

MASSACHUSETTS WATER RESOURCES AUTHORITY

Board of Directors Report
On
Key Indicators of MWRA Performance
For
First Quarter FY2014

| Q1 | Q2 | Q3 | Q4 |
|----|----|----|----|
| | | | |



Frederick A. Laskey, Executive Director
Michael J. Hornbrook, Chief Operating Officer
November 13, 2013

Board of Directors Report on Key Indicators of MWRA Performance

First Quarter FY2014

Table of Contents

Operations and Maintenance

| | |
|---|----|
| DITP Operations-Energy | 1 |
| DITP Operations | 2 |
| Residuals Processing | 4 |
| DITP Maintenance | 5 |
| Operations Division–Metering & Leak Detection | 6 |
| Water Distribution System–Valves | 7 |
| Wastewater Pipeline/Structures | 8 |
| FOD Metro Facility & Equipment Maintenance | 9 |
| Field Operations Energy Program | 10 |
| Toxic Reduction and Control | 11 |
| Field Operations – Narrative Topics | 12 |
| Laboratory Services | 14 |

Construction Programs

| | |
|--------------------------|----|
| Projects in Construction | 15 |
| CSO Control Update | 17 |
| CIP Expenditures | 19 |

Drinking Water Quality and Supply

| | |
|---|----|
| Source Water – Microbial Results | 20 |
| Source Water – Turbidity, pH and Alkalinity | 21 |
| Treated Water – Disinfection Effectiveness | 22 |
| Source Water – Algae, Complaints | 23 |
| Bacteria and Chlorine Residual Results | 24 |
| Disinfection By-Products, UV 254 | 25 |
| Water Supply/Source Water Management | 26 |

Wastewater Quality

| | |
|---------------------------|----|
| NPDES Permit Compliance – | |
| Deer Island TP | 27 |
| Clinton TP | 28 |

Community Flows and Programs

| | |
|---|----|
| Total Water Use | 29 |
| Core Communities | 30 |
| Community Wastewater Flows | 31 |
| Infiltration/Inflow Local Financial Assist. Prog. | |
| Water-Local Pipeline & System Assist. Prog. | |
| Community Support Programs | 32 |
| Community Water - System Leak Detection | |
| - Conservation Outreach | |

Business Services

| | |
|------------------------------|----|
| Procurement | 33 |
| Materials Management | 34 |
| MIS Program | 35 |
| Legal Matters | 36 |
| Internal and Contract Audits | 39 |

Other Management

| | |
|--------------------------|----|
| Workforce Management | 40 |
| Workplace Safety Program | 41 |
| Job Group Representation | 42 |
| MBE/WBE Expenditures | 43 |
| CEB Expenses | 44 |
| Cost of Debt | 45 |
| Investment Income | 46 |

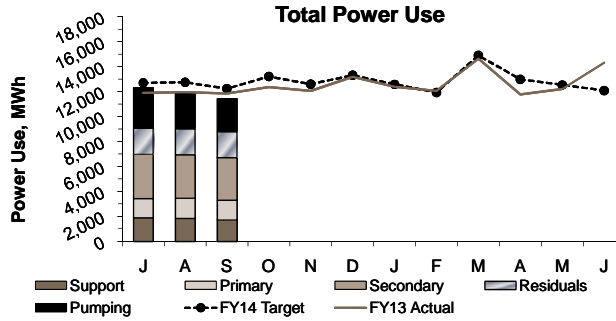
This quarterly report is prepared by MWRA staff to track a variety of MWRA performance measures for routine review by MWRA's board of directors. The content and format of this report is expected to develop as time passes. Information is reported on a preliminary basis as appropriate and available for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

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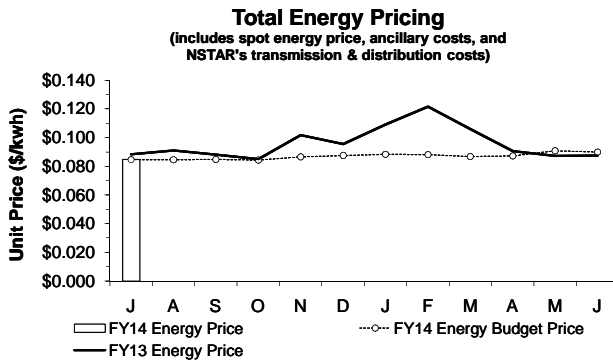
OPERATIONS AND MAINTENANCE

Deer Island Operations

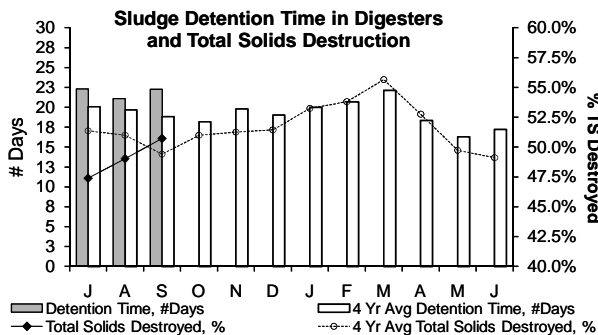
1st Quarter - FY14



Total Power Use in the 1st Quarter was 5.5% lower than the FY14 projections due mainly to lower-than-expected power used in wastewater pumping and for secondary wastewater treatment (as a result of energy optimization measures in the secondary reactor process area). Power used for pumping was 11.1% lower-than-expected for the quarter as the 4 year average plant flow (used in power use projections) was 9.2% lower-than-expected.

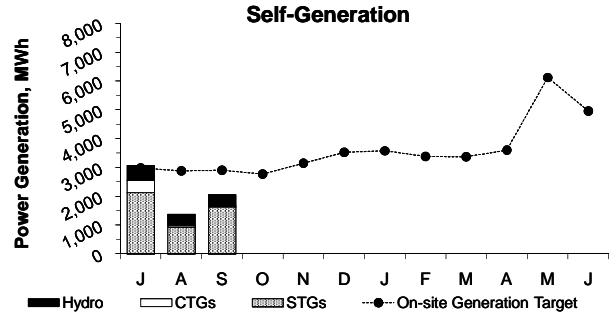


Under the current energy supply contract, a block portion of DI's energy is a fixed rate and the variable load above the block is purchased in real time. The actual total energy unit price in the 1st Quarter (July only) was 0.3% lower than the FY14 budget estimate. Both August and September Total Energy Prices are not yet available as not all of the invoices have been received; the Hess invoices for both months are still pending as well as the NSTAR invoice for September. Year-to-date costs are \$52,186 (6.4%) lower than budget after July (actuals only) as Total Power Used was 6.6% lower than budget. The total energy unit price includes a fixed block price, spot energy price, transmission & distribution charges, and ancillary charges.



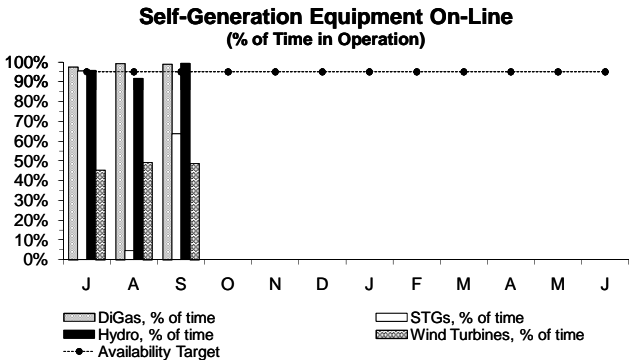
Total solids (TS) destruction averaged 49% following anaerobic sludge digestion during the 1st Quarter with an average sludge detention time in the digesters of 21.9 days. Solids destruction was 3% lower than the 4 year average for the quarter even though sludge detention time in the digesters was 12% higher than the 4 year average. Solids destruction is lower than anticipated due to the shifting of sludge as one of the digesters was taken out of service temporarily for mixer replacement.

Total solids (TS) destruction is dependent on sludge detention time which is determined by primary and secondary solids production, plant flow, and the number of active digesters in operation. Solids destruction is also significantly impacted by changes in the number of digesters and the resulting shifting around of sludge.

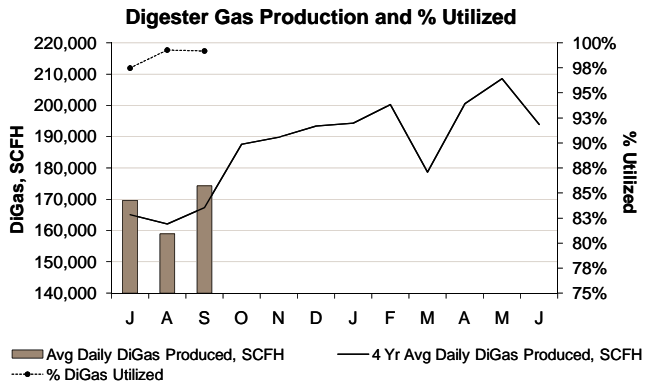


Power generated on-site during the 1st Quarter was 23.1% lower than target due mainly to 29.6% less generation by the STGs and 56.7% less generation by the Wind Turbines than was budgeted, even though generation by the CTGs was more than double the projections as they were operated on several days in July for peak demand charge avoidance. The STGs generated less than target due to an electrical failure on the main STG on August 2. The STG was placed back into service full time on September 20 and was operated sporadically before then while it was being tested. The BP-STG operated at maximum for the portions of this period when the main STG was offline, partially minimizing the impact of the STG failure. Generation by the Wind Turbines was lower-than-expected as Turbine #2 has been out of service since January 23 due to bearing issues.

Note: 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); a total of 288 MWh was generated by the Solar Panels and 120 MWh was generated by the Wind Turbines in the 1st Quarter.



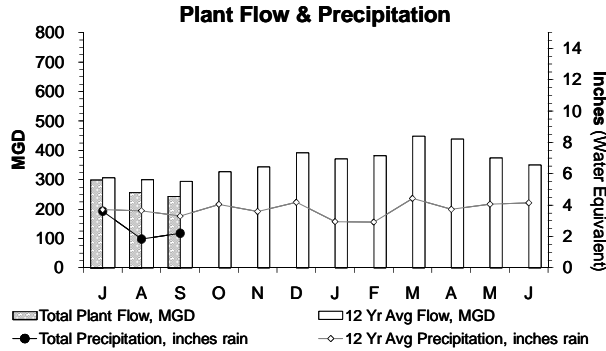
The DiGas and Hydro Turbine systems both met their 95% Availability Target for the 1st Quarter. The Wind Turbines fell 47% below the 95% target for the quarter as Wind Turbine #2 has been out of service since January 23 due to a major bearing failure. Wind Turbine #1 was available 95% of the time in the quarter. The main STG was only available for operation 55% of the time (due to an electrical failure issue) while the BP-STG was available more than 95% of the time.



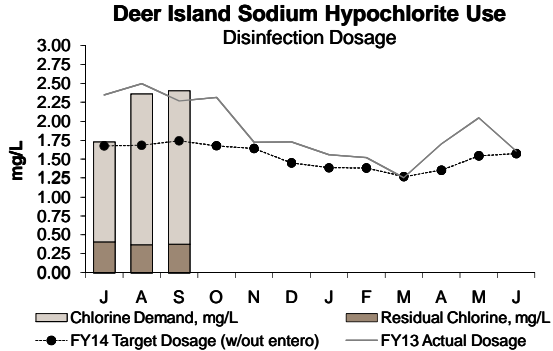
The Avg Daily DiGas Production was 1.7% higher in the 1st Quarter than the 4 Year Avg Daily DiGas Production for the same period and 98.6% of all the DiGas produced in the quarter was utilized at the Thermal Power Plant.

Deer Island Operations

1st Quarter - FY14



The Total Plant Flow for the 1st Quarter was 11.2% lower than the target 12 year average plant flow (266.6 MGD actual vs. 300.1 MGD expected) as precipitation was 28% lower-than-expected for the quarter (7.66 inches actual vs. 10.66 inches expected). Total Plant Flow and precipitation for each month of the 1st Quarter were all lower than target.



The disinfection dosing rate in the 1st Quarter was 27% higher than the target. Dosing was higher-than-expected due to a higher chlorine demand as a result of stronger wastewater caused by the 11.2% lower-than-normal plant flows. DITP maintained an average disinfection chlorine residual of 0.39 mg/L this quarter with an average dosing rate of 2.16 mg/L (as chlorine demand was 1.78 mg/L). The disinfection dosing rate during the 1st Quarter of FY14 was 9% lower than the disinfection dosing rate one year ago.

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 | 2 | 2 | 0 | 99.7% | 6.63 |
| A | 1 | 1 | 0 | 99.6% | 6.25 |
| S | 1 | 1 | 0 | 99.97% | 0.96 |
| O | | | | | |
| N | | | | | |
| D | | | | | |
| J | | | | | |
| F | | | | | |
| M | | | | | |
| A | | | | | |
| M | | | | | |
| J | | | | | |
| Total | 4 | 4 | 0 | 99.7% | 13.84 |

99.7% of all flows were treated at full secondary for the 1st Quarter of FY14. There were a total of four (4) separate secondary blending events; all were due to high plant flows resulting from heavy rain.

All four (4) blending events combined produced a total of 13.84 hours of blending and 66.76 Mgal of flow blended with secondary effluent.

Secondary permit limits were met at all times during the 1st Quarter of FY14.

Deer Island Operations & Maintenance Report

Environmental/Pumping:

The plant achieved a maximum average hourly flow rate of 999.3 MGD in the 1st Quarter during the late afternoon of August 9 as a result of a storm event that dropped a daily total of 1.62 inches of rain in the Boston area mostly within a four (4) hour period. Pumping and treatment operations at DITP continued without incident through this storm, as well as throughout the entire quarter.

Residuals Treatment:

DITP staff with consultants conducted a pilot study in August and September to evaluate the feasibility of a new biosolids screening unit process for possible future implementation at DITP. A Huber Technology Strain Press and an associated sludge feed pump were temporarily installed at one of the existing primary sludge gravity thickeners. Thickened primary sludge was pumped to the strain press and the press was operated at varying conditions for approximately five (5) weeks during this demonstration pilot study. The goal of this study is to demonstrate the potential feasibility of incorporating a solids screening unit process prior to anaerobic digestion and to quantify the amount of inorganic material currently present in biosolids that could be removed through the screenings process. Additionally, the screenings demonstration study will provide MWRA operational knowledge on the performance of strain press equipment at DITP. The pilot study was completed in mid-September and the consultants are in the process of preparing the final report.

Deer Island Operations & Maintenance Report (continued)

Energy and Thermal Power Plant:

Solar power generation accounted for 4.18% (288 MWh) of the total power generated on-site in the 1st Quarter while Wind Turbine generation accounted for 1.75% (120 MWh) of the total power generated on-site in the 1st 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 typically 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. However, Wind Turbine #2 in the South Parking Lot has been out of service since January 23 due to major bearing failure.

Contractors began repairs to Wind Turbine #2 in the South Parking Lot on September 30. The repair work to correct the bearing failure is scheduled to continue for approximately three (3) weeks.

Overall, total power generated on-site accounted for 19.4% of Deer Island's total power use for the 1st Quarter, a slight decrease, as the main STG was out of service for much of the quarter due to an electrical issue that was discovered on August 2 and required the STG to remain out of service for much of the quarter to allow for extensive troubleshooting and evaluation. The unit was returned to service full time on September 20. The BP-STG operated at maximum for the portions of the month the main STG was offline partially minimizing the impact of the STG failure. Renewable power generated on-site (by Solar, Wind, STGs, and Hydro Turbines) accounted for 18.0% of Deer Island's total power use for the quarter.

Annual scheduled maintenance on the Hydro Turbine system began on July 29 and was completed on August 9 resulted in periods of downtime for the turbine system. Maintenance and checks were performed on one turbine unit before proceeding to the second turbine unit. However, for safety reasons, both turbines were locked out and remained offline during the day when the maintenance activities were in progress. The turbine unit not being serviced was placed back in operation during the off-shift period to allow for hydro generation when active maintenance work was not in progress.

The CTGs were operated for 32.4 hours for peak demand charge avoidance on July 5 and each day during Boston's second recorded heat wave in the month from July 15 through July 19. ISO-NE set a new power demand hourly peak of 27.38 KMW on July 19.

NSTAR performed scheduled maintenance on their Bus A-side transformer on August 6 through August 7 which required DITP to transfer the entire plant load from the NSTAR Bus A-side to their Bus B-side while their A-side transformer remained offline during this maintenance. The equipment undergoing maintenance is owned and operated by NSTAR. Regulatory agencies (MaDEP and EPA) were appropriately pre-notified of this impending work and no impacts were encountered during this NSTAR maintenance. Nevertheless, DITP CTGs were tested and available for backup power in the unlikely event of an issue with the electrical feed through NSTAR's single Bus B-side (without redundancy). NSTAR plans a more extensive repair and maintenance on their Bus B-side transformer in October which will require this transformer to be unavailable for a three (3) week period.

Regulatory:

Emissions compliance testing on the East Odor Control (EOC) treatment system on DITP was conducted by consultants during the first week of September. The DITP Air Quality Operating Permit issued by the MaDEP requires that DITP conduct emissions compliance testing for the various emission units once every five (5) years. All the test results show that DITP was in compliance. The consultants are in the process of preparing the emissions report.

On September 5, personnel from the MA DEP performed a multimedia inspection/walkthrough of DITP. This inspection focused mainly on hazardous materials and emissions control practices and waste handling. During and following the inspection/walkthrough, a number of items, minor in nature, were noted by the inspectors. Although no written check sheet was furnished, DITP personnel were able to capture most of the items noted by the DEP representatives, and a memorandum to the DEP inspection staff was drafted and mailed on September 20. The memorandum outlined the noted items and the remedies being undertaken by the MWRA to address the DEP concerns. As of month's end, no correspondence had been received from the DEP regarding the inspection.

Clinton AWWTP:

The plant continues to meet its running average flow limit. September 2013 marks the 13th consecutive month the running average has been met.

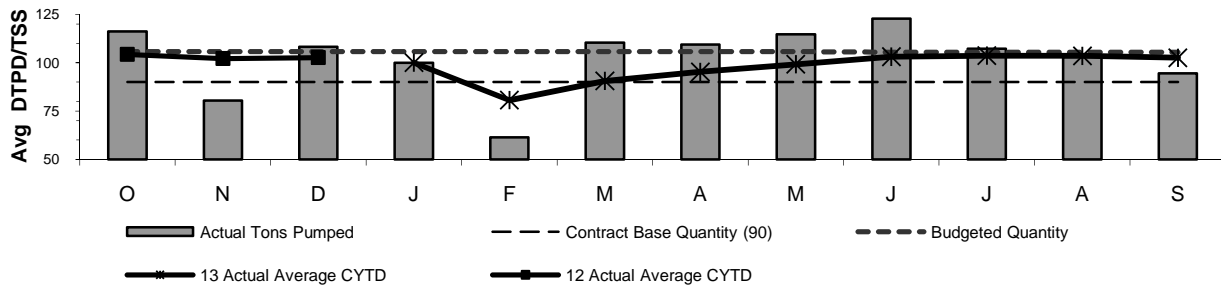
A re-draft of the NPDES permit has been received by MWRA for the Clinton Plant. It is currently under review by staff (Legal, ENQual, Clinton) and comments are being prepared for the public comment period. MWRA expects our past comments on the previous draft received in 2010 will also be resubmitted. The phosphorus reduction construction schedule and co-permittees (Town of Clinton and Lancaster Sewer District) remain important considerations for MWRA.

Deer Island Residuals

1st Quarter - FY14

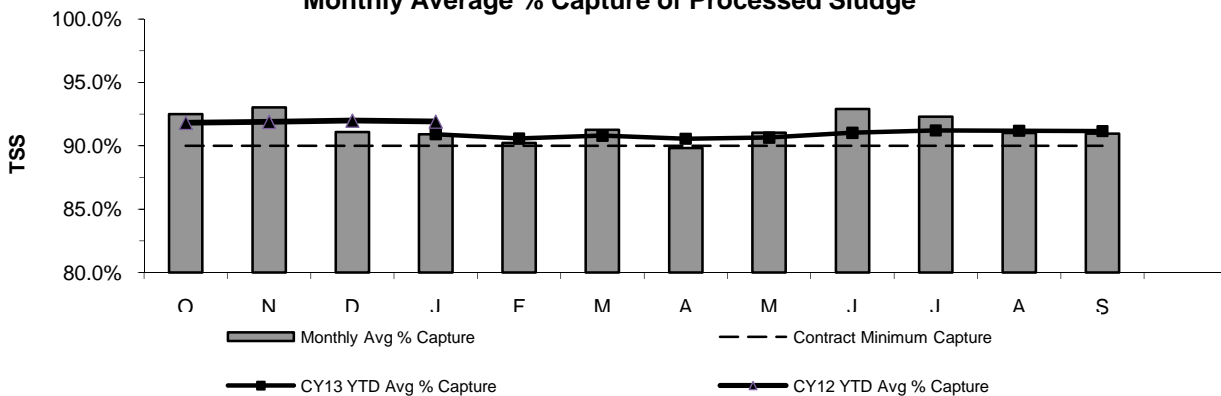
MWRA pays a fixed monthly amount for the calendar year to process up to 90 DTPD/TSS as an annual average. The monthly invoice is based on 90 DTPD/TSS (Dry Tons Per Day/Total Suspended Solids) times 365 days divided by 12 months. At the end of the year, the actual totals are calculated and additional 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 (FY14's budget is 105.4 DTPD/TSS).

Sludge Pumped From Deer Island



The average total quantity of sludge pumped in the 1st Quarter was 101.5.7 DTPD - lower than FY14's budget of 105.4 DTPD. The lower amount is due to higher inventory at Deer Island and lower sludge production.

Monthly Average % Capture of Processed Sludge



The contract requires NEFCo to capture at least 90% of the solids delivered to the Biosolids Processing Facility in Quincy. The Q1-FY14 average capture was 91.42%

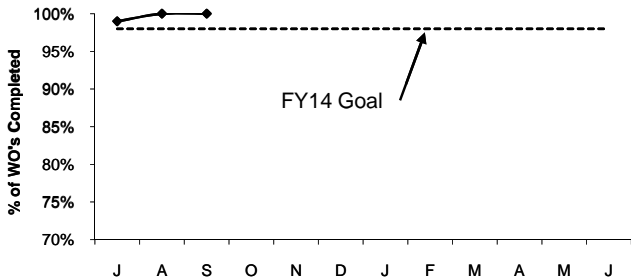
Deer Island Maintenance

1st Quarter FY14

Productivity Initiatives

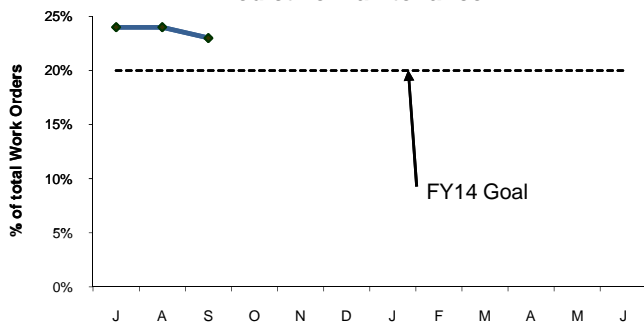
Productivity initiatives include increasing predictive maintenance compliance and increasing PdM work orders. Accomplishing these initiatives should result in a decrease in the overall maintenance backlog.

Predictive Maintenance Compliance



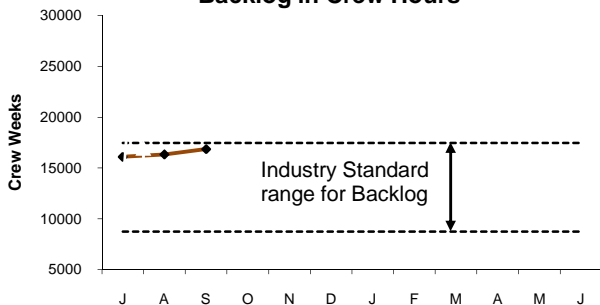
Deer Island's FY14 predictive maintenance goal is 98%. DITP completed 99% of all PdM work orders this quarter. DITP is continuing with an aggressive predictive maintenance program.

Predictive Maintenance



Deer Island's FY14 predictive maintenance goal is 20% of all work orders to be predictive maintenance. 24% of all work orders were predictive maintenance this quarter. The industry is moving toward increasing predictive maintenance work to reduce downtime and better predict when repairs are needed.

Maintenance Backlog in Crew Hours

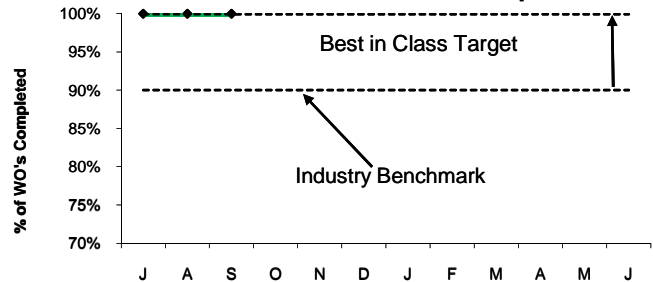


DITP's maintenance backlog was 16,435 hours this quarter. DITP is within, but at the upper end, of the industry average for backlog. The industry Standard for maintenance backlog with 97 staff (currently planned staffing levels) is between 8,730 hours and 17,460 hours. Management continues to monitor backlog and to ensure all critical systems and equipment are available.

Proactive Initiatives

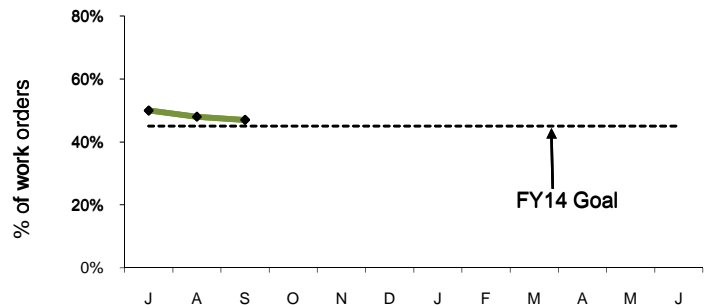
Proactive initiatives include completing 100% of all preventive maintenance tasks and increasing preventive maintenance kitting. These tasks should result in lower maintenance costs.

Preventive Maintenance Compliance



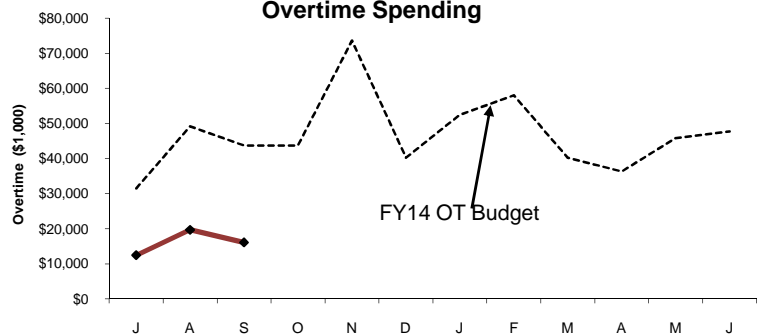
Deer Island's FY14 preventive maintenance goal is 100% completion of all PM work orders from Operations and Maintenance. DITP completed 100% of all PM work orders this quarter.

Maintenance Kitting



Deer Island's FY14 maintenance kitting goal is 45% of all work orders to be kitted. 48% of work orders were kitted this quarter. Kitting is staging of parts or material necessary to complete maintenance work. This has resulted in more wrench time and increased productivity.

Overtime Spending



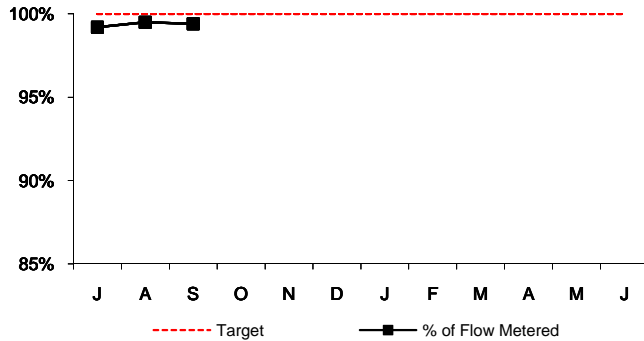
Maintenance overtime was under budget by \$76K this quarter. Management continues to monitor backlog and to ensure all critical systems and equipment are available. This quarter's overtime was spent on two wet weather events, trouble-shooting STG exciter issue, replaced PLC for harmonic filters in North Main Pump Station, support NSTAR outage, replace cylinders at Fuel station fire suppression system and installation of compressor 101 in Thermal Power Plant.

Operations Division Metering

1st Quarter - FY14

WATER METERS

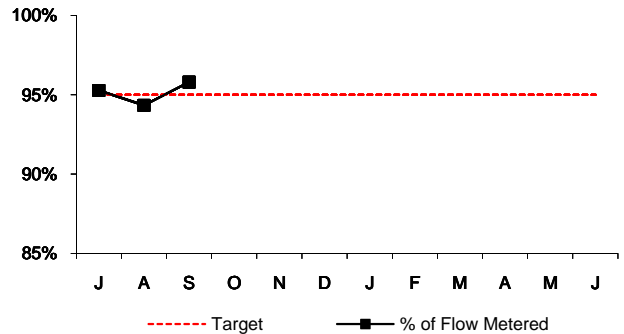
Percent of Total Revenue Water Deliveries Calculated Using Meters



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 1st Quarter of FY14, meter actuals accounted for 99.4% of flow; only 0.6% of total revenue water deliveries were estimated. The following is the breakdown of estimations:
 In-house and Capital Construction Projects - 0.0%
 Instrumentation Failure - 0.6%

WASTEWATER METERS

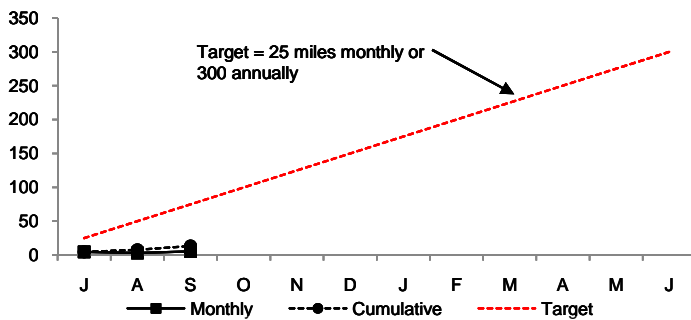
Percent of Total Wastewater Transport Calculated Using Meters



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 1st Quarter of FY14, meter actuals accounted for 95.1% of flow; 4.9% of wastewater transport was estimated.

WATER DISTRIBUTION SYSTEM PIPELINES

Miles Surveyed for Leaks



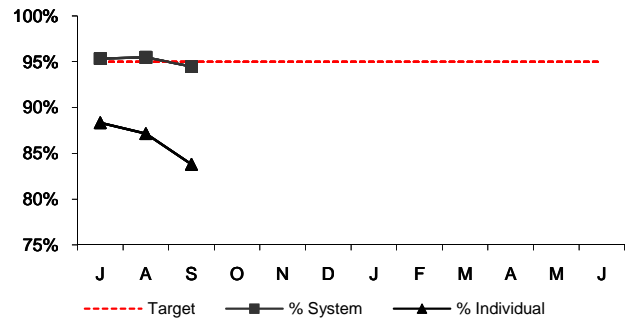
During the 1st Quarter of FY14 13.52 miles of waters mains were inspected. Mileage inspected was less than target due to staffing shortage. Going forward we anticipate meeting our targets as we have recently hired new staff. In mid-October staff will resume night-time leak detection.

Water Distribution System

| Month | J | A | S | O | N | D | J | F | M | A | M | J |
|----------------|-----|------|------|---|---|---|---|---|---|---|---|---|
| Leaks Detected | 2 | 1 | 0 | | | | | | | | | |
| Leaks Repaired | 0 | 1 | 2 | | | | | | | | | |
| Backlog | 2 | 2 | 0 | | | | | | | | | |
| Avg. Lag Time | 1.0 | 20.0 | 27.3 | | | | | | | | | |

During the 1st Quarter of FY14, three leaks were detected. Two leaks were detected in July, one in August and zero in September. The leaks were located at Walley Street, East Boston, Corporate Way in Medford and Second Street in Chelsea respectively. Corporate Way and Second Street leakage was repaired in two and 28 days respectively. The leak on Walley Street took almost two months to repair due to permit issues with the City of Boston.

% Wastewater Meter Uptime



During the 1st Quarter of FY14, out of a possible 1,583,904 data points, only 77,502 points were missed resulting in a system-wide up time of 95.1%. Of the 179.3 revenue meters installed, on average 24.3 experienced down time greater than the 5% target resulting in a 86.4% individual meter uptime. For the 1st Quarter of FY14, down time for an individual meter is defined by any individual meter having less than 2,796.7 data points out of a potential 2,880 data points.

Staff are prioritizing maintenance to meters with larger flows to keep the percentage of flow calculated using meters within target (the chart above), and thus individual meter down time for lower flow meters has crept up.

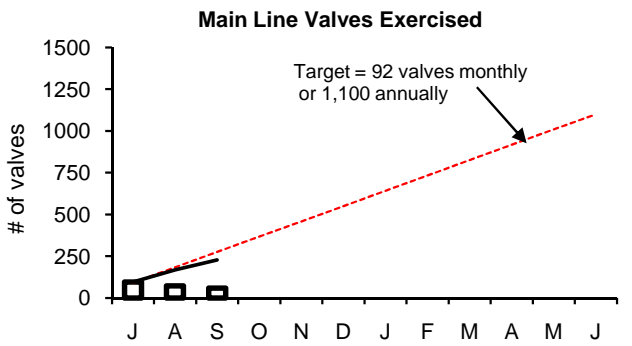
Water Distribution System Valves

1st Quarter - FY14

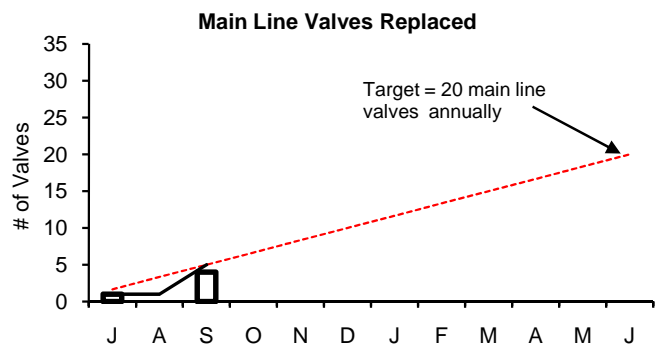
Background

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.

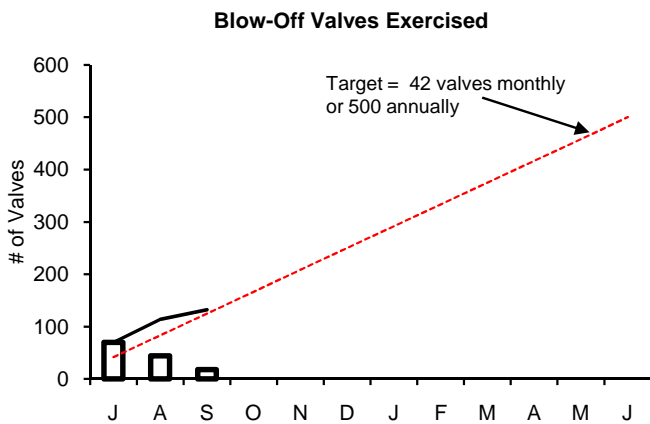
| Type of Valve | Inventory # | Operable Percentage | |
|--------------------|-------------|---------------------|--------------|
| | | FY14 to Date | FY14 Targets |
| Main Line Valves | 2,092 | 97.7% | 95% |
| Blow-Off Valves | 1,206 | 94.8% | 95% |
| Air Release Valves | 1,335 | 93.4% | 95% |
| Control Valves | 48 | 100.0% | 95% |



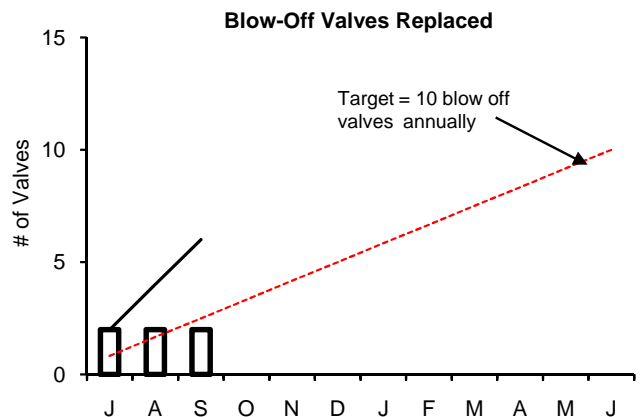
During the 1st Q of FY14 staff exercised 227 main line valves.



During the 1st Q of FY14 staff replaced five main line valves.



During the 1st Q of FY14 staff exercised 132 blow-off valves.



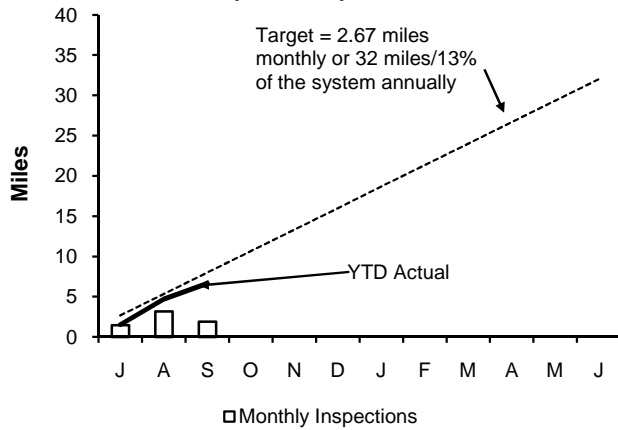
During the 1st Q of FY14 staff replaced six blow-off valves.

Wastewater Pipeline and Structure Inspections and Maintenance

1st Quarter - FY14

Inspections

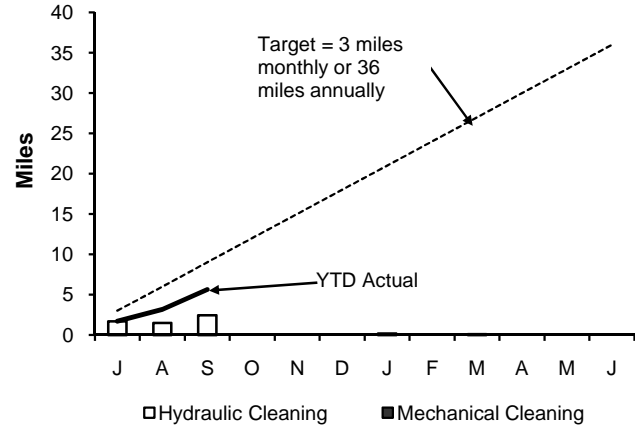
Pipeline Inspections



Staff internally inspected 6.63 miles of MWRA sewer pipeline during this quarter. The year to date total is 6.63 miles. Community Assistance was provided to the city of Medford, 2,344 linear feet of 12" diameter sewer this quarter.

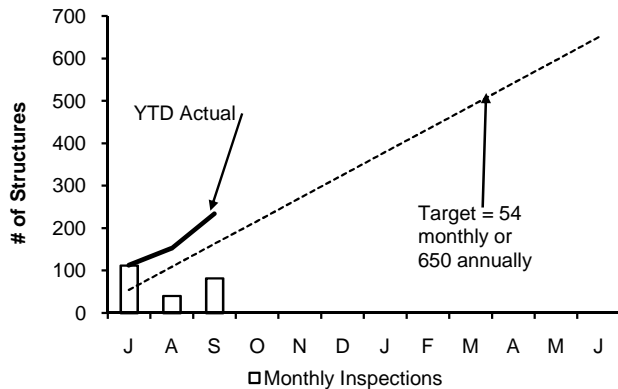
Maintenance

Pipeline Cleaning



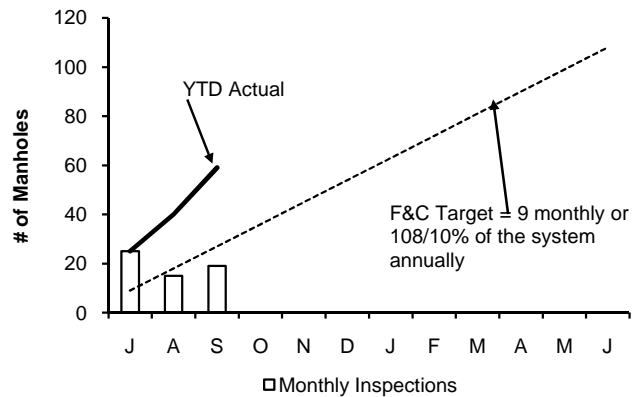
Staff cleaned 5.64 miles of MWRA's sewer system and removed 27 yards of grit and debris during this quarter. The year to date total is 5.64 miles. Community Assistance was provided to the city of Medford 2,000 linear feet and the town of Randolph 1,500 linear feet was cleaned this quarter.

Structure Inspections



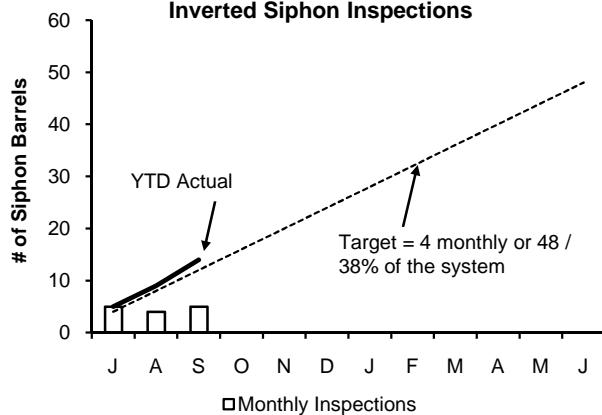
Staff inspected the 36 CSO structures and performed 198 additional manhole/structure inspections during this quarter. The year to date total is 234 inspections.

Manhole Rehabilitation



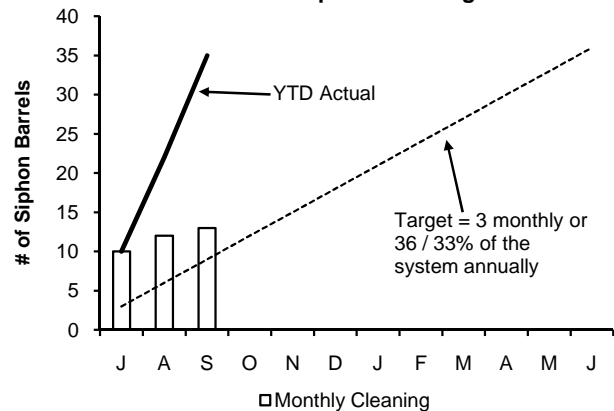
Staff replaced 59 frames & covers during this quarter. The year to date total is 59.

Inverted Siphon Inspections



Staff inspected 14 siphon barrels during this quarter. Year to date total is 14 inspections.

Inverted Siphon Cleaning



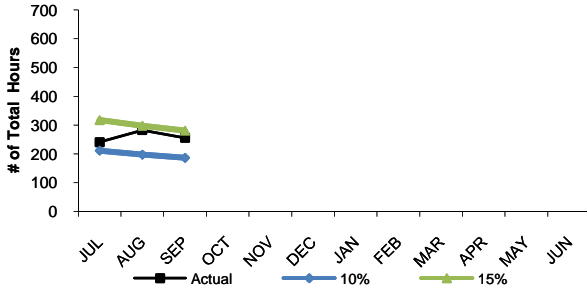
Staff cleaned 35 siphon barrels during this quarter. The year to date total remains at 35 barrels.

Field Operations' Metropolitan Equipment & Facility Maintenance

1st Quarter, FY14

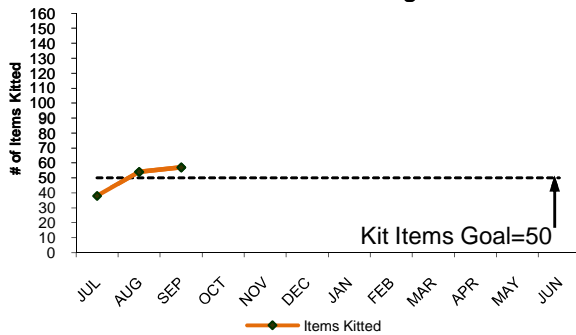
Several maintenance and productivity initiatives are in progress. The goal for the Overall PM completion and the Operator PM completion was raised to 100% for Fiscal Year 2010. The Operator PM and kitting initiatives frees up maintenance staff to perform corrective maintenance and project work, thus reducing maintenance spending. Backlog and overtime metrics monitor the success of these maintenance initiatives.

Operations Light Maintenance PM Hours



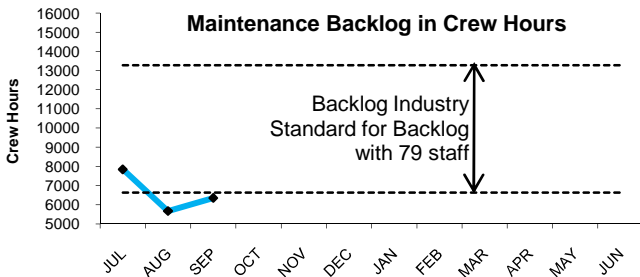
Operations staff averaged 260 hours of preventive maintenance during the 1st Quarter, an average of 13% of the total PM hours for the 1st Quarter, which is within the industry benchmark of 10% to 15%.

Items Kitted Utilizing Maximo



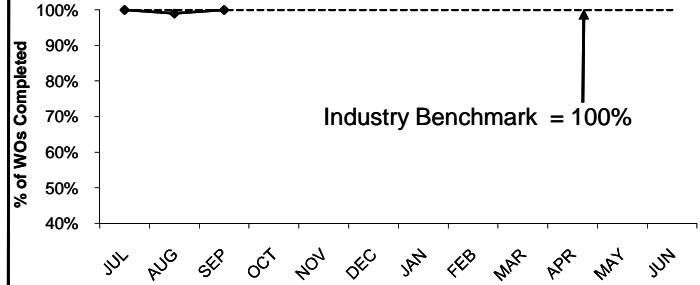
In an effort to more efficiently complete work, maintenance staff and work coordination staff have utilized the Lawson/Maximo interface to better kit stock and non stock material. The goal for FY14 is to "kit" 50 stock and non stock items total per month. An average of 50 items were kitted during the 1st Quarter.

Maintenance Backlog in Crew Hours



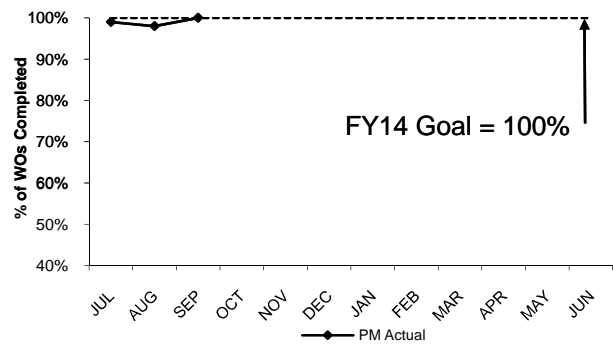
The 1st Quarter backlog average is 6621 hours, within, but at the lower end of the industry standard. Management's goal is to continue to control overtime and still stay within the industry benchmark of 6450 to 12,940 hours. There is currently one vacant facility specialist position.

Overall Preventive Maintenance



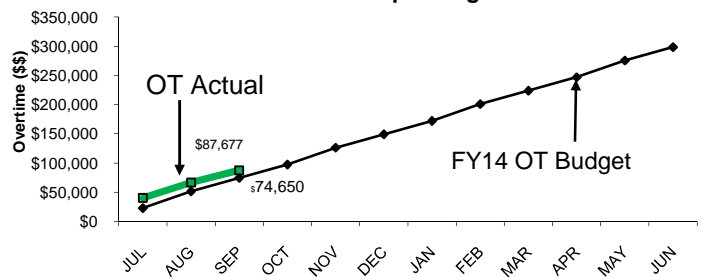
The Field Operations Department (FOD) preventive maintenance goal for FY14 is 100% of all PM work orders. Staff completed an average of 100% of all PM work orders in the 1st Quarter.

Operations Light Maintenance % PM Completion



Wastewater Operators complete light maintenance PM's which frees up maintenance staff to perform corrective maintenance. Operations' FY14 PM goal is completion of 100% of all PM work orders assigned. Operations completed an average of 99% of PM work orders in the 1st Quarter.

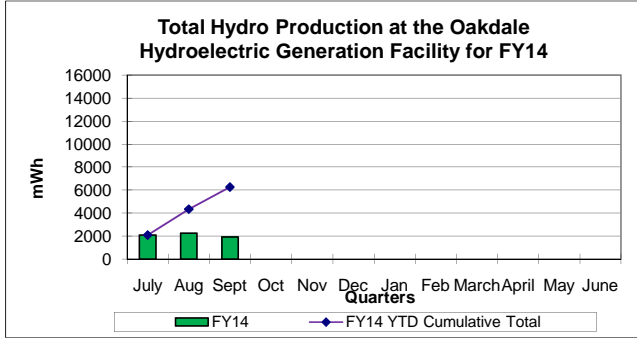
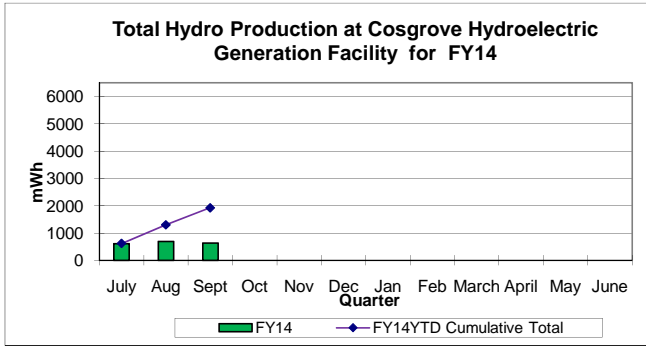
Overtime Spending



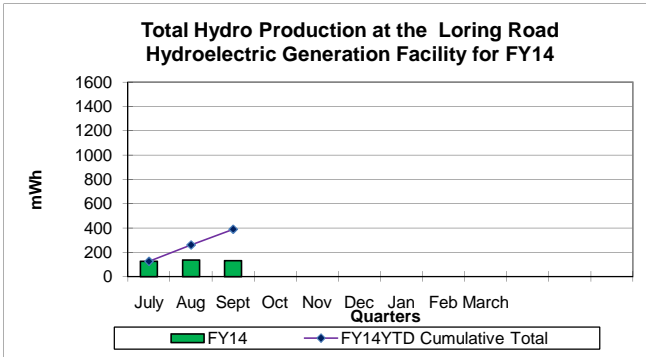
Maintenance overtime was \$13k over budget for the 1st Quarter. Overtime was used for the transformer repair at the IPS, emergency repairs and wet weather coverage.

Field Operations Hydroelectric Generation Quarterly Report

1st Quarter - FY14



In the 1st Quarter, the **Cosgrove Hydroelectric Station** generated a net of 1927 MWh; approximately 16% more power than was generated during the same quarter in FY13. The revenue generated at Cosgrove in the first quarter was \$86,920 exclusive of Renewable Energy Certificates.

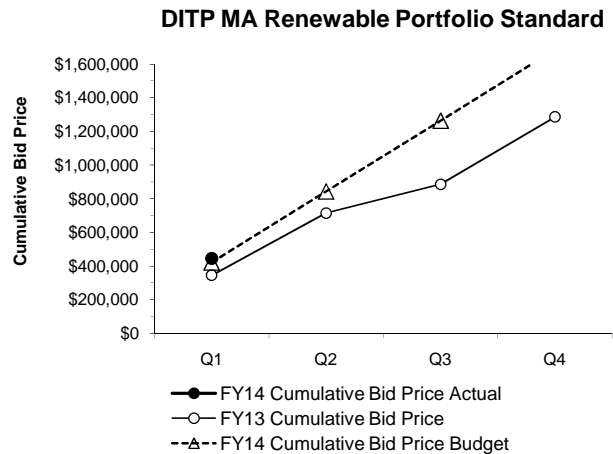
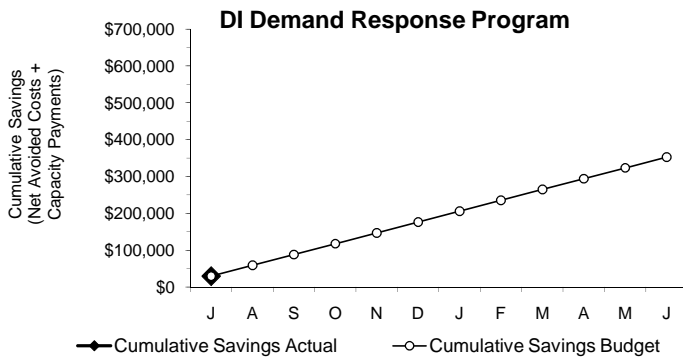


In the 1st Quarter, the **Oakdale Hydroelectric Station** generated a net of 6,261 MWh; approximately 14% more power than was generated during the same quarter in FY13. The net revenue generated in the first quarter was \$291,485. (Power is generated when water is transferred from Quabbin to Wachusett.)

In the 1st Quarter, the **Loring Road** hydroelectric 200 kW station generated 389 MWh; approximately 11% more power than was generated during the same quarter in FY13. The net revenue generated in the first quarter was \$15,090. 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.

Energy Audits and Implementation of Audit Recommendations at FOD Facilities: Technical energy audits of 24 facilities were performed in FY13. The focus of these energy audits were to identify specific lighting, HVAC, pumps, and motors, and insulation, among other measures that could be implemented at these facilities to save energy. Implementation of these audit recommendations will begin in FY14 once MWRA has completed its review of the costs and has received NSTAR's or NGRID's proposed incentive for each project.

Demand Response Payments: The John Carroll Water Treatment Plant, Loring Road Hydro, and Chelsea Creek, Columbus Park, and Ward Street Headworks are all enrolled in the ISO's Demand Response Program. The total net capacity payments for the first quarter of FY14 was \$10,560.



Deer Island participates in the ISO-New England Demand 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, MWRA receives monthly Capacity Payments from ISO-NE. When MWRA operates the CTGs during an ISO-NE called event, MWRA receives energy payments from ISO-NE and also avoids the cost of purchasing electricity from the grid. "Net Avoided Cost" is the avoided electricity costs, 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 \$29,404 through July.

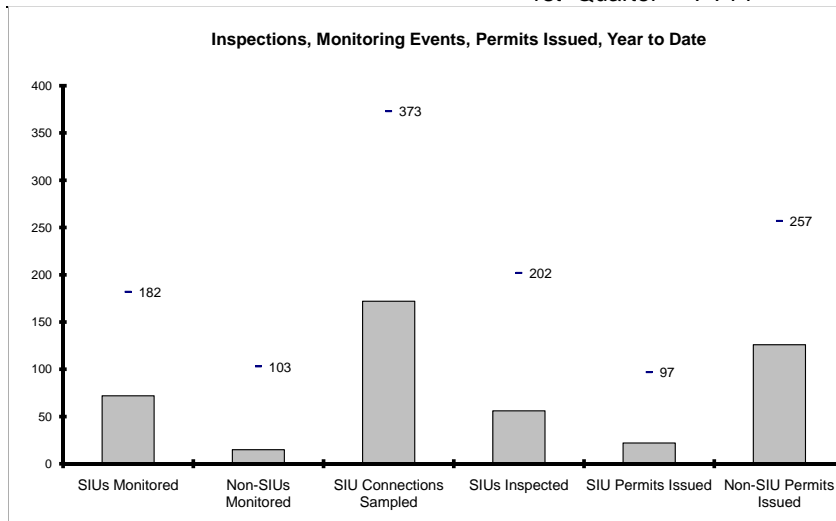
In Q1 FY14, a total of 7,677 Class I Renewable Energy Certificates from Deer Island's renewable energy assets were sold, for a value of \$445,163.

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 FY14 budgeted cumulative bid estimate through Q1 FY14 is \$421,403 while the actual bid total is \$445,163.

Note: Only the actual payments received are now being reported. The capacity payments for August and September are not reported here as the payments have not been received.

Toxic Reduction and Control

1st Quarter - FY14



EPA Required SIU Monitoring Events for FY14: 182
YTD: **72**

Required Non-SIU Monitoring Events for FY14: 103
YTD: **15**

SIU Connections to be Sampled For FY14: 373
YTD: **172**

EPA Required SIU Inspections for FY14: 202
YTD: **56**

SIU Permits due to Expire In FY14: 97
YTD: **22**

Non-SIU Permits due to Expire for FY14: 257
YTD: **126**

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 in the month. 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.

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.

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.

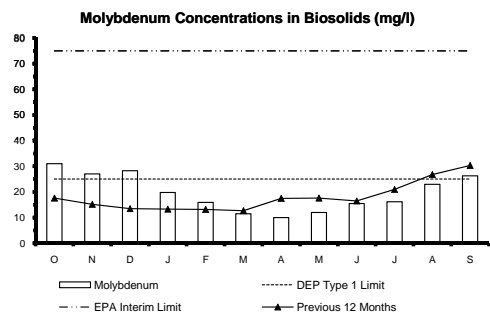
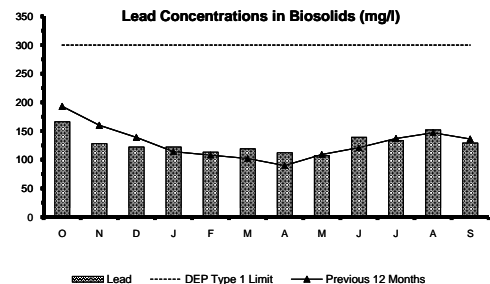
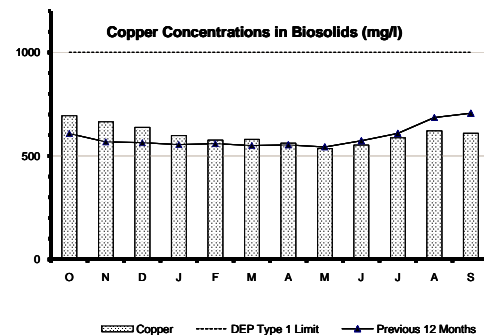
| | Number of Days to Issue a Permit | | | | | | Total Permits Issued | |
|-------|----------------------------------|---------|------------|---------|-------------|---------|----------------------|---------|
| | 0 to 120 | | 121 to 180 | | 181 or more | | SIU | Non-SIU |
| | SIU | Non-SIU | SIU | Non-SIU | SIU | Non-SIU | | |
| Jul | 7 | 13 | 0 | 0 | 0 | 0 | 7 | 14 |
| Aug | 1 | 94 | 1 | 1 | 0 | 1 | 2 | 96 |
| Sep | 12 | 13 | 1 | 3 | 0 | 0 | 13 | 16 |
| Oct | | | | | | | 0 | 0 |
| Nov | | | | | | | 0 | 0 |
| Dec | | | | | | | 0 | 0 |
| Jan | | | | | | | 0 | 0 |
| Feb | | | | | | | 0 | 0 |
| Mar | | | | | | | 0 | 0 |
| Apr | | | | | | | 0 | 0 |
| May | | | | | | | 0 | 0 |
| Jun | | | | | | | 0 | 0 |
| % YTD | 91% | 95% | 9% | 3% | 0% | 2% | 22 | 126 |

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.

In the first quarter of FY14 twenty SIU permits and one hundred and twenty non-SIU permits (included are 98 renewal permits for Food Processing) were issued within 120 days after receipt of their applications. Two SIU permits and four non-SIU permits were issued within the 121 to 180 days timeframe after receipt of their applications. No SIU permit and two non-SIU permits were issued more than 180 days after receipt of their applications. Delays were mainly due to permitting considerations.

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, although this is delayed due to biosolids processing time. 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.

In the first quarter of FY14, levels of molybdenum were below the DEP type 1 Limit for the first two months. MWRA and its contractor (NEFCO) do not distribute product in Massachusetts between July and January under its approval of suitability.



Field Operations Highlights

1st Quarter – FY14

Western Water Operations and Maintenance

Quabbin Aqueduct: Staff conducted annual maintenance at the Shaft 8 intake facility, including cleaning of the intake screens, cleaning of the 52-inch river meter, repointing of masonry structures that are normally submerged, inspections for invasive species and inspection of portions of the facility that are normally under water. Repairs to a masonry wall, and building roof were also made, and the fuel system upgraded.

CWTP: Staff completed the installation of local hand/off/auto switches for the closed loop and open loop cooling pumps that provide cooling water to the ozone generators. The switches will provide the ability to LOTO the pumps locally while performing maintenance. Staff extended sample taps in both Ultraviolet (UV) Rooms. These sample taps are located between UV disinfection and the addition of sodium hypochlorite and will support both startup and ongoing sampling. Staff also supported the UV contractor during hydraulic and demonstration testing of the UV Reactors. Reliability testing is scheduled for the beginning of next quarter.

Southborough: The final work on the circulator pumps for the air conditioning system in the Administration Building was completed. The new pumps were activated, and this along with the upgrades to the HVAC System controls, have resulted in improved efficiency in the cooling system and reduced energy costs. As part of the work, staff replaced the three-way valves on the heating system coils on the Air Handling Units to prevent leak by of heated water when the unit is not calling for heat.

Metro Water Operations & Maintenance

Valve Program: Section 10 crossing the Larz Anderson Bridge was returned to service early in July after the Mass DOT Contractor returned one of the two pipeline sections to service. Work continues on the bridge itself. The Mobile \Disinfection Unit (MDU) was deployed to assist the Town of Bedford with total coliform issues. It was operated around the clock for several days by Metro Operations Staff. Sections 8 and 87 were isolated, dewatered, filled, and reactivated for blow off retrofit projects to be completed. The portable water station was deployed at many different locations, including the Esplanade for the July 4 celebration. Winchester withdrew water from Spot Pond during the middle of July.

Water Pipeline Program: Five valves were installed and/or replaced: one in Waltham at Meter 148, one in Saugus at Meter 134, one in Newton on Section 24, and two in Ludlow at the CVA/Springfield emergency connection. Seven blow off retrofits were completed: two in Lynn on Section 87, two in Newton on Section 24, one in Malden on Section 18, one in Chelsea on Section 8, and one in Medford on Section 50. Excavation and site work were performed as part of the IPS transformer replacement. Foundation and pedestal work were completed for the display of the 48" valve from Weston at the Chelsea facility. Pipeline Staff modified the existing emergency connection between the Chicopee Valley Aqueduct (CVA) and the Springfield water system. New piping and valves were installed, as well as connections that will allow for the deployment of the mobile pumping units. Site work was performed to place two large historic markers on the grounds of the Waterworks Museum at Chestnut Hill.

Cambridge Water Supply Transition: Staff met with Cambridge Water Department Staff in August to plan the transition of the temporary supply of Cambridge to MWRA water supply. Preventative maintenance work was performed at the Pressure Reducing Valves (PRV) at Meter 145, at the PRV at Nonantum Road (the source of water for the Cambridge supply), and several mains were flushed in anticipation of the supply of water. Meter 145 to Cambridge was activated on Wednesday, September 11. The flow transition went smoothly, with water supply within the city remaining normal. The source of water is the Pressure Reducing Valve (PRV) at Nonantum Road in Brighton on WASM 14. The city continues to operate their water treatment plant at a reduced rate, with the majority of the water to the city being supplied through a MWRA connection at Meter 145.

Wastewater Operations & Maintenance

IPS Facility Replacement Transformer: Staff coordinated with Electrical, Maintenance and the electrical utility to maintain facility operations during this emergency transformer replacement activity. Staff were also required to operate and monitor the emergency back-up generator around the clock that supplied facility power for nearly three weeks while the work proceeded. The replacement transformer was successfully tested and installed and back in service without impact to normal facility operations.

Wastewater Operations Scanner Updates: Staff met with Authority MIS personnel and the scanner vendor, Tiscor-Brady Inc., in July to discuss the new data base format, program improvements and facility scanning routes for the anticipated roll out of the new scanners. Edits to questions, data extraction methods and improved scanner routing were reviewed and changes initiated. This updated scanner program is expected to include a "test" web base for collecting data from the scanners prior to full program rollout and implementation.

Braintree/Weymouth Relief Pump Station Manual Bar Screens: Operations Staff monitored and operated the new manual bar screens at the Braintree/Weymouth Relief Pump Station. The screens are intended to keep rags and other debris from clogging the two grinders at the facility. A SOP was developed by staff for cleaning the screens which was utilized for training during wet weather.

Wastewater Operations & Maintenance (cont.)

Wastewater OCC-Operation Practice Drills: Wastewater Operations Staff worked with SCADA Staff during the month of September to practice OCC operations from the Chelsea Radio Building and John Carroll Water Treatment Plant remote locations. This required staff to relocate to the specific back-up OCC site and assume SCADA control. Staff will continue this annual practice drill to ensure staff maintains familiarity with each remote site in case of a possible emergency.

Cottage Farm CSO - Spill Prevention Control and Countermeasure (SPCC) Plan - Update: A certified and updated SPCC Plan was delivered to the Cottage Farm CSO facility in September. This 2013 updated version evaluated the previously existing SPCC control measures with the considerations for the recently modified fuel oil system. Wastewater Operations worked with the MWRA Real Estate Properties / Environmental Department during the review process to ensure continuity with the existing SPCC Plan.

CSO Treatment Equipment Review: As part of the upcoming CSO Treatment Facility Equipment Evaluation by Engineering, Wastewater Operation Staff worked with Process Control and Process Support (PC&PS) Staff to review present day equipment and operation practices. Both equipment operation and staff operating practices were discussed. Repair work orders were entered for any equipment found defective following site visits to the Somerville Marginal and Prison Point CSO Facilities. Future operation enhancements will be based on the present facility equipment condition and operating practices.

TRAC

TRAC issued 2 Penalty Assessment Notices (PANs) totaling \$1,000.00, to companies that failed to submit the annual Compliance Report or annual silver sample result (or both) as required by the Group Permit for Photo Processing and Printing Operations (Group Permit). During the quarter, TRAC Staff renewed permits to 90 companies holding Group Permits for Food Processing Operations. The Group Permit is issued to wholesale food processors that can meet MWRA limits with a standard grease trap.

TRAC Monitoring Staff assisted MWRA Operations Staff at the Weymouth IPS in identifying the source of heavy grit coming into the station. Samples were collected throughout the station to segregate and identify the source of the grit while grit was sampled for grain size comparison. The grit appears to have come from the Pelletizer Plant.

Metro Equipment and Facility Maintenance

Commonwealth Avenue West Pump Station Pump #3: MWRA purchase Variable Frequency Drives (VFD) for the two pumps in the facility. MWRA Electricians removed the existing motor control center for Pump #3 and installed the new VFD. MWRA Electricians and a vendor service contractor worked together troubleshooting various issues during startup.

Columbus Park Headworks Dewatering Pump: Dewatering Pump #1 was original equipment for the Headworks. A new pump, motor, base and isolation valves were purchased. MWRA Mechanics disassembled the original equipment and installed new equipment. Some modifications were needed to the pump base, which were done by MWRA Masons. Each dewatering pump at Columbus Park, Chelsea and Ward Street are scheduled to be replaced.

Nut Island Odor Control Damper #2: Pneumatic Damper #2 froze due to age and the corrosive atmosphere of the odor control system. A new damper was purchased to replace the old damper. This was a very labor-intensive and difficult project because of the size and location of the damper. MWRA HVAC, Electrical, Mechanical and Painters worked together erecting scaffolding and rigging to remove the old and install the new damper. Once the damper was in place, the pneumatics were installed, tested and turned over to Operations.

Operations Support

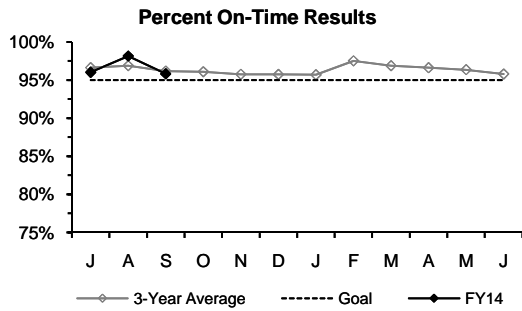
CVA Leak: Operations Engineering Staff continued investigating a leak near the Swift River crossing of the CVA and had prepared a shutdown plan to check if the leak could be repaired by an internal entry. The investigation indicated internal repair is not feasible. In the 1st Quarter, staff continued to work with Springfield Water & Sewer Commission and the CVA communities to implement the emergency pumping and temporary shutdown of the line to replace existing segments, this winter.

Online Water Quality Monitoring: Staff continued working on updating the Distribution Water Quality Monitoring Analyzer System. Fifteen units have been installed through the end of the 1st Quarter and have been made operational via SCADA. One of the enclosures needed for the remaining sites was delivered in September and field work for all remaining sites has been begun. Central data collection equipment and its associated server installation are operational. Staff continued implementing the associated data collection network with Verizon connections now being available for 15 of the sites. Draft response SOPs have been developed for alarm response. The remaining steps include training of some categories of response staff to finalize preparations for enabling alarms.

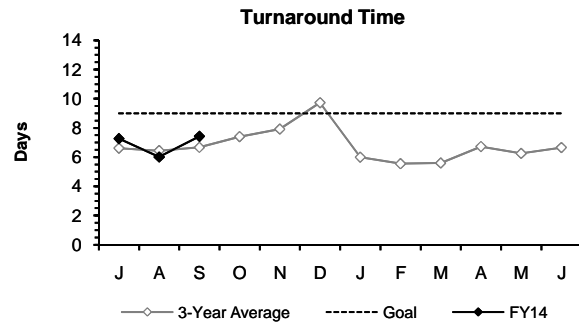
Seasonal Coliform Bacteria Issues: In the 1st Quarter, seasonal bacteria and nitrification issues in the communities continue to be closely monitored during the high water temperature period. Staff has had discussions with several communities that have had coliform positives and has met several times with Bedford to assist them with mobile disinfection response to help manage their system issues. The community emergency training program included a module on nitrification issues and has provided an opportunity to share MWRA's experience across all communities.

Laboratory Services

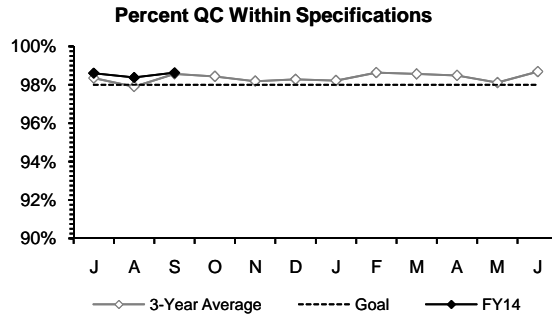
1st Quarter - FY14



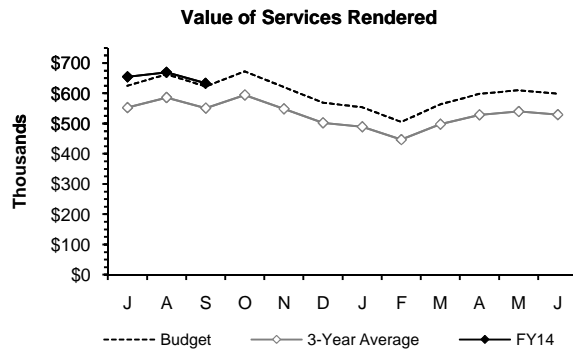
The Percent On-Time measurement exceeded the 95% goal each month of the quarter.



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



Percent of QC tests meeting specifications was above the 98% in-house goal each month of the quarter.



Value of Services Rendered was above the seasonally adjusted budget projection each month of the quarter.

Highlights: Gave a presentation in a continuing series on Lab Ethics at the Independent Testing Laboratory Association meeting.

Quality Assurance: The quarterly in-house compliance audit was on methods and procedures at all five locations.

LIMS: Informal user testing of the new version of LIMS continues. Identified issues are being rectified by MIS or the LIMS vendor.

DITP: Supported DITP pilot of screens to remove unwanted solids from the primary sludge feed to the digesters by testing samples before and after the screens as well as the material captured by the screens.

Wastewater Operations: Tested manhole samples from Weymouth area for evidence of salt water inflow. Tested grit samples from the IPS to attempt to resolve an operational issue. Tested rush bacteria, chloride, and nutrient samples from the Mystic River to address an operational concern.

ENQUAL Clean Water: Submitted responses to EPA on a request to change the lab method for Total PCBs. Investigated unusual bacteria results from the inner harbor.

ENQUAL Drinking Water: Tested residential complaint samples from Bedford. Tested samples from DITP and CMF water fountains. Testing annual Lead and Copper Rule samples. Tested numerous Total Coliform Rule repeat samples from Bedford and Hanscom. Tested a rush sample for Canton when their contract lab was unavailable.

Outside Customers: Peabody has begun using MWRA for its drinking water testing.

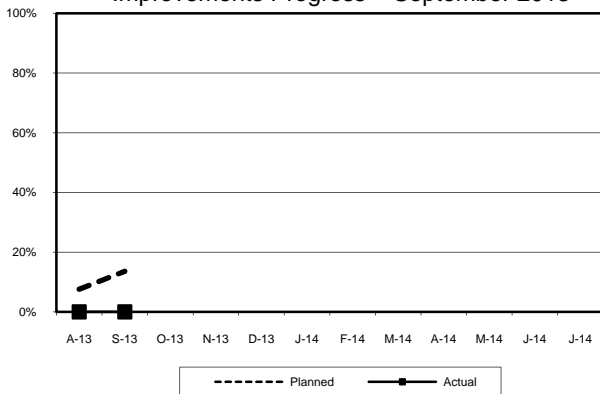
CONSTRUCTION PROGRAMS

Projects In Construction

1st Quarter FY14

(Progress Percentages based on Construction Expenditures)

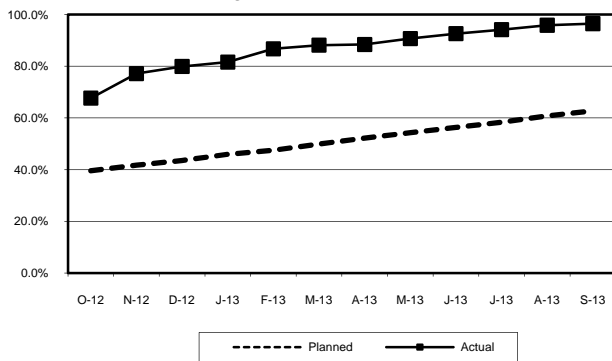
Nut Island Headworks Electrical and Conveyor Improvements Progress – September 2013



Project Summary: This project will replace the floor-slab-embedded electrical conduits in the bottom level of the headworks, as well as improvements to the grit and screenings conveyors.

Status and Issues: As of September the Contractor, J.F. White, resubmitted the site specific Health and Safety Plan, which was accepted by the MWRA. The Contractor and MWRA met on-site with the DPS Building Inspector regarding permitting. In addition, the Contractor worked on submittals, permit applications and finalizing subcontractor agreements.

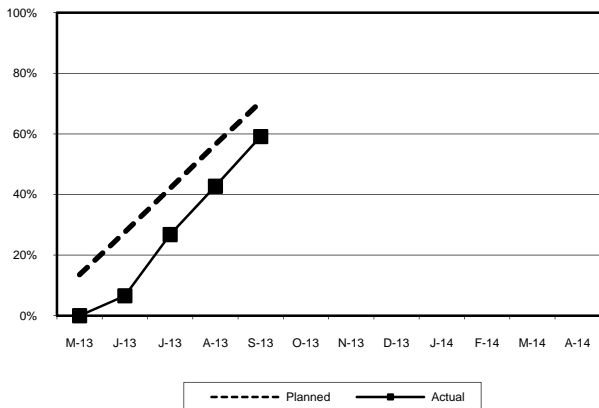
UV Disinfection Facilities CWTP Progress – September 2013



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: As of September, the UV equipment supplier, Calgon Carbon, performed demonstration testing and training; and began performance testing on installed equipment. Griffin Electric began punch list work issued for the A & B sides, they assisted with the installation of data loggers for the power supply units and disconnected the supply and exhaust ventilators on top of the A & B side tanks.

Watertown Section Rehabilitation Progress - September 2013



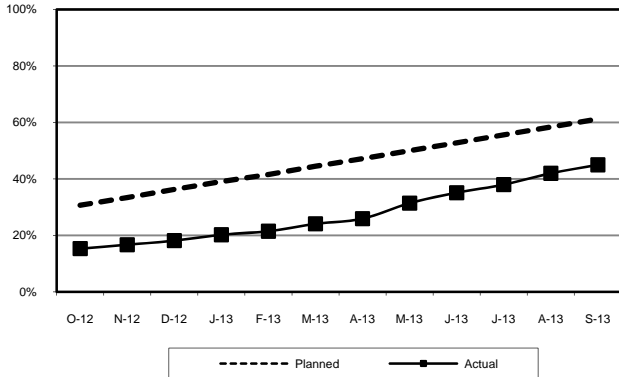
Project Summary: Watertown Section Rehabilitation involves the slip lining of a 5,300 foot-long 30-inch steel pipe with 24-inch High Density Polyethylene (HDPE) pipe and the installation of 400 feet of 24-inch and 30-inch diameter HDPE pipe by open cut.

Status and Issues: Through September, the Contractor completed the closure of the 24" HDPE line in Watertown. The air release man hole was installed at Sta. 49+06 on the Waltham/Watertown City line. The 12" water connection to Meter #148 was completed in the River/Willow St intersection. Also, the work on the Cambridge Water lines began on September 30th.

Projects In Construction September 2013

(Progress Percentages based on Construction Expenditures)

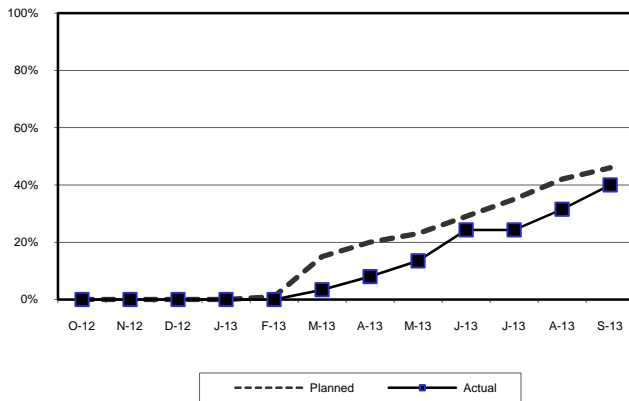
Spot Pond Water Storage Facility Progress – September 2013



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: Through September, the Contractor completed the Tank #2 base slab and walls. The Tank #2 roof decks are approximately 84% complete. The base slab cells in Tank #1 are approximately 63% complete and the wall sections are 35% complete. The Contractor cleared and grubbed on Pipeline Road and began the installation of the 36" DI pipe and yard piping adjacent to the pump station.

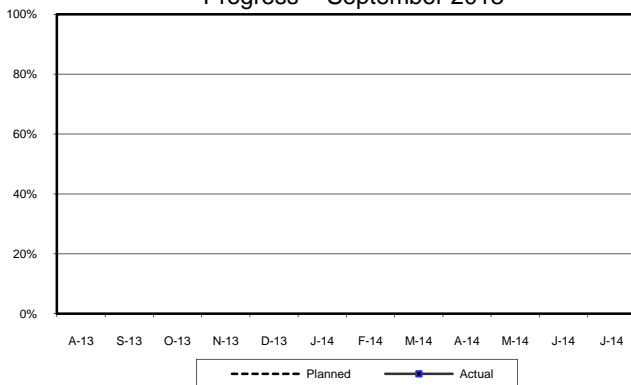
Quabbin UV Disinfection Progress – September 2013



Project Summary: This project will improve the quality of the drinking water delivered to the CVA communities serviced by the MWRA. It involves the addition of UV disinfection at the Quabbin Disinfection Facility to meet the EPA's regulation for a second means of disinfection for unfiltered water systems.

Status and Issues: Through September, the Contractor formed, rebarred and placed concrete for the covered walkway roof, pipe supports in Vault 1B and the equipment pads in the electric room. They also completed erecting structural block walls (interior & exterior) and installed insulation and flashing. Started erecting the roof.

Pump, Gear Box and Diesel Engine Upgrade Prison Point and Cottage Farm CSO Facilities Progress - September 2013



Project Summary: This project involves the rebuilding of pumps right angle gear drives and engines as well as the installation of diesel oxidation catalysts at the Prison Point and Cottage Farm CSO facilities.

Status and Issues: This contract was awarded at the September Board of Director's meeting.

CSO CONTROL PROGRAM

1st Quarter - FY14

MWRA and the CSO communities have completed 31 of the 35 projects in the Long-Term CSO Control Plan. Three CSO projects are in construction: Reserved Channel Sewer Separation by BWSC, CAM004 Sewer Separation by the City of Cambridge and SOM01A Interceptor Connection Relief and Floatables Control by MWRA. The one remaining project, related to the Alewife Brook, is in design by MWRA. The following table reports on the progress of the four CSO projects not yet complete, as well as BWSC's continuing inflow removal work associated with the completed South Dorchester Bay Sewer Separation project.

| Project | | Court Milestones in Schedule Seven (Shaded milestones are complete.) | | | Status as of September 30, 2013 | | | | | | | | | |
|---|---------------------------|---|-----------------------|---|--|-------------|---------------------------|--------------|-------------|---------------------------|--------------|------------|-----------------------|------------|
| | | Commence Design | Commence Construction | Complete Construction | | | | | | | | | | |
| Cambridge/ Alewife Brook Sewer Separation | CAM004 Sewer Separation | Jan 97 | Jul 98 | Dec 15 | <p>Cambridge completed four initial construction contracts for this project more than a decade ago and has planned three additional contracts (contracts 8A, 8B and 9) to complete the project.</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 25%;">Contract 8A</td> <td style="width: 50%;">Huron Ave. corridor, west</td> <td style="width: 25%;">50% Complete</td> </tr> <tr> <td>Contract 8B</td> <td>Huron Ave. corridor, east</td> <td><5% Complete</td> </tr> <tr> <td>Contract 9</td> <td>Concord Ave. corridor</td> <td>90% Design</td> </tr> </table> <p>In September, Cambridge issued the notice to proceed for Contract 8B. MWRA's Board approved a \$2.1 million increase to the MOU/FAA award amount in July to cover the higher cost of Contract 8B. Contract 9 was advertised for construction bids. Staff plan to seek Board approval to add the construction related costs for Contract 9 to the MOU/FAA in November. This amendment is expected to increase the award amount by approximately \$6 million over the approved CIP budget.</p> | Contract 8A | Huron Ave. corridor, west | 50% Complete | Contract 8B | Huron Ave. corridor, east | <5% Complete | Contract 9 | Concord Ave. corridor | 90% Design |
| | Contract 8A | Huron Ave. corridor, west | 50% Complete | | | | | | | | | | | |
| Contract 8B | Huron Ave. corridor, east | <5% Complete | | | | | | | | | | | | |
| Contract 9 | Concord Ave. corridor | 90% Design | | | | | | | | | | | | |
| MWR003 Gate and Rindge Ave. Siphon | Apr 12 | Aug 14 | Oct 15 | <p>On August 30, 2013, the Authority issued the Notice to Proceed with the \$292,300 construction contract for the Interceptor Connection Relief and Floatables Control at Outfall SOM01A project, ahead of the September 2013 milestone in Schedule Seven. The contract calls for construction to be complete ahead of the June 2014 milestone in Schedule Seven.</p> <p>The design is at 90% for the improvements at Outfall MWR003 and Rindge Ave. Siphon and expects to award the contract and issue the notice to proceed with construction by August 2014, in compliance with Schedule Seven.</p> | | | | | | | | | | |
| SOM01A Relief and Floatables Control | | Sep 13 | Jun 14 | | | | | | | | | | | |

| Project | Court Milestones in Schedule Seven (Shaded milestones are complete.) | | | Status as of September 30, 2013 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|-----------------------|-----------------------|--|-------------------|-------------------|----------|----------|------------|------------------|----------|----------|-------------|------------------|----------|----------|-------------|------------------|----------|--------------|------------|------------------|----------|--------------|------------|----------------------|----------|----------|------------|----------------------|----------|---------|
| | Commence Design | Commence Construction | Complete Construction | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Reserved Channel Sewer Separation | Jul 06 | May 09 | Dec 15 | BWSC continues to make progress with the nine planned contracts for the \$64.8 million Reserved Channel Sewer Separation project. | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | <table border="1"> <tr> <td>Contract 1</td> <td>CSO outfall rehab</td> <td>\$ 4.2 M</td> <td>Complete</td> </tr> <tr> <td>Contract 2</td> <td>Sewer separation</td> <td>\$ 5.9 M</td> <td>Complete</td> </tr> <tr> <td>Contract 3A</td> <td>Sewer separation</td> <td>\$11.2 M</td> <td>Complete</td> </tr> <tr> <td>Contract 3B</td> <td>Sewer separation</td> <td>\$ 9.6 M</td> <td>75% complete</td> </tr> <tr> <td>Contract 4</td> <td>Sewer separation</td> <td>\$ 7.4 M</td> <td>60% complete</td> </tr> <tr> <td>Contract 7</td> <td>Pavement restoration</td> <td>\$ 1.1 M</td> <td>Complete</td> </tr> <tr> <td>Contract 8</td> <td>Pavement restoration</td> <td>\$ 5.4 M</td> <td>Ongoing</td> </tr> </table> | Contract 1 | CSO outfall rehab | \$ 4.2 M | Complete | Contract 2 | Sewer separation | \$ 5.9 M | Complete | Contract 3A | Sewer separation | \$11.2 M | Complete | Contract 3B | Sewer separation | \$ 9.6 M | 75% complete | Contract 4 | Sewer separation | \$ 7.4 M | 60% complete | Contract 7 | Pavement restoration | \$ 1.1 M | Complete | Contract 8 | Pavement restoration | \$ 5.4 M | Ongoing |
| | | | | Contract 1 | CSO outfall rehab | \$ 4.2 M | Complete | | | | | | | | | | | | | | | | | | | | | | | | | |
| Contract 2 | Sewer separation | \$ 5.9 M | Complete | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Contract 3A | Sewer separation | \$11.2 M | Complete | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Contract 3B | Sewer separation | \$ 9.6 M | 75% complete | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Contract 4 | Sewer separation | \$ 7.4 M | 60% complete | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Contract 7 | Pavement restoration | \$ 1.1 M | Complete | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Contract 8 | Pavement restoration | \$ 5.4 M | Ongoing | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| BWSC expects to award Contract 5 (existing sewer cleaning and lining – not MWRA-eligible) and Contract 6 (downspout disconnections) this year, and complete all work for the Reserved Channel sewer separation project by December 2015, in compliance with Schedule Seven. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

| Other CSO Related Work | | | | |
|--|---|-----------------------|-----------------------|--|
| Project | Court Milestones in Schedule Seven (Shaded milestones are complete.) | | | Status as of September 30, 2013 |
| | Commence Design | Commence Construction | Complete Construction | |
| South Dorchester Bay Sewer Separation Post-Construction Inflow Removal | N/A | N/A | N/A | 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 project in 2007. BWSC continues with a construction contract to remove some of the remaining inflow sources from its sewer system. The contract amount is \$562,261, of which \$204,000 is eligible for MWRA funding under the BWSC CSO MOU and FAA. MWRA's FY14 CIP includes a total of \$5.6 million for the inflow removal effort, of which approximately \$2.6 million is allocated to awarded design and construction contracts. |

CIP Expenditures

1st Quarter FY14

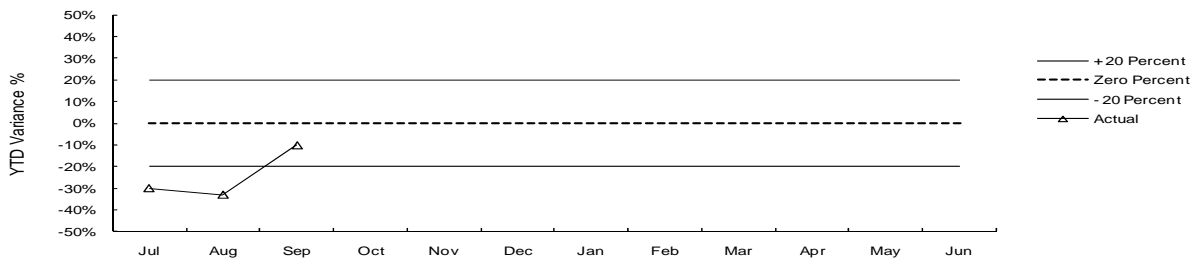
The Year-To-Date variances are highlighted below:

| FY14 Capital Improvement Program Expenditure Variances through September by Program (\$000) | | | | |
|---|----------------------------------|----------------------------------|--------------------|---------------------|
| Program | FY14 Budget Through September | FY14 Actual Through September | Variance Amount | Variance Percent |
| Wastewater | 3,888 | 6,437 | 2,548 | 66% |
| Waterworks | 19,197 | 14,058 | (5,139) | -27% |
| Business and Operations Support | 1,322 | 1,554 | 232 | 18% |
| Total | \$24,407 | \$22,049 | (\$2,359) | -10% |

Overspending within Wastewater is primarily due to greater than anticipated community requests for loans, grants, and repayments for the Infiltration/Inflow (I/I) Program, and work anticipated in FY13 but completed in FY14 for the Digester Modules 1 & 2 Pipe Replacement. This was partially offset by longer than anticipated lead times for specialized equipment for the North Main Pump Station Variable Frequency Drives construction. Underspending in Waterworks is primarily due to delay in constructing permanent detention basin due to coordination issues with the adjacent property owner and delay in equipment delivery for the Spot Pond Storage Facility Design/Build contract, delay in the Quabbin Ultraviolet Construction equipment delivery, community requests for loans were less than anticipated, timing of watershed land purchases, and Southern Spine Section 21,43 & 22 Design/Construction Services/Resident Inspection being completed under budget. This was partially offset by contractor progress for the Weston Aqueduct Supply Mains Watertown Section.

CIP Expenditure Variance

Total FY14 CIP Budget of \$142,461,000.



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 09/28/2013 | \$102 million |
| Unused capacity under the debt cap: | \$714 million |
| Estimated date for exhausting construction fund without new borrowing: | May-14 |
| Estimated date for debt cap increase to support new borrowing: | Not anticipated at this time |
| Commercial paper outstanding: | \$144 million |
| Commercial paper capacity: | \$350 million |
| Budgeted FY14 capital spending*: | \$125 million |

* Cash based spending is discounted for construction retainage.

DRINKING WATER QUALITY AND SUPPLY

Source Water – Microbial Results and UV Absorbance

1st Quarter – FY14

Source Water – Microbial Results

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 1st 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.

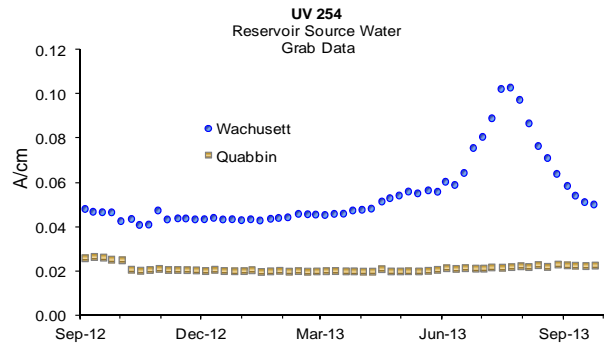
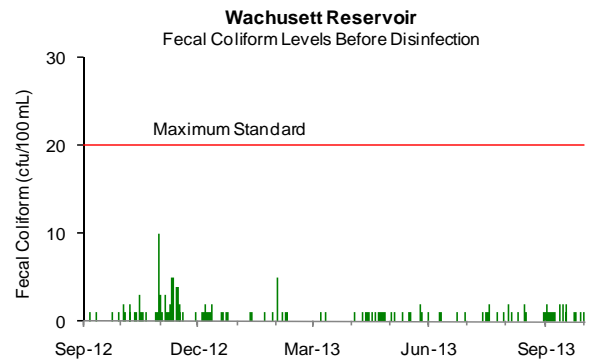
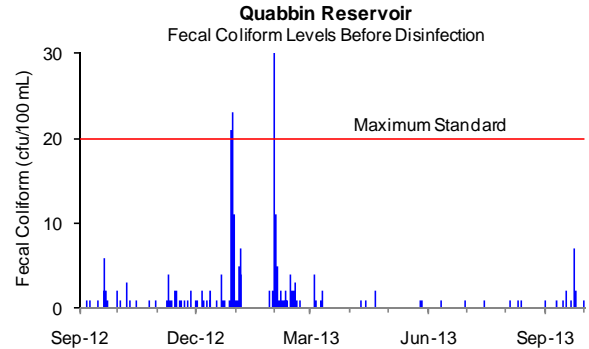
All samples collected during the 1st Quarter were below 20 cfu/100mL. **For the current six-month period, 0% of the samples exceeded a count of 20 cfu/100mL.**

Source Water – UV Absorbance

UV Absorbance at 254nm wavelength (UV-254), is a measure of the amount and reactivity of natural organic material in source water. Higher UV-254 levels cause increased ozone and chlorine demand resulting in the need for higher ozone and chlorine doses, and can increase the level of disinfection by-products. UV-254 is impacted by tributary flows, water age, sunlight and other factors. Hurricanes can have a significant and long lasting impact.

Quabbin Reservoir UV-254 levels are currently around 0.02 A/cm.

Wachusett Reservoir UV-254 levels are currently around 0.05 A/cm.



Source Water – Turbidity

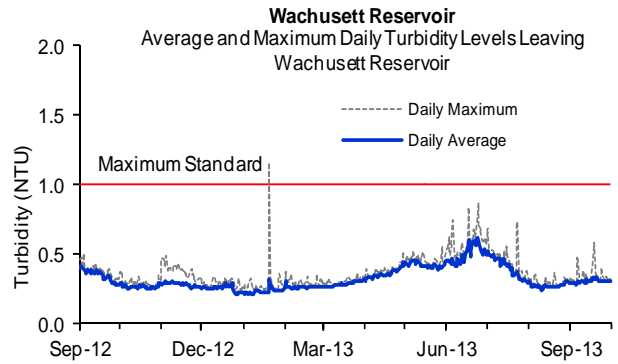
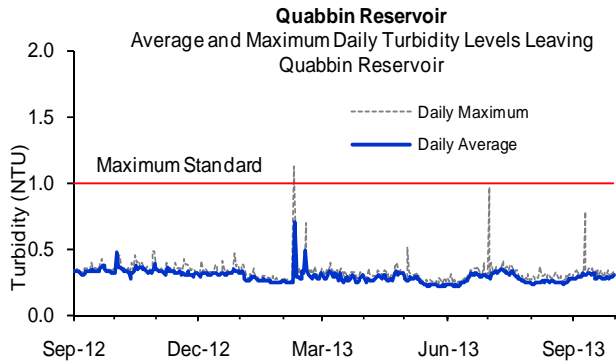
1st Quarter – FY14

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.

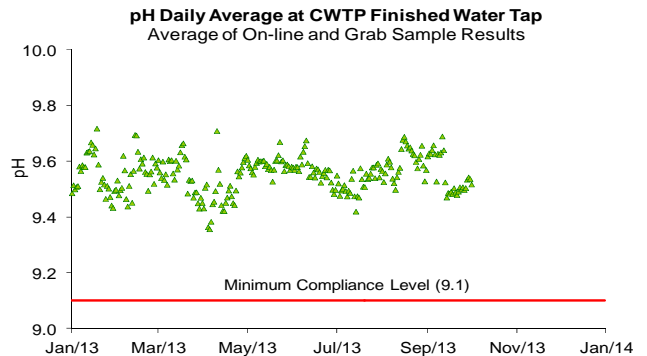
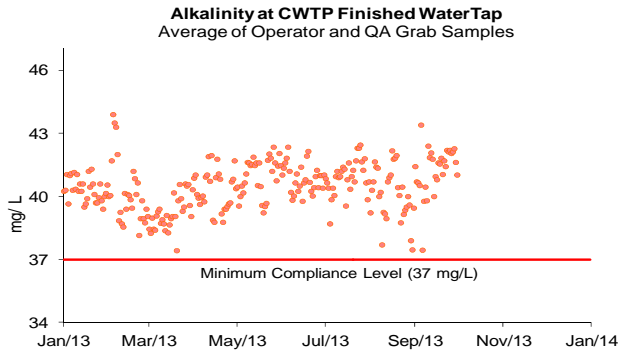
Maximum turbidity results at Quabbin and Wachusett were within DEP standards for the quarter



Treated Water – pH and Alkalinity Compliance

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 September 4 and 5, 2013. Distribution system sample pH ranged from 9.0 to 9.5 and alkalinity ranged from 37 to 43 mg/L. No sample results were below DEP limits for this quarter.



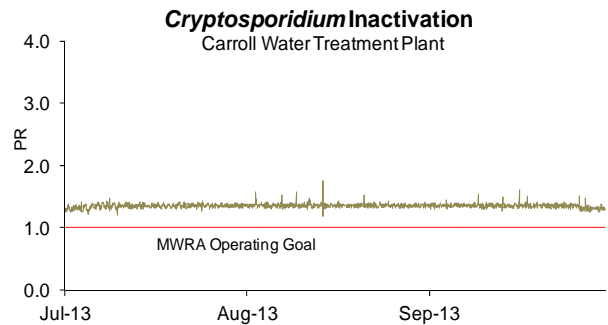
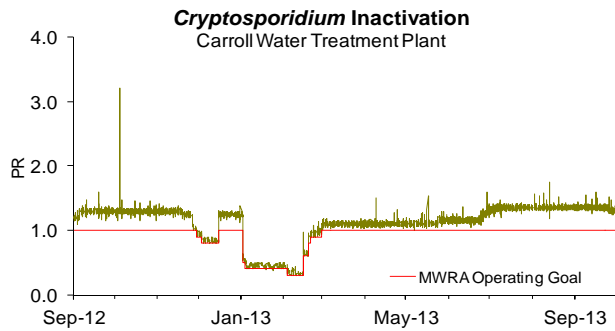
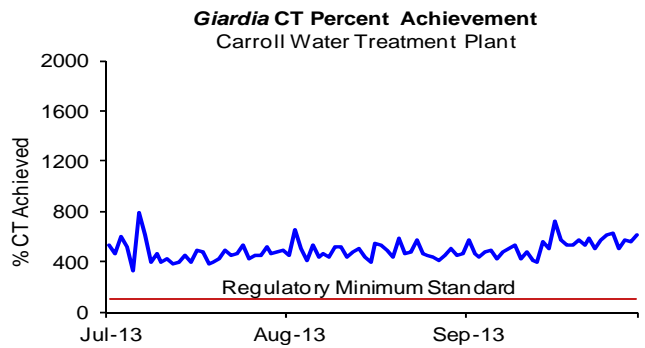
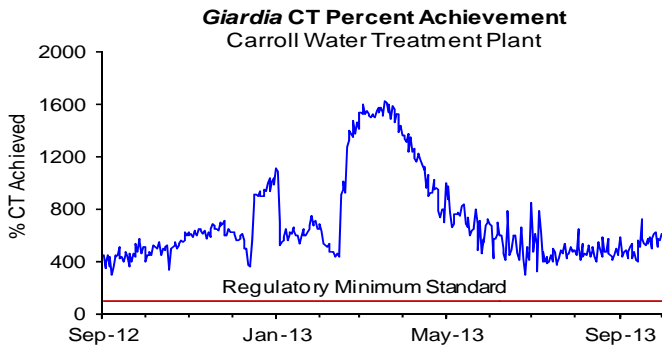
Treated Water – Disinfection Effectiveness

1st Quarter – FY14

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.

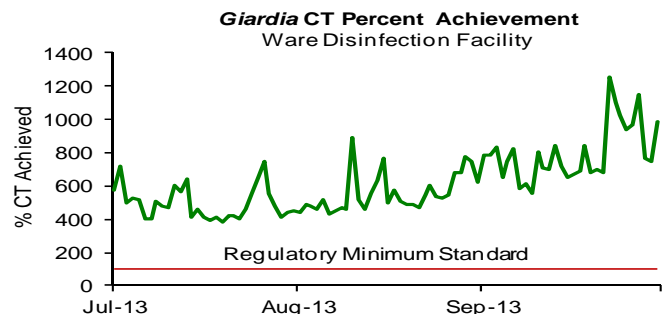
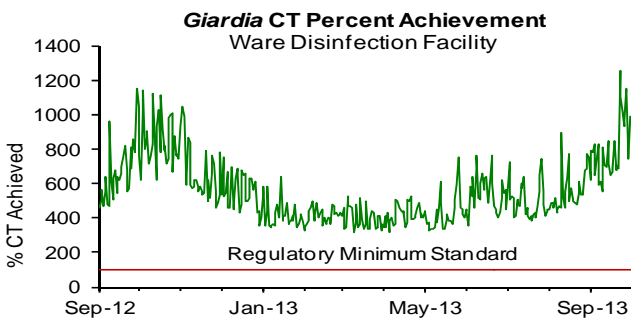
Wachusett Reservoir – MetroWest/Metro Boston Supply:

- *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’s operating goal to meet a *Cryptosporidium* PR of 1 was met at all times the plant was providing water into the distribution system for the quarter.
- *Ozone dose at the CWTP varied between 1.6 to 3.8 mg/L for the quarter.



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 seasonal target of ≥ 0.75 mg/L (November 01 – May 31) and ≥ 1.0 mg/L (June 1– October 31) at Ludlow Monitoring Station. The chlorine dose at WDF varied between 1.6 to 1.7 mg/L for the quarter.



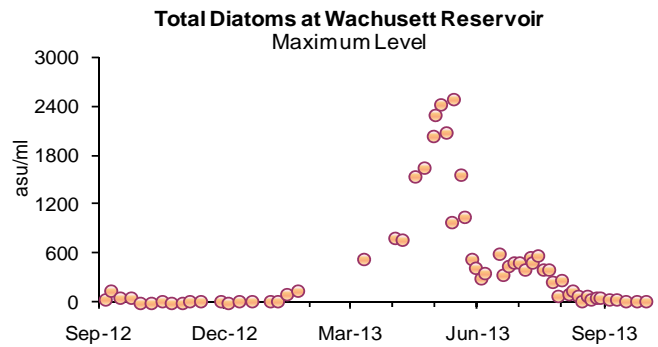
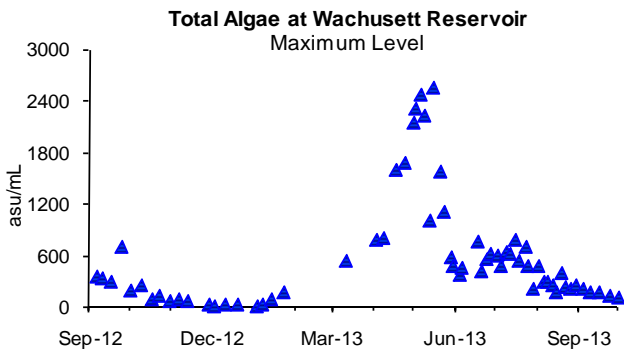
Source Water - Algae

1st Quarter – FY14

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 algacide. 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 1st Quarter, there were no complaints which may be related to algae reported from local water departments.

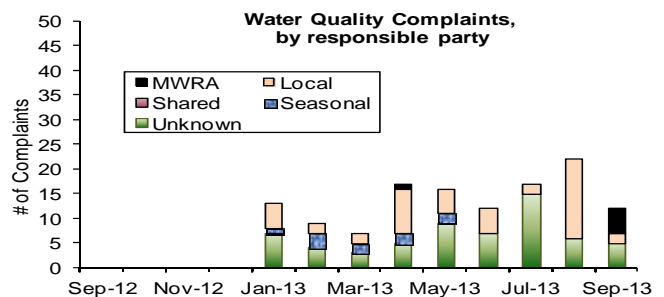
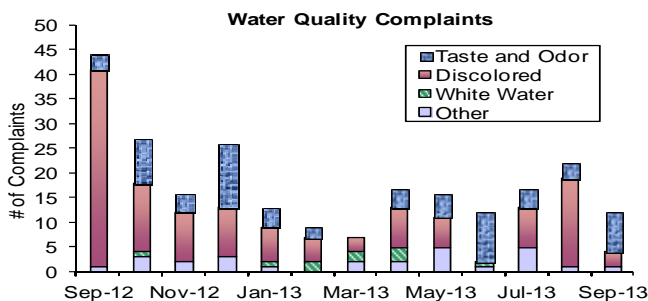


Drinking Water Quality Customer Complaints: Taste, Odor, or Appearance

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 routinely contacts communities to classify and tabulate water complaints from customers. This count, reflecting only telephone calls to towns, probably captures only a fraction of the total number of customer complaints. Field Operations staff have improved data collection and reporting by keeping track of more kinds of complaints, tracking complaints to street addresses and circulating results internally on a daily basis.

Communities reported 51 complaints during the quarter compared to 86 compared complaints for 1st Quarter of FY13. Of these complaints, 29 were for “discolored water”, 15 were for “taste and odor”, and 7 were for “other”. Of these complaints, 20 were local community issues, 5 were MWRA issues, and 26 were unknown.



* *Reporting by Responsible Party trending initiated January 2013.

Bacteria & Chlorine Residual Results for Communities in MWRA Testing Program

1st Quarter – FY14

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.

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. 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 1st Quarter, one hundred and forty-six of the 6,185 community samples (2.4% system-wide) submitted to MWRA labs for analysis tested positive for coliform (Bedford – in July; Bedford, Hanscom AFB – in August; Bedford, Waltham, Westboro State Hospital, South Hadley – in September). Of the 2,000 MWRA samples taken, six tested positive (0.3%) for total coliform. No sample tested positive for *E.coli*. Only 6.0% of samples had any chlorine residuals lower than 0.2 mg/L for the quarter.

| | # Coliform Samples (a) | Total Coliform # (% Positive) | E.coli # Positive | Public Notification Required? | Minimum Chlorine Residual (mg/L) | Average Chlorine Residual (mg/L) |
|--|------------------------|-------------------------------|-------------------|-------------------------------|----------------------------------|----------------------------------|
| <i>MWRA Sampling Locations (d)</i> | 2000 | 6 (0.3%) | 0 | No | 0.01 | 1.96 |
| ARLINGTON | 170 | 0 (0%) | 0 | | 0.00 | 1.17 |
| BELMONT | 112 | 0 (0%) | 0 | | 0.01 | 1.49 |
| BOSTON | 813 | 6 (0.7%) | 0 | No | 0.06 | 1.98 |
| BROOKLINE | 221 | 0 (0%) | 0 | | 0.08 | 2.03 |
| CHELSEA | 186 | 1 (0.5%) | 0 | No | 0.98 | 1.77 |
| DEER ISLAND | 56 | 0 (0%) | 0 | | 0.65 | 1.92 |
| EVERETT | 182 | 0 (0%) | 0 | | 0.02 | 1.03 |
| FRAMINGHAM | 216 | 0 (0%) | 0 | | 0.18 | 1.64 |
| LEXINGTON | 104 | 0 (0%) | 0 | | 0.34 | 1.84 |
| LYNNFIELD | 18 | 0 (0%) | 0 | | 0.48 | 1.21 |
| MALDEN | 252 | 0 (0%) | 0 | | 1.48 | 1.59 |
| MARBLEHEAD | 72 | 0 (0%) | 0 | | 0.18 | 1.93 |
| MEDFORD | 221 | 0 (0%) | 0 | | 0.48 | 1.68 |
| MELROSE | 126 | 0 (0%) | 0 | | 0.02 | 0.80 |
| MILTON | 96 | 0 (0%) | 0 | | 0.74 | 1.65 |
| NAHANT | 33 | 1 (3.0%) | 0 | No | 0.01 | 0.79 |
| NEWTON | 280 | 1 (0.4%) | 0 | No | 0.07 | 1.89 |
| NORWOOD | 99 | 0 (0%) | 0 | | 0.01 | 1.14 |
| QUINCY | 299 | 0 (0%) | 0 | | 0.03 | 1.09 |
| READING | 130 | 0 (0%) | 0 | | 0.02 | 1.02 |
| REVERE | 197 | 0 (0%) | 0 | | 0.35 | 1.58 |
| SAUGUS | 104 | 0 (0%) | 0 | | 0.87 | 1.67 |
| SOMERVILLE | 293 | 0 (0%) | 0 | | 1.04 | 1.80 |
| SOUTHBOROUGH | 30 | 0 (0%) | 0 | | 0.17 | 1.81 |
| STONEHAM | 93 | 0 (0%) | 0 | | 0.02 | 1.82 |
| SWAMPSCOTT | 54 | 0 (0%) | 0 | | 0.14 | 1.12 |
| WALTHAM | 239 | 7 (2.9%) | 0 | Yes | 0.16 | 1.85 |
| WATERTOWN | 129 | 0 (0%) | 0 | | 0.35 | 2.07 |
| WESTBORO HOSPITAL | 21 | 2 (9.5%) | 0 | Yes | 0.02 | 0.13 |
| WESTON | 48 | 0 (0%) | 0 | | 0.10 | 2.14 |
| WINTHROP | 72 | 0 (0%) | 0 | | 0.07 | 1.09 |
| Total: Fully Served | 4966 | 18 (0.4%) | | | | |
| CV & Partially Served (b) | | | | | | |
| BEDFORD | 146 | 61 (41.8%) | 0 | Yes | 0.06 | 0.73 |
| HANSCOM AFB | 102 | 59 (57.8%) | 0 | Yes | 0.02 | 0.55 |
| MARLBORO | 129 | 1 (0.8%) | 0 | No | 0.16 | 2.24 |
| NEEDHAM | 126 | 1 (0.8%) | 0 | No | 0.02 | 1.06 |
| NORTHBORO | 48 | 0 (0%) | 0 | | 0.08 | 1.61 |
| WAKEFIELD | 148 | 1 (0.7%) | 0 | No | 0.05 | 1.16 |
| WELLESLEY | 113 | 1 (0.9%) | 0 | No | 0.02 | 0.78 |
| WILMINGTON | 87 | 0 (0%) | 0 | | 0.06 | 1.47 |
| WINCHESTER | 65 | 0 (0%) | 0 | | 0.25 | 1.55 |
| WOBURN | 201 | 2 (1.0%) | 0 | No | 0.01 | 1.11 |
| SOUTH HADLEY FD1 (c) | 54 | 2 (3.7%) | 0 | Yes | 0.10 | 0.56 |
| Total: CVA & Partially Served | 1219 | 128 (10.5%) | | | | |
| Total: Community Samples | 6185 | 146 (2.4%) | | | | |

(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 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

1st Quarter – FY14

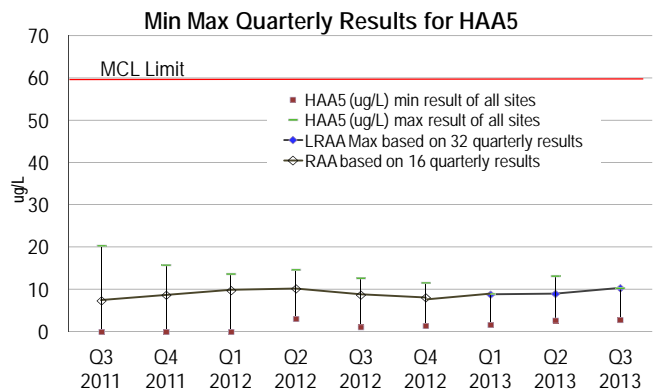
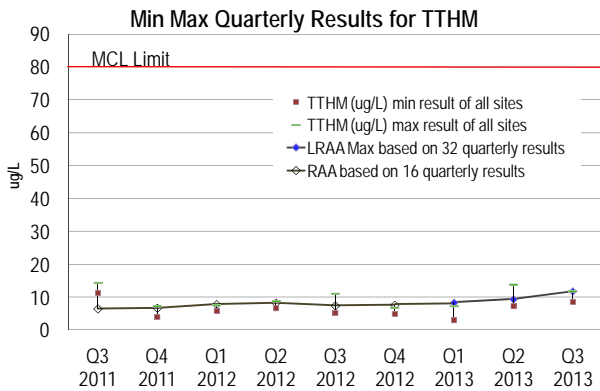
Total Trihalomethanes (TTHMs) and Haloacetic Acids (HAA5s) are by-products of disinfection treatment with chlorine. TTHMs and HAA5s are of concern due to their potential adverse health effects at high levels. EPA's running annual average (RAA) standard is 80 µg/L for TTHMs and 60 µg/L for HAA5s. For the MetroBoston system, effective Q2 2013, under the Stage 2 DBP Rule, compliance is based on locational running annual averages (LRAA). Sampling locations have increased from 16 to 32 each quarter. Data prior to Q1 2013 reports the running annual average, and since Q1 2013, the maximum LRAA is reported (in addition to min and max values). Partially served communities are responsible for their own compliance monitoring and reporting, and must be contacted directly for their results.

For the CVA communities, effective Q3 2013, under the Stage 2 DBP Rule, compliance is based on a LRAA for each community. Sampling locations have increased from 12 to 14 each quarter. Prior to Q3 2013, the running annual average is reported, and since Q3 2013, the maximum LRAA is reported (in addition to min and max values). The chart below combines all three CVA communities data. Partially served communities are responsible for their own compliance monitoring and reporting, and must be contacted directly for their results.

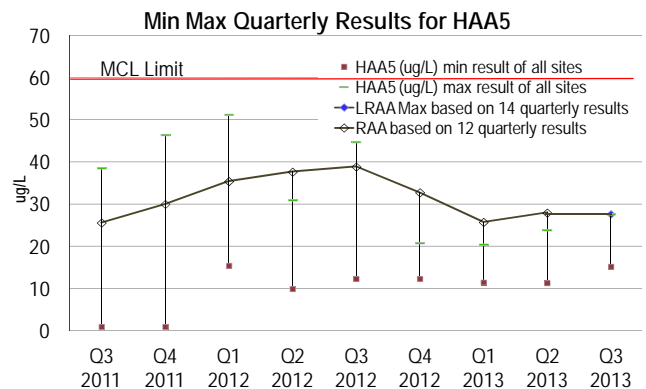
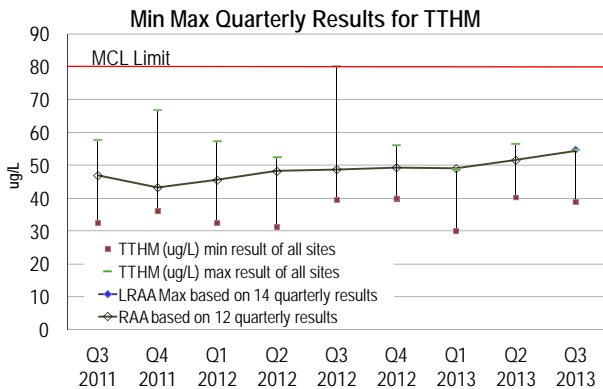
Bromate is tested monthly per DEP requirements for water systems that treat with ozone. Bromide in the raw water may be converted into bromate following ozonation. EPA's RAA MCL standard for bromate is 10 ug/L.

The RAA for TTHMs and HAA5s for MWRA's Compliance Program (represented as the line in the top two graphs below) remain below current standards. The LRAA for TTHMs = 11.8 ug/L; HAA5s = 10.3 ug/L. The current RAA for Bromate = 0.0 ug/L. CVA's DBP levels continue to be below current standards.

MetroBoston Disinfection By-Products



CVA Disinfection By-Products



Water Supply and Source Water Management

1st Quarter – FY14

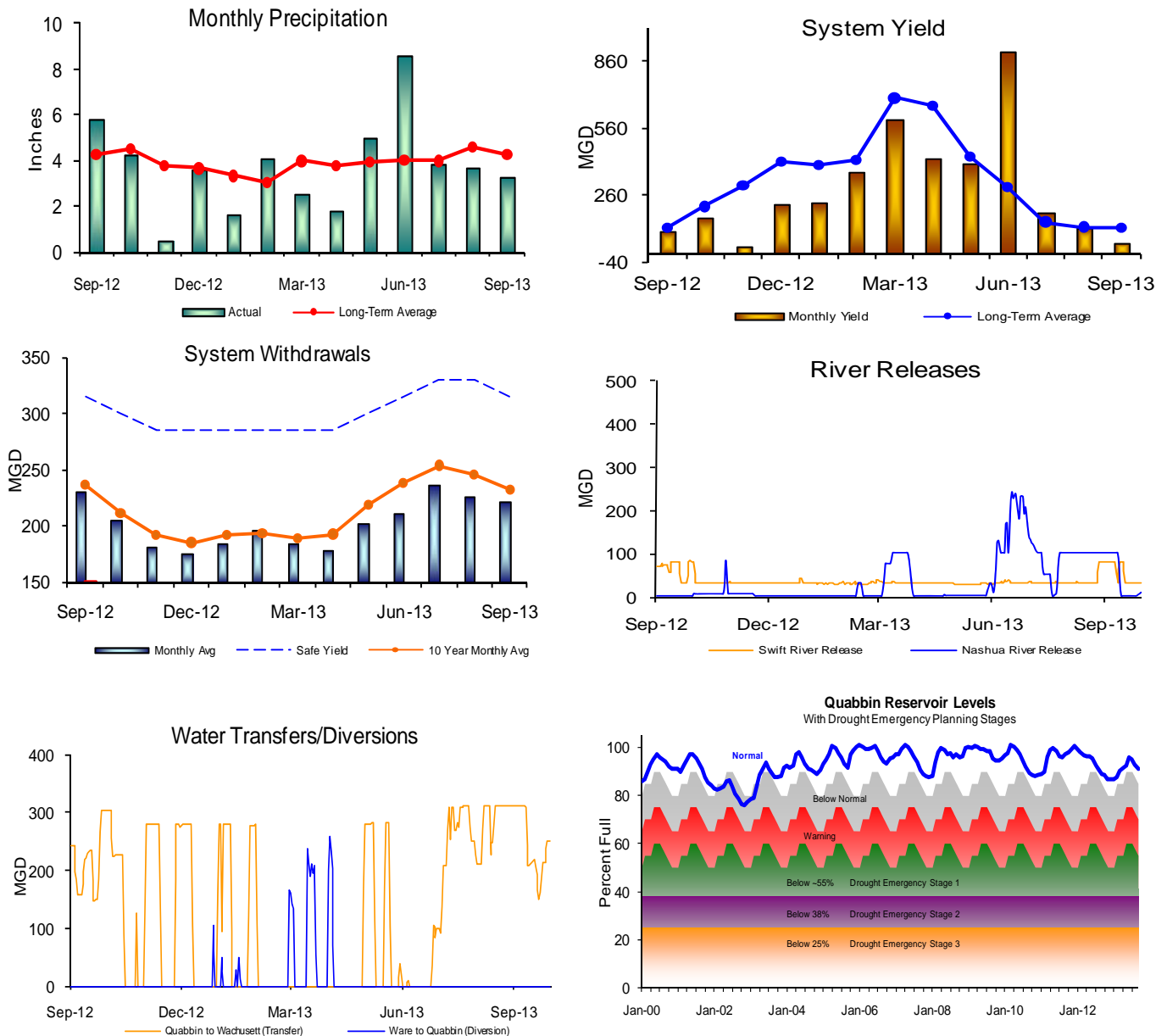
Background

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 volume of the Quabbin Reservoir was at 91.2% as of September 30, 2013; a 5.0% decrease for the quarter, which represents a decrease of 20.6 billion gallons of storage. Yield and precipitation for the quarter were below their respective long term quarterly averages. Monthly withdrawals continue to be below its long-term average.

On September 11, 2013 Cambridge began, temporarily, taking 8-9mgd of water from MWRA due to a water main rehabilitation project that required a shutdown of Cambridge's raw water intake line and MWRA's CSO program that required the shutdown of a main Cambridge distribution line. Cambridge is expected to remain taking MWRA water until approximately January 2014



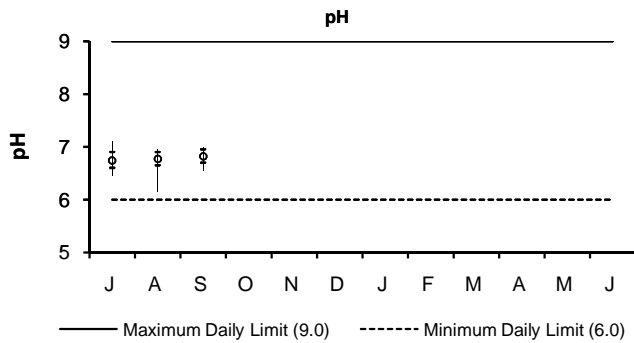
WASTEWATER QUALITY

NPDES Permit Compliance: Deer Island Treatment Plant
1st Quarter - FY14

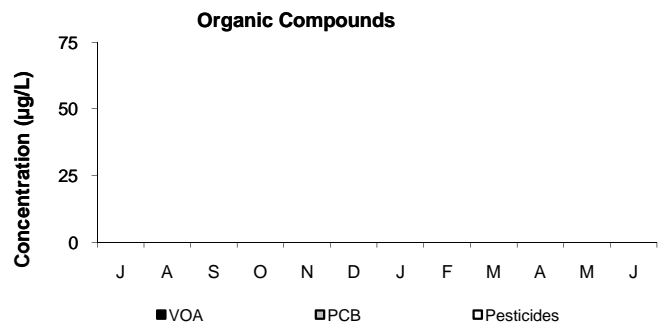
NPDES Permit Limits

| <i>Effluent Characteristics</i> | <i>Units</i> | <i>Limits</i> | <i>July</i> | <i>August</i> | <i>September</i> | <i>1st Quarter Violations</i> | <i>FY14 YTD Violations</i> | |
|---------------------------------|----------------------------|---------------|-------------|---------------|------------------|-------------------------------|----------------------------|---|
| Dry Day Flow: | mgd | 436 | 276.3 | 275.3 | 274.0 | 0 | 0 | |
| cBOD: | Monthly Average | mg/L | 25 | 4.9 | 5.2 | 5.1 | 0 | 0 |
| | Weekly Average | mg/L | 40 | 5.6 | 6.7 | 6.5 | 0 | 0 |
| TSS: | Monthly Average | mg/L | 30 | 7.5 | 7.4 | 5.5 | 0 | 0 |
| | Weekly Average | mg/L | 45 | 10.2 | 11.0 | 6.1 | 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 | 40 | 26 | 13 | 0 | 0 |
| | Weekly Geometric Mean | col/100mL | 14000 | 10 | 8 | 6 | 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 | 6.5-7.1 | 6.2-7.0 | 6.6-7.0 | 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 | 100 | 50 | 100 | 0 | 0 |
| | Inland Silverside | % | ≥1.5 | 6 | 50 | 100 | 0 | 0 |

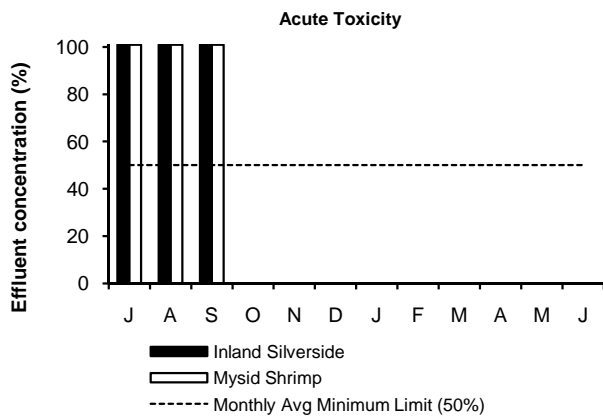
There have been no permit violations in FY14 at the Deer Island Treatment Plant.



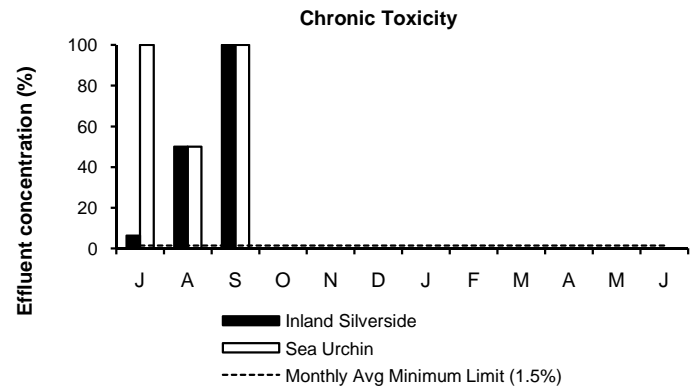
pH is a measure of the alkalinity or acidity of the effluent. Fluctuations in pH do not have an adverse effect on marine environments. Because of the pure oxygen used in the activated sludge reactor, the effluent pH tends to be at the lower pH range. pH measurements for the 1st Quarter were within the 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. No organic compounds were detected during the 1st Quarter.



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 1st 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 1st Quarter for both the inland silverside and sea urchin.

NPDES Permit Compliance: Clinton Wastewater Treatment Plant

1st Quarter - FY14

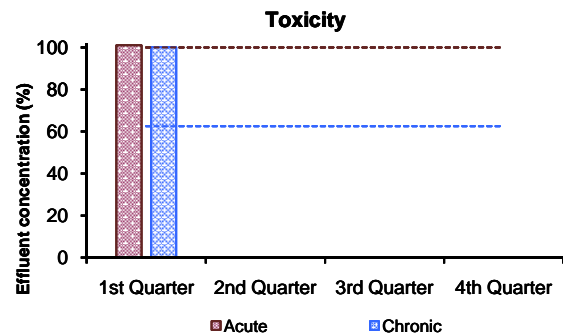
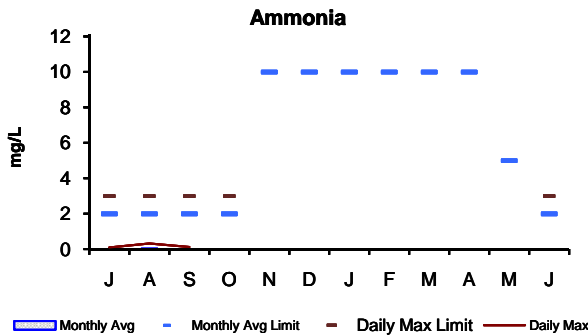
NPDES Permit Limits

| Effluent Characteristics | | Units | Limits | July | August | September | 1st Quarter Violations | FY14 YTD Violations |
|--|-------------------------|-----------|---------|---------|---------|-----------|------------------------|---------------------|
| Flow: | | mgd | 3.01 | 2.47 | 2.53 | 2.56 | 0 | 0 |
| BOD: | Monthly Average: | mg/L | 20 | 2.7 | 2.6 | 2.2 | 0 | 0 |
| | Weekly Average: | mg/L | 20 | 2.9 | 3.1 | 2.6 | 0 | 0 |
| TSS: | Monthly Average: | mg/L | 20 | 3.2 | 3.4 | 1.8 | 0 | 0 |
| | Weekly Average: | mg/L | 20 | 3.7 | 4.3 | 2.1 | 0 | 0 |
| pH: | | SU | 6.5-8.3 | 7.4-7.7 | 7.3-7.6 | 7.2-7.8 | 0 | 0 |
| Dissolved Oxygen: Daily Minimum: | | mg/L | 6 | 6.9 | 7.1 | 7.3 | 0 | 0 |
| Fecal Coliform: | Daily Geometric Mean: | col/100mL | 400 | 9 | 4 | 9 | 0 | 0 |
| | Monthly Geometric Mean: | col/100mL | 200 | 4 | 19 | 3 | 0 | 0 |
| TCR: | Monthly Average: | ug/L | 50 | 0 | 0.0 | 0.0 | 0 | 0 |
| | Daily Maximum: | ug/L | 50 | 0 | 0.0 | 0.0 | 0 | 0 |
| Total Ammonia Nitrogen: May 1 - May 31 | | | | | | | | |
| Monthly Average: | | mg/L | 10.0 | 0.01 | 0.03 | 0.02 | 0 | 0 |
| Daily Maximum: | | mg/L | 35.2 | 0.10 | 0.33 | 0.13 | 0 | 0 |
| Copper: Monthly Average: | | ug/L | 20 | 5.0 | 6.4 | 6.7 | 0 | 0 |
| Phosphorus: May 1 - Oct 31 | | | | | | | | |
| Monthly Average: | | mg/L | 1.0 | -- | 0.00 | 0.00 | 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 no permit violations in FY14 at the Clinton Treatment Plant.

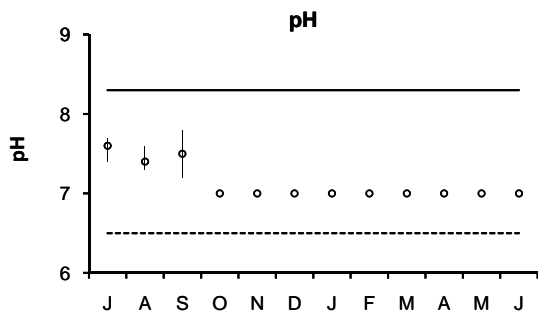
1st Quarter: There were no permit violations in the 1st Quarter of FY14.

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

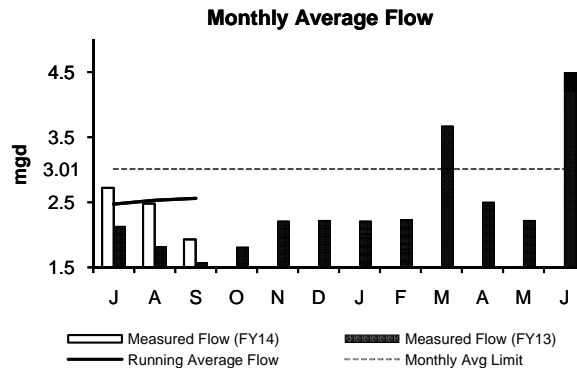


The 1st Quarter's monthly average and daily maximum concentrations were below the permit limits. The monthly average and daily maximum limits for the 1st Quarter are 10.0 mg/L and 35.2 mg/L respectively. The permit limits are most stringent from June to October when warm weather conditions are most conducive 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 1st Quarter.



pH is a measure of the alkalinity or acidity of water. The permit limit is 6.5. All daily pH results for the 1st 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 1st Quarter were below the NPDES permit limit.

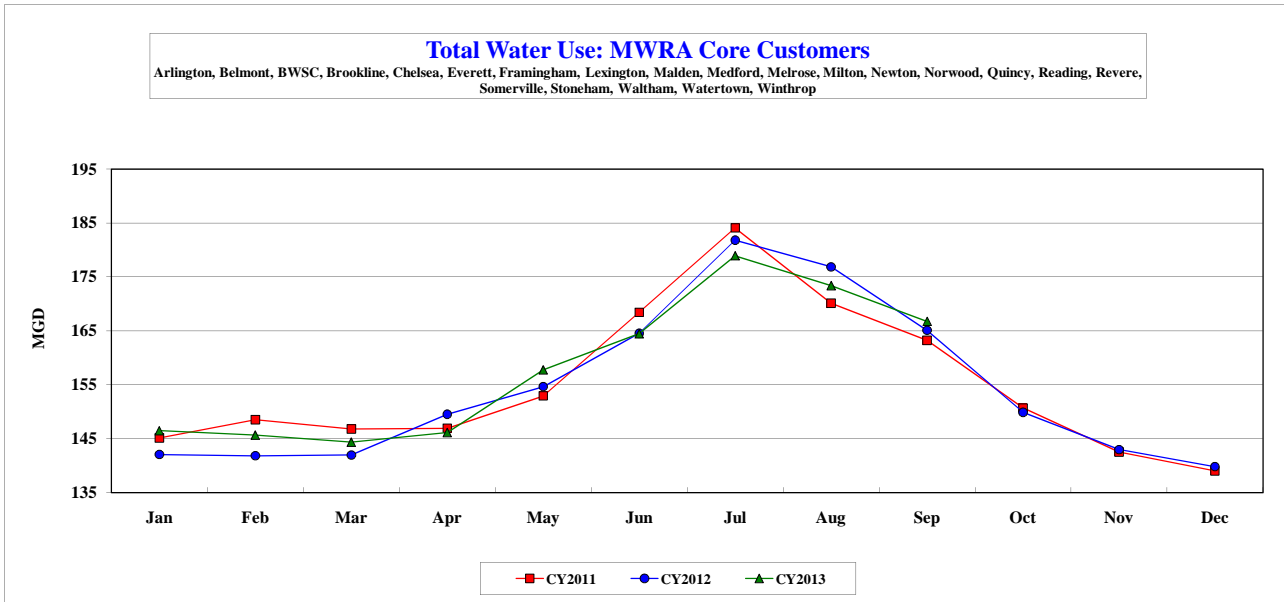
COMMUNITY FLOWS AND PROGRAMS

Total Water Use MWRA Core Customers 1st Quarter - FY14

Massachusetts Water Resources Authority
Water Supplied: MWRA Core Communities

| MGD | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Average |
|--------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| CY2011 | 145.115 | 148.527 | 146.797 | 146.931 | 152.931 | 168.416 | 184.085 | 170.122 | 163.231 | 150.683 | 142.515 | 139.004 | 154.911 |
| CY2012 | 142.065 | 141.834 | 141.967 | 149.527 | 154.647 | 164.532 | 181.801 | 176.862 | 165.092 | 149.865 | 142.968 | 139.811 | 154.302 |
| CY2013 | 146.467 | 145.657 | 144.348 | 146.144 | 157.756 | 164.449 | 178.910 | 173.389 | 166.761 | 0.000 | 0.000 | 0.000 | 158.337 |

| MG | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Total |
|--------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|------------|
| CY2011 | 4,498.571 | 4,158.744 | 4,550.712 | 4,407.920 | 4,740.857 | 5,052.494 | 5,706.639 | 5,273.797 | 4,896.915 | 4,671.177 | 4,275.458 | 4,309.129 | 56,542.412 |
| CY2012 | 4,404.020 | 4,113.193 | 4,400.982 | 4,485.812 | 4,794.071 | 4,935.954 | 5,635.832 | 5,482.733 | 4,952.773 | 4,645.824 | 4,289.046 | 4,334.134 | 56,474.376 |
| CY2013 | 4,540.462 | 4,078.391 | 4,474.786 | 4,384.334 | 4,890.432 | 4,933.474 | 5,546.220 | 5,375.072 | 5,002.817 | 0.000 | 0.000 | 0.000 | 43,225.987 |



Attached for your information is the September 2013 Community Water Use Report recently distributed to communities served by the MWRA waterworks systems. 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 2013 water use will be used to allocate the FY15 water utility rate revenue requirement.

September 2013 water supplied of 216.7 mgd (for revenue generating users) is up 11.8 mgd or 5.8% compared to September 2012. This includes 7.5 mgd supplied to the City of Cambridge in September 2013.

Annual system-wide water consumption for CY13 is slightly higher than CY12 with 195.3 mgd being supplied to MWRA customers through September. This is 0.4 mgd higher than CY12, and is an increase of 0.2%.

Community Wastewater Flows

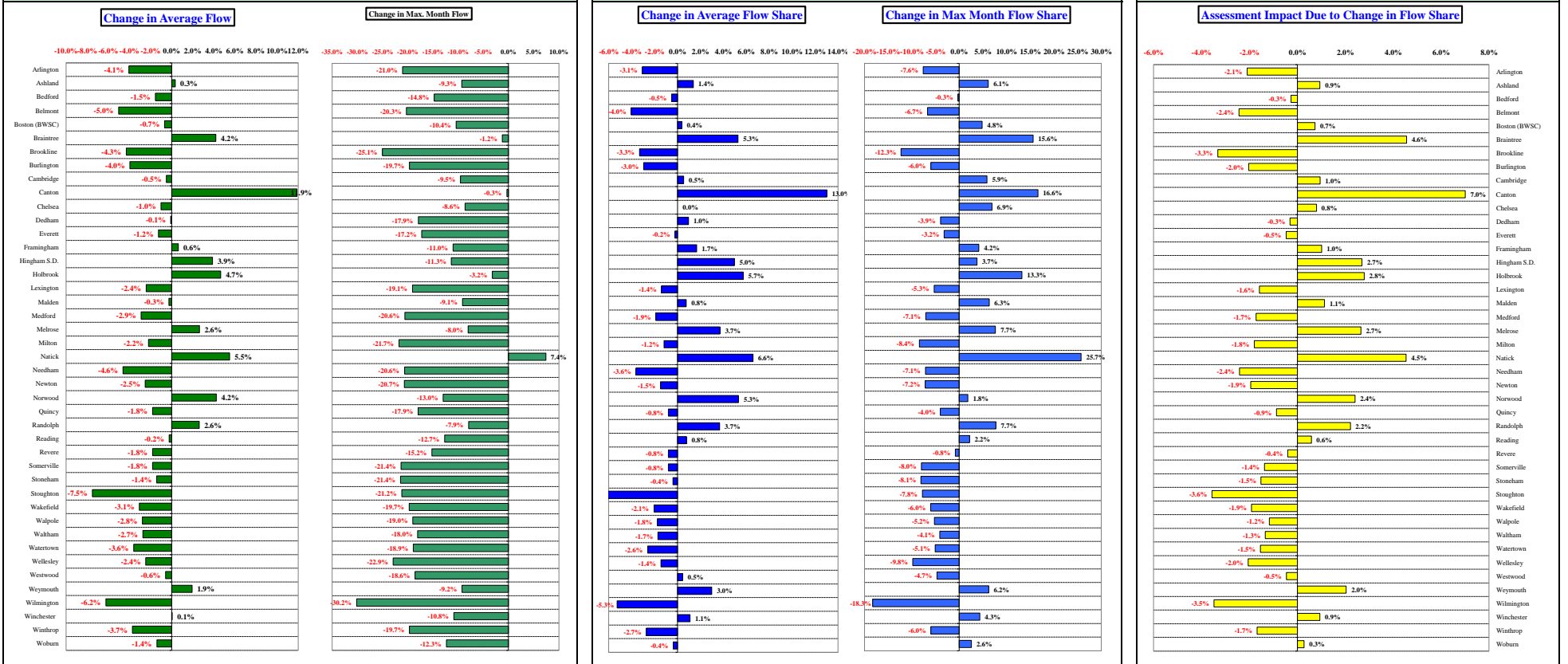
1st Quarter - FY14

How Projected CY2013 Community Wastewater Flows Could Effect FY2015 Sewer Assessments ^{1,2,3}

The flow components of FY2015 sewer assessments will be calculated using a 3-year average of CY2011 to CY2013 wastewater flows compared to FY2014 assessments that used a 3-year average of CY2010 to CY2012 wastewater flows.

But as MWRA's sewer assessments are a ZERO-SUM calculation, a community's assessment is strongly influenced by the **RELATIVE** change in CY2011 to CY2013 flow share compared to CY2010 to CY2012 flow share, compared to all other communities in the system.

The chart below illustrates the change in the TOTAL BASE assessment due to FLOW SHARE CHANGES. ⁴



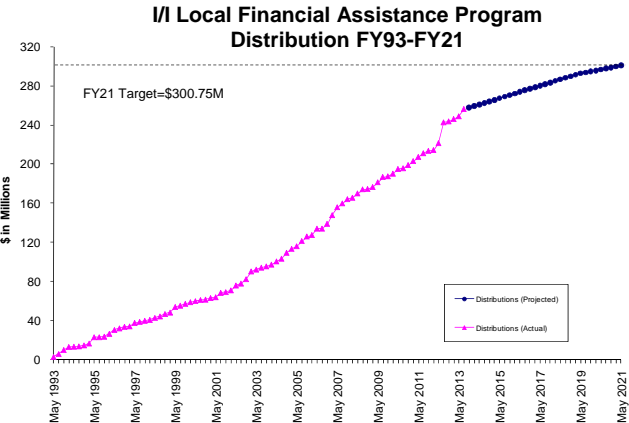
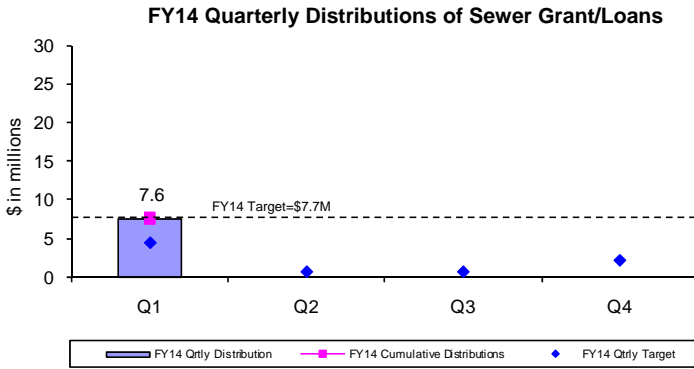
Notes:
¹ MWRA uses a 3-year flow average to calculate sewer assessments. Three-year averaging smoothes the impact of year-to-year changes in community flow share, but does not eliminate the long-term impact of changes in each community's relative contribution to the total flow.
² Based on CY2010 to CY2013 average wastewater flows as of 10/02/13. Flow data is preliminary and subject to change pending additional MWRA and community review.
³ CY2010 to CY2012 wastewater flows based on actual meter data. CY2013 flows based on actual meter data for January to August and projected flows for September to December.
⁴ Represents ONLY the impact on the total BASE assessment resulting from the changes in average and maximum wastewater FLOW SHARES.

Community Support Programs

1st Quarter – FY14

Infiltration/Inflow Local Financial Assistance Program

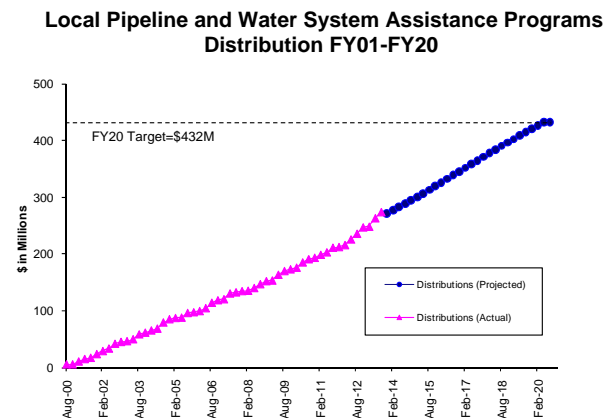
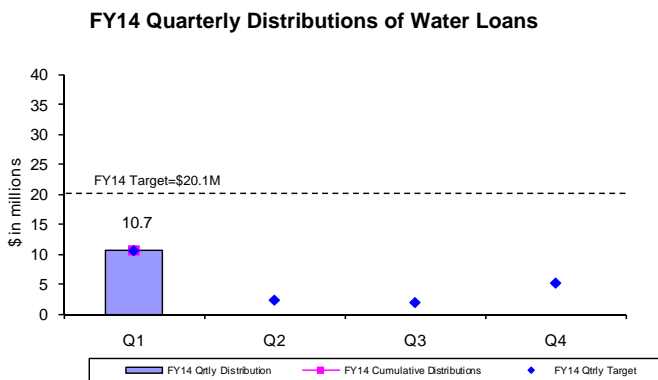
MWRA's Infiltration/Inflow (I/I) Local Financial Assistance Program provides \$300.75 million in grants and interest-free loans (average of about \$10 million per year from FY93 through FY21) to member sewer communities to perform I/I reduction and sewer system rehabilitation projects within their locally-owned 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.



During the 1st Quarter of FY14, \$7.6 million in financial assistance (45% grants and 55% interest-free loans) was distributed to fund local sewer rehabilitation projects in Ashland, Boston, Canton, Lexington, Randolph, Somerville and Wakefield. Total grant/loan distribution for FY14 is \$7.6 million. From FY93 through the 1st Quarter of FY14, all 43 member sewer communities have participated in the program and more than \$256 million has been distributed to fund 452 local I/I reduction and sewer system rehabilitation projects. Distribution of the remaining funds has been approved through FY21 and community loan repayments will be made through FY26. 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 \$432 million in interest-free loans (an average of about \$22 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. The LPAP concluded in FY13 with \$222 million in loan distributions. The Phase 2 LWSAP continues through FY20.



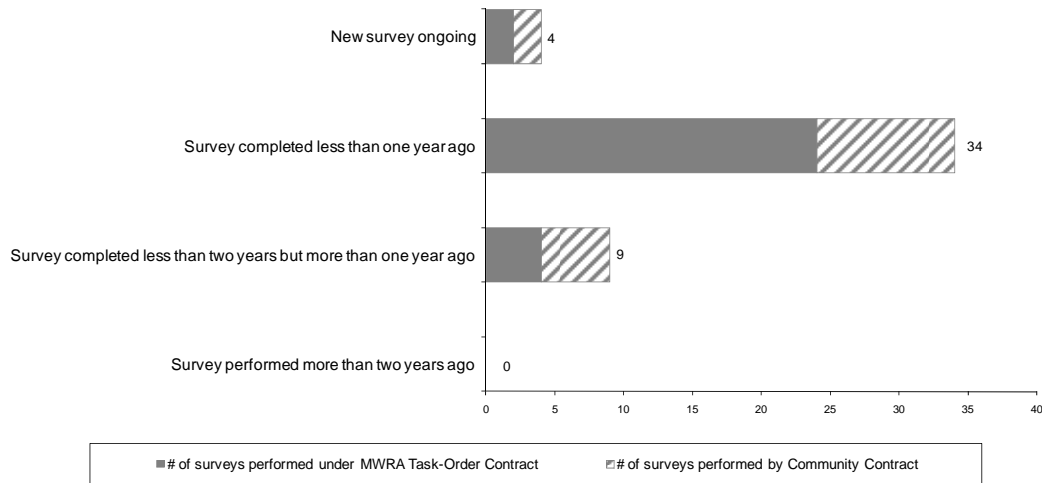
During the 1st Quarter of FY14, \$10.7 million in interest-free loans was distributed to fund local water projects in Arlington, Bedford, Canton, Chelsea, Malden, Melrose, Newton, Norwood, Reading, Saugus and Winthrop. Total loan distribution for FY14 is \$10.7 million. From FY01 through the 1st Quarter of FY14, more than \$273 million has been distributed to fund 313 local water system rehabilitation projects in 38 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.

Community Support Programs

1st Quarter – FY14

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 1st Quarter of FY14, 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.

| FY14 DISTRIBUTION | Annual Target | Q1 | Q2 | Q3 | Q4 | Annual Total |
|---|---------------|--------|----|----|----|--------------|
| Educational Brochures | 100,000 | 55,816 | | | | 55,816 |
| Low-Flow Fixtures (showerheads and faucet aerators) | 10,000 | 2,323 | | | | 2,323 |
| Toilet Leak Detection Dye Tablets | ----- | 827 | | | | 827 |

BUSINESS SERVICES

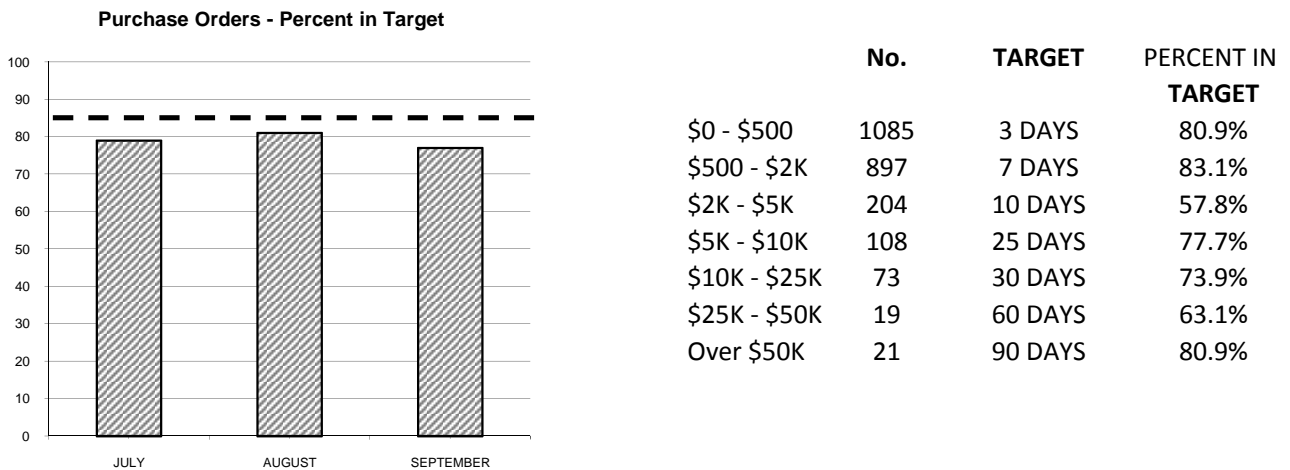
Procurement: Purchasing and Contracts

First Quarter, FY14

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

Outcome: Processed 79% of purchase orders within target; Average Processing Time was 8.42 days vs. 5.95 days in Qtr 1 of FY13. Processed 50% (8 of 16) contracts within target timeframes; Average Processing Time was 205 days vs. 141 days in Qtr 1 of FY13.

Purchasing



The Purchasing Unit processed 2407 purchase orders, 3 more than the 2404 processed in Qtr 1 of FY13 for a total value of \$9,951,080 versus a dollar value of \$7,191,468 in Qtr 1 of FY13.

The purchase order processing target was not met for the \$0-\$500 due to inadequate specifications, \$2k - \$5k due to inadequate specifications resulting in delays in vendor sourcing and the \$5k - \$10k category due to vendor sourcing and end user confirmation, the \$10k - \$25k category due to vendor sourcing and vendor insurance requirements, the \$25-\$50k due to end user specification requirements and the \$50K and over due to vendor sourcing requirements and bid award clarification.

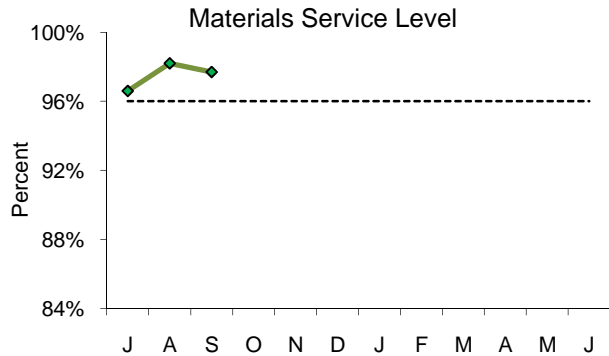
Contracts, Change Orders and Amendments

Eight contracts were not processed within target timelines due to extensive development of or changes to specifications, delays in vendor submitted documentation, review of bidder qualifications, a re-bid due to changes in the public bidding laws, or holding for further management or Board review or due to the timing of the need for the services.

Procurement processed sixteen contracts with a value of \$26,594,615 and seven amendments with a value of \$2,255,648.

Twenty one change orders were executed during the period. The dollar value of all non-credit change orders during the 1st Quarter FY14 was \$358,677 and the value of credit change orders was (\$784,105). Staff reviewed 44 proposed change orders and 30 draft change orders.

Materials Management 1st Quarter, FY14



The service level is the percentage of stock requests filled. The goal is to maintain a service level of 96%. Staff issued 8,457 (97.6%) of the 8,667 items requested in Q1 from the inventory locations for a total dollar value of \$1,437,522.

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 FY14 goal is to reduce consumable inventory from the July '13 base level (\$6.9 million) by 4.0% (approximately \$276,182), to \$6.6 million by June 30, 2014 (see chart below).

Items added to inventory this quarter include:

- Deer Island – power supply, wire, sensor, snubber, relief valve and access valve for Core; lock washer, retaining ring, gasket, slinger ring, gear joint, stator and rotor for Residuals; reducing bushings, sampling oil, proximity switch cable, float guide, float ball and air valve for Liquid Train.
- Chelsea – wiper motor kit, tail light, gasket, A/C condenser, actuation switch, trailer hair pin, brake pads, brake rotors and plate frame for VMM; solenoid valve, coupler, actuator, seal repair kit and LED lamp for Work Order Coordination Group.
- Southboro – band saw blades, brass couplings, abrasive disks and gate box covers for Maintenance.

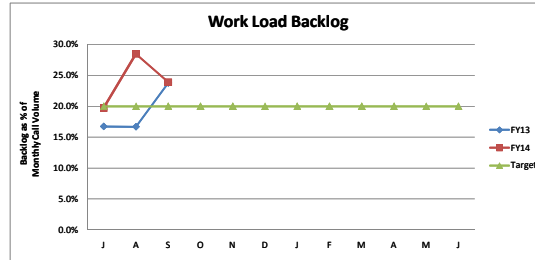
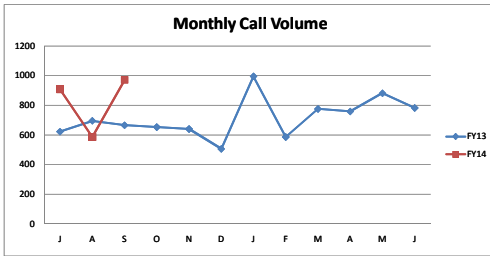
Property Pass Program:

- Audits were not conducted during Q1 due to reduced staffing resources as a result of retirement and medical leave.
- Numerous obsolete computers, monitors, printers, mice, docking stations, laptops, typewriters, cell phones and cameras 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 \$29,559.
- Revenue received from online vehicle auction held during Q1 amounted to \$56,777. Year to date revenue received amounts to \$56,777.

| Items | Base Value July-13 | Current Value w/o Cumulative New Adds | Reduction / Increase To Base |
|-----------------------------|--------------------|---------------------------------------|------------------------------|
| Consumable Inventory Value | 6,954,017 | 6,867,645 | -86,372 |
| Spare Parts Inventory Value | 7,358,692 | 7,289,398 | -69,294 |
| Total Inventory Value | 14,312,709 | 14,157,043 | -155,666 |

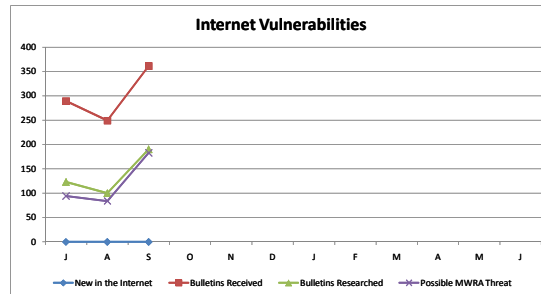
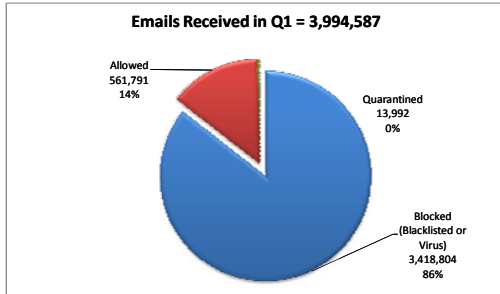
Note: New adds are items added at an inventory location for the first time for the purpose of servicing a group/department to meet their business needs/objectives.

MIS Program 1st Quarter FY14



Performance:

Call Volume: Peaked in August and increased by 2.4% from Q1 last year. **Call Backlog:** Peaked in September and is 3% above the targeted benchmark of 20%.



Information Security:

During Q1, staff pushed security fixes and updates to desktops and servers throughout the quarter in order to protect against 185 vulnerabilities.

LANDesk Antivirus quarantined 58 distinct viruses from 86 MWRA computers. MWRA's systems are current with anti-virus providers' signatures for all known malware.

Infrastructure:

Distributed Antennae Systems (DAS): The DAS installations were completed at Deer Island Administration, Warehouse, Reception Training buildings, and sub-terrain galleries and tunnels. Remaining buildings at Deer Island, JJCWT, Chelsea, Clinton, Weston and Charlestown will be completed in September. The DAS was implemented to improve cellular signal coverage indoors, and provide the latest high speed (4G LTE) network connectivity available. Verizon was the first service provider to join MWRA's DAS infrastructure.

Applications/Training/Records Center:

Strategic Sourcing and Contract Management: Staff and users worked several staggered weeks with a dedicated Infor/Lawson Consultant. Activities included work on test logs and scripts, addendum documents, change order processing options, and data mapping and migration for the Contract Card report. In addition, the group reviewed the vendor creation process options and the application of diversity codes on AP vendor records with Accounts Payable, Procurement, and Affirmative Action managers. Reviewed and distributed the specifications, provided by Infor that will provide an interface between Strategic Sourcing and Surety 2000 bid bond verification software. Existing Contract Data Migration mapping and testing began with a focus on new fields and change orders. Data migration tests with small samples of data are being tested and data sets and record counts are gradually increased as testing progresses.

Open Checkbook: The Retirement module was implemented on the MWRA's Open Checkbook application. This module was scheduled to go live after the other Open Checkbook modules because the Retirement Board's retirement application was being upgraded. The Retirement Board's vendor completed their upgrade and data was made available to the MWRA. Staff completed the development and testing of the Retiree module in August and deployed the revised Open Checkbook web site that included the Retiree module for production in September.

Amicus Attorney Upgrade: This application is used for legal case management. The MWRA's installed version was two versions behind the vendor's current release. The upgrade will offer staff new functionality and can be hosted in a virtual server environment, which is in line with our green computing initiatives. In August, staff presented the demo of new version Amicus Attorney 2012 to the users in the Law department who agreed to the August upgrade date. All users are now using the upgraded version of Amicus.

Employee Acknowledgement Application: The Employee Acknowledgement Application that staff access to confirm State Ethics awareness annually was launched in September. Staff will have until mid December to acknowledge their receipt of the 2013 Summary of the Conflict of Interest law via this tracking database.

Tiscor InspectNTrack: The Production server was installed and setup in the beginning of July. Checkpoints records were migrated to the production database. InspectNTrack client software was installed on the test scanner. The scanner was tested successfully for connectivity to the server. Data scrubbing and testing is continuing; 17 users were trained.

PI: Added 542 new PI tags to support various operational areas such as CWTP set points, Oakdale station, City of Cambridge Flow and Gradient, intrusion alarms, pump runtime hours, and Ultraviolet related parameters. The majority of the PI tags were created to support the new Water Quality Reporting System being developed by Riverside Technologies, Inc for the CWTP. In addition to the new PI tags, a new data collection node was added at the request of SCADA to support the new Ultraviolet System.

Library & Records Center: The Library completed 32 research requests, added 77 books and 276 O&M Manuals, distributed 78 periodicals and 2,134 electronically linked articles to staff. The Records Center added 332 boxes, conducted 2 training sessions for 3 staff, and attended 2 Records Conservation Board Meetings. Disposed of 422 boxes.

IT Training: For the quarter, 74 staff attended 18 classes and 3 workshops. 6% of the workforce has attended at least one class year-to-date. TISCOR InspectNTrack training classes were offered. Delivered Intermediate Excel – Working with Charts Beta class. 2 Lawson Time Entry training classes were offered. Outlook Web App job aid completed and posted on the Intranet.

Legal Matters

1st Quarter FY 2014

PROJECT ASSISTANCE

COURT AND ADMINISTRATIVE ORDER

- **Boston Harbor Litigation and CSO:** Reviewed amendment 10 to memorandum of understanding and financial assistance agreement between MWRA and the City of Cambridge for implementation of CSO projects; drafted comment letter on DEP's Tentative Determinations to Extend the Variances for CSO Discharges to Lower Charles River/Charles Basin and Alewife Brook/Upper Mystic River. Reviewed MWRA submittal to EPA and DEP related to updated cost information for system wide CSO elimination for variance extension purposes; filed quarterly compliance and progress report with Court.
- **NPDES:** Reviewed Draft NPDES Permit for Clinton wastewater treatment plant. Reviewed EPA's draft electronic reporting requirements.

REAL ESTATE, CONTRACT AND OTHER SUPPORT

- **Co-Digestion:** Provided support to Procurement for the Pilot Program RFQ/P, including the drafting of the general conditions of contract.
- **Public Access Permits:** Drafted permits for the Bay City Trail Connector Trail for Framingham and Southborough.
- **Fox Point:** Drafted and negotiated a draft Purchase and Sale Agreement for the sale of MWRA's Fox Point facility to Local 103 I.B.E.W. Educational Corporation; drafted legislation to surplus and convey the facility.
- **Fore River:** Drafted transactional documents for the land swap with March Fourth at the Fore River Shipyard.
- **MIS:** Reviewed and finalized terms and conditions for Spectrum Use Agreement with Verizon for six (6) MWRA locations and for "In-Building Radio Distribution Agreement" with Verizon for DITP.
- **DPS/MOU:** Finalized Amendment 3 with DPS to continue the provision of electrical inspection services.
- **MOA:** Drafted and finalized an MOA with DCR to enable MWRA to obtain funds to repair the Rutland-Holden Sewer from a Trust Account established for that purpose.
- **Electric Services:** Drafted two (2) electrical services agreements for the Spot Pond and Ware facilities.
- **Wireless Communications:** Reviewed two (2) licenses for the Turkey Hill facility.
- **Watershed Protection Act Acquisitions:** Reviewed and provided comments as to acceptability for the following parcel: W-1091 Princeton/Wachusett, WPR on property of Lindstrom
- **Section 36/W11 C/Shaft 9:** Prepared sixty-six (66) drafts of Offers to Convey and Orders of Taking needed to support the construction project.
- **Charlestown Wind Turbine:** Pursued planning and coordination with interested parties necessary to assume turn-over of turbine at the close of the manufacturer's warranty and to preserve any claims for defects prior to warranty expiration.
- **DITP Turbine #2:** Continued efforts to compel Hanover Insurance to agree to a broader scope of repairs for Turbine #2.
- **Weston Water Main:** Continued discovery in the Water Main Litigation; uploaded fourteen (14) documents to Merlin One regarding daily activity reports for access by all parties; updated the Compilation of Damages for issuance to the Defendants.

ENVIRONMENTAL

- **Regulations:** Drafted a summary of the emergency order and safety advisory issued by U.S. DOT/ Fed. Railroad Administration pertaining to trains carrying certain hazardous materials; drafted letter to congressional delegation in support of legislation to require railroads to provide sufficient and timely information on their hazardous freight transports to facilitate local entities' emergency response planning, preparation and actions.

LABOR, EMPLOYMENT AND ADMINISTRATIVE

New Matters

Sixteen demands for arbitration were filed.

Matters Concluded

Received an arbitrator's decision upholding two days of a four day suspension of an employee, while reversing two days of the suspension.

Received an arbitrator's decision in favor of MWRA finding that the MWRA did not violate Article 15 of a collective bargaining agreement when it did not pay the grievant the salary of a higher grade job.

Received a dismissal from the state Division of Labor Relations for lack of probable cause of a union charge that the MWRA violated Sections 10(a)(1) and 10(a)(3) of Chapter 150E when it did not assign overtime to an employee.

LITIGATION/TRAC

New Matters

During the First Quarter of FY 2014 one new lawsuit was received.

Oscar Melara v. MWRA and Black & Veatch, LLC: Employee of RJV construction, general contractor for MWRA on the Southern Spine Distribution Mains Rehabilitation Project, Contract No. 7099, alleges that on September 10, 2010, he sustained serious and permanent injuries while working in an underground vault. RJV's insurer, Travelers, has acknowledged MWRA as an additional insured under RJV's general liability policy, and has engaged counsel to defend MWRA. Traveler's assigned defense counsel to MWRA soon after the occurrence in September 2010; MWRA and defense counsel have been monitoring the matter since the incident occurred.

Significant Developments

Gilchrist Metal Fabricating Co., Inc. v. City Lights Electrical Co. v. MWRA: Counsel retained by AECOM to defend MWRA in this suit has served a motion for summary judgment, seeking dismissal of all claims against MWRA. It is expected that the motion will be heard in October.

MWRA v. J.F. Shea et al.: Law Division counsel for the Authority in the Shaft 5A coupling break cost-recovery suit successfully argued a motion to amend the complaint to include as part of its damages claim the costs incurred by MWRA when it removed three sets of damaged inner seals supplied by the defendant Victaulic and, in their place, welded butt straps around the interior of the pipe joints, all of which work was done in May 2012. Discovery in the case is well underway. Three depositions took place in July, with a dozen more scheduled for the months of September, October and November. MWRA has produced documents to three of the defendants and has answered one set of interrogatories. MWRA has inspected the documents from all the principal defendants from whom it requested a production and is pursuing the production of certain categories of documents asserted by the defendant Victaulic to be exempt from production.

Seaver Electric, Inc. v. J.F. White Contractors Co., Inc., et al.: On September 16, 2013, MWRA filed its Opposition to Seaver's Application for Further Appellate Review of the August 5, 2013 decision of the Appeals Court affirming summary judgment in MWRA's favor.

Matters Concluded

No cases closed during the First Quarter FY 2014.

Subpoenas

During the First Quarter of FY 2014, seven new subpoenas were received, and three subpoenas were pending at the end of the Fourth Quarter FY 2014.

Public Records

During the First Quarter of FY 2014 six new public records requests were received and three remained pending at the end of the First Quarter FY 2014.

TRAC/MISC.

New Appeals

Three new appeals were received in the 1st Quarter FY 2014.

Cookies by Design; MWRA Docket No. 13-17
Northeastern University; MWRA Docket No. 13-18
Brigham & Women's Hospital; MWRA Docket No. 13-19

SUMMARY OF PENDING LITIGATION MATTERS

| TYPE OF CASE/MATTER | As of Sept 2013 | As of June 2013 | As of Mar 2013 |
|---|------------------------|------------------------|-----------------------|
| Construction/Contract/Bid Protest (other than BHP) | 6 | 6 | 7 |
| Tort/Labor/Employment | 7 | 6 | 4 |
| Environmental/Regulatory/Other | 1 | 1 | 1 |
| Eminent Domain/Real Estate | 0 | 0 | 0 |
| total – all defensive cases | 14 | 13 | 12 |
| Affirmative Cases: <u>MWRA v. J. F. Shea Co., Inc., et al.</u> | 1 | 1 | 1 |
| Other Litigation matters (restraining orders, etc.) <u>MWRA v. Thomas Mercer</u> | 1 | 1 | 1 |
| total – all pending lawsuits | 16 | 15 | 14 |
| Significant claims not in suit: | 0 | 1 | 2 |
| Bankruptcy | 0 | 0 | 1 |
| Wage Garnishment | 14 | 14 | 14 |
| TRAC/Adjudicatory Appeals | 5 | 15 | 2 |
| Subpoenas | 3 | 3 | 3 |
| TOTAL – ALL LITIGATION MATTERS | 38 | 48 | 36 |

TRAC/MISC. (cont.)

Settlement by Agreement of Parties

No cases were settled by Agreement of Parties in the 1st Quarter FY 2014.

Stipulation of Dismissal

One case was dismissed by Stipulation of Dismissal, fine waived.

Atlantic Seacove, Inc. MWRA Docket No. 13-15

**Notice of Dismissal
Fine paid in full**

Twelve cases were dismissed by Joint Stipulation of Dismissal with Prejudice, fine paid in full.

- 1) F.B. Packing; MWRA Docket No. 13-03
- 2) Adams-Chapman Co.; MWRA Docket No. 13-04
- 3) Campco; MWRA Docket No. 13-05
- 4) Pier 7, Inc.; MWRA Docket No. 13-06
- 5) Samuel Holmes; MWRA Docket No. 13-07
- 6) Frank Bertolino Beef; MWRA Docket No. 13-08
- 7) Rago Veal; MWRA Docket No. 13-09
- 8) Metropolitan Meat Company; MWRA Docket No. 13-10
- 9) Aquanor Marketing, Inc.; MWRA Docket No. 13-11
- 10) Great Eastern Seafood; MWRA Docket No. 13-12
- 11) Channel Fish Processing Company; MWRA Docket No. 13-13
- 12) True World Foods; MWRA Docket No. 13-14

Tentative Decisions

No Tentative Decisions were issued in the 1st Quarter FY 2014.

Final Decisions

No Final Decisions were issued during the 1st Quarter FY 2014.

INTERNAL & CONTRACT AUDIT PROGRAM
1st Quarter FY14

Highlights

Operation and Maintenance of the Pelletizing Plant The New England Fertilizer Company (NEFCo) has operated the Pellet Plant since 2001. The contract expires in December 2015. This assignment reviewed the financial results from operations from January 2010 through December 2012. The results were combined with prior review information to present a comprehensive report on operations since contract inception.

License Fee & Maintenance of the Fore River Railroad The Fore River Transportation Company (FRTC) is the licensed operator of the railroad. This assignment verified that the \$2,203,179 in license fees received from January 2010 through December 2012 agreed to the accounting records of the operator. The FRTC is also responsible for executing an annual maintenance plan. The operator expended \$187,120 on maintenance FY12. Five recommendations were implemented to more closely monitor maintenance activities, including the preparation of a more comprehensive annual maintenance plan and for the Fore River Railroad Corporation (FRRRC) to document the approval of maintenance projects.

Status of Open Audit Recommendations (10 recommendations closed in the 1st 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 |
|---|--|------------------------|
| Warehouse Practices (9/30/10) | 1 | 9 |
| Facility Card Access Controls (2/22/11) | 3 | 17 |
| DITP Data Center Access Controls (10/14/11) | 3 | 19 |
| Chelsea Facility Physical Security (12/31/12) | 9 | 22 |
| Hardware Equipment Management (5/22/13) | 19 | 17 |
| Review of Purchase Card Activity (6/28/13) | 1 | 2 |
| Bay State Fertilizer (9/3/13) | <u>4</u> | <u>1</u> |
| Total Recommendations | 40 | 87 |

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.

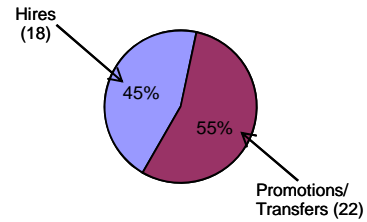
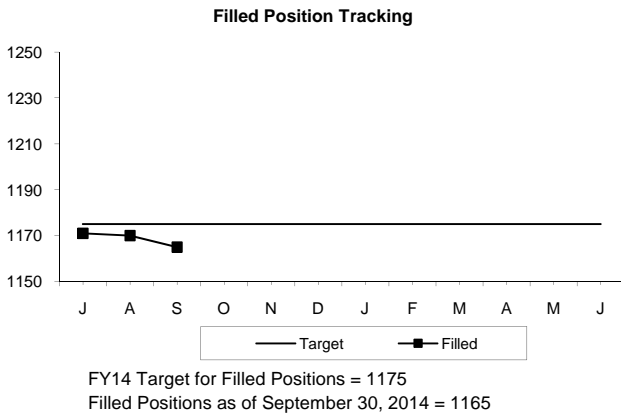
| Savings | FY10 | FY11 | FY12 | FY13 | FY14 (1Q) | TOTAL |
|-----------------------|-------------|-------------|-------------|-------------|-----------|-------------|
| Consultants | \$194,238 | \$520,176 | \$259,245 | \$587,314 | | \$1,560,973 |
| Contractors & Vendors | \$599,835 | \$3,129,538 | \$435,760 | \$2,153,688 | \$37,799 | \$6,356,620 |
| Internal Audits | \$206,282 | \$152,478 | \$407,350 | \$391,083 | \$37,765 | \$1,194,958 |
| Total | \$1,000,355 | \$3,802,192 | \$1,102,355 | \$3,132,085 | \$75,564 | \$9,112,551 |

OTHER MANAGEMENT

Workforce Management

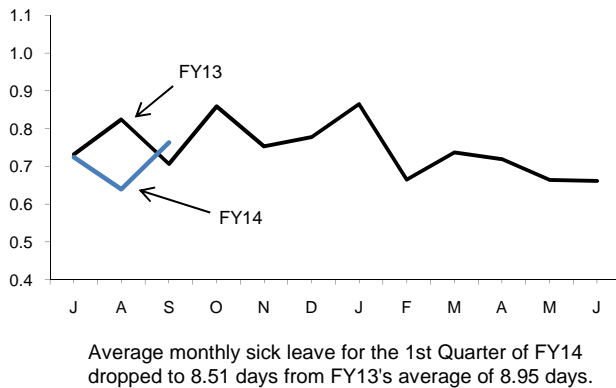
1st Quarter FY14

Positions Filled by Hires/Promotions FY14 (YTD)



| | Pr/Trfrs | Hires | Total |
|------|----------|----------|--------------|
| FY12 | 42 (61%) | 27 (39%) | 69 |
| FY13 | 82 (64%) | 47 (36%) | 129 |
| FY14 | 22 (55%) | 18 (45%) | 40 (To Date) |

Average Monthly Sick Leave Usage Per Employee

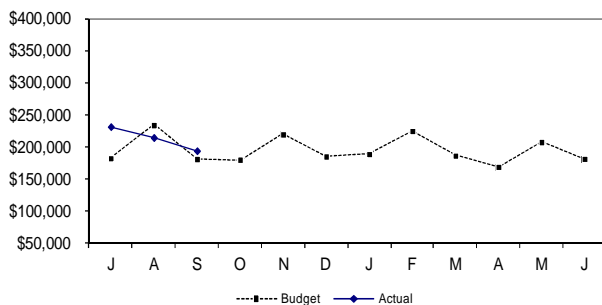


In Quarter 1 of FY14, the average quarterly sick leave usage has decreased by 6.3% from the same time period as last year.

| | Number of Employees | YTD | Annualized Total | Annual FMLA % | FY13 |
|-----------------|---------------------|-------------|------------------|---------------|-------------|
| A&F | 185 | 2.35 | 9.40 | 37.2% | 8.48 |
| Aff. Action | 7 | 1.98 | 7.91 | 0.0% | 12.25 |
| Executive | 5 | 0.99 | 3.95 | 0.0% | 3.08 |
| Int. Audit | 8 | 1.57 | 6.27 | 0.0% | 7.36 |
| Law | 16 | 2.63 | 10.50 | 4.7% | 11.80 |
| OEP | 5 | 5.00 | 20.10 | 0.0% | 5.89 |
| Operations | 940 | 2.09 | 8.32 | 21.9% | 9.02 |
| Pub. Affs. | 12 | 1.62 | 5.95 | 0.0% | 9.08 |
| MWRA Avg | 1178 | 2.14 | 8.51 | 23.2% | 8.95 |

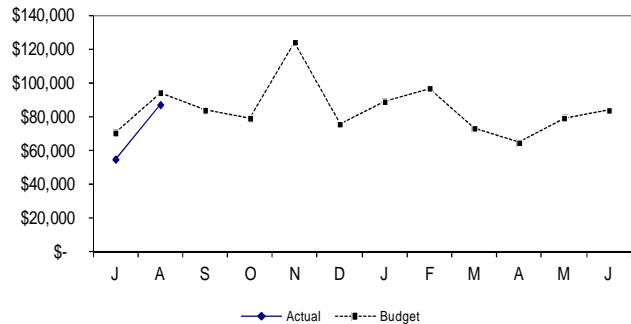
Percent of sick leave usage attributable to Family and Medical Leave Act (FMLA) leave is 23.2% for the 1st Quarter of FY14

Field Operations Current Month Overtime \$



Total Overtime for Field Operations for the first quarter of FY14 was \$639,076 which is (\$43k) under budget. Emergency overtime was \$319k, which was \$35k over budget, \$45k of which was for rain event events. Coverage overtime was \$165k, which was (\$7k) under budget, due mainly to lower than budgeted shift coverage requirements. Planned overtime was \$155k or \$14k over budget, mainly for off hours work and community assistance.

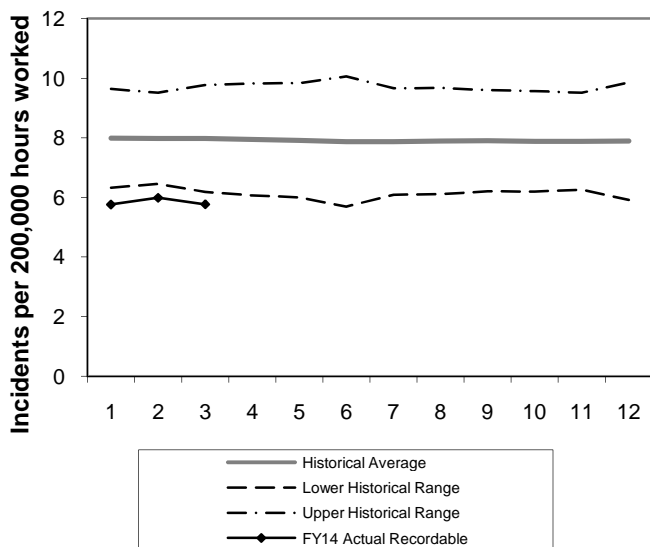
Deer Island Treatment Plant Current Month Overtime \$



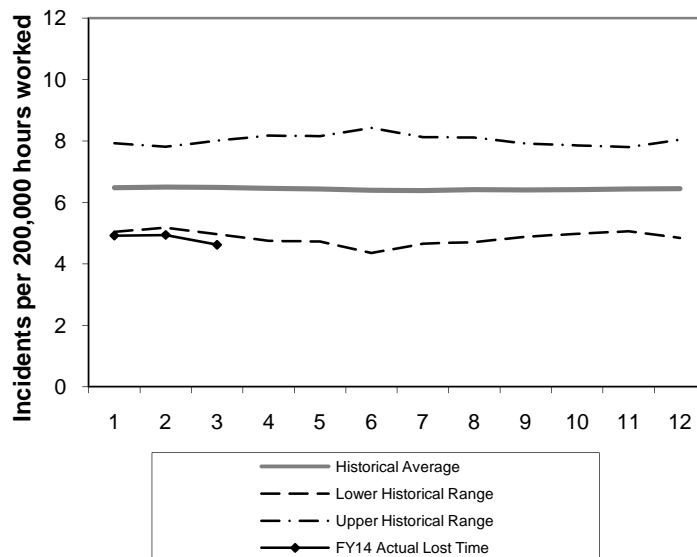
Deer Island's total overtime expenditure in August 2013 was \$87K, which was (\$7K) or (7.5%) under budget. The variance reflects less than anticipated storm coverage requirement, (441 hours or \$22K), along with Management's continued efforts to control overtime spending by allowing overtime for maintenance or repair of critical systems and equipment only, (\$9K). These items are partially offset by higher than anticipated shift coverage overtime due to a 2nd Class Engineer vacancy and a 3rd Class Engineer IA in Thermal, \$24K or 227 hours.

Workplace Safety 1st Quarter - FY 14

Recordable Injury & Illness Rates



Lost Time Injury & Illness Rates



- 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 FY13. The "Upper" and "Lower Historical Ranges" are computed using these same data – adding and subtracting two standard deviations respectively. FY14 actual incident rates can be expected to fall within this historical range.

Workers Compensation Claims Highlights - First Quarter FY14

| | New | Closed | Open Claims |
|--------------------|-----|--------|------------------------|
| Lost Time | 6 | 25 | 67 |
| Medical Only | 27 | 32 | 22 |
| Report Only | 25 | 25 | |
| | | | |
| | New | | YTD Light Duty Returns |
| Light Duty Returns | 2 | | 2 |

Highlights/Comments:

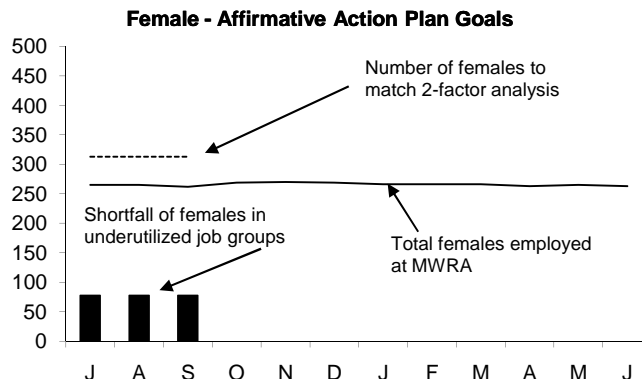
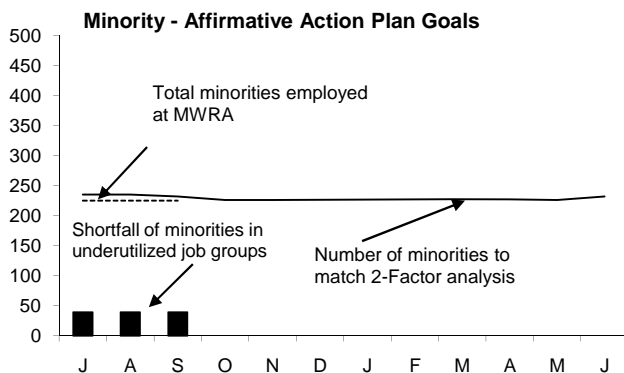
Light Duty Returns

- July** 1 employee while on light duty had several days during the month of IA
- Aug** 1 employee returned to work light duty from IA
- Sept** 1 employee returned to work light duty from IA

Regular Duty Returns

- July** 1 employee returned to work full duty from IA
1 employee returned to work full duty from light duty
- Aug** 1 employee returned to work full duty from IA
- Sept** 1 employee returned to work full duty from light duty
2 employees returned to work full duty from IA

MWRA Job Group Representation
1st Quarter, FY14



Highlights:

At the end of Q1 FY14, 9 job groups or a total of 39 positions are underutilized by minorities as compared to 8 job groups or a total of 44 positions at the end of Q1 FY13; for females 14 job groups or a total of 77 positions are underutilized by females as compared to 13 job groups or a total of 101 positions at the end of Q1 FY13. During Q1, 4 minorities and 3 females were hired. During this same period, 4 minorities and 5 females terminated.

Underutilized Job Groups - Workforce Representation

| Job Group | Employees as of 9/30/2013 | Minorities as of 9/30/2013 | Achievement Level | Minority Over or Under Utilized | Females As of 9/30/2013 | Achievement Level | Female Over or Under Utilized |
|-------------------|---------------------------|----------------------------|-------------------|---------------------------------|-------------------------|-------------------|-------------------------------|
| Administrator A | 18 | 3 | 2 | 1 | 3 | 5 | -2 |
| Administrator B | 20 | 0 | 3 | -3 | 4 | 5 | -1 |
| Clerical A | 46 | 19 | 12 | 7 | 40 | 20 | 20 |
| Clerical B | 33 | 9 | 9 | 0 | 12 | 1 | 11 |
| Engineer A | 82 | 15 | 20 | -5 | 12 | 17 | -5 |
| Engineer B | 50 | 14 | 10 | 4 | 6 | 12 | -6 |
| Craft A | 115 | 13 | 21 | -8 | 0 | 4 | -4 |
| Craft B | 154 | 32 | 23 | 9 | 3 | 7 | -4 |
| Laborer | 65 | 20 | 10 | 10 | 3 | 4 | -1 |
| Management A | 103 | 13 | 21 | -8 | 32 | 47 | -15 |
| Management B | 46 | 9 | 11 | -2 | 14 | 19 | -5 |
| Operator A | 67 | 4 | 7 | -3 | 2 | 4 | -2 |
| Operator B | 68 | 7 | 14 | -7 | 4 | 2 | 2 |
| Para Professional | 52 | 12 | 11 | 1 | 23 | 32 | -9 |
| Professional A | 37 | 3 | 7 | -4 | 23 | 17 | 6 |
| Professional B | 160 | 43 | 40 | 3 | 75 | 87 | -12 |
| Technical A | 52 | 15 | 8 | 7 | 5 | 8 | -3 |
| Technical B | 9 | 1 | 2 | -1 | 1 | 4 | -3 |
| Total | 1177 | 232 | 231 | 36/-39 | 262 | 295 | 41/-77 |

AACU Candidate Referrals for Underutilized Positions

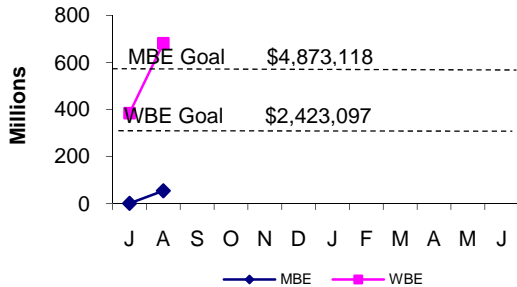
| Job Group | Title | # of Vac | Requisition Ext. | Int. / | Promotions/ Transfers | AACU Ref. External | Position Status |
|------------------|-------------------------------------|----------|------------------|--------|-----------------------|--------------------|-----------------|
| Craft B | Warehouse Materials Handler | 1 | Int | | 1 | 0 | Tran:WM |
| Craft B | Jr. Instrument Technician | 1 | Int | | 1 | 0 | Promo:BM |
| Craft B | Machinist | 1 | Int/Ext | | 0 | 0 | NH:WM |
| Craft B | Plumber/Pipefitter | 1 | Int/Ext | | 0 | 2 | NH:AM |
| Craft B | Machinist | 1 | Int/Ext | | 0 | 2 | NH:WM |
| Craft A | WSS Foreman | 1 | Int | | 1 | 0 | Promo:WM |
| Craft A | M&O Specialist | 1 | Int/Ext | | 1 | 0 | Promo:WM |
| Craft A | M&O Specialist | 1 | Int/Ext | | | 1 | Reposted |
| Craft A | Instrument Technician | 1 | Ext | | 0 | 0 | NH: HM |
| Craft A | Valve Maintenance Foreman | 2 | Int | | 2 | 0 | Promo:2 WM |
| Craft A | Executive Secretary | 1 | Ext | | | 1 | Interviewing |
| Engineer B | Project Engineer | 1 | Ext | | 0 | 0 | NH: WF |
| Engineer B | Project Manager | 1 | Ext | | 1 | 0 | Tran: WF |
| Laborers | OMC Laborer | 2 | Ext | | 1 | 0 | NH:WM;T:HM |
| Laborers | Skilled Laborer | 1 | Int/Ext | | | 0 | NH:NAF |
| Management A | Work Coordination Center Manager | 1 | Int/Ext | | 1 | 0 | Promo:WM |
| Professional B | Client Services Coordinator | 1 | Int | | 1 | 0 | Promo:WF |
| Professional B | Systems Analyst/Programmer 1 | 1 | Ext | | 0 | 0 | NH:WM |
| Professional B | Sampling Associate | 3 | Int/Ext | | | 3 | NH: 2 WF & HM |
| Professional B | Chemist I | 1 | Int | | | 1 | Interviewing |
| Professional B | Senior Lab Technician | 1 | Int | | 1 | 0 | Tran:AF |
| ParaProfessional | Planning and Scheduling Coordinator | 1 | Int | | 1 | 0 | Promo:WM |
| ParaProfessional | Payroll Administrator | 1 | Int | | 1 | 0 | Tran:WF |
| Technical A | Senior Field Service Technician | 1 | Ext | | 0 | 0 | NH:WM |
| Technical A | Senior Instrument Technician | 1 | Int | | 1 | 0 | Promo:WM |

MBE/WBE Expenditures

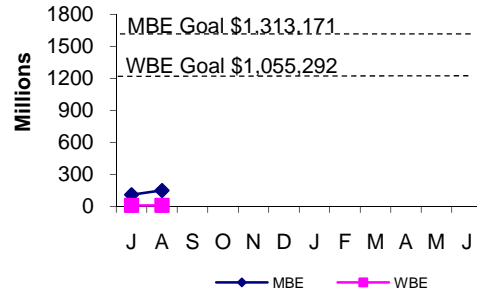
1st Quarter – FY14

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 August.

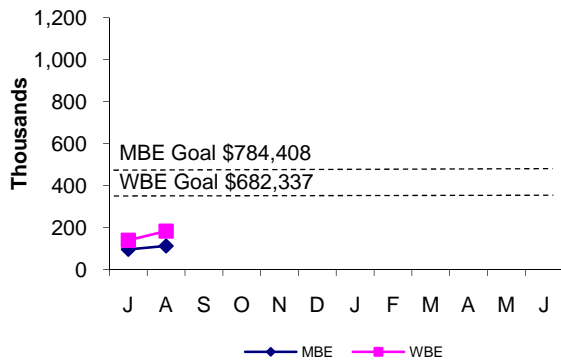
Construction



Professional



Goods/Services



FY14 spending and percentage of goals achieved, as well as FY13 performance are as follows:

| | MBE | | | | WBE | | | |
|--------------------------|-------------------|----------------|--------------------|----------------|-------------------|----------------|--------------------|----------------|
| | FY14 Year-to-Date | | FY13 | | FY14 Year-to-Date | | FY13 | |
| | <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 | 53,406 | 1.1% | 5,364,613 | 121.7% | 681,670 | 28.1% | 4,522,050 | 206.4% |
| Professional Svc. | 148,516 | 11.3% | 1,477,040 | 134.3% | 8,750 | .8% | 557,922 | 63.1% |
| <u>Goods & Svcs.</u> | <u>111,785</u> | <u>14.3%</u> | <u>1,128,359</u> | <u>378.4%</u> | <u>182,723</u> | <u>26.8%</u> | <u>578,379</u> | <u>223.0%</u> |
| Total | 313,707 | 4.5% | \$7,970,012 | 137.3% | 873,143 | 21.0% | \$5,658,351 | 169.7% |

MBE/WBE dollar totals include MBE and WBE payments to prime contractors, consultants and vendors.

CEB Expenses through 1st Quarter FY14

| | September 2013 Year-to-Date (\$000) | | | | | |
|-----------------------------------|---|-------------------|-------------------|--------------|-------------------|--------------|
| | Budget | Actual | Variance | % | FY14 Budget | % |
| EXPENSES | | | | | | |
| WAGES AND SALARIES | \$ 22,085 | \$ 21,422 | \$ (663) | -3.0% | \$ 94,874 | 22.6% |
| OVERTIME | 896 | 902 | 6 | 0.6% | 3,580 | 25.2% |
| FRINGE BENEFITS | 4,497 | 4,530 | 33 | 0.7% | 18,064 | 25.1% |
| WORKERS' COMPENSATION | 500 | 730 | 230 | 46.0% | 2,000 | 36.5% |
| CHEMICALS | 3,069 | 2,859 | (210) | -6.8% | 10,671 | 26.8% |
| ENERGY AND UTILITIES | 4,869 | 4,872 | 3 | 0.1% | 22,761 | 21.4% |
| MAINTENANCE | 5,680 | 6,669 | 990 | 17.4% | 27,762 | 24.0% |
| TRAINING AND MEETINGS | 29 | 53 | 24 | 82.5% | 331 | 15.9% |
| PROFESSIONAL SERVICES | 1,257 | 1,186 | (70) | -5.6% | 6,083 | 19.5% |
| OTHER MATERIALS | 657 | 1,066 | 410 | 62.4% | 5,969 | 17.9% |
| OTHER SERVICES | 5,938 | 5,933 | (5) | -0.1% | 22,279 | 26.6% |
| TOTAL DIRECT EXPENSES | \$ 49,476 | \$ 50,223 | \$ 747 | 1.5% | \$ 214,374 | 23.4% |
| INSURANCE | \$ 523 | \$ 420 | \$ (104) | -19.8% | \$ 2,094 | 20.0% |
| WATERSHED/PILOT | 6,804 | 6,808 | 4 | 0.1% | 27,215 | 25.0% |
| BECo PAYMENT | 840 | 840 | (0) | 0.0% | 3,347 | 25.1% |
| MITIGATION | 392 | 386 | (5) | -1.4% | 1,567 | 24.7% |
| ADDITIONS TO RESERVES | 42 | 42 | - | 0.0% | 169 | 25.0% |
| RETIREMENT FUND | 7,455 | 7,455 | - | 0.0% | 12,432 | 60.0% |
| TOTAL INDIRECT EXPENSES | \$ 16,056 | \$ 15,951 | \$ (105) | -0.7% | \$ 46,823 | 34.1% |
| STATE REVOLVING FUND | \$ 18,064 | \$ 18,064 | \$ - | 0.0% | \$ 75,961 | 23.8% |
| SENIOR DEBT | 50,834 | 50,834 | - | 0.0% | 204,471 | 24.9% |
| DEBT SERVICE ASSISTANCE | - | - | - | --- | 132 | 0.0% |
| CURRENT REVENUE/CAPITAL | 2,300 | 2,300 | - | 0.0% | 9,200 | 25.0% |
| SUBORDINATE MWRA DEBT | 24,899 | 24,899 | - | 0.0% | 100,117 | 24.9% |
| LOCAL WATER PIPELINE CP | 1,032 | 1,032 | - | 0.0% | 4,128 | 25.0% |
| CAPITAL LEASE | 804 | 804 | - | 0.0% | 3,217 | 25.0% |
| VARIABLE DEBT | - | (3,253) | (3,253) | --- | - | 0.0% |
| DEFESAANCE ACCOUNT | - | - | - | --- | - | --- |
| TOTAL DEBT SERVICE | \$ 97,932 | \$ 94,680 | \$ (3,252) | -3.3% | \$ 397,226 | 23.8% |
| TOTAL EXPENSES | \$ 163,465 | \$ 160,854 | \$ (2,612) | -1.6% | \$ 658,423 | 24.4% |
| REVENUE & INCOME | | | | | | |
| RATE REVENUE | \$ 157,180 | \$ 157,180 | \$ - | 0.0% | \$ 628,721 | 25.0% |
| OTHER USER CHARGES | 2,078 | 2,068 | (10) | -0.5% | 8,127 | 25.4% |
| OTHER REVENUE | 1,092 | 1,433 | 342 | 31.3% | 6,444 | 22.2% |
| RATE STABILIZATION | 875 | 875 | - | 0.0% | 3,500 | 25.0% |
| INVESTMENT INCOME | 3,389 | 3,071 | (318) | -9.4% | 11,631 | 26.4% |
| TOTAL REVENUE & INCOME | \$ 164,613 | \$ 164,627 | \$ 14 | 0.0% | \$ 658,423 | 25.0% |

As of September 2013, total revenue was \$164.6 million, \$14,000 higher than budget and total expenses were \$160.9 million, \$2.6 million or 1.6% less than budget for a net variance of \$2.6 million.

Expenses –

- **Direct Expenses** are \$50.2 million, \$747,000 or 1.5% more than budget.
- **Maintenance** is overspent by \$990,000 or 17.4% year-to-date. Material purchases are greater than budgeted by \$734,000 and services are overspent by \$256,000. The majority of the variance is timing related for projects scheduled for FY13 completed in FY14 such as the Manhole Rehabilitation project, various parts purchases in Field Operations, and unplanned projects for the Steam Turbine Generator and replacement of the Combustion Turbine Generator hydraulic pump and valve replacement at Deer Island.
- **Wages and Salaries** are underspent by \$663,000 or 3.0% due to lower headcount and mix of salaries for people retiring and new hires.
- **Other Materials** are over budget by \$410,000 or 62.4% mainly due to unbudgeted purchase of gas detection equipment and the timing of work clothes, equipment/furniture, postage, computer software and hardware expenses.
- **Workers Compensation** expenses are higher than budget by \$230,000 or 46.0%. To date, actual reserves of \$140,000 and payments of \$90,000 are trending higher than budget. The increase reflects the medical payments and reserves based on the number and severity of the current cases.
- **Chemicals** are underspent by \$210,000 or 6.8% mainly due to lower spending for Nitrazyme of \$91,000, Sodium Bisulfite of \$50,000, Activated Carbon of \$44,000, and Carbon Dioxide of \$36,000, mostly for timing of purchases.
- **Professional Services** are under budget by \$70,000 or 5.6% mainly due to lower than budgeted legal services expense and Harbor Monitoring initiatives.
- **Indirect Expenses** are \$16.0 million, \$105,000 or 0.7% under budget due to lower spending for Claims of \$84,000 and Premiums of \$20,000.
- **Debt Service Expenses** totaled \$94.7 million which is \$3.3 million or 3.3% lower than budgeted levels due to favorable short-term rates.

Revenue and Income –

- **Total Revenue / Income** for September is \$164.6 million, \$14,000 higher than budget due to higher Non-Rate Revenue of \$332,000 offset by lower Investment Income of \$318,000 due to lower than budgeted long-term rates. The higher Non-Rate Revenue is due to \$92,000 for sale of surplus equipment, \$70,000 for Emergency Water use by the Town of Holden, timing of Rutland Holden reimbursement of \$26,000, higher Energy Revenue of \$26,000 mainly due to higher Renewable Portfolio Standard (RPS) sales, and approximately \$118,000 for a variety of vendor rebates and other smaller items.

Cost of Debt

1st Quarter FY14

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.

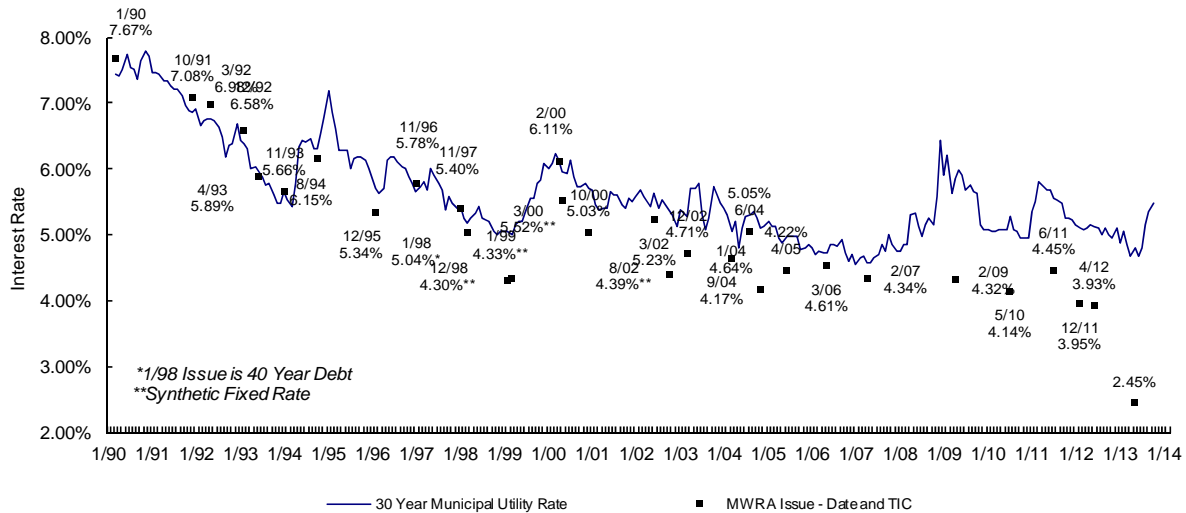
Average Cost of MWRA Debt

| | |
|--|-----------|
| Fixed Debt (\$4,052) | 4.34% |
| Variable Debt (\$484.3) | 0.70% |
| SRF Debt (\$1,023) | 1.22% |
| Weighted Average Debt Cost (\$5,628) | 3.45% |

Most Recent Senior Fixed Debt Issue March 2013

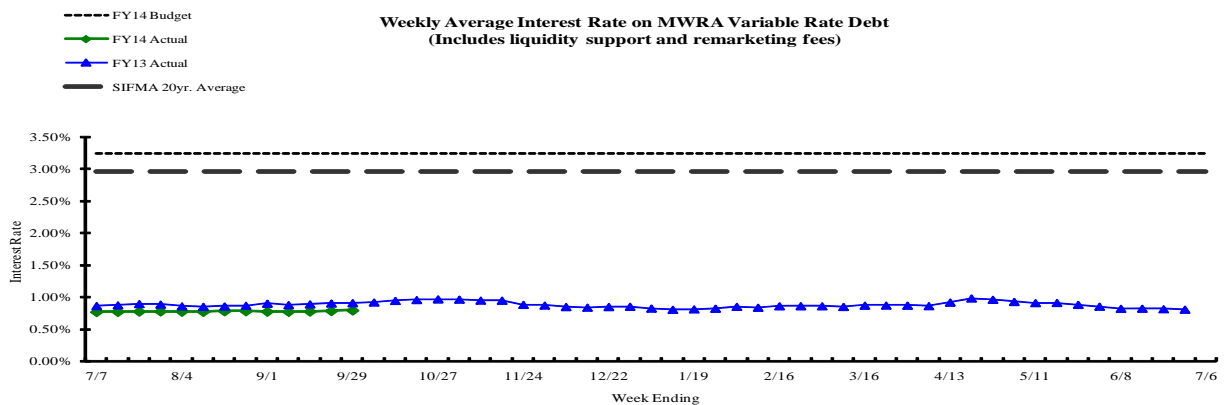
| | |
|-------------------------|-------|
| 2013 Series A (\$170.6) | 2.45% |
|-------------------------|-------|

MWRA Fixed Rate Debt vs. 30 Year Municipal Utility Interest Rate



Weekly Average variable Interest Rates vs. Budget

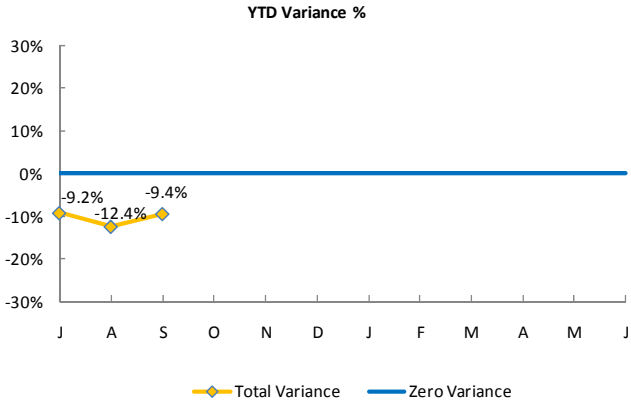
MWRA currently has ten variable rate debt issues with \$1.1 billion outstanding, excluding commercial paper. Of the ten outstanding series, five have portions which have been swapped to fixed rate. Variable rate debt has been less expensive than fixed rate debt in recent years as short-term rates have remained lower than long-term rates on MWRA debt issues. In September, SIFMA rates fluctuated with a high of 0.07% and a low of 0.05%. 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

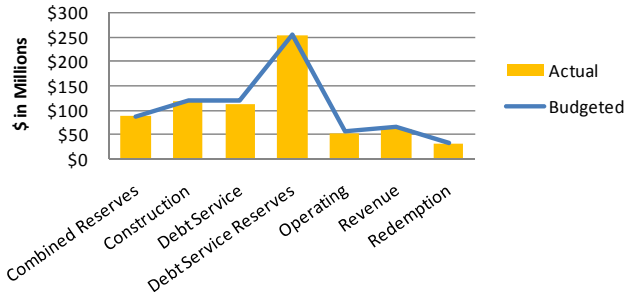
1st Quarter FY14

Year To Date

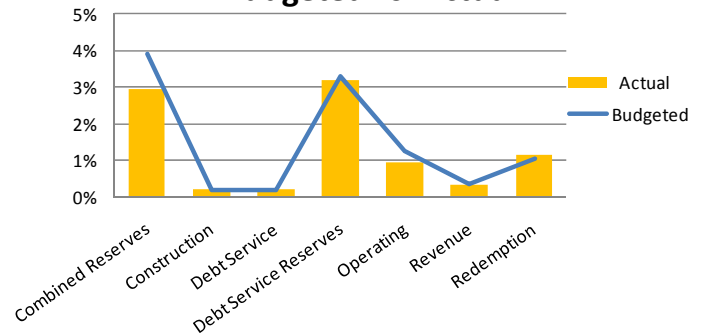


| | YTD BUDGET VARIANCE | | | |
|-----------------------|---------------------|----------------|----------------|--------------|
| | (\$'000) | | | |
| | BALANCES IMPACT | RATES IMPACT | TOTAL | % |
| Combined Reserves | \$5 | (\$206) | (201) | -23.7% |
| Construction | (\$1) | \$0 | (1) | -1.9% |
| Debt Service | (\$5) | \$0 | (5) | -7.8% |
| Debt Service Reserves | \$0 | (\$64) | (64) | -3.1% |
| Operating | (\$13) | (\$41) | (54) | -29.9% |
| Revenue | (\$2) | \$0 | (2) | -3.0% |
| Redemption | \$0 | \$9 | 9 | 10.3% |
| Total Variance | (\$16) | (\$302) | (\$318) | -9.4% |

YTD Average Balances Budgeted vs. Actual

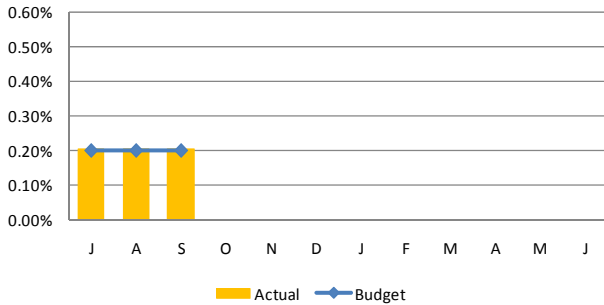


YTD Average Interest Rate Budgeted vs. Actual

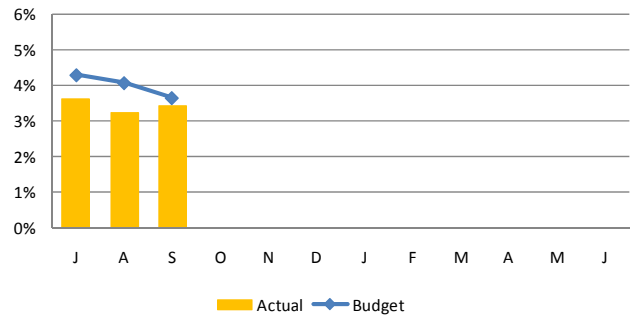


Monthly

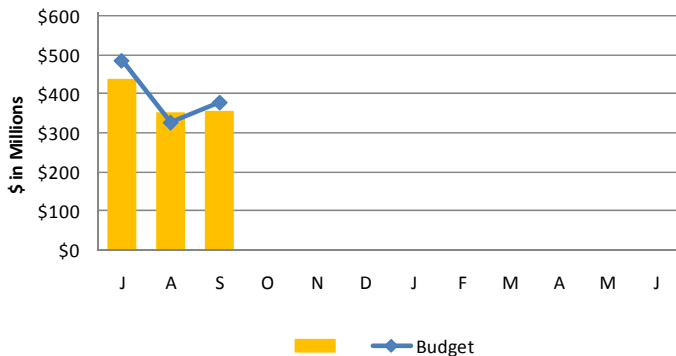
Short-Term Interest Rates



Long-Term Interest Rates



Short-Term Average Balances



Long-Term Average Balances

