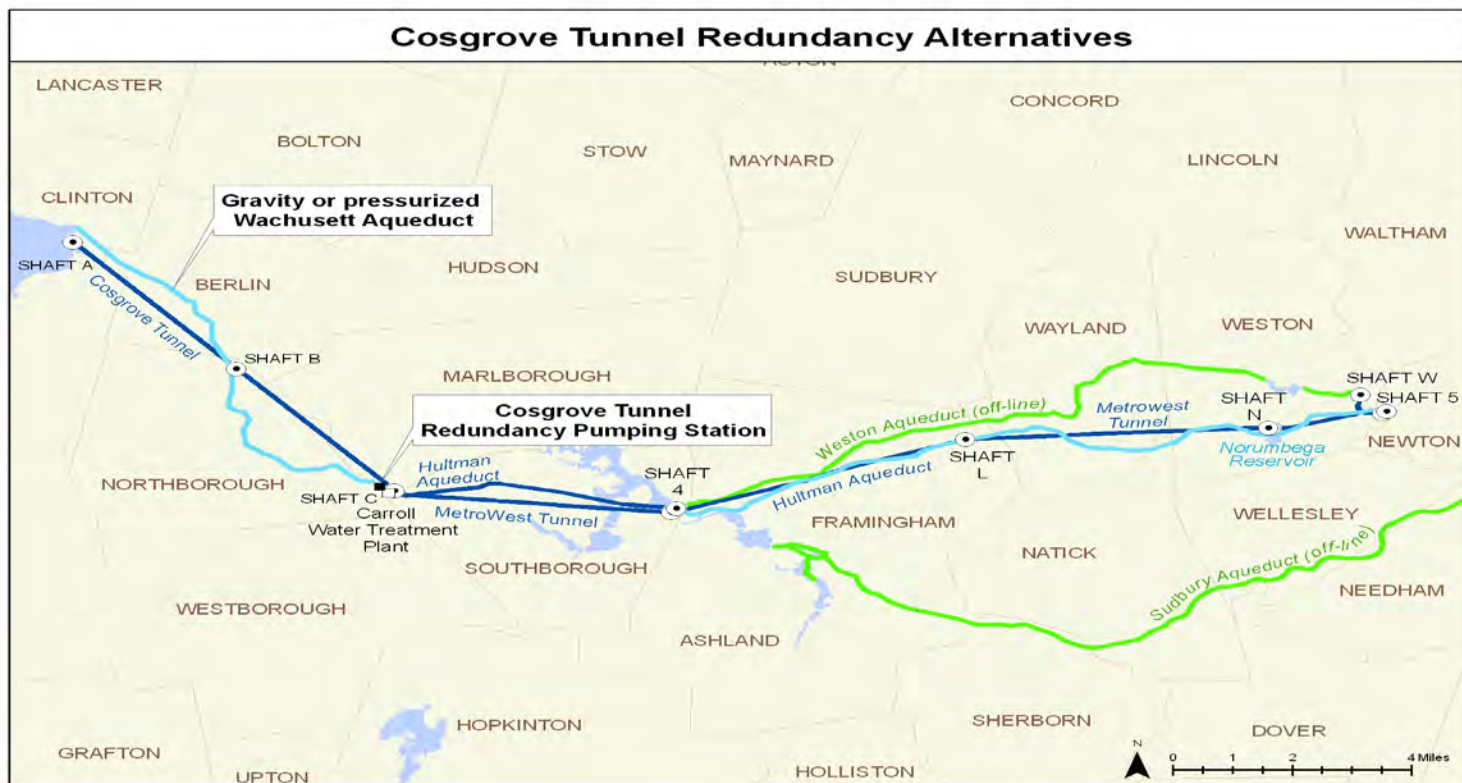
Carroll Water Treatment Plant UV Disinfection Construction



Total Budget	\$ 29.5M
Spending Through FY11	<u>\$ 0.8M</u>
Remaining Spending	\$ 28.7M
FY09-13 Spending	\$ 25.6M
FY13 Spending	\$ 14.1M



Long Term Redundancy – Wachusett Aqueduct Pump Station



Total Budget	\$ 52.3M
Spending Through FY11	\$ 0.0M
Remaining Spending	\$ 52.3M
FY09-13 Spending	\$ 2.1M
FY13 Spending	\$ 1.7M



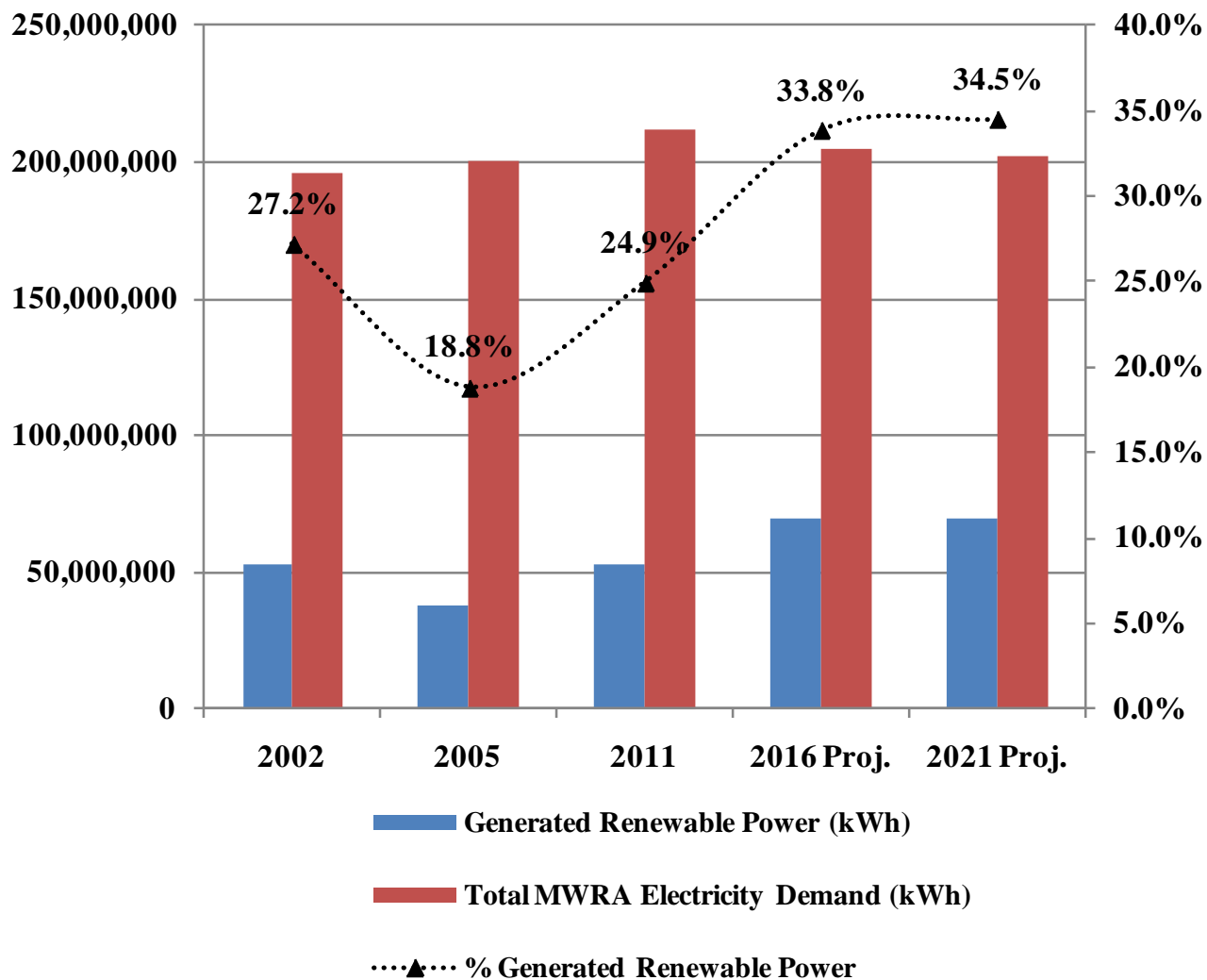
Renewable Energy Initiatives – “Leading by Example”

MWRA continues to work aggressively to use its resources efficiently and reduce the environmental impacts of its daily operations.

- The FY13 budget projects that Deer Island’s self-generation will grow to 30% mostly due to improved Steam Turbine Generation (STG) operation.
- **The MWRA is on track to meet the Governor’s initiative that 35% of power demand be met by green sources by the year 2020.**
- Including the avoided cost of diesel fuel due to utilizing methane generated to power the Steam Turbine Generator (STGs) for the plant heat demand at Deer Island, MWRA is self-generating approximately half of the total energy requirements.

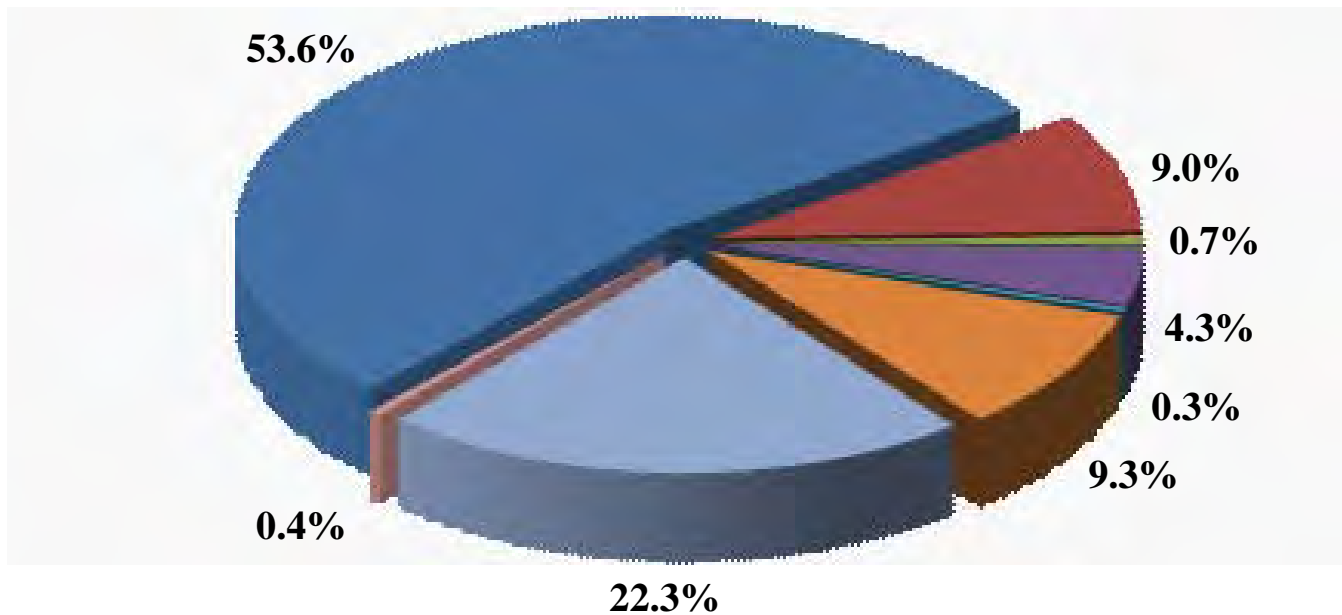


Total MWRA Electricity Demand and Renewable Power Generation





Renewable Energy By Source in 2011 – 52.7 million kWh



- STG Digester Gas
- Deer Island Solar
- Carroll Water Treatment Solar
- Oakdale Hydro

- Deer Island Outfall Hydro
- Deer Island Wind
- Cosgrove Hydro
- Loring Road Hydro



Total Changes for FY13 Proposed Capital Improvement Program vs. FY12 Final

Changes from FY12 Final to FY13 Proposed

- FY13 Proposed CIP increased \$52.4 million or 1.0% above the FY12 Final CIP.

	FY12 Final	FY13 Proposed	\$ change	% change	FY09-13 \$ change	FY09-13 % change
Wastewater Systems Improvements	\$2,625.4	\$2,643.3	\$17.9	0.7%	-\$28.1	-4.9%
Waterworks System Improvements	\$2,735.7	\$2,769.3	\$33.5	1.2%	-\$15.0	-4.8%
Business and Operations Support	\$107.1	\$108.1	\$1.0	0.9%	-\$5.0	-10.5%
Total MWRA without contingency	\$5,468.3	\$5,520.7	\$52.4	1.0%	-\$48.0	-5.1%



Total Changes for FY13 Proposed Capital Improvement Program vs. FY12 Final by reason

Changes between FY13 Proposed and FY12 Final (in thousands)

	Total	FY09-13	FY14-18	Beyond FY18
Total Change	\$52,409	(\$55,024)	(\$28,677)	\$ 136,134

Added:

New Projects	\$ 10,526	\$ 874	\$ 9,642	\$ 10
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Reduced/Increased:

Lower Awards	\$ (29,923)	\$ (23,653)	\$ (6,270)	\$ -
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Updated Cost Estimates	\$ 65,874	\$ (18,981)	\$ (6,734)	\$ 91,590
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Schedule Changes	\$ -	\$ (7,945)	\$ (24,764)	\$ 32,708
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Majority of the Changes	\$ 46,477	\$ (49,705)	\$ (28,126)	\$ 124,308
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Increase due to updated cost and inflation estimates of \$65.9 million and new project requests totaling \$10.5 million mostly for Asset Protection initiatives offset by lower project awards versus budget of \$29.9 million.



Capital Financing



Current Transaction

- \$150,000,000 in new money bonds to fund the on-going Capital Improvement Program.
- 86,775,000 in bonds to refund outstanding debt for budget savings. The sale was met with strong demand from all investors, particularly retail.
- The All-In-True Cost (TIC) for the whole deal was 3.91%. This All-In TIC is the lowest MWRA has ever achieved on any of its fixed rate debt issuances.
- The refunding for savings went very well resulting in \$5.2 million in present value savings or 5.1%, which is well above MWRA's 4% savings threshold.
- Budgetary savings from the refunding is \$15.9 million between FY13 and FY29.
- As part of the transaction, MWRA's strong credit ratings of Aa1, AA+, and AA+ from Moody's Investor Services, Standard and Poors, and Fitch Ratings were affirmed.



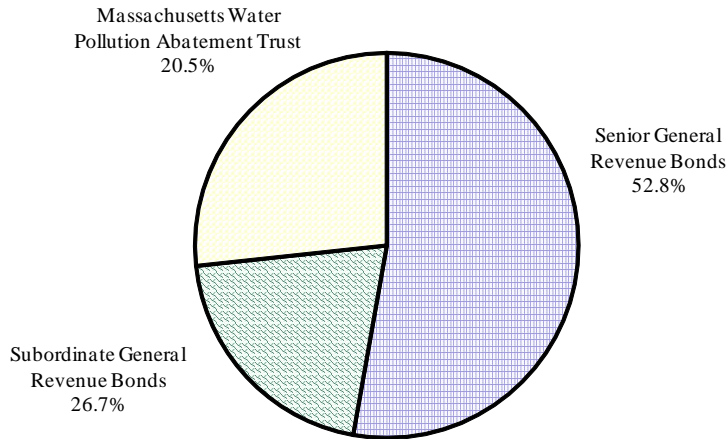
MWRA's Debt Portfolio - as of February 3, 2012

Type	FY12 Debt Service Budget	% of Total	Principal Outstanding February 2, 2012	% of Total
Senior General Revenue Bonds	\$ 187,165,671	52.8%	\$ 3,392,540,000	58.7%
Massachusetts Water Pollution Abatement Trust	\$ 72,657,679	20.5%	\$ 1,055,186,057	18.2%
Subordinate General Revenue Bonds	\$ 94,648,508	26.7%	\$ 1,191,955,000	20.6%
Tax Exempt Commercial Paper ⁽¹⁾		0.0%	\$ 144,000,000	2.5%
Total	\$ 354,471,858	100.0%	\$ 5,783,681,057	100.0%

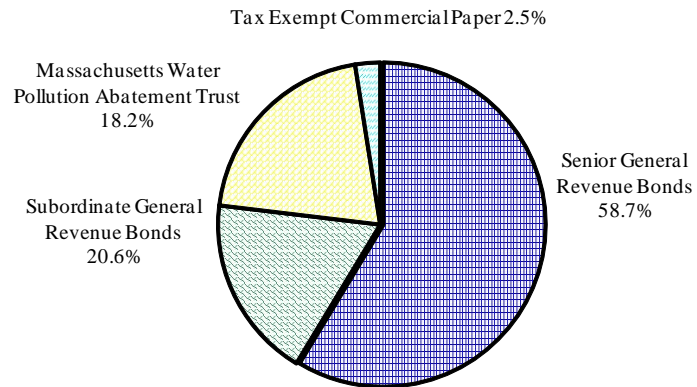
76.9% of MWRA's Debt is Fixed Rate

(1) The debt service on tax exempt commercial paper (TECP) is capitalized until the financed asset is put into service, at which time the TECP is permanently financed.

Fiscal Year 2012 Debt Service



Principal Outstanding





Anticipated Future Borrowings – Fiscal Year 2013

\$125 Million New Money

- Spring 2013
- Senior Lien
- Proceeds used for construction and retirement of Commercial Paper

\$114 Million Massachusetts Water Pollution Abatement Trust from Pool 16 and 17

- Spring 2012/Winter 2013
- Subordinated lien
- Amount is subject to change

Refunding Transactions

- MWRA is continuously monitoring market conditions to watch for potential refundings.
- MWRA typically sets a 4% present value savings threshold for refunding transactions.



QUESTIONS?