



MASSACHUSETTS WATER RESOURCES AUTHORITY

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ADMINISTRATION, FINANCE & AUDIT COMMITTEE MEETING

Chair: A. Pappastergion

Vice-Chair: M. Gove

Committee Members:

J. Barrera

J. Carroll

K. Cotter

J. Foti

V. Mannering

to be held on

Wednesday, September 12, 2012

Location: 100 First Avenue, 2nd Floor
Charlestown Navy Yard
Boston, MA 02129

Time: 10:00 a.m.

AGENDA

A. Information

1. FY2012 4th Quarter Orange Notebook
2. Internal Audit Department Activities Report
3. Delegated Authority Report – July and August 2012
4. Pension System Review Issues
5. FY12 Year-End Capital Program Spending Report
6. FY12 Year-End Financial Update and Summary

B. Approvals

1. Options for Fiscal Year Close-out

C. Contract Awards

1. Installation of a Distributed Antenna System: In-Building Cellular, WRA-3489Q

STAFF SUMMARY

TO: Board of Directors
FROM: Frederick A. Laskey, Executive Director
DATE: September 12, 2012
SUBJECT: FY12 Fourth Quarter Orange Notebook

COMMITTEE: Administration, Finance & Audit

INFORMATION
 VOTE

Michael J. Hornbrook
Chief Operating Officer

Rachel C. Madden
Director, Administration & Finance

Stephen Estes-Smargiassi, Director Planning
Preparer/Title

RECOMMENDATION:

For information only. The Board of Directors Report on Key Indicators of MWRA Performance (the Orange Notebook) is prepared at the close of each quarter of the fiscal year.

DISCUSSION:

The Orange Notebook presents performance indicators for operational, financial, workforce, and customer service parameters tracked by MWRA management each month. Significant outcomes for the quarter are noted below.

Deer Island Maintenance Metrics - Proactive and Productivity Measures

This year-end Orange Notebook presents a longer-term review of maintenance metrics for Deer Island (pages 5, 6 and 7), showing annual data for a number of measures from FY02 through FY12. Statistics for Preventive Maintenance show progress over the 11 years from just achieving the industry benchmark of completing 90 percent of scheduled preventive maintenance activities to consistently reaching 99 percent or greater – right at the “Best in Class” goal of 100 percent. (Page 5) The percentage of light maintenance work hours performed by Operations staff (rather than Maintenance staff) has increased from less than 1 percent to well above the industry benchmark of 10 to 15 percent – typically in the 16 to 18 percent range recently. (Page 5) Predictive maintenance – those actions initiated based on condition monitoring such as vibration, lubrication, or thermography – increased from none in FY02 to more than 18 percent of maintenance hours in FY12. (Page 5)

Availability of critical equipment continues to be well above the industry benchmark of 97 percent, even with a backlog at the upper end of the industry range. (Page 6) Other measures, such as the Replacement Asset Value per Maintenance Technician and the ratio of Maintenance Cost and Replacement Asset Value, will bear continued review as the Deer Island plant ages and

additional replacement and rehabilitation efforts are required. (Page 6) Management of overtime use for maintenance of only critical equipment and systems has reduced non-storm-related overtime from above the industry benchmark of 5 percent to significantly below. (Page 7)

Water Distribution System Valves and Wastewater Pipeline and Structure Inspections

Metropolitan Water Operations achieved all of its replacement and exercising goals for valves this fiscal year, and operability targets for all but blow-off valves were met. Blow-off valves narrowly missed the 94 percent operability target at 92.9 percent. (Page 9) All six of the inspection and maintenance targets for the wastewater collection system were met.

Water Quality Complaints

MWRA's practice has been to tabulate and classify customer complaints received through several mechanisms, including direct contacts received by MWRA staff via phone, web or e-mail and from routine telephone calls made to each community to incorporate all complaints received by them. The collection of data from communities was begun a number of years ago to more fully capture all data on complaints, both those related to system-wide water quality and MWRA actions, and the local issues related to local system operations such as flushing or valve operations. The systematic collection of complaint data from communities was interrupted during the past 3 quarters due to a staffing assignment issue. The outgoing calls to communities were resumed during August, and data for prior months was reconstructed based on available e-mail and telephone logs. Thus, this quarter's results are not directly comparable with historical results. (Page 25) As communities almost always contact MWRA when there are significant non-local issues, staff believe that no significant water quality issues have been missed. There are no regulatory requirements related to these data.

Carroll Water Treatment Plant

As discussed over the past two quarters, the high precipitation, and thus, higher Wachusett Reservoir yields caused reactive organic carbon loadings to rise (as measured by UV254 absorbance). (Page 27) Higher levels of UV254 require higher disinfection doses. As Wachusett Reservoir watershed yields decreased over the winter, Quabbin water could be transferred, starting a decline in the UV 254 levels. (Page 28) As anticipated, that gradual improvement in UV254 levels continued during the spring and early summer. Despite the higher organic loading, disinfection byproducts in the Metro Boston and MetroWest system continued to be very low, demonstrating the benefits of the use of ozone as a primary disinfectant compared to chlorine. (Page 27)

Laboratory Services

The Department of Laboratory Services conducted more than 250,000 tests of water, wastewater or environmental samples in FY12. The department met or exceeded its on-time results goal of 95 percent in every month of the year, as well as meeting or bettering its goal of at least 98 percent of Quality Control (QC) tests meeting specifications. All five labs did well on quarterly compliance ratings and DEP audits, and all continue to be fully certified by DEP.

Cost of Debt

During FY12, MWRA completed two revenue bond transactions, the first was a refunding and restructuring of outstanding debt for interest savings. The second transaction included both refunding and new money components. The first refunding transaction of \$327.2 million was completed in December and resulted in present value savings of \$25.3 million or 7.17%. As part of that transaction, MWRA was also able to restructure principal coming due in 2021, shortening the maturity to 2018 and starting to address the large increases to debt service between FY14 and FY22. The second transaction included \$150 million of new money and a refunding of \$86.8 million which was completed in April 2012 and resulted in the lowest all-in true interest cost in MWRA's history of 3.93%. The refunding component of the second transaction resulted in present value savings of \$5.2 million or 5.1%. (Page 47)

Procurement: Purchasing and Contracts

During FY12, MWRA's purchasing unit processed 2,664 purchase orders in the fourth quarter and 10,406 in total valued at \$37.4 million for the year, of which 84% were completed within the target timeframe, as compared to the goal of 85%. The contract unit processed 32 contracts during the fourth quarter and 112 contracts in total with a value of \$132.3 million for the year, of which 88% were within the target timeframes exceeding the goal of 80%. In addition, the contract unit processed 49 amendments valued at \$3.7 million and 169 change orders valued at \$9.2 million. (Page 35)

MWRA FY12 CEB Expenses

As discussed in more detail in separate staff summary, MWRA ended FY12 with a favorable variance of \$9.8 million. This amount was after the use of \$24.1 million to complete the FY12 defeasance. The favorable variance was a combination of \$8.0 million in under spending and \$1.8 million in additional revenue over budgeted amounts. (Page 46)

MASSACHUSETTS WATER RESOURCES AUTHORITY

Board of Directors Report

on

Key Indicators of MWRA Performance

for

Fourth Quarter FY2012

Q1	Q2	Q3	Q4



Frederick A. Laskey, Executive Director
Michael J. Hornbrook, Chief Operating Officer
September 12, 2012

Board of Directors Report on Key Indicators of MWRA Performance Fourth Quarter FY2012

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This quarterly report is prepared by MWRA staff to track a variety of MWRA performance measures for routine review by MWRA's board of directors. The content and format of this report is expected to develop as time passes. Information is reported on a preliminary basis as appropriate and available for internal management use and is subject to correction and clarification.

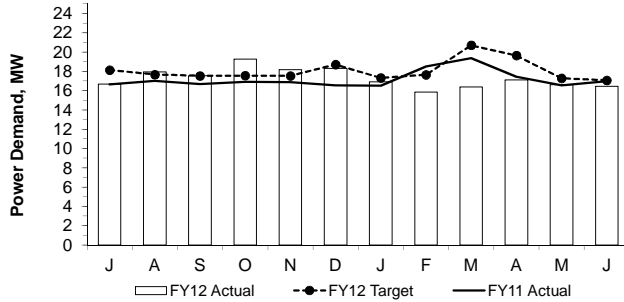
Frederick A. Laskey, Executive Director
Michael J. Hornbrook, Chief Operating Officer
September 12, 2012

OPERATIONS AND MAINTENANCE

Deer Island Operations

4th Quarter - FY12

Total Power Demand

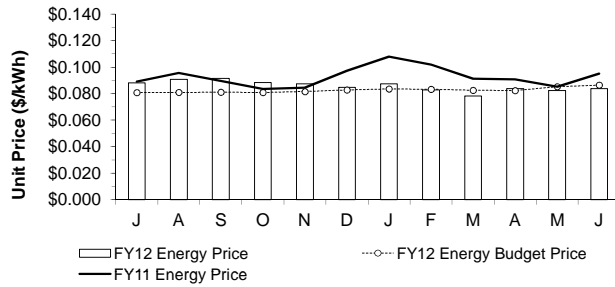


Total Power Demand in the 4th Quarter was 7% lower than the target for the quarter as Total Plant Flow was 24% lower-than-expected. Total Power Demand was 2% lower than in FY11 for the same period.

Overall in FY12, Total Power Demand was 4% lower than the target as Total Plant Flow was 6% lower-than-expected. The FY12 Total Power Demand was within 1% of the FY11 Total Power Demand.

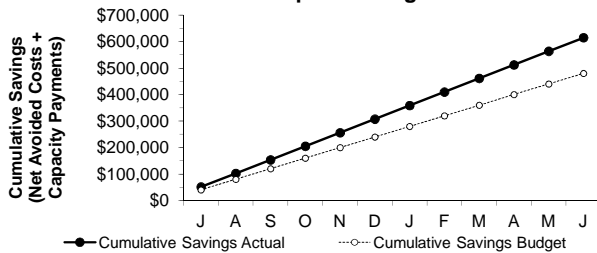
Total Energy Pricing

(includes spot energy price, ancillary costs, and NSTAR's transmission & distribution costs)



Under DI's energy supply contract, a block portion of DI's energy is a fixed rate and the variable load above the block is purchased in real time. Overall, the total energy price in the 4th Quarter was within 2% of the FY12 budget estimate and 8% lower than the 4th Quarter FY11 actual. The total energy price includes a fixed block price, spot energy price, transmission & distribution charges, and ancillary charges. Final year-to-date costs are estimated to be approximately \$331,281 (or 3.5%) more than budgeted for FY12 due to overall higher-than-expected total energy prices. Overall Total Power Demand for FY12 was slightly lower-than-expected.

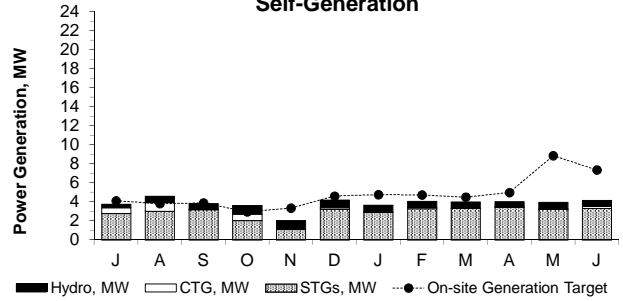
Load Response Program



Deer Island participates in the ISO-New England Load Response Programs. By agreeing to have its Combustion Turbine Generators available to run and thus relieve the New England energy grid of Deer Island's load during times of high energy demand or high pricing, MWRA receives monthly Capacity Payments from ISO-NE. When it runs the CTGs at ISO-NE's request, Deer Island receives energy payments from ISO-NE and also avoids NSTAR transmission and distribution charges. "Net Avoided Cost" is the avoided NSTAR payments offset by the cost of running the CTGs, and the energy payments from ISO-NE. Cumulative savings are the sum of Net Avoided Costs and monthly Capacity Payments - totaling \$614,842 at the end of FY12 compared to the budgeted savings of \$479,892. Also, an additional monthly amount of \$8,627 (included in the \$614,842 total) is expected to be received in July as part of a reconciliation payment ("true-up") for the FY12 contract year.

DITP participated in one demand response event this quarter on June 22.

Self-Generation

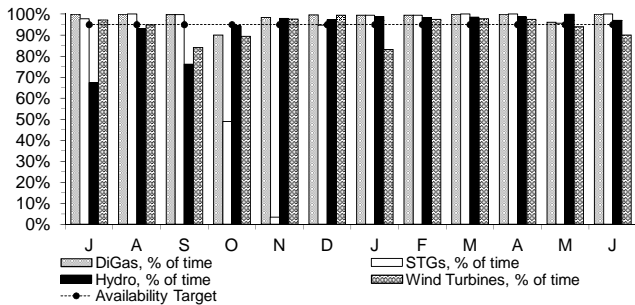


Power generated on-site was 38% below target for the 4th Quarter, 15% lower for FY12, mainly due to lower-than-expected generation by the CTGs and STGs. Generation by the Solar Panels was 44% higher than target for the quarter. Generation by the STGs, Hydro Turbines, and Wind Turbines were lower than their targets (by 21%, 13%, and 35%, respectively). STG generation was lower-than-expected as summer operating mode has not begun. The CTGs were not operated during severe wet weather events as was budgeted, since there were no severe storms this quarter, but were operated during peak system demand on June 21, to avoid the peak capacity charge, and during a demand response event on June 22. The CTGs were also operated briefly throughout the quarter for routine maintenance/checkout purposes. Monthly variances for Wind Turbine and Solar Panel generation are to be expected for the time being as we continue to compile historical monthly data for these units.

Note: While power generation by the Solar Panels and the Wind Turbines are not included in the graph (as the amounts generated cannot be seen within the current scale of this graph); 0.403 MW was generated by the Solar Panels and 0.513 MW was generated by the Wind Turbines in the 4th Quarter.

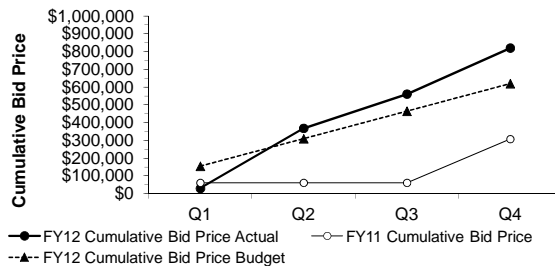
Self-Generation Equipment On-Line

(% of Time in Operation)



The DiGas, STGs, and Hydro Turbine systems all met their 95% Availability Target for the 4th Quarter. Wind Turbine availability for the 4th Quarter was within 1% of the 95% target due to lower than target availability in May and June as a result of scheduled maintenance on the Wind Turbines in the South Parking Lot.

MA Renewable Portfolio Standard

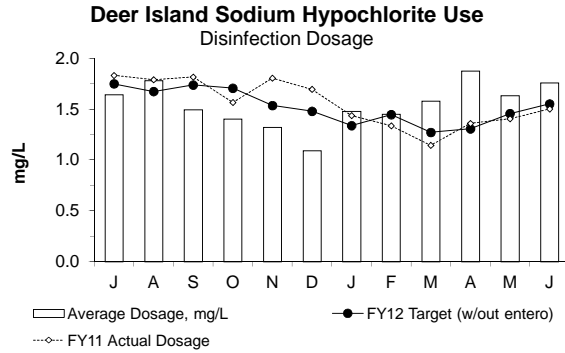
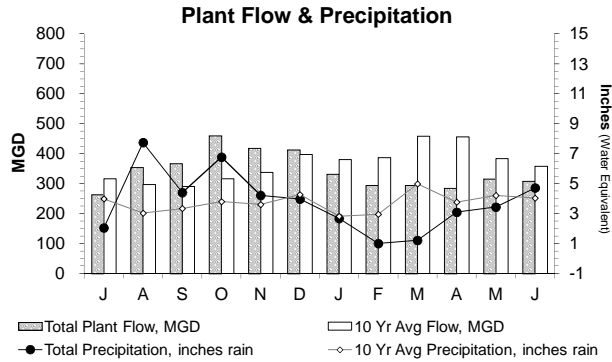


Bids were awarded in April for the sale of 45 Solar Renewable Energy Certificates (S-RECs) for a total value of \$20,682 and 5,140 Class I RECs for a total value of \$238,355. The value of the S-RECs is approximately 10 times higher than the current value of Class I RECs (for STG, hydro and wind).

REC prices reflect the bid prices on the date that bids are accepted. Cumulative bid price reflects the total value of bids received to date. The FY12 budgeted cumulative bid estimate at the end of FY12 is \$619,464 while the actual bid total is \$819,721.

Deer Island Operations

4th Quarter - FY12



The Total Plant Flow for the 4th Quarter was 24% lower than target (302.9 MGD actual vs. 399.2 MGD expected) as precipitation was 7% lower-than-expected for the quarter (11.23 inches actual vs. 12.01 inches expected). Total Plant Flow for the quarter is significantly lower than expected due to residual effects of the extremely dry conditions seen during the 3rd Quarter (mainly February and March).

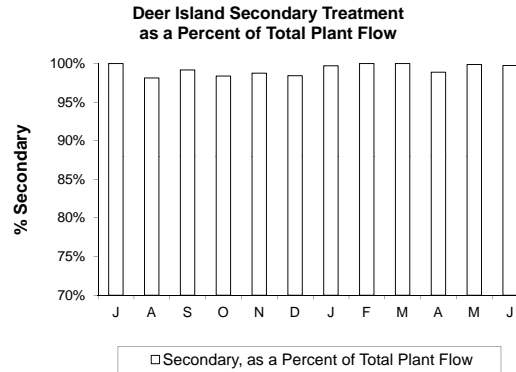
The disinfection dosing rate was 22% higher than the target for the 4th Quarter. The average dosing rate for the quarter was 1.76 mg/L compared to the target of 1.44 mg/L. Dosing was higher-than-expected due to a higher chlorine demand as a result of stronger wastewater from the lower plant flows over the last six (6) months. Overall, disinfection dosing was on target for FY12, while the actual sodium hypochlorite usage in gallons was 4.3% lower than target due to the 6% lower plant flow.

The FY12 Total Plant Flow was 6% below target while total precipitation was slightly above target by 1%.

The overall disinfection dosing rate (target and actual) is dependent on plant flow, target effluent total chlorine residual levels, effluent quality and NPDES permit levels for fecal coliform.

Secondary Blending Events

Month	Count of Blending Events	Count of Blending Events Due to Rain	Count of Blending Events Due to Non-Rain-Related Events	Secondary, as a Percent of Total Plant Flow	Total Hours Blended During Month
J	0	0	0	100.0%	0.00
A	7	7	0	98.1%	27.25
S	3	3	0	99.2%	10.25
O	10	10	0	98.4%	43.94
N	5	5	0	98.8%	20.72
D	2	3	0	98.4%	28.35
J	2	2	0	99.7%	6.48
F	0	0	0	100.0%	0.00
M	0	0	0	100.0%	0.00
A	1	1	0	98.9%	11.27
M	1	1	0	99.9%	3.87
J	4	4	0	99.8%	7.58
Total	35	36	0	99.2%	159.7



There were a total of six (6) separate secondary blending events during the 4th Quarter of FY12; all were due to high plant flows resulting from heavy rain. There was a single secondary blending event each in April and in May and four (4) separate events in June.

Overall, 99.5% of the total plant flow to DITP received Secondary treatment during the 4th Quarter of FY12. The Maximum Secondary Capacity for the entire quarter was 700 MGD.

All six (6) blending events combined produced a total of 22.72 hours of blending and 124.4 Mgal of flow blended with secondary effluent.

Secondary permit limits were met at all times during the 4th Quarter.

Deer Island Operations & Maintenance Report

Environmental/Pumping:

The total precipitation of 11.23 inches for the 4th Quarter of FY12 was 7% lower than the 10-year average precipitation for the quarter of 12.01 inches. Measureable rain fell on 32 of the 91 days in the quarter. Total precipitation for the 4th Quarter of FY12 was also 7% lower than the FY11 precipitation of 12.03 inches during the same period.

The plant achieved a maximum average hourly flow rate of 1,031.5 MGD during the morning hours of April 23 as a result of a large storm system that brought heavy rain to the area with rainfall starting during the afternoon of April 22 and becoming very heavy through the overnight hours into April 23. A total of 2.52 inches of rain fell during the course of these two (2) days. Pumping and treatment operations continued without incident through this storm event, as well as throughout the entire quarter.

A new monthly average North System influent low flow record for April was set this quarter. The 188.10 MGD monthly average for North System influent flow broke the previous low flow record for April of 195.03 MGD. The 284.80 MGD monthly average Total Influent plant flow for April did not break the record but was very close to the previous record of 284.79 MGD set back in April 2006. Several other low plant flow records on DITP (post startup of the South System Pump Station in July 1998) were also broken last quarter in March.

Deer Island Operations

4th Quarter - FY12

Deer Island Operations & Maintenance Report (continued)

Secondary Treatment:

Annual turnaround maintenance was performed at the Cryogenic Oxygen Facility on DITP during the first two weeks of April. This turnaround maintenance is performed on roughly half of the components and systems in the facility and allows the remaining half of the facility to continue to operate and produce oxygen uninterrupted. This maintenance was performed on Cryo Train #2. The same maintenance is planned for the remaining systems for sometime in the fall.

Essential maintenance to re-wire the heaters, that in cold weather, warm the lubricating oils in the secondary reactor mixers in Secondary Batteries A and B was performed on April 17 (for Battery B) and on April 19 (for Battery A). This was necessary to correct a design flaw in the heaters' wiring system which could have potentially led to a wholesale failure of all 24 mixers within a battery. The essential maintenance involved rewiring these heaters that were connected to a single transformer and breaker to multiple breakers that are separated on different distribution buses. Flow to the specific secondary battery had to be suspended during the rewiring work, to allow the mixers to be taken offline, resulting in the temporary lowering of the secondary process limit from 700 MGD to 470 MGD. The flow was suspended for approximately three and-a-half (3-1/2) hours to Secondary B and for two (2) hours to Secondary Battery A. The work was performed during dry weather while plant flows were still well below the temporary lower secondary process limit of 470 MGD. The re-wiring work for both batteries was completed successfully and no impacts were observed in the secondary treatment process as a result of the temporary shutdown in these batteries.

Odor Control:

Activated carbon media was changed out for carbon adsorber (CAD) units #3, #4, and #6 in the East Odor Control (EOC) Facility, #6 in the West Odor Control (WOC) Facility, and #2 and #5 in the Residuals Odor Control (ROC) Facility during this quarter.

Energy:

Solar Power generation was 3.1% (0.403 MW) and Wind Turbine generation was 3.94% (0.513 MW) of the total power generated on-site for the 4th Quarter. Solar power generation includes solar installations on the roof of the Residuals Odor Control (ROC) Facility, Maintenance/Warehouse (M/W), and the Grit Facility buildings, in addition to the solar installation on the ground of the South Parking Lot. Wind Turbine power generation includes generation by the two wind turbines located in the South Parking Lot and intermittent generation during optimization and testing by the FloDesign wind turbine installed near the Hydro Power Plant. Wind Turbine generation was 24% lower than budgeted in FY12 and as compared to the FY11 Wind Turbine generation due mainly to wind speeds that were 10% lower in FY12 than in FY11. Overall, total power generated on-site by all the generating units accounted for 26.0% of Deer Island's total power demand for the 4th Quarter; 23.8% overall for FY12.

DITP staff performed a test to evaluate the DiGas system capacity on May 24. Sludge feed to the digesters was suspended for nine (9) hours during the day on May 23 in order to maximize the rate of digester gas production once sludge feed was resumed prior to initiating the DiGas capacity test. A record amount of digester gas was transported from the residuals digester area to the DITP Thermal Power Plant during this test. The results demonstrated that all three (3) available gas compressors (including the backup compressor) could be operated simultaneously at a flow of 268,000 Standard Cubic Feet per Hour (SCFH) for several hours to compress and transport the digester gas to the DITP Thermal Power Plant. It is likely that even higher gas flow could have been handled if more gas was available. Based on the results of this test, the third (backup) compressor, when available, could be turned on when gas production rises above 220,000 SCFH and it appears likely that gas production will continue to increase.

Annual overhaul maintenance on the two (2) CTGs began during the last week of May and was completed in mid-June with each CTG having to go through a thorough two (2) week maintenance period. The scope of work for this maintenance includes rolling out and inspecting the generator bearings and oil seals by the contractor and replacing them with new parts. Maintenance began on May 29 with the overhaul of CTG-1A, followed by the maintenance of CTG-2B, and required each generator to be locked out (but available for operation within two hours during the off shifts) the first week, then completely locked out and unavailable the second week during the bearing and oil seal replacement. Staff ensured the CTG was available for use if needed during the intervening weekends when no maintenance was being performed.

DITP staff installed Dissolved Oxygen (D.O.) probes in February 2011 to better monitor oxygen utilization in the secondary reactor process area. Because of their installation, staff has been able to slowly reduce oxygen generation to better match the secondary treatment oxygen demand to the point where DITP only needs to operate one cold box unit when historically it typically required two cold box units, saving on average 0.5 – 0.7 MW or 370,000 – 520,000 kwh monthly in cryogenic oxygen generation (cryo) energy demand alone. This revised control strategy was implemented in August 2011 of FY12. In FY12, cryo energy savings vs. DITP's 3-year historical performance has been in the order of 3,800,000 kwh due to this change. Additional modifications to secondary reactor mixer operation, reducing the number of mixers in operation per train with no impact to secondary capacity or NPDES permit compliance, has realized an additional savings of 3,400,000 kwh from historical use (the last 3-years of operation) for a total energy savings in the secondary process area of 7,200,000 kwh; an approximate savings of over \$600,000.

Regulatory:

Joe Su with the Massachusetts Department of Environmental Protection (MaDEP) performed two (2) site visits at DITP this quarter to discuss and review various provisions under DITP's Air Quality Operating Permit. A significant portion of these visits involved a detailed tour and overview of boiler operation, including an in-depth review of the boiler startup sequence. Other aspects of these visits involved tours of the wet chemical scrubber and carbon adsorption areas of each of the five (5) odor control treatment facilities, a review of the process control and compliance stack monitoring data, and the activated carbon status information, as well as a tour of the emissions flare system with a review of the operating data. Other emissions generating units that were reviewed and discussed during these visits included the parts washers, the stage II vapor recovery system, and a number of portable generators. These visits by MaDEP are for informational purposes in preparation for the renewal of the next operating permit.

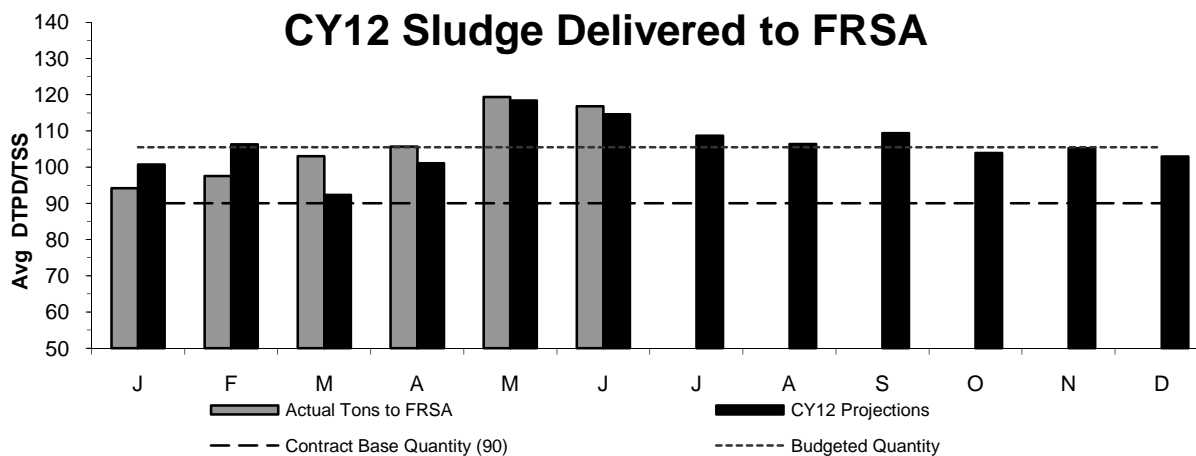
Clinton Wastewater Treatment Plant Operations and Maintenance Report:

The preliminary design report for the new phosphorous treatment system has been received and is being reviewed by MWRA. This new treatment process will be required to meet the much more stringent phosphorous limit contained in the new draft NPDES permit. The total cost for the project has increased due to the expanding of the project to include a new process water system, a redundant process train, a new polymer system, additional site work, 2 emergency generators, and a new diversion structure. The plant has continued to exceed the permitted flow limit for the eighth consecutive month (3.25 mgd for June with a limit of 3.01 mgd).

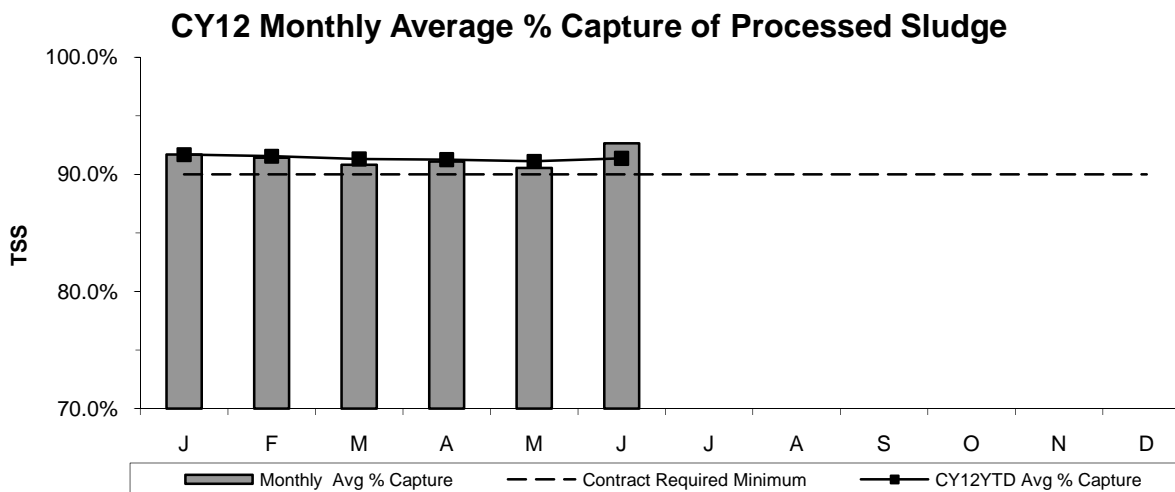
Deer Island Residuals

4th Quarter - FY12

MWRA pays a fixed monthly amount for the calendar year to process up to 90 DTPD/TSS as an annual average. The monthly invoice is based on 90 DTPD/TSS (Dry Tons Per Day/Total Suspended Solids) times 365 days divided by 12 months. At the end of the year, the actual totals are calculated and additional payments are made on any quantity above the base amount. The base quantity of 90 DTPD/TSS was set for the 15-year term of the contract even though, on average, MWRA processes more than 90 DTPD/TSS each year (FY12's budget is 105.5 DTPD/TSS).



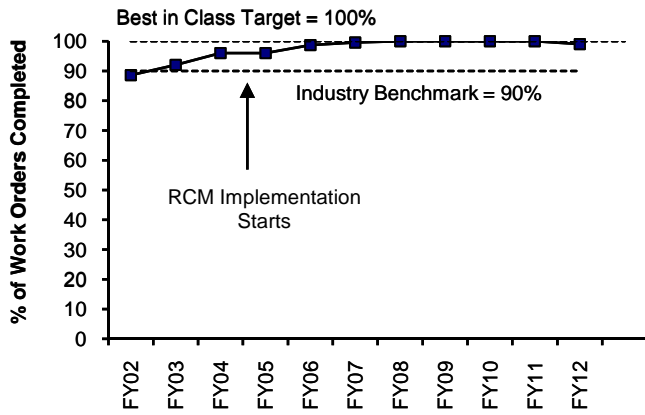
The total amount of sludge pumped to FRSA in June was more than projected. The total sludge sent to digestion this month was slightly higher than expected, approximately 7.8 TSS tpd more (3.0% variance), resulting in approximately 3.7 TSS tpd more sludge going to the sludge holding tanks assuming a solids destruction of roughly 48% this month.



The contract requires NEFCo to capture at least 90% of the solids delivered to the Biosolids Processing Facility in Quincy. The capture rate of solids in June was 92.64%.

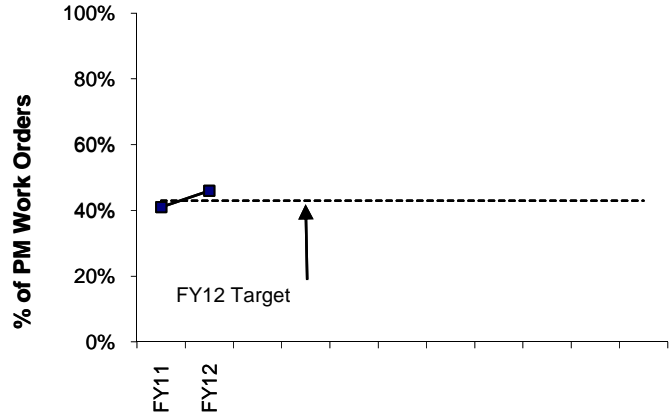
Deer Island Yearly Maintenance Metrics Proactive and Productivity Measures 4th Quarter - FY12

Preventive Maintenance



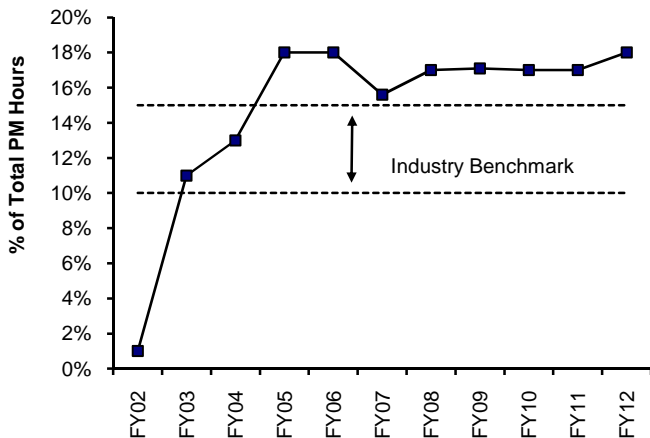
The industry benchmark is 90% Preventive Maintenance (PM) completion. Upon reaching the 90% goal in FY02, the goal was raised to the "best in class" standard of 100% PM completion. Since then, the percentage of PM work order completion has been at 99% or higher. Reliability-Centered Maintenance (RCM) and PM optimization efforts have continued in FY12. PM completion rate was 99% in FY12.

Preventive Maintenance Kitting



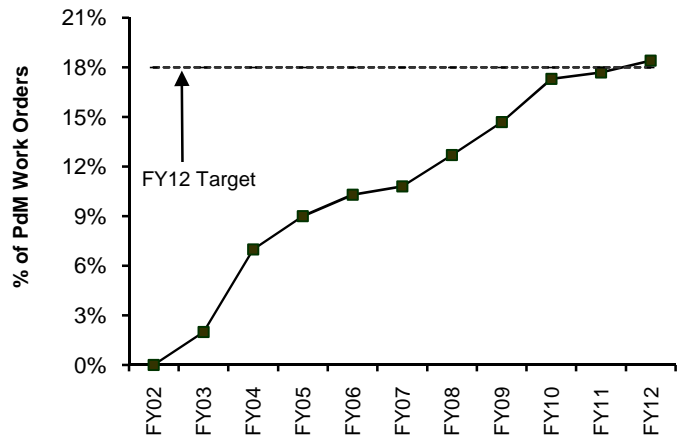
PM inventory items were loaded into Maximo so that parts for equipment could be assigned to PM work orders on a monthly basis. DITP reached the PM kitting goal in FY10. A new graph was developed in FY11 to track kitting of all maintenance work orders. In an effort to increase wrench time, staff have been fine-tuning a process to "kit" all maintenance work orders. Kitting is considered a best practice by maintenance and reliability professionals and entails staging parts necessary to complete maintenance work. Kitting allows maintenance staff to spend more time "turning the wrench" and less time waiting for parts at the stockroom window.

Operations Light Maintenance PMs



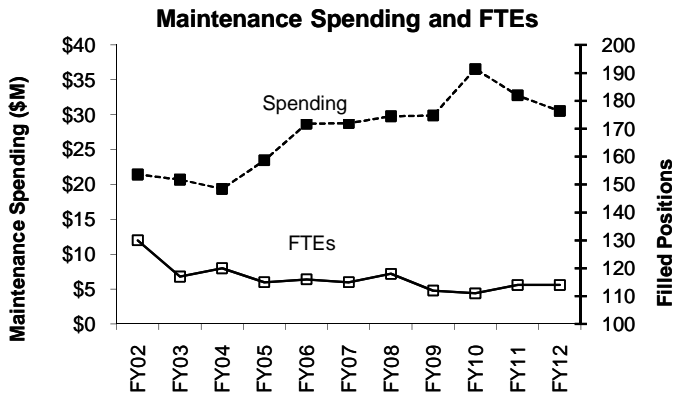
The percentage of preventive maintenance work order hours completed by Operations staff (not maintenance staff) has increased from less than 1% in January 2002 to the current level of 18%. DI reached the industry benchmark range of 10-15% in April 2003 and has exceeded the goal through FY12. Operations completes approximately 600 PM work orders per month.

Predictive Maintenance



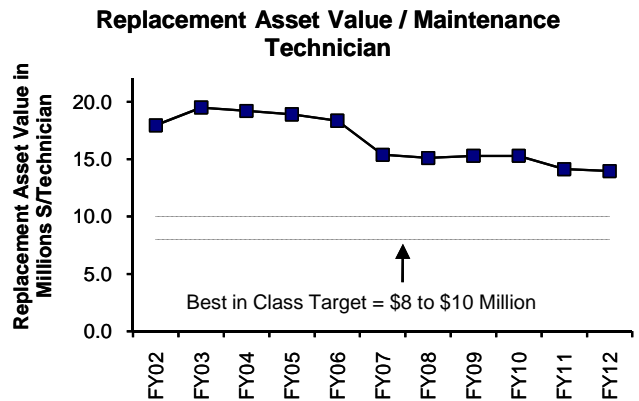
Predictive maintenance has steadily increased from 0% in FY02 to 18% in FY12. The increase in predictive maintenance was achieved through the expanded use of lubrication, vibration, thermography, and acoustic ultrasonic testing techniques. The Condition Monitoring Group continually reviews and investigates new opportunities and initiatives to expand condition monitoring testing and analysis. Every month, a "needs action" list is generated from the condition monitoring testing and analysis.

Deer Island Yearly Maintenance Metrics Overall Maintenance Program Measures 4th Quarter - FY12



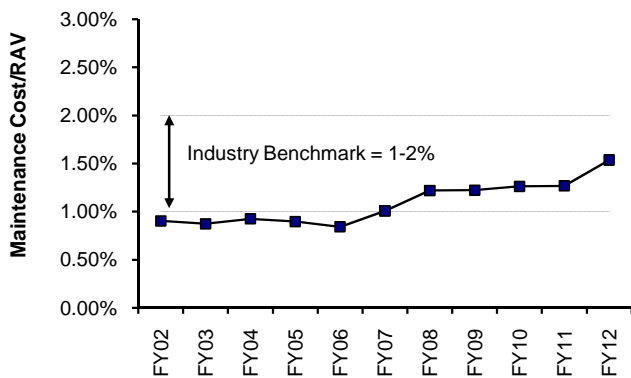
The number of Full-time Equivalent positions or FTEs steadily decreased from FY02 thru FY09 through staff attrition. Maintenance has been successful in meeting its goals through implementation of numerous maintenance efficiencies including Operations staff performing light maintenance, cross-functional training and flexibility, and Reliability Centered Maintenance.

The maintenance spending graph shows actual annual maintenance spending and large asset replacements (equipment costs only). Maintenance budgeting will continue to evaluate proper preventive maintenance of plant assets and requirements for replacement of obsolete equipment to insure plant operates at maximum efficiency. In FY12, overall spending was lower than FY11 due to some significant CIP projects that were completed in FY10. Some of the capital replacement projects included electrical equipment upgrades, heat loop, and roof replacements. The Clarifier rehabilitation project (\$58M) was also on-going during that period.

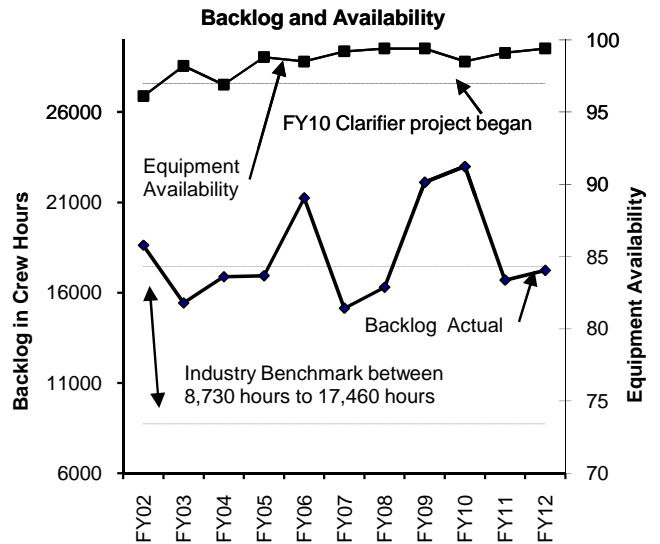


DITP has adopted a "best in class" target of \$8-\$10 Million/Technician for its maintenance staffing. DITP exceeds the target at this time although the trend continues downward. As the plant ages and additional projects and replacements are required, additional staffing needs will be assessed.

Maintenance Cost / Replacement Asset Value



The industry benchmark for annual maintenance spending is between 1% to 2% of replacement asset value. The plant's replacement asset value was calculated to be approximately \$2.3 billion dollars. DITP's current maintenance spending is within the target range. Additional spending is expected to be required as the plant ages and additional equipment replacements are required. The maintenance spending includes \$12.5 million in CEB together with CIP spending which included projects such as Clarifier Rehabilitation (\$58M), Electrical Upgrades (\$15M) and Digester Pipe replacement (\$10M).



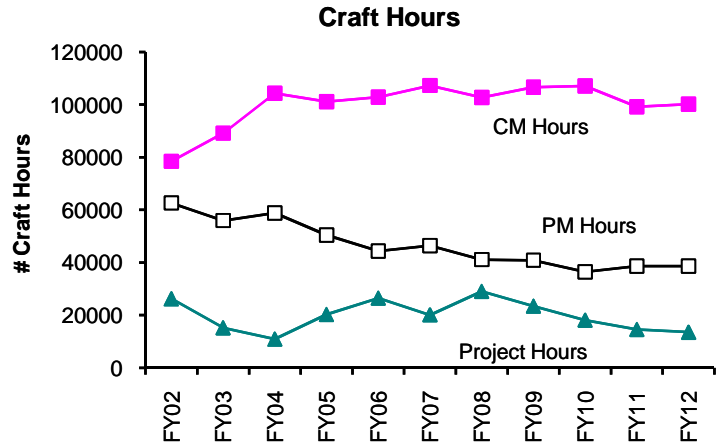
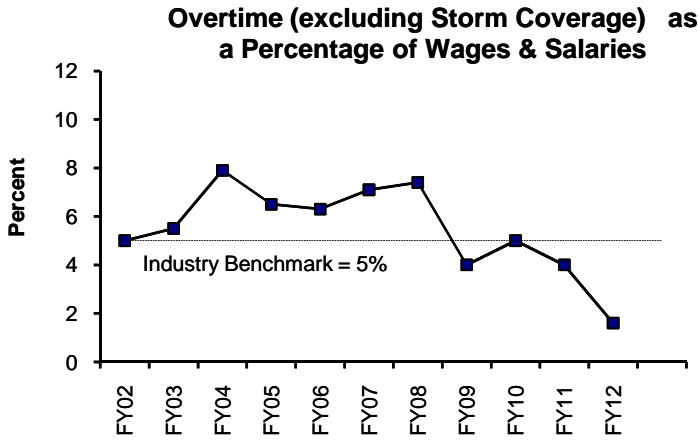
The industry benchmarks for equipment availability is 97% and maintenance backlog based on current staffing levels is between 8,730 to 17,460 hours, respectively. The equipment availability met or exceeded the goal for the last ten years and was 99.4% for FY12.

The total average backlog for FY12 was 17,230 hours and is within the industry benchmark. The slight increase in backlog from FY11 was due to staffing availability primarily associated with industrial accidents and medical leave. Management continues to prioritize work and closely monitor our backlog.

Deer Island Yearly Maintenance Metrics

Overall Maintenance Program Measures

4th Quarter - FY12



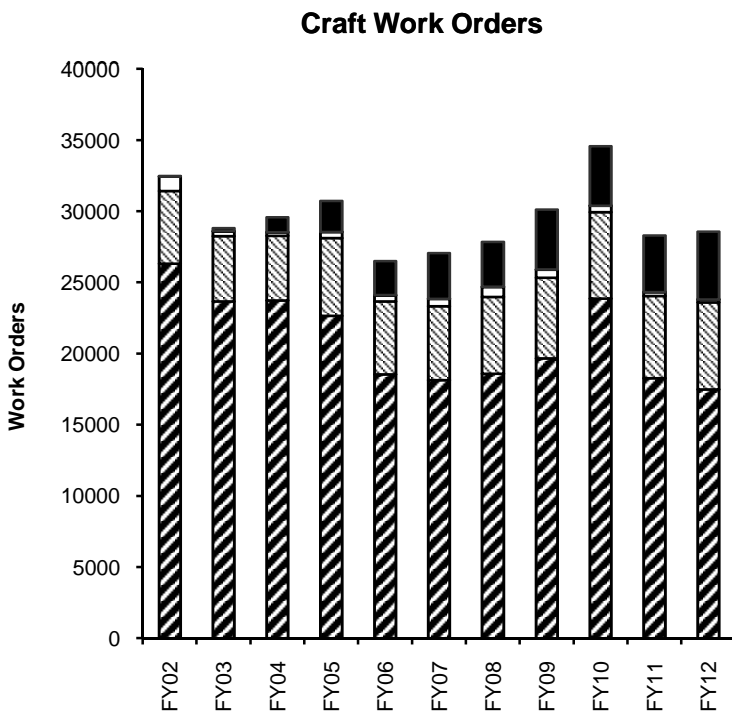
Management is working toward keeping overtime within the industry benchmark. DITP maintenance overtime was 1.6% for FY12. Management has taken steps to reduce overtime spending by limiting overtime to repair critical equipment and systems only. DITP has been under benchmark from FY09 through FY12.

Optimization of the PM program through the transfer of some light maintenance tasks to Operations staff (18% of PM hours at the end of FY12), elimination of duplicate work orders, decreasing PM frequency due to equipment history and performance, completion of a PM Optimization efforts in FY05, and Reliability Centered Maintenance (RCM) recommendations has resulted in a significant decrease (24,019 hours) in maintenance staff PM craft hours from FY02 to FY12. Corrective Maintenance (CM) hours has shown a slight increase of 975 hours this year due to HVAC equipment failures attributed to the corrosive environment. Project Maintenance hours continues to show a decline as an increasingly amount of project work is being handled through CIP projects.

Condition Monitoring techniques are being applied, which allow maintenance to monitor and test equipment using technology that takes less time and is less intrusive.

During FY12, total the number of total work orders held steady from the previous year.

A continued reduction in Project work orders is due primarily to the increase in capital projects.



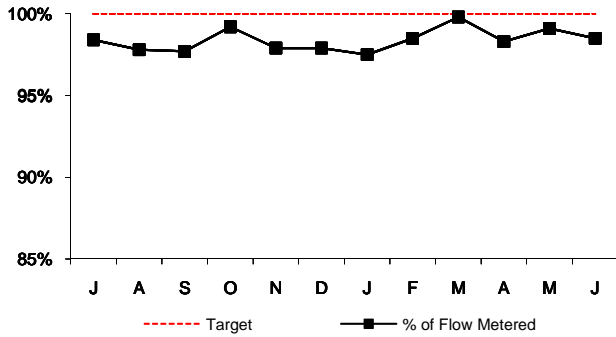
- Predictive Maintenance
- Emergency Maintenance
- ▨ Project
- ▧ Preventive Maintenance
- ▩ Corrective Maintenance

Operations Division Metering

4th Quarter - FY12

WATER METERS

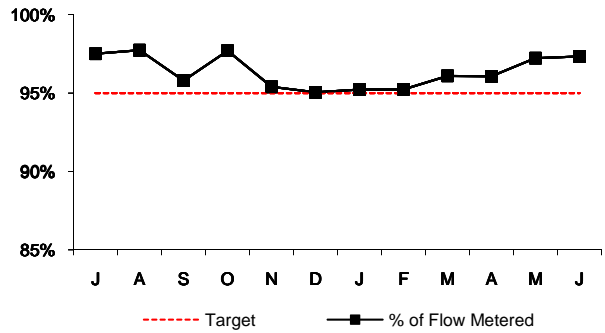
Percent of Total Revenue Water Deliveries Calculated Using Meters



The target for revenue water deliveries calculated using meters is 100%. Estimates are generated for meters that are out of service due to instrumentation problems or in-house and capital construction projects. During the 4th Quarter of FY12, meter actuals accounted for 98.6% of flow; only 1.4% of total revenue water deliveries were estimated. The following is the breakdown of estimations:
 In-house and Capital Construction Projects - 0.2%
 Instrumentation Failure - 1.2%

WASTEWATER METERS

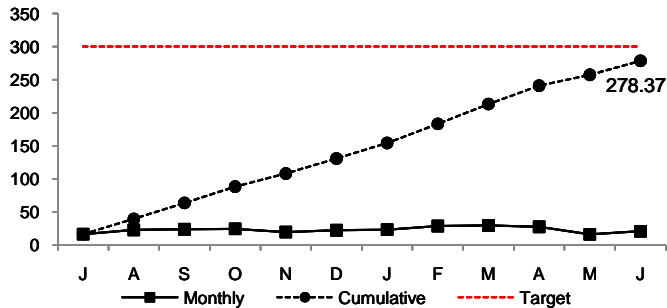
Percent of Total Wastewater Transport Calculated Using Meters



The target for revenue wastewater transport calculated using meters is 95%. Estimates are generated for meters missing data due to instrument failure and/or erratic meter behavior. Estimates are produced using data from previous time periods under similar flow conditions. During the 4th Quarter of FY12, meter actuals accounted for 96.88% of flow; 3.12% of wastewater transport was estimated.

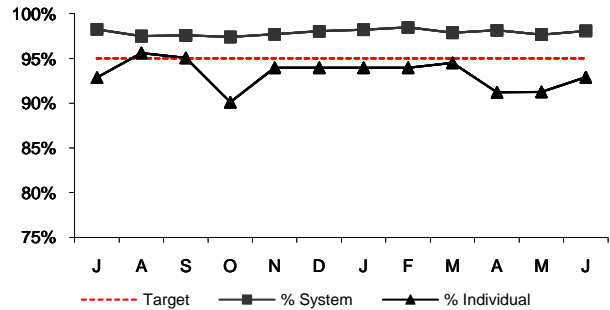
WATER DISTRIBUTION SYSTEM PIPELINES

Miles Surveyed for Leaks



During the 4th Quarter of FY12, 65.26 miles of water mains were inspected; this brings the YTD total to 278.37, just below the target of 300.

% Wastewater Meter Uptime



During the 4th Quarter of FY12, out of a possible 1,595,808 data points, only 32,613 points were missed resulting in a system-wide up time of 98%. Of the 183 revenue meters installed, on average 15 meters per month experienced down time greater than the 5% target resulting in a 91.8% of individual meters meeting the target. For the 4th Quarter of FY12, down time for an individual meter is defined by any individual meter having on average less than 2766.3 data points out of a potential 2,912 data points.

Water Distribution System

Month	J	A	S	O	N	D	J	F	M	A	M	J
Leaks Detected	0	0	0	0	0	4	2	2	1	2	2	1
Leaks Repaired	0	1	0	0	0	4	0	2	1	2	3	2
Backlog	1	0	0	0	0	0	2	2	2	2	1	0
Avg. Lag Time	31.0	47.0	47.0	47.0	47.0	13.2	13.0	15.5	20.3	22.6	22.7	23.0

During the 4th Quarter of FY12, 5 leaks were detected and all of them were repaired. Additional repairs during the 4th Quarter of FY12 included the leak at Riverside in Medford (Section 57) originally detected in January, and also the leak located out on the Saugus Channel under the General Edwards Bridge (Section 56) originally detected in February. These leaks were repaired on April 20th and June 27th respectively. However, Section 56 remains out of service because another leak was found on the line at the bridge in July.

During FY12 fourteen (14) leaks were detected and repaired. The one extra repair was a Newton leak (on Section 24) that carried over from FY11. It was repaired in the first quarter. Three of the FY12 leak repairs (Section 57, Section 56 and Section 24) took more than 1 month to repair. These repairs required a more complex coordination of resources which significantly increased our year end average lag time.

The Pipeline Program's goal is to repair all leaks found during the fiscal year. However, if the goal cannot be reached due to restrictions, isolations, communities, or degree of difficulty, then the goal is to have not more than two leaks outstanding at year's end.

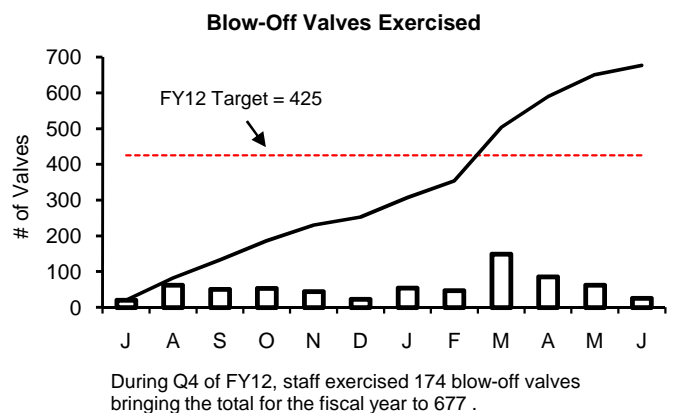
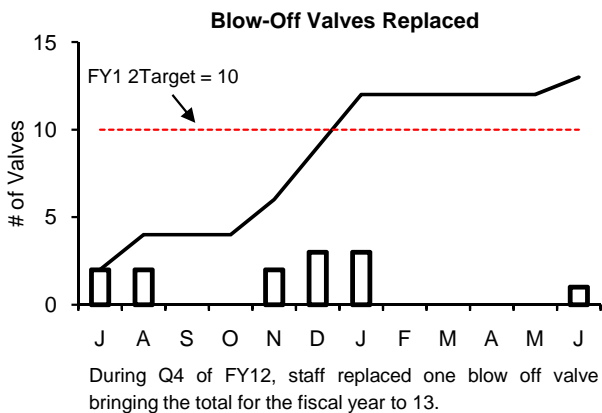
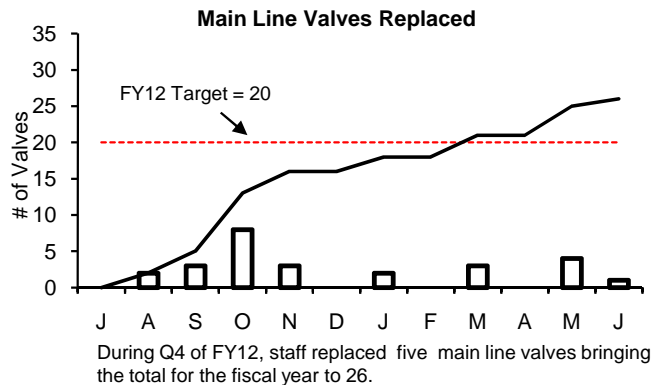
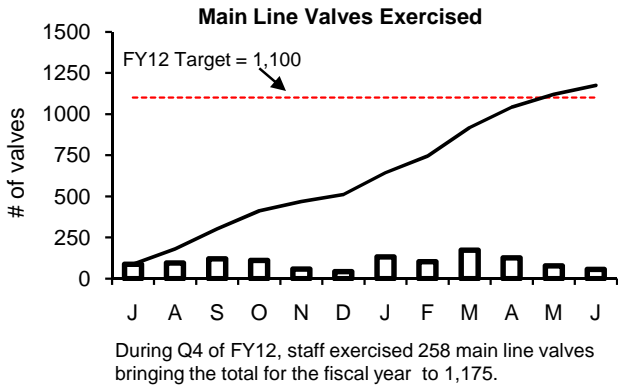
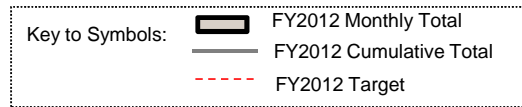
Water Distribution System Valves

4th Quarter - FY 12

Background

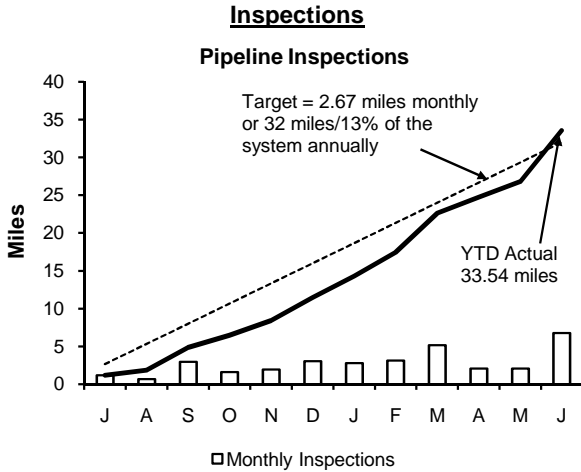
Valves are exercised, rehabilitated, or replaced in order to improve their operating condition. This work occurs year round. Valve replacements occur in roadway locations during the normal construction season, and in off-road locations during the winter season. Valve exercising can occur year round but is often displaced during the construction season. This is due to the fact that a large number of construction contracts involving rehabilitation, replacement, or new installation of water lines, requires valve staff to operate valves and assist with disinfection, dechlorination, pressure-testing, and final acceptance. Valve exercising can also be impacted due to limited redundancy in the water system; valve exercising cannot be performed in areas where there is only one source of water to the community meters or flow disruptions will occur.

Type of Valve	Inventory #	Operable Percentage	
		FY12 to Date	FY12 Targets
Main Line Valves	2,092	96.8%	92%
Blow-Off Valves	1,206	92.9%	94%
Air Release Valves	1,335	93.0%	92%
Control Valves	48	100.0%	95%

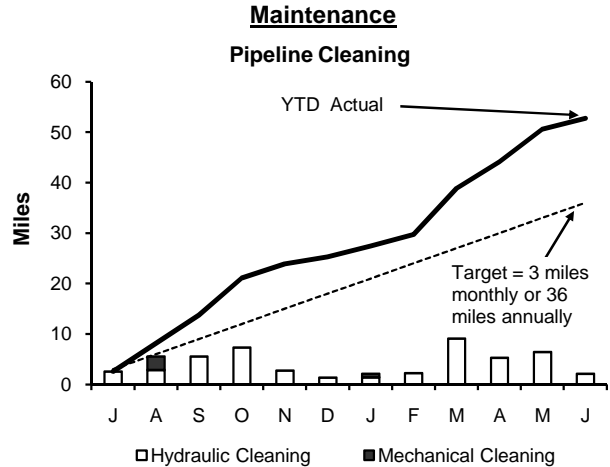


Wastewater Pipeline and Structure Inspections and Maintenance

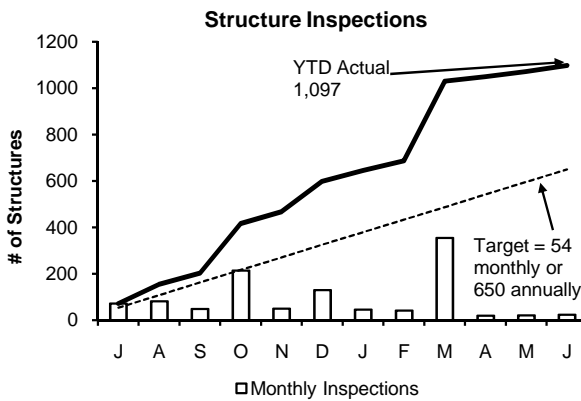
4th Quarter - FY 12



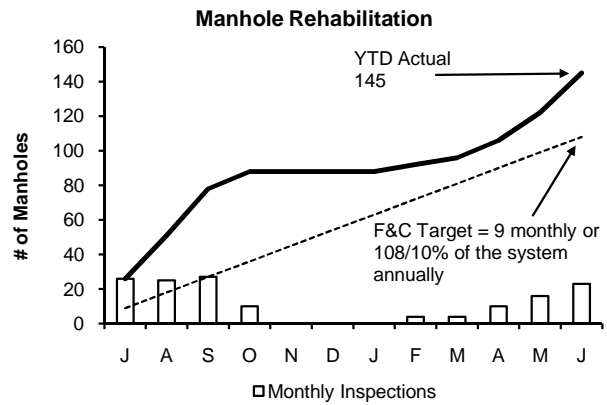
Staff internally inspected 10.94 miles of MWRA sewer pipeline during this quarter. The year-end total for FY 12 is 33.54 miles. Community Assistance was provided to the city of Somerville; 1,210 linear feet (0.23 miles) of local 8" diameter sewer was inspected this quarter.



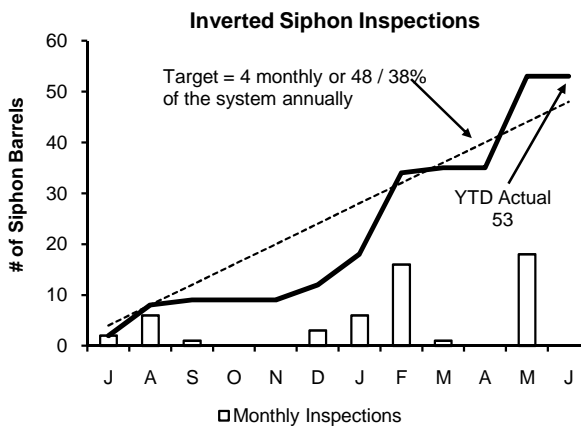
Staff cleaned 13.19 miles of MWRA's sewer system and removed 49 yards of grit and debris during this quarter, bringing the year-end total to 52.74 miles. Community Assistance was provided to the city of Waltham, resulting in 200 linear feet (0.04 miles) of local sewer cleaning.



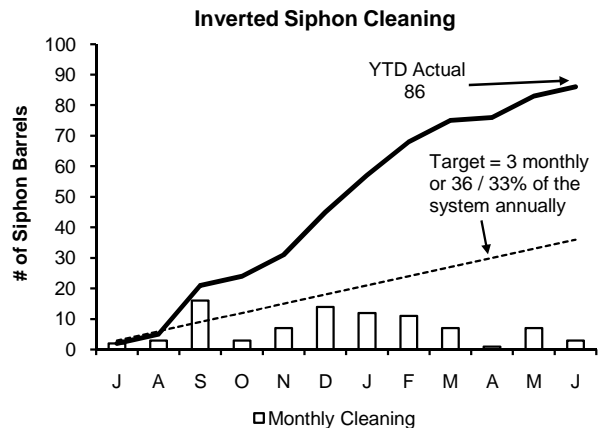
Staff inspected the 36 CSO structures and performed 31 additional manhole/structure inspections during this quarter, the year -end total is 1,097 inspections.



Staff replaced 49 frames & covers this quarter. The year-end total is 145.



Staff inspected 18 siphon barrels this quarter. The year-end total is 53 barrels.



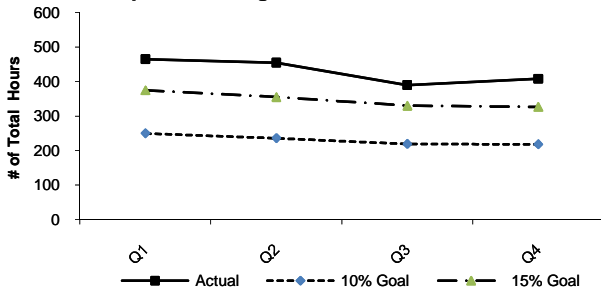
This quarter, staff cleaned 11 siphon barrels. The year-end total is 86 barrels.

Field Operations' Metropolitan Equipment & Facility Maintenance

4th Quarter - FY12

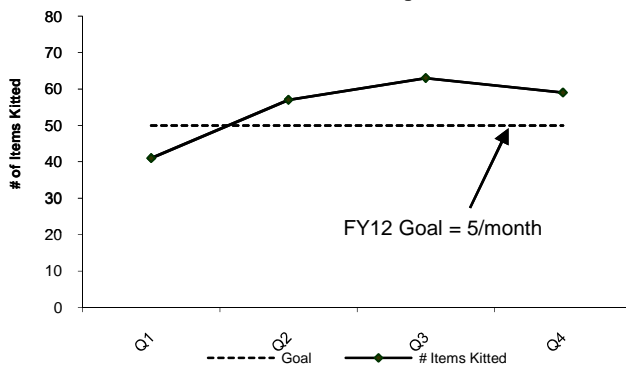
Staff are continuing with several maintenance and productivity initiatives; The Operator PM and kitting initiatives frees up maintenance staff to perform corrective maintenance and project work, thus reducing maintenance spending. Backlog and overtime metrics monitor the success of these maintenance initiatives.

Operations Light Maintenance PM Hours



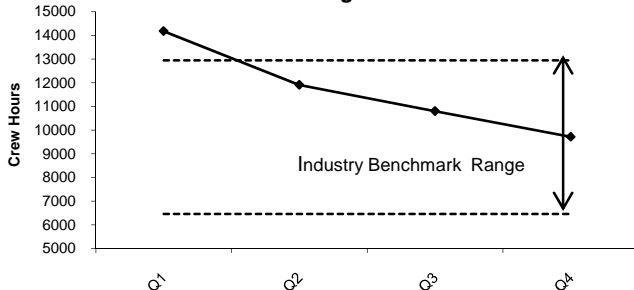
Operations staff averaged 408 hours of preventive maintenance during the 4th Quarter, an average of 19% of the total PM hours for the 4th Quarter and 19% for FY12, which is above the industry benchmark of 10% to 15%.

Items Kitted Utilizing Maxim



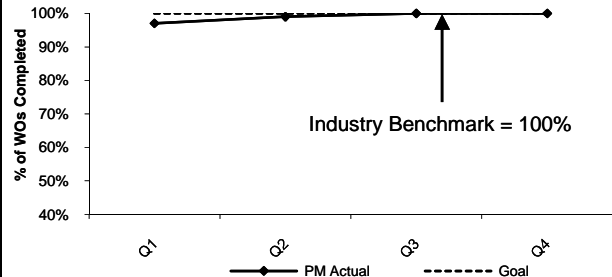
In an effort to more efficiently complete work, maintenance staff and work coordination staff have utilized the Lawson/Maxim interface to better kit stock and non stock material. The goal for FY12 is to "kit" 50 stock and non stock items total per month. An average of 59 items were kitted for the 4th Quarter and 55 items for FY12 which exceeds the goal.

Maintenance Backlog in Crew Hours



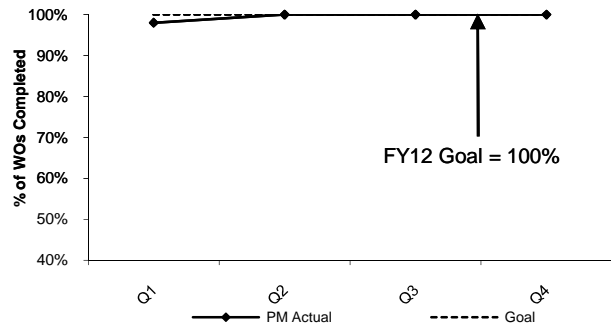
The 4th Quarter backlog average is 9,711 hours. The Mechanical backlog is above the industry average due to the addition of multiple projects including the Alewife Screens and Nut Island Conveyor repairs. Management's goal is to control overtime and still stay within the industry benchmark of 6450 to 12,940 hours.

Overall Preventive Maintenance



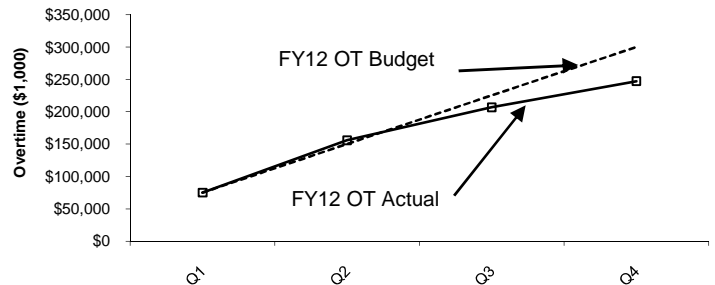
The Field Operations Department (FOD) preventive maintenance goal for FY12 is 100% of all PM work orders. Staff completed 100% of all PM work orders in the 4th Quarter.

Operations Light Maintenance % PM Completion



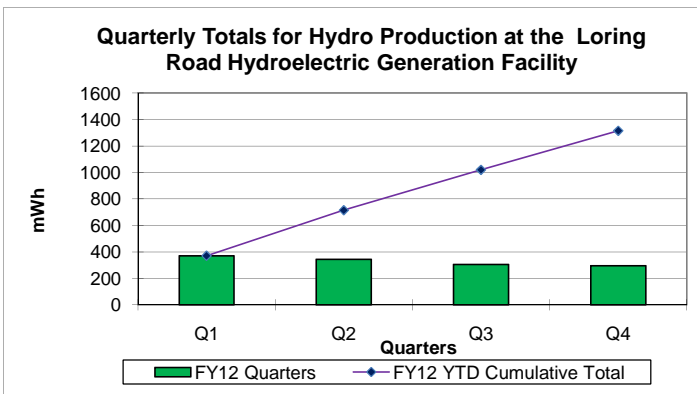
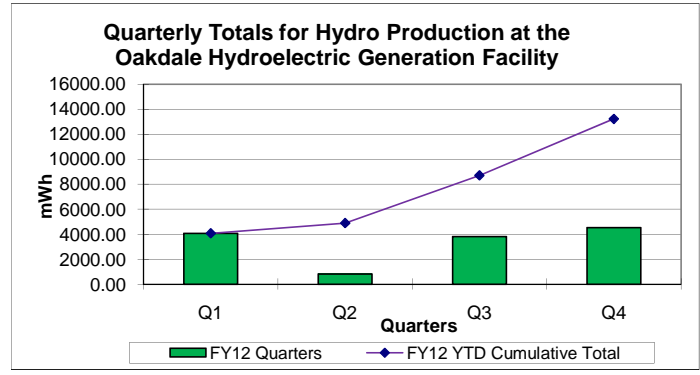
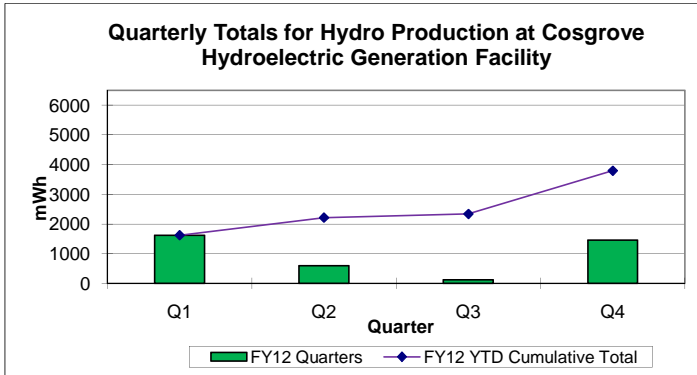
Wastewater Operators complete light maintenance PM's which frees up maintenance staff to perform corrective maintenance. Operations' FY12 PM goal is completion of 100% of all PM work orders assigned. Operations completed 100% of PM work orders in the 4th Quarter.

Overtime Spending



Maintenance overtime was \$34k under budget for the 4th Quarter and \$53k under budget for FY12. Overtime was used to complete emergency repairs due to a variety of critical operational needs as well as coverage for wet weather.

Field Operations Hydroelectric Generation Quarterly Report 4th Quarter - FY12



In the 4th Quarter, the **Cosgrove Hydroelectric Station** generated a net of 1454 MWh; approximately 13% less than was generated during the same quarter in FY11. The revenue generated at Cosgrove in the fourth quarter was \$44,613 exclusive of Renewable Energy Certificates.

In the 4th Quarter, the **Oakdale Hydroelectric Station** generated a net of 4523 MWh; approximately 42% more power than was generated during the same quarter in FY11. (Power is generated when water is transferred from Quabbin to Wachusett.)

In the 4th Quarter, the **Loring Road** hydroelectric 200 kW station generated 296 MWh. Power is generated as water conveyed from Norumbega to the Loring Road storage tanks is reduced in pressure and the energy available in this pressure reduction is captured by the new turbine. The facility operates continuously. Some power is consumed on site, with the bulk exported to the grid.

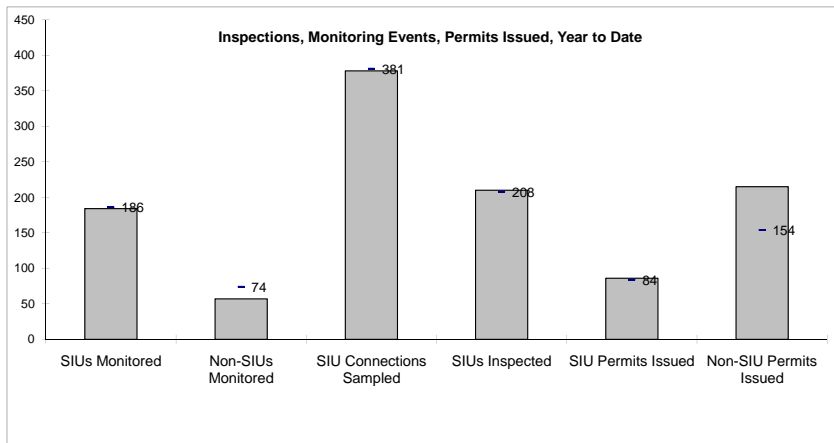
Southborough: An audit of the Southborough facility recommended a review of the HVAC system. Staff completed that work and have recommended the installation of an energy management system similar to the one being installed at the Chelsea Facility. NSTAR has committed to providing a \$30,000 incentive to this project based on the projected energy savings. This project falls under the requirements of the Green Communities Act since it would be under \$100,000. The work is expected to begin in September 2012.

Chelsea Facility: The detailed audit of the Chelsea facility recommended installing an Energy Management System for the Admin. Building along with some equipment updates. NSTAR has agreed to provide a \$168,000 incentive to MWRA for the installation of the EMS. The project was bid and a contract was awarded during the second quarter of FY12. Work began in the third quarter of FY12 and is expected to be completed during the first quarter of FY13.

Energy Audits and Implementation of Audit Recommendations at FOD Facilities: MWRA staff identified multiple facilities that would benefit from a comprehensive energy audit. Audits of 24 facilities were performed in two phases from FY10 through the first quarter of FY12. The focus of these energy audits were lighting, HVAC, pumps, and motors. Implementation of the audit recommendations began at the end of the 1st Quarter of FY11 and are on-going. VFDS on the HVAC systems and scrubber pumps at Ward Street and Columbus Park Headworks were installed during the 4th quarter of FY12. Energy efficient lighting was installed at Prison Point during the fourth quarter also. Audits of an additional 6 facilities began in the second quarter of FY12 and are on-going. Audits of two of the six were completed in the fourth quarter of FY12.

Toxic Reduction and Control

4th Quarter - FY 2012



EPA Required SIU Monitoring Events for FY12: 186
YTD: **184**

Required Non-SIU Monitoring Events for FY12: 74
YTD: **57**

SIU Connections to be Sampled For FY12: 381
YTD: **378**

EPA Required SIU Inspections for FY12: 208
YTD: **210**

SIU Permits due to Expire In FY12: 84
YTD: **86**

Non-SIU Permits due to Expire for FY12: 154
YTD: **215**

Significant Industrial Users (SIUs) are MWRA's highest priority industries due to their flow, type of industry, and/or their potential to violate limits. SIUs are defined by EPA and require a greater amount of oversight. EPA requires that all SIUs *with flow* be monitored at least once during the fiscal year. The "SIU Monitored" data above reflects the number of industries monitored. However, many of these industries have more than one sampling point and the "SIU Connections Sampled" data reflect samples taken from multiple sampling locations at these industries. One SIU had no discharge during the year, and one SIU with multiple sample locations had one connection not sampled because of a communication issue. Two other connections had no discharges during the year.

TRAC's annual monitoring and inspection goals are set at the beginning of each fiscal year but they can fluctuate due to the actual number of SIUs at any given time. During the course of the year, some SIUs do not discharge and cannot be monitored. TRAC also monitors one-third of the non-SIUs each year. Non-SIU monitoring events fell short of goals because of staff turnover, but these facilities, sampled once every three years, can be completed in FY13 and 14 with no regulatory impact. The number of SIUs inspected reflects the total number of facilities that were inspected throughout the year that were determined to be SIUs at some time during the year. MWRA inspected 100% of SIUs (including 2 new SIUs) and sampled 99% of the SIUs with flow during the year.

SIU and Non-SIU permits are issued with durations of two to five years, depending on the category of industry, varying the number of permits that expire in a given year. More SIU and non-SIU permits were issued than expected for one of two reasons: they were new permittees, or their existing permits expired in the previous year (FY11).

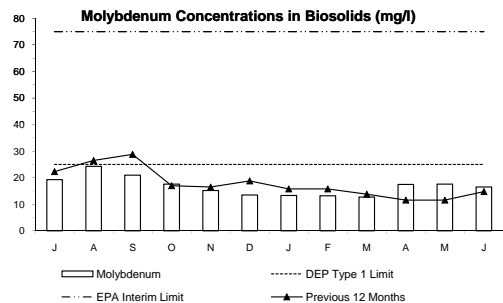
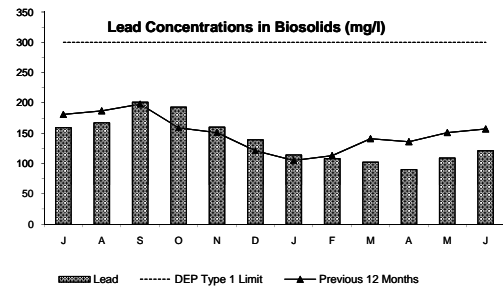
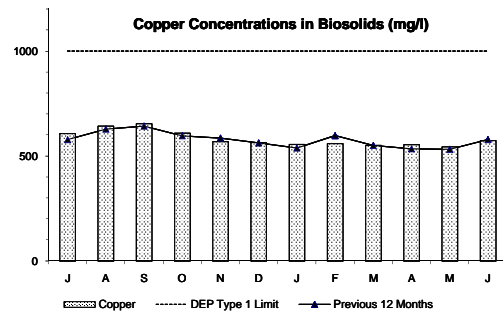
	Number of Days to Issue a Permit						Total Permits Issued	
	0 to 120		121 to 180		181 or more		SIU	Non-SIU
	SIU	Non-SIU	SIU	Non-SIU	SIU	Non-SIU		
Jul	5	10	0	0	0	4	5	14
Aug	4	13	4	2	0	5	8	20
Sep	2	11	1	2	0	3	3	16
Oct	13	18	0	2	0	3	13	23
Nov	9	20	0	1	0	1	9	22
Dec	2	16	1	2	0	0	3	18
Jan	2	23	0	1	0	0	2	24
Feb	5	14	0	1	0	4	5	19
Mar	10	7	1	0	0	2	11	9
Apr	4	9	1	2	0	0	5	11
May	10	23	0	0	0	2	12	25
Jun	8	13	0	0	2	1	10	14

% YTD	86%	82%	9%	6%	2%	12%	86	215
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EPA requires MWRA to issue or renew 90% of SIU permits within 120 days of receipt of the application or the permit expiration date - whichever is later. EPA also requires the remaining 10% of SIU permits to be issued within 180 days. One SIU permit was held longer than 120 days and two were held longer than 180 days while staff gathered the necessary information to draft the appropriate permits. Four non-SIU permits were held longer than 120 or 180 days while awaiting payment, and one was held while staff gathered information to draft the appropriate permit. For the year, 86% of SIU permits were issued within 120 days, and 97% within 180 days.

Copper, lead, and molybdenum are metals of concern for MWRA as their concentrations in its biosolids have, at times, exceeded regulatory standards for unrestricted use as fertilizer. Cooling tower usage typically causes a seasonal spike in molybdenum concentrations due to the blowdown on large AC systems that use corrosion inhibitors containing molybdenum. Levels drop again following the end of the cooling season. The hotter the season, the higher the spike. TRAC has an ongoing program to persuade cooling tower operators to switch to phosphate-based corrosion inhibitors.

Levels were lower than standards for the 4th Quarter of FY 2012.



Field Operations Highlights – Orange Notebook Bullets

4th Quarter – FY12

Western Water Operations and Maintenance

CWTP: The treatment plant was returned to full plant operation after the completion of winter maintenance and flow control was returned to Valve Chamber E-1. Staff replaced the knife gates on Soda Ash Silos #3 and #4 with a new style gate that is less susceptible to binding, and replaced the heater elements in both oxygen trim heaters. Also, staff witnessed shop testing of CWTP UV Reactors at Calgon's manufacturing facility in Pennsylvania.

MWWST: Staff participated in the isolation and draining of a portion the MetroWest Tunnel, including the valves at Shaft 5A, Loring Road Storage Tanks and Norumbega Storage Tanks, to support the Hultman Interconnections Contractor during the internal welding of the pipe couplings between Shaft W and the valve chamber. When the work was completed, the isolated portion of the tunnel was returned to service.

Wachusett Dam: Staff supported the contractor during emergency repairs of the Angle Pattern Sleeve Valve in the Lower Gatehouse, which had pinholes at the weld of the effluent flange. While the valve was out of service, the regulatory release to the Nashua River was made by adjusting the tip elevation of the crest gate.

Hultman Aqueduct: The Hultman Interconnections Contractor completed work on the Lower Hultman from the Bifurcation Valves to the new Valve Chamber 5A-2, including the majority of the branch line. Disinfection was completed and staff provided support with activation of the line. Staff isolated and drained the Upper Hultman from the CWTP to Shaft 4 in Southborough as part of the new CP-6B work, and participated in the initial inspection of the Upper Hultman from the 120-inch butterfly valves near Shaft C to Shaft 1.

Chicopee Valley Aqueduct: Staff discovered a small leak associated with a 36-inch "Y" fitting near where the CVA crosses the Swift River. There is a 2-inch drain line at the bottom of the fitting that is believed to be the source of the leak. Staff have exercised the up and down stream isolation valves and ordered repair pieces as a contingency while an engineered solution is pursued.

Metro Water Operations & Maintenance

Lynn Raw Water Line Drilling Incident: On April 24, a drilling contractor working for Mass DOT on Walnut Street in Saugus hit a 30" Lynn Water and Sewer Commission (LWSC) raw water main. Initially, it was thought to be the 8" MWRA pipeline to the Lynnfield Pump Station. MWRA, Saugus, and LWSC Staff all initially responded. LWSC hired a contractor to repair the main.

Section 85 Excavation Incident: On April 30, a contractor working for the City of Revere cut into MWRA Section 85 with a pipe saw to see if it was an abandoned line. The subsequent leak in the 36" Pre-stressed Concrete Cylinder Pipe was isolated as soon as it was reported, with no service impacts. A repair saddle was installed by the MWRA Pipeline Staff. The line was returned to service on Friday, May 11.

Shaft 9A Leak: On May 3, water was reported surfacing near Shaft 9A in Malden. A leak was found on an 8" flanged valve, downstream of the isolation valves at the top of the shaft. The line was isolated, the valve was removed, a new valve was installed and the line was reactivated. Several bolts were found to be corroded on the valve bonnet, allowing the water to escape. Additional inspections have been and will continue to be performed to check the balance of the piping at the site.

Waltham Sewer and Water Main Issue: On Saturday, May 12, the City of Waltham experienced a sewer, then a water main issue requiring MWRA assistance. Wastewater Pipeline Staff first mobilized a 6" pump used to bypass the sewer line, and Metro Operations Staff deployed the Mobile Disinfection Unit to assist with disinfection of the affected water main.

Water Tank Inspections: The majority of the Metropolitan water storage tanks were inspected during the quarter. All were found to be in very good condition, with two minor exceptions. A 2" threaded plug was found missing on the Deer Island tank, and a 1" corrosion hole was found on the vertical section of the top vent on the Turkey Hill Tank. Both issues were resolved.

Wastewater Operations & Maintenance

ISO-NE Electrical Demand Response Program: Operations continues to support the ISO-NE Electrical Demand Response Program. As part of an initial system test, Ward Street, Chelsea Creek and Columbus Park Headworks were all called upon by the Constellation Electric Utility to operate independently of the electric supply grid by utilizing their back-up diesel driven electrical generators. Operations Staff ensured electrical generation equipment was available within 30 minutes as required and successfully operated for this test.

Emergency Spill Response: Operations Staff participated in an inter-department and inter-agency Spill Response Training Exercise on June 5th to demonstrate a coordinated response effort. Operations Staff also participated in a scheduled Emergency Spill Response Meeting that discussed ongoing efforts for ensuring the necessary capacity when responding to potential spill hazards. Equipment items and on-site storm drain locations were identified for continued investigation. Future joint meetings are planned as updated response efforts are implemented.

Training: Staff have begun required Annual Right to Know (RTK) Training. This training informs all staff of the proper material identification and related personal safety protections when handling or using any chemicals found at a facility, and provides information regarding chemical classifications, labeling and Material Safety Data Sheets (MSDS) as required by State and Federal Agencies. Biannual Spill Prevention Control and Countermeasures (SPCC) Refresher Training has also begun to provide staff with necessary information regarding oil spill or release detection and the related prevention and response SOPs. Operations staff continue to perform the DEP required SPCC Inspections at Cottage Farm CSO, Prison Point CSO and Braintree Weymouth Pump Station.

Alewife Brook Pump Station Rehabilitation-Contract No. 7034: Operations Staff met with Engineering & Construction Staff and the design engineer and contractors to evaluate by-pass pumping operations options at the Alewife Brook Pump Station. This joint effort will assist both the ongoing engineering design, as well as the facility operation requirements for maintaining continuous operation during planned construction activities. Operations will continue to provide support throughout all phases of this project.

MWR010 Cleaning Project: The project will clean the MWR010 outfall in preparation of Brookline's future use to convey storm water upon completion of their Sewer Separation Project. The contractor performed a preliminary survey of the construction site, initiated rodent control, removed the BU Beach Area Berm, prepared the staging area for the contractor equipment, installed their downstream weir wall, removed the existing stop logs and downstream tide gates, dewatered the conduit and started to evacuate the muck from the conduit.

Inspections: Staff inspected 10.94 miles of MWRA Sewer Interceptors; 36 Combined Sewer Overflow (CSO) structures and 31 other structures; and 18 siphon barrels. Community Assistance was provided to the City of Somerville to inspect 1.26 miles of local sewers.

Pipe Maintenance: Staff cleaned 13.19 miles of MWRA pipelines, removing 49 cubic yards of grit and debris; replaced 49 frames and covers; and cleaned 11 Siphon Barrels. Community Assistance was provided to Waltham to clean 200 feet of local sewer.

TRAC

Annual Significant Industrial User (SIU) Meetings: Approximately 95 people attended MWRA's Annual Meetings in April at the Pelletizer Plant in Quincy. Attendees enjoyed a detailed overview of the process and subsequent tours. Following the tours, the SIU's Representatives were provided with useful information to aid in maintaining compliance with their permits.

Framingham Extension Sewer (FES) Monitoring: In May, TRAC Monitoring Staff began collecting samples in the FES communities. Samples will be collected during one week each month through November at six locations to gauge the impact of industrial, municipal and MWRA actions to reduce the formation of sulfide and minimize odor and corrosion in the FES and downstream interceptors. June sampling was coordinated with Wastewater Operations Staff who were testing out a new chemical aimed at reducing the generation of sulfide.

Permits-Group Permit for Food Processors: During May, TRAC Staff sent biannual compliance reports to approximately 90 food processing companies throughout the sewer district. They are required to report every other June on their operations during the previous two calendar years. The compliance reports are due on July 2nd. TRAC Staff audit 20% of the group permit holders every year.

Metro Equipment and Facility Maintenance

Water Pump Stations: The Surge Valve for Pump #3 at the Lexington PS was replaced with a more reliable one by Pipeline Crew, Electricians and Plumbers. Four sump pumps and an associated electrical conduit at the Gillis PS were corroded because of the harsh conditions of the chambers. MWRA Electricians removed the existing electrical conduit and wiring, installing new galvanized conduit and wiring. MWRA installed new sump pumps and returned pumps to service.

Nut Island: The #1 Screening Conveyor was rebuilt, including all new drums, shafts, rollers, bearings and belts. The two-speed motor for the #4 Odor Control Fan failed. The motor was sent out for rebuilding, and the motor frame was cleaned, new vibration dampeners installed and the belt tensioners rebuilt. The plug valves used to dewater the vortexes were difficult to operate. MWRA Mechanics replaced 5 of the 6 valves. The 6th which operates properly will be changed at a future date.

Grinders: The #2 grinder at Braintree/Weymouth was found to have worn lower teeth. The grinder was removed and replaced with a spare grinder. The original grinder was sent out for rebuild. Grinder #1 will be replaced once the rebuilt grinder is returned. The #1 Grinder at the Hingham Pump Station was worn and in need of replacement. A spare grinder was installed and put into service. The old grinder will be rehabilitated and become the spare. The Screening Grinder for Prison Point failed. The spare grinder was installed by Mechanics and wired by Electricians. The used grinder was sent out for rebuild.

Equipment Cooling: The VFD Room at Alewife and the Electrical and VFD Room at DeLauri have a history of overheating in the summer and tripping out the VFDs. A 20-ton A/C unit was installed at Alewife and a 25-ton portable trailer mounted A/C unit was installed at DeLauri by MWRA Electricians, HVAC Technicians, Carpenters and Masons.

Cottage Farm Gate: MWRA Water Valve Crews changed out the gate valve which allows flow to Ward Street. This new valve setup allows remote operation from the Wastewater OCC.

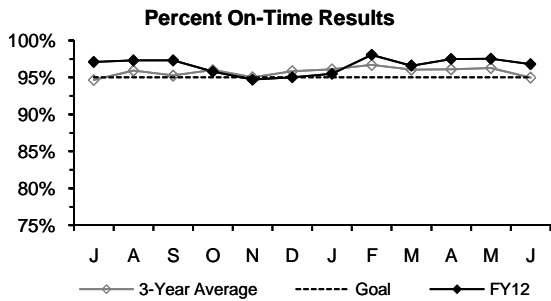
Operations Support

National Level Exercise Cyber Drill: Staff participated in the FEMA Training Exercise held on June 5-8, 2012. This major drill featured operational impacts on both water and sewer systems and cyber impacts on MWRA IT systems as part of a simulated cyber attack on critical infrastructure.

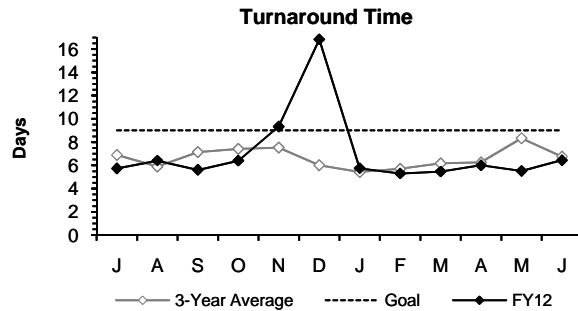
Meter Systems: Staff have begun implementing Rosemount flow transmitter replacement system-wide with a newer generation that allows a wider accurate span. Staff are also converting water meter data collection to wireless transmission to cut costs.

Online Water Quality Monitoring: Staff continued working on updating the distribution water quality monitoring analyzer system. Eleven units have been installed and made operational via SCADA through June and several more are in progress. Response SOPs are being developed for alarm response when the system is fully operational. Planned startup of alarm monitoring is summer 2012.

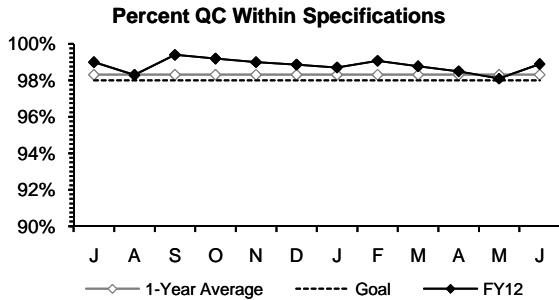
Laboratory Services 4th Quarter - FY12



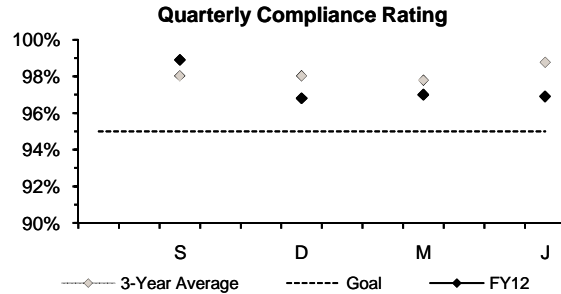
The Percent On-Time measurement exceeded the 95% goal each month of the quarter.



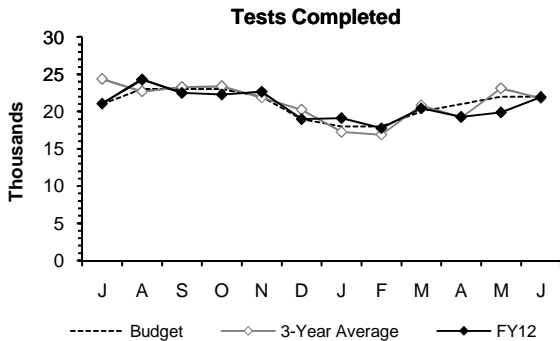
Turnaround Time was faster than the 9-day goal each month of the quarter.



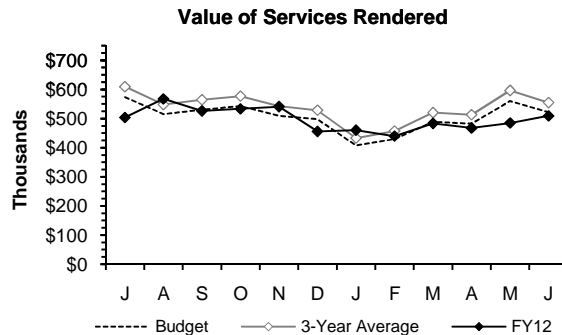
Percent of QC tests meeting specifications exceeded the 98% goal each month of the quarter. The 1-year average is based on the new LIMS results.



An audit of all five lab locations on SOPs found good compliance with procedures. Compliance audits are performed in September, December, March, and June.



The Tests Completed was slightly below the seasonally adjusted budget goal for the quarter. FY12 will be a transition year for this metric between the old and the new LIMS.



Value of Services Rendered was slightly below the seasonally adjusted budget projection for the quarter. FY12 will be a transition year for this metric between the old and new LIMS.

Highlights: The on-site construction work to replace six chemical fume hoods used to prepare samples for metals testing at the Central Lab has been extended into July to address an unanticipated electrical issue on the roof. The new fume hoods and the lab's casework are made of polypropylene plastic to prevent samples to be tested for metals from getting contaminated in the lab.

Quality Assurance: DEP performed a certification audit of the Central Lab in May. No major deficiencies were noted in the draft audit report. The few minor deficiencies are being rectified to meet a July deadline. Working on implementing the changes to approved wastewater methods in EPA's recent Methods Update Rule.

DITP: Provided assistance collecting check samples during fuel deliveries. The samples are archived and used if there is a disagreement regarding the characteristics of the fuel.

ENQUAD: Collected special harbor samples for Red Tide and tested Red Tide nutrient samples from Boston Harbor and Mass. Bay. Participated in the Harbor and Outfall Monitoring annual science meeting.

TRAC: Discussed changes to cyanide sampling and preservation based on EPA's Methods Update Rule. Working on implementing a new field quality control sample to demonstrate adequate cyanide preservation.

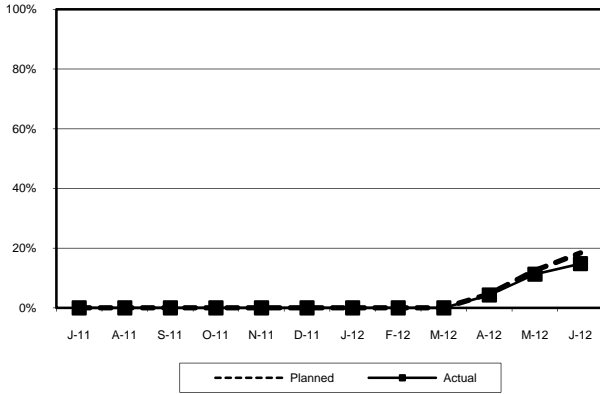
Water Quality Assurance: The use of Colilert for testing Total Coliform Rule samples began in January. For the first six months there were no E. coli positive and only a few Total Coliform positive sample out of about 12,000 samples.

Outside Customers: Beach testing has begun 5 days a week for the Boston Harbor beaches and once a week for Revere and Winthrop beaches.

CONSTRUCTION PROGRAMS

Projects In Construction 4th Quarter FY12 (Progress Percentages based on Construction Expenditures)

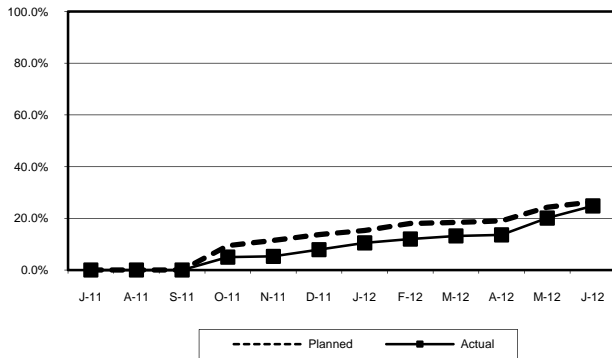
Hultman Aqueduct Interconnection CP-6B
Progress – June 2012



Project Summary: This project includes the replacement and rehabilitation of valves and piping in the Shaft 4 Headhouse, adjoining aqueduct chamber and the sections of the Hultman Aqueduct located in Marlborough and Southborough.

Status and Issues: Through June, the Contractor continued repairing internal joints on the Upper Hultman and suspended removal of PRV in the Shaft 4 building. On-going work includes the selective demolition of pipes and valves in the Shaft 4 building.

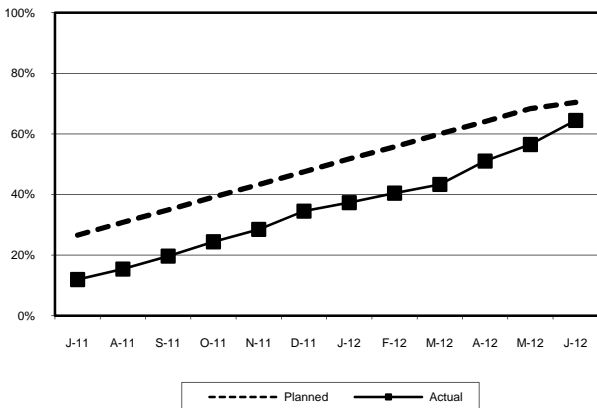
UV Disinfection Facilities CWTP
Progress – June 2012



Project Summary: In accordance with the EPA's requirement to have two primary methods of disinfection, the Authority will add an Ultraviolet (UV) light disinfection process at the Carroll Water Treatment Plant, which will render Cryptosporidium inactive.

Status and Issues: Through June, the Contractor continued with installation of rebar, formwork and concrete for slabs, stairs, and baffle walls on both the A & B sides. Contractor also continued with installation of various electrical conduits, bridge crane support brackets, and waterproofing of UV room walls.

Lynnfield/Saugus Pipelines
Progress - June 2012

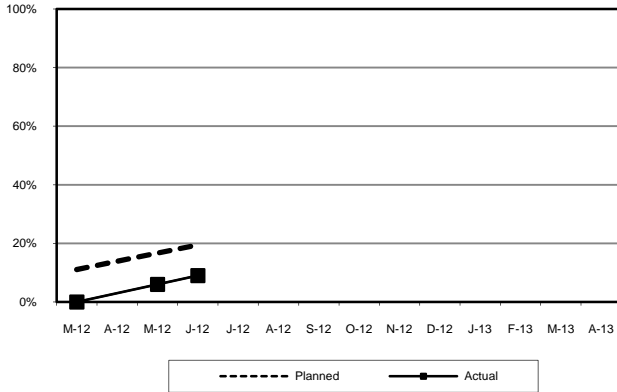


Project Summary: Installation of MWRA water mains including 1,800 linear feet of 36-inch pipe and 4,700 feet of 24-inch pipe. Project also includes 6,000 linear feet of 12-inch pipeline for the Town of Saugus. Pipeline construction is located along Route 1 in Saugus.

Status and Issues: The Contractor installed on Route 1 South along Hawkes Pond, 510 ft of 12" and 591 ft of 24" DIP. They completed the tie in of a 12" line at Lynnfield Water District Pumping Station and completed instrument piping in the new meter vault. Also they had to cross under Lynn's 30" raw water line, found in direct conflict with 24" main.

Projects In Construction 4th Quarter FY12 (Progress Percentages based on Construction Expenditures)

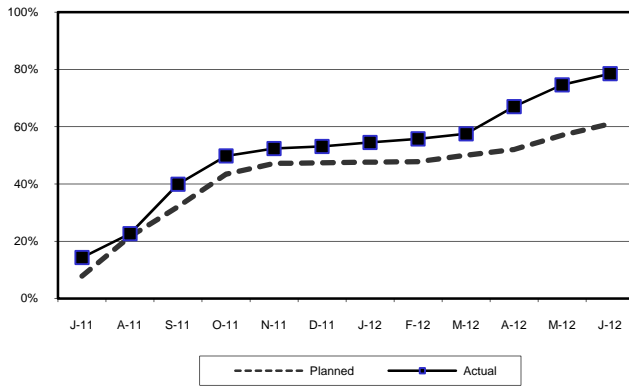
**Spot Pond Water Storage Facility
Progress – June 2012**



Project Summary: This is a design/build project for the construction of two, 10 million-gallon covered concrete storage tanks and a buried pump station, which will provide back-up redundancy for the Northern High and Northern Intermediate High distribution service areas.

Status and Issues: In June, the design build team submitted the 100% design package. The excavation and transportation of excavated materials began on June 11th. The phase 1 excavation to elevation 210 and the phase 2 excavation to elevation 195 were both completed during the month.

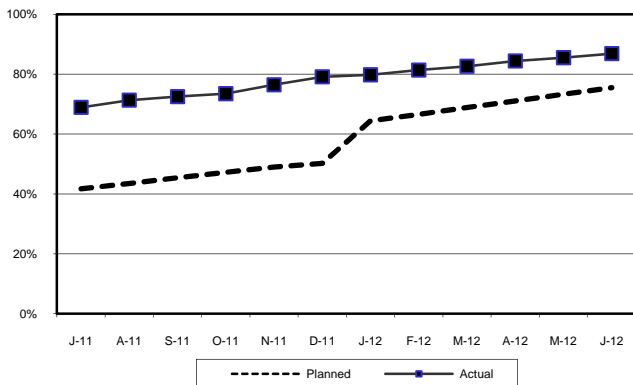
**Phase 7 Valve Replacement
Progress – June 2012**



Project Summary: This project consists of the replacement of 10 blow-off and 10 main line valves and the rehabilitation of various meters throughout the Authority's water distribution system.

Status and Issues: During June, the Contractor completed work on Perkins Street and Meter 48 is now in service. The redesign of the Kennedy Drive valve and blowoff has been completed. Work is shutdown during summer peak demand and will resume in September.

**Hultman Aqueduct Interconnections Project
Progress - June 2012**



Project Summary: This project includes rehabilitation construction to the Hultman Aqueduct to provide redundancy to the MetroWest Tunnel from Southborough to Weston by adding five new MetroWest/Hultman interconnections, two surge relief structures, 13.5 miles of internal rehabilitation and 15 miles of external access work.

Status and Issues: As of June, the Contractor completed excavation, installed an 84" valve at W-5 at Loring Road and continued welding butt straps. They began the installation of permanent security fencing around VC-5A-1 and 5A-2 and removed the temporary steel bridge over the Hultman. Started preparation of River Road work site for work to occur in the fall.

CSO CONTROL PROGRAM
4th Quarter - FY12

As reported last quarter, 29 of the 35 projects in MWRA's Long-Term CSO Control Plan are complete and 4 CSO projects are in construction. On March 30, 2012, MWRA commenced design of the remaining two projects – Outfall MWR003 Gate and Floatables Control/Rindge Ave. Siphon Relief and Outfall SOM01A Interceptor Connection Relief and Floatables Control – which are both related to Alewife Brook. Progress of ongoing and planned work to complete the CSO plan is described below.

Project	Court Milestones in Schedule Seven (Shaded milestones are complete.)			Status as of June 30, 2012															
	Commence Design	Commence Construction	Complete Construction																
Brookline Sewer Separation	Nov 06	Nov 08	Jul 13	<p>The \$26.0M Brookline sewer separation project comprises three construction contracts. All work is scheduled to be complete by July 2013, in compliance with Schedule Seven.</p> <p><u>Town of Brookline Sewer Separation Contract 1</u> Brookline attained substantial completion of its \$1.4M first construction contract in January 2010. It involved the installation of 5,658 linear feet of new storm drain.</p> <p><u>Town of Brookline Sewer Separation Contract 2</u> The \$16.6M second construction contract, which Brookline commenced in January 2011, was approximately 70% complete as of 6/30/12. This contract involves the installation of 3,790 linear feet of storm drain and 1,290 linear feet of sanitary sewer by open trench method and 4,550 linear feet of sanitary sewer by micro-tunneling. Town of Brookline expects the work to be complete by December 2012.</p> <p><u>MWRA Outfall MWR010 Cleaning Contract</u> MWRA issued Notice to Proceed on 4/6/12, and the work is scheduled to be complete by September 2012.</p>															
Reserved Channel Sewer Separation	Jul 06	May 09	Dec 15	<p>BWSC continues to make construction progress with five of nine planned contracts for the \$64.3 million Reserved Channel Sewer Separation project.</p> <table border="0"> <tr> <td>Contract 1 - CSO outfall rehab</td> <td>\$ 4.0M</td> <td>Complete</td> </tr> <tr> <td>Contract 2 – sewer separation</td> <td>\$ 6.9M</td> <td>Complete</td> </tr> <tr> <td>Contract 3A – sewer separation</td> <td>\$ 9.9M</td> <td>85% complete</td> </tr> <tr> <td>Contract 3B – sewer separation</td> <td>\$10.9M</td> <td>30% complete</td> </tr> <tr> <td>Contract 7 – pavement restoration</td> <td>\$ 1.2M</td> <td>Complete</td> </tr> </table> <p>BWSC awarded its \$6.8 million Contract 8 (pavement restoration 2) on April 26, 2012. Notice to proceed with Contract 8 is pending receipt of the DEP's approval under SRF regulations. Contract 8 includes roadway resurfacing associated with sewer separation contracts 3A, 3B and 4. On June 14, 2012, BWSC received construction bids for its estimated \$10.6 million Contract 4, which is the last of the major Reserved Channel sewer separation contracts. Contract 4 involves sewer separation in two areas totaling 182 acres tributary to outfalls BOS076, BOS078 and BOS079. BWSC plans to commence construction of Contract 4 in September 2012 and complete the work by June 2015. In the meantime, BWSC continues with the design of the remaining contracts – Contract 5 (existing sewer cleaning and lining) and Contract 6 (downspout disconnections), both of which BWSC plans to award in 2013. BWSC plans to complete all work for the Reserved Channel sewer separation project by December 2015, in compliance with Schedule Seven.</p>	Contract 1 - CSO outfall rehab	\$ 4.0M	Complete	Contract 2 – sewer separation	\$ 6.9M	Complete	Contract 3A – sewer separation	\$ 9.9M	85% complete	Contract 3B – sewer separation	\$10.9M	30% complete	Contract 7 – pavement restoration	\$ 1.2M	Complete
Contract 1 - CSO outfall rehab	\$ 4.0M	Complete																	
Contract 2 – sewer separation	\$ 6.9M	Complete																	
Contract 3A – sewer separation	\$ 9.9M	85% complete																	
Contract 3B – sewer separation	\$10.9M	30% complete																	
Contract 7 – pavement restoration	\$ 1.2M	Complete																	

Project		Court Milestones in Schedule Seven (Shaded milestones are complete.)			Status as of June 30, 2012
		Commence Design	Commence Construction	Complete Construction	
Cambridge/ Alewife Brook Sewer Separation	CAM004 Outfall and Wetland Basin		Apr 11	Apr 13	Cambridge continues to make progress with construction of the \$16.1 million CAM004 stormwater outfall and wetland basin (\$3.6 million MWRA share), which Cambridge commenced in April 2011. The contract was more than 65% complete as of 6/30/12. During the past quarter, Cambridge completed the construction and stabilization of the perimeter berms and final grading at the forebay of the wetland basin and the installation of headwall structures between the forebay and the wetland basin and at the wetland basin outlet. Cambridge also made significant progress with ongoing excavation and grading within the 3.4-acre basin and with ongoing stabilization of the perimeter berms. In addition, Cambridge has commenced the vegetative plantings. Cambridge has also completed installation of the box culvert (stormwater outfall) sections across 55 Wheeler Street, across the parking lots at 150/180 Cambridge Park Drive, and at 125 Cambridge Park Drive. Cambridge continues with the construction of the Belmont Crossing Structure that will allow the box culvert to pass over MWRA's interceptor pipes behind 125 Cambridge Park Drive. Cambridge expects to complete the outfall and wetland basin in April 2013, in compliance with Schedule Seven.
	CAM004 Sewer Separation	Jan 97	Jul 98	Dec 15	Cambridge completed four initial construction contracts for this project several years ago and plans to award three additional contracts (contracts 8A, 8B and 9) to complete the work. Cambridge has completed final design of Contract 8A and recently advertised the contract for construction bids. Cambridge plans to issue the Notice to Proceed with Contract 8A by September 2012, in compliance with Schedule Seven. Cambridge commenced final design of Contract 8B in May 2012 and continues with the field investigations that will support design of Contract 9, which Cambridge plans to commence in 2013.
			Sep 12		
	MWR003 Gate and Rindge Ave. Siphon	Apr 12	Aug 14	Oct 15	On March 30, 2012, MWRA issued the Notice to Proceed with Contract 6952, which includes preliminary design, final design and engineering services during construction for these last two projects in MWRA's long-term CSO control plan. Field investigations and hydraulic model updating and verification are underway.
SOM01A Connection Relief and Floatables Control	Sep 13		Jun 14		
Other CSO Related Work					
South Dorchester Bay Sewer Separation Post-Construction Inflow Removal	N/A	N/A	N/A	<p>BWSC continues to investigate alternatives for removing additional stormwater inflow from its Dorchester Interceptor or otherwise relieving hydraulic conditions in the interceptor during extreme storms following the closing of its CSO regulators with completion of the South Dorchester Bay sewer separation in 2007. BWSC presented the initial results of its investigations to MWRA in February 2012 and is continuing with a flow metering program and performing additional hydraulic modeling and system analysis to define the causes of system flooding and determine preferred hydraulic relief solutions. BWSC plans to issue an interim report on the results of this analysis later this summer and a final report with recommendations by the end of 2012.</p> <p>BWSC attained substantial completion of its \$6.0 million construction contract for Lower Dorchester Brook Sewer improvements, which included the relocation of CSO regulator RE-070/11-2 and sewer separation in a portion of the South Bay area. The work was partially funded by MWRA and was intended to lower CSO discharges to BWSC's Dorchester Brook Conduit and help attain the level of CSO control in MWRA's long-term control plan for Fort Point Channel. With the regulator relocation and sewer separation work now complete, stormwater runoff from an approximately 150-acre area no longer impacts BWSC's interceptor system.</p>	

CIP Expenditures 4th Quarter –FY12

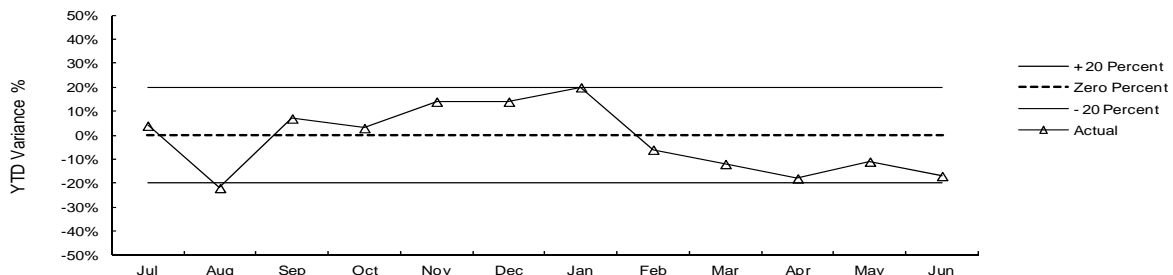
The Year-To-Date variances are highlighted below:

FY12 Capital Improvement Program Expenditure Variances through June by Program (\$000)				
Program	FY12 Budget Through June	FY12 Actual Through June	Variance Amount	Variance Percent
Wastewater	87,628	75,752	(11,875)	-14%
Waterworks	67,611	55,318	(12,293)	-18%
Business and Operations Support	9,858	6,576	(3,282)	-33%
Total	\$165,097	\$137,646	(\$27,451)	-17%

Underspending within Wastewater is due to: lower than budgeted award for the North Main Pump Station VFD Replacement, delays in Clarifier Flushing System, Expansion Joint Repair Construction 2, Barge Berth & Facility Replacement, Miscellaneous VFD Replacements, Process Information Control System (PICS), Digester Modules 1 & 2 Pipe Replacement, Centrifuge Back-drive Replacement, Electrical Equipment Upgrade Construction 4, and less than anticipated CSO land easement expense due to favorable negotiation of temporary easement lease terms. This was partially offset by timing of payments for Reserved Channel and Brookline Sewer Separation contracts, greater than anticipated community requests for grants and loans, greater than budgeted spending on North Dorchester Dewater Pump Station and Sewers due to timing and unanticipated work, and progress on Section 156 Rehabilitation Design/Build contract. Underspending in Waterworks is due to: lower award for the Spot Pond Storage Facility Design/Build contract, lower than anticipated community requests for loans, and delays in Gillis Pump Station Improvements, Sudbury Aqueduct Preliminary Design/Resident Engineer Inspection/Massachusetts Environmental Protection Agency Review and Oakdale Phase 1A Electrical Construction contracts. This was partially offset by contractor progress on the Reading Stoneham Interconnections, Carroll Water Treatment Plant Ultraviolet Disinfection, Lower Hultman Aqueduct Rehabilitation (CP6A), Dam Safety Modifications and Repairs, and timing of work for the Lynnfield/Saugus Pipeline Construction 2 project.

CIP Expenditure Variance

Total FY12 CIP Budget of \$165,497,000.



Construction Fund Management

All payments to support the capital program are made from the Construction Fund. Sources of fund in-flows include bond proceeds, commercial paper, SRF reimbursements, loan repayments by municipalities, and current revenue. Accurate estimates of cash withdrawals and grant payments (both of which are derived from CIP spending projections) facilitate planning for future borrowings and maintaining an appropriate construction fund balance.

Cash Balance 6/30/2012	\$241 million
Unused capacity under the debt cap:	\$507 million
Estimated date for exhausting construction fund without new borrowing:	May-13
Estimated date for debt cap increase to support new borrowing:	FY2020
Commercial paper outstanding:	\$144 million
Commercial paper capacity:	\$350 million
Budgeted FY12 capital spending*:	\$157 million

* Cash based spending is discounted for construction retainage.

DRINKING WATER QUALITY AND SUPPLY

Source Water – Microbial Results

4th Quarter – FY12

Background

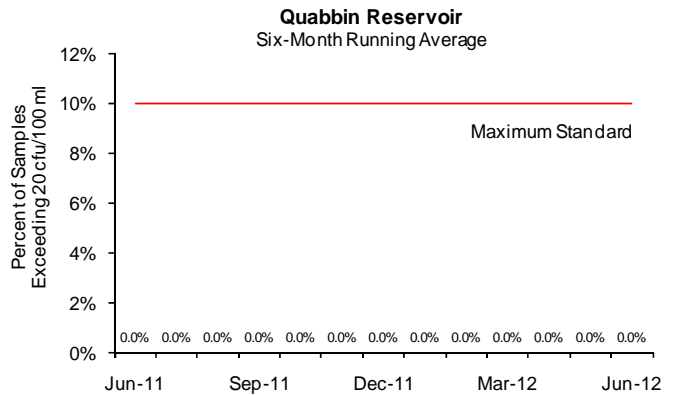
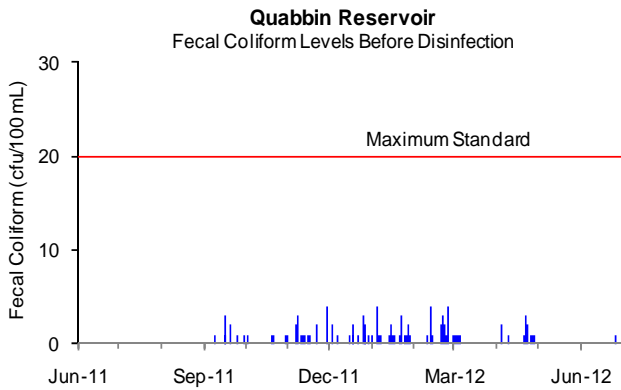
Total coliform bacteria are monitored in both source and treated water to provide an indication of overall bacteriological activity. Most coliforms are harmless. However, fecal coliform, a subclass of the coliform group, are identified by their growth at temperatures comparable to those in the intestinal tract of mammals. They act as indicators of possible fecal contamination. The Surface Water Treatment Rule for unfiltered water supplies allows for no more than 10% of source water samples prior to disinfection over any six-month period to have more than 20 fecal coliforms per 100ml.

Sample Site: Quabbin Reservoir

Quabbin Reservoir water is sampled at the Ware Disinfection Facility (WDF) raw water tap before being treated and entering the CVA system.

All samples collected during the 4th Quarter were below 20 cfu/100ml.

For the current six-month period, 0.0% of the samples have exceeded a count of 20 cfu/100mL .



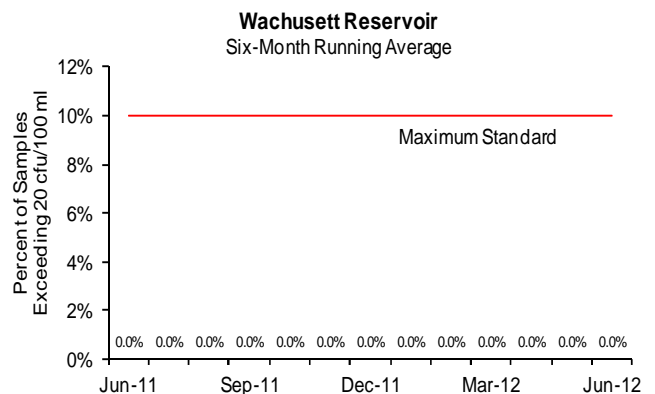
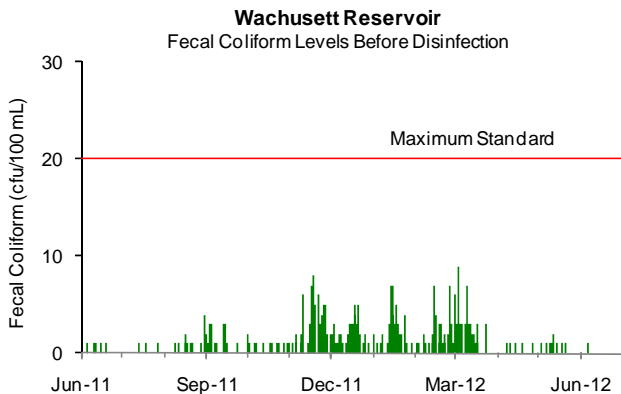
Sample Site: Wachusett Reservoir

Wachusett Reservoir water is sampled at the CWTP raw water tap in Marlborough before being treated and entering the MetroWest/Metropolitan Boston systems.

Fecal coliform levels tend to increase during the winter because, when water bodies near Wachusett ice over, waterfowl seek open water. Many roost at Wachusett, which tends to freeze later in the year than smaller ponds nearby. DCR has an active bird harassment program to move the birds away from the intake area.

All samples collected during the 4th Quarter were below 20 cfu/100ml.

For the current six-month period, 0% of the samples exceeded a count of 20 cfu/ 100ml.



Source Water – Turbidity

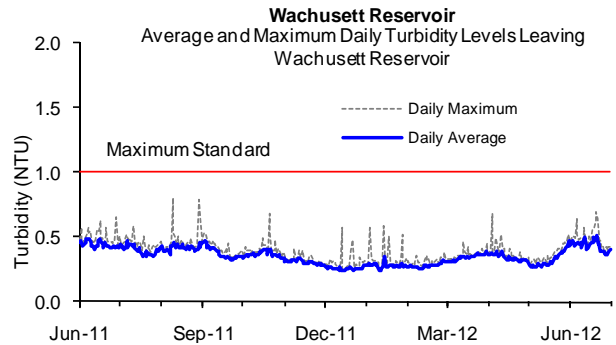
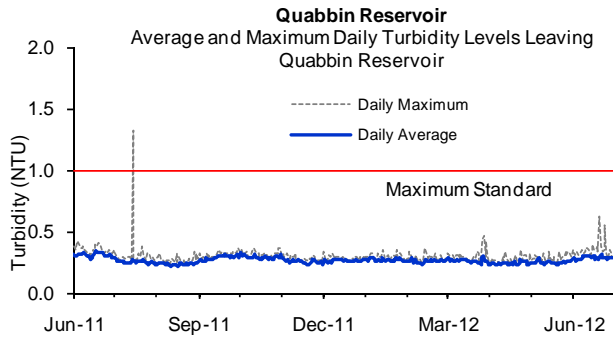
4th Quarter – FY12

Background

Turbidity is a measure of suspended and colloidal particles including clay, silt, organic and inorganic matter, algae and microorganisms. The effects of turbidity depend on the nature of the matter that causes the turbidity. High levels of particulate matter may have a higher chlorine demand or may protect bacteria from the disinfectant effects of chlorine, thereby, interfering with the disinfectant residual throughout the distribution system.

There are two standards for turbidity: all water must be below 5 NTU (Nephelometric Turbidity Units), and water only can be above 1 NTU if it does not interfere with effective disinfection.

Turbidity of Quabbin Reservoir water is monitored continuously at the Ware Disinfection Facility (WDF) before chlorination. Turbidity of Wachusett Reservoir is monitored continuously at the Carroll Water Treatment Plant before ozonation. Maximum turbidity results at Quabbin and Wachusett were within DEP standards for the quarter.

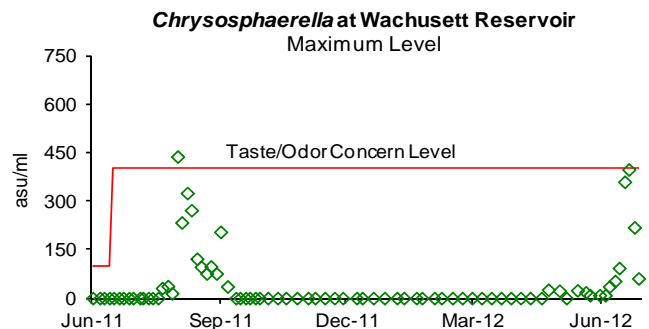
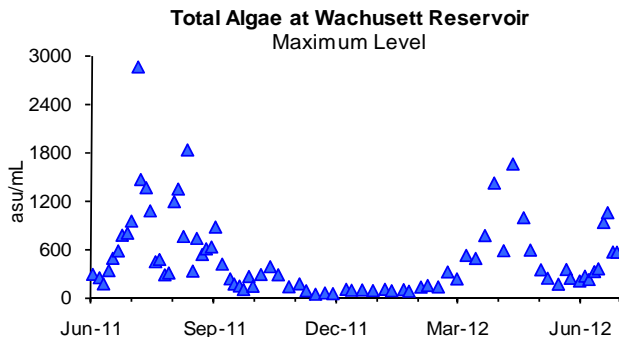


Source Water – Algae

Algae levels in Wachusett Reservoir are monitored by DCR and MWRA. These results, along with taste and odor complaints, are used to make decisions on source water treatment for algae control.

Taste and odor complaints at the tap may be due to algae, which originate in source reservoirs, typically in trace amounts. Occasionally, a particular species grows rapidly, increasing its concentration in water. When *Synura*, *Anabaena*, or other nuisance algae bloom, MWRA may treat the reservoir with copper sulfate, an algicide. During the winter and spring, diatom numbers may increase. While not a taste and odor concern, consumers that use filters may notice a more frequent need to change their filters.

In the 4th Quarter, there were no complaints related to algae reported from local water departments. Wachusett Reservoir was treated with copper sulfate on June 19 to control the growth of *Chryso-sphaerella*, a taste and odor causing algae species.



Treated Water – Disinfection Effectiveness

4th Quarter – FY12

Background

At the Carroll Water Treatment Plant (CWTP), MWRA reports on both regulatory required 99.9% inactivation for *Giardia* (reported as "CT"), and its voluntary operating goal of 99% inactivation for *Cryptosporidium*. MWRA calculates hourly CT inactivation rates and reports daily CT inactivation rates at maximum flow, as specified by EPA regulations. The concentration (C) of the disinfectant over time (T) yields a measure of the effectiveness of disinfection. CT achievement for *Giardia* assures CT achievement for viruses, which have a lower CT requirement. The required CT for ozonated water varies with water temperature. Compliance with the *Giardia* standard is expressed as percent of required CT achieved; 100% is the minimum allowed. To avoid confusion with regulatory requirements, inactivation of *Cryptosporidium* is reported as Performance Ratio (PR); a PR of 1 demonstrates inactivation of 99% of *Cryptosporidium* based on site-specific data.

Wachusett Reservoir – MetroWest/Metro Boston Supply:

- CT was maintained above 100% at all times the plant was providing water into the distribution system this quarter, as well as every day for the last fiscal year.

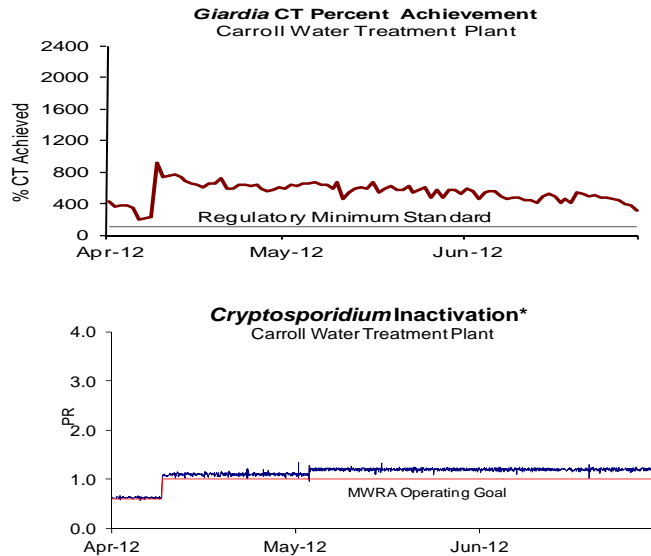
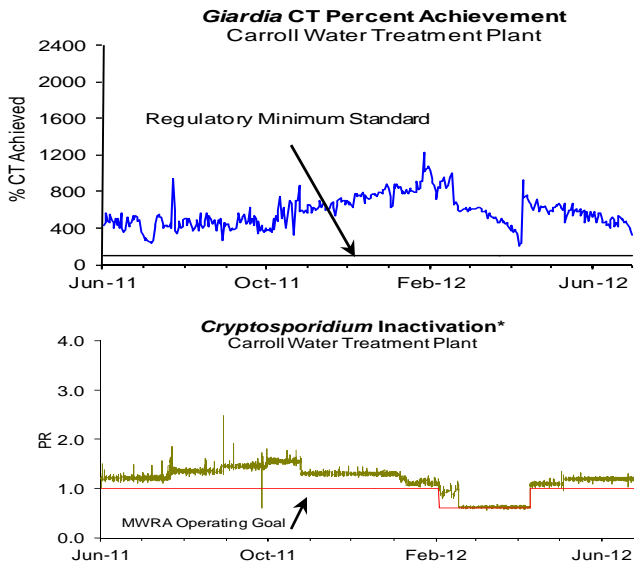
- MWRA was not be able to fully meet our voluntary 2-log *Cryptosporidium* inactivation target during the winter period due to the UV construction project from February 2 through April 8, 2012. This change in treatment was reviewed and approved by the Massachusetts Department of Environmental Protection as part of its permitting for this project. The lowest PR achieved for the month of April was 0.6, which provides 93.7% *Cryptosporidium* inactivation.

- The PR target was raised to 1.0 on April 9 when CWTP went back to full plant status.

- On May 4, the hourly average PR level dropped to 0.95 between 6 AM to 7 AM when the ozone generators were rotated for maintenance. There were no compliance concerns.

- MWRA's operating goal to meet a *Cryptosporidium* PR of 1 was met for every hour in June.

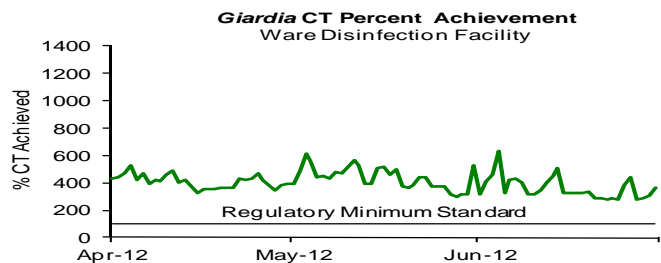
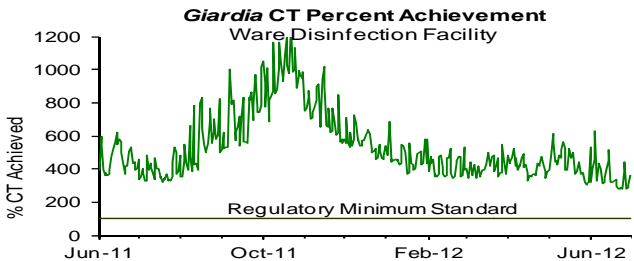
- Ozone dose at the CWTP varied between 2.6 to 3.3 mg/L for the quarter.



Note: Performance Ratio Overall Target for *Cryptosporidium* inactivation was raised from ≥ 0.6 to ≥ 1.0 on April 9, 2012.*

Quabbin Reservoir at Ware Disinfection Facility (CVA Supply):

CT was maintained above 100% at all times the plant was providing water into the distribution system for the quarter, as well as every day for the last fiscal year. The chlorine dose at Ware Disinfection Facility (WDF) is adjusted in order to achieve MWRA's target of ≥ 0.75 mg/L at Ludlow Monitoring Station. The chlorine dose at WDF varied between 1.4 mg/L to 1.5 mg/L for the quarter.

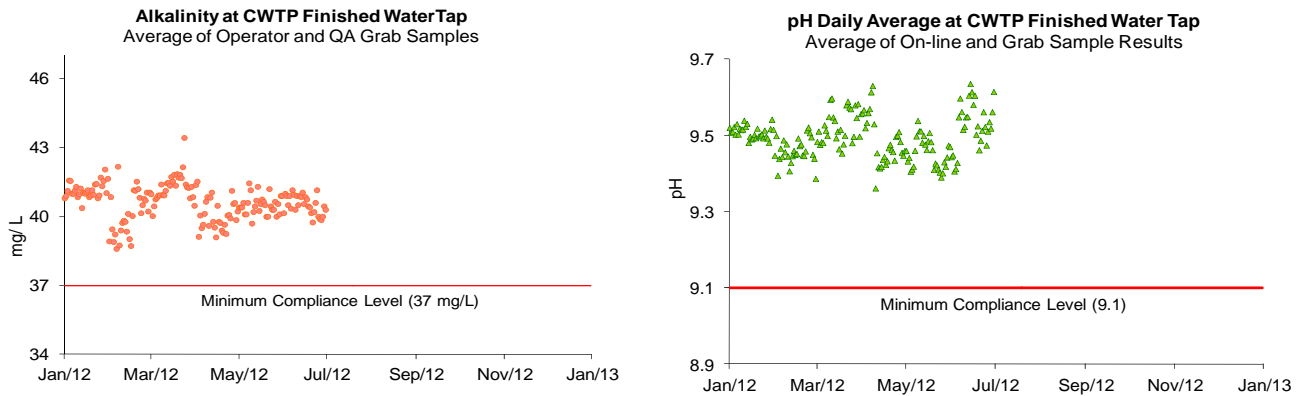


Treated Water – pH and Alkalinity Compliance

4th Quarter – FY12

MWRA adjusts the alkalinity and pH of Wachusett water to reduce its corrosivity, which minimizes the leaching of lead and copper from service lines and home plumbing systems into the water. MWRA tests finished water pH and alkalinity daily at the CWTP's Fin B sampling tap. MWRA's target for distribution system pH is 9.3; the target for alkalinity is 40 mg/l. Per DEP requirements, CWTP samples have a minimum compliance level of 9.1 for pH and 37 mg/L for alkalinity. Samples from 27 distribution system taps have a minimum compliance level of 9.0 for pH and 37 mg/L for alkalinity. Results must not be below these levels for more than nine days in a six month period. Distribution system samples are collected in March, June, September, and December.

Distribution system samples were collected on June 12 and 13, 2012. Distribution system sample pH ranged from 9.1 to 9.5 and alkalinity ranged from 39 to 42 mg/L. No sample results were below DEP limits for this quarter.



Drinking Water Quality Customer Complaints: Taste, Odor, or Appearance

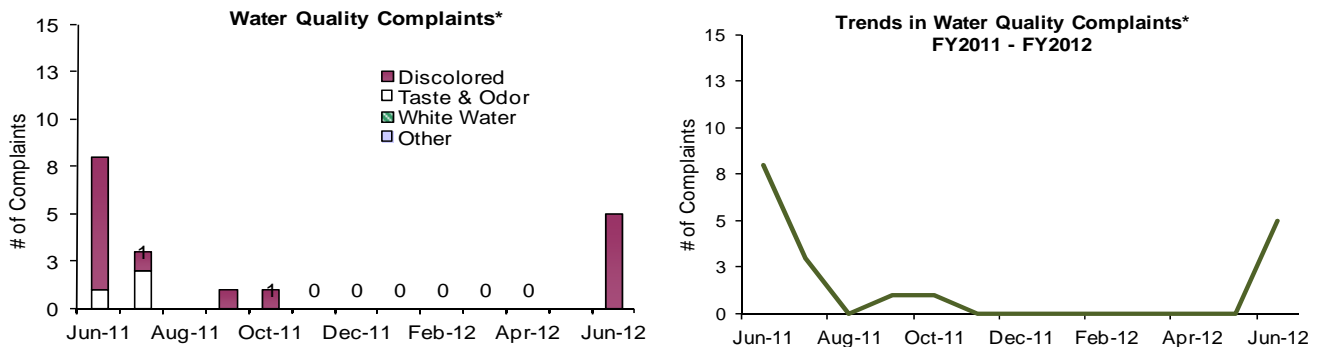
Background

MWRA collects information on water quality complaints that typically fall into four categories: 1.) discoloration due to MWRA or local pipeline work; 2.) taste and odor due to algae blooms in reservoirs or chlorine in the water; 3.) white water caused by changes in pressure or temperature that traps air bubbles in the water; or 4.) "other" complaints including no water, clogged filters or other issues.

MWRA's practice has been to tabulate and classify customer complaints received through several mechanisms, including direct contacts received by MWRA staff via phone, web or e-mail and from routine telephone calls made to each community to incorporate all complaints received by them.

Outcome

Communities reported 5 complaints during the quarter compared to 9 complaints for the 4th Quarter of FY11. Of these complaints, 5 were for "discolored water".



* Outgoing calls to communities were interrupted during a portion of FY12 and resumed during Q1 FY13, thus, some results are not directly comparable with historical data.

Bacteria & Chlorine Residual Results for Communities in MWRA Testing Program

4th Quarter – FY12

While all communities collect bacteria samples for the Total Coliform Rule (TCR), 42 systems (including Deer Island and Westborough State Hospital) use MWRA's Laboratory for TCR compliance testing. These systems collect samples for bacteriological analysis and measure water temperature and chlorine residual at the time of collection. The other 10 MWRA customer communities (including Lynn's GE plant) have their samples tested elsewhere and these towns should be contacted directly for their monthly results.

There are 139 sampling locations for which MWRA is required to report TCR results. These locations include a subset of the community TCR locations, as well as sites along MWRA's transmission system, water storage tanks, and pumping stations.

The TCR requires that no more than 5% of all samples may be total coliform positive in a month (or that no more than one sample be positive when less than 40 samples are collected each month). Public notification is required if this standard is exceeded.

Escherichia coli (*E.coli*) is a specific coliform species that is almost always present in fecal material and whose presence indicates potential contamination of fecal origin. If *E.coli* are detected in a drinking water sample, this is considered evidence of a critical public health concern. Additional testing is conducted immediately and joint corrective action by DEP, MWRA, and the community is undertaken. Public notification is required if follow-up tests confirm the presence of *E.coli* or total coliform. A disinfectant residual is intended to maintain the sanitary integrity of the water; MWRA considers a residual of 0.2 mg/L a minimum target level at all points in the distribution system.

Highlights

In the 4th Quarter, six of the 5,851 community samples (0.10% system-wide) submitted to MWRA labs for analysis tested positive for coliform (Boston – in May; Bedford, Stoneham, Wellesley – in June). Of the 1,933 (0.05%) MWRA samples taken, one tested positive for total coliform. No sample tested positive for *E.coli*. Bedford violated the TCR in June. All 42 systems that submitted chlorine residual data maintained an average disinfectant residual of at least 0.2 mg/L. Only 3.5% of samples had any results with a disinfectant residual lower than 0.2 mg/L for the quarter.

TCR results by Community						
Town	Samples Tested for Coliform (a)	Total Coliform # (%) Positive	E.coli % Positive	Public Notification Required?	Minimum Chlorine Residual (mg/L)	Average Chlorine Residual (mg/L)
ARLINGTON	182	0 (0%)	0.0%		0.02	1.32
BEDFORD	102	3 (2.94%)	0.0%	Yes	0.02	0.53
BELMONT	104	0 (0%)	0.0%		0.26	1.49
BOSTON	784	1 (0.13%)	0.0%	No	0.39	1.80
BROOKLINE	221	0 (0%)	0.0%		0.06	1.74
CHELSEA	169	0 (0%)	0.0%		1.21	1.68
DEER ISLAND	58	0 (0%)	0.0%		1.27	1.75
EVERETT	130	0 (0%)	0.0%		0.06	1.08
FRAMINGHAM	216	0 (0%)	0.0%		0.22	1.69
HANSCOM AFB (Bedford) (b)	27	0 (0%)	0.0%		0.00	1.06
LEXINGTON	117	0 (0%)	0.0%		0.98	1.80
LYNNFIELD	18	0 (0%)	0.0%		0.15	1.04
MALDEN	195	0 (0%)	0.0%		1.31	1.45
MARBLEHEAD	72	0 (0%)	0.0%		0.16	1.40
MARLBOROUGH (b)	126	0 (0%)	0.0%		1.03	1.83
MEDFORD	220	0 (0%)	0.0%		0.78	1.66
MELROSE	118	0 (0%)	0.0%		0.02	0.73
MILTON	96	0 (0%)	0.0%		0.84	1.52
NAHANT	30	0 (0%)	0.0%		0.08	1.26
NEEDHAM (b)	124	0 (0%)	0.0%		0.09	0.84
NEWTON	277	0 (0%)	0.0%		0.32	1.69
NORTHBOROUGH	48	0 (0%)	0.0%		0.12	1.35
NORWOOD	108	0 (0%)	0.0%		0.01	1.30
QUINCY	298	0 (0%)	0.0%		0.08	1.58
READING	131	0 (0%)	0.0%		0.01	1.35
REVERE	195	0 (0%)	0.0%		0.11	1.70
SAUGUS	96	0 (0%)	0.0%		0.67	1.71
SOMERVILLE	287	0 (0%)	0.0%		1.00	1.81
SOUTH HADLEY FD1 (c)	48	0 (0%)	0.0%		0.06	0.44
SOUTHBOROUGH	30	0 (0%)	0.0%		0.20	1.56
STONEHAM	95	1 (1.05%)	0.0%	No	0.69	1.80
SWAMPSCOTT	48	0 (0%)	0.0%		0.33	1.42
WAKEFIELD (b)	143	0 (0%)	0.0%		0.28	1.07
WALTHAM	216	0 (0%)	0.0%		0.32	1.73
WATERTOWN	130	0 (0%)	0.0%		0.73	1.76
WELLESLEY (b)	110	1 (0.91%)	0.0%	No	0.05	0.75
WESTBORO HOSPITAL	15	0 (0%)	0.0%		0.04	0.24
WESTON	48	0 (0%)	0.0%		1.11	1.99
WILMINGTON (b)	87	0 (0%)	0.0%		0.50	1.79
WINCHESTER (b)	65	0 (0%)	0.0%		0.15	1.16
WINTHROP	72	0 (0%)	0.0%		0.27	1.03
WOBURN (b)	195	0 (0%)	0.0%		0.09	0.99
Total:	5851	6 (0.10%)	0.0%			
MASS. WATER RESOURCES AUTHORITY (d,e)	1933	1 (0.05%)	0.0%	No	0.02	1.68

(a) The number of samples collected depends on the population served and the number of repeat samples required.

(b) These communities are partially supplied, and may mix their chlorinated supply with MWRA chloraminated supply.

(c) Part of the Chicopee Valley Aqueduct System. Free chlorine system.

(d) MWRA sampling program includes a subset of community TCR sites as well as sites along the transmission system, tanks and pumping stations.

(e) MWRA total coliform and chlorine residual results include data from 125 community pipe locations as described above. In most cases these community results are accurately indicative of MWRA water as it enters the community system; however, some are clearly strongly influenced by local pipe conditions. Residuals in the MWRA system are typically between 1.0 and 2.8 mg/L.

Treated Water Quality: Disinfection By-Product (DBP) Levels in Communities

4th Quarter – FY12

Background

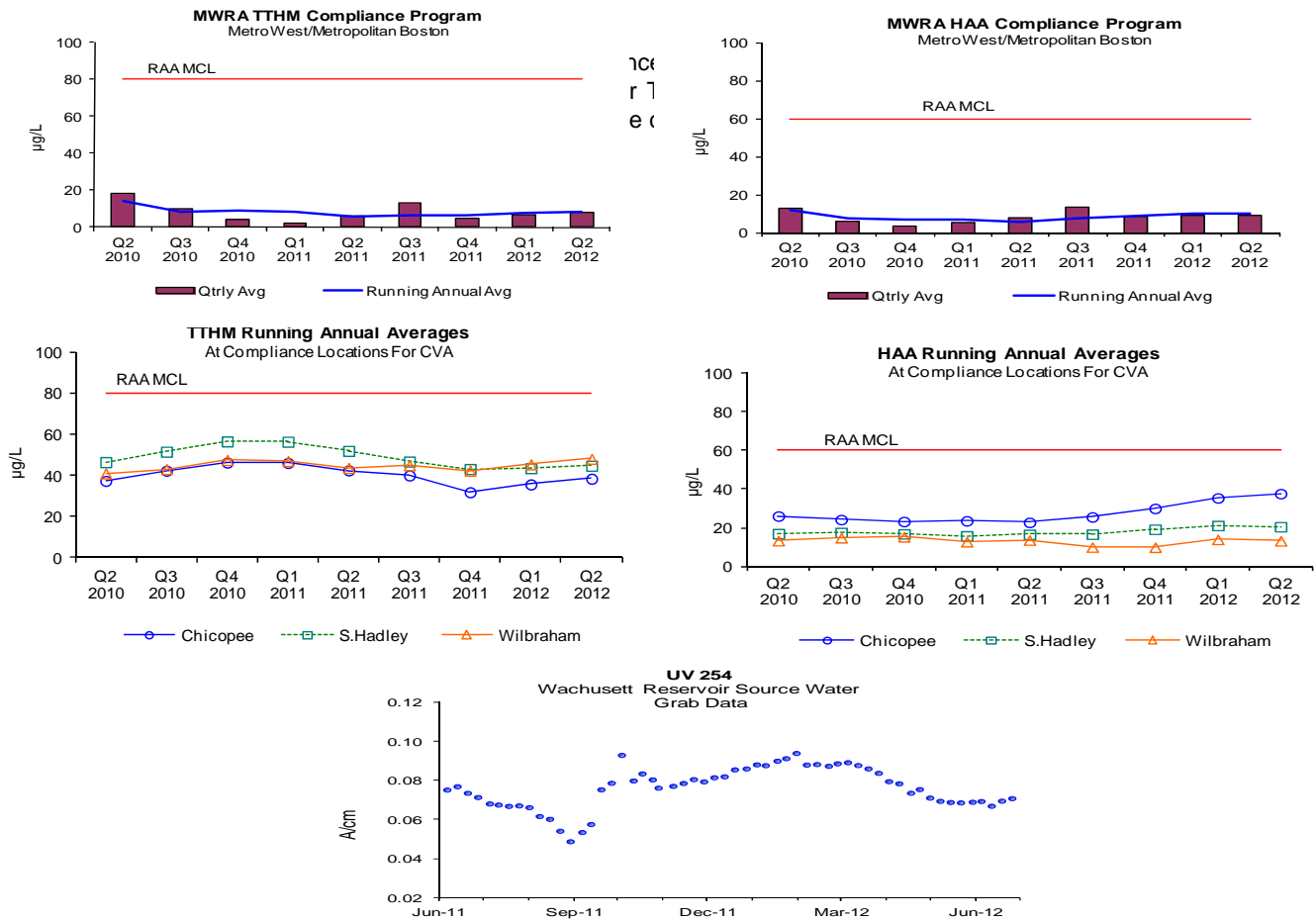
Total Trihalomethanes (TTHMs) and Haloacetic Acids (HAA5s) are by-products of disinfection treatment with chlorine. TTHMs and HAA5s are of concern due to their potential adverse health effects at high levels. EPA's running annual average (RAA) standard is 80 µg/L for TTHMs and 60 µg/L for HAA5s. Effective Q2 2013, under the Stage 2 DBPR compliance will be based on a LOCATIONAL running annual average, rather than an overall average. MWRA initiated monitoring under this new Stage 2 rule May 2012. Sampling locations have increased from 16 to 32 each quarter. Until May 2013, MWRA will continue to report an overall quarterly and running annual average. After May 2013, LRAA's will be reported for each site. Partially served communities are responsible for their own compliance monitoring and reporting and must be contacted directly for their results.

Absorbance, measured as UV-254, is one measurement of the amount and reactivity of natural organic material in source water. After Hurricane Irene, UV-254 measurements in Wachusett Reservoir rose sharply due to the action of the storm, increased tributary flows and above average fall precipitation. The higher UV-254 levels caused increased ozone and chlorine demand resulting in the need for higher ozone and chlorine doses. There were no impacts on regulatory compliance.

Bromate is tested monthly per DEP requirements for water systems that treat with ozone. Bromide in the raw water may be converted into bromate following ozonation. EPA's RAA MCL standard for bromate is 10 ug/L.

Outcome

The RAA for TTHMs and HAA5s for MWRA's Compliance Program (represented as the line in the top two graphs below) remained below current standards. The RAA for TTHMs = 8.3 ug/L; HAA5s = 10.2 ug/L. CVA's DBP levels continue to be below current standards. UV-254 levels are currently around 0.07 A/cm. The current RAA for Bromate = 0.0 ug/L.



Water Supply and Source Water Management

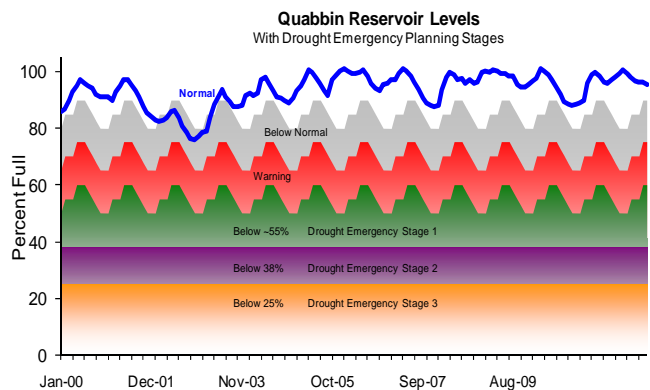
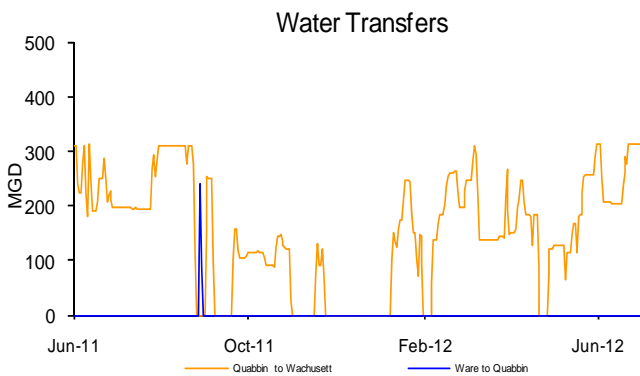
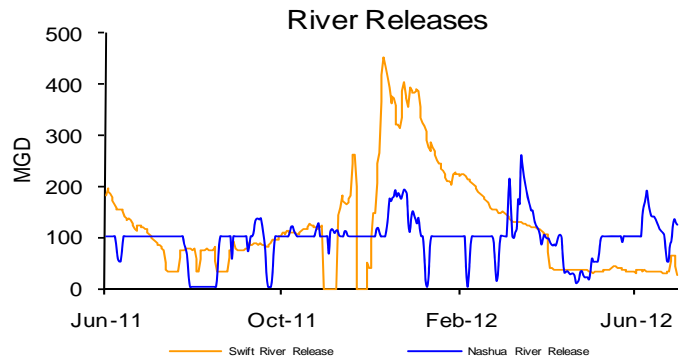
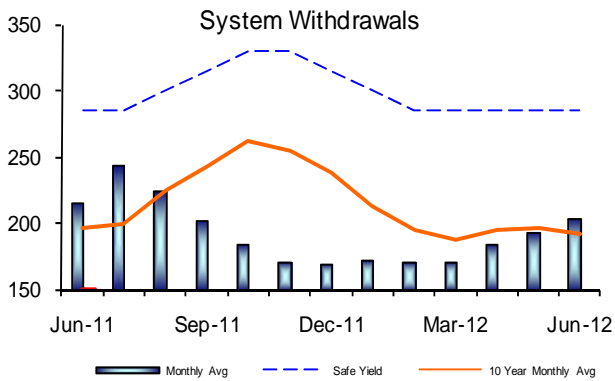
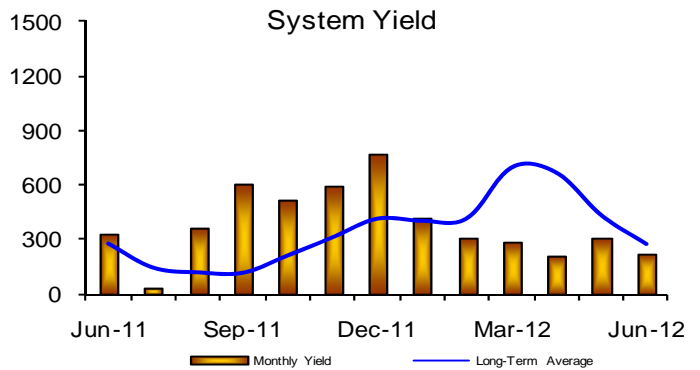
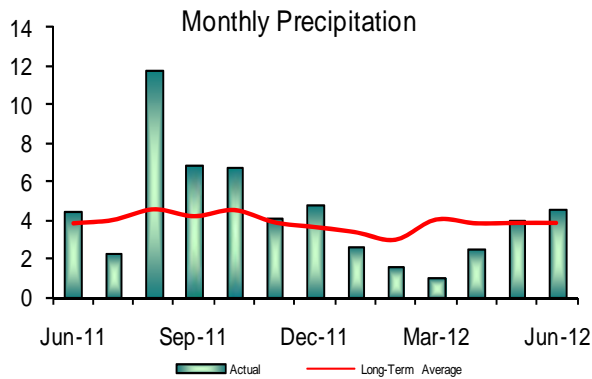
4th Quarter – FY12

Background

A reliable supply of water in MWRA's reservoirs depends on adequate precipitation during the year and seasonal hydrologic inputs from watersheds that surround the reservoirs. Demand for water typically increases with higher summer temperatures and then decreases as temperatures decline. Quabbin Reservoir was designed to effectively supply water to the service areas under a range of climatic conditions and has the ability to endure a range of fluctuations. Wachusett Reservoir serves as a terminal reservoir to meet the daily demands of the Greater Boston area. A key component to this reservoir's operation is the seasonal transfer of Quabbin Reservoir water to enhance water quality during high demand periods. On an annual basis, Quabbin Reservoir accounts for nearly 50% of the water supplied to Greater Boston. The water quality of both reservoirs (as well as the Ware River, which is also part of the System Safe Yield) depend upon implementation of DCR's DEP-approved Watershed Protection Plans. System Yield is defined as the water produced by its sources, and is reported as the net change in water available for water supply and operating requirements.

Outcome

Quabbin Reservoir level remains above the normal operating range for this period of the year. The reservoir was at 95.3% of capacity as of June 30, 2012; a 2.8% decrease for the quarter, which represents a decrease of 11.8 billion gallons of storage. Yield & precipitation for the quarter were below their respective long term averages. Monthly withdrawals continue to be below the long-term average.



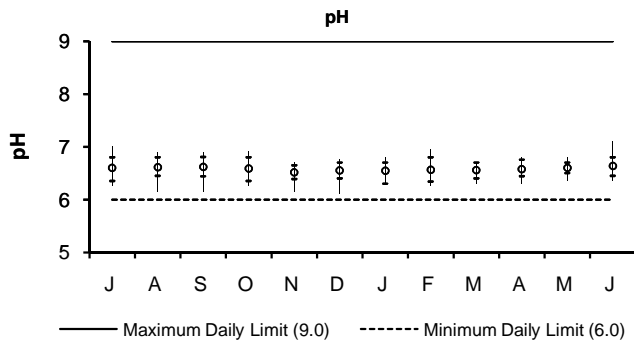
WASTEWATER QUALITY

NPDES Permit Compliance: Deer Island Treatment Plant
4th Quarter - FY12

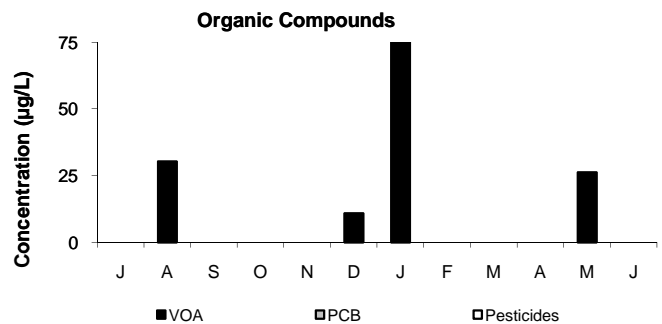
NPDES Permit Limits

Effluent Characteristics		Units	Limits	April	May	June	4th Quarter Violations	FY12 YTD Violations
Dry Day Flow:		mgd	436	306.7	304.9	304.3	0	0
cBOD:	Monthly Average	mg/L	25	6.5	4.4	4.4	0	0
	Weekly Average	mg/L	40	8.1	4.7	5.5	0	0
TSS:	Monthly Average	mg/L	30	9.9	5.8	6.4	0	0
	Weekly Average	mg/L	45	12.7	6.7	8.1	0	0
TCR:	Monthly Average	ug/L	456	<40	<40	<40	0	0
	Daily Maximum	ug/L	631	<40	<40	<40	0	0
Fecal Coliform:	Daily Geometric Mean	col/100mL	14000	24.0	10.0	24.9	0	0
	Weekly Geometric Mean	col/100mL	14000	7.8	5.8	8.5	0	0
	% of Samples >14000	%	10	0	0	0	0	0
	Consecutive Samples >14000	#	3	0	0	0	0	0
pH:		SU	6.0-9.0	6.3-6.8	6.4-6.8	6.4-7.1	0	0
PCB, Aroclors:	Monthly Average	ug/L	0.000045	UNDETECTED			0	0
Acute Toxicity:	Mysid Shrimp	%	50	>100	>100	>100	0	0
	Inland Silverside	%	50	>100	>100	>100	0	0
Chronic Toxicity:	Sea Urchin	%	1.5	50	100	100	0	0
	Inland Silverside	%	1.5	100	100	100	0	0

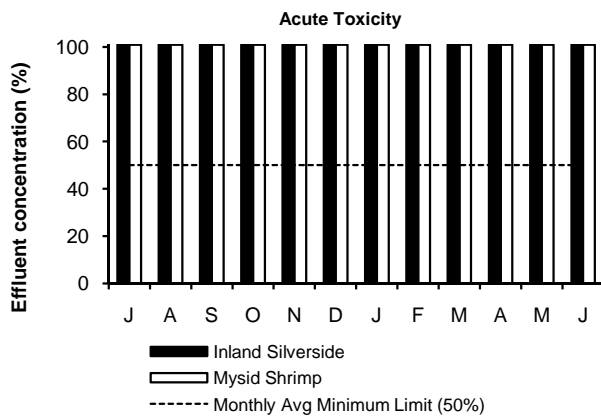
There have been no permit violations in FY12 at the Deer Island Treatment Plant.



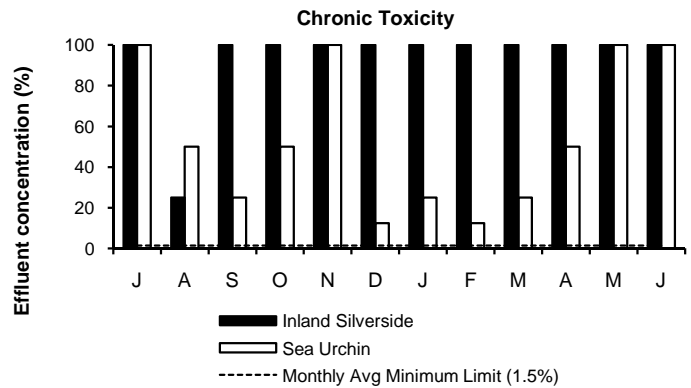
pH is a measure of the alkalinity or acidity of the effluent. Fluctuations in pH do not have an adverse effect on marine environments. Because of the pure oxygen used in the activated sludge reactor, the effluent pH tends to be at the lower pH range. pH measurements for the 4th Quarter were within the daily permit limits.



An important wastewater component to be monitored in the effluent is organic compounds, including volatile organic acids, pesticides, and polychlorinated biphenyls. The secondary treatment process has significantly reduced organic compounds in the effluent stream.



The acute toxicity test simulates the short-term toxic effects of chemicals in wastewater effluent on marine animals. The test measures the concentration (percent) of effluent that kills half the test organisms within four days. The higher the concentration of effluent required, the less toxic the effluent. For permit compliance, the effluent concentration that causes mortality to mysid shrimp and inland silverside must be at least 50%. Acute toxicity permit limits were met for the 4th Quarter for both the inland silverside and mysid shrimp.



Typically, effects of chronic exposures differ from those of acute exposures. Because of this, chronic toxicity responses are not necessarily related to acute toxicity. The chronic toxicity test simulates the long-term toxic effects of chemicals in wastewater effluent on marine animals. To meet permit limits, a solution of 1.5% effluent and 98.5% dilution water must show no observed effect on the growth and reproduction of the test species. Chronic toxicity permit limits were met for the 4th Quarter for both the inland silverside and sea urchin.

NPDES Permit Compliance: Clinton Wastewater Treatment Plant 4th Quarter - FY12

NPDES Permit Limits

Effluent Characteristics		Units	Limits	April	May	June	4th Quarter Violations	FY12 YTD Violations
Flow:		mgd	3.01	3.27	3.23	3.25	3	9
BOD:	Monthly Average:	mg/L	20	4.4	2.2	2.6	0	0
	Weekly Average:	mg/L	20	5.6	2.4	3.0	0	0
TSS:	Monthly Average:	mg/L	20	4.9	3.7	2.9	0	0
	Weekly Average:	mg/L	20	5.1	5.9	3.8	0	0
pH:		SU	6.5-8.3	7.1-7.6	6.7-7.6	7.-7.5	0	0
Dissolved Oxygen:	Daily Minimum:	mg/L	6	8.1	8.1	7.5	0	1
Fecal Coliform:	Daily Geometric Mean:	col/100mL	400	6.4	4.2	4.9	0	0
	Monthly Geometric Mean:	col/100mL	200	3.2	3.3	3.3	0	0
TCR:	Monthly Average:	ug/L	50	0	0	0	0	0
	Daily Maximum:	ug/L	50	0	0	0	0	0
Total Ammonia Nitrogen: May 1 - May 31								
	Monthly Average:	mg/L	10.0	0	0	0	0	0
	Daily Maximum:	mg/L	35.2	0	0	1	0	0
Copper:	Monthly Average:	ug/L	20	2.3	5.7	5.2	0	0
Phosphorus: May 1 - Oct 31								
	Monthly Average:	mg/L	1.0	N/A	0.27	0.12	0	0
Acute Toxicity:	Daily Minimum:	%	100	*N/A	*N/A	>100	0	0
Chronic Toxicity:	Daily Minimum:	%	62.5	*N/A	*N/A	100	0	0

There have been ten permit violation in Fiscal Year 2012 at the Clinton Treatment Plant.

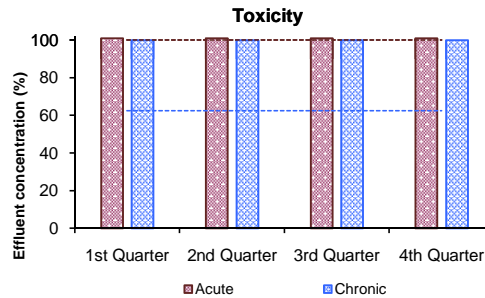
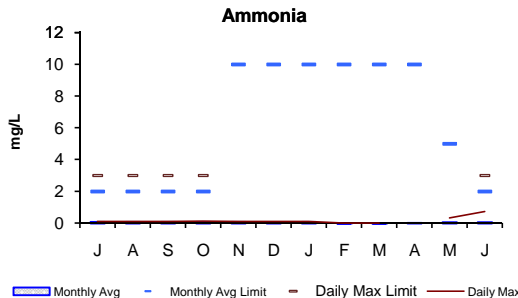
4th Quarter:

There were three permit violations in the 4th Quarter of FY12. The monthly average flow limit of 3.01 mgd was exceeded three times during the 4th Quarter. The high flow rates have historically been attributed to excessive wet weather conditions. The flow is calculated using a 12-month running average.

Prior Quarters:

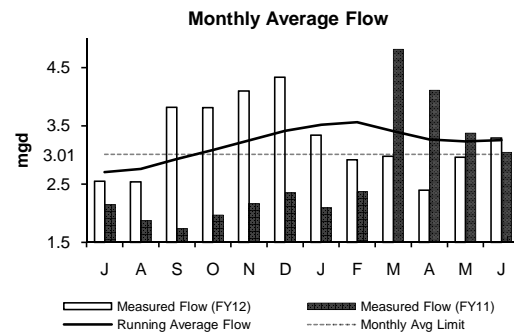
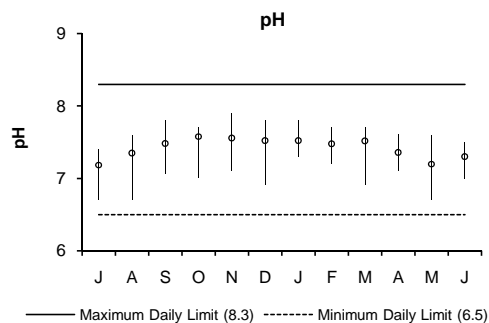
There were three permit violations in the 3rd Quarter of FY12. The official monthly average flow during January, February, and March were 3.52 mgd, 3.56 mgd, and 3.41 mgd, respectively. There were three permit violations in the 2nd Quarter of FY12. The official monthly average flow during October, November, and December were 3.09 mgd, 3.25 mgd, and 3.41 mgd, respectively. There was one permit violation in the 1st Quarter of FY12. The August 9, 2011 dissolved oxygen result of 5.1 mg/L did not meet the minimum permit limit of 6.0 mg/L. There was no known reason for this violation. The plant process and monitoring parameters were within the normal operating range on August 9 and there were no equipment failures or plant upsets reported during the monitoring period.

*Toxicity testing at the Clinton Treatment Plant is conducted on a quarterly basis.



The 4th Quarter's monthly average and daily maximum concentrations were below the permit limits. The monthly average and daily maximum limits for the 4th Quarter are 10.0 mg/L and 35.2 mg/L, respectively. The permit limits are most stringent from June to October when warm weather conditions are most conducive to potential eutrophication.

Acute and chronic toxicity testing simulates the short- and long-term toxic effects of chemicals in wastewater effluent on aquatic animals. For permit compliance, the effluent concentration that causes mortality to the daphnid in acute and chronic testing must be at least >100% and 62.5%, respectively. Toxicity limits were met during the 4th Quarter.



pH is a measure of the alkalinity or acidity of the effluent. All daily pH results for the 4th Quarter were within the range set by the permit.

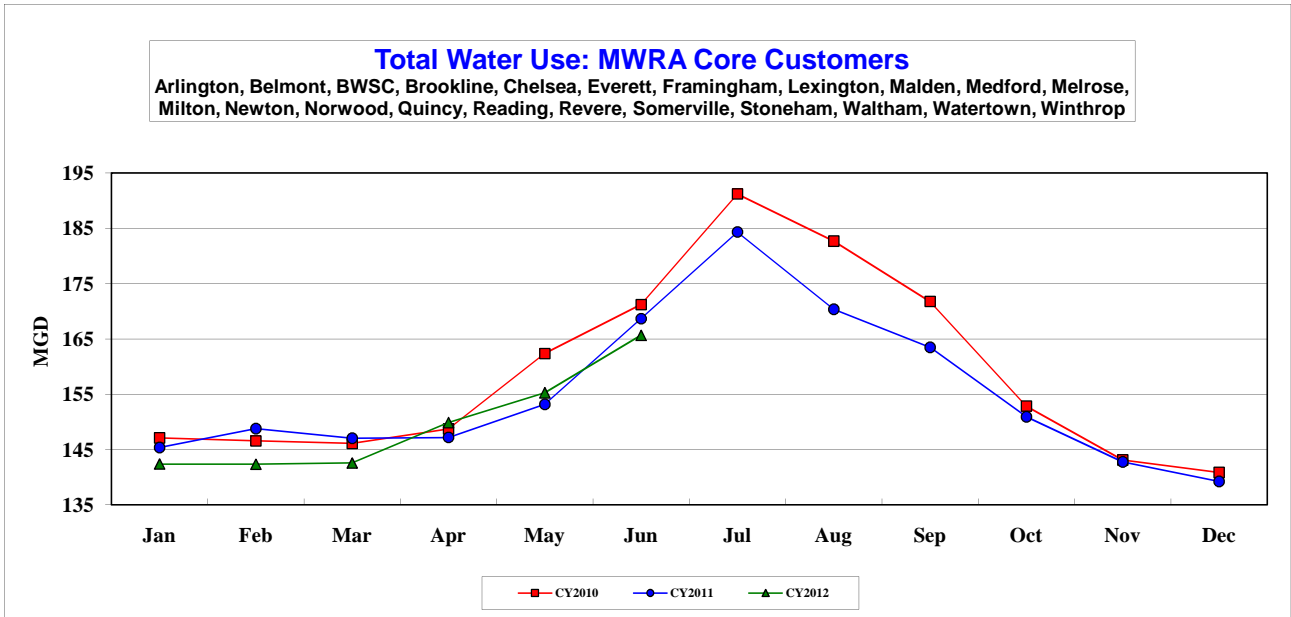
The graph depicts the running annual average monthly flow, measured in million gallons per day, exiting the plant. The average monthly flows during the 4th Quarter were above the NPDES permit limit.

COMMUNITY FLOWS AND PROGRAMS

Massachusetts Water Resources Authority
 Water Supplied: MWRA Core Communities

MGD	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Average
CY2010	147.109	146.572	146.104	148.736	162.362	171.224	191.222	182.708	171.780	152.865	143.132	140.875	158.824
CY2011	145.371	148.782	147.051	147.188	153.188	168.673	184.336	170.378	163.482	150.928	142.769	139.250	155.164
CY2012	142.392	142.351	142.573	149.888	155.292	165.667	0.000	0.000	0.000	0.000	0.000	0.000	149.686

MG	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
CY2010	4,560.379	4,104.007	4,529.220	4,462.067	5,033.225	5,136.713	5,927.887	5,663.942	5,153.392	4,738.813	4,293.973	4,367.117	57,970.734
CY2011	4,506.504	4,165.900	4,558.577	4,415.643	4,748.836	5,060.182	5,714.425	5,281.711	4,904.458	4,678.774	4,283.058	4,316.759	56,634.829
CY2012	4,414.158	4,128.174	4,419.769	4,496.630	4,814.044	4,970.011	0.000	0.000	0.000	0.000	0.000	0.000	27,242.787



Each community's annual water use relative to the system as a whole is the primary factor in allocating the annual water rate revenue requirement to MWRA water communities. Calendar year 2012 water use will be used to allocate the FY14 water utility rate revenue requirement.

June 2012 water supplied of 209.2 mgd (for revenue generating users) is down 2.5 mgd or 1.2% compared to June 2011. Year-to-date system-wide water consumption for CY12 remains lower than CY11 with 180.6 mgd being supplied to MWRA customers. This is 2.0 mgd lower than CY11 through June, a decrease of 1.1%.

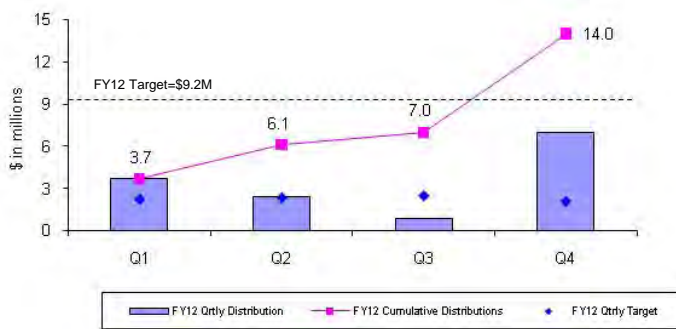
Community Support Programs

4th Quarter – FY12

Infiltration/Inflow Local Financial Assistance Program

MWRA's Infiltration/Inflow (I/I) Local Financial Assistance Program provides \$260.75 million in grants and interest-free loans (average of about \$10 million per year from FY93 through FY18) to member sewer communities to perform I/I reduction and sewer system rehabilitation projects within their locally-owned collection systems. Eligible project costs include: sewer rehabilitation construction, pipeline replacement, removal of public and private inflow sources, I/I reduction planning, engineering design, engineering services during construction, etc. I/I Local Financial Assistance Program funds are allocated to member sewer communities based on their percent share of MWRA's wholesale sewer charge. Interest-free loans are repaid to MWRA over a five-year period beginning one year after distribution of the funds.

FY12 Quarterly Distributions of Sewer Grant/Loans



I/I Local Financial Assistance Program Distribution FY93-FY18

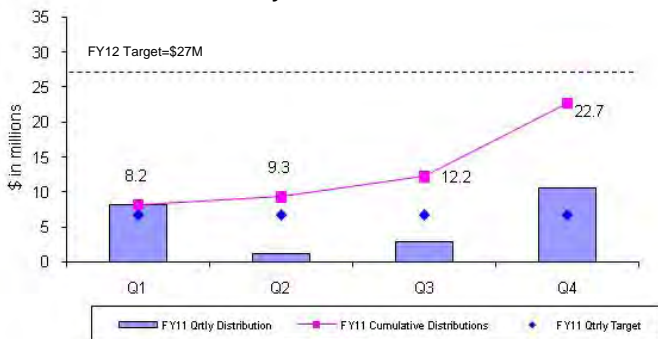


During the 4th Quarter of FY12, \$7 million in financial assistance (45% grants and 55% interest-free loans) was distributed to fund local sewer rehabilitation projects in Belmont, Holbrook, Natick, Somerville, Wakefield, Walpole, Watertown, Wellesley, Winchester and Winthrop. Total grant/loan distribution for FY12 is \$14.0 million. From FY93 through the 4th Quarter of FY12, all 43 member sewer communities have participated in the program and more than \$221 million has been distributed to fund 430 local I/I reduction and sewer system rehabilitation projects. Distribution of the remaining funds has been approved through FY18 and community loan repayments will be made through FY23. All scheduled community loan repayments have been made.

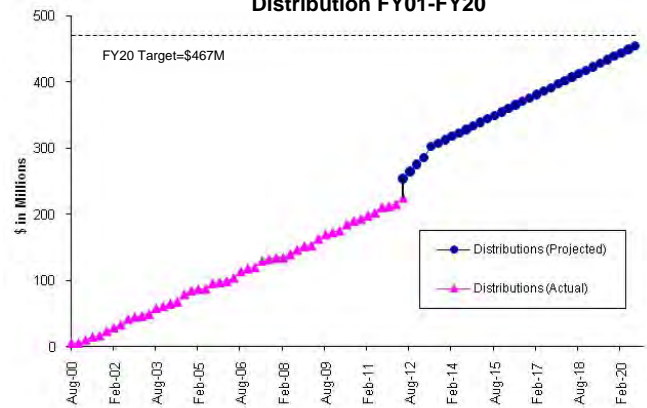
Water Local Pipeline and Water System Assistance Programs

MWRA's Local Pipeline and Water System Assistance Programs (LPAP and LWSAP) provide \$467 million in interest-free loans (an average of about \$23 million per year from FY01 through FY20) to member water communities to perform water main rehabilitation projects within their locally-owned water distribution systems. Eligible project costs include: water main cleaning/lining, replacement of unlined water mains, lead service replacements, valve, hydrant, water meter, tank work, engineering design, engineering services during construction, etc. MWRA partially-supplied communities receive pro-rated funding allocations based on their percentage use of MWRA water. Interest-free loans are repaid to MWRA over a ten-year period beginning one year after distribution of the funds.

FY12 Quarterly Distributions of Water Loans



Local Pipeline and Water System Assistance Programs Distribution FY01-FY20



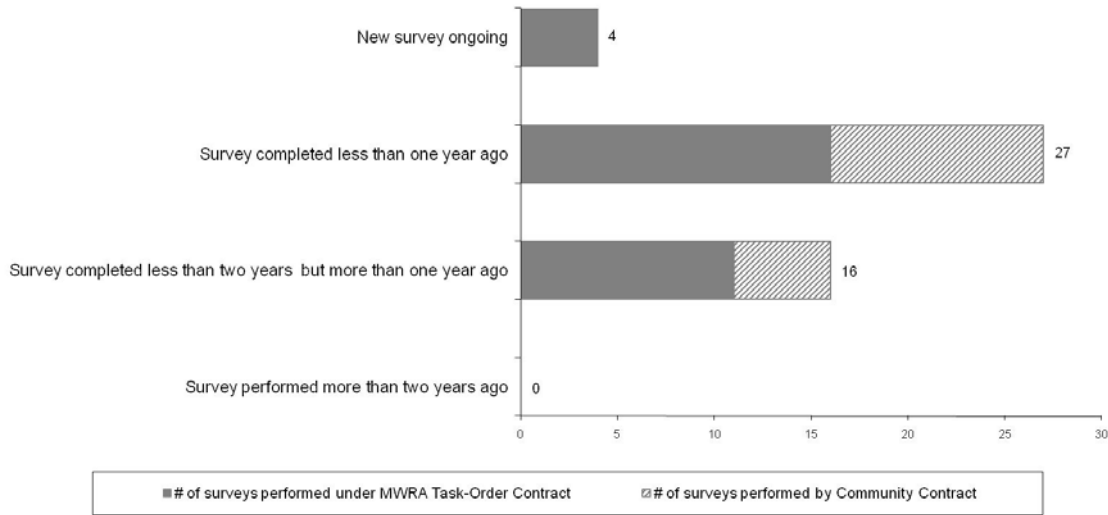
During the 4th Quarter of FY12, \$10.5 million in interest-free loans was distributed to fund local water projects in Boston, Canton, Chelsea, Malden, Newton, Somerville, Winthrop and Woburn. Total loan distribution for FY12 is \$22.7 million. From FY01 through the 4th Quarter of FY12, more than \$225 million has been distributed to fund 260 local water system rehabilitation projects in 37 MWRA member water communities. Distribution of the remaining funds has been approved through FY20 and community loan repayments will be made through FY30. All scheduled community loan repayments have been made. FY13 is the last year of community loans under the Phase 1 Local Pipeline Assistance Program (Phase 2 Local Water System Assistance loans began in FY11 and will be distributed through FY20). A portion of the Phase 1 loan budget is not expected to be utilized by the communities. A revised Phase 1 budget has been developed for FY13.

Community Support Programs

4th Quarter – FY12

Community Water System Leak Detection

To ensure member water communities identify and repair leaks in locally-owned distribution systems, MWRA developed leak detection regulations that went into effect in July 1991. Communities purchasing water from MWRA are required to complete a leak detection survey of their entire distribution system at least once every two years. Communities can accomplish the survey using their own contractors or municipal crews; or alternatively, using MWRA's task order leak detection contract. MWRA's task order contract provides leak detection services at a reasonable cost that has been competitively procured (3-year, low-bid contract) taking advantage of the large volume of work anticipated throughout the regional system. Leak detection services performed under the task order contract are paid for by MWRA and the costs are billed to the community the following year. During the 4th Quarter of FY12, all member water communities were in compliance with MWRA's Leak Detection Regulation.



Community Water Conservation Outreach

MWRA's Community Water Conservation Program helps to maintain average water demand below the regional water system's safe yield of 300 mgd. Current 5-year average water demand is less than 210 mgd. The local Water Conservation Program includes distribution of water conservation education brochures (indoor and outdoor bill-stuffers) and low-flow water fixtures and related materials (shower heads, faucet aerators, toilet leak detection dye tabs, and instructions), all at no cost to member communities or individual customers. The Program's annual budget is \$25,000 for printing and purchase of materials. Annual distribution targets and totals are provided in the table below. Distributions of water conservation materials are made based on requests from member communities and individual customers.

FY12 DISTRIBUTION	Annual Target	Q1	Q2	Q3	Q4	Annual Total
Educational Brochures	150,000	1,994	4,796	19,470	5,312	31,572
Low-Flow Fixtures (showerheads and faucet aerators)	10,000	1,945	2,712	3,557	3,150	11,364
Toilet Leak Detection Dye Tablets	-----	3,683	1,535	3,631	2,020	10,869

During FY12, requests for educational brochures (indoor and outdoor bill stuffers) were lower than in prior years. For FY13, the target for educational brochure distribution will be lowered to 100,000.

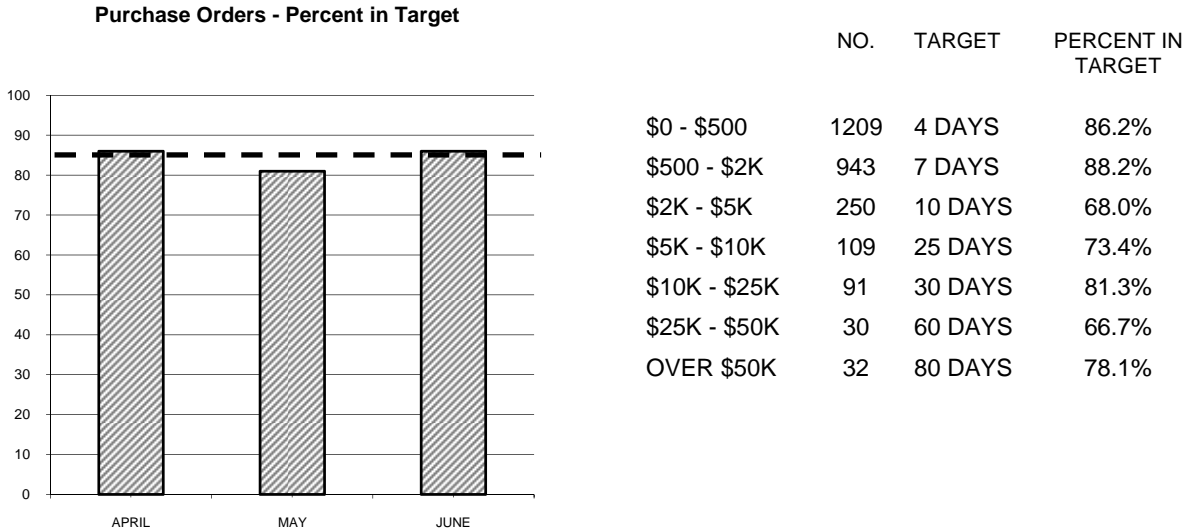
BUSINESS SERVICES

Procurement: Purchasing and Contracts Fourth Quarter FY12

Background: Goal is to process 85% of Purchase Orders and 80% of Contracts within Target timeframes.

Outcome: Processed 84% of purchase orders within target; Avg. Processing Time was 6.73 days vs. 6.72 days in Qtr 4 of FY11. Processed 88% (28 of 32) contracts within target timeframes; Avg. Processing Time was 117 days vs. 111 days in Qtr 4 of FY11.

Purchasing



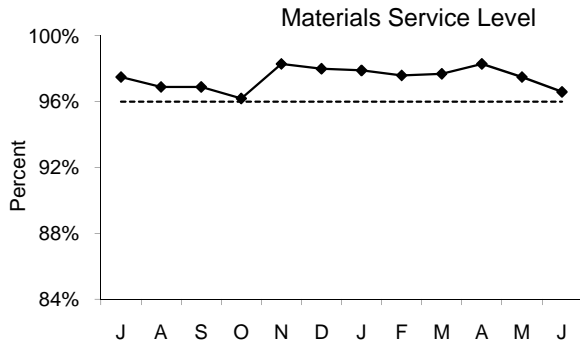
- Purchasing Unit processed 2664 purchase orders, 303 more than the 2361 processed in Qtr 4 of FY11, for a total value of \$12,126,509 vs. a dollar value of \$14,690,872 in Qtr 4 of FY11.
- The target was not achieved for the \$2k - \$5k category because of clarification of specifications, vendor sourcing and evaluation of end user needs, the \$5k - \$10k category due to a change in purchasing strategy and timing of the need for the service, the \$10k - \$25k category because of an extended bid review, the \$25k - \$50k category due to a re-bid and specification development and the over \$50k category due to clarification of specifications and extended bid review.

Contracts, Change Orders and Amendments

- Four contracts were not processed within target timeframes. Two contracts required the resolicitation of sub-bids, one process was extended as the scope of work was revised, and one was slowed due to delayed return of documents from the vendor.
- Procurement processed thirty-two contracts with a value of \$15,045,246 and sixteen amendments with a value of \$1,991,684.
- Forty change orders were executed during the period, but some were credit change orders and are recorded as negative numbers. The dollar value of all non-credit change orders during the 4th quarter FY12 was \$4,240,953 and the value of credit change orders was (\$2,124,132).
- In addition, staff reviewed 73 proposed change orders and 45 draft change orders.

Materials Management

4th Quarter, FY12



The service level is the percentage of stock requests filled. The goal is to maintain a service level of 96%. Staff issued 10,768 (97.5%) of the 11,049 items requested in Q4 from the inventory locations for a total dollar value of \$1,185,362.

Inventory Value - All Sites

Inventory goals focus on:

- Maintaining optimum levels of consumables and spare parts inventory
- Adding new items to inventory to meet changing business needs
- Reviewing consumables and spare parts for obsolescence
- Managing and controlling valuable equipment and tools via the Property Pass Program

The FY12 goal is to reduce consumable inventory from the July '11 base level (\$6.8 million) by 4.0% (approximately \$273,659), to \$6.5 million by June 30, 2012 (see chart below). The goal was not met due to the establishment of Motorola radios as inventory items to safeguard and track this item. Receipts of radios in June 2012 amounted to \$910,956. In addition, several high dollar MIS related items were received in June 2012 amounting to \$59,360.

Items added to inventory this quarter include:

- Deer Island –compression connectors, snap ring, slinger, impeller cap, impeller washer, 1.5v battery and cooling thermostat for Core; front seal holder for Residuals; oil filter, sump pump and grease fittings for Liquid Train.
- Chelsea –air, oil and fuel filters, e-brake cables, gasket cooler, brake rotor, socket, mirror kit, sensors, rivets and air pump for VMM; led lamps, single pole switch, vibration isolator, limit switch, connector and Dixon couplings for Work Order Coordination Group.
- Southboro – load binders and coveralls for Maintenance; reflective shirts and polo shirts for Administration.

Property Pass Program:

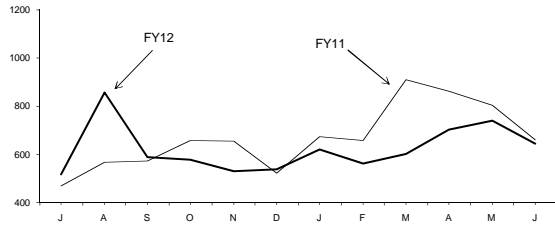
- Audits were conducted at Chelsea vehicle maintenance, plumbers, water operations valve and Ward Street pump station during Q4.
- Numerous obsolete computers, scanners, monitors, printers, keyboards, power supplies, docking stations, laptops, television stands and televisions have been received into property pass as surplus. Disposition is being handled as part of our ongoing recycling efforts.
- Scrap revenue received to date for the quarter amounted to \$7,395.59.

Items	Base Value July-11	Current Value w/o Cumulative New Adds	Reduction / Increase To Base
Consumable Inventory Value	6,841,475	7,662,652	821,177
Spare Parts Inventory Value	7,057,082	7,100,817	43,735
Total Inventory Value	13,898,557	14,763,469	864,912

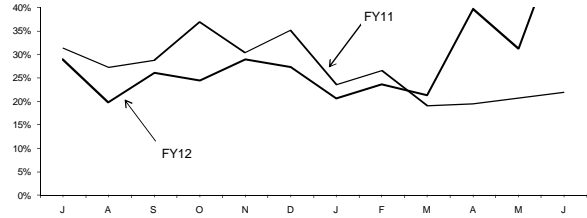
Note: New adds are items added at an inventory location for the first time for the purpose of servicing a group/department to meet their business needs/objectives.

MIS Program 4th Quarter FY12

Helpline Monthly Call Volume



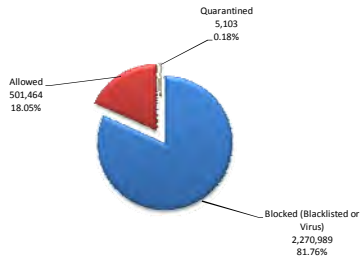
Workload Backlog



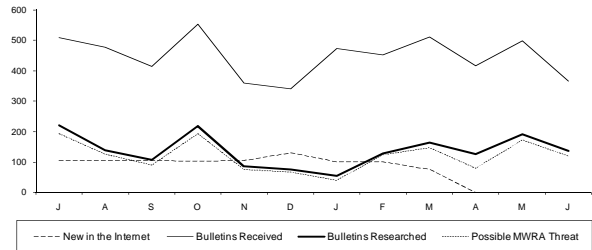
Performance:

For Q4, call volume peaked in May and calls decreased by 10.3% from Q4 last year. Call backlog peaked in June making the backlog 37.4% above the targeted benchmark of 20%.

Emails Received in Q4 = 2,777,556



Internet Vulnerabilities



Information Security:

During Q4, staff pushed security fixes and updates to desktops and servers throughout the quarter in order to protect against the 59 vulnerabilities. LANDesk Antivirus quarantined 78 distinct viruses from 56 MWRA computers. MWRA's systems are current with anti-virus providers' signatures for all known malware.

Infrastructure:

Cellular services migration: 215 devices were identified and the migration effort began in March. By the end of June, 92 devices have been migrated. This effort is scheduled to be complete in conjunction with the in-building distributed antenna system deployment.

Oracle Database Server Consolidation: The consolidation project began this month. When completed the number of Oracle database servers in Production and Development will be reduced from twenty-two to two. MIS purchased two Oracle Database Appliances and upgraded the MWRA's Oracle licensing agreements.

Applications/Training/Records Center:

MWRA Open Checkbook Application: The Commonwealth enacted a transparency and accountability law giving residents visibility into state government spending through a searchable website. MWRA and other authorities will be required to adhere to the law. In May and June, staff implemented the Employee, Vendor, and Categories (Spending) modules of the MWRA Open Checkbook application. (The Pension module is on hold pending the appointment of a new Retirement Board Director.) The application was presented to the Board of Directors in June.

Lawson 9.0.1 Upgrade: Received a new application from Bottomline (check printing application vendor) and installed it on production server in CNY; ran tests with Treasury using a sample paycheck file on the development system; installed BSI Tax Factory for Oracle 11g version on the development system and ran a small payroll; converted, compiled, and tested custom code; met with user management from Finance, Procurement, and HR to discuss 9.0.1 upgrade progress and provided users with upgrade release notes and links to related system documentation and user test plans; provided users system access to begin user testing.

Lawson Maintenance: Supported Payroll and HR with several year-end tasks including successful longevity payments due to all union employees and vacation milestone adjustments for unit 2, 3, and 9 employees. Upgraded the Lawson platform to Oracle 11g R2.

Employee Contact Information Review: Designed and developed a new web application for staff to review their contact information. Staff can confirm that the information is accurate or email HR with changes. In May, HR instructed CNY staff to use this application as a prerequisite to the MWRA Reverse 911 drill for CNY staff.

MWRA Emergency Notification Systems (ENS): Worked with Public Affairs to prepare for communication drills for CNY, Southborough, and CWTP staff. All drills used the remote activation call feature in Communicator! NXT and were completed in Q4. The drills were conducted to ensure staff familiarity with the application use, exercise the application, and help validate contact information is accurate. Also in Q4, staff provided training on the Emergency Notification Systems (ENS) for users identified by the Security Task Force. All key users have been trained in 2012.

GIS: An effort to link Water Quality (WQ) data to our GIS system is now underway. A proof of concept model has been developed that successfully integrates WQ data with our GIS Flex viewer. The GIS Flex viewer is in the final approval stage so the WQ integration portion may not be ready for the initial release however it should follow shortly after.

Granite XP - Cues TV: The newly upgraded Close Circuit TV (CCTV) system has been installed onto the MWRA CCTV truck. The upgrade included a new pipeline Scoring Module, improvements to sonar reporting, and a GIS Integration Module. The two new software modules of Granite XP integrate the inspection results, video files, and GIS into a single display (via a desktop viewer) to maximize effectiveness of the information being presented. MWRA will have unlimited licenses for the deployment of the viewer to end users in Operations, Engineering and Planning who require this information.

Community Operations Management Monitoring System (OMMS): Updated the Community OMMS Website to be compatible with the iPad at the request of Boston Water and Sewer. The website was originally developed in the fall of 2000 and designed to work with Microsoft Internet Explorer 4. The update also made the website compatible with the current versions of Internet Explorer as well as con-Microsoft web browsers.

Library & Records Center: The Library completed 57 research requests (211 YTD), added 10 books (103 YTD), distributed 88 periodicals (421 YTD) and 3,943 electronically (12,488 YTD) linked articles to staff. The Records Center added 64 boxes (260 YTD), conducted 2 training sessions, and attended 2 Record Conservation Board Meetings. Received permission from RCB to dispose of 259 boxes. Shaft 5 litigation support included Room 2A set up, research, indexing, and hosted opposing counsel review of microfilm. Construction Photo Project support included drafting proposed scope of work, standards (formatting, metadata, keywords, etc..) cross reference contract spreadsheet, and research.

IT Training: For the quarter, 251 staff attended 14 classes and 20 workshops. 21% of the workforce have attended at least one class year-to-date. The majority of Q4 training classes were refresher or new user training for the various Emergency Notification Systems (ENS) applications (Community Contacts Database, Communicator! NXT, and MWRA 911). In addition, 30 staff attended IT Infrastructure Library (ITIL) Foundation training to provide a foundation for the formal adoption of appropriate ITIL best practices for IT services at the MWRA.

Legal Matters

4th Quarter FY2012

PROJECT ASSISTANCE

COURT AND ADMINISTRATIVE ORDER

- **Boston Harbor Litigation and CSO:** Reviewed 2011 CSO discharge estimates and rainfall analyses submitted to EPA and DEP in accordance with Variances for CSO Discharges to the Alewife Brook/Upper Mystic River and for CSO Discharges to the Lower Charles River/Charles Basin. Reviewed Amendment No. 3 to the Memorandum of Understanding and Financial Assistance Agreement between the MWRA and the Town of Brookline for the implementation of certain CSO control projects. Drafted a portion of the June compliance and progress report. Drafted and filed quarterly compliance and progress report; filed CSO annual report.
- **NPDES:** Drafted the Clinton NPDES permit and MWRA's subsequent comments. Reviewed and edited chapters four through seven of latest draft of nine minimum control document.
- **2012 Wastewater System Master Plan:** Reviewed and commented upon draft chapters 4, 14 and 16 of the 2012 Wastewater System Master Plan.
- **Administrative Consent Order (DITP power outages):** Reviewed and submitted updated semi-annual *Consultant's Deer Island Energy Recommendations Tracking Sheet* to DEP and EPA.

REAL ESTATE, CONTRACT AND OTHER SUPPORT

- **MassDOT License - Chelsea:** Revised the draft license agreement for MassDOT to grant MWRA use of the abandoned right-of-way adjacent to the MWRA facility in Chelsea.
- **Weston Aqueduct Recreational Trail - Framingham:** Drafted an 8(m) Permit to the Town of Framingham for the use of a portion of the Weston Aqueduct as a passive recreational trail and submitted the draft to the Town of Framingham for review and comment.
- **CVA- Fish Hatchery Hydropower Project:** Revised the draft legislation for the acquisition of a permanent easement at the Ware Disinfection Facility.
- **Northern Low Service Storage Project:** Drafted Amendment #1 to the License for Entry Agreement with the developer of the adjacent property to provide for the use of Parcel M-1 during construction.
- **Fore River Railroad Corporation:** Finalized a Gas Main License Agreement with Boston Gas Company, d/b/a National Grid, to allow for the installation of a gas main under the right-of-way of the railroad at two (2) locations in Quincy.
- **Conveyance of former East Boston Pump Station:** Finalized a Grant of Easement for the conveyance of two access easements necessary for the sale by DCAM of the property occupied by the former East Boston Pump Station.
- **Cochituate Aqueduct Damage - Natick:** Drafted a Cease and Desist Order requiring the stoppage of further environmental damage and remediation on the easement for the Cochituate Aqueduct following a partial collapse of the aqueduct.
- **Weston Water Main:** Participated in a two-day mediation on May 22-23 with all parties in an attempt at early resolution. Mediation did not resolve any issues. However, subsequent to the Mediation, and as a result thereof, pursuant to approval received by the Board of Directors, MWRA presented a Settlement Demand to MWRA's direct Defendants.
- **Miscellaneous:** Reviewed and approved thirty (30) Section 8(m) Permits and one (1) Direct Connect Permit; reviewed and made recommendations on five (5) construction claims.

ENVIRONMENTAL

- **Clean Air Regulations:** Reviewed various regulations, and proposed regulations, of EPA and DEP relating to Clean Air Act Amendments, contaminant monitoring for public water systems, air pollution control.

- **Division of Fire Services Regulations:** Completed analysis and draft memo concluding that the new fire service regulations pertaining to the safe handling and processing of hazardous materials did not apply to the MWRA.
- **Miscellaneous: The Register of Historic Places:** Reviewed regulatory and case law to determine criteria for listing buildings on the MA. State Register.

LABOR, EMPLOYMENT AND ADMINISTRATIVE

New Matters	Three demands for arbitration were filed. One charge of prohibited practice was filed at the Division of Labor Relations.
Matters Concluded	Settled two arbitrations in which a union claimed the MWRA violated a collective bargaining agreement when three employees were allegedly working out of title.

LITIGATION/TRAC

New Matters	During the Fourth Quarter of FY 2012 one new lawsuit was received. (Former employee) v. MWRA: Plaintiff is a former employee who seeks damages and other relief arising out of his termination from employment on January 27, 2012. Plaintiff asserts claims under the Massachusetts Whistleblower statute, G.L. c. 149 § 185, and the Massachusetts Civil Rights Act G.L. c. 12 § 111. Plaintiff also alleges that he was denied his statutory rights under the "Age Discrimination Employment Act" (ADEA), and the "Older Workers Benefit Protection Act" (OWBPA). Among other things, plaintiff alleges that he was subjected to retaliation by MWRA when he objected to and reported unlawful activity by two employees, i.e., the theft of time and misappropriation of MWRA property.
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Significant Developments	<u>William A. Davison, Mary J. Davison and Paul W. DiMaura, Trustees of Heather Realty Trust v. MWRA:</u> On April 6, 2012, MWRA filed a Motion of Defendant MWRA for Entry of Judgment, requesting that interest be applied to the March 23, 2012 jury verdict strictly in accordance with the eminent domain statute, G.L. c. 79 § 37. On May 10, 2012, plaintiffs served an opposition to MWRA's motion, and served Plaintiffs' Motion To Determine Interest Rate and For Entry of Judgment, in which plaintiffs requested that interest be calculated at a substantially higher rate than that provided by statute, and also that interest be compounded annually, rather than calculated as simple interest. The papers of both parties were submitted to the Court for decision.
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(Former employee) v. MWRA: This is a race discrimination claim filed by the Complainant, a former MWRA employee, alleging his employment was terminated because he was a white supervisor. The MCAD dismissed his claim. Complainant has appealed this dismissal and the appeal is scheduled to be heard at MCAD on July 19, 2012.

Matters Concluded	<u>Midland Funding, Inc. vs. (Present Employee) and MWRA:</u> In this wage garnishment action, MWRA received on March 23, 2012 a Voluntary Dismissal of Trustee Process as to the defendant and MWRA as Trustee was filed in Charlestown District Court.
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D & C Construction Company, Inc. v. MWRA: On or about June 26, 2008, D&C entered into public construction contract with MWRA for a project known as "Cottage Farm/Brookline Connection and Inflow Controls in Boston and Cambridge, MA in lump sum amount of \$1,976,000. The Contract for the Project was MWRA Project No. 7080. D&C's work under the Contract included dismantling, evacuation and cleanup of certain chambers related to anticipated overflow events during the course of the Project. Plaintiff claimed breach of contract by a general contractor on a public construction project to recover monies due under its lump sum contract with the Authority and is claiming damages in the amount of \$187,106.60. On March 5, 2012, the court ruled that D&C's Motion for Summary Judgment be denied and MWRA's Motion for Summary Judgment be allowed. The Complaint of the plaintiff, D&C Construction Company, Inc., has been dismissed against the MWRA, with costs. The appeal rights of the plaintiff have expired.

(Former Employee) v. MWRA: This was an employment matter involving two cases filed by the plaintiff at the Massachusetts Commission Against Discrimination ("MCAD"). The cases were consolidated and scheduled for trial on May 14, 2012 at the Massachusetts Commission Against Discrimination. Just prior to trial the case settled.

Subpoenas During the Fourth Quarter of FY 2012, one new subpoena was received, two subpoenas were re-activated and six subpoenas were pending at the end of the Fourth Quarter FY 2012.

Public Records During the Fourth Quarter of FY 2012 six new public records requests were received and of those six, four remained pending at the end of the Fourth Quarter FY 2012.

SUMMARY OF PENDING LITIGATION MATTERS

TYPE OF CASE/MATTER	As of June 2012	As of March 2012	As of Dec 2011
Construction/Contract/Bid Protest (other than BHP)	3	2	4
Tort/Labor/Employment	6	7	6
Environmental/Regulatory/Other	1	1	1
Eminent Domain/Real Estate	1	1	2
total – all defensive cases	11	11	13
Affirmative Cases: <u>MWRA v. (current employee)</u> <u>MWRA v. J. F. Shea Co., Inc., et al.</u>	2	2	2
Other Litigation matters (restraining orders, etc.)	0	0	0
total – all pending lawsuits	13	13	15
Significant claims not in suit: <u>Giaquinto/Geico Automobile Accident Claims</u> <u>Oscar Malera personal injury claim</u> <u>Trooper Walker Injury Claim</u>	3	2	2
Bankruptcy	1	3	3
Wage Garnishment	15	8	8
TRAC/Adjudicatory Appeals	1	0	0
Subpoenas	6	4	3
TOTAL – ALL LITIGATION MATTERS	39	30	31

TRAC/MISC.

New Appeals One new appeal was received in the 4th Quarter FY 2012.

Environmental Compliance Corporation; MWRA Docket No. 12-01

Settlement by Agreement of Parties No cases were settled by Agreement of Parties in the 4th Quarter FY 2012.

Stipulation of Dismissal No cases were dismissed by Stipulation of Dismissal.

Notice of Dismissal Fine paid in full No cases were dismissed by Notice of Dismissal, fine paid in full.

Tentative Decisions No Tentative Decisions were issued in the 4th Quarter FY 2012.

Final Decisions No Final Decisions were issued during the 4th Quarter FY 2012.

INTERNAL & CONTRACT AUDIT PROGRAM 4th Quarter FY12

Highlights

MIS Equipment Controls

The MIS department is responsible for the recordkeeping, custody and the ultimate disposal of MIS hardware, audio/visual equipment, digital cameras and cell phones. Some types of equipment, such as laptops, cameras and phones are subsequently issued by MIS to individual employees.

Fieldwork on this assignment is wrapping up and a draft report is being written. A number of deficiencies were identified, including incomplete recordkeeping, missing equipment, and the storage of equipment in insecure locations. Management was kept informed of deficiencies and has instituted corrective actions. The nature of the deficiencies and corrective actions will require an Internal Audit follow-up in six months.

Status of Open Audit Recommendations (6 recommendations closed in the 4th quarter)

The Internal Audit Department follows up on open recommendations on a continuous basis. All pending recommendations have target implementation dates. When a recommendation has not been acted on in 48 months the appropriateness of the recommendation is re-evaluated during a subsequent audit. On closed assignments 98% of recommendations have been implemented.

Report Title (date)	Recommendations Pending Implementation	Closed Recommendations
Boston Water & Sewer Commission CSO Financial Assistance Agreement (9/18/09)	1	2
Construction Change Order Pricing (12/31/09)*	4	1
Warehouse Practices (9/30/10)	2	8
Facility Card Access Controls (2/22/11)	3	17
DITP Data Center Access Controls (10/14/11)	14	8
FRRC Financial and Management Controls (12/14/11)	1	6
Workers' Compensation (12/23/11)	3	1
Review of Fleet Services Activities (1/9/12)	<u>4</u>	<u>1</u>
Total Recommendations	32	44

*Recommendations involve an updated construction manual with a target completion of August 2012.

Audit Savings

The Internal Audit Department's target is to achieve at least \$1 million in cost savings each year. Cost savings vary each year based upon many factors. In some cases, cost savings for one year may be the result of work in prior years.

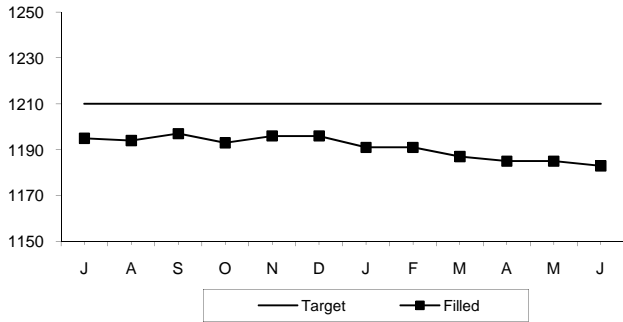
Savings	FY08	FY09	FY10	FY11	FY12	TOTAL
Consultants	\$55,901	\$316,633	\$194,238	\$520,176	\$259,245	\$1,346,193
Contractors & Vendors	\$2,147,311	\$1,262,088	\$599,835	\$3,129,538	\$435,760	\$7,574,532
Internal Audits	\$0	\$438,027	\$206,282	\$152,478	\$407,350	\$1,204,137
Total	\$2,203,212	\$2,016,748	\$1,000,355	\$3,802,192	\$1,102,355	\$10,124,862

OTHER MANAGEMENT

Workforce Management

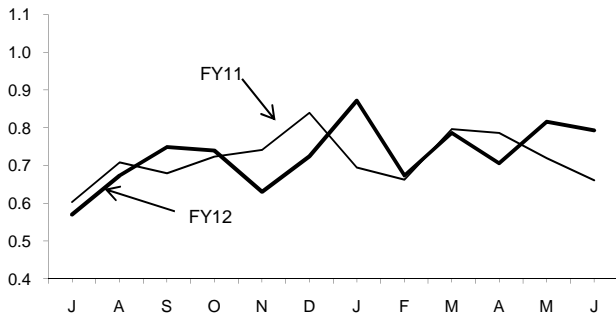
4th Quarter FY12

Filled Position Tracking

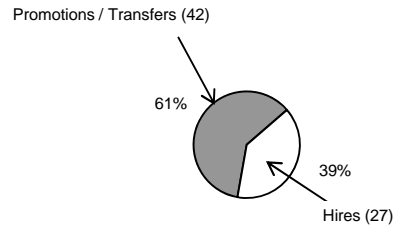


FY12 Target for Filled Positions = 1210
 Filled Positions as of June 2012 = 1183

Average Monthly Sick Leave Usage
Per Employee



Positions Filled by Hires/Promotions
FY12-YTD



	Pr/Trns	Hires	Total
FY09	63 (73%)	23 (27%)	86
FY10	66 (76%)	21 (24%)	87
FY11	48 (62%)	30 (38%)	78

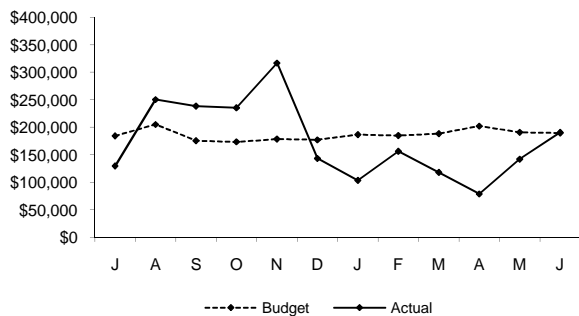
In FY12, the average monthly sick leave usage has increased 1.35% from the same time last year.

	Number of Employees	YTD	Annual Total	Annual FMLA %	FY11
A&F	190	8.18	8.18	22.1%	8.01
Aff. Action	7	13.14	13.14	39.0%	7.63
Executive	5	6.53	6.53	55.6%	3.29
Int. Audit	8	5.94	5.94	10.5%	4.47
Law	17	11.24	11.24	29.7%	9.95
OEP	4	5.21	5.21	0.0%	5.74
Operations	927	8.81	8.81	21.1%	8.86
Planning	21	6.58	6.58	11.1%	4.68
Pub. Affs.	12	7.81	7.81	1.1%	8.15
MWRA Avg	1191	8.73	8.73	21.3%	8.64

Percent of sick leave usage attributable to Family and Medical Leave Act (FMLA) leave is 21.3% ending June 30, 2012.

Field Operations

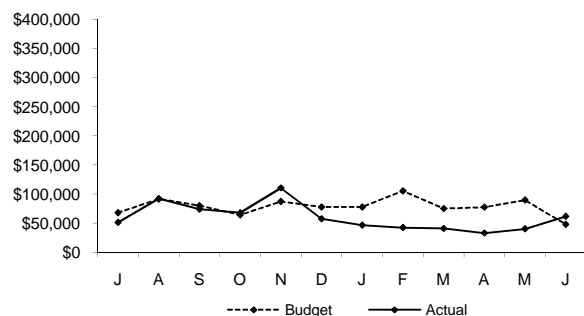
Overtime Expenditure Variance



Total June overtime for Field Operations was \$190,613, which is \$1k over budget. Emergency overtime was \$99k, which was \$12k over budget. Of that amount, \$31k was spent on rain events, \$19k for rain event pre staging, \$18k for emergency maintenance, \$14k for CSO activation, and \$9k for emergency operations. Coverage overtime was \$60k, which was \$1k over budget. Vacation coverage was \$27k; personal coverage was \$13k, sick coverage was \$6k, vacancy coverage was \$4k. Planned overtime was \$32k or (\$12k) under budget. \$7k was for Planned Operations, \$5k for Maintenance off hours work \$5k for maintenance- work completion, \$3k for training.

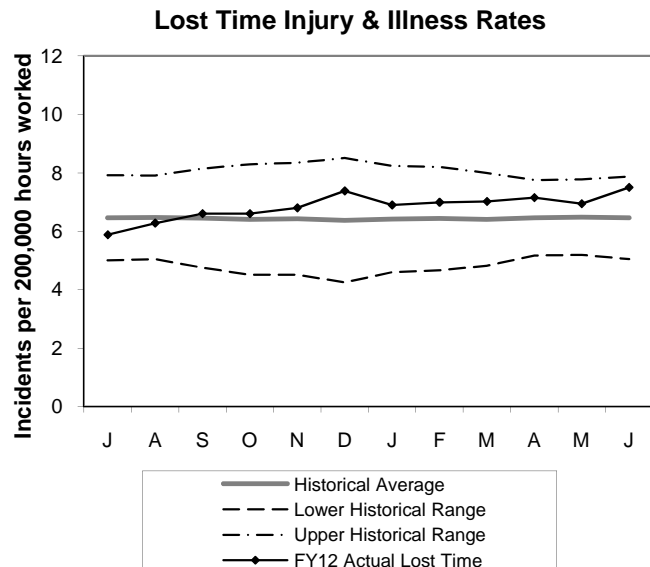
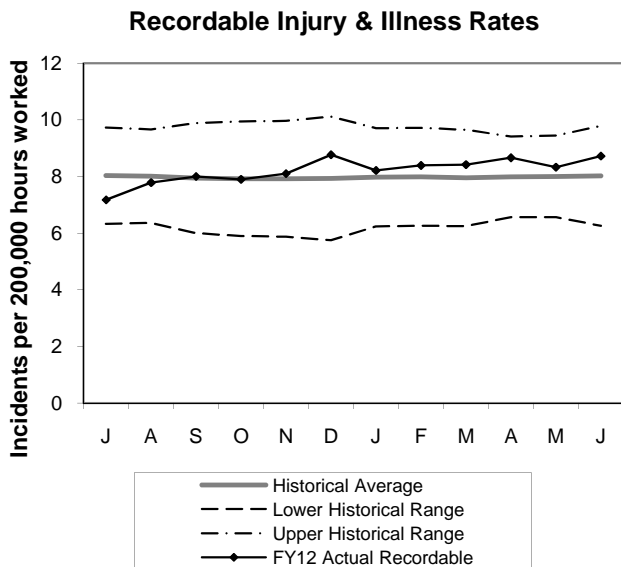
Deer Island Treatment Plant

Overtime Expenditure Variance



Deer Island's total overtime expenditure in June 2012 was \$62K, which is \$13K or 27.9% over budget. The variance is attributable to a combination of higher than budgeted storm coverage requirements, \$16K and higher than budgeted shift coverage, \$16K. The budget, which was based upon historical actuals, did not anticipate any hours of storm coverage while 214 hours were actually required, also shift coverage was higher than anticipated due to a greater need for vacation coverage. These variances are partially offset by Maintenance's planned/unplanned overtime was (\$15K) under budget due Management's continued efforts to control overtime spending by allowing overtime for maintenance or repair of critical systems and equipment only All Other overtime was a net (\$4K) under budget

Workplace Safety 4th Quarter FY12



- 1 "Recordable" incidents are all work-related injuries and illnesses which result in death, loss of consciousness, restriction of work or motion, transfer to another job, or require medical treatment beyond first aid.
- 2 "Lost-time" incidents, a subset of the recordable incidents, are only those incidents resulting in any days away from work, days of restricted work activity or both - beyond the first day of injury or onset of illness.
- 3 The "Historical Average" is computed using the actual MWRA monthly incident rates for FY99 through FY11. The "Upper" and "Lower Historical Ranges" are computed using these same data – adding and subtracting two standard deviations respectively. FY12 actual incident rates can be expected to fall within this historical range.

Workers Compensation Claims Highlights - Fourth Quarter FY12

	New	Closed	Open Claims
Lost Time	11	14	48
Medical Only	41	54	44
	New		YTD Light Duty Returns
Light Duty Returns	2		9

Highlights/Comments:

Light Duty returns

April none

May 1 employee returned to work in a light duty for one week and then went to full duty

June 1 employee returned to work full duty from IA

Regular Duty returns

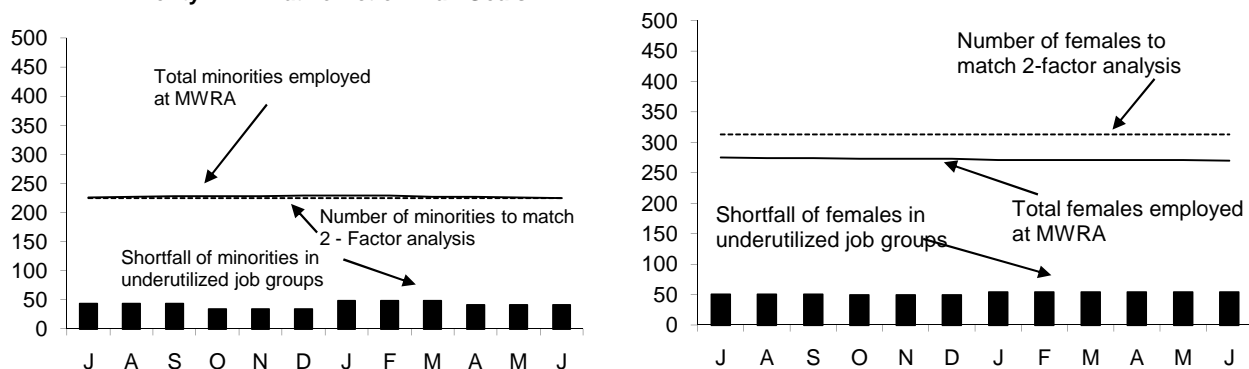
April 3 employees returned to work in a regular capacity (1 employee worked 1 day, then returned to IA)

May 2 employees returned to work full duty

June 1 employee returned to work full duty from a light duty assignment

MWRA Job Group Representation Quarter 4, FY 2012

Minority - Affirmative Action Plan Goals



Highlights:

At the end of Q4 FY12, 8 job groups or a total of 44 positions are underutilized by minorities as compared to 7 job groups or a total of 40 at the end of Q4 FY11; for females 13 job groups or a total of 101 positions are underutilized by females as compared to 12 job groups or a total of 87 at the end of Q4FY11. During Q4, 0 minorities and 0 females were hired. During this same period, 2 minorities and 2 females terminated.

Underutilized Job Groups - Workforce Representation

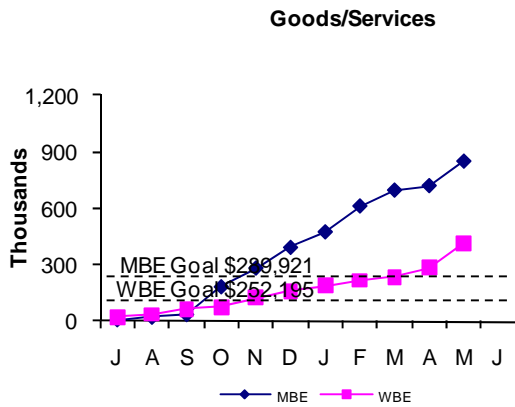
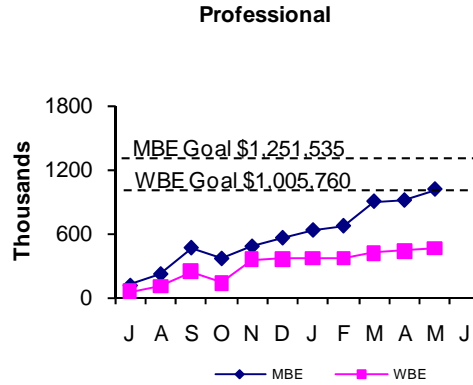
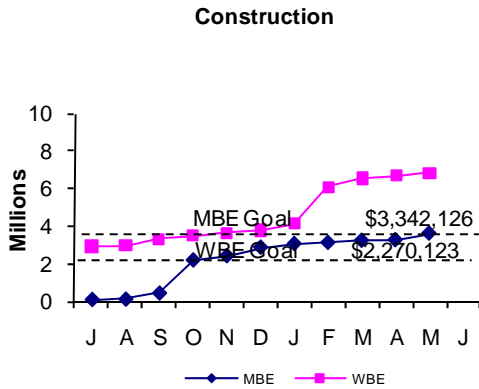
Job Group	Employees as of 6/30/2012	Minorities as of 6/30/2012	Achievement Level	Minority Over or Under Under utilized	Females As of 6/30/2012	Achievement Level	Female Over or Under Under utilized
Administrator A	18	3	2	1	3	5	-2
Administrator B	20	0	3	-3	5	5	0
Clerical A	46	20	11	9	40	4	36
Clerical B	35	9	9	0	15	3	12
Engineer A	83	15	17	-2	11	17	-6
Engineer B	50	11	5	6	6	18	-12
Craft A	114	13	21	-8	0	4	-4
Craft B	149	27	22	6	3	9	-6
Laborer	64	16	12	4	4	16	-12
Management A	106	16	22	-6	33	47	-14
Management B	51	11	11	0	14	25	-11
Operator A	66	5	6	-1	2	3	-1
Operator B	66	7	13	-6	4	5	-1
Para Professional	56	11	25	-14	25	49	-24
Professional A	37	3	7	-4	22	16	6
Professional B	164	39	31	8	76	76	0
Technical A	54	17	10	7	5	11	-6
Technical B	9	2	2	0	2	4	-2
Total	1188	225	229	41/-44	270	317	54/-101

AACU Candidate Referrals for Underutilized Positions

Job Group	Title	# of Vac	Requisition Int. / Ext.	Promotions/ Transfers	AACU Ref. External	Position Status
Craft A	M&O Specialist	1	Int	0	0	Pending
Craft B	Instrument Technician	1	Ext	0	1	Pending
Craft B	Electrician	1	Int/Ext	0	1	New Hire - W/M
Craft B	Facilities Specialist I	6	Int	0	0	Pending
Craft B	Plumber/Pipefitter	1	Ext	0	0	Pending
Craft B	Heavy Equipment Operator	1	Ext	0	0	Pending
Laborer	Building & Grounds Worker	2	Int/Ext	0	0	Lat Trans-W/M
Laborer	Skilled Laborer	1	Int/Ext	0	0	Pending
Laborer	OMC Laborer	2	Int/Ext	0	0	New Hire - W/M
Management B	Asst. Contract Mgr.	1	Int/Ext	0	0	Pending

MBE/WBE Expenditures Fourth Quarter FY 2012

Background: MBE/WBE targets are determined based on annual MWRA expenditure forecasts in the procurement categories noted below. MBE/WBE percentage goals, resulting from a 2002 Availability Analysis, are applied to the MWRA CIP and CEB expenditure forecasts. As a result of the Availability Analysis, the category of Non-Professional Services is included in Goods/Services. Consistent with contractor reporting requirements, MBE/WBE expenditure data is available through May.



FY12 spending and percentage of goals achieved, as well as FY11 performance are as follows:

	MBE				WBE			
	FY12 Year-to-Date		FY11		FY12 Year-to-Date		FY11	
	<u>Amount</u>	<u>Percent</u>	<u>Amount</u>	<u>Percent</u>	<u>Amount</u>	<u>Percent</u>	<u>Amount</u>	<u>Percent</u>
Construction	3,585,531	107.3%	6,672,772	129.2%	6,837,179	301.2%	7,871,501	184.8%
Professional Svc.	1,009,012	80.6%	2,045,576	160.6%	459,312	45.7%	1,212,947	118.3%
Goods & Svcs.	851,430	293.7%	393,060	56.9%	415,559	164.8%	345,590	57.5%
Total	\$5,445,973	111.5%	\$9,111,408	127.8%	\$7,712,050	218.6%	\$9,430,038	160.2%

MWRA FY12 CEB Expenses through 4th Quarter –FY12

	June 2012 Year-to-Date					
	Period 12 YTD Budget	Period 12 YTD Actual	Period 12 YTD Variance	%	FY12 Approved	% Expended
EXPENSES						
WAGES AND SALARIES	\$ 90,319,013	\$ 89,887,813	\$ (431,200)	-0.5%	\$ 90,319,013	99.5%
OVERTIME	3,508,630	3,086,174	(422,456)	-12.0%	3,508,630	88.0%
FRINGE BENEFITS	17,954,076	17,662,543	(291,533)	-1.6%	17,954,076	98.4%
WORKERS' COMPENSATION	2,100,000	1,600,726	(499,274)	-23.8%	2,100,000	76.2%
CHEMICALS	9,047,275	9,271,529	224,254	2.5%	9,047,275	102.5%
ENERGY AND UTILITIES	22,654,931	22,766,837	111,906	0.5%	22,654,931	100.5%
MAINTENANCE	29,470,020	26,776,012	(2,694,008)	-9.1%	29,470,020	90.9%
TRAINING AND MEETINGS	251,550	184,228	(67,322)	-26.8%	251,550	73.2%
PROFESSIONAL SERVICES	5,892,441	5,099,517	(792,924)	-13.5%	5,892,441	86.5%
OTHER MATERIALS	4,765,483	5,513,699	748,216	15.7%	4,765,483	115.7%
OTHER SERVICES	23,323,074	22,985,815	(337,259)	-1.4%	23,323,074	98.6%
TOTAL DIRECT EXPENSES	\$ 209,286,493	\$ 204,834,893	\$ (4,451,598)	-2.1%	\$ 209,286,493	97.9%
INSURANCE	\$ 2,285,870	\$ 2,076,961	\$ (208,909)	-9.1%	\$ 2,285,870	90.9%
WATERSHED/PILOT	25,576,274	25,629,604	53,330	0.2%	25,576,274	100.2%
BEC _o PAYMENT	3,965,500	3,561,130	(404,370)	-10.2%	3,965,500	89.8%
MITIGATION	1,528,700	1,744,579	215,879	14.1%	1,528,700	114.1%
ADDITIONS TO RESERVES	195,467	195,467	-	0.0%	195,467	100.0%
RETIREMENT FUND	7,340,438	7,363,170	22,732	0.3%	7,340,438	100.3%
POST EMPLOYEE BENEFITS	-	-	-	---	-	---
TOTAL INDIRECT EXPENSES	\$ 40,892,249	\$ 40,570,911	\$ (321,338)	-0.8%	\$ 40,892,249	99.2%
DEBT SERVICE	\$ 368,329,918	\$ 365,136,323	\$ (3,193,595)	-0.9%	\$ 367,979,918	99.2%
DEBT SERVICE ASSISTANCE	(350,000)	(384,323)	(34,323)	9.8%	-	0.0%
TOTAL DEBT SERVICE	\$ 367,979,918	\$ 364,752,000	\$ (3,227,918)	-0.9%	\$ 367,979,918	99.2%
TOTAL EXPENSES	\$ 618,158,660	\$ 610,157,804	\$ (8,000,853)	-1.3%	\$ 618,158,660	98.7%
REVENUE & INCOME						
RATE REVENUE	\$ 589,700,000	\$ 589,700,000	\$ -	0.0%	\$ 589,700,000	100.0%
OTHER USER CHARGES	7,142,495	7,264,794	122,299	1.7%	7,142,495	101.7%
OTHER REVENUE	4,872,342	5,655,583	783,241	16.1%	4,872,342	116.1%
RATE STABILIZATION	1,091,780	1,091,780	-	0.0%	1,091,780	100.0%
INVESTMENT INCOME	15,352,043	16,267,463	915,420	6.0%	15,352,043	106.0%
TOTAL REVENUE & INCOME	\$ 618,158,660	\$ 619,979,620	\$ 1,820,960	0.3%	\$ 618,158,660	100.3%

As of June 2012, total revenue was \$620.0 million, \$1.8 million or 0.3% more than budget. Total expenses were \$610.2 million, \$8.0 million or 1.3% less than budget, resulting in a net variance of \$9.8 million.

Expenses –

- **Direct Expenses** are \$204.8 million, \$4.5 million or 2.1% less than budget.
- **Maintenance** is \$2.7 million or 9.1% less than budget. Services are underspent by \$3.0 million and materials are overspent by \$290,000.
- **Professional Services** are \$793,000 or 13.5% under budget mainly due to lower than projected use of Lab & Testing of \$255,000 due to lower Harbor Outfall Monitoring activities, lower as-needed engineering services of \$215,000, lower Security of \$130,000 and lower Other of \$120,000.
- **Other Materials** are \$748,000 or 15.7% over budget due to higher spending for Equipment/Furniture of \$847,000 mainly for radio purchase, Lab & Testing supplies of \$73,000, and Office Supplies of \$43,000. Offset by lower spending for Computer Hardware of \$114,000, Postage of \$82,000, and Vehicle Purchases of \$42,000.
- **Workers' Compensation** is \$499,000 or 23.8% lower spending for reserve requirements of \$485,000 and actual payments of \$15,000.
- **Wages and Salaries** are underspent by \$431,000 or 0.5% due to lower than budgeted filled positions and staff on unpaid leave offset by unbudgeted COLA 's.
- **Overtime** is \$422,000 or 12.0% under budget mainly due to lower spending for snow removal and wet weather events.
- **Other Services** are \$337,000 or 1.4% under budget mainly for lower spending for Other Services of \$818,000 mainly for delayed implementation of the Global Positioning Services (GPS) for Authority vehicles and equipment offset by higher Sludge Pelletization of \$480,000.
- **Fringe Benefits** are lower by \$292,000 or 1.6% mainly due to lower spending for Health Insurance of \$287,000 and Overtime Meals of \$16,000.
- **Chemicals** are overspent by \$224,000 or 2.5% due to higher Ferric Chloride of \$223,000, Sodium Hypochlorite of \$136,000, Liquid Oxygen of \$107,000, and Nytrazyme \$102,000. Offset by lower spending for Activated Carbon of \$134,000, and Soda Ash of \$103,000.
- **Utilities** are overspent by \$112,000 or 0.5% mainly for higher spending for water of \$194,000 and Diesel Fuel of \$73,000 offset by lower spending for Natural Gas of \$137,000.
- **Indirect Expenses** are \$40.6 million, \$321,000 or 0.8% under budget mainly due to lower special maintenance projects for the Deer Island Cross Harbor cable of \$404,000, and Insurance of \$209,000 mainly due to lower claims.
- **Debt Service Expenses** total \$364.8 million, \$3.2 million or 0.9% under budget due to lower variable rate debt of \$14.1 million, State Revolving fund of \$8.0 million and Local Water Pipeline of \$3.2 million, and \$2.1 million favorable refunding. Offset by \$24.1 million for the FY12 defeasance.

Revenue and Income –

- **Total Revenue / Income** for June is \$620.0 million, \$1.8 million or 0.3% higher than budget and is mainly due to higher Investment Income of \$915,000 and non-rate revenue of \$906,000.

Cost of Debt 4th Quarter –FY12

MWRA borrowing costs are a function of the fixed and variable tax exempt interest rate environment, the level of MWRA's variable interest rate exposure and the perceived creditworthiness of MWRA. Each of these factors has contributed to decreased MWRA borrowing costs since 1990.

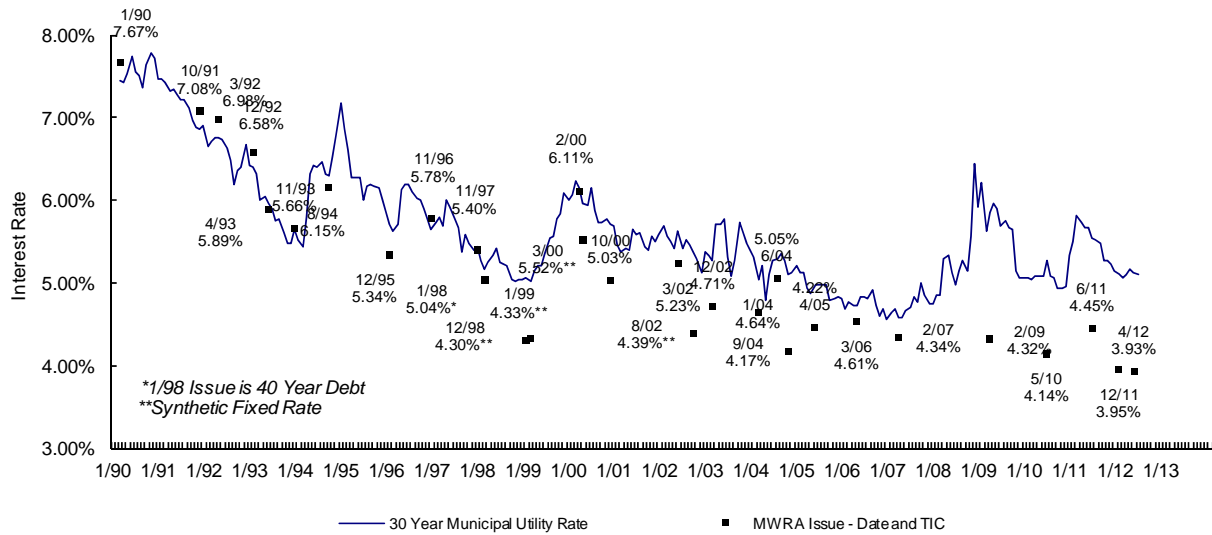
Average Cost of MWRA Debt

Fixed Debt (\$4,129)	4.43%
Variable Debt (\$544)	0.87%
SRF Debt (\$1,022)	1.16%
 Weighted Average Debt Cost (\$5,769)	 3.47%

Most Recent Senior Fixed Debt Issue April 2012

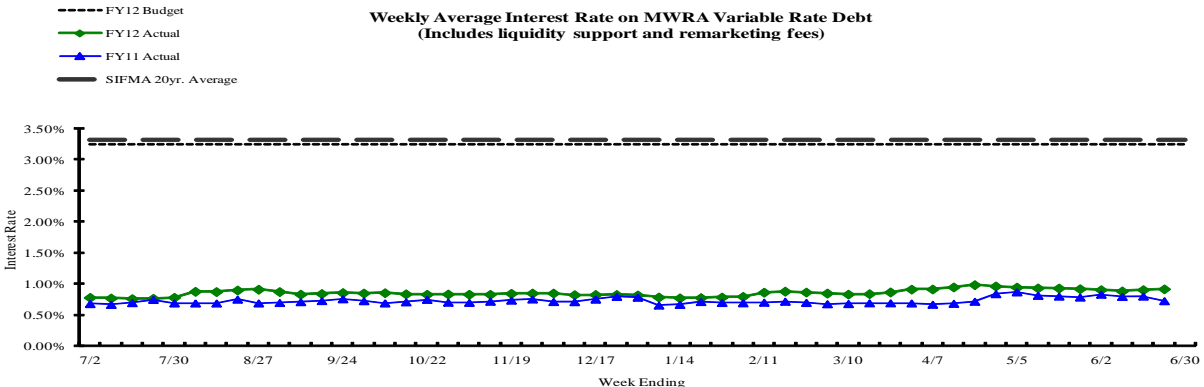
2012 Series A & B (\$236.8)	3.93%
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MWRA Fixed Rate Debt vs. 30 Year Municipal Utility Interest Rate



Weekly Average variable Interest Rates vs. Budget

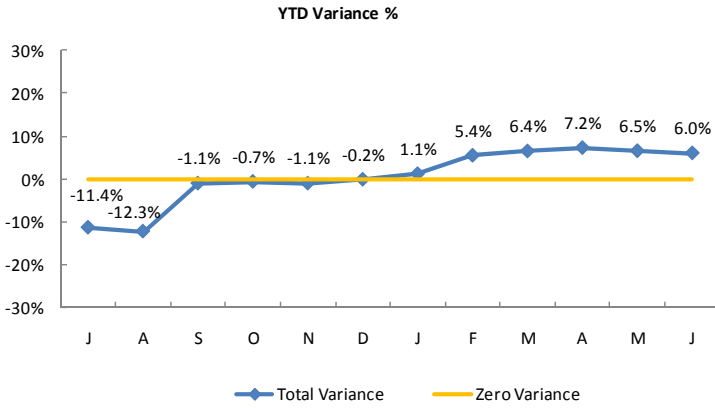
MWRA currently has nine variable rate debt issues with \$1.2 billion outstanding, excluding commercial paper. Of the nine outstanding series, five have portions which have been swapped to fixed rate. Variable rate debt has been less expensive than fixed rate debt in recent years as short-term rates have remained lower than long-term rates on MWRA debt issues. In June, SIFMA rates fluctuated with a high of 0.20% and a low of 0.16%. MWRA's issuance of variable rate debt, although consistently less expensive in recent years, results in exposure to additional interest rate risk as compared to fixed rate debt.



Investment Income

4th Quarter -FY12

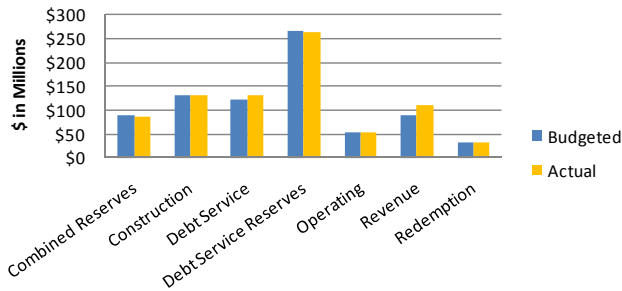
Year To Date



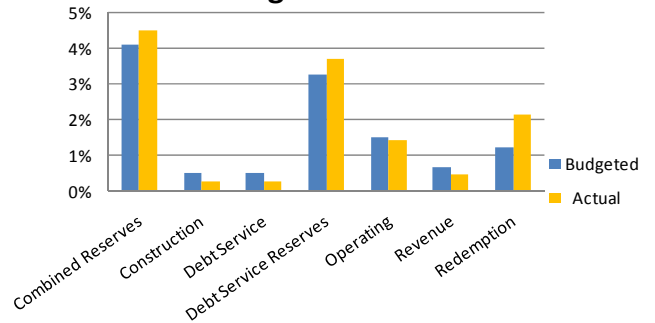
	YTD BUDGET VARIANCE			
	(\$'000)			
	BALANCES IMPACT	RATES IMPACT	TOTAL	%
Combined Reserves	(\$88)	\$350	263	7.3%
Construction	(\$7)	(\$300)	(307)	-46.9%
Debt Service	\$46	(\$311)	(265)	-42.6%
Debt Service Reserves	(\$74)	\$1,138	1,063	12.3%
Operating	(\$1)	(\$54)	(55)	-6.8%
Revenue	\$86	(\$175)	(89)	-14.8%
Redemption	\$1	\$303	304	75.2%
Total Variance	(\$36)	\$951	\$915	6.0%

➤ The positive variance is attributed to the change in the liquidity requirements which allowed long-term investments to be made rather than reinvesting these funds at short-term rates.

YTD Average Balances Budgeted vs. Actual

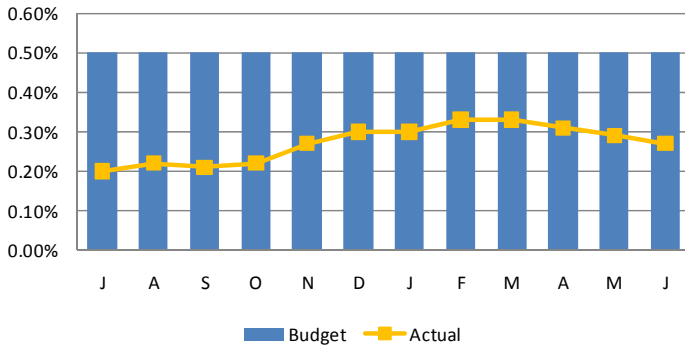


YTD Average Interest Rate Budgeted vs. Actual

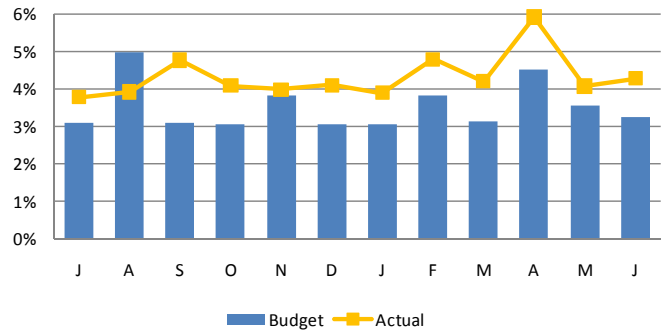


Monthly

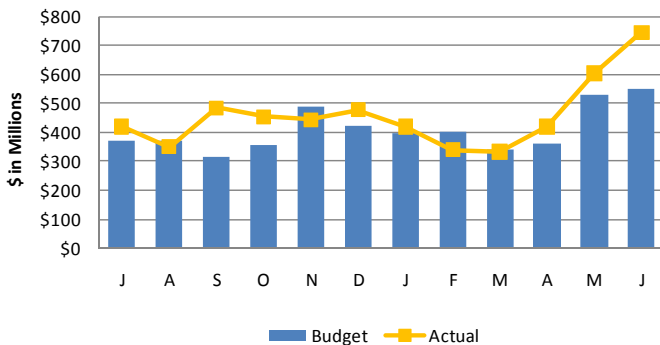
Short-Term Interest Rates



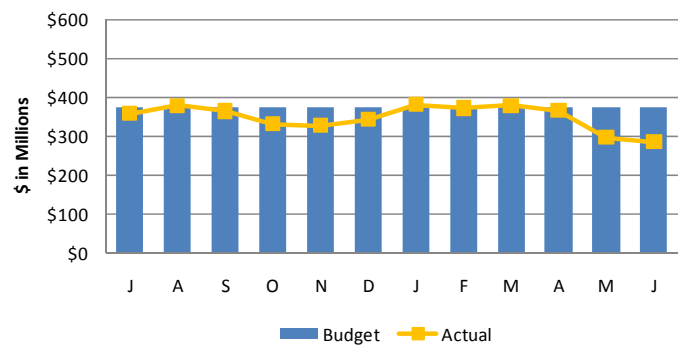
Long-Term Interest Rates



Short-Term Average Balances



Long-Term Average Balances



STAFF SUMMARY

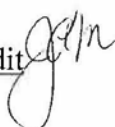
TO: Board of Directors
FROM: Frederick A. Laskey, Executive Director
DATE: September 12, 2012
SUBJECT: Internal Audit Department Activities Report



COMMITTEE: Administration, Finance & Audit

INFORMATION
 VOTE

John A. Mahoney, Director, Internal Audit
Preparer/Title



RECOMMENDATION:

For information only. Internal Audit annually presents to the Board the results of completed assignments and the objectives and status of active and planned assignments. Every quarter, Internal Audit utilizes the Orange Notebook to briefly discuss recently issued reports and to report on the status of open audit recommendations and cost savings. This staff summary includes a discussion of activities since Internal Audit's last report to the Board in September 2011.

DISCUSSION:

Internal Audit's goal is to provide sufficient audit coverage to give reasonable assurance that internal management controls are functioning as intended and that only reasonable, allowable and allocable costs are paid to consultants, contractors and vendors. Audit coverage is provided through performance audits that analyze and evaluate MWRA programs and activities to determine if they are being carried out effectively and efficiently, compliance audits that focus on adherence to MWRA policies and procedures, contractual requirements, rules or regulations and management advisory services.

The development of the annual Work Plan assignments is based on Internal Audit's risk assessment of programs and management controls, and input from the Advisory Board and senior managers across the MWRA. The actual scheduling and completion of audit assignments is dependent on staff availability which can be impacted by control issues needing immediate attention, or by unscheduled special requests for management advisory services.

Attachment 1 lists assignments completed in FY12, assignments in process at the end of FY12 and additional assignments planned to commence in FY13.

INTERNAL AUDITS and MANAGEMENT ADVISORY SERVICES

In FY12, reports on the following four assignments were issued and numerous management advisory services were completed.

FLEET SERVICES

The Fleet Services Department manages and maintains MWRA's motor vehicle and equipment fleet. The goal of the department is to maintain vehicles and equipment to minimize downtime and extend the life of assets. Fleet Services manages the Chelsea repair and fuel facilities, the gas card program and the development and processing of specifications for new vehicles and equipment. Equipment repair is also performed at the Deer Island Treatment Plant, Southborough facility and South Barre.

A&F management initiated a review of the management controls used by Fleet Services to schedule and perform vehicle maintenance activities, and to safeguard automotive parts, shop tools and equipment. A&F's review identified deficiencies and A&F initiated corrective actions.

Subsequently, Internal Audit was requested to perform an independent assessment of Fleet Services activities. Internal Audit found that improvements were needed in scheduling and documenting preventative and corrective maintenance.

- Time spent by technicians (mechanics) to complete a work order was not being recorded in Maximo.
- The work order number and plate number did not appear on the purchase order or vendor invoice, or the Stock Issue Request form for automotive parts. Although there was no evidence of misappropriation, there was no audit trail.
- Preventative maintenance (PM) work orders were opened only when a vehicle arrived at the repair facility.
- Fleet Service mechanics often went to pick up automotive parts, rather than having them delivered.
- PM was not always performed in accordance with the manufacturer's suggested schedule.
- On occasion, automotive parts received by Fleet Services were given directly to a department for installation on an assigned vehicle.
- The review identified several pieces of shop tools and equipment that were not captured in the Property Pass system.

Management Response Management took immediate corrective action by issuing new procedures for both preventative and corrective maintenance. The Maximo system is now used to schedule preventative maintenance, and to capture both mechanic hours and the automotive parts used to complete a work order. Documentation will now include the work order number in order to trace parts to specific vehicles.

The Deputy Director of Administration and Finance has further strengthened internal controls by requiring the Fleet Services Manager to report at the beginning of every week the status of equipment that is in the garage for service, and to provide a weekly reconciliation report. Because of the number of corrective actions needed to address the audit observations, Internal Audit will be re-evaluating Fleet Services' practices in FY13.

ADMINISTRATION OF WORKERS' COMPENSATION

MWRA currently utilizes the services of a third party administrator for claims management, utilization review, payment for medical evaluations, medical treatment costs, lost time compensation, claims settlements, surveillance costs, and vocational rehabilitation training costs. To facilitate the payments, MWRA deposits funds in a Workers' Compensation Payment Account (WCPA) that is jointly in the name of the Authority and third party administrator.

A&F management requested Internal Audit to assess the financial controls utilized by MWRA to ensure the effective and efficient administration of the Workers' Compensation Program.

The review identified three financial issues that were addressed by management.

- The WCPA acts as an imprest fund in that the amount in the account should be reconciled to the predetermined balance that is established for the account.

At the time of the audit the MWRA's books showed a balance of \$210,000. However, the actual balance was \$132,437.55, a variance of \$77,562.45.

The variance arose from the following transactions.

- In 2004, the administrator transferred \$175,000 into a new bank account. The administrator was unable to reconcile to the original balance of \$210,000 resulting in a variance of \$35,000.
- In December 2007, MWRA did not replenish the imprest fund for \$39,570.37 in workers compensation expenses paid by the administrator.
- The remaining \$2,992.08 variance was most likely attributable to accumulated bank charges that were never funded by the MWRA.

Management Response Corrective action was immediately taken. The WCPA account is now reconciled on a monthly basis. MWRA received a reimbursement of \$35,000 from the administrator.

- Employees are paid every two weeks in arrears from the WCPA. During the validation of the accuracy of the payments, it was found that one employee was being paid at the rate of \$1,896.68, whereas the payment should have been \$1,296.68, an overpayment of \$600 every two weeks. CCMSI was requested to recoup the overpayment totaling \$5,664.

Management Response The overpayment is being recouped and the accuracy of all workers compensation payment calculations are now being verified by MWRA staff.

- MWRA's annual budget for the Workers' Compensation Program includes reserves for each workers' compensation claim that represent the estimated future liability for lost time and medical expenses for each claim. Reserve amounts can vary greatly from month to month and can cause significant fluctuation in overall expenses in any given period. It was recommended that management consider accounting for workers' compensation expense on the cash basis, except the last month of the year where the accrual is adjusted for estimated future costs.

Management Response Management has elected to continue with its present practice of including estimated future liabilities in its monthly expense accruals to be consistent with past accounting practices.

DEER ISLAND DATA CENTER ACCESS CONTROLS

Internal Audit staff completed a review of the physical security controls at the Deer Island Data Center and related MIS secure areas. The areas reviewed by staff included the Information Security Policy Document, the physical security perimeter, physical entry controls, fire protection and training.

Physical security recommendations included the use of additional card readers, reducing signage, and hardening the security perimeter. Enhanced access controls included the use of a visitor log and access lists, and Halon and Inergen fire protection systems training was also recommended. Finally, management was asked to consider the use of the Commonwealth of Massachusetts tier 3 data center in Springfield, Massachusetts (currently under construction) as the MWRA's disaster recovery data center.

Management Response Management has implemented many of the recommendations and is evaluating the possibilities of locating to the Springfield data center.

FORE RIVER RAILROAD FINANCIAL AND MANAGEMENT CONTROLS

At the request of the Fore River Railroad's Corporation's (FRRC) Operations Manager, Internal Audit conducted a review of FRRC management and accounting activities. Recommendations included moving FRRC's records to accounting software rather than the current use of spreadsheets, improving the financial reporting to the FRRC Board of Directors by reconciling the quarterly reports to the Board with the bank statement, revising the format of the Operating Budget, developing and presenting a Capital Improvement Program each year, and timely presenting the annual financial statements. Management should also evaluate the risk of having checking account balances in excess of \$250,000 uninsured.

Management Response Management is taking steps to address each issue and has already moved its accounting activities to QuickBooks accounting software, and reformatted its financial presentations to the FRRC Board.

OTHER MANAGEMENT ADVISORY SERVICES

Numerous management advisory services were completed in FY12. The assignments included, but were not limited to, reviewing the timeliness of the release of retainage on construction contracts, validating process improvements in the Procurement Department, analyzing Deer Island overtime for responding to fire alarms, and performing numerous analyses of Howland Development's proposal for the MWRA to purchase the Chelsea facility. Internal Audit also provided litigation support to the Law Division by preparing an analysis of job promotions.

Internal Audit staff also worked closely with the Finance Division staff on several accounting and payment issues, including analyzing vendor credit balances, resolving a duplicate payment, applying prompt payment discounts, and promoting electronic fund transfers (EFT). Staff also assisted in the installation of QuickBooks software for the Fore River Railroad Corporation.

Annually, management advisory services also include calculating MWRA's fringe and indirect cost rates and billing rates for work performed on behalf of the FRRC, performing financial capability reviews of bidders, and verifying unemployment benefit calculations.

CONTRACT AUDITS AND RELATED REVIEWS

In FY12, a total of \$695,005 in savings was recognized from contract audit assignments.

CONSULTANT INCURRED COST AUDITS

Incurred cost audits determine if billed labor costs are supported by the consultant's time reports and project cost records, if other direct costs are supported by valid payments, if final indirect costs have been calculated in accordance with the contract, and that final rates have been properly applied to labor billings. The extent of fieldwork required to complete an assignment is based on a risk assessment that starts with an invoice analysis and a review of a consultant's annual cost disclosure submittals, and may include fieldwork conducted at the consultant's offices, or be limited to a desk review to verify that costs billed were supported.

In FY12, eleven incurred cost assignments were completed. A total of \$102,517 was recovered and \$75,643 in billings was avoided.

CONSULTANT PRELIMINARY REVIEWS

Internal Audit reviews and accepts provisional indirect cost rates proposed by consultants for billing both new and active contracts. If a new contract has been awarded, Internal Audit will review the supporting documentation for proposed direct labor, indirect costs, or other direct costs, and notify Procurement and the project manager of any issues, including any unsupported proposed costs that might be available for re-allocation to another cost element. Approved provisional indirect cost rates are reported to project managers and Procurement as a reference source for reviewing invoices and pricing contract amendments.

In FY12, \$81,085 in unsupported proposed costs were identified for potential reallocation.

CONSTRUCTION LABOR BURDEN REVIEWS

These reviews establish accurate labor burden rates to be used in the pricing of future change orders. Typical adjustments to contractor proposed rates include the application of effective versus statutory FICA, FUTA and SUTA rates, applying appropriate experience modifications and other adjustments to workers compensation rates, and determination of the basis for general liability and bond premium.

In FY12, eleven labor burden rate reviews were completed with an estimated \$114,972 in cost savings.

CONSTRUCTION CLAIM ANALYSIS

These reviews are undertaken at the request of project managers and/or Law Division to support negotiations or resolve construction claims and disputes. Audit procedures typically include obtaining a copy of the contractor's job cost report and validating payroll, material, equipment and costs against payroll registers, invoices and agreements. Costs are categorized as supported, unsupported or unresolved. Unsupported costs and costs that are specific to the claim are discussed in the report to assist Authority staff in the negotiation process.

In FY12, one claim review was completed and the verification of the construction costs was provided to the project manager and the Law Division.

HARBOR ELECTRIC ENERGY CORPORATION (HEEC) 2010 TRUE-UP

The purpose of this assignment was to verify the capacity and operations and maintenance (O&M) charges billed under the HEEC agreement for CY 2010. The capacity charge uses a complex formula to determine the annual payment for the use of the cross-harbor cable. The major variable cost in the formula is the effective interest rate charged on the net value of the cable after depreciation. The effective interest rate takes into account the interest paid on HEEC's bonds less the interest earned on the debt service reserve. The O&M charge includes the labor costs and materials needed to maintain the cable and insurance for the cable.

In FY2012, savings of \$60,540 were recognized from earlier negotiated changes to both the gross investment base and effective interest rate calculations used in the capacity charge calculation.

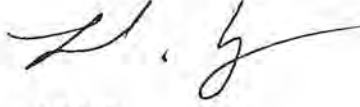
OTHER CONTRACT ASSIGNMENTS

Other contract assignments included a true-up of 2011 Boston Water and Sewer Commission CSO force account work and eligible costs with savings of \$169,335 and assisting the Procurement Department and project manager in reducing the price of the U.S. Security contract amendment by \$90,913. Internal Audit staff also validated a contractor's compliance with the terms of a settlement agreement that required the contractor to subcontract additional work with WBE firms.

Status of Internal Audit Assignment FY 12 and FY 13


COMPLETED FY12	IN PROCESS End of FY12	PLANNED FY13	
<u>Reviews of Agreements and Contracts</u>			
	<u>Date</u>		
HEEC 2010 True-up	Aug-11	CNY Lease	FRTC Railroad Revenue and Maintenance
U. S. Security	Jun-12	DITP & Chelsea Janitorial Service	Vendor TBD (1)
WBE Settlement 6975	Jun-12	Grit & Screenings HEEC 2011 True-up W. B. Mason	
<u>Consultant Incurred Cost</u>			
C&C Consultants	Feb-12	CH2M Hill	AECOM
HDR Engineering	Jan-12	City Point Partners	Beta Group
Jacobs	Sep-11	FS&T	Black & Veatch
Nitsch Engineering	Feb-12	Horsley Witten Group	Brown & Caldwell
Peer Consultants	Nov-11	Malcolm Pirnie	Bryant
Regina Villa	Sep-11	Tetra Tech Rizzo Associates	GEI
SEA	Nov-11		Green International
Shaw Environmental	Oct-11		GZA
Source One	Sep-11		PMA
STV	Apr-12		
Weston & Sampson	Jul-11		
<u>Consultant Preliminary Reviews</u>			
			<u>EST NTP</u>
Alewife Brook PS	Mar-12		DI Ancillary Mods Des 7088 \$2.3M Oct-12
Alewife Brook CSO	May-12		DI Clarifier Rehab Des 7394 \$3M Sep-12
DI Environmental Compliance Assistance	Jan-12		DI Digester/Storage Tank Des/ESDC 7052 \$3M Nov-12
NIH Redundant Pipeline	Jul-11		DI Fire Alarm System Des 6904 \$2.1M Jul-12
Wachusett Aqueduct Pumping Station	Mar-12		DI HVAC Replacement Des 7111 \$3.5M Sep-12
			DI Sodium Hypochlorite Pipe Des 6853 \$2.1M Nov-12
			MEPA Review Sudbury Aqueduct \$5.3M Jul-12
			WASM3 - MEPA/Des/CA/RI 6539 \$31.5M Jan-13
<u>Construction Labor Burden Reviews</u>			
Dam Repairs 7194	Oct-11	Clinton Aeration, 7278	DI Switchgear Replace \$4.1M Dec-12
Hultman Interconnection 6205	May-12	Clarifier Flushing, 7374	DI Fire Alarm System 7051 \$16M Jun-13
JJCWTP UV 6924	Oct-11		DI NMPS Motor Control 7420 \$6M Jun-13
Lynnfield/Saugus Pipeline 6584	Apr-12		DI WTF VFD Replace 6875 \$3.7M Jan-13
NIH 7261	Aug-11		NI Electrical & Grit Screens 7313 \$7M May-13
NMPS VFD Replacement 6903	Dec-11		No. Dorchester Outfall Dredging 4094 \$3.7M Sep-12
No. Metropolitan Sewer 7393	Sep-11		Rehab of Section 186 & 4 7423 \$3M Feb-13
Oakdale Phase I, 7230	May-12		WASM Sec 36 7222 \$21M Apr-13
Sludge Overflow 7055	Sep-11		Quabbin UV 6776 \$5.8 Sep-12
<u>Construction Change Orders and Claims</u>			
Switchgear Relay Upgrade 7061	Jul-11		Contractors TBD (2)
<u>Internal Audits & Management Advisories</u>			
			<u>Requestor</u>
BWSC CSO FAA 2011	Jun-12	Cambridge CSO FAA 2010 -2011	BWSC CSO FAA 2012
DI Data Center Access Controls	Oct-11	MIS Software Licenses	Fleet Services (Follow-Up) A&F
Fleet Services	Jan-12	MIS Physical Asset Management	MBE and WBE Subcontracting Requirements AACU
FRRC Financial & Mgmt Controls	Dec-11	Purchase Card Program	MWRA Fringe Benefit & Indirect Cost Rates A&F
Workers Compensation Program	Dec-11		MWRA Staff Billing Rate for the FRRC A&F
			Purchasing Unit A&F
			Review of Field Crews OPS

STAFF SUMMARY


TO: Board of Directors
FROM: Frederick A. Laskey, Executive Director 
DATE: September 12, 2012
SUBJECT: Delegated Authority Report – July and August 2012

COMMITTEE: Administration, Finance & Audit

X INFORMATION
VOTE


Rachel C. Madden
Director, Administration & Finance

Barbie Aylward, Administrator
Frank Renda, Data & Information Coordinator
Preparer/Title


Michele Gillen
Deputy Director, Administration & Finance

RECOMMENDATION:

For information only. Attached is a listing of actions taken by the Executive Director under delegated authority for the period July 1, 2012 through August 31, 2012.

This report is broken down into three sections:

- Awards of Construction, non-professional and professional services contracts and change orders and amendments in excess of \$25,000, including credit change orders and amendments in excess of \$25,000;
- Awards of purchase orders in excess of \$25,000; and
- Amendments to the Position Control Register, if applicable.

BACKGROUND:

The Board of Directors' Management Policies and Procedures, as amended by the Board's vote on October 14, 2009, delegate authority to the Executive Director to approve the following:

Construction Contract Awards:

Up to \$1 million if the award is to the lowest bidder; or up to \$500,000 if the award is to other than the lowest bidder.

Change Orders:

Up to 25% of the original contract amount or \$250,000, whichever is less, where the change increases the contract amount, and for a term not exceeding an aggregate of six

months; and for any amount and for any term, where the change decreases the contract amount. The delegations for cost increases and time can be restored by Board vote.

Professional Service Contract Awards:

Up to \$100,000 and one year with a firm; or up to \$50,000 and one year with an individual.

Non-Professional Service Contract Awards:

Up to \$250,000 if a competitive procurement process has been conducted, or up to \$100,000 if a procurement process other than a competitive process has been conducted.

Purchase or Lease of Equipment, Materials or Supplies:

Up to \$1 million if the award is to the lowest bidder; or up to \$500,000 if the award is to other than the lowest bidder.

Amendments:

Up to 25% of the original contract amount or \$250,000, whichever is less, and for a term not exceeding an aggregate of six months.

Amendments to the Position Control Register:

Amendments which result only in a change in cost center.

BUDGET/FISCAL IMPACT:

Recommendations for delegated authority approval include information on the budget/fiscal impact related to the action. For items funded through the capital budget, dollars are measured against the approved capital budget. If the dollars are in excess of the amount authorized in the budget, the amount will be covered within the five-year CIP spending cap. For items funded through the Current Expense Budget, variances are reported monthly and year-end projections are prepared at least twice per year. Staff review all variances and projections so that appropriate measures may be taken to ensure that overall spending is within the MWRA budget.

CONSTRUCTION/PROFESSIONAL SERVICES DELEGATED AUTHORITY ITEMS JULY 1 - 31, 2012

DATE OF AWARD	TITLE AND EXPLANATION	CONTRACT	AMENDMENT/CO	COMPANY	FINANCIAL IMPACT
07/02/12	SOUTH DIKE TREE REMOVAL AT WACHUSETT RESERVOIR GRUB, GRADE AND HYDROSEED 3.7 ACRES OF LAND TO MATCH ADJACENT SEEDED AREAS PER MWRA DCR AGREEMENT	OP-182	1	ALDORE TETREULT AND SONS, INC	\$60,000.00
07/06/12	STEAM AND HYDRO TURBINE GENERATOR MAINTENANCE DEER ISLAND TREATMENT PLANT DECREASE FOLLOWING BID ITEMS TO REFLECT ACTUAL QUANTITIES USED: NON-EMERGENCY AND EMERGENCY MAINTENANCE AND REPAIR SERVICES; PARTS AND MATERIALS AND FACTORY REPRESENTATIVE SERVICES	S480	2	ENERGY RESOURCES GROUP, INC.	(\$81,598.36)
07/18/12	THERMAL AND HYDRO POWER PLANT MAINTENANCE DEER ISLAND TREATMENT PLANT INCREASE FOLLOWING BID ITEMS TO ENSURE CONTINUED SAFE AND RELIABLE OPERATION OF ALL STEAM BOILERS AND APPURTENANCES: REPLACEMENTS PARTS AND MARK-UP; AUTHORIZED FACTORY REPRESENTATIVE SERVICES	S500	1	O'CONNOR CONSTRUCTORS, INC.	\$176,000.00
07/23/12	NORTH DIKE TREE REMOVAL AT WACHUSETT RESERVOIR AWARD OF CONTRACT TO LOWEST RESPONSIVE BIDDER FOR REMOVAL OF EXCESS TREE GROWTH ON THE NORTH DIKE OF WACHUSETT RESERVOIR TO MEET REGULATORY REQUIREMENTS FOR A TERM OF 120 CALENDAR DAYS	OP-195	AWARD	RICCIARDI BROTHERS, INC.	\$395,000.00

PURCHASING DELEGATED AUTHORITY ITEMS - JULY 1 - 31, 2012

DATE OF AWARD	TITLE AND EXPLANATION	CONTRACT #	AMENDMENT	COMPANY	FINANCIAL IMPACT
07/02/12	CONDENSING UNIT AWARD OF A PURCHASE ORDER, TO THE LOWEST RESPONSIVE BIDDER, FOR THREE 40-TON CONDENSING UNITS FOR THE DEER ISLAND TREATMENT PLANT DISINFECTION FACILITY, REPLACING EXISTING UNITS THAT HAVE REACHED THE END OF THEIR USEFUL LIVES	WRA-3456		STEBBINS-DUFFY, INC	\$56,610.00
07/06/12	ALIGNMENT TOOLS AWARD OF A PURCHASE ORDER, TO THE LOWEST RESPONSIVE BIDDER, FOR TWO LASER ALIGNMENT TOOLS FOR THE DEER ISLAND TREATMENT PLANT TO REPLACE EXISTING OBSOLETE UNITS	WRA-3454		VIBRALIGN, INC	\$41,290.00
07/06/12	REPLACEMENT OF POWER LINE CONDITIONERS AWARD OF A PURCHASE ORDER, TO THE LOWEST RESPONSIVE BIDDER, FOR TWENTY POWER LINE CONDITIONERS FOR THE DEER ISLAND TREATMENT PLANT, REPLACING EXISTING OBSOLETE UNITS	WRA-3480		NEEDHAM ELECTRIC SUPPLY COMPANY	\$62,980.00
07/06/12	GLOBE BODY LINE BREAK VALVE AWARD OF A SOLE SOURCE PURCHASE ORDER FOR ONE 36 INCH GLOBE BODY LINE BREAK VALVE, TO BE INSTALLED ON SECTION 89, WASHINGTON STREET, WOBURN			ROSS VALVE MANUFACTURING COMPANY	\$139,217.00
07/10/12	REPLACEMENT CLOSED CIRCUIT TELEVISION INSPECTION TRUCK AWARD OF A SOLE SOURCE PURCHASE ORDER FOR A REPLACEMENT CLOSED-CIRCUIT TELEVISION INSPECTION TRUCK, REPLACING THE EXISTING OBSOLETE TRUCK, WRA-848			CUES, INC	\$294,000.00
07/16/12	REPLACEMENT CARBON CANISTERS AT QUINCY AND SQUANTUM PUMP STATIONS AWARD OF A SOLE SOURCE PURCHASE ORDER FOR REPLACEMENT CARBON CANISTERS AT THE QUINCY AND SQUANTUM PUMP STATIONS			MAHER CORPORATION	\$39,880.00
07/18/12	GRIT CLASSIFIER COVERS AWARD OF A PURCHASE ORDER, TO THE LOWEST RESPONSIVE BIDDER, FOR SIXTEEN GRIT CLASSIFIER COVERS FOR THE DEER ISLAND TREATMENT PLANT, TO REPLACE EXISTING OBSOLETE UNITS	WRA-3460		WESCOR	\$69,189.00
07/18/12	SUPPLY AND DELIVERY OF SODIUM BISULFITE AWARD OF TWO SEPARATE ONE-YEAR PURCHASE ORDER CONTRACT FOR THE SUPPLY AND DELIVERY OF SODIUM BISULFITE TO THE JOHN J CARROLL WATER TREATMENT PLANT WITH PVS CHEMICAL SOLUTIONS, INC AND TO THE CLINTON WASTEWATER TREATMENT PLANT WITH JONES CHEMICAL, INC	WRA-3478		PVS CHEMICAL SOLUTIONS, INC JONES CHEMICAL, INC	\$255,000.00 \$43,890.00
07/26/12	REPLACEMENT PARTS FOR SLUDGE RECIRCULATING PUMPS AWARD OF A PURCHASE ORDER, TO THE LOWEST RESPONSIVE BIDDER, FOR REPLACEMENT PARTS FOR SLUDGE RECIRCULATING PUMPS AT THE DEER ISLAND TREATMENT PLANT	WRA-3466		PROCESS DISTRIBUTORS, INC	\$37,536.00
07/26/12	VIBRATION ANALYSIS AND SUPPORT SERVICES AWARD OF A TWO-YEAR PURCHASE ORDER CONTRACT, TO THE LOWEST RESPONSIVE BIDDER, TO PROVIDE VIBRATION ANALYSIS AND SUPPORT SERVICES TO VARIOUS MWRA FIELD OPERATIONS SITES	WRA-3488Q		M&B ENGINEERED SOLUTIONS	\$51,260.00

DATE OF AWARD	TITLE AND EXPLANATION	CONTRACT	AMENDMENT/CO	COMPANY	FINANCIAL IMPACT
08/03/12	EMPLOYEE ASSISTANCE PROGRAM (EAP) EXERCISE THREE-YEAR OPTION TO RENEW EXTENDING THE CONTRACT FROM OCTOBER 1, 2012 TO SEPTEMBER 30, 2015	A566	1	DEER OAKS EAP SERVICES, LLC	\$77,335.00
08/03/12	WIND TURBINE MAINTENANCE DEER ISLAND TREATMENT PLANT AWARD OF CONTRACT TO LOWEST RESPONSIVE BIDDER FOR WIND TURBINE MAINTENANCE FOR TWO 600KW WIND TURBINES LOCATED AT THE DEER ISLAND TREATMENT PLANT FOR A TERM OF 365 CALENDAR DAYS	5503	AWARD	AERONAUTICA WINDPOWER, LLC	\$168,330.00
08/14/12	WESTERN OPERATIONS FACILITIES GROUNDSKEEPING SERVICES DECREASE FOLLOWING BID ITEMS TO REFLECT ACTUAL QUANTITIES USED: PLANT MATERIAL ALLOWANCE; SPECIFIED GROUNDSKEEPING SERVICES; UNSCHEDULED GROUNDSKEEPING SERVICES	OP-151	2	GREENER LANDSCAPING, INC.	(\$32,662.50)
08/14/12	FUEL STORAGE TANK MAINTENANCE SERVICES DECREASE FOLLOWING BID ITEMS TO REFLECT ACTUAL QUANTITIES USED: TANK AND LINE TIGHTNESS TESTING; SCHEDULED CATHODIC PROTECTION TESTS; NON-EMERGENCY ON-CALL SERVICES; SUMP CLEAN-OUTS; THIRD PARTY UNDERGROUND FUEL STORAGE TANK INSPECTIONS; REPLACEMENT PARTS AND RENTAL EQUIPMENT; MARK-UP ON REPLACEMENT PARTS AND RENTAL EQUIPMENT	OP-113	2	PENNONI ASSOCIATES, INC.	(\$55,826.84)
08/14/12	METALS LAB FUME HOOD REPLACEMENT DEER ISLAND TREATMENT PLANT FURNISH AND INSTALL ADDITIONAL CONDUITS AND CONDUCTORS TO SEPARATE THE CONTROL WIRING; EXTEND CONTRACT TERM BY 89 CALENDAR DAYS FROM APRIL 20, 2012 TO JULY 18, 2012	6197	10	COX ENGINEERING COMPANY	\$39,680.28
08/14/12	ULTRAVIOLET DISINFECTION FACILITIES JOHN J. CARROLL WATER TREATMENT PLANT SEAL CONCRETE JOINTS, CRACKS AND CONCRETE SURFACES ON EXISTING CONCRETE UV ROOM WALLS; ADJUST SEAL ON VALVE, FURNISH, PRETEST AND INSTALL A REPLACEMENT VALVE AND PRESSURE-TEST CO2 SYSTEM; FURNISH AND INSTALL WATERSTOPS ON THE 48-INCH STAINLESS STEEL PIPES	6924	7	DANIEL O'CONNELL'S SONS, INC.	\$56,904.91
08/16/12	THERMAL POWER PLANT DUMP CONDENSER REPLACEMENT DEER ISLAND TREATMENT PLANT REMOVE ADDITIONAL BOILER-RELATED EQUIPMENT; PERFORM ADDITIONAL PIPING AND PIPE SUPPORT WORK	7061C	7	J.F. WHITE CONTRACTING CO.	\$93,616.01
08/16/12	ELECTRICAL TESTING AND TECHNICAL SERVICES METROPOLITAN BOSTON AWARD OF CONTRACT TO LOWEST RESPONSIVE BIDDER FOR ELECTRICAL TESTING AND TECHNICAL SERVICES FOR THE LOW AND MEDIUM VOLTAGE EQUIPMENT AT METRO WATER AND WASTEWATER FACILITIES FOR A TERM OF 365 CALENDAR DAYS	OP-173	AWARD	INFRA-RED BUILDING AND POWER SERVICE	\$249,324.00
08/16/12	METROPOLITAN OPERATIONS PAVING AWARD OF CONTRACT TO LOWEST RESPONSIVE BIDDER TO PROVIDE PERMANENT PAVING ON AN AS-NEEDED BASIS AT LOCATIONS WHERE ROADWAYS HAVE BEEN EXCAVATED AND TEMPORARILY PATCHED DURING MWRA MAINTENANCE, REPAIR AND NEW CONSTRUCTION WORK FOR A TERM OF 840 CALENDAR DAYS	OP-193	AWARD	NEWPORT CONSTRUCTION CORP.	\$857,150.00
08/23/12	DIGESTER SLUDGE OVERFLOW PIPING AND PLUG VALVE REPLACEMENT DEER ISLAND TREATMENT PLANT DELETE THE REQUIREMENT TO REMOVE, DISPOSE AND REPLACE FOURTEEN GLASS-LINED PLUG VALVES; DELETE THE REQUIREMENT TO FURNISH AND INSTALL 28 ELECTRICAL DISCONNECT SWITCHES FOR THE DIGESTER GAS VENT VALVES	7022	2	WALSH CONSTRUCTION COMPANY	(\$65,380.53)
08/29/12	SOUTHBOROUGH FACILITY ENERGY MANAGEMENT SYSTEM AWARD OF ENERGY EFFICIENCY CONTRACT TO NSTAR PREQUALIFIED VENDOR FOR AN ENERGY MANAGEMENT SYSTEM FOR THE SOUTHBOROUGH ADMINISTRATION AND WESTERN OPERATIONS CONTROL CENTER BUILDINGS FOR A TERM OF 180 DAYS	OP-199	AWARD	AMERICAN ENERGY MANAGEMENT	\$89,230.00

PURCHASING DELEGATED AUTHORITY ITEMS - AUGUST 1 - 31, 2012

DATE OF AWARD	TITLE AND EXPLANATION	CONTRACT #	AMENDMENT	COMPANY	FINANCIAL IMPACT
08/03/12	CISCO SMARTNET SWITCHES - MAINTENANCE AND SUPPORT AWARD OF A THREE-YEAR PURCHASE ORDER CONTRACT, UNDER STATE BLANKET CONTRACT #ITT29, FOR THE SOFTWARE MAINTENANCE AND SUPPORT OF 78 CISCO SMARTNET SWITCHES	SC-#ITT29		PRESIDIO NETWORKED SOLUTIONS, INC	\$82,518.37
08/14/12	LABORATORY EQUIPMENT MAINTENANCE AWARD OF A THREE-YEAR PURCHASE ORDER CONTRACT, TO THE LOWEST RESPONSIVE BIDDER, TO PROVIDE PREVENTIVE AND CORRECTIVE MAINTENANCE SERVICES FOR THE DEPARTMENT OF LABORATORY SERVICES LABORATORY EQUIPMENT	WRA-3430Q		ECONOMY LABORATORY SERVICES	\$33,630.00
08/16/12	HEAT EXCHANGER PLATES AWARD OF A PURCHASE ORDER, TO THE LOWEST RESPONSIVE BIDDER, FOR HEAT EXCHANGER PLATES FOR THE DEER ISLAND TREATMENT PLANT, REPLACING EXISTING OBSOLETE UNITS	WRA-3490		INDUSTRIAL PACKING	\$25,596.00
08/16/12	CAD WORKSTATIONS AWARD OF A PURCHASE ORDER, TO THE LOWEST RESPONSIVE BIDDER, FOR TWENTY HP Z420 CAD WORKSTATIONS FOR THE ENGINEERING AND CONSTRUCTION DEPARTMENT	WRA-3492-Q		HIQ COMPUTERS, INC	\$27,340.00
08/16/12	DUCTILE IRON, GLASS-LINED PIPE AND PIPING CONNECTIONS AWARD OF A PURCHASE ORDER, TO THE LOWEST RESPONSIVE BIDDER, FOR DUCTILE-IRON, GLASS-LINED PIPE TO BE USED AS PART OF AN ONGOING PROJECT TO REPLACE THREE THICKENED PRIMARY SLUDGE PUMPS WITH PROGRESSIVE CAVITY PUMPS	WRA-3457		F.W. WEBB COMPANY, INC	\$29,633.78
08/16/12	CENTRAL BLOWER ACTUATORS AWARD OF A PURCHASE ORDER, TO THE LOWEST RESPONSIVE BIDDER, FOR SIX BLOWER ACTUATORS FOR THE PRIMARY CLARIFIER AIR LOW-PRESSURE SYSTEM, REPLACING EXISTING OBSOLETE UNITS	WRA-3495		POWER HOUSE SUPPLY	\$37,935.00
08/16/12	FAN ASSEMBLY - CRITICAL NEED AWARD OF A CRITICAL NEED PURCHASE ORDER FOR THE REPLACEMENT OF AN ODOR CONTROL FAN ASSEMBLY FOR THE DEER ISLAND TREATMENT PLANT ODOR CONTROL FACILITY			VERANTIS ENVIRONMENTAL SOLUTIONS GROUP	\$72,870.00
08/16/12	ORACLE DATABASE APPLIANCE HARDWARE, INSTALLATION AND SUPPORT AWARD OF A PURCHASE ORDER, TO THE LOWEST RESPONSIVE BIDDER, FOR THE PURCHASE, INSTALLATION AND SUPPORT OF TWO ORACLE DATABASE APPLIANCES AS PART OF A DATABASE CONSOLIDATION AND STANDARDIZATION PROJECT	WRA-3499		MYTHICS, INC	\$95,187.67
08/16/12	VARIABLE FREQUENCY DRIVES AWARD OF A PURCHASE ORDER, TO THE LOWEST RESPONSIVE BIDDER, FOR FOUR VARIABLE FREQUENCY DRIVES FOR THE COMMONWEALTH AVENUE PUMP STATION, REPLACING EXISTING OBSOLETE DRIVES	WRA-3491		ASSOCIATED ELECTRO-MECHANICS, INC	\$120,951.00
08/16/12	SUPPLY AND DELIVERY OF HYDROFLUOROSILICIC ACID AWARD OF A ONE-YEAR PURCHASE ORDER CONTRACT, TO THE LOWEST RESPONSIVE BIDDER, FOR THE SUPPLY AND DELIVERY OF HYDROFLUOROSILICIC ACID TO THE JOHN J CARROLL WATER TREATMENT PLANT	WRA-3497		SOLVAY FLUORIDES, LLC	\$864,887.43
08/20/12	SCADA SOFTWARE MAINTENANCE AND SUPPORT AWARD OF A SOLE-SOURCE PURCHASE ORDER FOR THE RENEWAL OF A ONE-YEAR SCADA SOFTWARE MAINTENANCE AGREEMENT, PLUS THE PURCHASE OF PROFICY WORKFLOW SOFTWARE AS PART OF A PILOT PROJECT			GE INTELLIGENT PLATFORMS, INC	\$129,587.00

POSITION CONTROL REGISTER (PCR) LOCATION CHANGES August 2012

<u>DATE OF CHANGE</u>	<u>POSITION TITLE</u>	<u>CURRENT PCR#</u>	<u>CURRENT COST CENTER</u>	<u>NEW PCR #</u>	<u>NEW COST CENTER</u>	<u>REASON FOR CHANGE</u>
8/4/2012	Document Coordinator	8810033	Procurement	4510049	Treasury	To meet the staffing needs of both Procurement and Treasury
8/18/2012	Skilled Laborer	3394039	Grounds Maint -West	5910038	Policy&Admin	To meet the staffing needs in the Facilities Management Unit



STAFF SUMMARY

TO: Board of Directors
FROM: Frederick A. Laskey, Executive Director
DATE: September 12, 2012
SUBJECT: Pension System Issues Review



COMMITTEE: Administration, Finance & Audit

 VOTE
 X INFORMATION


Thomas J. Durkin, Treasurer
Preparer/Title
Rachel C. Madden
Director, Administration & Finance

RECOMMENDATION:

Information only. Several issues regarding public pensions liability have been reported in the media recently. The issues include the budgetary effect of the adoption of the new mortality table for actuarial calculations, the appropriate assumed rate of return on investments, and the latest pronouncements from the Government Accounting Standards Board (GASB) requiring additional disclosure of the MWRA's pension liability. This staff summary will address these current issues facing public pensions across the country generally and the MWRA Employees Retirement System specifically.

DISCUSSION:

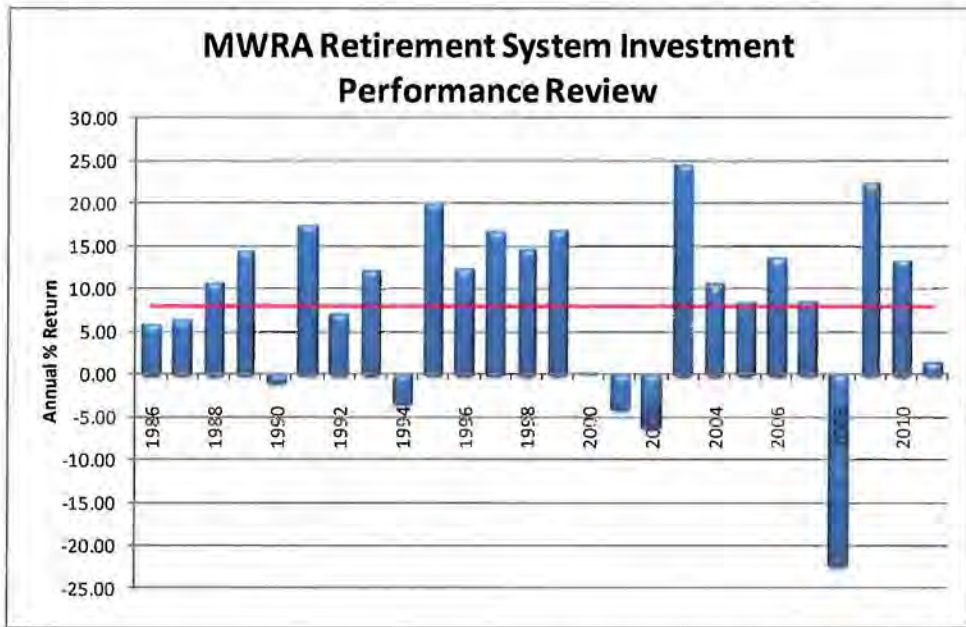
The recent reports have focused on the ongoing debate concerning the assumptions and methods used in reporting an employer's liability for the pension system's benefit funding. A pension system's Unfunded Actuarial Accrued Liability (UAAL) is a measure of the degree to which an employer has funded the system. Many systems across the country have not funded the systems adequately.

Each year employees earn a pension benefit as members of a retirement system. The total cost for the employer of the benefit earned for all of the employees is referred to as the Normal Cost. A plan would be fully funded if the Normal Cost had been funded each year. Aside from the issue of employers historically underfunding the Normal Cost, the issue of how the UAAL and the Normal Cost are calculated and reported has been frequently debated in recent months.

Assumed Rate of Return

The assumed rate of return that will be earned on the investment pool is an important assumption that is made by the actuaries when computing the UAAL and the Normal Cost. Recently State Treasurer Grossman announced his desire to lower the assumed rate of return from 8.25% to

8.00% for the state's pension system. The Treasurer has referenced the state pension systems' recent low returns and his outlook for future earnings for this decision. MWRA's pension system currently uses 8.00%. The members of the MWRA Employees Retirement System Board of Trustees have not indicated a strong desire to lower this assumption. The MWRA pension system has actually achieved 8.00% since inception. The graph below illustrates the annual returns of the investment pool. The horizontal line represents the assumed rate of 8.00%.



As the table below details, the recent returns have been less than the assumed rate return but the MWRA Employees Retirement System Board is confident the fund will achieve 8.00% in the long-term. This assumption is reviewed for reasonableness by the actuarial firm performing the actuarial report and by accounting firm issuing the MWRA's financial statements which include disclosure of parts of the actuarial report. If the Retirement System Board were to lower the assumed rate of return, the effects of the lowering would be seen as an increase to the annual budget requirement, but such a change is not recommended at this time.

Period	Return
1 Year	1.40%
5 Year	3.54%
10 Year	6.63%
Since Inception (1986)	8.00%

New Mortality Tables

Another very important actuarial assumption is life expectancy. We all know that people are living longer. Because the pension benefit is paid until the member dies, this increased life expectancy results in a greater benefit cost to the employer. Due to recent updates within the Actuarial Standards of Practice No. 35 (ASOP 35) of the Actuarial Standards Board (ASB), the actuarial firm issuing the actuarial report to the pension system has revised the mortality assumptions used in the valuation computation based on the new RP-2000 mortality tables. The

MWRA Employees Retirement System Board hires an actuarial firm to conduct a full valuation every two years. The most recent valuation was done as of January 1, 2011. That report was used to develop the budget for FY13 and FY14. The next valuation report will be done as of January 1, 2013. In the “off year” the MWRA Employees Retirement System contracts for an interim year report. The interim year reports are helpful to plan for changes to the liability. In the recent interim report, the UAAL increased from \$42.2 million to \$56.8 million as a result of the longer life expectancy reflected in the new mortality tables. This increase to the UAAL will likely increase the annual required contribution amount for FY15 from \$6.1 million to \$8.3 million, a projected increase of \$2.2 million. The use of the new RP-2000 Mortality Tables will increase the Normal Cost going forward and the UAAL until full funding is achieved in 2024.

The magnitude of the UAAL is a major concern for all pension plans. A widely used measure of pension funding is the Funded Ratio. Funded Ratio is calculated by dividing the Actuarial Value of Assets by the Actuarial Value of Liabilities. As of the last full actuarial report, MWRA had a Funded Ratio of 87.6%. In its most recent annual report, the Public Employees Retirement Administration Commission (PERAC) ranked MWRA the 5th most funded system of the 106 pension systems in Massachusetts. It is likely that this Funded Ratio will be reduced due to the implementation of the RP-2000 Mortality Tables in the full valuation of January 1, 2013, offset by additional optional contributions. Massachusetts state law requires pension systems to be “fully funded” having amortized the UAAL by no later than June 30, 2040. MWRA Employees Retirement System is currently scheduled to be fully funded by 2024.

MWRA has continued to responsibly maintain its commitment to be fully funded by 2024 as part of a long-term strategy for addressing its outstanding pension and Other Post Employment Benefits (OPEB) liabilities. Currently, MWRA is not funding OPEB having adopted a holistic approach to addressing both these outstanding liabilities sequentially. Under this plan, MWRA will aggressively pay down its pension liability by 2024 and upon reaching full funding, redirect budgeted funds to begin paying down its OPEB liability.

New GASB Reporting Requirement

An important reporting requirement has been added. The GASB has issued a new pronouncement, GASB Statement 68 Accounting and Financial Reporting for Pensions, requiring that the pension liability be included on the employer’s balance sheet. MWRA will include this liability on its balance sheet for the first time at the close of FY15. Additionally, GASB has created its own method for calculating the liability for reporting purposes though not affecting the calculation for funding. The GABS 68 liability calculation method, principally a blending of the assumed rate of return, will result in a higher liability than the current method.

The change required by GASB 68 will not affect the annual budget. This change will only affect the financial statements by including a liability not previously included.

BUDGET/FISCAL IMPACT:

There is no fiscal impact for the current fiscal year or FY14. As a result of the new mortality tables, the interim valuation report projects an increase to the FY15 budget requirement of approximately \$2.2 million increasing over time to \$2.9 million in FY24, the year when the retirement system is scheduled to be fully funded.


STAFF SUMMARY

TO: Board of Directors
FROM: Frederick A. Laskey, Executive Director
DATE: September 12, 2012
SUBJECT: Fiscal Year 2012 Year-End Capital Program Spending Report



COMMITTEE: Administration, Finance & Audit

VOTE
 INFORMATION


Kathy Soni, Budget Director

Dave Whelan, Budget Manager
Preparer/Title

Michael J. Hornbrook
Chief Operating Officer

Rachel C. Madden
Director, Administration & Finance

At the end of each fiscal year, staff present the Board with a comprehensive recap of the Capital Improvement Program (CIP) with more detailed explanations of variances than those provided in the monthly Financials.

Overall FY12 has been another successful year, during which MWRA achieved significant progress on several major projects. Staff managed over 85 design and construction projects, and awarded new contracts valued at over \$110 million.

Contract award amounts continued to reflect the current competitive economic environment resulting in lower than budgeted awards in excess of \$37 million.

FY12 was the fourth year of MWRA's five-year spending cap of FY09-13 established at \$1.14 billion. The cap serves as a ceiling for annual and cumulative 5-year spending. MWRA has successfully stayed well within its cap limit and complied with both the annual and five-year overall cap requirements.

In terms of overall spending, FY12 has followed previous years' trends driven by the multitude of factors that influence both design and construction projects, such as: changes in schedules, scope and priorities; removal of projects from the CIP due to work being done in-house; permitting issues; and revision or deletion of projects after further re-evaluation, etc.

While capital spending is tracked annually, capital projects often extend over several years. As a result, spending across fiscal years is blurred.

Looking forward to FY13 and the next five-year cap to be established in the FY14 budget cycle, the capital program will reflect the evolution of the Authority's CIP from primarily being comprised of mandated projects to asset protection and water redundancy initiatives. The inclusion and prioritization of projects in the CIP will continue to be guided by the Master Plan, originally established in 2006 and currently being updated.

RECOMMENDATION:

For information only. The Fiscal Year 2012 Year-End Capital Program Spending Report highlights major capital program accomplishments and provides explanations for spending variances and schedule changes versus the budget.

DISCUSSION:

For FY2012, total Capital Improvement Program (CIP) spending was budgeted at \$165.1 million. Total spending was \$137.6 million, which was \$27.5 million or 16.6% below budget. The FY12 CIP included a wide range of projects.

For the first time in several years, spending on Waterworks projects, at \$55.3 million, was higher than spending on the Combined Sewer Overflow (CSO) Control Program, at \$47.6 million. Spending for other Wastewater projects was \$28.2 million and spending for Business and Operations Support was \$6.6 million.

Projects that were completed or reached substantial completion in FY12 included:

- Deer Island Treatment Plant Primary & Secondary Clarifier Rehab - \$59.2 million
- Deer Island Electrical Equipment Upgrade 3 - \$15.1 million
- Southern Spine Distribution Mains, Section 107, Phase 2 - \$15.0 million;
- New Connecting Mains, Shaft 7 to WASM, Northeast Segment - \$5.6 million
- Charlestown Wind Turbine - \$5.2 million (funded through ARRA)
- Reserved Channel Sewer Separation, Contract 1 (BWSC) - \$ 4.0 million
- Deer Island Thermal/Power Plant Dump Condenser Replacement - \$2.9 million
- Section 156 Sewer Rehabilitation - \$2.6 million
- Prison Point HVAC Upgrades – \$2.4 million
- Lower Dorchester Brook Conduit (BWSC) - \$2.0 million

MWRA also made significant progress on a number of water and wastewater projects, including:

- Brookline Sewer Separation – 97% complete
- Rehabilitation of the Lower Hultman Aqueduct – 89% complete
- Lynnfield/Saugus Pipeline – 79% complete
- Carroll Plant UV Disinfection – 39% complete
- Dam Project – 35% complete
- Spot Pond Storage Facility – 15% complete

In FY12, the MWRA continued the support for the community financial assistance programs by providing funding of \$36.7 million for wastewater infiltration and inflow (I/I) removal (\$14.0 million) and water pipeline improvements (\$22.7 million).

In terms of the amount of awards in FY12, MWRA benefited from the current competitive economic environment as the actual project awards were, in general, lower than projected.

Major Variances to FY12 Budget

The \$27.5 million variance is the net of \$52.2 million in less than budgeted spending on 47 projects offset by \$24.7 million in more than budgeted spending on 15 projects.

The main reasons for these variances are:

- Treatment - \$23.6 million underspending mostly due to lower than budgeted award for the North Main Pump Station VFD Replacement of \$5.4 million, delays in Clarifier Flushing System of \$1.6 million, Expansion Joint Repair Construction 2 of \$1.2 million, Barge Berth & Facility Replacement of \$1.1 million, Miscellaneous VFD Replacements of \$1.0 million, Process Instrumentation Control System (PICS) of \$1.0 million, and Digester Modules 1 & 2 Pipe Replacement of \$0.9 million.
- Combined Sewer Overflow program - \$12.9 million overspending mostly due to timing of payments for Reserved Channel of \$8.3 million and Brookline Sewer Separation of \$4.8 million, and North Dorchester Bay CSO of \$1.2 million due to timing and unanticipated work. This overspending was partially offset by less than anticipated CSO Land Easement expense of \$1.1 million primarily due to the favorable negotiations of temporary easement lease terms.
- Drinking Water Quality Improvements – \$7.6 million less than budgeted spending primarily due to lower award for the Spot Pond Design/Build contract of \$7.3 million offset by higher spending for the Carroll Water Treatment Plant Ultraviolet Disinfection of \$1.4 million.
- Interception & Pumping - \$4.4 million less than budgeted spending primarily due to updated schedules for Chelsea Creek Upgrade Design/Construction Administration and Engineering Services During Construction/Resident Inspection of \$1.5 million due to revised schedules and sequencing for the headworks upgrades and updated schedule for the Braintree-Weymouth Wetlands Replication contract of \$0.5 million. This was partially offset by contractor progress on the Section 156 Rehabilitation Design/Build contract of \$0.9 million.
- Waterworks Other - \$4.2 million less than budgeted spending due to Local Water Pipeline community requests for loans being lower than budgeted.
- Business and Operations Support - \$3.3 million less than budgeted spending is attributable to lower Equipment Purchase of \$1.2 million due to the timing of purchases for equipment, vehicles, and laboratory equipment, and Business Systems Plan of \$1.1 million due to projects being restructured, renamed, and re-scheduled based on the IT Strategic Plan.

Some of the underspending was offset by overspending of \$2.1 million in Distribution and Pumping due to the timing of work for the Lynnfield/Saugus Pipeline and progress on the Reading/Stoneham Interconnections contract, accelerated schedule and higher than expected

contractor progress on the Hultman Rehabilitation of \$1.2 million, and greater than budgeted spending for the Infiltration and Inflow (I/I) Program of \$4.0 million.

Please refer to Attachment B of the report for detailed FY12 CIP variance explanations.

FY13 Outlook

Looking ahead to Fiscal Year 2013, the projected capital spending is \$164.9 million including contingency of \$8.6 million. Projects with the largest budgeted spending in FY13 include Deer Island Treatment Plant Asset Protection of \$31.6 million, Carroll Plant of \$21.9 million, Spot Pond Storage Facility of \$21.8 million, Cambridge Sewer Separation of \$12.2 million, and Reserved Channel Sewer Separation of \$12.0 million.

Staff will be completing the design and progressing to the bid and award stage on several major projects such as Weston Aqueduct Supply Mains (WASM) Design/Construction Administration/Resident Inspection, WASM Section 36/Watertown/Waltham Connections Construction, Deer Island Treatment Plant Fire Alarm System Replacement, Nut Island Electrical & Grit/Screens Conveyance Construction, Quabbin Ultraviolet Disinfection Construction, and Sudbury Aqueduct Massachusetts Environmental Protection Agency review contracts. Staff will also continue to provide oversight for the CSO Community Managed projects including Reserved Channel and Cambridge Sewer Separation contracts. In addition, staff continue to work on the final design of the Headworks Upgrades projects.

ATTACHMENTS:

- A. Fiscal Year 2012 Year-End Capital Program Spending Report
- B. FY12 CIP Year-End Variance Report
- C. FY12 Planned versus Actual/Revised CIP Notice to Proceeds
- D. Linear Footage of Rehabilitated or New Pipelines in FY12
- E. FY13 Planned Capital Contract Awards

MASSACHUSETTS WATER RESOURCES AUTHORITY

Capital Program Spending Report

for

FY2012



September 12, 2012

Fiscal Year 2012 Year-End Capital Program Spending Report

Table of Contents –

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Introduction

Since its inception, MWRA has expended \$7.6 billion on capital initiatives. Of this spending 73% has supported improvements to the Wastewater treatment, interceptor, pumping and combined sewer overflow (CSO) systems, 26% has supported Waterworks treatment, transmission, distribution and water protection improvements.

MWRA Capital Spending FY1986 - FY2022				
(\$ in millions)				
	Expenditures FY86 - 2012		Planned Expenditures 2013 - 2022	
	Total	% of Total	Total	% of Total
Program				
Wastewater	\$5,514	73%	\$805	44%
Waterworks	\$1,968	26%	\$979	54%
Business & Operations Support	\$105	1%	\$37	2%
Total MWRA	\$7,586	100%	\$1,821	100%

Through FY12, over 80% of the capital spending has been for court mandated projects. In 2006, MWRA completed a Master Plan which identified the system needs and served as a basis of including projects in the CIP. Going forward, MWRA expects to spend an additional \$1.8 billion on system improvements between FY13-FY22 with main emphasis on Asset Protection and Water System Redundancy initiatives.

To-date, MWRA has spent \$802.3 million on the Wastewater CSO program and plans to spend an additional \$59.2 million through FY22.

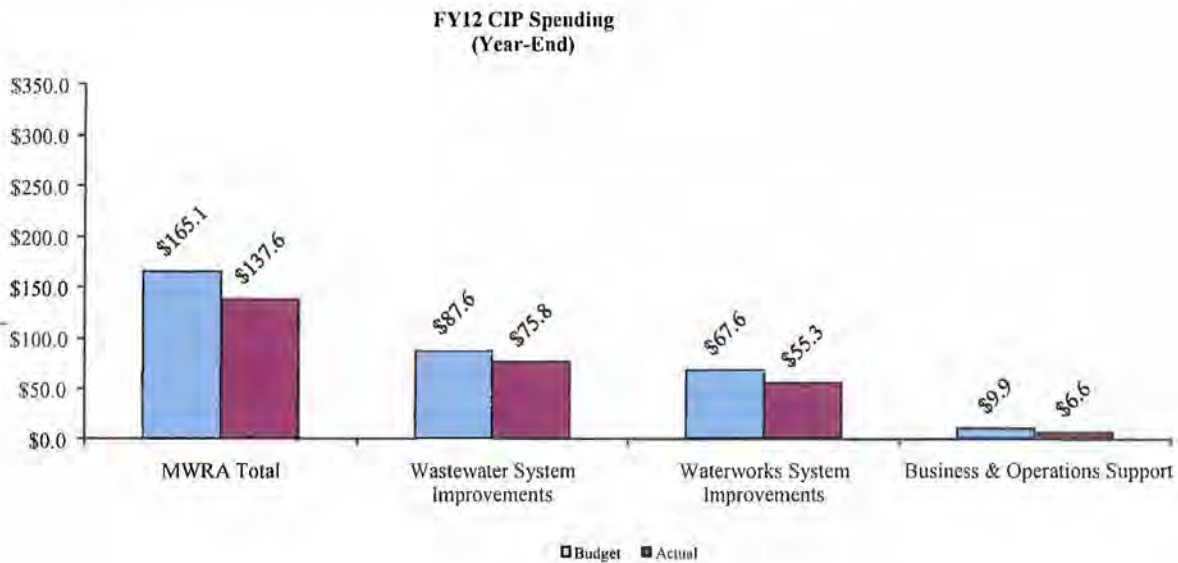
To-date, MWRA has distributed \$86.7 million in grants and \$134.2 million in no-interest loans to fund 430 separate projects in 43 communities under the I/I Local Financial Assistance Program. Additionally, \$225.7 million in Local Water Pipeline Assistance Program loans has been distributed to member communities.

FY12 Spending

Total Capital Improvement Program (CIP) spending in Fiscal Year 2012 was \$137.6 million which was \$27.5 million or 16.6% less than the \$165.1 million budgeted. Spending by program in FY12 was:

Program	FY12 Budget (\$ Millions)	FY12 Actuals (\$ Millions)	Variance	% Variance
Wastewater	\$87.6	\$75.8	(\$11.9)	-14%
Waterworks	\$67.6	\$55.3	(\$12.3)	-18%
Business & Operations Support	\$9.9	\$6.6	(\$3.3)	-33%
Total	\$165.1	\$137.6	(\$27.5)	-17%

Variances are illustrated in the following graph:



FY12 spending included \$9.7 million in financial assistance that the MWRA provided to its member communities for wastewater infiltration and inflow (I/I) removal and water pipeline improvements. The \$9.7 million includes \$30.4 million in loans (45% for sewer and 55% for water improvements) and \$6.3 million in I/I grants, offset by \$27.0 million in repayments by communities for previously issued loans.

During FY12, the MWRA rehabilitated or replaced over 5 miles of wastewater pipeline including Community Managed pipeline and 5 miles of water pipeline including substantial progress on repairs to the Hultman Aqueduct. These numbers do not include the rehabilitated or replaced pipelines of our member communities which are funded through our Inflow/Infiltration (I/I) program as referenced above. Refer to Attachment D for the linear footage of rehabilitated or new pipelines in FY12.

FY12 Capital Program Highlights

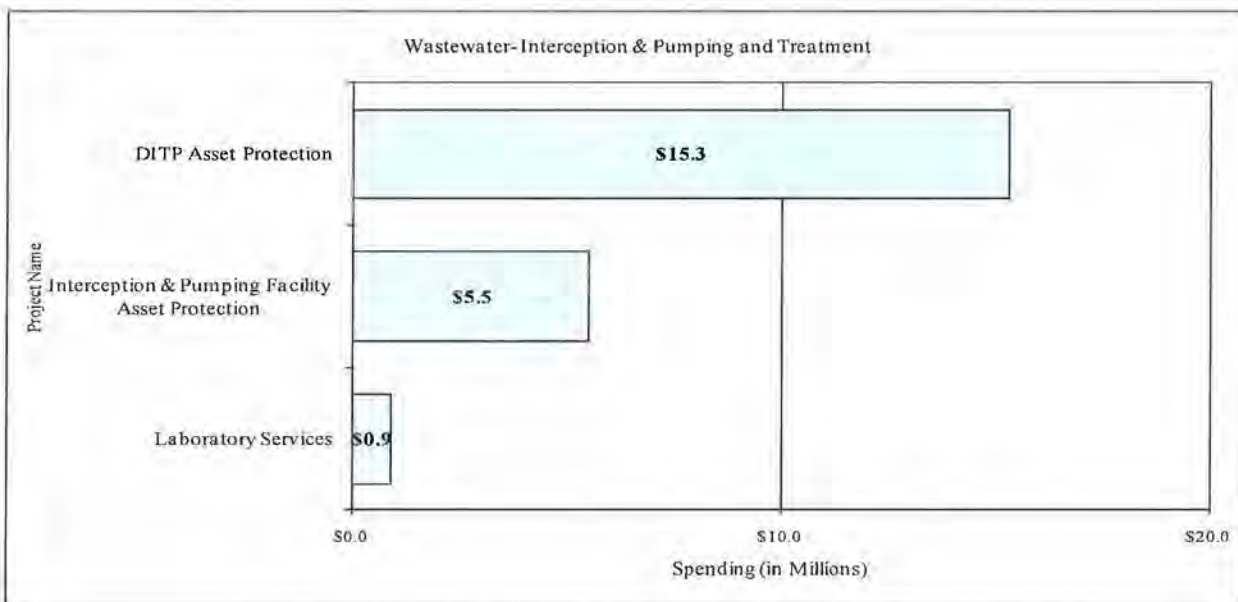
Wastewater System

During FY12, the MWRA spent \$75.8 million on the Wastewater system projects for the following: Interception & Pumping projects of \$6.0 million, Treatment projects of \$16.4 million, CSO projects of \$47.6, and Other Wastewater projects of \$5.8 million.

This section highlights the spending and key accomplishments by the major program categories and projects:

Wastewater Interception & Pumping and Treatment Projects

Total FY12 spending for Interception & Pumping was \$6.0 million and Treatment was \$16.4 million. The largest spending occurred on the following:



Key Accomplishments include:

Wastewater - Interception and Pumping:

- North System Hydraulic Study Notice to Proceed was issued in November 2011.
- Somerville/Marginal Influent Gates and Stop-Log Replacement contract was substantially complete in November 2011.
- Alewife Brook Pump Station Final Design/Construction Administration/Resident Engineering Inspection Notice to Proceed was issued in March 2012.
- Prison Point HVAC Upgrades was substantially complete in March 2012.
- Hingham Pump Station Isolation Gate Construction was substantially complete in May 2012.
- Cottage Farm Fuel System Upgrade Notice to Proceed was issued in May 2012.
- Section 156 Sewer Rehabilitation was substantially complete in May 2012.

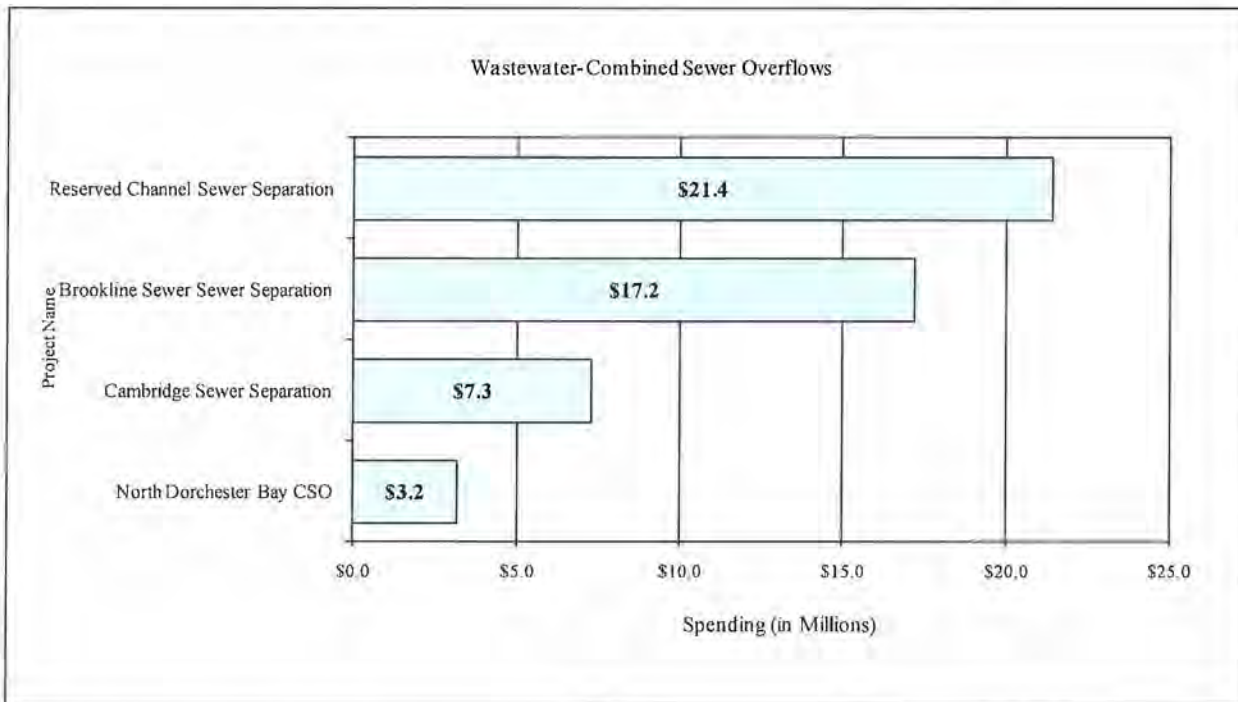
Wastewater - Treatment:

- Deer Island Treatment Plant (DITP) Primary & Secondary Clarifier Rehabilitation contract was substantially complete in February 2012.
- DI Process Information Control System (PICS) Notice to Proceed was issued in July 2011.
- Electrical Equipment Upgrade 3 and Resident Engineering/Inspection contracts were substantially complete in August 2011 and November 2011, respectively.
- Digester Sludge Pump Replacement Phase 1 Construction was substantially complete in September 2011.
- North Main Pump Station Variable Frequency Drives Replacement Construction Notice to Proceed was issued in December 2011.
- North Main Pump Station Motor Control Center Construction Notice to Proceed was issued in January 2012.
- DITP Thermal/Power Plant Dump Condenser Replacement was substantially complete in February 2012.
- Metals Laboratory Fume Hood Replacement Design and Construction contracts were substantially complete in February 2012.

- Clinton Aeration Efficiency Improvement contract Notice to Proceed was issued in April 2012.
- DITP As-Needed Design Phases 6-1 and 6-2 were substantially complete in May 2012.
- Clarifier Flushing System Construction was awarded in May 2012.
- Fuel Pipe Abandonment contract was awarded in June 2012.
- DITP Digester Sludge Overflow Piping and Plug Valve Replacement Notice to Proceed was issued in August 2011.

Wastewater System – Combined Sewer Overflow (CSO) Projects

Total FY12 spending for CSO projects was \$47.6 million. Of this amount, the Community Managed projects totaled \$43.8 million, MWRA Managed projects totaled \$3.2 million, and Planning and Support projects totaled \$0.6 million. The largest spending occurred on the following:



Key accomplishments include:

- Boston Water & Sewer Commission reached substantial completion of the Lower Dorchester Brook Construction in July 2011.
- Substantial progress was made on the second Brookline Sewer Separation contract.

- Substantial progress was made on Cambridge Sewer Separation Contract 12.
- Reserved Channel Contract 1 was substantially complete in December 2011.
- MWR003 Gate & Siphon Design Notice to Proceed was issued in March 2012.
- Brookline MRW010 Outfall Cleaning Notice to Proceed was issued in April 2012.
- Reserved Channel Sewer Separation Construction 8 Paving Notice to Proceed was issued in April 2012.
- Reserved Channel Sewer Separation Contract 7 reached substantial completion in April 2012.

Wastewater - Other

This category included the community managed Infiltration/Inflow (I/I) Local Financial Assistance Program.

In FY12, MWRA distributed \$6.2 million in grants and \$7.7 million in no-interest loans which is offset by repayment of prior-period loans of \$8.1 million which resulted in total net spending of \$5.8 million.

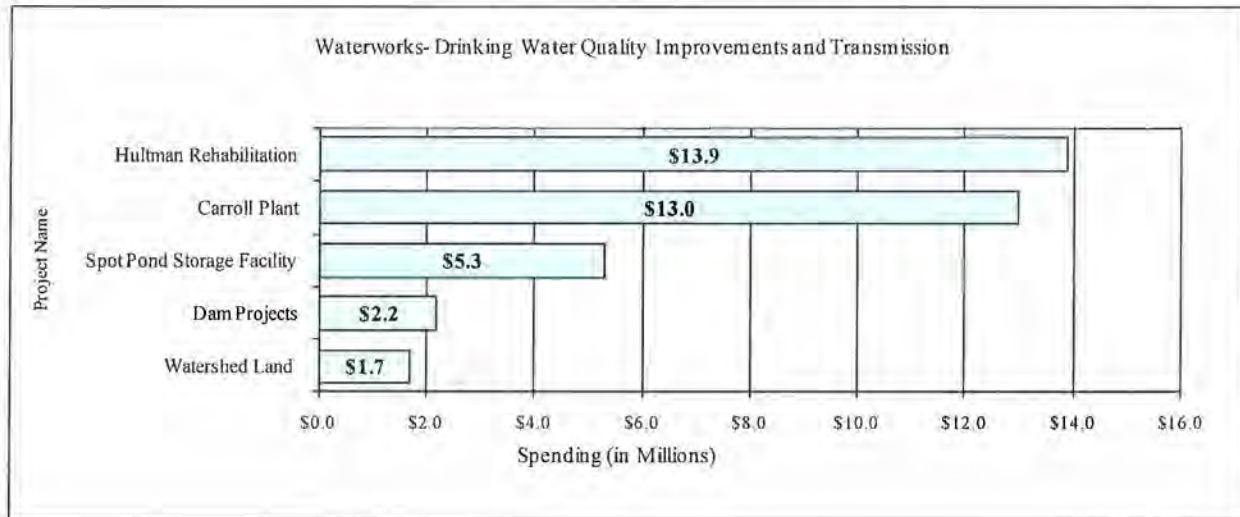
Waterworks System

During FY12, the MWRA spent \$55.3 million on the Waterworks system projects for the following: Drinking Water Quality Improvement projects of \$18.4 million, Transmission projects of \$18.3 million, Distribution and Pumping projects of \$14.3 million and Other Waterworks projects of \$4.3 million.

This section highlights the spending and key accomplishments by the major program categories and projects:

Waterworks System – Drinking Water Quality Improvements and Transmission

Total FY12 spending for Drinking Water Quality Improvements and Transmission projects was \$18.4 million and \$18.3 million, respectively. The largest spending occurred on the following:



Key accomplishments included:

- Spot Pond Storage Facility Design/Build Notice to Proceed was issued in November 2011.
- Substantial progress has been made on the Carroll Water Treatment Plant Ultraviolet Disinfection contract.
- Spot Pond Storage Facility Early Water Connection was substantially complete in February 2012.
- Carroll Plant Installation of Second Gaseous Oxygen Line was substantially complete in May 2012.

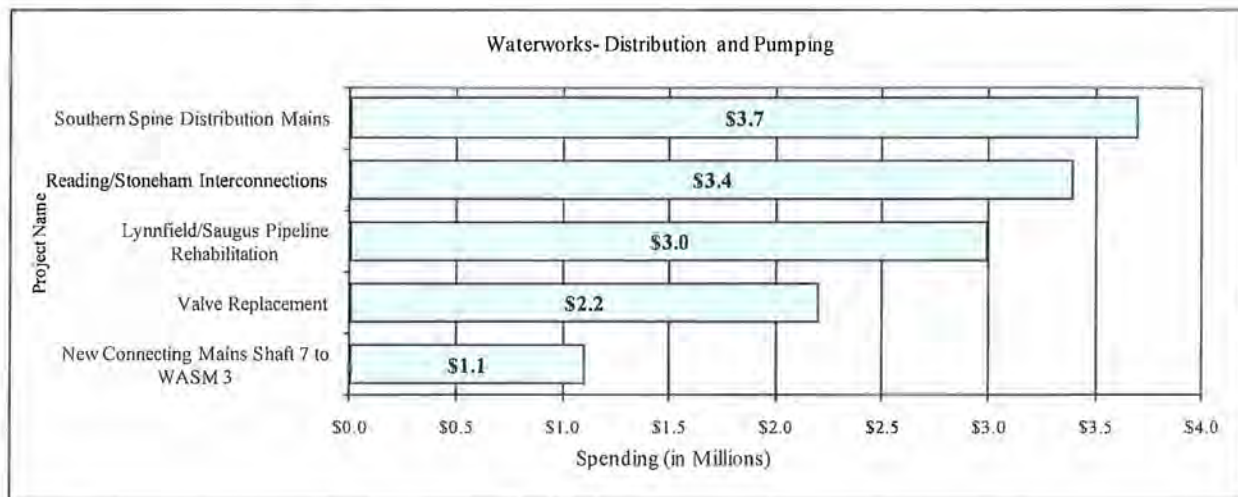
Waterworks - Transmission

- Substantial progress has been made on the Rehabilitation of the Lower Hultman Aqueduct (CP-6A). The contract is currently ahead of schedule.
- Dam Safety Modifications and Repairs Construction Notice to Proceed was issued in August 2011.
- Water Transmission Redundancy Plan was substantially complete in September 2011.

- Wachusett Aqueduct Pump Station Design/ESDC/RI Notice to Proceed was issued in February 2012.
- Upper Hultman Rehabilitation (CP-6B) Notice to Proceed was issued in April 2012.
- Oakdale Phase 1A Electrical Construction Notice to Proceed was issued in April 2012

Waterworks System - Distribution and Pumping

Total FY12 spending for Distribution and Pumping projects totaled \$14.3 million. The largest spending occurred on the following:



Key accomplishments included:

- Reading/Stoneham Interconnections Notice to Proceed was issued in August 2011.
- New Connecting Mains Shaft 7 to WASM 3 CP5 Northeast Segment was substantially complete in November 2011.
- Southern Spine Distribution Mains Section 107 Phase 2 Construction was substantially complete in January 2012.

Waterworks – Other

This category includes the community assistance program for the local water pipelines.

In FY12, MWRA distributed \$22.7 million in Local Water Pipeline Assistance Program loans to member communities offset by repayment of prior-period loans of \$18.8 million.

Business & Operations Support

Total FY12 spending for Business and Operations Support totaled \$6.6 million.

Key accomplishments included:

- As-Needed Design Contracts 9 and 10 for technical assistance Notice to Proceeds were issued in July and August 2011, respectively.
- Charlestown Wind Turbine was substantially complete in October 2011.
- Carroll Plant Solar Construction was substantially complete in August 2011.
- As-Needed Design Contract 8 for technical assistance was substantially complete in February 2012.

FY12 Spending and Schedule Variances

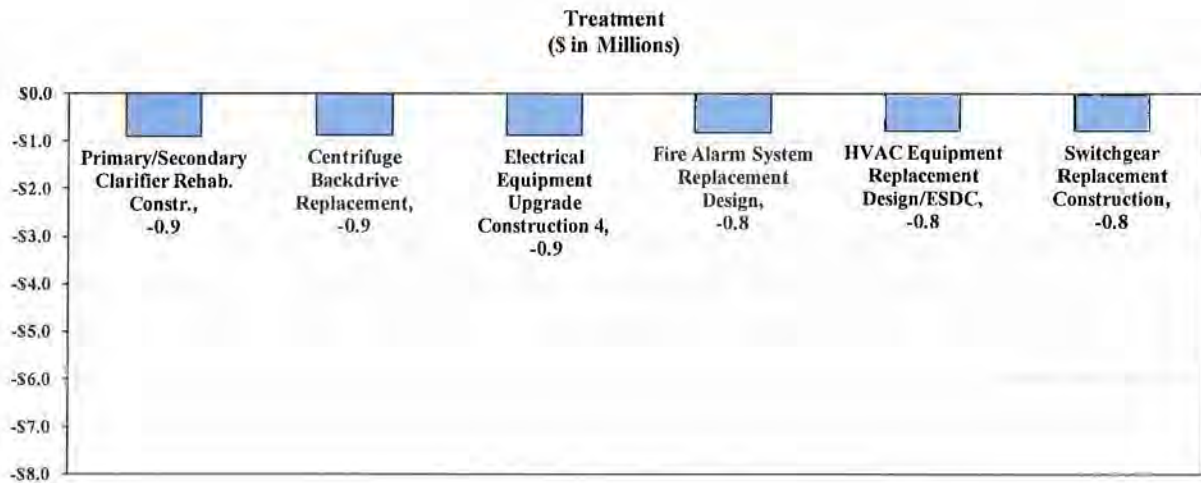
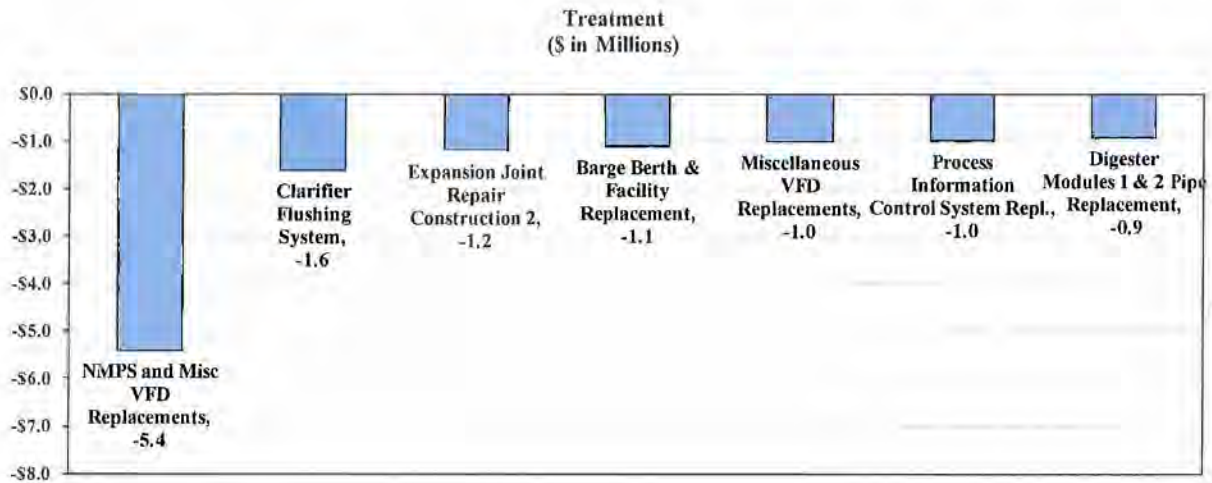
Total FY12 capital spending was \$137.6 million which was \$35.8 million or 21% less than the \$173.5 million budgeted including contingency. Excluding the contingency budget, the variance is \$27.5 million or 17% less than the \$165.1 million budget and is primarily due to underspending for the Deer Island Treatment Plant Asset Protection, Spot Pond Storage Facility, Local Water Pipeline Improvement Loan Program, and Long Term Redundancy projects.

FY12 Capital Improvement Program Spending (\$000s)					
Program	Budgeted Spending	Actual Spending	Variance to Budget		% of Total Spending
			\$	%	
Total Wastewater System	\$87,628	\$75,752	(\$11,875)	-14%	55%
Interception & Pumping	\$10,401	\$5,994	(\$4,407)	-42%	4%
Treatment	\$39,987	\$16,351	(\$23,636)	-59%	12%
Residuals	\$715	\$0	(\$715)	-100%	0%
Combined Sewer Overflow	\$34,711	\$47,572	\$12,861	37%	35%
Other Wastewater Programs	\$1,815	\$5,836	\$4,021	222%	4%
Total Waterworks System	\$67,611	\$55,318	(\$12,293)	-18%	40%
Drinking Water Quality Improvements	\$26,061	\$18,442	(\$7,619)	-29%	13%
Transmission	\$20,815	\$18,331	(\$2,484)	-12%	13%
Distribution and Pumping	\$12,215	\$14,268	\$2,053	17%	10%
Other Waterworks Programs	\$8,520	\$4,276	(\$4,243)	-50%	3%
Business & Operations Support	\$9,858	\$6,576	(\$3,282)	-33%	5%
Total MWRA (without Contingency)	\$165,097	\$137,646	(\$27,451)	-17%	100%

Refer to Attachment B for the FY12 CIP variance explanations.

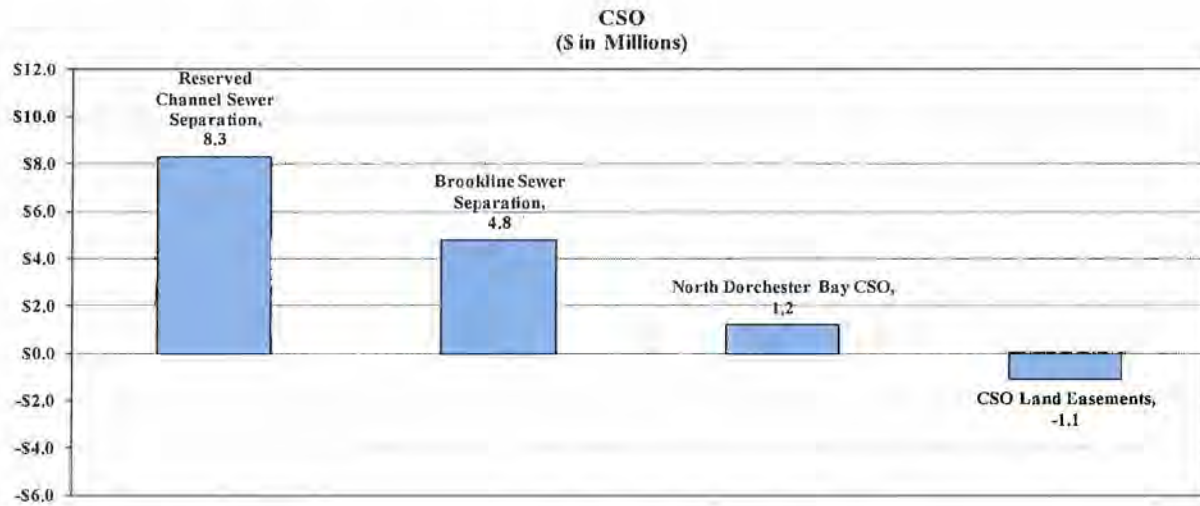
FY12 Major Project Variances

Wastewater – Treatment



- Deer Island Treatment Plant Asset Protection: \$22.9 million less than budgeted spending primarily due to timing of work and lower award for North Main Pump Station Variable Frequency Drives (VFDs) Replacements, delays in Clarifier Flushing System, Expansion Joint Repair Construction 2, Barge Berth & Facility Replacement, Miscellaneous VFD Replacements, Process Information Control System Construction, Digester Module 1 & 2 Pipe Replacement, balancing credit change order for Primary/Secondary Clarifier Rehabilitation Construction, delays in Centrifuge Backdrive Replacement, Electrical Equipment Upgrade Construction 4, Fire Alarm System Replacement Design, HVAC Equipment Replacement Design/Engineering Services During Construction, and Switchgear Replacement Construction contracts.

Wastewater - Combined Sewer Overflows (CSO's)



- Reserved Channel Sewer Separation: \$8.3 million more than budgeted spending primarily due to timing of payments.
- Brookline Sewer Separation: \$4.8 million more than budgeted spending primarily due to timing of payments.
- North Dorchester Bay CSO: \$1.2 million more than budgeted spending primarily due to timing and unanticipated work on the Dewatering/Pump Station & Sewers contract.
- CSO Support: \$1.1 million less than budgeted spending due less than anticipated CSO land easement expense due to favorable negotiation of temporary easement lease terms.

Wastewater - Interception & Pumping

- Interception & Pumping Facility Asset Protection: \$1.9 million less than budgeted spending primarily due to updated schedules for Chelsea Creek Upgrade/ESDC/REI due to revised schedules and sequencing for the Headworks Upgrades. This was partially offset by contractor progress on the Section 156 Rehabilitation Design/Build contract.
- Braintree-Weymouth Relief Facilities: \$0.8 million less than budgeted spending primarily due to updated schedule for the Wetlands Replication contract.

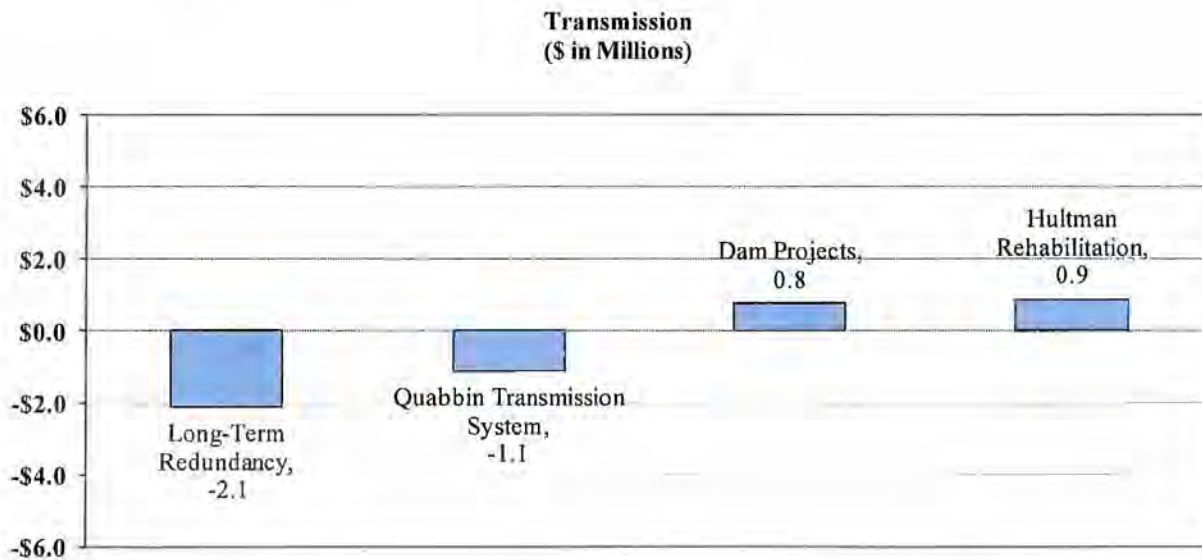
Wastewater - Other

- I/I Local Financial Assistance: \$4.0 million more than budgeted spending which resulted from \$2.2 million in grant distributions and \$2.6 million in no-interest loans offset by repayment of prior period loans of \$0.8 million.

Waterworks - Drinking Water Quality Improvements

- Spot Pond Storage Facility: \$7.9 million less than budgeted spending primarily due to lower award for the Design/Build contract.
- Carroll Water Treatment Plant: \$0.6 million more than budgeted spending primarily due to contractor progress for the Ultraviolet Disinfection Construction contract partially offset by less than anticipated As-Needed Technical Assistance work.

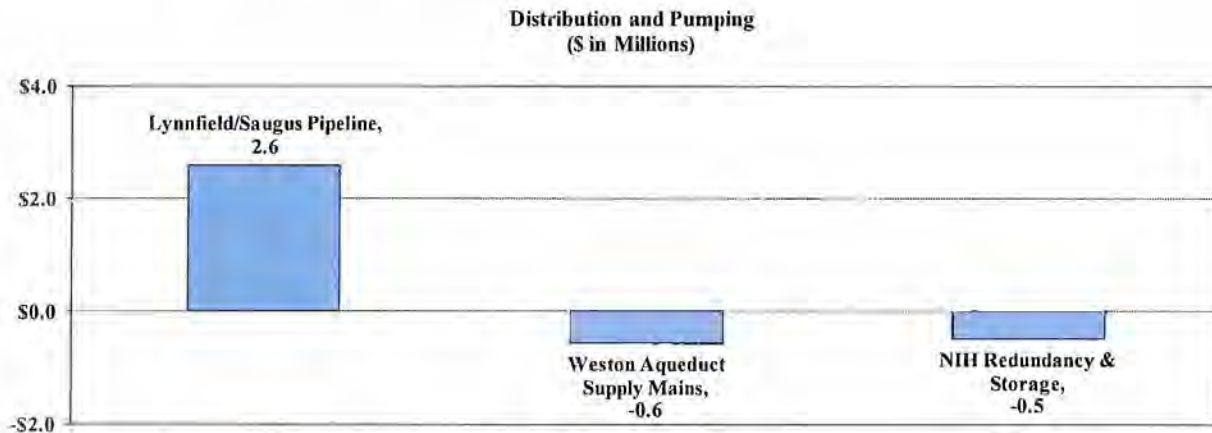
Waterworks – Transmission



- Long-Term Redundancy: \$2.1 million less than budgeted spending primarily due to delay in schedule for the Sudbury Aqueduct Preliminary Design/Resident Engineer Inspection/Massachusetts Environmental Protection Agency Review and lower award for the Wachusett Aqueduct Pump Station Design/Engineering Services During Construction contract.
- Quabbin Transmission System: \$1.1 million less than budgeted spending primarily due to delay in schedule for the Oakdale Phase 1A Electrical Construction contract.

- Dam Projects: \$0.8 million more than budgeted spending due to contractor progress on the Dam Safety Modifications and Repairs contract.
- Hultman Rehabilitation: \$0.9 million greater than budgeted spending primarily due to accelerated contractor progress on the (CP-6A) contract.

Waterworks - Distribution and Pumping



- Lynnfield/Saugus Pipeline: \$2.6 million more than budgeted spending primarily due to work scheduled for FY11 being completed in FY12 for the Lynnfield/Saugus Construction 2 contract.
- Weston Aqueduct Supply Mains (WASMs): \$0.6 million less than budgeted spending primarily due to WASM 3 Design/Construction Administration/Resident Inspection schedule change.
- Northern Intermediate High (NIH) Redundancy and Storage: \$0.5 million less than budgeted spending primarily due schedule change for the Gillis Pump Station Improvements and delay in Section 29/89 Redundancy Design/Construction Administration/Resident Inspection due to pipeline route discussions. This underspending was partially offset by progress on the Reading/Stoneham Interconnections Construction contract.

Waterworks - Other

- Local Water Pipeline Improvement Loan Program: \$3.3 million less than budgeted spending primarily due to community requests for loans being less than anticipated.

Business & Operations Support

- Equipment Purchase: \$1.2 million less than budgeted spending primarily due to a timing of purchases for equipment, vehicles, and laboratory equipment.

- Business Systems Plan: \$1.1 million less than budgeted spending primarily due to projects being restructured, renamed, and re-scheduled based on the IT Strategic Plan.

FY12 CIP Contract Awards

During FY12, the MWRA awarded 25 contracts valued at \$111.6 million. The FY12 CIP planned to award 57 contracts with a value of \$259.1 million. Of the planned awards, 17 were awarded, 28 are expected to be awarded in FY13, 10 have slipped beyond FY13, and 2 have been removed from the CIP. In addition to FY12 planned awards, 8 additional contracts were awarded: 1 project originally expected in FY11 and 7 sub-phases were broken out from existing phases bringing the total award amount to 25.

A comparison of the FY12 budgeted projects, the mid-year re-projection based on the FY13 Proposed CIP, and the FY12 actual contract awards are detailed on the below:

FY12 Contracts (\$ in Millions)						
Program	Budget		Projected (Based on FY13 Proposed CIP)		Actual	
	#	\$	#	\$	#	\$
Total MWRA	57	259.1	56	189.0	25	111.6
Wastewater	36	116.9	38	91.3	13	38.8
Waterworks	13	134.9	12	91.1	6	67.4
Business Operations & Support	8	7.3	6	6.6	6	5.4

The primary reasons for not awarding all contracts were due to the following: 17 projects have been delayed due to changes in scope that has required additional work; 9 projects where the schedule was delayed but progress is being made and the Notice to Proceed is anticipated in the first half of FY13; 8 projects where the project/phase was eliminated, is being performed in-house, or where the phase is completed but project is on hold; 5 projects whose schedules are being re-evaluated considering a change in priority of the proposed work; and 1 project has been delayed due to permitting issues.

Please refer to Attachment C for additional information.

Change Orders and Consultant Performance Review

Management of change orders remains a top priority. Total change orders for MWRA-managed capital projects were 8.5% of award value through June 2012. Change orders as a percent of award value for completed and ongoing work in the FY12 CIP are 8.6% and 6.6%, respectively. These percentages remain within the target of 10% for change orders as a percentage of award.

Master Plan and the FY12 CIP Process

The MWRA presented its updated Master Plan to the Board of Directors in the Fall of 2006 which identified \$3.1 billion in system needs over the FY07-48 timeframe; \$2.1 billion in wastewater needs and \$1.0 billion in waterworks needs.

The FY12 CIP included 13 new projects or sub-phases with a contract value of \$38.9 million that were added from the Master Plan. These projects or sub-phases were prioritized and included in the CIP for the repair or replacement of existing infrastructure (water distribution lines, wastewater interceptors, and facility equipment), although water system redundancy is also a major theme.

Development of the 2012 update to MWRA's Water and Wastewater Master Plans is currently underway. Planning staff have been working with Operations and Engineering staff to update information, identify additional capital projects and to establish priorities for the most critical projects.

The 2012 Master Plans will be focused on the updated capital needs for MWRA's Water System and Wastewater System over the next 40 year period and is intended to be the principal framework for annual capital planning. The 2012 update will be used to guide development of the spending cap for the FY14-18 time period. The 2012 Plan will list ongoing projects being implemented during FY12-13 and will put emphasis on projects that are proposed to require capital spending during the next two 5-year CIP cap cycles, FY14-18 and FY19-23. Following these two five year periods, potential capital needs during additional 10-year (FY24-33) and 20-year (FY34-53) planning periods will also be identified.

Drafts of the 2012 Master Plan are planned to be completed in Fall 2012 and will be reviewed and finalized by the end of 2012 in order to prioritize and incorporate recommendations into the FY14 Proposed CIP.

The number and estimated cost of projects included in the Master Plan based on FY08, FY09, FY10, FY11, and FY12 CIP are listed below:

Budget Cycle	Projects/Sub phases Added	\$ in Millions
FY08 Final	67	\$ 955.0
FY09 Final	11	\$ 31.3
FY10 Final	14	\$ 58.7
FY11 Final	9	\$ 19.7
FY12 Final	13	\$ 38.9
Total from the Master Plan	114	\$ 1,103.6

FY09-13 Spending Cap

In June 2008, the Board of Directors established the FY09-13 Base-Line Spending Cap. The Spending Cap anticipated capital expenditures in the FY09-13 timeframe to total \$1.081 billion. Including \$64.8 million for contingency, \$22.4 million for inflation on un-awarded construction projects, and a reduction of \$24.8 million for the Chicopee Valley Aqueduct (CVA) projects, the FY09-13 Cap is \$1.144 billion.

Base-Line Cap		FY09	FY10	FY11	FY12	FY13	Total FY09-13
	Projected Expenditures	\$230.0	\$251.7	\$224.3	\$196.7	\$178.7	\$1,081.4
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	

The FY13 Final CIP FY09-13 Cap Spending

FY13 is the fifth and final year of the five-year Spending Cap. The FY13 Final CIP FY09-13 Cap cash flow totals \$841.5 million which is \$302.4 million or 26.4% lower than the approved Base-Line Cap. The FY09-13 expenditure forecast decreased by \$243.3 million, contingency and inflation decreased by \$48.0 million and \$21.8 million, respectively from the Base-Line Cap. The lower spending is the result of schedule changes, updated cost estimates, and significantly lower awards reflecting the current competitive economic environment.

The FY13 Final CIP Cap for FY09-13 complies with both the annual and five-year overall Cap requirements.

FY13 Final		FY09	FY10	FY11	FY12	FY13	Total FY09-13
	Projected Expenditures	\$182.2	\$211.4	\$139.3	\$148.8	\$156.3	\$838.1
Contingency	0.0	0.0	0.0	0.0	8.6	8.6	
Inflation on Unawarded Construction	0.0	0.0	0.0	0.0	0.6	0.6	
Less: Chicopee Valley Aqueduct Projects	(0.6)	(0.5)	(0.9)	(0.4)	(3.4)	(5.8)	
FY13 Final FY09-13 Cap	\$181.6	\$210.9	\$138.4	\$148.4	\$162.1	\$841.5	

FY13 Final vs. Base-Line Cap		FY09	FY10	FY11	FY12	FY13	Total FY09-13
	Projected Expenditures	(\$47.8)	(\$40.2)	(\$85.0)	(\$47.9)	(\$22.4)	(\$243.3)
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)	(10.7)	(21.8)	
Less: Chicopee Valley Aqueduct Projects	0.6	1.4	8.3	9.1	(0.4)	18.9	
FY09-13 Cap (\$ Change)	(\$62.8)	(\$53.2)	(\$91.6)	(\$58.6)	(\$36.3)	(\$302.4)	
FY09-13 Cap (% Change)	-25.7%	-20.1%	-39.8%	-28.3%	-18.3%	-26.4%	

FY13 Outlook Based on FY13 CIP

Projected capital spending for FY13 is \$156.3 million excluding contingency. The ten contracts with the greatest budgeted spending in FY13 are noted below. Planned spending on these ten contracts account for nearly 79% of the \$156.3 million budgeted for capital spending in FY13.

Project	FY13 Spending
Deer Island Plant Asset Protection	\$ 31.6
Carrol Water Treatment Plant	21.9
Spot Pond Storage Facility	21.8
Cambridge Sewer Separation	12.2
Reserved Channel Sewer Separation	12.0
MetroWest Tunnel	9.9
NIH Redundancy and Storage	3.8
Facility Asset Protection	3.6
Watershed Land	2.9
Long Term Redundancy	2.9

Top Ten Projects	\$ 122.6
Total FY13 Spending	\$ 156.3
Top Ten Projects as a percent of FY13 Spending	78.4%

In Fiscal Year 2013, 66 contracts or phases of projects with a total budget of \$193.1 million are expected to be awarded (see Attachment E). Staff will be completing the design and progressing to the bid and award stage on several major projects. The following projects or phases of projects account for over 57% of total projected value:

Project	Subphase	Budget
Weston Aqueduct Supply Mains	WASM 3 - Design/Construction Administration/Resident Inspection	\$ 31.5
Weston Aqueduct Supply Mains	Section 36/Watertown/Waltham Connection Construction	21.1
DITP Plant Asset Protection	Fire Alarm System Replacement Construction	16.0
Facility Asset Protection	Nut Island Electrical & Grit/Screens Conveyance Construction	7.1
DITP Plant Asset Protection	North Main Pump Station Motor Control Center Phase 2	6.1
DITP Plant Asset Protection	North Main Pump Station Motor Harmonic Filter Replacement	6.0
DITP Plant Asset Protection	Deer Island Combustion Turbine Generator Rebuilds	6.0
Quabbin Water treatment Plant	Quabbin Water UV - Construction	5.8
Carroll Water Treatment Plant	Existing Facilities Modifications - CP7	5.6
Long term Redundancy	Sudbury Aqueduct - Massachusetts Environmental Protection Agency Review	5.3
TOP TEN BUDGETED PLANNED AWARDS IN FY13		\$ 110.5

Other major initiatives in FY13 include:

- Completion of several construction contracts including Lower Hultman Rehabilitation CP6A, Brookline Sewer Separation, Lynnfield/Saugus Pipeline Construction 2, Reading/Stonham Interconnections, Valve Replacement Construction 6, Dam Safety Modifications & Repairs, and Deer Island North Main Power Station Motor Control Center;
- Award of several construction contracts including Deer Island Treatment Plant Switchgear Replacement, DITP Clarifier Tip tube Replacement, Winthrop Terminal Facility Variable Frequency Drive (VFD) Replacement, Gillis Pump Station Improvements, North Dorchester Outfall Dredging Construction, and Prison Point Pump & Gearbox Rebuilds.

ATTACHMENT B
FY12 CIP YEAR-END VARIANCE REPORT - PROGRAM SUMMARY (\$000s)

	BUDGET	ACTUALS	VARIANCE		MAJOR PROJECT
			(\$)	%	
Total MWRA without Contingency	\$ 165,096	\$ 137,646	\$ (27,450)	-17%	
Contingency	\$ 8,393	\$ -	\$ (8,393)	-	
Total Variance	\$ 173,489	\$ 137,646	\$ (35,843)	-21%	
Variance by Program without Contingency					
Total Wastewater	\$ 87,628	\$ 75,752	\$ (11,875)	-14%	
Interception and Pumping	\$ 10,401	\$ 5,994	\$ (4,407)	-42%	I&P Facility Asset Protection (\$1.9M), Upper Neponset Valley Sewer System (\$1.1M), Braintree-Weymouth Relief Facilities (\$0.8M), Wastewater Process Optimization (\$0.4M) and Wastewater Central Monitoring (\$0.3M).
Treatment	\$ 39,987	\$ 16,351	\$ (23,636)	-59%	DITP Asset Protection (\$22.9M) and Clinton Wastewater Treatment Plant (\$0.5M).
Residuals	\$ 715	\$ -	\$ (715)	-	Residuals Asset Protection (\$0.7M).
CSO	\$ 34,711	\$ 47,572	\$ 12,861	37%	
MWRA Managed	\$ 2,118	\$ 3,250	\$ 1,132	53%	North Dorchester Bay +\$1.2M offset by East Boston Branch Sewer Relief (\$0.1M).
Community Managed	\$ 30,976	\$ 43,769	\$ 12,793	41%	Reserved Channel Sewer Separation +\$8.3M, Brookline Sewer Separation +\$4.8M and Cambridge Sewer Separation +\$0.5M offset by S. Dorchester Bay Sewer Separation/Commercial Point (\$0.4M), Morrissey Boulevard Drain (\$0.3M) and Bulfinch Triangle (\$0.1M).
Planning & Support	\$ 1,616	\$ 552	\$ (1,064)	-66%	CSO Support (\$1.1M).
Other	\$ 1,815	\$ 5,836	\$ 4,021	222%	I/I Local Financial Assistance +\$4.0M.
Total Waterworks System Improvements	\$ 67,611	\$ 55,318	\$ (12,293)	-18%	
Drinking Water Quality Improvements	\$ 26,061	\$ 18,442	\$ (7,619)	-29%	Spot Pond Storage Facility (\$8.0M), and Quabbin Water Treatment Plant (\$0.2M) offset by Carroll Water Treatment Plant +\$0.6M.
Transmission	\$ 20,815	\$ 18,331	\$ (2,484)	-12%	Long Term Redundancy (\$2.1M), Quabbin Transmission System (\$1.1M), Watershed Land (\$0.5M), Winsor Station/Pipeline Improvements (\$0.5M) offset by Hultman Aqueduct Rehabilitation +\$0.9M and Dam Projects +\$0.8M.
Distribution and Pumping	\$ 12,215	\$ 14,268	\$ 2,053	17%	Lynnfield Pipeline +\$2.6M, Valve Replacement +\$0.4M and New Connecting Mains - Shaft 7 to WASM 3 +\$0.4M offset by Weston Aqueduct Supply Mains (\$0.6M), NIH Redundancy & Storage (\$0.5M) and SEH Redundancy & Storage (\$0.2M).
Other	\$ 8,520	\$ 4,276	\$ (4,243)	-50%	Local Water Pipeline Improvement Loan Program (\$3.3M) and Central Monitoring System (\$0.9M).
Business and Operations Support	\$ 9,858	\$ 6,576	\$ (3,282)	-33%	Equipment Purchase (\$1.2M), Business Systems Plan (\$1.1M), MWRA Facilities Management & Planning (\$0.5M), Capital Maintenance Planning & Development (\$0.3M) and Alternative Energy Initiatives (\$0.2M).
Total Variance by Program without Contingency	\$ 165,096	\$ 137,646	\$ (27,450)	-17%	

ATTACHMENT B
FY12 CIP YEAR-END VARIANCE REPORT - BY PROJECT (\$000s)

	BUDGET	ACTUALS	VARIANCE		VARIANCE EXPLANATIONS
			(\$)	%	
Total MWRA without Contingency	\$ 165,097	\$ 137,646	\$ (27,451)	-17%	
Wastewater System Improvements	\$ 87,628	\$ 75,752	\$ (11,875)	-14%	
Interception & Pumping	\$ 10,401	\$ 5,994	\$ (4,407)	-42%	
Braintree-Weymouth Relief Facilities	\$ 922	\$ 131	\$ (790)	-86%	
Wetlands Replication	\$ 500	\$ -	\$ (500)	-	Underspending due to schedule shift.
Design 2/Construction Services /Resident Inspection (CS/RI)	\$ 322	\$ 130	\$ (192)	-60%	Underspending due to final costs being less than anticipated. Contract is substantially complete. Budget reduced in FY13 Final.
Upper Neponset Valley Sewer System	\$ 1,168	\$ 84	\$ (1,085)	-93%	
Land Acquisition	\$ 1,100	\$ -	\$ (1,100)	0%	Underspending due to schedule shift.
Corrosion & Odor Control	\$ -	\$ (1)	\$ (1)	-	
West Roxbury Tunnel	\$ -	\$ 24	\$ 24	-	
Wastewater Central Monitoring	\$ 250	\$ -	\$ (250)	-	
Wastewater Redundant Communications	\$ 250	\$ -	\$ (250)	-	Underspending due to schedule shift.
Wastewater Process Optimization	\$ 583	\$ 207	\$ (376)	-64%	
North System Hydraulic Study	\$ 583	\$ 207	\$ (376)	-64%	Underspending due to delayed contract award and notice-to-proceed.
Wastewater Meter System - Equipment Replacement	\$ 60	\$ -	\$ (60)	-	
Interception & Pumping (I&P) Facility Asset Protection	\$ 7,418	\$ 5,548	\$ (1,870)	-25%	
Sect 156 Rehabilitation - Design/Build	\$ 1,667	\$ 2,563	\$ 896	54%	Overspending due to accelerated contractor progress. Contract is substantially complete.
Chelsea Creek Upgrades Engineering Services During Construction (ESDC)/Resident Engineering Inspection (REI)	\$ 848	\$ -	\$ (848)	-	Underspending due to resequencing of the Headworks upgrades and revised schedules.
Chelsea Creek Upgrades - Design/Construction Administration (CA)	\$ 897	\$ 229	\$ (668)	-75%	
Prison Point Pump & Gearbox Rebuilds	\$ 440	\$ -	\$ (440)	-	Underspending due to scope changes to now include pump rebuilds.
Pump Stations & CSOs Condition Assessment	\$ 375	\$ -	\$ (375)	-	Underspending due to schedule shifts.
Cottage Farm Fuel System Upgrade	\$ 257	\$ -	\$ (257)	-	
Treatment	\$ 39,987	\$ 16,351	\$ (23,636)	-59%	
DITP Asset Protection	\$ 38,281	\$ 15,343	\$ (22,938)	-60%	
NMPS VFD Replacement - Construction	\$ 6,667	\$ 1,283	\$ (5,384)	-81%	Underspending due to lower than budgeted contract award and schedule shift.
Miscellaneous VFD Replacements	\$ 1,000	\$ -	\$ (1,000)	-	Underspending due to purchase of drives on a as-needed basis.
Process Information Control System (PICS) Replacement - Construction	\$ 1,302	\$ 324	\$ (978)	-75%	Underspending due to longer lead time in obtaining specialized equipment.
Digester Modules 1&2 Pipe Replacement	\$ 2,662	\$ 1,755	\$ (907)	-34%	Underspending due to reduced scope and schedule shift.
Primary & Secondary Clarifier Rehab - Construction	\$ 6,951	\$ 6,045	\$ (906)	-13%	Underspending due to pending final credit change order. Contract is substantially complete.
As-needed Design Phase 6-1 and 6-2	\$ 2,152	\$ 1,295	\$ (857)	-40%	Use of technical assistance design contracts less than anticipated.
Power System Improvements - Construction	\$ 2,617	\$ 1,868	\$ (748)	-29%	Underspending due to pending final credit change order.
Primary & Secondary Clarifier Rehab - Design	\$ 788	\$ 460	\$ (328)	-42%	Underspending due to less than anticipated design services.

ATTACHMENT B
FY12 CIP YEAR-END VARIANCE REPORT - BY PROJECT (\$000s)

	BUDGET	ACTUALS	VARIANCE		VARIANCE EXPLANATIONS
			(\$)	%	
Clarifier W3H Flushing System	\$ 1,556	\$ -	\$ (1,556)	-	Underspending due to schedule shifts.
Expansion Joint Repair - Construction 2	\$ 1,231	\$ -	\$ (1,231)	-	
Barge Berth and Facility Replacement	\$ 1,086	\$ -	\$ (1,086)	-	
Electrical Equipment Upgrades - Construction 4	\$ 875	\$ -	\$ (875)	-	
Centrifuge Backdrive Replacement	\$ 884	\$ -	\$ (884)	-	
Fire Alarm System Replacement - Design	\$ 817	\$ -	\$ (817)	-	
Switchgear Replacement - Construction	\$ 786	\$ -	\$ (786)	-	
HVAC Equipment Replacement - Design/ESDC	\$ 778	\$ -	\$ (778)	-	
Cryogenics Plant Equipment Replacement - Construction	\$ 617	\$ -	\$ (617)	-	
Digester & Storage Tank Rehab - Design/ESDC	\$ 500	\$ -	\$ (500)	-	
Gravity Thickener Improvements - Construction	\$ 540	\$ 54	\$ (486)	-90%	
Thermal Power Plant Fuel System Modifications - REI	\$ 426	\$ -	\$ (426)	-	
NMPS Motor Control Center - Construction	\$ 563	\$ 150	\$ (412)	-73%	
NMPS VFD Replacement - REI	\$ 367	\$ -	\$ (367)	-	
Digester Sludge Pump Replacement - Construction	\$ 484	\$ 168	\$ (316)	-65%	
NMPS & WTF Butterfly Valve Replacement	\$ 313	\$ -	\$ (313)	-	
Clinton Wastewater Treatment Plant	\$ 650	\$ 107	\$ (543)	-84%	Underspending due to schedule shift. Contract awarded March 14, 2012.
Clinton Aeration Efficiency Improvement	\$ 500	\$ 107	\$ (393)	-79%	
Laboratory Services	\$ 1,056	\$ 901	\$ (155)	-15%	
Residuals	\$ 715	\$ -	\$ (715)	-	
Residuals Asset Protection	\$ 715	\$ -	\$ (715)	-	
Condition Assessment/Technology & Regulatory Review	\$ 715	\$ -	\$ (715)	-	Underspending due to delay in awarding the Residuals Technology contract. Contract awarded during June 27, 2012 Board of Directors 'meeting.
CSO	\$ 34,711	\$ 47,572	\$ 12,861	37%	
MWRA-Managed	\$ 2,118	\$ 3,250	\$ 1,132	53%	
North Dorchester Bay	\$ 2,002	\$ 3,165	\$ 1,164	58%	
Dewatering Pump Station & Sewers - Construction	\$ 40	\$ 1,696	\$ 1,655	-	Overspending due to work scheduled in FY11 being performed in FY12 and additional unanticipated work.
Tunnel - Design/ESDC	\$ 194	\$ (51)	\$ (245)	-	Underspending due to actual cost for engineering services during construction being less than accrual.
East Boston Branch Sewer Relief	\$ 56	\$ (64)	\$ (121)	-	Underspending due to actual cost for resident inspection services being less than accrual.
MWR003 Gate & Siphon	\$ 60	\$ 149	\$ 89	148%	
Community-Managed	\$ 30,976	\$ 43,769	\$ 12,793	41%	
S. Dorchester Bay Sewer Separation (Fox Point)	\$ 409	\$ 390	\$ (19)	-5%	
S. Dorchester Bay Sewer Separation (Commercial Point)	\$ 992	\$ 581	\$ (411)	-41%	Underspending due to delayed start of Contract 9 Final Design pending results of field investigations and schedule change for Inflow/Infiltration and modeling removal work.
Design	\$ 992	\$ 581	\$ (411)	-41%	

**ATTACHMENT B
FY12 CIP YEAR-END VARIANCE REPORT - BY PROJECT (\$000s)**

	BUDGET	ACTUALS	VARIANCE		VARIANCE EXPLANATIONS
			(\$)	%	
Cambridge Sewer Separation	\$ 6,788	\$ 7,301	\$ 513	8%	
Construction	\$ 3,098	\$ 4,256	\$ 1,158	37%	Overspending due to accelerated contractor progress.
Design/CS/RI	\$ 3,690	\$ 3,045	\$ (645)	-17%	Underspending due to less than anticipated design work and less than anticipated engineering services during construction.
Fort Point Channel Sewer Separation	\$ 114	\$ 74	\$ (40)	-35%	
Morrissey Boulevard Drain	\$ (2,946)	\$ (3,238)	\$ (292)	-	
Design	\$ 329	\$ 37	\$ (293)	-89%	Underspending due to lower than anticipated costs for as-built drawings and water quality monitoring.
Construction	\$ (3,275)	\$ (3,275)	\$ 0	-	
Reserved Channel Sewer Separation	\$ 13,097	\$ 21,436	\$ 8,339	64%	
Construction	\$ 10,152	\$ 18,490	\$ 8,338	82%	Overspending primarily due to timing of community payments.
Brookline Sewer Separation	\$ 12,394	\$ 17,226	\$ 4,832	39%	
Construction	\$ 12,026	\$ 15,213	\$ 3,187	27%	Overspending due to timing of community payments and accelerated contractor progress.
Design/CS/RI	\$ 368	\$ 2,013	\$ 1,645	447%	
Bulfinch Triangle	\$ 128	\$ -	\$ (128)	-	
Planning and Support	\$ 1,616	\$ 552	\$ (1,064)	-66%	
Land Easement	\$ 1,416	\$ 552	\$ (864)	-61%	Underspending due to favorable renegotiation of North Dorchester Bay CSO temporary land easement.
System Assessment	\$ 200	\$ -	\$ (200)	-	Underspending due to temporary metering work delay.
Other	\$ 1,815	\$ 5,836	\$ 4,021	222%	
I/I Local Financial Assistance	\$ 1,815	\$ 5,836	\$ 4,021	-	
Grants	\$ 4,093	\$ 6,287	\$ 2,194	54%	Overspending due to community requests for grants and loans being greater than planned. Total community repayments will equal total loan distributions by the end of the program (FY26).
Loans	5,127	7,684	\$ 2,557	50%	
Repayments	(7,405)	(8,135)	\$ (730)	10%	

**ATTACHMENT B
FY12 CIP YEAR-END VARIANCE REPORT - BY PROJECT (\$000s)**

	BUDGET	ACTUALS	VARIANCE		VARIANCE EXPLANATIONS
			(\$)	%	
Waterworks System Improvements	\$ 67,611	\$ 55,318	\$ (12,293)	-18%	
Drinking Water Quality Improvements	\$ 26,061	\$ 18,442	\$ (7,619)	-29%	
Carroll Water Treatment Plant	\$ 12,458	\$ 13,042	\$ 584	5%	
CWTP Ultraviolet Disinfection-Construction	\$ 9,244	\$ 10,685	\$ 1,441	16%	Overspending due to accelerated contractor progress.
Technical Assistance 5 & 6	\$ 500	\$ 137	\$ (363)	-73%	Use of technical assistance design contracts less than anticipated.
Ancillary Modifications - Construction 2	\$ 1,600	\$ 1,394	\$ (206)	-13%	Underspending due to schedule shift.
Quabbin Water Treatment Plant	\$ 300	\$ 66	\$ (234)	-78%	
Blue Hills Covered Storage	\$ 15	\$ 0	\$ (15)	-99%	
Spot Pond Storage Facility	\$ 13,288	\$ 5,334	\$ (7,954)	-60%	
Design/Build	\$ 11,669	\$ 4,390	\$ (7,279)	-62%	Underspending primarily due to lower than budgeted contract award. Also, delay in approval of permit for soil removal.
Early Construction Water Connection	\$ 958	\$ 362	\$ (596)	-62%	Underspending due to accrual for reimbursement from Fellsway Development for share of the cost for water main connection in Stoneham. Budget reduced in FY13 Final.
Transmission	\$ 20,815	\$ 18,331	\$ (2,484)	-12%	
Winsor Station/Pipeline Improvements	\$ 509	\$ 43	\$ (466)	-92%	
Quabbin Aqueduct & WPS Upgrade - Design/CA/RI	\$ 418	\$ 43	\$ (375)	-90%	Underspending due to pending resolution of out of scope items with contractor.
MetroWest Tunnel	\$ 12,980	\$ 13,870	\$ 890	7%	
CP6A Lower Hultman Rehab	\$ 10,839	\$ 12,061	\$ 1,222	11%	Overspending due to accelerated schedule and contractor progress.
Upper Hultman Rehabilitation - CP6B	\$ 1,033	\$ 834	\$ (199)	-19%	Underspending due to schedule shift.
Quabbin Transmission System	\$ 1,250	\$ 170	\$ (1,080)	-86%	
Oakdale Phase 1A Electrical - Construction	\$ 1,000	\$ 80	\$ (920)	-92%	Underspending due to schedule shift.
Watershed Land	\$ 2,147	\$ 1,664	\$ (483)	-22%	
Land Acquisition	\$ 2,147	\$ 1,664	\$ (483)	-22%	Underspending due to the timing of land purchases.
Dam Projects	\$ 1,411	\$ 2,169	\$ 757	54%	
Dam Safety Modifications & Repairs - Construction	\$ 1,174	\$ 1,896	\$ 722	61%	Overspending due to contractor progress for Foss and Weston Reservoir modifications and repairs to comply with regulatory spillway flood requirements. Foss Dam work completed one year ahead of schedule.
Long Term Redundancy	\$ 2,518	\$ 416	\$ (2,101)	-83%	
Sudbury Aqueduct - MEPA Review	\$ 1,269	\$ -	\$ (1,269)	-	Underspending due to schedule shifts.
Wachusett Aqueduct Pump Station Design/ESDC/RI	\$ 742	\$ 276	\$ (466)	-63%	Underspending due to lower than budgeted contract award and schedule shift.
Water Transmission Redundancy Plan	\$ 507	\$ 140	\$ (366)	-72%	Underspending due to final costs being less than anticipated.
Distribution And Pumping	\$ 12,215	\$ 14,268	\$ 2,053	17%	
Valve Replacement	\$ 1,755	\$ 2,184	\$ 429	24%	
Construction Phase 7	\$ 1,555	\$ 2,171	\$ 616	40%	Overspending due to accelerated contractor progress.
Equipment Purchase	\$ 200	\$ -	\$ (200)	-	Underspending due to purchase of valves on a as-needed basis.
Northern High Service - Sect 27 Improvement	\$ 0	\$ -	\$ (0)	-	
NHS - Revere & Malden Pipeline Improvements	\$ 5	\$ -	\$ (5)	-	
New Connecting Mains - Shaft 7 to WASM 3	\$ 706	\$ 1,121	\$ 415	59%	
CP5 - Northeast Segment	\$ 706	\$ 1,121	\$ 416	59%	Overspending due to additional unanticipated work.
Rehab of Other Pump Stations	\$ 66	\$ (0)	\$ (66)	-	

ATTACHMENT B
FY12 CIP YEAR-END VARIANCE REPORT - BY PROJECT (\$000s)

	BUDGET	ACTUALS	VARIANCE		VARIANCE EXPLANATIONS
			(\$)	%	
Northern Extra High Service - New Pipelines	\$ 10	\$ -	\$ (10)	-	
Spot Pond Supply Mains Rehab	\$ 150	\$ -	\$ (150)	-	
Southern Spine Distribution Mains	\$ 3,644	\$ 3,652	\$ 7	0%	
NIH Redundancy & Storage	\$ 4,333	\$ 3,861	\$ (472)	-11%	
Reading/Stoneham Interconnections	\$ 1,769	\$ 3,447	\$ 1,678	95%	Overspending due to accelerated contractor progress and additional unanticipated work.
Gillis Pump Station Improvements	\$ 1,653	\$ -	\$ (1,653)	-	Underspending due to schedule shift.
Section 89 & 29 Redundancy - Design	\$ 705	\$ 241	\$ (464)	-66%	Underspending due to delayed sub-surface exploration work due to ongoing pipeline routing discussions with Town of Stoneham.
Northern Low Service Sections 8 & 57	\$ 32	\$ -	\$ (32)	-	
SEH Redundancy & Storage	\$ 162	\$ 8	\$ (154)	-95%	
Weston Aqueduct Supply Mains	\$ 1,004	\$ 452	\$ (552)	-55%	
WASM 3 - MEPA/Design/CA/RI	\$ 460	\$ -	\$ (460)	-	Underspending due to schedule shift.
Lynnfield Pipeline	\$ 347	\$ 2,990	\$ 2,643	761%	
Construction	\$ 176	\$ 2,879	\$ 2,704	-	Overspending due to work scheduled in FY11 being performed in FY12.
Other	\$ 8,520	\$ 4,276	\$ (4,243)	-50%	
Central Monitoring System	\$ 952	\$ 99	\$ (854)	-90%	
Winsor Dam Communication Line Replacement	\$ 715	\$ -	\$ (715)	-	Underspending due to schedule shift.
Local Water Pipeline Improvement Loan Program	\$ 7,160	\$ 3,877	\$ (3,283)	-46%	Underspending due to community requests for loans being less than planned
Community Loans	\$ 27,000	\$ 22,720	\$ (4,280)	-16%	slightly offset by loan repayments being less than originally anticipated. Total community repayments will equal total loan distributions by the end of the program (FY30).
Repayments	\$ (19,840)	\$ (18,843)	\$ 997	-5%	
Water Facilities Asset Protection	\$ 407	\$ 301	\$ (106)	-26%	
Business & Operations Support	\$ 9,858	\$ 6,576	\$ (3,282)	-33%	
Equipment Purchase	\$ 2,170	\$ 960	\$ (1,210)	-56%	
Security Equipment & Installation	\$ 1,256	\$ 634	\$ (622)	-50%	Underspending due to schedule shift.
FY09-13 Vehicle Purchases	\$ 714	\$ 326	\$ (388)	-54%	Underspending due to the timing of purchases.
MWRA Facility - Chelsea	\$ -	\$ (9)	\$ (9)	-	
Business Systems Plan	\$ 1,635	\$ 548	\$ (1,087)	-66%	Underspending due to Phase VI contract, Deer Island PBX final costs being less than anticipated and the restructuring, renaming and rescheduling of projects based on the MIS strategic plan.
Environmental Remediation Plan	\$ -	\$ (0)	\$ (0)	-	
Capital Maintenance Planning & Development	\$ 2,233	\$ 1,974	\$ (259)	-12%	
As-Needed Design Contracts 7-10	\$ 2,233	\$ 1,974	\$ (259)	-12%	Use of technical assistance design contracts less than anticipated.
MWRA Facilities Management & Planning	\$ 527	\$ -	\$ (527)	-	
Facilities Construction	\$ 465	\$ -	\$ (465)	-	Underspending due to schedule shift.
Alternative Energy Initiatives	\$ 3,293	\$ 3,104	\$ (190)	-6%	
Charlestown Wind Project	\$ 1,054	\$ 2,495	\$ 1,442	137%	Overspending due to work scheduled in FY11 performed in FY12.
Technical Assistance	\$ 1,340	\$ 557	\$ (783)	-58%	Underspending on all Technical Assistance contracts mainly due to schedule shifts.
DI Wind Phase II - Construction	\$ 900	\$ 24	\$ (876)	-97%	Underspending due to schedule shift.

ATTACHMENT C
FY12 PLANNED VERSUS ACTUAL/REVISED CIP NOTICE TO PROCEEDS (\$ in Millions)

Project	Subphase	NTP	NTP Revised Thr. 8/12	FY12 Budget	Award Amount
I&P Facility Asset Protection	Headworks Upgrades - Construction Management Services (now Chelsea Creek Upgr ESDC/REI)	Jul-11	Sep-13	\$ 6.5	
I&P Facility Asset Protection	Somerville Marginal Influent Gates Replacement	Jul-11	Jul-11	0.3	0.3
Deer Island Treatment Plant Asset Protection	NMPS VFD Replacement - Construction	Jul-11	Dec-11	40.0	24.1
Deer Island Treatment Plant Asset Protection	NMPS Motor Control Center - Design/Engineering Services During Construction (Sub phase to be deleted and work will be done In-House)	Jul-11		1.0	
Deer Island Treatment Plant Asset Protection	NMPS Motor Control Center - Construction (Phase 1)	Jul-11	Nov-11	1.0	0.9
Deer Island Treatment Plant Asset Protection	NMPS VFD Replacement - Resident Engineer Inspection	Jul-11	Oct-12	2.0	
Deer Island Treatment Plant Asset Protection	Thermal Power Plant Steam & Fuel System Modifications - Resident Engineer Inspection	Jul-11	Dec-12	1.2	
I&P Facility Asset Protection	Interceptor Renewal No.1 - Design (work will be performed under As-Needed Technical Assistance Contract).	Aug-11		0.2	
Deer Island Treatment Plant Asset Protection	Centrifuge Backdrive Replacement	Aug-11	Dec-12	2.7	
Clinton Wastewater Treatment Plant	Clinton Aeration Efficiency Improvement	Aug-11	Apr-12	0.8	1.8
Capital Maintenance Planning	As-Needed Design Contract 9	Aug-11	Jul-11	1.6	2.0
Capital Maintenance Planning	As-Needed Design Contract 10	Aug-11	Aug-11	1.6	2.0
Wastewater Process Optimization	Hydraulic Flood Engineering Analysis North System (Study)	Sep-11	Nov-11	2.5	0.6
I&P Facility Asset Protection	Hingham Pump Station Isolation Gate-Construction	Sep-11	Sep-11	0.4	0.1
Deer Island Treatment Plant Asset Protection	Switchgear Replacement - Construction	Sep-11	Dec-12	4.0	
Deer Island Treatment Plant Asset Protection	HVAC Equipment Replacement - Design/Engineering Services During Construction	Sep-11	Sep-12	3.5	
Deer Island Treatment Plant Asset Protection	Clarifier Phase 2 Design	Sep-11	Sep-12	3.0	
Spot Pond Storage Facility	Design / Build	Sep-11	Nov-11	61.7	49.4
NIH Redundancy & Storage	Reading/Stoneham Interconnections	Sep-11	Aug-11	2.7	2.1
Business Systems Plan	Cyber Security	Sep-11	Sep-11	1.2	1.1
MWRA Facilities Management	Design/Engineering Services	Sep-11	Apr-13	0.2	
I&P Facility Asset Protection	Cottage Farm Fuel System Upgrade	Oct-11	May-12	0.3	0.3
Deer Island Treatment Plant Asset Protection	Electrical Equipment Upgrade-Construction 4	Oct-11	Dec-12	3.5	
Deer Island Treatment Plant Asset Protection	Barge Berth and Facility Replacement	Oct-11	Apr-13	2.3	
Winsor Station Pipeline	Hatchery Pipeline - Design/Engineering Services During Construction/Resident Engineer Inspection	Oct-11	Jan-13	0.7	
Dam Projects	Dam Safety Modifications & Repairs - Construction	Oct-11	Aug-11	4.7	3.4
Long Term Redundancy	Wachusett Aqueduct Pump Station Design/Engineering Services During Construction	Oct-11	Jan-12	8.3	4.5

*Bolted contracts were awarded in FY12.

ATTACHMENT C
FY12 PLANNED VERSUS ACTUAL/REVISED CIP NOTICE TO PROCEEDS (\$ in Millions)

Project	Subphase	NTP	NTP Revised Thr. 8/12	FY12 Budget	Award Amount
Long Term Redundancy	Sudbury Aqueduct - Preliminary Design/Resident Engineer Inspection/Massachusetts Environmental Protection Agency Review	Oct-11	Nov-12	5.1	
NIH Redundancy & Storage	Gillis Pump Station Improvements	Oct-11	Sep-12	3.6	
Business Systems Plan	Laboratory Instrument Data Management	Oct-11	Oct-12	0.3	
Wastewater Central Monitoring	Wastewater Redundant Communications	Nov-11	Nov-12	0.9	
Quabbin Transmission System	Oakdale Phase 1A Electrical - Construction	Nov-11	Apr-12	2.2	2.2
Central Monitoring System	Winsor Dam High Line Replacement	Nov-11	Jul-13	1.0	
Alternative Energy Initiative	Deer Island Wind Phase II - Construction	Nov-11	Nov-12	2.5	
MetroWest Tunnel	Upper Hultman Rehabilitation - CP6B	Dec-11	Apr-12	8.8	5.8
July 2011 - December 2011	35 Contracts Planned			\$ 181.9	\$ 100.7
	16 Contracts Awarded			\$ 137.7	\$ 100.7
Wastewater Meter System-Equipment	Planning / Study	Jan-12	Mar-13	\$ 0.1	
I&P Facility Asset Protection	Pump Stations & CSOs Condition Assessment	Jan-12	Jul-13	3.0	
Deer Island Treatment Plant Asset Protection	Fuel Transfer Pipe Replacement-Construction	Jan-12	Feb-20	3.6	
Deer Island Treatment Plant Asset Protection	Deer Island Digester & Storage Tank Rehabilitation Design/Engineering Services During Construction	Jan-12	Nov-12	3.0	
Deer Island Treatment Plant Asset Protection	Cryogenics Plant Equipment Replacement - Construction	Jan-12	Apr-15	6.4	
Deer Island Treatment Plant Asset Protection	North Main Pump Station & Winthrop Terminal Facility Butterfly Valve Replacement	Jan-12	Sep-12	2.5	
Clinton Wastewater Treatment Plant	Clinton Wastewater Treatment Plant Influent Gates (Combined project into Clinton Digester Rehab Project).	Jan-12	Sep-12	1.8	
Spot Pond Supply Mains Rehabilitation	Section 4 Webster Ave Bridge Pipe Rehabilitation - Design	Jan-12	Jul-13	0.5	
Weston Aqueduct Supply Mains	WASM 3 - Massachusetts Environmental Protection Agency/Design/Construction Administration/Resident Inspection	Jan-12	Jan-13	30.0	
Equipment Purchase	FY09-13 Major Lab Instrumentation	Jan-12	Mar-13	1.0	
Business Systems Plan	MIS Strategic Planning	Jan-12	Nov-12	0.5	
Deer Island Treatment Plant Asset Protection	Gravity Thickener Rehabilitation - Design	Feb-12	Nov-12	1.0	
Braintree-Weymouth Relief Facilities	Braintree-Weymouth Improvements	Apr-12	Apr-14	4.0	
I&P Facility Asset Protection	Caruso Pump Station Improvement Design/Construction Administration/Resident Engineer Inspection	Apr-12	Aug-12	0.6	
I&P Facility Asset Protection	Caruso Pump Station Improvements Construction	Apr-12	Jan-14	1.0	
MWR003 Gate & Siphon	Design	Apr-12	Mar-12	1.2	1.5
Quabbin Water Treatment Plant	Quabbin UVWTP - Construction	May-12	Sep-12	5.8	

***Bolded contracts were awarded in FY12.**

ATTACHMENT C
FY12 PLANNED VERSUS ACTUAL/REVISED CIP NOTICE TO PROCEEDS (\$ in Millions)

Project	Subphase	NTP	NTP Revised Thr. 8/12	FY12 Budget	Award Amount
I&P Facility Asset Protection	Nut Island Mechanical&Electrical Replacements	Jun-12	Jul-13	3.0	
Deer Island Treatment Plant Asset Protection	Deer Island Digester Gas Flare #4 - Design	Jun-12	Jun-13	0.4	
Deer Island Treatment Plant Asset Protection	Sodium Hypochlorite Pipe Replacement - Design	Jun-12	Nov-12	2.0	
Deer Island Treatment Plant Asset Protection	LOCAT Scrubber Replacement - Construction	Jun-12	Mar-16	4.9	
Business Systems Plan	Corporate Server Infrastructure & Document Distribution (Implement IT Governance)	Jun-12	Nov-12	1.0	
January 2012 - June 2012	22 Contracts Planned			\$ 77.3	\$ 1.5
	1 Contract Awarded			\$ 1.2	\$ 1.5
Total July 2011- June 2012	57 Contracts Planned			\$ 259.1	\$ 102.2
Total July 2011- June 2012	17 Contracts Awarded			\$ 138.9	\$ 102.2

Additional Awards:

Deer Island Treatment Plant Asset Protection	DITP Digester Sludge Overflow Piping and Plug Valve Replac.	Aug-11			\$ 6.0
Equipment Purchase	10-Wheel Dump Truck	Jan-12			\$ 0.1
Brookline Sewer Separation	MWR010 Outfall Cleaning	Mar-12			\$ 1.1
Deer Island Treatment Plant Asset Protection	DI Fuel Pipe Abandonment	Mar-12			\$ 0.2
Equipment Purchase	Tractor (Slopemaster)	Apr-12			\$ 0.1
Equipment Purchase	6-Wheel Dump Truck	Apr-12			\$ 0.1
Deer Island Treatment Plant Asset Protection	Clarifier W3H Flushing System	May-12			\$ 1.2
Residuals Asset Protection	Residuals Processing Facility Technology Options Assessment	Jun-12			\$ 0.6
Total Additions	8 Unplanned Contract Awarded				\$ 9.4
Total Awards	25 Total Contracts Awarded				\$ 111.6

*Bolded contracts were awarded in FY12.

ATTACHMENT D

**Linear Footage Of Rehabilitated Or New Pipelines
FY12 (July 2011-June 2012)**

	<u>Contract #</u>	<u>Type</u>	<u>Linear Feet</u>
<u>WASTEWATER PROJECTS</u>			
Section 156 Rehabilitation Design/Build	7393	Rehab	1,800
CSO Community Managed-Reserved Channel Sewer Separation (1)	6994	New	15,683
CSO Community Managed-Cambridge Sewer Separation (1)	6255	New	2,970
CSO Community Managed-Brookline Sewer Separation (1)	7077	New	6,951
CSO Community Managed-Lower Dorchester Brook Conduit (1)	6992	New	9
<u>WATERWORKS PROJECTS</u>			
Southern Spine Section 107 Phase 2	7099	New Rehab	1,125 2,417
Valve Replacement Construction 7	6436	New	1,156
Northeast Segment (CP-5)	6394	New	186
Reading/Stoneham Interconnections	7261	New	2,198
Lynnfield/Saugus Construction 2	6584	New	4,501
Lynnfield/Saugus Construction 2 (Saugus Portion)		New	4,110
Spot Pond Early Construction Water Connection	7314	New	1,785
CP-6A Lower Hultman Rehabilitation	6975	Rehab New	11,500 130
Carroll Water Treatment Plant Ultraviolet Disinfection	6924	New	211
(1) Project involves storm drain construction for sewer separation and CSO control, and the new pipelines are owned by BWSC, Brookline, or Cambridge.			
<u>TOTAL PIPELINE REHABILITATED OR CONSTRUCTED IN FY12</u>			
		<u>Linear Feet</u>	<u>Miles</u>
Wastewater Projects		27,412	5.2
Water Projects		29,319	5.6
Total		56,731	10.7

ATTACHMENT E
FY13 PLANNED CAPITAL CONTRACT AWARDS (\$ in Millions)

Project	Subphase	NTP	FY13 Budget
Information Security Program (ISP)	Electronic Security Plan Implementation	Jul-12	\$ 0.4
Residuals Asset Protection	Residuals Technology & Regulatory Review	Jul-12	0.7
Information Tech Mgmt Program	Service Delivery & Best Practices	Jul-12	0.3
IT Infrastructure Program	IT System Architecture	Jul-12	1.0
IT Infrastructure Program	Server Management	Jul-12	0.5
DI Treatment Plant Asset Protection	Fire Alarm System Replacement-Design	Jul-12	2.1
DI Treatment Plant Asset Protection	Gravity Thickener Rehabilitation - Design	Jul-12	1.0
DI Treatment Plant Asset Protection	North Main Pump Station Variable Frequency Drives Replacement - Resident Engineer Inspection	Jul-12	2.0
DI Treatment Plant Asset Protection	Clarif Tip Tube Replacement	Jul-12	4.0
Winsor Station Pipeline	Hatchery Pipeline - Design/Engineering Services During Construction/Resident Inspection	Jul-12	0.7
Long Term Redundancy	Sudbury Aqueduct - Massachusetts Environmental Protection Agency Review	Jul-12	5.3
Facility Asset Protection	Caruso Pump Station Improvements Design/Construction Administration/Resident Engineer Inspection	Aug-12	0.6
DI Treatment Plant Asset Protection	Thermal Power Plant Fuel System Modification Resident Engineer Inspection	Aug-12	0.8
DI Treatment Plant Asset Protection	As-Needed Design 7-1	Aug-12	2.6
DI Treatment Plant Asset Protection	As-Needed Design 7-2	Aug-12	2.6
DI Treatment Plant Asset Protection	Gravity Thickener Ctr Column Replacement	Aug-12	1.0
Clinton Wastewater Treatment Plant	Clinton Tank Rehabilitation	Sep-12	1.7
Application Improvement Program	Maximo Upgrade	Sep-12	0.8
North Dorchester Bay CSO	No. Dorchester Outfall Dredging-Construction	Sep-12	3.7
Facility Asset Protection	DeLauri PS Improvements	Sep-12	0.4
Facility Asset Protection	Prison Pt Pump & Gearbox Rebuilds	Sep-12	3.4
DI Treatment Plant Asset Protection	HVAC Equipment Replacement - Design/Engineering Services During Construction	Sep-12	3.5
DI Treatment Plant Asset Protection	North Main Pump Station & Winthrop Terminal Facility Butterfly Valve Replacement.	Sep-12	2.5
DI Treatment Plant Asset Protection	Clarifier Phase 2 Design	Sep-12	3.0
DI Treatment Plant Asset Protection	Cryo Chillers Replacement	Sep-12	1.1
NIH Redundancy & Storage	Gillis Pump Station Improvements	Sep-12	3.8
Carroll Water Treatment Plant	Existing Facilities Modifications - CP7	Sep-12	5.6
Quabbin Water Treatment Plant	Quabbin UltraViolet Water Treatment Plant Constr.	Sep-12	5.8
Business Systems Plan	Laboratory Instrument Data Management	Oct-12	0.3
IT Infrastructure Program	Enterprise Applications Integration	Oct-12	0.6
DI Treatment Plant Asset Protection	Ancillary Modifications - Final Design 4	Oct-12	2.3
Alternative Energy Initiatives	DI Wind Phase II - Construction (CSB)	Nov-12	2.5
Wastewater Central Monitoring	Wastewater Redundant Communications	Nov-12	0.9
DI Treatment Plant Asset Protection	Sodium Hypo Pipe Replacement - Design	Nov-12	2.1
DI Treatment Plant Asset Protection	Digester & Storage Tank Rehab Design/Engineering Services During Construction	Nov-12	3.0
DI Treatment Plant Asset Protection	Switchgear Replacement - Design	Nov-12	1.2

ATTACHMENT E
FY13 PLANNED CAPITAL CONTRACT AWARDS (\$ in Millions)

Project	Subphase	NTP	FY13 Budget
Clinton Wastewatr Treat Plant	Phosphorous Removal Design/Engineering Services During Construction	Nov-12	0.9
DI Treatment Plant Asset Protection	Chemical Pipe Replacement - Design	Dec-12	0.5
DI Treatment Plant Asset Protection	Switchgear Replacement - Construction	Dec-12	4.1
July 2012 - December 2012	39 Contracts Planned		\$ 79.3
IT Infrastructure Program	Enterprise Data Mgmt	Jan-13	1.0
Braintree-Weymouth Relief Facilities	Mill Cove Sluice Gates - Construction	Jan-13	0.6
Siphon Structure Rehabilitation	Design/Construction Services/Resident Inspection	Jan-13	0.5
Facility Asset Protection	Nut Island Fire Pump Building - Study	Jan-13	0.3
Facility Asset Protection	Prison Point/Cottage Farm CSO Rehab Prelimin Design/Study	Jan-13	1.0
DI Treatment Plant Asset Protection	Eastern Seawall Design - 1	Jan-13	0.5
DI Treatment Plant Asset Protection	Winthrop Terminal Facility VFD Replac. -Constr.	Jan-13	3.8
DI Treatment Plant Asset Protection	Roof Replacement Phase 3	Jan-13	1.0
Weston Aqued. Supply Mains	WASM 3 - Massachusetts Environmental Protection Agency/Design/Construction Administration/Resident Inspection	Jan-13	31.5
Carroll Water Treatment Plant	Technical Assistance 7	Jan-13	0.6
Carroll Water Treatment Plant	Technical Assistance 8	Jan-13	0.6
Facility Asset Protection	Rehab of Sects 186 and 4 Construction	Feb-13	3.0
Clinton Wastewatr Treat Plant	Clinton Plant-Wide Concrete Repair	Feb-13	1.5
Equipment Purchase	FY09-13 Major Lab Instrumentation	Mar-13	1.0
Wastewater Meter Sys-Equip Repl.	Planning / Study	Mar-13	0.1
MWRA Facilities Management	Design/Engineering Services (Old Admin Bldg)	Apr-13	0.2
IT Infrastructure Program	User Data Mgmt	Apr-13	0.1
DI Treatment Plant Asset Protection	Barge Berth and Facility Replacement	Apr-13	2.3
Weston Aqued. Supply Mains	Sect 36/Watertown/Waltham Conn. Constr.	Apr-13	21.1
Facility Asset Protection	Nut Island Elec & Grit/Sreens Conveyance-Construction	May-13	7.1
DI Treatment Plant Asset Protection	North Main Pump Station Harmonic Filter Replacement	May-13	6.0
DI Treatment Plant Asset Protection	Digester Gas Flare #4 - Design	Jun-13	0.4
DI Treatment Plant Asset Protection	Fire Alarm System Replacement - Const	Jun-13	16.0
DI Treatment Plant Asset Protection	Deer Island Combustion Turbine Generator Rebuilds	Jun-13	6.0
DI Treatment Plant Asset Protection	North Main Pump Station Motor Control Center Ph 2 Resident Engineer Inspection	Jun-13	0.6
DI Treatment Plant Asset Protection	North Main Pump Station Motor Control Center Ph 2 Construction	Jun-13	6.1
DI Treatment Plant Asset Protection	Fire System Replacement Resident Engineer Inspection	Jun-13	1.2
January 2013 - June 2013	27 Contracts Planned		\$ 113.9
Total July 2012 - June 2013	66 Contracts Planned		\$ 193.1


STAFF SUMMARY

TO: Board of Directors
FROM: Frederick A. Laskey, Executive Director
DATE: September 12, 2012
SUBJECT: Final FY12 Financial Update and Summary



COMMITTEE: Administration, Finance & Audit

INFORMATION
 VOTE


Kathy Song, Budget Director
David Whelan, Budget Manager
Preparer/Title


Rachel C. Madden
Director, Administration and Finance

RECOMMENDATION:

For information only. This staff summary provides the final financial update and variance highlights for FY12.

DISCUSSION:

Total year-end expenses were lower than budget by \$8.0 million or 1.3% and total revenues were greater than budgeted by \$1.8 million or 0.3% for a net variance of \$9.8 million.

The largest favorable variances for the year were:

- Direct Expenses of \$4.5 million mostly for maintenance, professional services, workers' compensation, wages and salaries, and overtime;
- Debt Service of \$3.2 million for lower than budgeted variable rate of \$14.1 million; lower and delayed State Revolving Fund (SRF) borrowing of \$8.0 million; lower Local Water Pipeline Commercial Paper expense of \$3.2 million, and \$2.1 million in favorable refunding, offset by \$24.1 million defeasance executed in June;
- Indirect Expenses of \$0.3 million for lower Deer Island Harbor Cable expense due to delayed maintenance activities and Insurance expenses for fewer than anticipated claims offset by higher mitigation expense due to a one-time payment for ambulance services for the Town of Winthrop; and
- Revenues of \$1.8 million were higher than budgeted Investment Income due to a lower level of liquidity requirements which allowed for longer investments and higher non-rate revenue for a variety of miscellaneous revenue items, the largest being the energy related Renewable Portfolio Standard (RPS) credits.

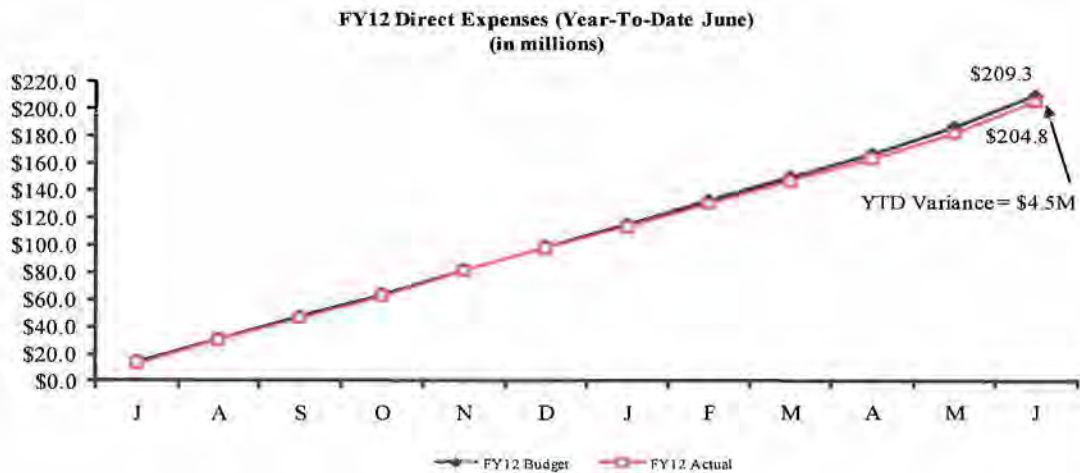
The \$24.1 million defeasance executed in June 2012 was structured to provide targeted relief in FY13, FY14, FY15, and FY16 as part of the Authority's multi-year rates strategy.

Total FY12 expenses were lower than budget by \$8.0 million or 1.3% as indicated below:

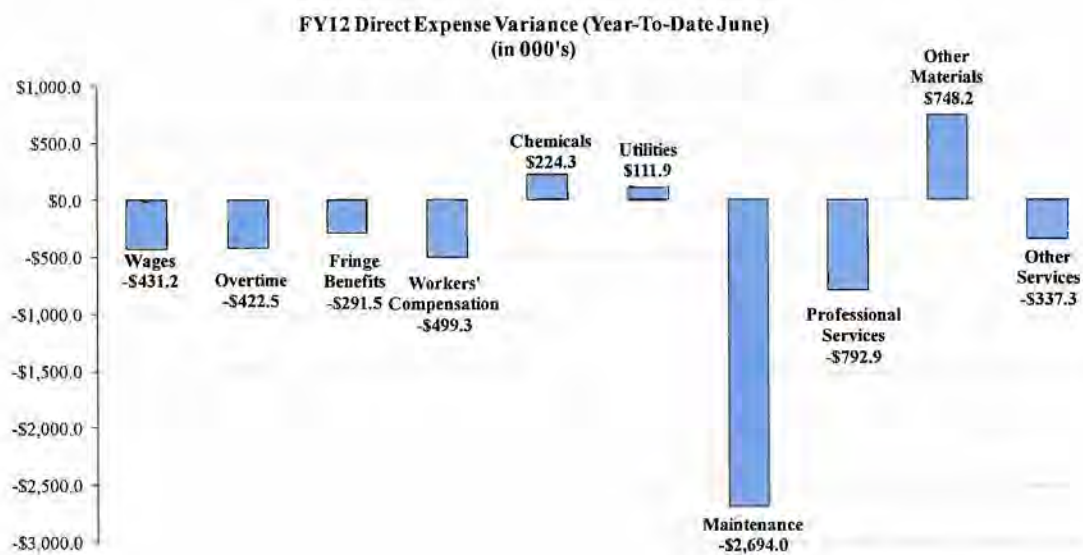
	FY12 Budget (June)	FY12 Actual (June)	\$ Variance	% Variance
Direct Expenses	\$209.3	\$204.8	-\$4.5	-2.1%
Indirect Expenses	\$40.9	\$40.6	-\$0.3	-0.8%
Debt Service	\$368.0	\$364.8	-\$3.2	-0.9%
Total	\$618.2	\$610.2	-\$8.0	-1.3%

Direct Expenses

Direct expenses totaled \$204.8 million, \$4.5 million or 2.1% less than budget.



The primary reasons for underspending on direct expenses were lower spending for: maintenance, professional services, workers' compensation, wages and salaries, overtime, other services and fringe benefits. The underspending was offset by higher than budgeted spending for other materials, chemicals, and utilities. Please refer to Attachment 2 for a more detailed comparison by line item.



Maintenance

Maintenance was underspent by \$2.7 million or 9.1% for the year of which \$3.0 million was for services offset by overspending of \$290,000 for materials. In Operations, some of the underspending was attributable to the timing of projects such as the carbon absorbers and Combined Turbine Generators (CTG) annual service contract at Deer Island. Switchgear modifications at Nut Island and relocation of gate controls at Braintree Weymouth Intermediate Pump Station slipped into FY13 due to the need for additional engineering assessments. Additionally, the Prison Point pump rebuilding project has been moved to the CIP as the scope has increased, the bid for the tree removal project at Wachusett South Dike came in lower than budgeted, components of the metro facilities HVAC and lighting upgrade project were funded thru NSTAR American Reinvestment and Recovery (ARRA) funds, and some projects originally scheduled for FY12 were completed in FY11. In A&F, underspending was mainly in MIS due to a re-evaluation of computer license needs as a result of the IT Study.

Professional Services

Professional Services were underspent by \$793,000 or 13.5% mainly due to lower than projected use of as-needed engineering services, Harbor Monitoring expenses, timing of the IT Study implementation, technical training, and guard services.

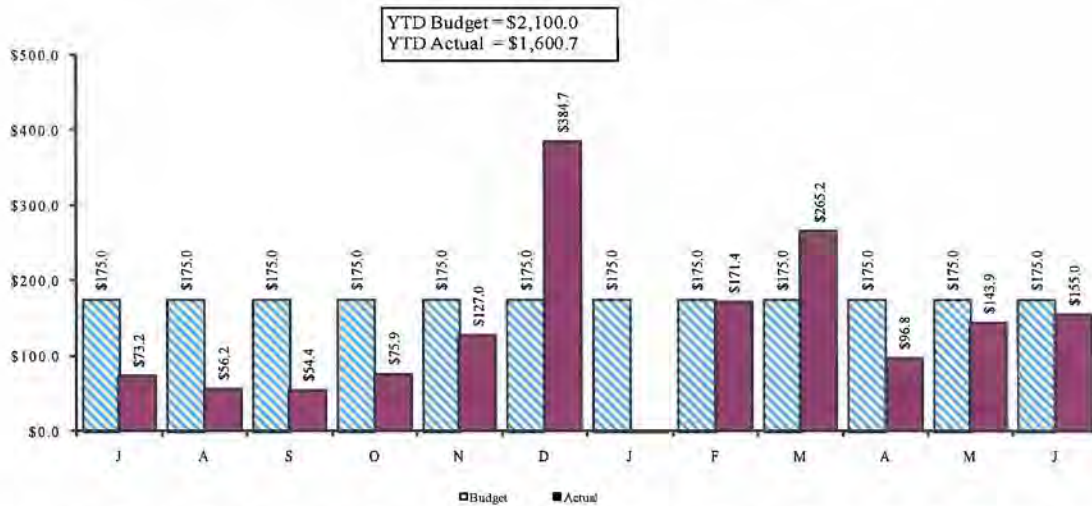
Other Materials

Other Materials were higher than budget by \$748,000 or 15.7% due to higher than budgeted equipment expense for Authority-wide radio purchases offset by lower than budgeted spending for computer hardware and lab and testing supplies.

Workers' Compensation

Workers' Compensation was lower than budget by \$499,000 or 23.8%. In FY12, contrary to the experience of FY11, both the reserves (\$485,000) and the actual payments (\$15,000) were trending below budget.

FY12 Workers' Compensation Spending (Year-To-Date June)
(in thousands)

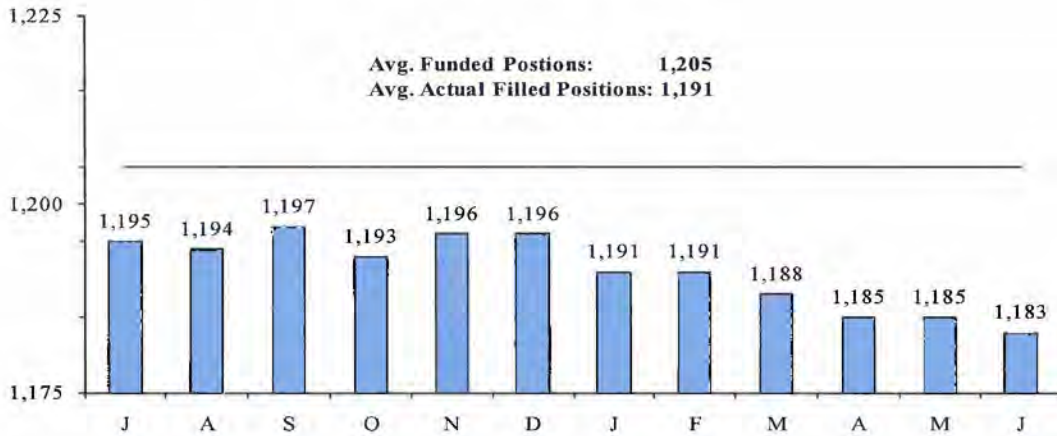


# of Open Claims-Lost Time	43	40	41	42	44	51	49	48	46	52	50	48
# of Open Claims-Medical Only	38	47	57	55	52	56	51	52	54	62	54	44

Wages and Salaries

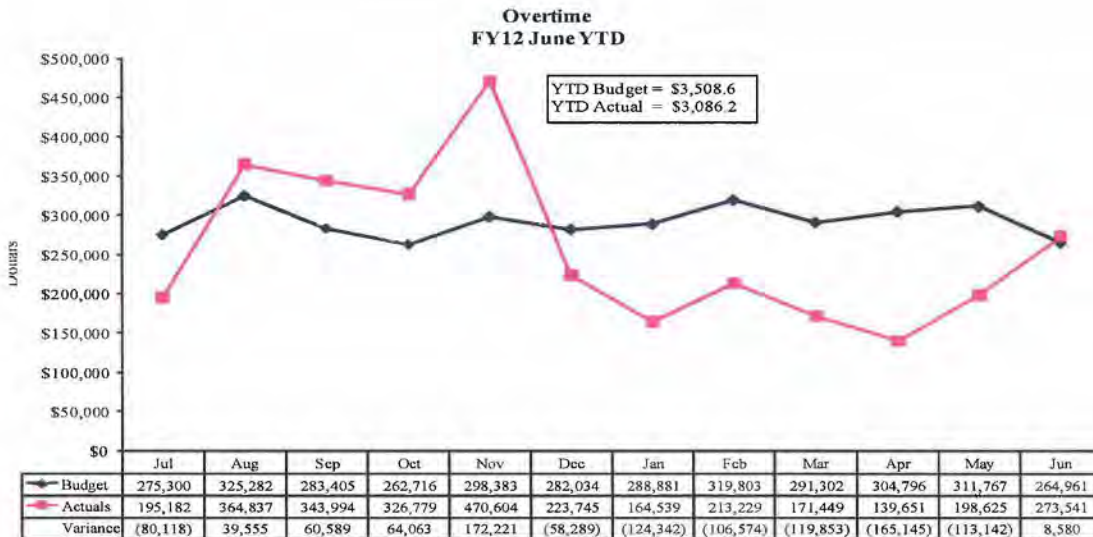
Wages and Salaries were underspent by \$431,000 or 0.5% as a result of lower than budgeted filled positions and unpaid time off, offset by unbudgeted regular pay COLA increases as a result of collective bargaining agreements reached in FY12. The average actual filled positions were 1,191 which are 14 positions lower than the 1,205 positions funded. The actual number of temporary employees were 6 versus 11 budgeted.

FY12 MWRA Headcount Trend



Overtime

Overtime was underspent by \$422,000 or 12.0% mainly due to lower than projected snow removal and less than budgeted wet weather events.



Other Services

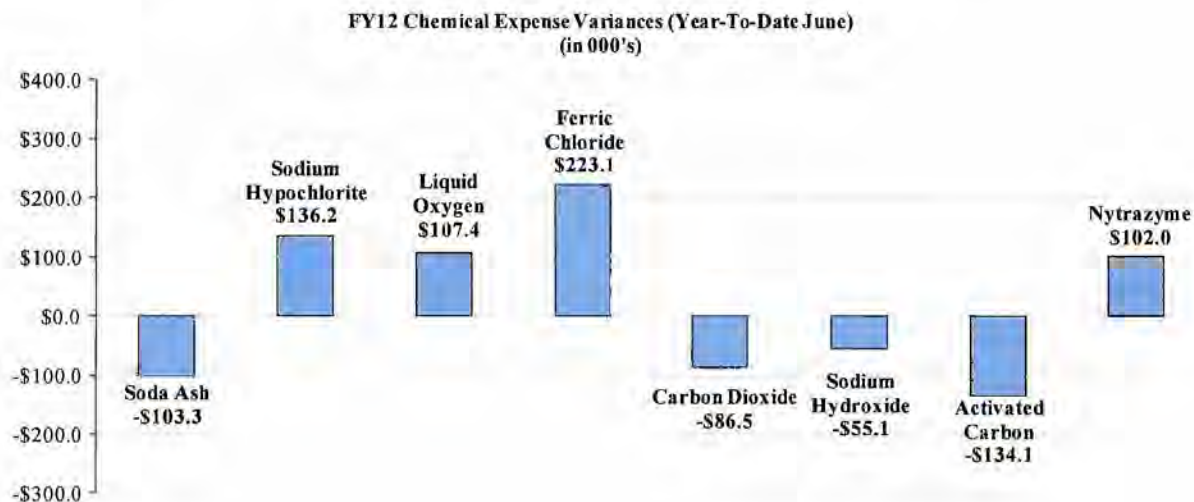
Other Services were lower than budget by \$337,000 or 1.4% mainly due to delayed implementation of Global Positioning Services for Authority vehicles which was offset by higher than budgeted sludge quantities. Sludge quantities in FY12 were approximately 4% higher than budget, 109.7 tons per day versus 105.5 budgeted mainly due to digester maintenance work earlier in the fiscal year that temporarily reduced storage capacity.

Fringe Benefits

Fringe Benefits were underspent by \$292,000 or 1.6% in FY12 due to lower than budgeted health insurance costs resulting from lower headcount and the fact that new employees contribute at a higher percentage (25% versus 20%) than employees hired before July 2003.

Chemicals

Chemicals were overspent by \$224,000 or 2.5% year-to-date. The majority of the variance was attributable to higher usage of Ferric Chloride for struvite control at Deer Island, higher Sodium Hypochlorite due to higher usage in Field Operations and higher pricing at Deer Island, and higher Nytrazyme due to odor control in the Framingham Extension Relief Sewer. Some of the overspending was offset by lower usage of Activated Carbon and Soda Ash.

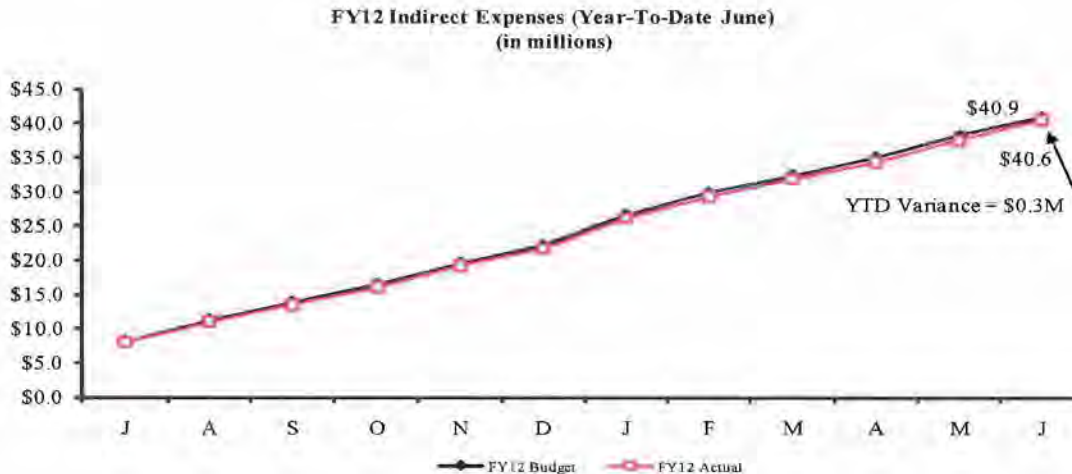


Utilities

Utilities were overspent by \$112,000 or 0.5% for higher water use of \$194,000 mainly for the Deer Island leak which has been corrected and in Field Operations for higher usage and pricing at several facilities and higher Diesel of \$73,000 due to higher purchases due to favorable pricing at Deer Island offset by lower volume and pricing in Field Operations. The overspending was offset by lower natural gas of \$137,000 due to lower usage in Field Operations.

Indirect Expenses

Indirect Expenses in FY12 totaled \$40.6 million, \$321,000 or 0.8% less than budget.



The majority of the year-to-date underspending on Indirect Expenses was for Deer Island Cross Harbor cable of \$404,000 mainly due to lower special maintenance projects as a result of NSTAR delays and Insurance expenses of \$209,000 due to lower claims and premiums offset by higher mitigation expense due to a one-time payment for ambulance services for the Town of Winthrop. It should be noted, however, that going forward, the Town of Winthrop will be providing ambulance service for Deer Island, for an annual savings to MWRA of approximately \$250,000 per year.

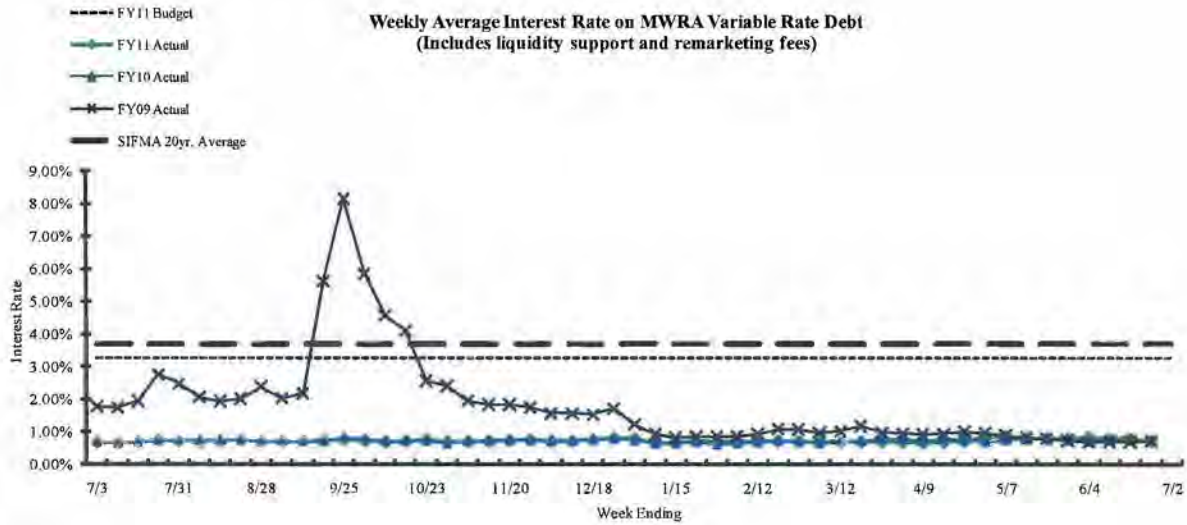
Debt Service Expenses

Debt Service Expenses through June totaled \$364.8 million which was \$3.2 million or 0.9% less than budget after the June defeasance. In June, the Authority defeased \$38.7 million in future debt obligations by using FY12 Debt Service savings of \$24.1 million and \$14.6 million released from Debt Service Reserves. The FY12 defeasance will provide targeted rate relief in FY13, FY14, FY15, and FY16.

Debt Service expenses included the principal and interest payment for fixed debt, the variable subordinate debt, and the State Revolving Fund (SRF) obligation. Also, included were the commercial paper program for the local water pipeline projects, current revenue for capital, and the Chelsea facility lease payment.

Before the \$24.1 million defeasance, the favorable debt service variance for the year totaled \$27.3 million as a result of lower than budgeted variable interest rates, lower and delayed State Revolving Fund (SRF) borrowing, lower Commercial Paper rates for the Water Pipeline Program, and favorable refunding.

The graph below reflects the variable rate trend by month over the past year in comparison with FY09 and FY10 Actuals and the FY11 Budget for the same period.



Revenue

Total Revenue and Income for FY12 totaled \$620.0 million, \$1.8 million or 0.3% higher than budget mainly due to higher investment income of \$915,000 due to lower level of liquidity requirements which allowed for higher long-term investments and non-rate revenue of \$906,000 which pertained to the higher energy program revenue, permit fees, and proceeds from the sale of obsolete equipment.

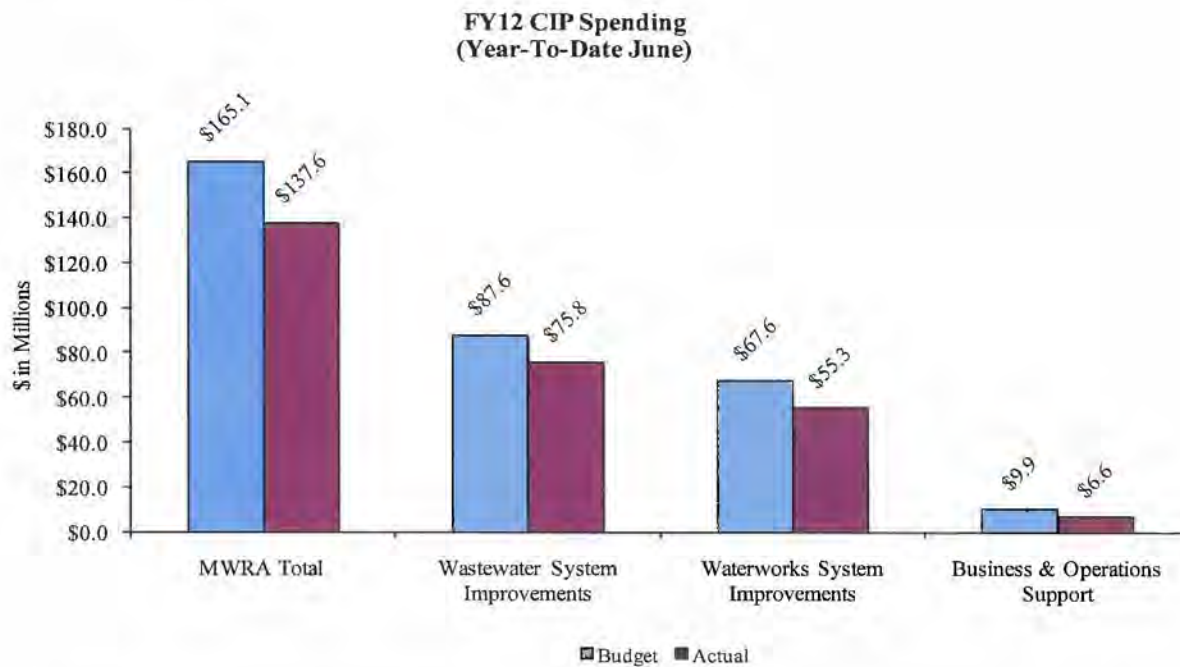
FY12 Capital Improvement Program

Spending in FY12 totaled \$137.6 million, \$27.5 million or 16.6% lower than budget.

Underspending was reported in all three programs: Wastewater of \$11.9 million, Waterworks of \$12.3 million, and Business and Operations Support of \$3.3 million.

A more comprehensive review of the capital program for FY12 is being presented in a separate staff summary to the Board today under the Fiscal Year 2012 Year-End Capital Project Performance Report.

CIP Spending By Program:



\$ in Millions	Budget	Actuals	\$ Var.	% Var.
Wastewater System Improvements				
Interception & Pumping	10.4	6.0	-4.4	-42.4%
Treatment	40.0	16.4	-23.6	-59.1%
Residuals	0.7	0.0	-0.7	-100.0%
CSO	34.7	47.6	12.9	37.1%
Other	1.8	5.8	4.0	221.6%
Total Wastewater System Improvements	\$87.6	\$75.8	-\$11.9	-13.6%
Waterworks System Improvements				
Drinking Water Quality Improvements	26.1	18.4	-7.6	-29.2%
Transmission	20.8	18.3	-2.5	-11.9%
Distribution & Pumping	12.2	14.3	2.1	16.8%
Other	8.5	4.3	-4.2	-49.8%
Total Waterworks System Improvements	\$67.6	\$55.3	-\$12.3	-18.2%
Business & Operations Support	\$9.9	\$6.6	-\$3.3	-33.3%
Total MWRA	\$165.1	\$137.6	-\$27.5	-16.6%

The main reasons for FY12 underspending were:

1. Wastewater Treatment of \$23.6 million - due to lower award and delay for North Main Pump Station Variable Frequency Drive Construction and project delays such as the Clarifier Flushing System, Expansion Joint Repair, Barge Berth and Facility Replacement, Digester Module 1 & 2 Pipe Replacement and As-needed Design Contracts.
2. Drinking Water Program of \$7.6 million – mainly due to lower than budgeted award for the Spot Pond Design/Build contract.
3. Interception and Pumping Program of \$4.4 million – mainly due to delays in the Upper Neponset Valley project of \$1.1 million, the Chelsea Creek Upgrade Engineering Services during Construction of \$848,000 and the Chelsea Creek Design of \$668,000.
4. Local Water Pipeline Assistance Program of \$3.3 million – due to lower than anticipated requests for funding from communities.
5. Water Transmission of \$2.5 million – mainly due to delays in Long-Term Redundancy, Quabbin Transmission System, and timing of Watershed land purchases.

The underspending was offset by overspending of \$12.9 million in the Combined Sewer Overflow (CSO) program due to the timing of the payments for the Reserved Channel Sewer Separation and the Brookline Sewer Separation projects, \$4.0 million in higher Inflow/Infiltration (I/I) community requests, and \$2.1 million in Water Distribution and Pumping mainly due to greater than budgeted spending for Lynnfield Pipeline and Northern Intermediate High Redundancy & Storage – Reading/Stoneham Interconnections. Other projects showing overspending include \$1.2 million for Lower Hultman Rehabilitation activities and \$757,000 for Dam Projects Modifications and Repairs due to an accelerated schedule and contractor progress on the Foss and Weston Dams.

Construction Fund Balance

The construction fund balance was at \$241 million as of June 2012. Commercial Paper availability was at \$206 million to fund construction projects.

- Attachment 1 – Variance Summary June 2012
- Attachment 1A – FY12 Budget vs. FY12 Actual
- Attachment 2 – Current Expense Variance Explanations
- Attachment 3 – Capital Improvement Program Variance Explanations
- Attachment 4 – FY12 Actual versus FY12 Year-End Projection (May)
- Attachment 5 – FY12 Actual versus FY11 Actual Spending

ATTACHMENT 1

	June 2012 Year-to-Date					
	Period 12 YTD Budget	Period 12 YTD Actual	Period 12 YTD Variance	%	FY12 Approved	% Expended
EXPENSES						
WAGES AND SALARIES	\$ 90,319,013	\$ 89,887,813	\$ (431,200)	-0.5%	\$ 90,319,013	99.5%
OVERTIME	3,508,630	3,086,174	(422,456)	-12.0%	3,508,630	88.0%
FRINGE BENEFITS	17,954,076	17,662,543	(291,533)	-1.6%	17,954,076	98.4%
WORKERS' COMPENSATION	2,100,000	1,600,726	(499,274)	-23.8%	2,100,000	76.2%
CHEMICALS	9,047,275	9,271,529	224,254	2.5%	9,047,275	102.5%
ENERGY AND UTILITIES	22,654,931	22,766,837	111,906	0.5%	22,654,931	100.5%
MAINTENANCE	29,470,020	26,776,012	(2,694,008)	-9.1%	29,470,020	90.9%
TRAINING AND MEETINGS	251,550	184,228	(67,322)	-26.8%	251,550	73.2%
PROFESSIONAL SERVICES	5,892,441	5,099,517	(792,924)	-13.5%	5,892,441	86.5%
OTHER MATERIALS	4,765,483	5,513,699	748,216	15.7%	4,765,483	115.7%
OTHER SERVICES	23,323,074	22,985,815	(337,259)	-1.4%	23,323,074	98.6%
TOTAL DIRECT EXPENSES	\$ 209,286,493	\$ 204,834,893	\$ (4,451,598)	-2.1%	\$ 209,286,493	97.9%
INSURANCE	\$ 2,285,870	\$ 2,076,961	\$ (208,909)	-9.1%	\$ 2,285,870	90.9%
WATERSHED/PILOT	25,576,274	25,629,604	53,330	0.2%	25,576,274	100.2%
BECo PAYMENT	3,965,500	3,561,130	(404,370)	-10.2%	3,965,500	89.8%
MITIGATION	1,528,700	1,744,579	215,879	14.1%	1,528,700	114.1%
ADDITIONS TO RESERVES	195,467	195,467	-	0.0%	195,467	100.0%
RETIREMENT FUND	7,340,438	7,363,170	22,732	0.3%	7,340,438	100.3%
POST EMPLOYEE BENEFITS	-	-	-	-	-	-
TOTAL INDIRECT EXPENSES	\$ 40,892,249	\$ 40,570,911	\$ (321,338)	-0.8%	\$ 40,892,249	99.2%
DEBT SERVICE	\$ 368,329,918	\$ 365,136,323	\$ (3,193,595)	-0.9%	\$ 367,979,918	99.2%
DEBT SERVICE ASSISTANCE	(350,000)	(384,323)	(34,323)	9.8%	-	0.0%
TOTAL DEBT SERVICE	\$ 367,979,918	\$ 364,752,000	\$ (3,227,918)	-0.9%	\$ 367,979,918	99.2%
TOTAL EXPENSES	\$ 618,158,660	\$ 610,157,804	\$ (8,000,853)	-1.3%	\$ 618,158,660	98.7%
REVENUE & INCOME						
RATE REVENUE	\$ 589,700,000	\$ 589,700,000	\$ -	0.0%	\$ 589,700,000	100.0%
OTHER USER CHARGES	7,142,495	7,264,794	122,299	1.7%	7,142,495	101.7%
OTHER REVENUE	4,872,342	5,655,583	783,241	16.1%	4,872,342	116.1%
RATE STABILIZATION	1,091,780	1,091,780	-	0.0%	1,091,780	100.0%
INVESTMENT INCOME	15,352,043	16,267,463	915,420	6.0%	15,352,043	106.0%
TOTAL REVENUE & INCOME	\$ 618,158,660	\$ 619,979,620	\$ 1,820,960	0.3%	\$ 618,158,660	100.3%

Attachment 1A
FY12 Budget vs. FY12 Actual

TOTAL MWRA	FY12 Budget	FY12 Actual	Change FY12 Budget vs. FY12 Actual	
			\$	%
EXPENSES				
WAGES AND SALARIES	\$ 90,319,013	\$ 89,887,813	\$ (431,200)	-0.5%
OVERTIME	3,508,630	3,086,174	(422,456)	-12.0%
FRINGE BENEFITS	17,954,076	17,662,543	(291,533)	-1.6%
WORKERS' COMPENSATION	2,100,000	1,600,726	(499,274)	-23.8%
CHEMICALS	9,047,275	9,271,529	224,254	2.5%
ENERGY AND UTILITIES	22,654,931	22,766,837	111,906	0.5%
MAINTENANCE	29,470,020	26,776,012	(2,694,008)	-9.1%
TRAINING AND MEETINGS	251,550	184,228	(67,322)	-26.8%
PROFESSIONAL SERVICES	5,892,441	5,099,517	(792,924)	-13.5%
OTHER MATERIALS	4,765,483	5,513,699	748,216	15.7%
OTHER SERVICES	23,323,074	22,985,815	(337,259)	-1.4%
TOTAL DIRECT EXPENSES	\$ 209,286,493	\$ 204,834,893	\$ (4,451,598)	-2.1%
INSURANCE	\$ 2,285,870	\$ 2,076,961	\$ (208,909)	-9.1%
WATERSHED/PILOT	25,576,274	25,629,604	53,330	0.2%
HEEC PAYMENT	3,965,500	3,561,130	(404,370)	-10.2%
MITIGATION	1,528,700	1,744,579	215,879	14.1%
ADDITIONS TO RESERVES	195,467	195,467	-	0.0%
RETIREMENT FUND	7,340,438	7,363,170	22,732	0.3%
POSTEMPLOYMENT BENEFITS			-	
TOTAL INDIRECT EXPENSES	\$ 40,892,249	\$ 40,570,911	\$ (321,338)	-0.8%
DEBT SERVICE (before offsets)	\$ 368,329,918	\$ 379,245,092	\$ 10,915,174	3.0%
VARIABLE RATE DEBT		(14,108,769)	(14,108,769)	
DEFEASANCE ACCOUNT			-	
DEBT SERVICE ASSISTANCE	(350,000)	(384,323)	(34,323)	9.8%
TOTAL DEBT SERVICE	\$ 367,979,918	\$ 364,752,000	\$ (3,227,918)	-0.9%
TOTAL EXPENSES	\$ 618,158,660	\$ 610,157,804	\$ (8,000,853)	-1.3%
REVENUE & INCOME				
RATE REVENUE	\$ 589,700,000	\$ 589,700,000	\$ -	0.0%
OTHER USER CHARGES	7,142,495	7,264,794	122,299	1.7%
OTHER REVENUE	4,872,342	5,655,583	783,241	16.1%
RATE STABILIZATION	1,091,780	1,091,780	-	0.0%
INVESTMENT INCOME	15,352,043	16,267,463	915,420	6.0%
TOTAL REVENUE & INCOME	\$ 618,158,660	\$ 619,979,620	\$ 1,820,960	0.3%
Surplus after Initial Defeasance	\$ -	\$ 9,821,813	\$ 9,821,813	

ATTACHMENT 2
Current Expense Variance Explanations

Total MWRA	FY12 Budget June YTD	FY12 Actuals June YTD	FY12 Actual vs. FY12 Budget		Explanations
			\$	%	
Direct Expenses					
Wages & Salaries	90,319,013	89,887,813	(431,200)	-0.5%	Underspending due to lower than budgeted filled positions and staff on unpaid leave offset by unbudgeted regular pay increases for collective bargaining agreements. As of June, there were 1,183 filled positions, 22 positions lower than the 1,205 funded positions. Year-to-date average filled positions are 1,191, or 14 positions under budget.
Overtime	3,508,630	3,086,174	(422,456)	-12.0%	Underspending mainly due to lower than projected snow removal and lower than budgeted wet weather events.
Fringe Benefits	17,954,076	17,662,543	(291,533)	-1.6%	Lower spending for Health Insurance of \$287k, and Overtime Meals of \$16k.
Worker's Compensation	2,100,000	1,600,726	(499,274)	-23.8%	Lower spending for reserve requirements of \$485k and actual payments of \$15k.
Chemicals	9,047,275	9,271,529	224,254	2.5%	Higher spending for Ferric Chloride of \$223k, Sodium Hypochlorite of \$136k, Liquid Oxygen of \$107k and Nitrazyme of \$102k, offset by lower spending mainly for Activated Carbon of \$134k, Soda Ash of \$103k, and Carbon Dioxide of \$87k.
Utilities	22,654,931	22,766,837	111,906	0.5%	Higher spending for water of \$194k mainly due to a Deer Island leak which has been corrected and Diesel Fuel of \$73k mainly due to lower usage, offset by lower spending for Natural Gas of \$137k.
Maintenance	29,470,020	26,776,012	(2,694,008)	-9.1%	Maintenance Services are underspent by \$3.0 million and Materials are overspent by \$290k. Some of the underspending is due to timing of carbon absorbers, CTG servicing, and Nut Island switchgear modifications.

ATTACHMENT 2
Current Expense Variance Explanations

Total MWRA	FY12 Budget June YTD	FY12 Actuals June YTD	FY12 Actual vs. FY12 Budget		Explanations
			\$	%	
Training & Meetings	251,550	184,228	(67,322)	-26.8%	Underspending by most divisions.
Professional Services	5,892,441	5,099,517	(792,924)	-13.5%	Underspending for Lab & Testing of \$255k for lower Harbor Outfall Monitoring activities, lower as-needed engineering services of \$215k, lower Security of \$130k, and Other of \$120k.
Other Materials	4,765,483	5,513,699	748,216	15.7%	Higher spending for Equipment Furniture of \$847k due to radio purchase, Lab & Testing supplies of \$73k, and Office Supplies of \$43k. Offset by lower spending for Computer Hardware of \$114k, Postage of \$82k, and Vehicle Purchases of \$42k.
Other Services	23,323,074	22,985,815	(337,259)	-1.4%	Lower spending for Other Services of \$818k mainly for delayed implementation of Global Positioning Services (GPS) for Authority vehicles and equipment, offset by higher spending for Sludge Pelletization of \$480k.
Total Direct Expenses	209,286,493	204,834,893	(4,451,600)	-2.1%	
Indirect Expenses					
Insurance	2,285,870	2,076,961	(208,909)	-9.1%	Underspending for Payments/Claims of \$176k and Premiums of \$33k.
Watershed/PILOT	25,576,274	25,629,604	53,330	0.2%	Higher Watershed Reimbursement of \$42k and PILOT of \$11k.
HEEC Payment	3,965,500	3,561,130	(404,370)	-10.2%	Lower spending for Deer Island Cross Harbor special maintenance projects of \$405k due to NStar delays.
Mitigation	1,528,700	1,744,579	215,879	14.1%	Overspending due to one-time payment of \$250k to Winthrop for ambulance contract.
Addition to Reserves	195,467	195,467	-	0.0%	
Pension Expense	7,340,438	7,363,170	22,732	0.3%	
Post Employee Benefits	-	-	-		
Total Indirect Expenses	40,892,249	40,570,911	(321,338)	-0.8%	

ATTACHMENT 2
Current Expense Variance Explanations

Total MWRA	FY12 Budget June YTD	FY12 Actuals June YTD	FY12 Actual vs. FY12 Budget		Explanations
			\$	%	
Debt Service					
Debt Service	368,329,918	365,136,323	(3,193,595)	-0.9%	Lower variable rate debt of \$14.1 million, State Revolving fund of \$8.0 million, Local Water Pipeline of \$3.2 million, and favorable refunding of \$2.1 million. The underspending of \$27.3 million was offset by a \$24.1 million defeasance executed in June.
Debt Service Assistance	(350,000)	(384,323)	(34,323)	9.8%	
Total Debt Service Expenses	367,979,918	364,752,000	(3,227,918)	-0.9%	
Total Expenses					
Total Expenses	618,158,660	610,157,804	(8,000,856)	-1.3%	
Revenue & Income					
Rate Revenue	589,700,000	589,700,000	-	0.0%	
Other User Charges	7,142,495	7,264,794	122,299	1.7%	Mainly due to Deer Island water usage of \$132k.
Other Revenue	4,872,342	5,655,583	783,241	16.1%	Higher Revenue Energy of \$447k, Permit Fees of \$193k, Miscellaneous Revenue of \$127k, and Equipment Disposal of \$134k offset by lower Hydro-power of \$86k and Penalties of \$74k.
Rate Stabilization	1,091,780	1,091,780	-	0.0%	
Investment Income	15,352,043	16,267,463	915,420	6.0%	Higher than budgeted Investment Income due to a lower level of liquidity requirements which allowed for higher long-term investments.
Total Revenue	618,158,660	619,979,620	1,820,960	0.3%	
Net Revenue in Excess of Expenses	-	9,821,816	9,821,816		

**ATTACHMENT 3
Capital Improvement Program Variance Explanations**

	FY12 Budget YTD June	FY12 Actuals YTD June	YTD Actuals vs. Budget		Explanations
			\$	%	
Interception & Pumping (I&P)	\$10,401,156	\$5,993,887	(\$4,407,268)	-42.4%	Underspending for Chelsea Creek Upgrades Engineering Services During Construction (ESDC) and Design/Construction Administration (CA) contracts of \$848,000 and \$668,000 respectively due to re-evaluation of the phasing of the Remote Headworks facilities project; schedule shifts in Upper Neponset Valley Sewer System Land Acquisition of \$1.1M, Braintree/Weymouth Relief Facilities Wetlands Replication of \$500,000, Prison Point Pump & Gearbox Rebuilds of \$440,000 and Pump Stations/CSOs Condition Assessment of \$375,000; and delay in North System Hydraulic Study of \$376,000. Offset by overspending due to contractor progress on Section 156 Rehabilitation Design/Build contract of \$896,000.
Treatment	\$39,986,919	\$16,350,949	(\$23,635,969)	-59.1%	Underspending due to lower than budgeted award and delays for the North Main Pump Station VFD Replacement Construction of \$5.4M; HVAC Equipment Replacement Design/ESDC and Construction of \$1.7M; Clarifier Flushing System of \$1.6M; Expansion Joint Repair-Construction 2 of \$1.2M; Barge Berth and Facility Replacement of \$1.1M; Miscellaneous VFD Replacements of \$1.0M; Process Information Control System (PICS) Replacement Construction of \$978,000; Digester Modules 1 & 2 Pipe Replacement of \$907,000; Primary/Secondary Clarifier Rehabilitation of \$906,000; Electrical Equipment Upgrades-Construction 4 of \$875,000; As-needed Design contracts of \$857,000; schedule shifts in Fire Alarm System Replacement - Design of \$817,000; Switchgear Replacement-Construction of \$786,000; Power System Improvements-Construction of \$748,000; and Cryogenics Plant Equipment Replacement-Construction of \$617,000 and Digester and Storage Tank Rehabilitation Design/ESDC of \$500,000.
Residuals	\$714,577	\$0	(\$714,577)	-	Underspending due to delay in award of Residuals Technology contract. Contract was awarded in June 2012.
CSO	\$34,710,526	\$47,571,744	\$12,861,218	37.1%	Overspending primarily due to Reserved Channel Sewer Separation of \$8.3M and Brookline Sewer Separation of \$4.8M mainly due to timing; North Dorchester Bay of \$1.2M due to timing and unanticipated work; and Cambridge Sewer Separation of \$513,000 due to contractor progress. Offset by underspending in CSO Support of \$1.1M mainly for favorable renegotiation of the North Dorchester temporary easement.

ATTACHMENT 3
Capital Improvement Program Variance Explanations

	FY12 Budget YTD June	FY12 Actuals YTD June	YTD Actuals vs. Budget		Explanations
			\$	%	
Other Wastewater	\$1,814,652	\$5,835,910	\$4,021,258	221.6%	Overspending on Inflow and Infiltration (I/I) due to community requests for grants and loans being greater than budgeted.
Total Wastewater	\$87,627,830	\$75,752,491	(\$11,875,338)	-13.6%	
Drinking Water Quality Improvements	\$26,061,379	\$18,441,906	(\$7,619,472)	-29.2%	Underspending primarily due to Spot Pond Storage Facility Design/Build of \$7.3M due to lower than budgeted award; Spot Pond Early Construction Water Connection of \$596,000; Carroll Plant Technical Assistance of \$362,000; and Quabbin Ultraviolet Design/CA/Resident Inspection (RI) of \$236,000. Offset by overspending for Carroll Plant Ultraviolet Disinfection Construction of \$1.4M due to contractor progress.
Transmission	\$20,814,790	\$18,330,974	(\$2,483,815)	-11.9%	Underspending on Long-Term Redundancy of \$2.1M due to Sudbury Aqueduct MEPA Review schedule change of \$1.3M, Wachusett Aqueduct Redundancy Pump Station - Design/ESDC/RI of \$466,000 due to lower award and Water Transmission Redundancy study work being less than budgeted of \$366,000; Quabbin Transmission System's Oakdale Phase 1A Electrical Design/CA/RI and Construction of \$1.1M; Watershed Land Acquisition of \$483,000 due to timing; and Quabbin Aqueduct/Winsor Station of \$466,000. Offset by overspending for the Lower Hultman rehabilitation work of \$1.2M due to contractor progress and acceleration of the project and Dam Projects of \$757,000 mainly for contractor progress and accelerated schedule for Foss and Weston Reservoirs.
Distribution & Pumping	\$12,215,067	\$14,268,492	\$2,053,425	16.8%	Overspending due to Lynnfield Pipeline of \$2.6M due to timing; Valve Replacement of \$429,000 mainly for contractor progress; and New Connecting Mains-Shaft 7 to WASM 3 Northeast Segment of \$416,000 for additional work. Offset by underspending on Northern Intermediate High Redundancy & Storage of \$472,000 due to schedule shift in Gillis Pump Station Improvements of \$1.7M and delays to Section 89/29 Redundancy Design of \$464,000 offset by Reading/Stoneham Interconnections due to progress and unanticipated work of \$1.7M; and Weston Aqueduct Supply Mains 3 - MEPA/Design/CA/RI of \$460,000 due to schedule change.

ATTACHMENT 3
Capital Improvement Program Variance Explanations

	FY12 Budget YTD June	FY12 Actuals YTD June	YTD Actuals vs. Budget		Explanations
			\$	%	
Other Waterworks	\$8,519,845	\$4,276,414	(\$4,243,430)	-49.8%	Underspending on Local Water Pipeline Assistance Program due to community requests for loans being less than budgeted by \$4.3M and \$1.0M lower repayments than anticipated; and Central Monitoring of \$854,000 mainly due to schedule change for Winsor Dam Communication Line Replacement.
Total Waterworks	\$67,611,081	\$55,317,788	(\$12,293,292)	-18.2%	
Business & Operations Support	\$9,858,378	\$6,575,919	(\$3,282,458)	-33.3%	Underspending due to Centralized Equipment Purchases of \$1.2M; Business Systems Plan of \$1.1M; MWRA Facilities Management & Planning of \$527,000; and As-Needed Design contracts of \$259,000.
Total MWRA	\$165,097,289	\$137,646,199	(\$27,451,089)	-16.6%	

Attachment 4
FY12 Actual versus FY12 Year-End Projection (May)

TOTAL MWRA	FY12 Projection (May)	FY12 Actual	Change FY12 Projection vs. FY12 Actual	
			\$	%
EXPENSES				
WAGES AND SALARIES	\$ 90,111,013	\$ 89,887,813	\$ (223,200)	-0.2%
OVERTIME	3,114,213	3,086,174	(28,039)	-0.9%
FRINGE BENEFITS	17,802,992	17,662,543	(140,449)	-0.8%
WORKERS' COMPENSATION	1,672,000	1,600,726	(71,274)	-4.3%
CHEMICALS	9,142,275	9,271,529	129,254	1.4%
ENERGY AND UTILITIES	22,341,516	22,766,837	425,321	1.9%
MAINTENANCE	25,504,771	26,776,012	1,271,241	5.0%
TRAINING AND MEETINGS	220,247	184,228	(36,019)	-16.4%
PROFESSIONAL SERVICES	5,392,981	5,099,517	(293,464)	-5.4%
OTHER MATERIALS	5,604,073	5,513,699	(90,374)	-1.6%
OTHER SERVICES	23,268,536	22,985,815	(282,721)	-1.2%
TOTAL DIRECT EXPENSES	\$ 204,174,617	\$ 204,834,893	\$ 660,276	0.3%
INSURANCE	\$ 1,985,376	\$ 2,076,961	\$ 91,585	4.6%
WATERSHED/PILOT	25,554,600	25,629,604	75,004	0.3%
HEEC PAYMENT	3,628,203	3,561,130	(67,073)	-1.8%
MITIGATION	1,511,645	1,744,579	232,934	15.4%
ADDITIONS TO RESERVES	195,467	195,467	-	0.0%
RETIREMENT FUND	7,363,170	7,363,170	-	0.0%
POSTEMPLOYMENT BENEFITS			-	
TOTAL INDIRECT EXPENSES	\$ 40,238,461	\$ 40,570,911	\$ 332,450	0.8%
DEBT SERVICE (before offsets)	\$ 382,303,671	\$ 379,245,092	\$ (3,058,579)	-0.8%
VARIABLE RATE DEBT	(13,939,430)	(14,108,769)	(169,339)	1.2%
DEFEASANCE ACCOUNT			-	
DEBT SERVICE ASSISTANCE	(384,323)	(384,323)	-	0.0%
TOTAL DEBT SERVICE	\$ 367,979,918	\$ 364,752,000	\$ (3,227,918)	-0.9%
TOTAL EXPENSES	\$ 612,392,996	\$ 610,157,803	\$ (2,235,192)	-0.4%
REVENUE & INCOME				
RATE REVENUE	\$ 589,700,000	\$ 589,700,000	\$ -	0.0%
OTHER USER CHARGES	7,142,494	7,264,794	122,300	1.7%
OTHER REVENUE	5,516,714	5,655,583	138,869	2.5%
RATE STABILIZATION	1,091,781	1,091,781	-	0.0%
INVESTMENT INCOME	16,252,043	16,267,463	15,420	0.1%
TOTAL REVENUE & INCOME	\$ 619,703,032	\$ 619,979,621	\$ 276,589	0.0%
Surplus after Initial Defeasance	\$ 7,310,036	\$ 9,821,818	\$ 2,511,780	34.4%

Attachment 5
FY12 Actual versus FY11 Actual Spending

TOTAL MWRA	FY11 Actual	FY12 Actual	Change FY12 Actual vs. FY11 Actual Spending	
			\$	%
EXPENSES				
WAGES AND SALARIES	\$ 88,505,698	\$ 89,887,813	\$ 1,382,115	1.6%
OVERTIME	3,899,297	3,086,174	(813,123)	-20.9%
FRINGE BENEFITS	17,357,067	17,662,543	305,476	1.8%
WORKERS' COMPENSATION	2,228,175	1,600,726	(627,449)	-28.2%
CHEMICALS	8,697,048	9,271,529	574,481	6.6%
ENERGY AND UTILITIES	21,977,294	22,766,837	789,543	3.6%
MAINTENANCE	27,964,126	26,776,012	(1,188,114)	-4.2%
TRAINING AND MEETINGS	127,569	184,228	56,659	44.4%
PROFESSIONAL SERVICES	5,638,342	5,099,517	(538,825)	-9.6%
OTHER MATERIALS	4,327,538	5,513,699	1,186,161	27.4%
OTHER SERVICES	23,551,456	22,985,815	(565,641)	-2.4%
TOTAL DIRECT EXPENSES	\$ 204,273,610	\$ 204,834,893	\$ 561,283	0.3%
INSURANCE	\$ 1,002,044	\$ 2,076,961	\$ 1,074,917	107.3%
WATERSHED/PILOT	24,709,345	25,629,604	920,259	3.7%
HEEC PAYMENT	3,875,371	3,561,130	(314,241)	-8.1%
MITIGATION	1,474,834	1,744,579	269,745	18.3%
ADDITIONS TO RESERVES	(407,581)	195,467	603,048	-148.0%
RETIREMENT FUND	5,342,856	7,363,170	2,020,314	37.8%
POSTEMPLOYMENT BENEFITS			-	
TOTAL INDIRECT EXPENSES	\$ 35,996,869	\$ 40,570,911	\$ 4,574,042	12.7%
DEBT SERVICE (before offsets)	\$ 375,747,770	\$ 379,245,092	\$ 3,497,322	0.9%
VARIABLE RATE DEBT	(15,589,844)	(14,108,769)	1,481,075	-9.5%
DEFEASANCE ACCOUNT		-	-	N/A
DEBT SERVICE ASSISTANCE	-	(384,323)	(384,323)	N/A
TOTAL DEBT SERVICE	\$ 360,157,926	\$ 364,752,000	\$ 4,594,074	1.3%
TOTAL EXPENSES	\$ 600,428,405	\$ 610,157,803	\$ 9,729,399	1.6%
REVENUE & INCOME				
RATE REVENUE	\$ 569,800,000	\$ 589,700,000	\$ 19,900,000	3.5%
OTHER USER CHARGES	7,218,642	7,264,794	46,152	0.6%
OTHER REVENUE	7,335,377	5,655,583	(1,679,794)	-22.9%
RATE STABILIZATION	5,029,744	1,091,781	(3,937,963)	-78.3%
INVESTMENT INCOME	15,193,091	16,267,463	1,074,372	7.1%
TOTAL REVENUE & INCOME	\$ 604,576,854	\$ 619,979,621	\$ 15,402,767	2.5%
Surplus after Initial Defeasance	\$ 4,148,449	\$ 9,821,818	\$ 5,673,367	136.8%

STAFF SUMMARY

TO: Board of Directors
FROM: Frederick A. Laskey, Executive Director
DATE: September 12, 2012
SUBJECT: Options for Fiscal Year Close-Out



COMMITTEE: Administration, Finance & Audit

VOTE
 INFORMATION

Kathy Soni, Budget Director
Thomas J. Durkin, Treasurer
Matthew R. Horan, Deputy Treasurer
Preparer/Title




Rachel C. Madden
Director, Administration & Finance

After expending \$24.1 million to execute the defeasance on June 21, 2012, the final FY12 budget surplus was \$9.8 million. This Staff Summary presents three different options for the use of these surplus funds including: reserves deposit, targeted defeasance, and optional payment to the Retirement System. After evaluation of the available options, staff recommends a defeasance which by providing targeted rate relief in FY16, a particularly challenging year, offers the most advantageous outcome under the current circumstances.

In addition, staff are requesting Board authorization to continue funding the Defeasance Account. As part of MWRA's multi-year rates strategy, the account was established during FY12, for the periodic deposit of favorable Capital Finance balances which would be used to defease bonds, thereby lowering future debt service and in turn the assessments to member communities. In accordance with the Advisory Board's FY13 budget recommendation to continue this practice, staff are seeking Board authorization to maintain this defeasance account through FY13.

RECOMMENDATION:

To authorize the use of the fiscal year 2012 budget surplus of \$9.8 million to defease future debt service with the largest impact in 2016 resulting in lower Rate Revenue Requirements and consequently lower water assessments for our communities.

To further authorize the continuation of the Defeasance Account established for the first time in FY12, for depositing potential Capital Finance budget surpluses during the year, with the intension of using the funds for a FY13 bond defeasance.

DISCUSSION:

At previous fiscal years' end, staff have provided the Board with various alternatives for the use of the end budget surpluses. As in the past, the most advantageous use of the funds is dependent on the situation and objectives of the Authority at the time. The three primary alternative uses of

the surplus include replenishing reserve accounts, executing an additional defeasance for future debt service relief, and making an optional payment to the Retirement System. This staff summary reviews these options in the context of current circumstances.

As discussed in the past, one of the largest challenges facing the Authority in the coming years is the escalating debt service. As a result of increases to debt service the assessment increases to our communities are projected at an average of over 6% in the FY14-FY16 timeframe. Although the years after FY16 are also challenging, the projected release of reserves as a result of the amendments to the General Bond Resolution will be available to help to mitigate those increases. Given the circumstances, the current goal is to provide rate relief in the relatively near term.

Discussion of Options

Both the defeasance and deposit to Rate Stabilization or Bond Redemption reserves would provide the most direct way to target budgetary savings in challenging fiscal years, since the available funds could be applied, with some limitations, for relief in specific fiscal years. Additional deposits to the Retirement System offer less “targeted” budgetary relief since the savings would be spread over the remaining amortization of the unfunded liability. However, in general, funds transferred to the Retirement System result in greater interest rate returns for a longer period of time than a reserve deposit or a defeasance.

The rating agencies would view each option favorably given that additions to reserve would increase MWRA’s liquidity and a deposit to the Retirement System and/or defeasance would reduce liabilities.

While all three approaches provide some financial benefit to MWRA, it is important to look at the context in which they are used. While a deposit to the Retirement System may provide a greater economic benefit, the flexibility afforded by reserve deposits and targeted defeasances may outweigh the financial gains generated from a Retirement System prepayment.

Reserves Deposit

MWRA has two specific funds which can be used for the purposes of rate smoothing; the Bond Redemption Account and the Rate Stabilization Fund. While the use of Bond Redemption is an offset to the debt service expenses, the Rate Stabilization Fund is a vehicle of enhancing revenues. Funds deposited in the Bond Redemption Account can be used to pay future debt service and there are no General Bond Resolution limitations on the amount to be withdrawn in any given year. Monies in the Rate Stabilization Fund are treated as revenue for coverage purposes, with annual withdrawals being limited to 10% of senior debt service per the General Bond Resolution. Both reserve accounts are limited in use by the available utility balances, water or sewer, depending on the original source of the funds when deposited.

Unlike a defeasance where funds are placed into an escrow account or an optional Retirement System payment where the funds are now outside of MWRA’s flow of funds, reserve funds can provide MWRA with the liquidity necessary to respond to unforeseen expenses and the intended application of these funds can be revisited in future budget cycles. As such, depositing of surplus funds to a reserve provides the maximum flexibility for future use.

Defeasance

One of MWRA's best tools for mitigating assessment increases has been to defease future debt service using surplus funds. To execute a defeasance, funds are deposited into an escrow account, usually comprised of U.S. Treasury Securities, which will pay all future debt service on eligible bonds. Typically, a defeasance can be structured to provide targeted budget relief in one or more fiscal years. At this time, the recommended target year is FY16 which has a projected water rate increase of 8%. The use of the additional \$9.8 million in FY12 surplus funds to defease the 2016 maturity of the variable rate series 2008 Series F would reduce debt service in the FY13-16 period by approximately \$11.3 million with the largest impact in FY16, reducing the projected water assessment increase from 8.0% to 4.0% and the combined rate increase from 6.6% to 5.1% providing guaranteed relief in 2016 and some residual savings in FY13, FY14 and FY15. Since the 2008 Series F bonds are currently callable, MWRA would be able to pay off the principal right away and avoid future interest expense. The following table details the savings by fiscal year.

	Budgetary Reduction and Impact on Assessment Increases			
	2013	2014	2015	2016
Annual Dollar Reduction	\$ 320,450	\$ 345,100	\$ 369,750	\$ 10,254,400
Prior to Defeasance	3.0%	4.4%	7.4%	6.6%
After Defeasance	3.0%	4.4%	7.4%	5.1%

Optional Payment to the Retirement System

funds available at the end of a fiscal year could be used to make an optional payment to the Retirement System, which would result in a reduction to future annual required contributions and/or a shortened amortization schedule for the unfunded liability. MWRA's Retirement System currently has an unfunded liability of approximately \$42.2 million based on the January 1, 2011 Actuarial Study, and is scheduled to be fully funded in 2024. This study was used to determine the level of funding for the annual required contributions for Fiscal Years 2013 and 2014.

In accordance with the Actuarial Standards of Practice No. 35 (ASOP 35), the Retirement System will need to incorporate the new RP-2000 Mortality Tables in the next official Actuarial Study scheduled for January 1, 2013. The new mortality tables reflect that people are living longer and in turn the pension liability will increase. To assess the potential increase of the annual required contribution (ARC) starting in FY15, an interim actuarial evaluation was performed as of January 1, 2012. These estimates projected that there would be an increase to the ARC ranging from \$2.2 million in FY15 to \$2.9 million in FY24 increasing the current ARC from \$6.1 million to \$8.3 million in FY15 and from \$7.5 million to \$10.4 million in FY24.

If available funds were transferred to the Retirement System, based on the current amortization of the unfunded liability with an 8% assumption long-term investment return, applying the FY12 budget surplus of \$9.8 million would reduce the annual required contributions by approximately \$1.4 million per year for the next 11 years. This reduction to the annual required contribution would offset the projected increase as result of using the new mortality tables.

Estimated Budgetary Reduction for the Various Options:

Estimated Budgetary Reduction		
Reserves Deposit	Target Defeasance	Additional Pension Deposit
\$9.8 million	\$11.3 million	\$15.4 million


While overall the additional deposit to the Retirement System offers the greatest long-term economic benefit, staff believe that given the current situation a targeted defeasance to provide rate relief in the near term is the best option. In particular, this defeasance would primarily provide targeted relief for the water utility reducing the projected FY16 increase from 8% to 4%, as well as providing residual relief from FY14 to FY16. This defeasance, along with the anticipated 2016 release of reserve funds as a result of the amendments to the General Bond Resolution, is a continuation of the multi-year approach to manage the projected large increases to assessments between FY14 and FY22.

BUDGET/FISCAL IMPACT:

A targeted defeasance of \$9.8 million will reduce the FY13-FY16 debt service expenses by a total of approximately \$11.3 million. The defeasance will provide the largest reduction in FY16 with residual benefit in FY13, FY14, and FY15.

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STAFF SUMMARY

TO: Board of Directors
FROM: Frederick A. Laskey, Executive Director 
DATE: September 12, 2012
SUBJECT: Installation of a Distributed Antenna System
In-Building Cellular
Bid WRA-3489-Q/State Blanket Contract #ITC45

COMMITTEE: Administration, Finance & Audit

 INFORMATION
 X VOTE

Russell J. Murray, Jr.
MIS Director



Michele S. Gillen
Deputy Director Administration
& Finance



Ken Carlson/Operations Manager
Preparer/MIS Senior Manager

Rachel C. Madden
Director, Administration & Finance

RECOMMENDATION:

To approve the award of Purchase Order Contract WRA-3489-Q/State Blanket Contract ITC45, for the installation of a Distributed Antenna System to the lowest responsive bidder In-Building Cellular, and authorize the Director of Administration and Finance to execute said purchase order in the bid amount of \$489,830.45.

BACKGROUND:

MWRA has begun migrating to a new wireless provider for cell phone and wireless data services. MWRA has been experiencing cellular reception issues with its current provider in parts of its service area since the current provider does not cover all locations with significant signal strength to eliminate dropped calls. Furthermore, MWRA facilities located throughout the service area are impenetrable to wireless signals. This is due to the type and style of construction. Many of the facilities are constructed from steel and concrete and are located underground. These facilities require an in-building antenna system to carry the signal. The current vendor did install in-building distributed antenna systems at some of the MWRA sites but when approached to obtain use of this infrastructure by the new provider the MWRA was denied. The current vendor offered to leave the cabling but all electronic components would need to be removed. In order to eliminate this dependency on any particular wireless provider, the MWRA decided to invest in its own infrastructure.

In January 2012, MWRA requested the services of a Consultant to provide engineering services to conduct a survey of nine designated MWRA facilities and prepare and submit a Technical Report that included recommendations for enhancement of the wireless coverage as well as detailed designs and estimated costs to procure and install under Technical Assistance Contract

#7244. A Site Assessment Survey was conducted and detailed designs were submitted for in-building distributed antenna systems for all facilities requiring enhancements. The consultant recommended enhancements to seven locations.

DISCUSSION:

An in-building distributed antenna system (DAS) is a way to efficiently consolidate and distribute wireless connections inside large buildings where steel columns and layers of concrete can interfere with wireless signals. A DAS can be used to eliminate "dead zones" by routing radio frequency (RF) signals through fiber or copper cabling from a single base station to multiple antennas located throughout the building. The sources can include cellular service from multiple wireless carriers, public safety radio frequencies, and Wi-Fi.

The DAS simplifies the various wireless networks that MWRA maintains while making sure the system is future-proof and robust enough to carry the calls throughout the Authority for the next 7 to 10 years. In-Building Cellular will provide the infrastructure equipment, installation and support based on the design specifications provided to enhance the cell coverage at the MWRA facilities listed below.

Location	Coverage Floor Locations
Chelsea	Administration Floor(s) 1
Charlestown	Administration Floor(s) 1-2-3
Clinton	Main – Floor(s) 1 Chemical – Floor(s) 1 Warehouse – Floor(s) 1
Deer Island	Admin Building-Floor(s) 1-4 Operations Center-Floor(s) 1 Primary Operations-Floor(s)1-3 Thermal Plant-Floor(s) 1-2 Secondary Odor Control-Floor(s) 1-2 Warehouse-Floor(s) 1-2 Galleries and Tunnels
Carroll Water Treatment Plant (Marlborough)	Main lower basement Floor(s) 1
Southborough	Main Floor(s) 1-2 Administration Floor(s) 1 -2 Lab Floor(s) 1 Warehouse Floor(s) 1
Weston	Main Floor(s) 1

Currently, these buildings are not able to receive consistent and reliable cell coverage. Once the distributed antenna system is installed, service providers such as Verizon, AT&T, and others will be able to add their components to the DAS to propagate the external cell signal throughout MWRA sites. The project is expected to be completed within 180 days from time of award.

The work will include the installation of communications equipment and associated data network

cabling as specified in the Commonwealth of Massachusetts State Blanket Contract ITC45. There is no construction work included in this installation.

Procurement Process:

In order to procure these services, staff accessed the Commonwealth of Massachusetts State Blanket Contract ITC45. State blanket contracts, issued through Comm-Pass, utilize the combined buying power of the Commonwealth to establish vendor pricing that allows smaller agencies and municipalities to purchase goods and services at large volume discount prices. Per ITC45 guidelines, four state qualified vendors were directly solicited through WRA-3489-Q. Three sealed bids were received and publicly opened on June 29, 2012 with the following results.

Vendor Name	Amount
In-Building Cellular	\$489,830.45
<i>Engineer's Estimate</i>	<i>\$514,344.00</i>
LAN-TEL Communications, Inc.	\$673,435.00
Netversant Solutions II, LLC	Bid Withdrawn

After review and analysis of bid proposals, staff recommend In-Building Cellular as the lowest responsive bidder.

BUDGET/FISCAL IMPACT:

Sufficient funds for this procurement are included in the FY13 Capital Improvement Program under IT System Architecture Project #7200.

MBE/WBE PARTICIPATION:

In-Building Cellular is not a certified Minority- or Women-owned business.



MASSACHUSETTS WATER RESOURCES AUTHORITY

Charlestown Navy Yard
100 First Avenue, Building 39
Boston, MA 02129

Frederick A. Laskey
Executive Director

Telephone: (617) 242-6000
Fax: (617) 788-4899
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WASTEWATER POLICY & OVERSIGHT COMMITTEE MEETING

Chair: J. Foti
Vice-Chair: J. Walsh
Committee Members:
J. Carroll
M. Gove
A. Pappastergion

to be held on

Wednesday, September 12, 2012

Location: 100 First Avenue, 2nd Floor
Charlestown Navy Yard
Boston, MA 02129

Time: Immediately following AF&A Comm.

AGENDA

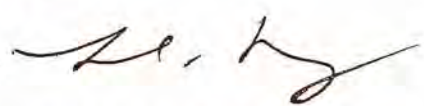
A. Contract Awards

1. Struvite, Scum, Sludge, and Grit Removal Services at the Deer Island Treatment Plant: Clean Harbors Environmental Services, Bid WRA-3513
2. Concrete/Steel Restoration and Coating Phase IV, Deer Island Treatment Plant: Atlas Painting and Sheeting Co., Contract S513
3. Technical Assistance Consulting Services, Deer Island Treatment Plant: AECOM Technical Services, Inc., Contract 7399; Fay, Spofford & Thorndike, Inc., Contract 7400; and Dewberry Engineers, Inc., Contract 7434

WDA.1
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STAFF SUMMARY

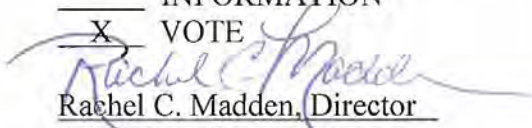
TO: Board of Directors
FROM: Frederick A. Laskey, Executive Director
DATE: September 12, 2012
SUBJECT: Struvite, Scum, Sludge, and Grit Removal Services at the Deer Island Treatment Plant
Clean Harbors Environmental Services
Bid WRA-3513




COMMITTEE: Wastewater Policy & Oversight

 INFORMATION

VOTE


Rachel C. Madden, Director
Administration and Finance

Daniel K. O'Brien, Director, Deer Island Treatment Plant
Michele S. Gillen, Deputy Director, Administration and Finance
Preparer/Title


Michael J. Hornbrook
Chief Operating Officer

RECOMMENDATION:

To approve the award of a two-year purchase order contract to provide struvite, scum, sludge, and grit removal services at the Deer Island Treatment Plant to the lowest responsive bidder under Bid WRA-3513, Clean Harbors Environmental Services, and authorize the Director of Administration and Finance to execute said purchase order for an amount not to exceed \$696,400.

DISCUSSION:

Struvite is a crystallized compound forming from solubilized phosphate, ammonia, and magnesium, which can form a matrix with digested sludge solids and coat pipelines or other surfaces. It is a by-product of anaerobic sludge digestion.

Staff first observed struvite in the filtrate lines and elbows downstream of the dewatering processes in the Pelletizing Plant at the Fore River Ship Yard shortly after startup of Secondary treatment (Batteries A & B) at Deer Island in 1998. Staff also noticed struvite beginning to form in the dewatering equipment. It was later discovered in the heat exchangers, the digested sludge line centrifuges, piping, and valves at Deer Island, and eventually in the overflow lines of the digesters and on the digester mixers shafts (pictured above).



Staff continue to struggle with the formation of struvite. Struvite build-up is a concern because of the operational problems that it can cause; it can impact process equipment, such as equipment imbalance, excessive vibration, premature failure, and operational inefficiency, and it can clog piping and result in the loss of digester and sludge thickening capacity. It should be noted that MWRA is not alone in dealing with struvite as staff have learned that other large wastewater treatments plants in San Francisco, Los Angeles, and Chicago have had similar problems.



Struvite can present itself in different forms. The picture on the left depicts a typical, thick solid piece that had been chipped off of an interior wall of a pipe, and the photo below shows a collection of thinner pieces of struvite, also scaled from the inside of process piping.



Although staff have been mitigating struvite build-up with the addition of ferric chloride to the digesters, which binds up soluble phosphate preventing the formation of struvite, struvite build-up can still occur and when it does, it typically requires the services and industrial equipment of specialty contractors, often working in confined spaces.

MWRA has competitively bid these services several times in the past. Clean Harbors is currently performing these services under a separate contract that will expire on October 12, 2012.

In addition to struvite, staff have also found the need to use these specialized services to clean severe blockages and the build-up of scum, sludge, and grit in a number of other process areas of the plant. While struvite build-up has only occurred in the Residuals complex, staff have found other types of blockages in the gravity thickeners, primary clarifiers, influent channels, and scum receiving wells.

Use of MWRA staff is generally the first option in clearing these types of blockages, but contracted services are required when the blockages reach a level that is beyond in-house capability or when the scum/sludge/grit material is of such a thick consistency that processing it through the plant could cause upset conditions or the potential for equipment damage.

Procurement Process

Bid WRA-3513 was advertised in the Boston Globe, Central Register, Goods & Services, Dodge Reports, El Mundo, and Banner Publications. In addition, bids were made available for public downloading on the Commonwealth of Massachusetts' procurement website.

Sealed bids were received from six vendors and were publicly opened on August 22, 2012 with the following results:

Vendor	Total Bid Price
Clean Harbors Environmental Services	\$696,400
Cyn Environmental	\$809,000
Clean Venture	\$826,400
Moran Environmental	\$828,000
United Oil Recovery	\$1,111,000
TMC Services	\$1,670,062

The scope of services for this contract includes 250 days of field work as defined by MWRA, which includes a five-person work crew and all necessary special cleaning equipment, to be used on an as-needed basis. In addition, bid prices were submitted for the hauling and disposal of an estimated 600 tons of solid material and 150,000 gallons of wet material during a two-year period based on previous contracts. These are estimates only and not a guaranteed commitment to the vendor; MWRA will incur costs only for the services provided and satisfactory documentation of quantities removed (e.g., weight slips from licensed landfills or disposal sites).

Clean Harbor's bid pricing is approximately 15% lower than its previous bid. It should be noted that the previous bid yielded only three bidders. The current bid produced twice that number, all of whom participated in a pre-bid walk-through at Deer Island on August 8, 2012. Staff attribute Clean Harbors' reduction in bid pricing to its familiarity with the project requirements and the increased competition generated by the current bid.

Staff have reviewed Clean Harbors' bid and have determined that it meets all of the requirements of the bid specifications. Staff have been satisfied with Clean Harbors' performance on the current contract. Therefore, staff recommend the award of this purchase order contract to Clean Harbors Environmental Services as the lowest responsive bidder.


BUDGET/FISCAL IMPACT:

The FY13 Current Expense Budget (CEB) includes \$300,000 for the first year of this contract. Appropriate funding will be included in the Proposed FY14 CEB for the remaining term of the contract.

MBE/WBE PARTICIPATION:

Clean Harbors Environmental Services is not a certified Minority- or Women-owned business.

STAFF SUMMARY

TO: Board of Directors
FROM: Frederick A. Laskey, Executive Director 
DATE: September 12, 2012
SUBJECT: Concrete/Steel Restoration and Coating, Phase IV, Deer Island Treatment Plant
Atlas Painting and Sheeting Corp.
Contract S513


COMMITTEE: Wastewater Policy & Oversight

INFORMATION

VOTE


Rachel C. Madden, Director
Administration and Finance

Daniel K. O'Brien, Director, Deer Island WWTP
Richard J. Adams, Manager, Engineering Services
Preparer/Title


for Michael J. Hornbrook
Chief Operating Officer

RECOMMENDATION:

To approve the award of Contract S513, Concrete/Steel Restoration and Coating, Phase IV, Deer Island Treatment Plant, to the lowest responsible and eligible bidder, Atlas Painting and Sheeting Corp., and to authorize the Executive Director, on behalf of the Authority, to execute said contract in the bid amount of \$1,839,000, with a contract term of 540 calendar days from the Notice to Proceed.

DISCUSSION:

As part of MWRA's on-going maintenance program at the Deer Island Treatment Plant, staff have been utilizing a phased approach to re-coating various portions of the facility's assets to ensure their continued structural integrity. After two initial smaller painting contracts, staff began broadening the scope of work into major phases that included multiple facilities and structures in each phase. Staff anticipate that additional contracts will be completed each year on a continuing basis.

There have been significant advances in materials and technology in the painting/coating industry since construction of the Deer Island Treatment Plant. More robust and durable products are now available, particularly for Deer Island's applications, where exposure to harsh environmental and industrially-corrosive conditions is a constant.

Contract S513 will provide coating for concrete and steel structures in several areas of the plant, including: the carbon adsorber tanks, the Winthrop Terminal Facility's pumps, the combustion turbine generators' (CTG) emission stacks, Digester Modules 1 and 2 interior catwalks and overflow boxes, the fuel dispensing station, and four different chemical containment areas.

The following is a brief description of some of the elements of work under this contract:

Carbon Adsorber Tanks

Degradation of the original coating system has been identified on the interior surfaces of several carbon adsorber tanks located in the East and West Odor Control facility, North Main Pump Station, and the Residuals Odor Control facilities (pictured on the right). These structures are made of carbon steel and the coating has failed in localized areas where rust has developed. These tanks are normally exposed to high levels of hydrogen sulfide. The thickness of the steel tank structures have not been significantly reduced so staff do not anticipate that structural repair work will be required. However, the coating system will need to be removed and a new coating applied.



Winthrop Terminal Facility Pumps

The six Winthrop Terminal Facility pumps and some appurtenant equipment in the lower level of the pump station are showing surface degradation rust (pictured on the right). Because of the temperature difference between the surrounding air and the effluent, condensation typically forms on the pump housings, which contributes to the problem. The existing coating system will be removed and a new coating system will be applied to all of the pumps.



CTG Emission Stacks

The coating system on the two CTG stacks (pictured on the right) has significantly deteriorated and rust is clearly evident. The stacks are constructed of carbon steel and located on the northern side of the island where they are normally exposed to the harsh marine environment. The existing coating system must be removed and a new coating will be applied. No structural restoration is anticipated.



Digester Modules 1 and 2 Interior Catwalks and Overflow Boxes

The digester walkways, which are located 140 feet above grade, are used to traverse the tops of the egg-shaped digesters. The coating system on the structural steel within the interior of the walkways (see picture on the right), including the rotundas and overflow boxes, are exhibiting signs of partial failure. The existing coating system must be removed and the steel must be recoated. No structural restoration is anticipated.



Containment Area Around a Sodium Hypochlorite Storage Tank

Latent damage to the surface coating in the containment area of the sodium hypochlorite tanks is clearly evident in the picture to the right. This damage was likely initially caused by a hot steam operation used during the re-lining of this tank a couple years ago. The damage has worsened over time.



Underneath Section of Fuel Filling Station Roof

Age and exposure to the open marine environment has resulted in deterioration of the coating on the underside of the protective roof over the fuel filling station pictured on the right. The entire underside will be stripped and repainted.



Procurement Process

Contract S513 was advertised and bid in accordance with Chapter 149 of Massachusetts General Laws. Bids were opened and read on August 14, 2012 with the following results:

<u>Contractor</u>	<u>Bid Amount</u>
Atlas Painting and Sheeting Corp.	\$1,839,000
SOEP Painting Corp.	\$1,968,000
<i>Engineer's Estimate</i>	<i>\$2,000,000</i>
M.L. McDonald Sales Co., Inc.	\$2,175,000
John W. Egan Co., Inc	\$2,290,000

Atlas Painting and Sheeting Corporation (Atlas) submitted a bid that was approximately 6% lower than the Engineer's Estimate. MWRA's Design Engineer, Fay Spofford & Thorndike (FST), contacted Atlas Painting and Sheeting Corp. to ensure that the bid price included all elements of the work and to confirm that the Contractor understands the full nature and scope of the work and can complete the work for the bid price.

Based upon the results of those discussions, staff are of the opinion that the bid price is reasonable, complete, and includes the payment of prevailing wages, as required.

References were checked and found to be favorable. Staff are of the opinion that Atlas Painting and Sheeting Corp possesses the skill, ability, and integrity necessary to perform the work under this contract and is qualified to do so. Therefore, staff recommend the award of this contract to Atlas Painting and Sheeting Corp. as the lowest responsible and eligible bidder.

BUDGET/FISCAL IMPACT:

There is \$1,200,000 specifically identified for this project in Deer Island's FY13 maintenance budget. The remaining \$639,000 will be included in the Proposed FY14 CEB.

MBE/WBE PARTICIPATION:

There were no MBE or WBE participation requirements established for this contract due to limited opportunities for subcontracting.

WWA.3
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9/12/12

STAFF SUMMARY

TO: Board of Directors
FROM: Michael J. Hornbrook, Chief Operating Officer
DATE: September 12, 2012
SUBJECT: Technical Assistance Consulting Services – Deer Island Treatment Plant
AECOM Technical Services, Inc. - Contract 7399
Fay, Spofford & Thorndike, LLC - Contract 7400
Dewberry Engineers, Inc. - Contract 7434

COMMITTEE: Wastewater Policy & Oversight

INFORMATION

VOTE

Rachel C. Madden, Director
Administration and Finance

John P. Vetere
Dep. Chief Operating Officer

Daniel K. O'Brien, PE, Director, Deer Island WWTP
Richard J. Adams, Manager, Engineering Services
Preparer/Title

RECOMMENDATION:

To approve the recommendation of the Consultant Selection Committee to award three separate contracts to provide as-needed technical assistance consulting services for the Deer Island Treatment Plant to AECOM Technical Services, Inc., Fay, Spofford & Thorndike, LLC, and Dewberry Engineers, Inc., and to authorize the Chief Operating Officer, on behalf of the Authority, to execute Contract 7399 with AECOM Technical Services, Inc., Contract 7400 with Fay, Spofford & Thorndike, LLC, and Contract 7434 with Dewberry Engineers, Inc., each in an amount not to exceed \$1,600,000, and for a contract term of three years from the Notice to Proceed.

DISCUSSION:

During the past 13 years, MWRA has awarded several as-needed technical assistance consulting contracts to supplement in-house staff on high priority or unanticipated projects at the Deer Island Treatment Plant, and to provide expertise on short-term assignments requiring specialized engineering disciplines that are not cost effective for MWRA to maintain on an in-house basis.

Over the last several years, MWRA has awarded two technical assistance contracts to address Deer Island's needs (in addition to the two contracts for the Carroll Water Treatment Plant and two contracts for all other MWRA water and wastewater facilities). In the past, with two concurrent contracts, MWRA staff have had access to a broader, more diverse range of resources, ensuring timely responsiveness. Also, two separate contracts has minimized the

potential for a conflict of interest with a consultant who may be called upon to evaluate a problematic system or component that it originally designed.

In the development of this most recent procurement, staff recommended the addition of yet a third contract in an attempt to further increase competition and broaden the number of proposals received from qualified firms. The addition of the third contract will further ensure responsiveness and timely completion of task orders, as well as, allow for more comparative pricing on task orders.

Procurement Process

Staff utilized a one-step/two-envelope Request for Qualifications/Proposals (RFQ/P). On August 28, 2012, six qualifications statements, along with separate sealed cost envelopes, were received from the following firms: AECOM Technical Services, Inc., Fay, Spofford & Thorndike, LLC, CDM Smith, Inc., ARCADIS U.S., Inc., Dewberry Engineers, Inc., and Brown and Caldwell. The Selection Committee evaluated and compared each firm's first-stage qualifications statements using the following criteria: Past Performance on MWRA Projects and Similar Experience/Past Performance on Similar Non-MWRA Projects; Capacity/Qualifications/Key Personnel; and Technical Approach/Organization and Management Approach.

The Selection Committee determined that four of six firms met the threshold and technical requirements and were considered qualified. The fifth and sixth firms, ARCADIS U.S., Inc. and Brown and Caldwell, did not meet minimum requirements as their proposed senior engineers did not meet the minimum required years of experience and did not hold Massachusetts Professional Engineering Licenses in the specified disciplines as outlined in the Minimum Required Qualifications of Key Personnel section of the RFQ/P. The cost envelopes from these two firms were not opened.

The procurement process for these technical assistance contracts is different from the process for selecting a consultant for a specific study or design. When the scope of work is clearly known and defined, a consultant can estimate the level of effort required to produce the desired end product. With technical assistance contracts, task order work varies depending on the size of the task and the specific engineering disciplines required to complete the work, none of which are known until a specific need arises. Therefore, proposers were required to complete and submit a Cost Data Exercise using a level of effort pre-determined by MWRA. The total level of effort was based on the average annual distribution of hours from prior technical assistance contracts over several years.

Each proposer completed a Cost Data Form providing cost information, which included labor rates and a multiplier, incorporating indirect costs and a profit percentage based on a total of 14,200 hours of effort. The total dollar amounts proposed by the four qualified firms in the Cost Data Exercise and the associated ranking based upon those costs are presented on the following page.

<u>Firm</u>	<u>Cost Exercise Amount</u>	<u>Rank</u>
AECOM, Inc.	\$1,367,837.00	1
Fay, Spofford & Thorndike, LLC	\$1,518,385.00	2
Dewberry Engineers, Inc.	\$1,573,172.02	3
CDM Smith, Inc.	\$1,620,440.00	4

The three lowest cost proposers: AECOM Technical Services, Inc., Fay, Spofford & Thorndike, LLC, and Dewberry Engineers, Inc., proposed project teams that included staff that have vast experience in the design of large wastewater treatment plants with secondary treatment. The proposed teams included Senior Engineers that currently hold Massachusetts Professional Engineering Licenses and who have at least 15 years of relevant experience in their respective disciplines, which was a requirement in the RFQ/P. The Selection Committee was in agreement that all three firms submitted excellent qualifications statements that demonstrated a clear understanding of the contract needs and proposed project teams consisting of well-qualified and experienced key personnel.

CDM Smith also submitted an excellent qualifications statement but the firm was ranked fourth on the basis of its highest Cost Data Exercise.

Based on the proposals submitted, the Selection Committee recommends that the Board approve the award of three separate contracts to the three lowest proposers on the Cost Data Exercise, AECOM Technical Services, Inc., Fay, Spofford & Thorndike, LLC, and Dewberry Engineers, Inc., each in an amount not to exceed \$1,600,000 and for a contract term of three years from the Notice to Proceed.

BUDGET/FISCAL IMPACT:

The FY13 CIP includes a budget of \$1,800,000 for each contract. The budgeted amount was developed based upon estimated usage and historical pricing from previous technical assistance contracts. In previous instances, recommended contract award amounts were based on budgeted amounts and closely approximated the lowest proposed Cost Exercise Amounts. Staff are recommending award amounts of only \$1,600,000 each, \$200,000 less than the budgeted amounts, based on the lower Cost Exercise Amounts submitted for this procurement.

MBE/WBE PARTICIPATION:

Due to the specialized nature of this work, there were no minimum MBE or WBE participation requirements established for this contract.



MASSACHUSETTS WATER RESOURCES AUTHORITY

Charlestown Navy Yard
100 First Avenue, Building 39
Boston, MA 02129

Frederick A. Laskey
Executive Director

Telephone: (617) 242-6000
Fax: (617) 788-4899
TTY: (617) 788-4971

WATER POLICY AND OVERSIGHT COMMITTEE MEETING

Chair:

Vice-Chair: V. Mannering

Committee Members:

J. Barrera

J. Carroll

J. Foti

M. Gove

A. Pappastergion

J. Walsh

to be held on

Wednesday, September 12, 2012

Location: 100 First Avenue, 2nd Floor
Charlestown Navy Yard
Boston, MA 02129

Time: Immediately following Wastewater Comm.

AGENDA

A. Contract Awards

1. Sudbury Aqueduct Pressurization and Connections Alternatives Analysis and MEPA Review: CDM Smith, Inc., Contract 7352

B. Contract Amendments/Change Orders

1. Ultraviolet Disinfection Facilities at the John J. Carroll Water Treatment Plant: Daniel O'Connell's Sons, Inc. Contract 6924, Change Order 8

W A.1
IV B.5
9/12/12

STAFF SUMMARY

TO: Board of Directors
FROM: Michael J. Hornbrook, Chief Operating Officer
DATE: September 12, 2012
SUBJECT: Sudbury Aqueduct Pressurization and Connections Alternatives Analysis and MEPA Review
CDM Smith, Inc.
Contract 7352

COMMITTEE: Water Policy & Oversight

INFORMATION

VOTE

Rachel C. Madden
Rachel C. Madden, Director
Administration and Finance

John P. Vetere
John P. Vetere
Dep. Chief Operating Officer

Fredrick O. Brandon, Sr. Program Manager
Jae R. Kim, Chief Engineer
Preparer/Title

RECOMMENDATION:

To approve the recommendation of the Selection Committee to award Contract 7352, Sudbury Aqueduct Pressurization and Connections Alternatives Analysis and MEPA Review, to CDM Smith, Inc., and to authorize the Chief Operating Officer, on behalf of the Authority, to execute said contract in the amount of \$3,405,107, for a contract term of 1,095 days from the Notice to Proceed.

DISCUSSION:

The current metropolitan water distribution tunnel system, consisting of the City Tunnel, the City Tunnel Extension, and the Dorchester Tunnel, is reliant on surface connections and valving that require maintenance and repair. Many of these critical facilities are 60 years old. The existing MWRA water transmission system lacks redundancy to allow shutdown of the metropolitan distribution facilities for these repairs.

In the event of an emergency or planned repair of the City Tunnel or its connections, the Sudbury Aqueduct would need to be brought on line to supply the Southern High and Southern Extra High systems. Extensive use of the Chestnut Hill Emergency Pump Station and open distribution system, including Chestnut Hill Reservoir would also be required. Supply would be limited by the capacity of the Sudbury Aqueduct and a "boil water" order would be placed in effect.

In July 2010, staff presented to the Board a proposed redundancy plan, which would allow shutdowns of the metropolitan tunnel system in the event of an emergency or for maintenance, while providing uninterrupted potable supply to the water service area. The plan included a

northern component (WASM 3 replacement/rehabilitation and Spot Pond Covered Storage) and a southern component (Sudbury Aqueduct Pressurization and Connections).

Under Contract 7352, MWRA will evaluate alternatives and complete a MEPA review of the southern component (Sudbury Aqueduct Pressurization and Connections). The alternatives to be evaluated for the southern component are shown in the attached Figure A-1. Staff anticipate initiating a similar project for the northern component in early 2013.

Procurement Process

A two-step procurement process was utilized for this selection process. First, a Request for Qualifications (RFQ) was issued; next a Request for Proposals (RFP) was issued to those firms that were pre-qualified through the RFQ step. A Selection Committee consisting of five voting members and four non-voting members was formed to score and rank the proposals. Recognizing the importance of this project the appointed members of the Selection Committee consisted primarily of senior MWRA staff who understand the critical needs of the water transmission system.

The RFQ required firms to submit information on: Qualifications (40 points), Past Performance on Authority Projects (20 points); Similar Experience/Past Performance on Non-Authority Projects (25 points); Capacity (15 points). On March 16, 2012, Qualifications Statements were received from five teams. The Selection Committee evaluated the Qualifications Statements and voted to shortlist all five teams. The five shortlisted teams were: AECOM Technical Services, Inc. (AECOM), CDM Smith, Inc., Fay, Spofford & Thorndike, LLC (FST), Jacobs Engineering Group, Inc., and Parsons Brinckerhoff, Inc.

MWRA staff prepared the RFP, which consisted of the MWRA Agreement, Scope of Services, and compensation requirements for the project. The RFP was issued on June 27, 2012 and included the following criteria: Cost (30 points), Key Personnel (30 points), Technical Approach (25 points), Organization and Management Approach (10 points), and MBE/WBE Participation (5 points) for a total maximum score of 100 points.

On July 27, 2012, all five firms submitted Proposals. The following is a summary of the costs and level of effort for each consultant firm:

Proposer	Proposed Cost	Level of Effort	Cost per Hour
CDM Smith	\$3,405,107*	23,774 Hours	\$97
FST	\$3,249,620*	18,190 Hours	\$115
Jacobs Engineering Group	\$3,292,392	22,721 Hours	\$103
Parsons Brinckerhoff	\$3,361,415*	16,865 Hours	\$137
AECOM	\$2,872,278*	15,932 Hours	\$114

* Adjusted by MWRA to correct calculation errors.

The Selection Committee met to discuss and rank the Proposals. All of the scores from the Selection Committee members were totaled to determine the first-ranked team. The following is a summary of scores and ranking for each team:

Proposer	Final Total Score	Order of Preference *	Ranking
CDM Smith	399	8	1
FST	386	10	2
Jacobs Engineering Group	376	15	3
Parsons Brinckerhoff	360	21	4
AECOM	351	21	5

*Order of Preference represents the sum of the individual Selection Committee member's rankings where the firm receiving the highest number of points is assigned a "1," and the firm receiving the next highest number of points is assigned a "2," and so on.

CDM Smith received the highest score and was the first-ranked firm.

The Selection Committee unanimously voted to award the project to CDM Smith, Inc.. The firm proposed a well-qualified and diversified project team with relevant experience regarding alternatives analysis of pipeline options, hydraulic analyses, and MEPA approval. CDM Smith prepared a well thought out technical approach. Selection Committee members were in agreement that the critical importance of this project – providing redundancy for approximately half of the Metropolitan Boston area's water demands, and the magnitude of the cost decisions associated with the alternatives, which include tunnels and surface pipelines – appropriately warranted the level of effort proposed by CDM Smith. Although CDM Smith's proposed cost was 5% higher than the average cost of all five firms, CDM Smith's proposed level of effort was more than 20% greater than the average level of effort of all five firms. More importantly, CDM Smith proposed greatest number of hours at the lowest average hourly cost. CDM Smith also proposed a reduced overhead rate. The Selection Committee was in agreement that CDM Smith's proposal represented a good value for MWRA on this important project.

CDM Smith has provided consulting services on a number of MWRA projects, including the WASM 1, 2, and 4 Rehabilitations, the MetroWest Tunnel repairs, and the Carroll Water Treatment Plant. CDM Smith's proposed project team also has experience in large tunnel projects in New York City.

Although the Selection Committee members were in agreement that the second-ranked firm, FST, also proposed a well qualified project team, they were uniformly concerned with FST's low proposed level of effort for key subtasks, as well as resource constraints. The Selection Committee felt that the third-ranked firm, Jacobs Engineering Group, was generally a good value, but the firm proposed less experienced staff and a potentially problematic organizational structure.

Proposals from the remaining two firms, AECOM and Parsons Brinckerhoff, received overall lower scores from the Selection Committee, mainly because of their high hourly costs and limitations on the technical approach. In particular, the Selection Committee was uncertain that AECOM's proposed level of effort could adequately address the project's needs.

Based on the ranking of the Selection Committee, staff recommend the award of this contract to CDM Smith for the proposed amount of \$3,405,107

BUDGET/FISCAL IMPACT:

The FY12 CIP includes a budget of \$5,315,855 for Contract 7352; the recommended contract amount is \$3,405,107.

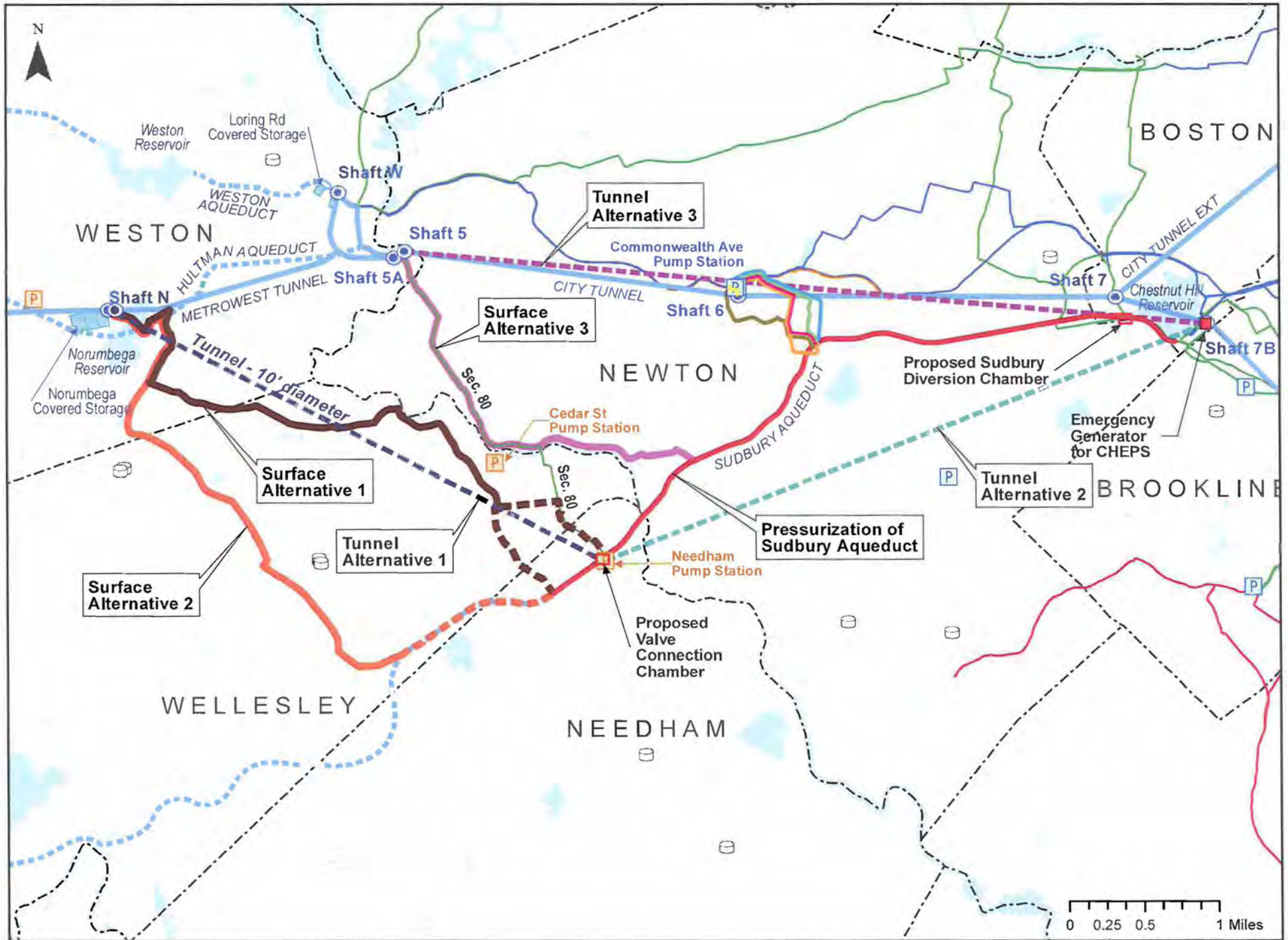
MBE/WBE PARTICIPATION:

The MBE and WBE participation requirements for this contract were established at 7.18% and 5.77%, respectively. CDM Smith proposed 17.1% MBE participation and 5.77% WBE participation.

ATTACHMENT:

Figure A- 1 - Southern Component - Sudbury Aqueduct Pressurization and Connections

Figure A-1: Southern Component, Sudbury Aqueduct Pressurization and Connections



WB.1
DA.1
9/12/12

STAFF SUMMARY


TO: Board of Directors
FROM: Frederick A. Laskey, Executive Director
DATE: September 12, 2012
SUBJECT: Ultraviolet Disinfection Facilities
John J. Carroll Water Treatment Plant
Daniel O'Connell's Sons, Inc.
Contract 6924, Change Order 8



COMMITTEE: Water Policy & Oversight

 INFORMATION
 X VOTE

Charles Scott, Construction Coordinator
A. Navanandan, P.E., Director, Construction
Preparer/Title


for Michael J. Hornbrook
Chief Operating Officer

RECOMMENDATION:

To authorize the Executive Director, on behalf of the Authority, to approve Change Order 8 to Contract 6924, Ultraviolet Disinfection Facilities, John J. Carroll Water Treatment Plant, with Daniel O'Connell's Sons, Inc., for an amount not to exceed \$506,994, increasing the contract amount from \$29,973,038.25 to \$30,480,032.25, with no increase in contract term.

Further, to authorize the Executive Director to approve additional change orders as may be needed to Contract 6924 in an amount not to exceed the aggregate of \$250,000, in accordance with the Management Policies and Procedures of the Board of Directors.

DISCUSSION:

On April 13, 2011, the Board approved the award of Contract 6924 to Daniel O'Connell's Sons, Inc. to construct a UV disinfection system at the Carroll Water Treatment Plant (CWTP) to bring the plant into compliance with the new Long-Term 2 Enhanced Surface Water Treatment Rule. The contract includes a milestone of February 14, 2014, by which time the UV system must be in service; this is six weeks prior to the April 1, 2014 compliance date in the Long-Term 2 Enhanced Surface Water Treatment Rule.

This Change Order

Change Order 8 consists of the following 13 items:

Furnish and Install a Composite Waterproofing System
and Furnish Granular Backfill Material Over the Ultraviolet Rooms \$310,000

The contract requires excavating the soil that is on top of the new Ultraviolet (UV) Rooms and the Chlorine Contact Channels (part of the former water storage tank roof) and stockpiling it for reuse in the same areas. The contract also requires liquid-applied waterproofing with a two-inch protective topping on the concrete roof and a crystalline waterproofing on the ceiling of the UV Rooms.

Staff have noted that poor soil drainage has caused ponding of rain water on the adjacent CWTP's water storage tanks and staff are concerned about the *potential* for leakage of this ponded water into the tanks. A recent consultant study recommended that the existing soils on top of the entire area of the water storage tanks be replaced with a granular material to improve drainage. The study further recommended that an upgraded waterproofing system, similar to that now being used on other recently designed MWRA underground water storage tanks, be installed to further improve drainage. The study was not completed in time to include the recommended upgrade in the design of this UV Disinfection Facilities contract.

The recommended upgrade of the tank roof soil and waterproofing as part of this change order is limited only to excavated roof areas included in this contract. These areas will have new buried structures, which could be structurally compromised or otherwise damaged if re-excavated at a later time. Staff recommend that this limited upgrade work be included under this contract as a change order because it will save MWRA the cost of re-excavating and furnishing and installing the specified waterproofing. Staff will include the remainder of the water storage tank soil replacement and waterproofing upgrade in a future, competitively bid contract.

The photo below shows the roof of the water storage tanks during construction in 2004, before they were buried.

The PCO for this item has been identified by MWRA staff as an unforeseen condition. The Designer, AECOM, MWRA staff, and the Contractor have agreed to an amount not to exceed \$310,000 for this additional work with no increase in contract term. This work has not commenced.



Security Revisions to Goose Neck Vents and Existing Access Hatches

\$112,882

After this contract was bid and awarded, staff determined that the existing goose neck vents on the top of the storage tank pose a potential security risk as there is unrestricted access to the water in the tanks. Therefore, it was determined that the six goose neck vents (depicted in the photo on the right) must be replaced with high-security, tamper-proof vents. Also, after this contract was bid, staff determined that because of the potential for security and leakage risks, the four existing roof hatches and the two ladders and stairs within them should be demolished.



The PCO for this item has been identified by MWRA staff as an unforeseen condition. AECOM, MWRA staff, and the Contractor have agreed to a lump sum amount of \$112,882 for this additional work with no increase in contract term.

Furnish and Install Polystyrene Foam Insulation in lieu of Fiberglass Insulation

\$61,880

The contract requires insulation of new piping and a fill station for Carbon Dioxide Tank 1 (shown on the right) but did not specify the type of insulation required. The Contractor included fiberglass insulation in its bid but polystyrene foam insulation must be installed because fiberglass could become saturated with water and prematurely deteriorate. The contract drawings also failed to show the 11 existing valves that had to be removed and reinstalled on the new pipe. Removal and replacement of the valves was added under Change Order 3 but the change order omitted insulation of the valves.



The PCO for this item has been identified by MWRA staff as a design omission. AECOM, MWRA staff, and the Contractor have agreed to an amount not to exceed \$61,880 for this additional work with no increase in contract term.

Modify Pipe Supports and Gaskets on the 48-inch Branch Lines

\$61,666

The twelve 48-inch branch lines contain the 12 UV reactors. The contract drawings specify a size and configuration of custom pipe supports for the 48-inch lines (depicted on the right), which are insufficient to support the lines and must be modified. Rubber gaskets are specified for the valves on the 48-inch lines. A malfunction in the ozone contactors or the sodium bisulfite pumps could result in ozone reaching these valves. Therefore, Viton gaskets, which are ozone resistant, must be substituted for the specified rubber gaskets.



The PCO for this item has been identified by MWRA staff as a design error. AECOM, MWRA staff, and the Contractor have agreed to a lump sum amount of \$61,666 for this additional work with no increase in contract term.

Replace Gas Line in the Post-Treatment Building

\$50,000

The gas service to the Post-Treatment Building was relocated because the utility company refused to allow an unsupported pipe over an open excavation. Change Order 3 included installation of a new five-inch-diameter gas line inside the building to connect to the existing four-inch gas line. (connection is shown on the right – yellow pipe, in the forefront is five-inch; four-inch section is yellow, top right). After the new line was connected, gas pressure to the boilers was determined to be insufficient. The State Plumbing Inspector required that the remaining lengths of the four-inch gas line be replaced.



The PCO for this item has been identified by MWRA staff as an unforeseen condition. AECOM, MWRA staff, and the Contractor have agreed to an amount not to exceed \$50,000 for this additional work with no increase in contract term.

Furnish and Install Carrier Water Lines and Backflow Preventers \$44,521

The contract requires that the carrier water for the chemical supply to the Ozone Contact Tanks be supplied from a service (W2 – non-potable) water source. After the carrier water line was installed, DEP’s inspector required that lines be installed to provide the carrier water directly from a potable (W1) water supply with backflow preventers. The W2 line provides water for other uses creating a potential for cross-contamination.

The PCO for this item has been identified by MWRA staff as an unforeseen condition. AECOM, MWRA staff, and the Contractor have agreed to a lump sum amount of \$44,521 for this additional work with no increase in contract term.

Modify Actuators on Butterfly Valves \$28,666

Butterfly valves control the flow of water through the UV reactors. The valves can be set at any opening position through programmable logic controller (PLC) calculations based on valve speed over time. After bid, it was determined that increased UV efficiency could be obtained if the opening position is set by sending a signal directly to a valve positioner in the actuator, which will provide a quicker and more accurate position setting and enable the operator to balance the flow between the six reactors more efficiently. The actuators were modified during the manufacturing process to add a valve positioner.

The PCO for this item has been identified by MWRA staff as an unforeseen condition. AECOM, MWRA staff, and the Contractor have agreed to a lump sum amount of \$28,666 for this additional work with no increase in contract term.

Furnish and Install Vents and Piping at 120-inch Manway Hatches \$19,141

The design for the UV reactor piping consists of a 120-inch header connecting to six parallel 48-inch lines. Each of the 48-inch lines contains UV reactors with a flow meter to control the intensity of the lamps. After bid, information obtained from a treatment plant with a similar installation revealed the function of the flow meters could be severely impacted by air in the line feeding the reactors. Therefore, it was determined that an air release is required at the high point of each 120-inch line to prevent incorrect lamp intensity, which would impact UV treatment.

The PCO for this item has been identified by MWRA staff as an unforeseen condition. AECOM, MWRA staff, and the Contractor have agreed to a lump sum amount of \$19,141 for this additional work with no increase in contract term.

Support the Plant Water Line in Place
in lieu of Demolishing and Bypassing the Line

\$17,348

A 16-inch plant water line in the storage tank supplies water for chemical feed systems in the Post-Treatment Building, which controls water chemistry of the finished potable water. The line (shown on the right) penetrated four concrete walls, which provided support and restraint for the pipe.



To install the UV Room, these walls had to be demolished. Because of the risk of damage to the water line during demolition, the contract requires installation of a bypass pipe parallel to the plant water line, a total plant outage to tie-in the bypass, and subsequent demolition of a section of the plant water line.

The Contractor proposed hand demolition and supporting the existing pipe in place with vertical supports similar to those designed for the bypass line instead of bypassing and demolishing the water line. After review, staff felt that the Contractor's proposed alternative (with no increase in contract amount) would eliminate a full plant shutdown and the risks associated with tying the bypass into the plant water line. However, when the concrete was removed, it was discovered that the as-built drawings did not accurately show the pipe alignment, which was not straight due to unknown installation of couplings joining the pipe sections. Therefore, the Contractor was required to furnish and install stronger and additional pipe supports to support and restrain the pipe. In addition, due to concerns raised after bid regarding potential damage to the plant water line, the Contractor was directed to store emergency fittings and pipe on site during demolition.

The PCO for this item has been identified by MWRA staff as an unforeseen condition. AECOM, MWRA staff, and the Contractor have agreed to a lump sum amount of \$17,348 for this additional work with no increase in contract term.

Demolish an Electric Ductbank Across the Top of B-Side Tank

\$7,164

During demolition, the Contractor encountered an electrical ductbank running across the top of B-Side's tank that was not shown on the record drawings. This ductbank had to be removed to allow a concrete saw cutting machine to cut the roof slab over the new UV room. Due to the proximity of the ductbank to the Post-Treatment Building, it was necessary to mobilize smaller equipment to remove the ductbank without damaging the building and adjacent utilities.

The PCO for this item has been identified by MWRA staff as an unforeseen condition. AECOM, MWRA staff, and the Contractor have agreed to a lump sum amount of \$7,164 for this additional work with no increase in contract term.

Modify Connections of the New Stairs to Existing Walls in the Chlorine Contact Channels \$2,110

The contract documents require connecting the new stairs to the existing walls in the Chlorine Contact Channels. The keyways required in the existing walls to support the vertical loads at the stairway landings were omitted from the contract drawings requiring additional modifications by the Contractor.

The PCO for this item has been identified by MWRA staff as a design omission. AECOM, MWRA staff, and the Contractor have agreed to a lump sum amount of \$2,110 for this additional work with no increase in contract term.

Delete Power Conditioners and Wiring (\$190,000)

The contract requires power conditioners to protect the UV equipment from power fluctuations. However, the Calgon equipment, which was preselected prior to bidding this contract and specified as proprietary, is designed to withstand power fluctuations that exceed the specified range of the power conditioners. Therefore, the power conditioners have been determined to be unnecessary and can be deleted from the contract.

The PCO for this item has been identified by MWRA staff as a design error. AECOM, MWRA staff, and the Contractor have agreed to a lump sum credit amount of (\$190,000) for the deletion of this work with no increase in contract term.

Provide Uni-Directional Magnetic Flow Meters in Lieu of the Specified Meter (\$18,384)

The contract specifies Marsh-McBirney Model 285 Insertion Magnetic Flow Meters with bi-directional flow as a proprietary item. However, this meter is no longer manufactured because the manufacturer was acquired by McCrometer. Since a bi-directional flow measurement is not required in this application, it was determined that the Contractor should furnish a McCrometer Model 395L, which has a uni-directional flow indication.

The PCO for this item has been identified by MWRA staff as an unforeseen condition. AECOM, MWRA staff, and the Contractor have agreed to a lump sum credit amount of (\$18,384) for this substitution in meter with no increase in contract term.

The Contractor has proceeded with the work on these items (not Item 1) at its own risk in order to avoid delays and proceed with the remainder of the contract work.

CONTRACT SUMMARY:

	<u>Amount</u>	<u>Time</u>	<u>Dated</u>
Original Contract:	\$29,413,382.00	1,420 Days	04/21/11
Change Orders:			
Change Order 1*	\$18,742.37	0 Days	12/16/11
Change Order 2*	\$13,791.51	0 Days	12/27/11
Change Order 3*	\$200,113.56	0 Days	03/08/12
Change Order 4	\$91,782.93	0 Days	03/19/12
Change Order 5*	\$188,180.70	0 Days	05/30/12
Change Order 6*	(\$9,859.73)	0 Days	06/21/12
Change Order 7*	\$56,904.91	0 Days	08/21/12
Change Order 8	<u>\$506,994.00</u>	<u>0 Days</u>	Pending
Total of Change Orders:	\$1,066,650.25	0 Days	
Adjusted Contract:	\$30,480,032.25	1,420 Days	

*Approved under delegated authority

If Change Order 8 is approved, the cumulative value of all change orders to this contract will be \$1,066,650.25 or 3.6% of the original contract amount. Work on this contract is approximately 51.7% complete.

BUDGET/FISCAL IMPACT:

The FY13 CIP contains a budget of \$30,745,144 for Contract 6924. Including this change order for \$506,994 the adjusted subphase total is \$30,480,032.25.

MBE/WBE PARTICIPATION:

The MBE/WBE participation requirements for this project are 7.24% and 3.6%, respectively. The Contractor will be notified that these requirements are still expected to be met.



MASSACHUSETTS WATER RESOURCES AUTHORITY

Charlestown Navy Yard
100 First Avenue, Building 39
Boston, MA 02129

Frederick A. Laskey
Executive Director

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TTY: (617) 788-4971

PERSONNEL & COMPENSATION COMMITTEE MEETING

Chair: K. Cotter
Vice-Chair: J. Barrera
Committee Members:
J. Foti
V. Mannering
J. Walsh

to be held on

Wednesday, September 12, 2012

Location: 100 First Avenue, 2nd Floor
Charlestown Navy Yard
Boston, MA 02129

Time: Immediately following Water Comm.

AGENDA

A. Approvals

1. PCR Amendments – September 2012

PCA.1
IV A.2
9/12/12

STAFF SUMMARY

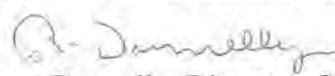
TO: Board of Directors
FROM: Frederick A. Laskey, Executive Director
DATE: September 12, 2012
SUBJECT: September PCR Amendments

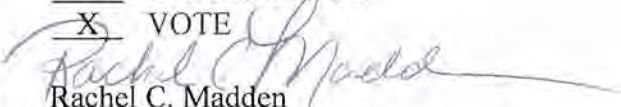


COMMITTEE: Personnel and Compensation

 INFORMATION

VOTE


Robert Donnelly, Director of Human Resources
Preparer/Title


Rachel C. Madden
Director, Administration & Finance

RECOMMENDATION:

To approve the amendments to the Position Control Register (PCR) included in the attached chart¹.

DISCUSSION:

The PCR amendments included in this package reflect organizational changes aimed at improving cost-effectiveness, structural soundness and staffing.

These amendments include:

1. Title change to a vacant position in Operations (Program Manager, Process Control and Project Support to Program Manager, Wastewater Operations) to meet the need for program management in the Wastewater Operations Section.
2. Title change to a vacant position in the Administration & Finance, MIS Department (Programmer Analyst II to Technical Support Analyst) to address service needs identified in the IT Strategic Plan.

These amendments require Personnel and Compensation Committee approval.

BUDGET/FISCAL IMPACT:

None.

ATTACHMENTS:

New/Old Job Descriptions

¹ The Position Control Register lists all regular positions in this fiscal year's Current Expense Budget. Any changes to positions during the year are proposed as amendments to the PCR. The Personnel and Compensation Committee of the Board of Directors must approve all PCR amendments. In addition, any amendments resulting in an upgrade of a position by more than one grade level or increasing a position's annual cost by \$10,000 or more must be approved by the Board of Directors after review by the Personnel and Compensation Committee.

MASSACHUSETTS WATER RESOURCES AUTHORITY
 POSITION CONTROL REGISTER AMENDMENTS
 FISCAL YEAR 2013

PCR AMENDMENTS REQUIRING PERSONNEL & COMPENSATION COMMITTEE APPROVAL -September 12, 2012

Number	Current PCR #	V/F	Type	Current Title	UN	GR	Amended Title	UN	GR	Current/Budge Salary	Estimated New Salary	Estimated Annual \$ Impact	Reason For Amendment	
P1	Operations WW General 24700142	V	T	Program Manager, PC & PS	9	29	Program Manager, WW Operations	9	29	NA	NA - NA	\$0 - \$0	To better meet the needs for prooram management needs of the Wastewater Operations Section.	
P2	Administration & Finance MIS 8610034	V	T	Programmer Analyst II	6	9	Technical Support Analyst	6	9	NA	NA - NA	\$0 - \$0	To address gaps in service as identified in the recently completed 5-Year IT Strategic Plan for improved customer service and productivity	
PERSONNEL & COMP COMMITTEE TOTAL=					2							TOTAL	\$0 - \$0	
GRAND TOTAL =					2							TOTAL ESTIMATED COSTS:	\$0 - \$0	

Legend:
 V = Vacant position, F = Filled position
 T = Title change, L = Location change, transfer to another Cost Center, G = Grade Change, SA= Salary Adjustment, E = Elimination



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Vice-Chair: J. Carroll
Secretary: J. Foti
Board Members:
J. Barrera
K. Cotter
M. Gove
V. Mannering
A. Pappastergion
B. Swett
J. Walsh

BOARD OF DIRECTORS' MEETING

to be held on

Wednesday, September 12, 2012

Location: 100 First Avenue, 2nd Floor
Charlestown Navy Yard
Boston, MA 02129

Time: 1:00 p.m.

AGENDA

- I. **APPROVAL OF MINUTES**
- II. **REPORT OF THE CHAIR**
- III. **REPORT OF THE EXECUTIVE DIRECTOR**
- IV. **BOARD ACTIONS**
 - A. **Approvals**
 1. Options for Fiscal Year Close-out (ref. AF&A B.1)
 2. PCR Amendments – September 2012 (ref. P&C A.1)
 - B. **Contract Awards**
 1. Installation of a Distributed Antenna System: In-Building Cellular, WRA-3489Q (ref. AF&A C.1)
 2. Struvite, Scum, Sludge, and Grit Removal Services at the Deer Island Treatment Plant: Clean Harbors Environmental Services, Bid WRA-3513 (ref. WW A.1)
 3. Concrete/Steel Restoration and Coating Phase IV, Deer Island Treatment Plant: Atlas Painting and Sheeting Co., Contract S513 (ref. WW A.2)

4. Technical Assistance Consulting Services, Deer Island Treatment Plant: AECOM Technical Services, Inc., Contract 7399; Fay, Spofford & Thorndike, Inc., Contract 7400; and Dewberry Engineers, Inc., Contract 7434 (ref. WW A.3)
5. Sudbury Aqueduct Pressurization and Connections Alternatives Analysis and MEPA Review: CDM Smith, Inc., Contract 7352 (ref. W A.1)

C. Contract Amendments/Change Orders

1. Ultraviolet Disinfection Facilities at the John J. Carroll Water Treatment Plant: Daniel O'Connell's Sons, Inc. Contract 6924, Change Order 8 (ref. W B.1)

V. CORRESPONDENCE TO THE BOARD

VI. OTHER BUSINESS

VII. EXECUTIVE SESSION

1. Approval of Minutes
2. Real Estate:
 - a. Watershed Land Acquisition Approval
 - b. Update on CNY Lease
 - c. Update on Land Available for Purchase
3. Litigation:
 - a. Oakdale Electricity Rate Dispute With West Boylston Municipal Lighting Plant; American Arbitration Association 11 198 01281 12
4. Collective Bargaining:
 - a. Employee Reclassifications (materials to follow)

VIII. ADJOURNMENT

Meeting of the Board of Directors

July 18, 2012

A meeting of the Board of Directors of the Massachusetts Water Resources Authority was held on July 18, 2012 at the Authority headquarters in Charlestown. Chairman Sullivan presided. Present from the Board were Messrs. Carroll, Foti, Gove, Hunt, Mannering and Walsh; Mr. Barrera joined the meeting in progress. Ms. Turner and Messrs. Cotter and Pappastergion were absent. Among those present from the Authority staff were Frederick Laskey, Executive Director, Steven Remsberg, General Counsel, Michael Hornbrook, Chief Operating Officer, Rachel Madden, Director of Administration and Finance, Thomas Durkin, Treasurer, John Vetere, Deputy Chief Operating Officer, Daniel O'Brien, Director of Deer Island Treatment Plant, Patrick Smith, Project Manager, Paul Rullo, Design Manager, Robert Donnelly, Director of Human Resources, and Bonnie Hale, Assistant Secretary. The meeting was called to order at 1:10 p.m.

APPROVAL OF MINUTES

Upon a motion duly made and seconded, it was

Voted to approve the minutes of the Board of Directors' meeting of June 27, 2012, as presented and filed with the records of the meeting.

(Mr. Barrera joined the meeting.)

REPORT OF THE CHAIR

Chairman Sullivan noted that Board member Marie Turner was in the hospital and wished her the best and a speedy recovery.

REPORT OF THE EXECUTIVE DIRECTOR

Mr. Laskey reported on various matter, including a display of the plaque commemorating the Authority's receipt of the National Association of Clean Water Agencies' Platinum Award for achieving five years without an NPDES permit violation, which he credited to everyone who works at the Deer Island Treatment Plant. In addition, staff and the Authority's financial advisor discussed the investigation of interest-rate manipulation by banks (the LIBOR probe) and the possible effects to the Authority.

ADMINISTRATION, FINANCE & AUDIT COMMITTEE

INFORMATION

Delegated Authority Report – June 2012

There was question and answer on the status of the Charlestown wind turbine.

APPROVALS

Approval of Competitive Purchases of Bonds

Upon a motion duly made and seconded, it was

Voted to authorize the termination of the two Standby Bond Purchase Agreements with Bank of America, N.A. on 2008 Series B and 2008 Series C-1; to approve the recommendation of the Selection Committee to award Competitive Purchases of the \$183,430,000 in 2008 Series B and Series C-1 bonds to Wells Fargo Bank, N.A., RBC Capital Markets, Inc. and Citibank, N.A.; and to adopt the Sixty-fourth Supplemental Resolution authorizing the issuance of up to \$183,430,000 of Massachusetts Water Resources Authority Multimodal Subordinated General Revenue Refunding Bonds and the supporting Issuance Resolution.

WASTEWATER POLICY & OVERSIGHT COMMITTEE

CONTRACT AWARDS

Expansion Joint Repair Construction 2 – Deer Island Treatment Plant: Chapman Waterproofing Company, Contract 6704

Upon a motion duly made and seconded, it was

Voted to approve the award of Contract No. 6704, Expansion Joint Repair Construction 2 – Deer Island Treatment Plant, to the lowest eligible and responsible bidder, Chapman Waterproofing Company, and to authorize the Executive Director, on behalf of the Authority, to execute and deliver said contract in the bid amount of \$1,927,500.00 for a term of 548 calendar days from the Notice to Proceed.

Caruso Pump Station Improvements: Dewberry Engineers, Inc., Contract 7037

Staff described the need for the project and the work to be done.

Upon a motion duly made and seconded, it was

Voted to approve the recommendation of the Consultant Selection Committee to select Dewberry Engineers, Inc. to provide design, construction administration and resident engineering services for the Caruso Pump Station Improvements project and to authorize the Executive Director, on behalf of the Authority, to execute Contract 7037 with Dewberry Engineers, Inc. in an amount not to exceed \$773,396.00 for a term of 1,308 calendar days from the Notice to Proceed.

WATER POLICY & OVERSIGHT COMMITTEE

CONTRACT AWARDS

Wachusett Aqueduct Emergency Interconnection Valves: Barletta Heavy Division, Inc., Contract 7085C

Staff discussed the project and the work to be performed.

Upon a motion duly made and seconded, it was

Voted to approve the award of Contract No. 7085C, Wachusett Aqueduct Emergency Interconnection Valves, to the lowest eligible and responsible bidder, Barletta Heavy Division, Inc., and to authorize the Executive Director, on behalf of the Authority, to execute and deliver said contract in the bid amount of \$1,091,000.00 for a term of 365 calendar days from the Notice to Proceed.

PERSONNEL & COMPENSATION COMMITTEE

APPROVALS

FY13 Non-Union Compensation

Upon a motion duly made and seconded, it was

Voted to take the following actions in MWRA's FY13 Non-Union Compensation Program: (1) Authorize the Executive Director to implement across-the-board compensation adjustments for non-union managers of 1.5% effective July 1, 2012 and 1.5% effective January 1, 2013; and (2) Approve a revision to the non-union salary ranges for FY13 as presented in Attachment A and filed with the records of the meeting.

FY13 Non-Union Salary Collision Adjustments

Upon a motion duly made and seconded, it was

Voted to take the following actions in MWRA's FY13 Non-Union Compensation Program to alleviate salary collision issues, effective July 1, 2012: (1) Authorize the Executive Director to implement a salary adjustment of \$1,978.00 for the position of Manager, Western Maintenance; and (2) Authorize the Executive Director to implement a salary adjustment of \$1,860.00 for the position of Deputy Director, Human Resources.

(Mr. Carroll temporarily left the meeting and returned for the executive session.)

EXECUTIVE SESSION

It was moved to enter executive session to discuss litigation and real estate.

Upon a motion duly made and seconded, it was, upon a roll call vote in which the members were recorded as follows:

<u>Yes</u>	<u>No</u>	<u>Abstain</u>
Barrera		
Foti		
Gove		
Hunt		
Mannering		
Walsh		
Sullivan		

Voted to enter executive session for the purpose of discussing strategy with respect to litigation and to consider the purchase, exchange, lease or value of real property, in that such discussion in open session may have a detrimental effect on the litigating and negotiating positions of the Authority.

It was noted that the meeting would return to open session solely for the consideration of adjournment.

* * * *

EXECUTIVE SESSION

* * * *

The meeting returned to open session at 2:00 p.m. and adjourned.