

MASSACHUSETTS WATER RESOURCES AUTHORITY

Board of Directors Report
On
Key Indicators of MWRA Performance
For
First Quarter FY2013

Q1	Q2	Q3	Q4



Frederick A. Laskey, Executive Director
Michael J. Hornbrook, Chief Operating Officer
November 14, 2012

Board of Directors Report on Key Indicators of MWRA Performance First Quarter FY2013

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 and Algae	21
Treated Water – Disinfection Effectiveness	22
Treated Water – pH and Alkalinity, 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	27
NPDES Permit Compliance – Clinton	28

Community Flows and Programs

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

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

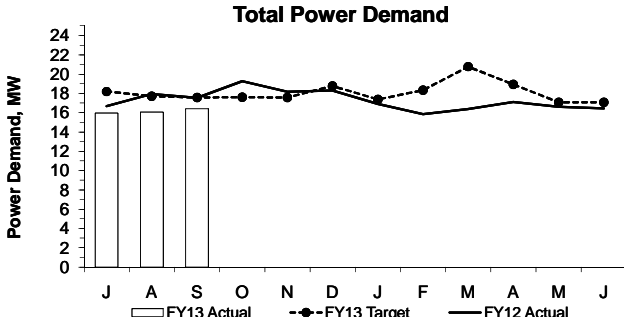
This quarterly report is prepared by MWRA staff to track a variety of MWRA performance measures for routine review by MWRA's board of directors. The content and format of this report is expected to develop as time passes. Information is reported on a preliminary basis as appropriate and available for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

Frederick A. Laskey, Executive Director
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November 14, 2012

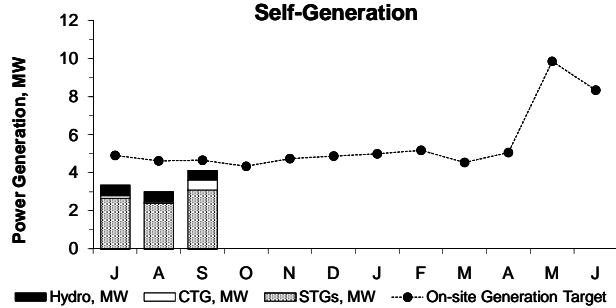
OPERATIONS AND MAINTENANCE

Deer Island Operations

1st Quarter - FY13



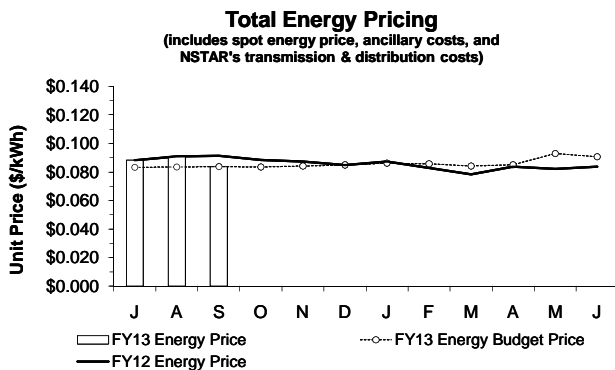
Total Power Demand in the 1st Quarter was 9% lower than the target for the quarter as Total Plant Flow was 12% lower-than-expected. Total Power Demand was 7% lower than in FY12 for the same period.



Power generated on-site was 21% below target for the 1st Quarter mainly due to lower-than-expected generation by the STGs, Hydro Turbines, and Wind Turbines. Generation by the Solar Panels and the CTGs was higher than target for the quarter.

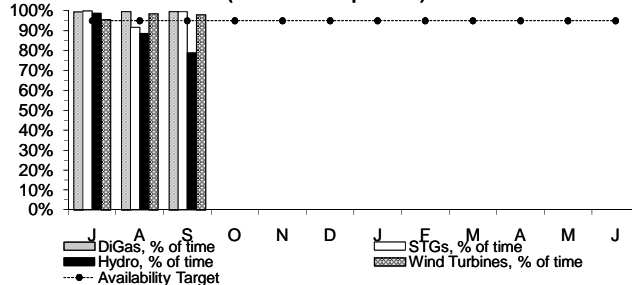
Generation by the STGs was 26% low as the BP STG was operated in test mode during system optimization and sludge feed to the digesters was also suspended several times due to contractor valve work in the digester area which greatly reduced the production of digester gas (the main fuel source for the boiler which produces the steam for the STG). Hydro Turbine generation was 19% low due to lower flows and scheduled annual maintenance and essential repairs on Turbine #2. Generation by the Wind Turbines was 30% low due to lower-than-expected wind. CTG generation was more than two times higher than target mainly due to operation during seasonal peak demand, as well as during NSTAR annual maintenance which required DITP to be disconnected from the electrical grid. Generation by the Solar Panels was 4% higher than target.

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); 0.403 MW was generated by the Solar Panels and 0.304 MW was generated by the Wind Turbines in the 1st Quarter.

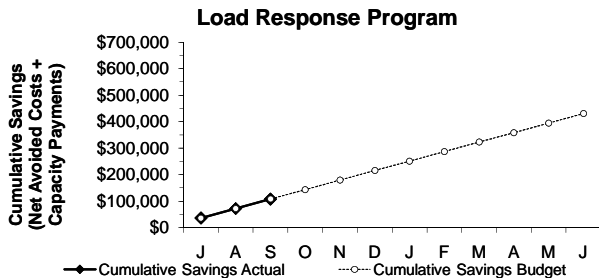


Under DI's energy supply contract, a block portion of DI's energy is a fixed rate and the variable load above the block is purchased in real time. Overall, the total energy price in the 1st Quarter was 5% higher than the FY13 budget estimate. The total energy price includes a fixed block price, spot energy price, transmission & distribution charges, and ancillary charges. Please note the September total energy price is an estimate as the completed invoices have not been received. Year-to-date costs are estimated at approximately \$31,156 (+1.3%) more than budgeted as of the end of the quarter due to higher total energy prices in July and August that were 6% and 9% higher-than-expected (once the actual total energy price was available).

Self-Generation Equipment On-Line (% of Time in Operation)



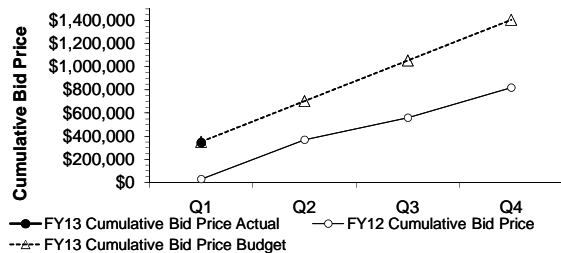
The DiGas, STGs, and Wind Turbine systems all met their 95% Availability Target for the 1st Quarter. The Hydro Turbine availability for the 1st Quarter was 6% below the 95% target due to scheduled annual maintenance and essential repairs on Hydro Turbine #2 that resulted in significant periods of downtime for the Hydro Turbine system.



Deer Island participates in the ISO-New England Load Response Programs. By agreeing to have its Combustion Turbine Generators available to run and thus relieve the New England energy grid of Deer Island's load during times of high energy demand or high pricing, MWRA receives monthly Capacity Payments from ISO-NE. When it runs the CTGs at ISO-NE's request, Deer Island receives energy payments from ISO-NE and also avoids NSTAR transmission and distribution charges. "Net Avoided Cost" is the avoided NSTAR payments offset by the cost of running the CTGs, and the energy payments from ISO-NE. Cumulative savings are the sum of Net Avoided Costs and monthly Capacity Payments - totaling \$107,561 at the end of the 1st Quarter. Please note the capacity payment for September is an estimate as the actual payment has not yet been received.

ISO_NE did not request any demand response events this quarter.

MA Renewable Portfolio Standard

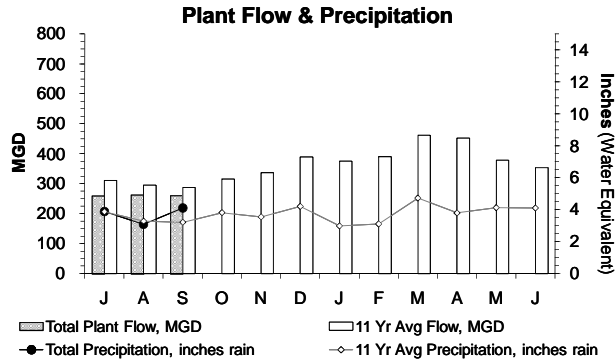


Bids were awarded in July for the sale of 60 Solar Renewable Energy Certificates (S-RECs) for a total value of \$25,181 and 6,446 Class I RECs for a total value of \$319,270. The value of the S-RECs is approximately 8.5 times higher than the current value of Class I RECs (for STG, hydro and wind).

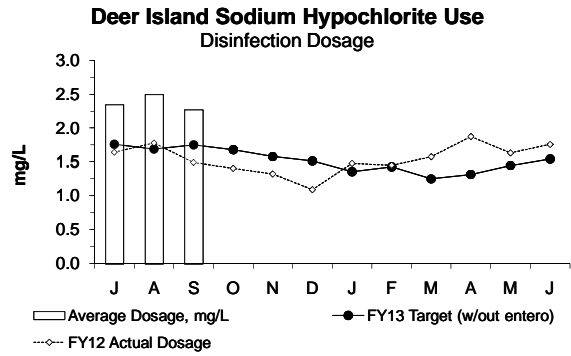
REC prices reflect the bid prices on the date that bids are accepted. Cumulative bid price reflects the total value of bids received to date. The FY13 budgeted cumulative bid estimate at the end of the 1st Quarter is \$351,764 while the actual bid total is \$344,451.

Deer Island Operations

1st Quarter - FY13



The Total Plant Flow for the 1st Quarter was 12% lower than target (260.6 MGD actual vs. 297.6 MGD expected) even though precipitation was 7% higher-than-expected for the quarter (11.06 inches actual vs. 10.34 inches expected). Much of the rain was quickly absorbed into the ground due to the very dry conditions that still exist as a result of the much lower-than-expected rainfall for much of this year and therefore did not significantly impact overall plant flow.



The disinfection dosing rate was 37% higher than the target for the 1st Quarter. The average dosing rate for the quarter was 2.37 mg/L compared to the target of 1.74 mg/L. Dosing was much higher-than-expected due to a higher chlorine demand as a result of stronger wastewater caused by the lengthy period of much lower-than-normal plant flows since January.

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.

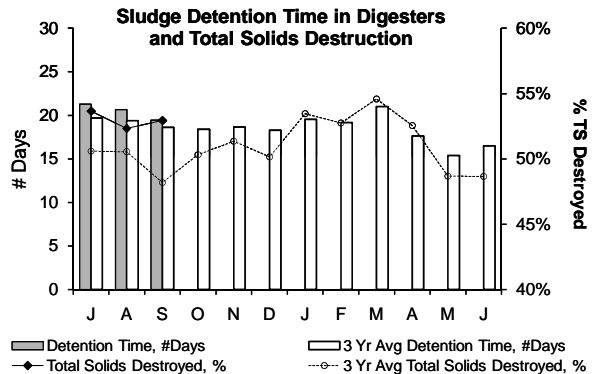
Secondary Blending Events

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%	5.78
A	1	1	0	99.9%	2.04
S	2	2	0	99.8%	4.35
O					
N					
D					
J					
F					
M					
A					
M					
J					
Total	5	5	0	99.8%	12.17

There were a total of five (5) separate secondary blending events during the 1st Quarter of FY13; all were due to high plant flows resulting from heavy rain. There was a single secondary blending event in August and two (2) separate events in July and in September.

All five (5) blending events combined produced a total of 12.17 hours of blending and 46.92 Mgal of flow blended with secondary effluent.

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



Total solids (TS) destruction averaged 53% following anaerobic sludge digestion during the 1st Quarter with an average sludge detention time in the digesters of 20.4 days. Solids destruction was 3% higher than the 3-year average for the quarter as the detention time was 6% higher than the 3-year average. DI operated with seven (7) active digesters during the entire quarter.

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.

Deer Island Operations & Maintenance Report

Environmental/Pumping:

The total precipitation of 11.06 inches in the 1st Quarter of FY13 was 7% higher than the 11-year average of 10.34 inches, and 22% lower than the 14.18 inches in 1st Quarter FY12. Measureable rain fell on 26 of the 92 days in the quarter. The plant achieved a maximum average hourly flow rate of only 919.3 MGD during the evening hours of July 18 as a result of storm system that brought a total of 1.74 inches of rain.

A new low flow record for July North System influent was set. The 174.39 MGD monthly average for North System influent flow broke the previous low flow record from July 2010 of 175.16.

Deer Island Operations

1st Quarter - FY13

Deer Island Operations & Maintenance Report (continued)

Odor Control:

Activated carbon media was changed out for carbon adsorber (CAD) units #2 in the East Odor Control Facility, and #1 and #7 in the West Odor Control Facility in July.

Both the Gravity Thickener and Centrifuge Thickener airflows in the Residuals Odor Control Facility (ROC) were shut down on two separate days on July 31 and on August 1 to replace the heat exchanger and to manually clean the air duct around the heater on CAD #2. The total duration of the combined shutdowns was 12 hours and 35 minutes.

Two (2) separate facility-wide shutdowns of the West Odor Control (WOC) Facility were scheduled in September to allow staff to safely and completely remove the failed airflow scrubber fan for wet chemical scrubber #5. A new replacement fan is scheduled to be installed, inspected, and tested operationally in October. There were also three (3) separate shorter facility-wide shutdowns of the East Odor Control (EOC) Facility in September to allow for essential maintenance activities.

Energy:

Solar Power generation was 3.6% (0.403 MW) and Wind Turbine generation was 2.72% (0.304 MW) of the total power generated on-site for the 1st Quarter. Overall, total power generated on-site accounted for 23.1% of Deer Island's total power demand for the 1st Quarter of FY13.

"Renewable Energy Certificate (REC)" - Bids were awarded in July for the sale of 60 Solar Renewable Energy Certificates (S-RECs) for a total value of \$25,181 and 6,446 Class I RECs for a total value of \$319,270. There were no Renewable Energy Certificate (REC) bids in August or September.

Annual scheduled maintenance on the Hydro Turbine system began in mid-August with maintenance being completed on both turbines by the end of August. Work on Hydro Turbine #2 uncovered a worn seal on the unit's speed increaser. Replacement required an almost complete disassembly of the turbine from the water side taking several weeks, and resulted in significant periods of downtime for both turbines for much of September. For safety reasons, both turbines were locked out and remained offline during the day while repair activities were in progress. Hydro Turbine #2 was back in operation on September 27.

Regulatory:

Emissions compliance testing on the Residuals Odor Control (ROC) treatment system on DITP was conducted by consultants during the week of August 6. The DEP requires that DITP conduct emissions compliance testing for the various emission units once every five (5) years. The draft report, received from the consultants in mid-September, shows that DITP was in compliance.

Kevin Brander with the DEP was onsite at DITP on August 29 for an unannounced site visit. He was given a comprehensive plant tour covering the entire wastewater and residuals treatment facilities and process areas. Initial communications indicate the inspection went well and a formal report by the DEP will be forwarded to the EPA.

Clinton AWWTP

The construction contract for the fine bubble diffused air system, the influent and intermediate redundant pumps and all associated piping, instrumentation and controls is progressing as scheduled. The project should be substantially complete by the end of the calendar year. The MWRA will then receive an energy grant from NGRID for approximately \$177,000.

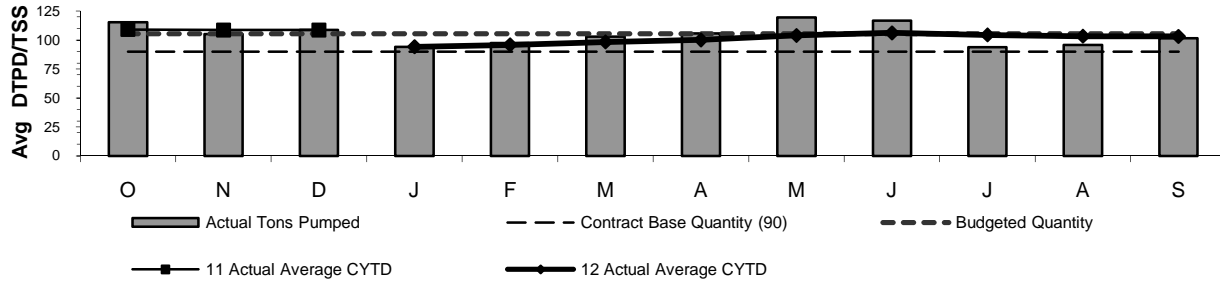
The plant met its running average flow limit for the month of September. This is the first time in ten consecutive months this permit limit was met. The DEP annual inspection was conducted in July, reviewing all aspects of plant operations, compliance, maintenance and general cleanliness of the plant. The plant received a very favorable inspection. Installation of the effluent chlorine analyzer has been completed, providing a second level of alarm for loss of chlorination (a chlorine flow alarm is also in use). The duplicate methods insure plant operators are alerted in the event of loss of chlorination during the 16 hours per day the plant is unstaffed. Low effluent chlorine levels could lead to a permit violation.

Deer Island Residuals

1st Quarter - FY13

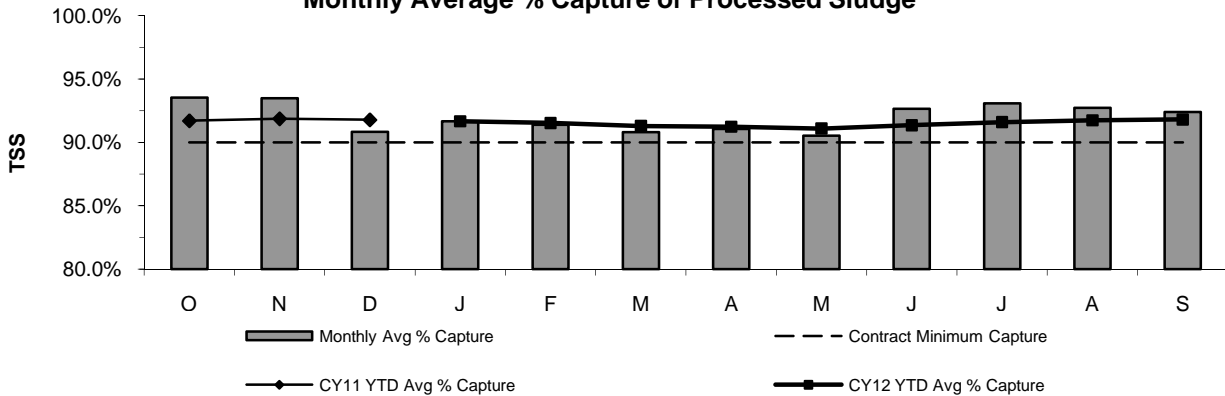
MWRA pays a fixed monthly amount for the calendar year to process up to 90 DTPD/TSS as an annual average. The monthly invoice is based on 90 DTPD/TSS (Dry Tons Per Day/Total Suspended Solids) times 365 days divided by 12 months. At the end of the year, the actual totals are calculated and additional 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 (FY13's budget is 105.7 DTPD/TSS).

Sludge Pumped From Deer Island



The average total quantity of sludge pumped in the 1st Quarter was 97.0 DTPD - lower than FY13's budget of 105.5 DTPD. The lower amount is due to lower flow and longer digestion resulting in better solids destruction.

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 solids capture rate for the 1st Quarter was 92.7%.

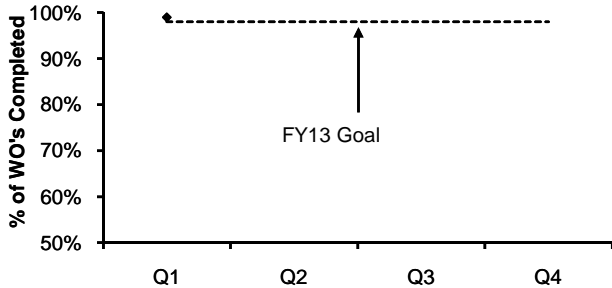
Deer Island Maintenance

1st Quarter - FY13

Productivity Initiatives

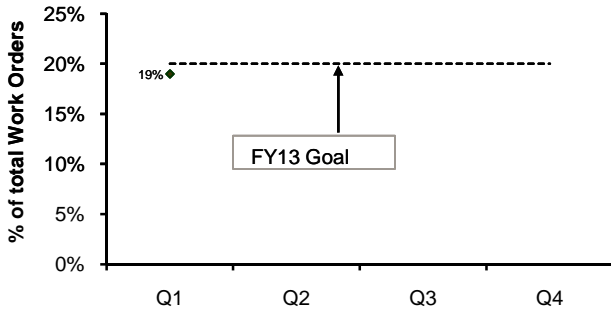
Productivity initiatives include increasing predictive maintenance tasks. Accomplishing this initiative should result in a decrease in the overall maintenance backlog.

Predictive Maintenance Compliance



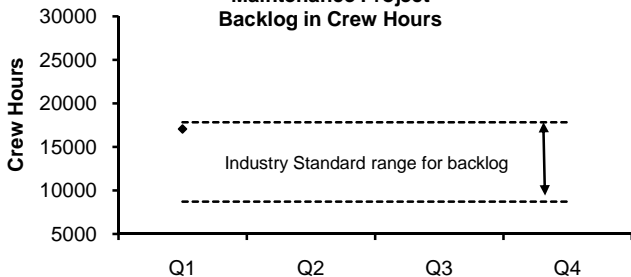
Deer Island FY13 predictive maintenance goal is 98%. DITP completed 99% of all PDM work orders this quarter. DITP is continuing with an aggressive predictive maintenance program.

Predictive Maintenance



Deer Island's FY13 predictive maintenance goal is 20% of all work orders to be predictive maintenance, up from 18% in FY12. 19% of all work orders were predictive maintenance this quarter. The industry is moving toward increasing predictive maintenance work to reduce down time and better predict when repairs are needed.

Maintenance Project Backlog in Crew Hours

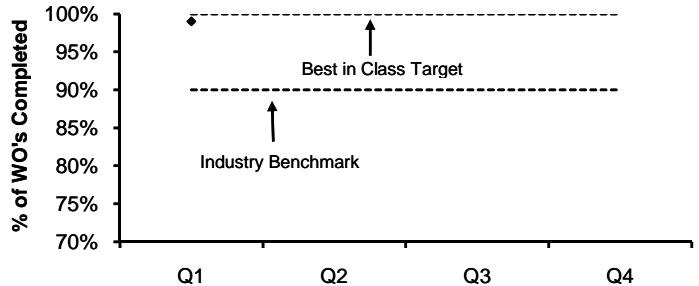


DITP's maintenance backlog at Deer Island is 17,073 hours. DITP is within, but at the upper end, of the industry average for backlog. The industry Standard for maintenance backlog with 97 staff (currently planned staffing levels) is between 8,730 hours and 17,460 hours. Backlog has been adversely effected due to eleven staff members out on I/A and medical leave. Management continues to monitor backlog and to ensure all critical systems and equipment are available.

Proactive Initiatives

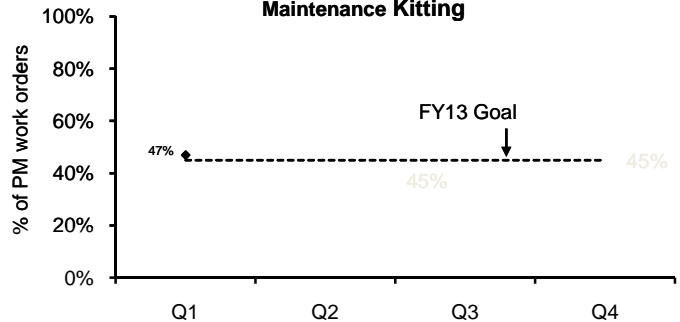
Proactive initiatives include completing 100% of all preventive maintenance tasks and increasing preventive maintenance kitting. These tasks should result in lower maintenance costs.

Preventive Maintenance Compliance



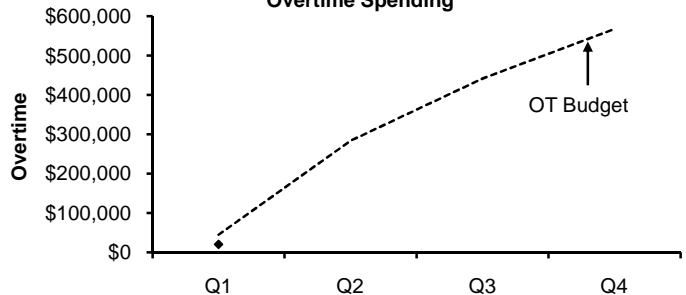
Deer Island's FY13 preventive maintenance goal is 100% completion of all PM work orders from Operations and Maintenance. DITP completed 99% of PM work orders this quarter.

Maintenance Kitting



Deer Island's FY13 maintenance kitting goal is 45% of all work orders to be kitted, up from 43% in FY12. 47% of all 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



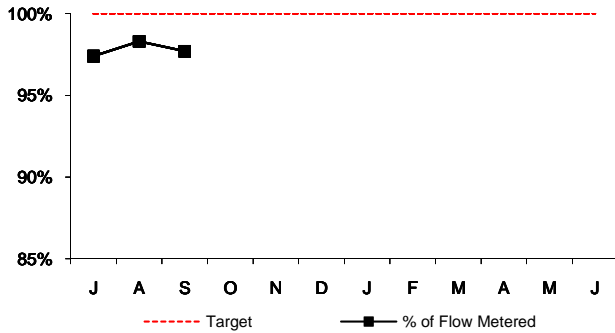
Maintenance overtime was under by \$24 K this quarter. Management continues to monitor backlog and to ensure all critical systems and equipment are available. This quarter overtime was used for storm and high flow events, removal and installation of three chillers located in Winthrop, Primary and secondary, rebuild #1 pump in South System Pump Station, repair harmonic filter in North Main Pump Station, and Electrical switching during NSTAR schedule maintenance on the main distribution system.

Operations Division Metering

1st Quarter - FY13

WATER METERS

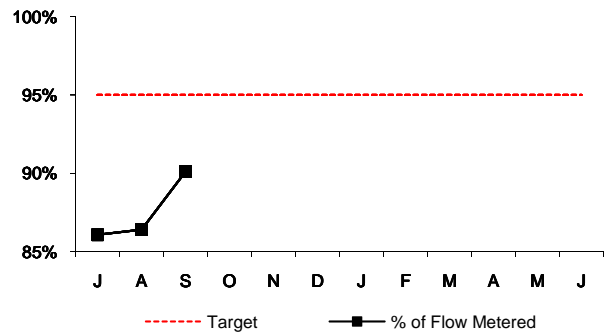
Percent of Total Revenue Water Deliveries Calculated Using Meters



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 FY13, meter actuals accounted for 98.0% of flow; only 2.0% of total revenue water deliveries were estimated. The following is the breakdown of estimations:
 In-house and Capital Construction Projects - 1.0%
 Instrumentation Failure - 1.0%

WASTEWATER METERS

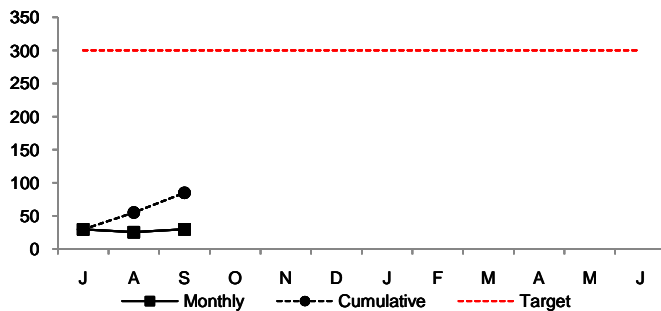
Percent of Total Wastewater Transport Calculated Using Meters



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 FY13, meter actuals accounted for 87.5% of flow; 12.5% of wastewater transport was estimated, of which, 7.14% was attributable to one meter BO-MI -1. This meter was producing valid depths and was estimated using Mannings Equation. Staff increased maintenance at site to reduce estimations. Diver installed new meter on 10/9/2012.

WATER DISTRIBUTION SYSTEM PIPELINES

Miles Surveyed for Leaks



During the 1st Quarter of FY13, 89.41 miles of water mains were inspected.

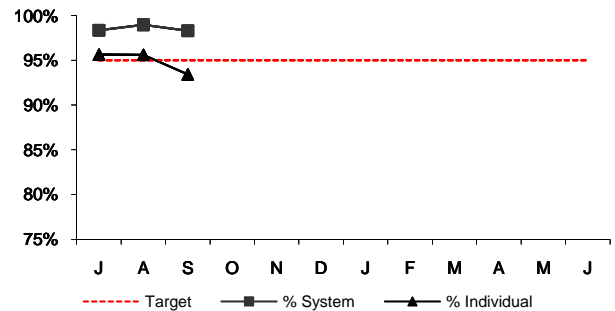
Water Distribution System

Month	J	A	S	O	N	D	J	F	M	A	M	J
Leaks Detected	2	2	1									
Leaks Repaired	2	1	2									
Backlog	0	1	0									
Avg. Lag Time	1.0	2.3	3.0									

During the 1st Quarter of FY13, five leaks were detected. All leaks with the exception of Blue Hill Avenue in Dorchester were repaired within one day. The leak at Blue Hill Avenue, originally detected on August 26, 2012 was repaired on September 6, 2012. For the 1st Q of FY13 all leaks have been repaired.

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

% Wastewater Meter Uptime



During the 1st Quarter of FY13, out of a possible 1,610,400 data points, only 23,528 points were missed resulting in a system-wide up time of 98.5%. Of the 182.3 revenue meters installed, on average 9.3 meters/mth. experienced down time greater than the 5% target resulting in a 94.9% individual meter uptime. For the 1st Quarter of FY13, down time for an individual meter is defined by any individual meter having on average less than 2796.7 data points out of a potential 2,944 data points.

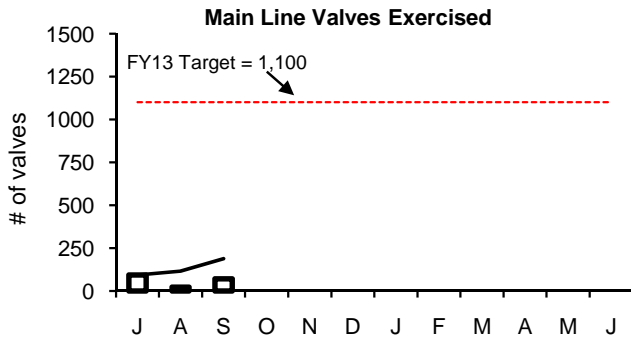
Water Distribution System Valves

1st Quarter - FY 13

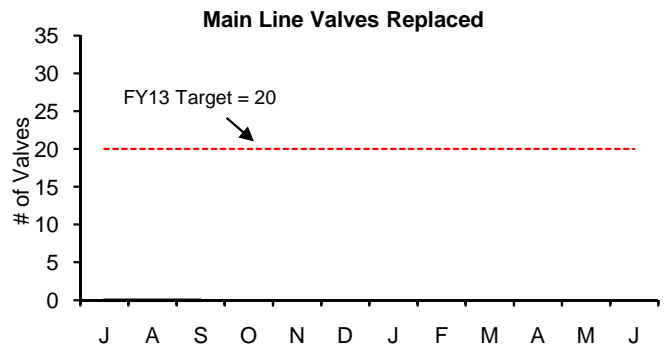
Background

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.

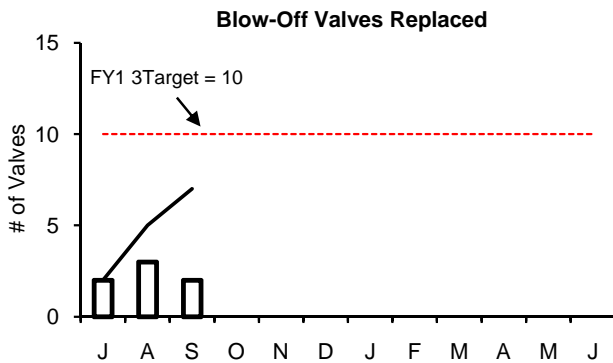
Type of Valve	Inventory #	Operable Percentage	
		FY13 to Date	FY13 Targets
Main Line Valves	2,092	97.3%	92%
Blow-Off Valves	1,206	95.2%	94%
Air Release Valves	1,335	93.0%	92%
Control Valves	48	100.0%	95%



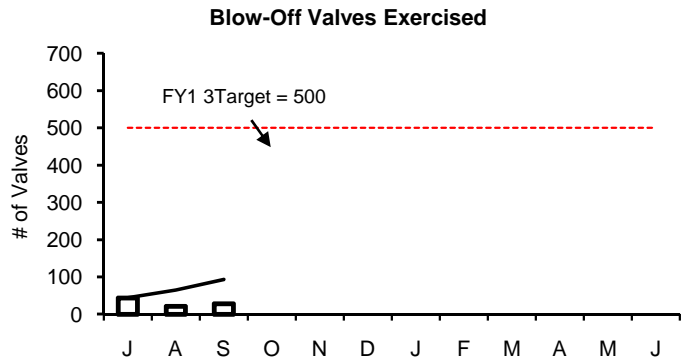
During Q1 of FY13, staff exercised only 189 main line valves due to emergency support, including but not limited to, emergency disinfection in Bedford, water quality issues at Fells Covered Storage, as well as contractor support for water main shutdowns, flushings, etc.



During Q1 of FY13, staff replaced zero main line valves due to high water demands during the Summer months.



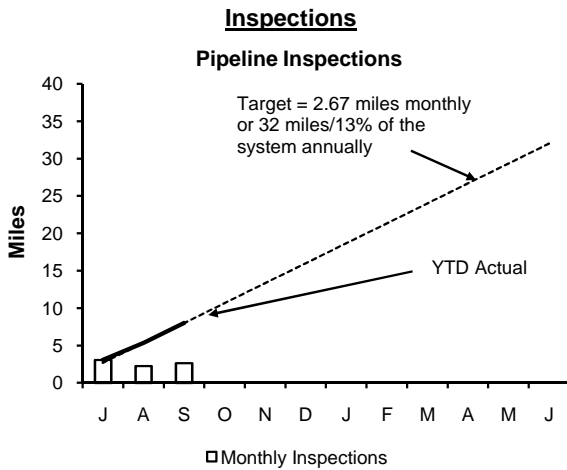
During Q1 of FY13, staff replaced seven blow off valves.



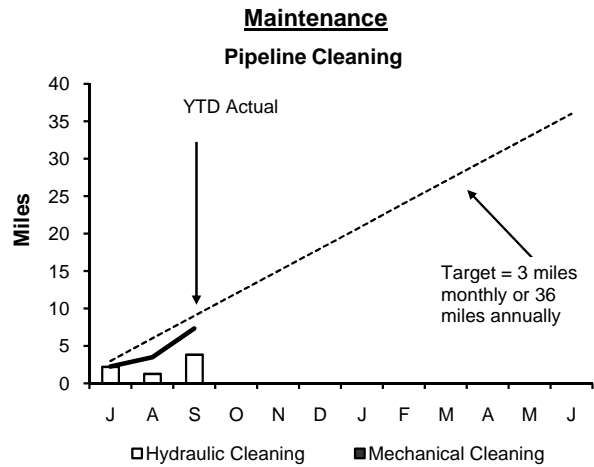
During Q1 of FY13, staff exercised 93 blow-off valves .

Wastewater Pipeline and Structure Inspections and Maintenance

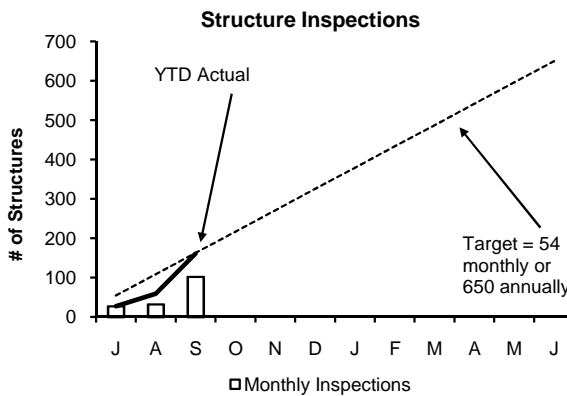
1st Quarter - FY 13



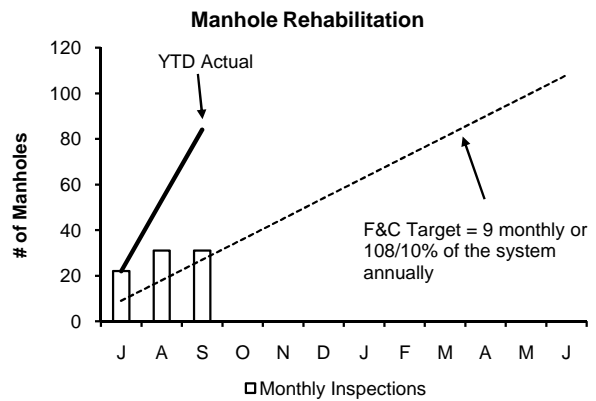
Staff internally inspected 7.99 miles of MWRA sewer pipeline during the first quarter. Community Assistance was provided to the city of Somerville, 1.37 miles and the town of Arlington, 0.56 miles this quarter.



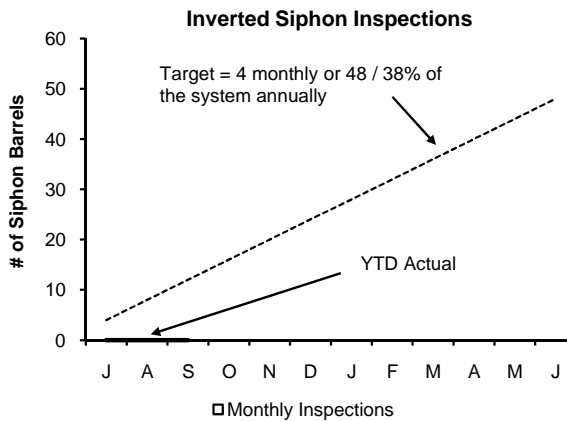
Staff cleaned 7.31 miles of MWRA's sewer system and removed 43 yards of grit and debris during the first quarter. Community Assistance was provided to the city of Everett, staff by-pass pumped a collapsed drain culvert that was causing street flooding.



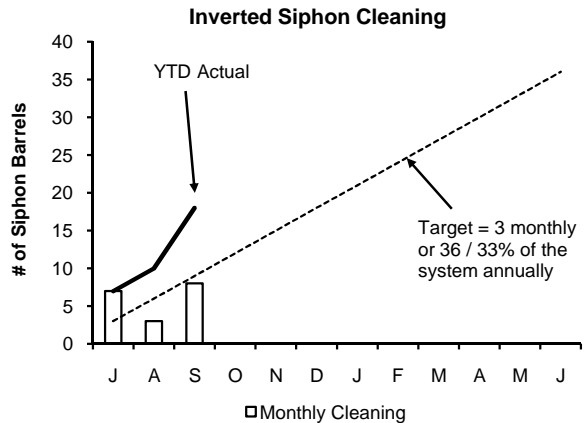
Staff inspected the 36 CSO structures and performed 125 additional manhole/structure inspections during the first quarter.



Staff replaced 84 frames & covers during the first quarter.



Staff did not inspect any siphon barrels during the first quarter. During this quarter, the inspection crew focused more heavily on manhole and sewer inspections.



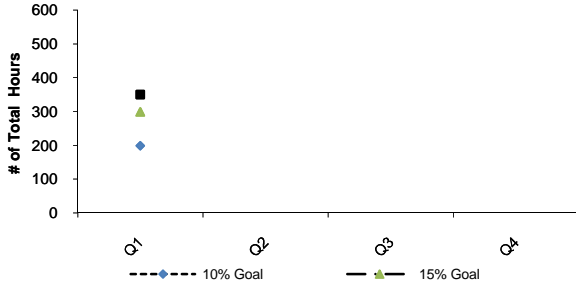
During the first quarter, staff cleaned 18 siphon barrels.

Field Operations' Metropolitan Equipment & Facility Maintenance

1st Quarter - FY13

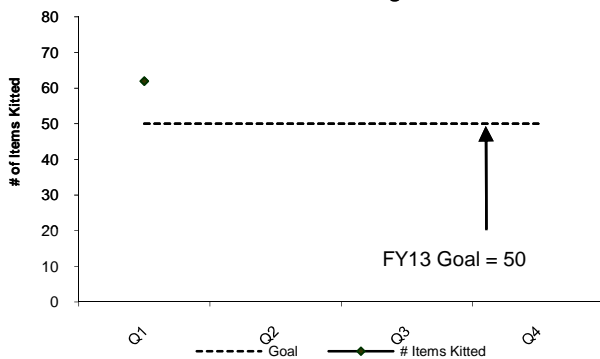
Staff are continuing with several maintenance and productivity initiatives; The Operator PM and kitting initiatives frees up maintenance staff to perform corrective maintenance and project work, thus reducing maintenance spending. Backlog and overtime metrics monitor the success of these maintenance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

Operations Light Maintenance PM Hours



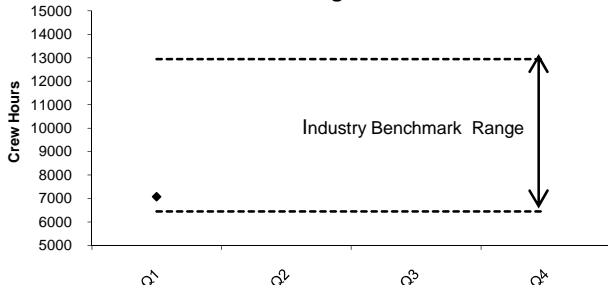
Operations staff averaged 350 hours of preventive maintenance during the 1st Quarter, an average of 18% of the total PM hours for the 1st Quarter, which is above the industry benchmark of 10% to 15%.

Items Kitted Utilizing Maximo



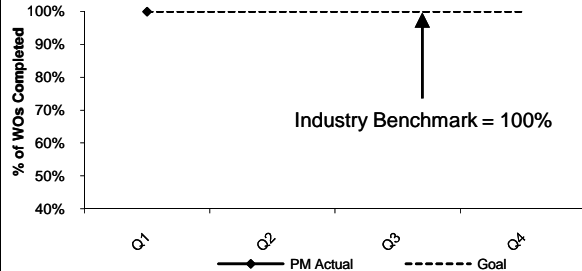
In an effort to more efficiently complete work, maintenance staff and work coordination staff have utilized the Lawson/Maximo interface to better kit stock and non stock material. The goal for FY13 is to "kit" 50 stock and non stock items total per month. An average of 62 items were kitted during the 1st Quarter

Maintenance Backlog in Crew Hours



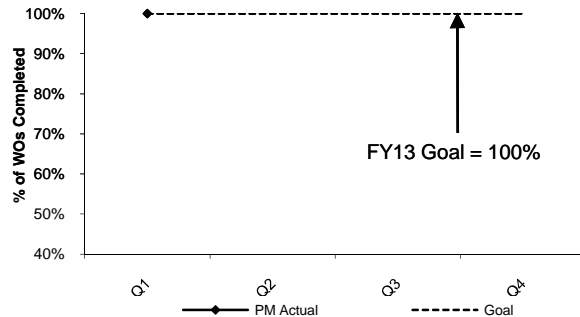
The 1st Quarter backlog average is 7077 hours. Management's goal is to continue to control overtime and still stay within the industry benchmark of 6450 to 12,940 hours. There are currently 2 vacant positions: a facility specialist and an electrician.

Overall Preventive Maintenance



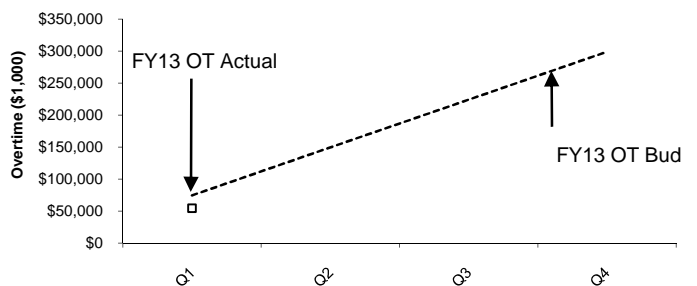
The Field Operations Department (FOD) preventive maintenance goal for FY13 is 100% of all PM work orders. Staff completed an average of 100% of all PM work orders in the 1st Quarter.

Operations Light Maintenance % PM Completion



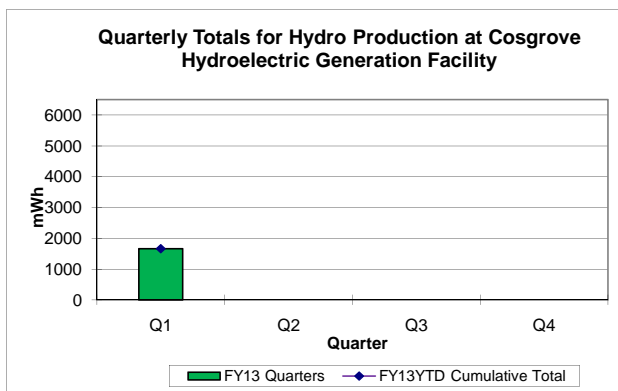
Wastewater Operators complete light maintenance PM's which frees up maintenance staff to perform corrective maintenance. Operations' FY13 PM goal is completion of 100% of all PM work orders assigned. Operations completed an average of 100% of PM work orders in the 1st Quarter.

Overtime Spending

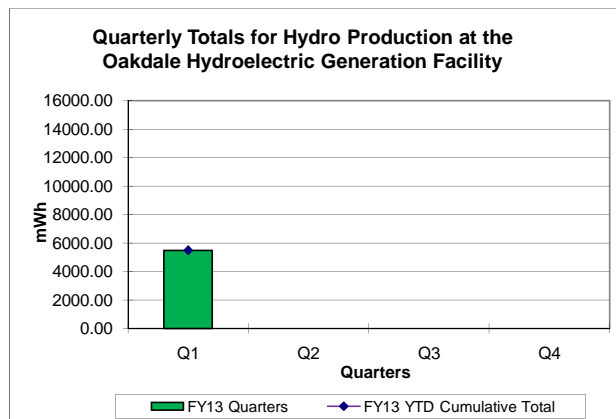


Maintenance overtime was \$20k under budget for the 1st Quarter. Overtime was used for Chelsea Administration Building improvements and electrical testing at various facilities as well as emergency repairs and wet weather coverage.

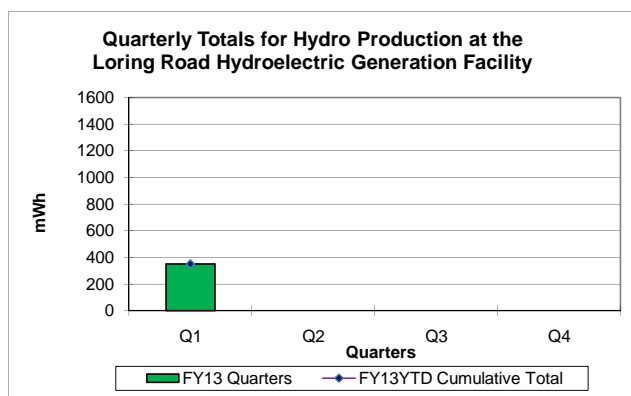
Field Operations Hydroelectric Generation Quarterly Report 1st Quarter - FY13



In the 1st Quarter, the **Cosgrove Hydroelectric Station** generated a net of 1664 MWh; approximately 13% more power than was generated during the same quarter in FY12, due to higher water demands. The revenue generated at Cosgrove in the first quarter was \$71,586 exclusive of Renewable Energy Certificates.



In the 1st Quarter, the **Oakdale Hydroelectric Station** generated a net of 5489 MWh; approximately 35% more power than was generated during the same quarter in FY12, due to large transfers from Quabbin as a result of higher water demands. The revenue generated at Oakdale in the first quarter was \$239,448 (Power is generated when water is



In the 1st Quarter, the **Loring Road** hydroelectric 200 kW station generated 351 MWh; approximately 8% less power than was generated during the same quarter in FY12. Power is generated as water conveyed from Norumbega to the Loring Road storage tanks is reduced in pressure and the energy available in this pressure reduction is captured by the new turbine. The facility operates continuously. Some power is consumed on site, with the bulk exported to the grid.

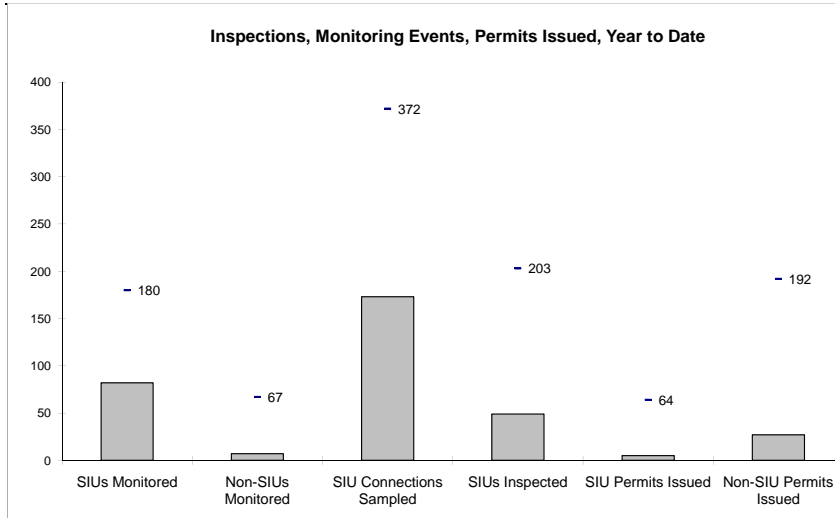
Southborough: Based on the energy audit of the Southborough facility, an energy management system is being installed at the Southborough Facility. NSTAR has committed to providing a \$30,000 incentive to this project based on the projected energy savings. This project falls under the requirements of the Green Communities Act since it would be under \$100,000. The work began in September 2012.

Chelsea Facility: The detailed energy audit of the Chelsea facility recommended installing an Energy Management System for the Admin. Building along with some equipment updates. This project was completed during the first quarter of FY13. NSTAR will be providing a \$168,000 rebate to MWRA for the installation of the EMS.

Energy Audits and Implementation of Audit Recommendations at FOD Facilities: MWRA staff identified multiple facilities that would benefit from a comprehensive energy audit. Audits of 24 facilities were performed in two phases from FY10 through the first quarter of FY12. The focus of these energy audits were lighting, HVAC, pumps, and motors. Implementation of the audit recommendations began at the end of the 1st Quarter of FY11 and are on-going. VFDS on the HVAC systems and scrubber pumps at Ward Street and Columbus Park Headworks were installed during the 4th quarter of FY12. Energy efficient lighting was installed at Prison Point during the fourth quarter also. Audits of an additional 6 facilities began in the second quarter of FY12 and are on-going. Implementation of some of the audit recommendations will begin in the second quarter of FY13.

Toxic Reduction and Control

1st Quarter - FY 2013



EPA Required SIU Monitoring Events for FY13: 180
YTD: **82**

Required Non-SIU Monitoring Events for FY13: 67
YTD: **7**

SIU Connections to be Sampled For FY13: 372
YTD: **173**

EPA Required SIU Inspections for FY13: 203
YTD: **49**

SIU Permits due to Expire In FY13: 64
YTD: **5**

Non-SIU Permits due to Expire for FY13: 192
YTD: **27**

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.

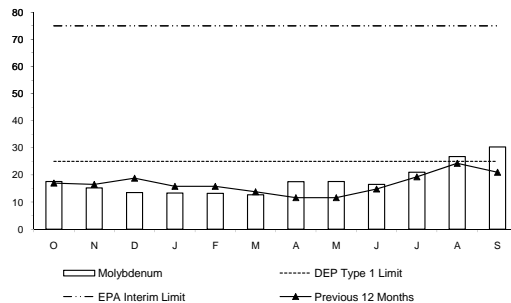
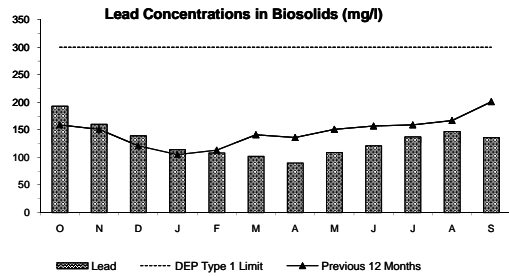
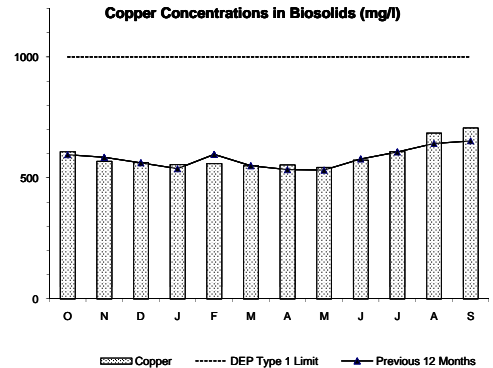
TRAC's annual monitoring and inspection goals are set at the beginning of each fiscal year but they can fluctuate due to the actual number of SIUs at any given time. During the course of the year, some SIUs do not discharge and cannot be monitored. TRAC also monitors one-third of the non-SIUs each year.

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
Jul	2	8	0	0	0	0	2	8
Aug*	1	9	1	0	0	0	2	9
Sep	1	8	0	1	0	1	1	10
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	80%	93%	20%	4%	0%	4%	5	27

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 August, one SIU permit was issued more than 120 days after receipt of its application; the complex permit required coordination with EPA and DEP. In September, one non-SIU permit was delayed while awaiting payment and the other was delayed while the appropriate permit conditions were established. *In August, TRAC also issued 106 Group Permits to Photodevelopers and Printers and 9 Combined Permits to facilities with low flows and photo-developing or printing operations.

Copper, lead, and molybdenum are metals of concern for MWRA as their concentrations in its biosolids have, at times, exceeded regulatory standards for unrestricted use as fertilizer. Cooling tower usage typically causes a seasonal spike in molybdenum concentrations due to the blowdown on large AC systems that use corrosion inhibitors containing molybdenum. Levels drop again following the end of the cooling season. The hotter the season, the higher the spike. TRAC has an ongoing program to persuade cooling tower operators to switch to phosphate-based corrosion inhibitors. In August, levels of molybdenum exceeded the DEP Type 1 Limit due to the warmer weather. MWRA's contractor (NEFCO) did not distribute product in Massachusetts between August and September, due to molybdenum concentration, under its approval of suitability.



Field Operations Highlights

1st Quarter – FY13

Western Water Operations and Maintenance

- Hultman Aqueduct: Staff isolated and dewatered the aqueduct between Valve Chambers E-3 and L-2 to support contractor repairs of a failed joint just west of L-2. Once the joint was welded, the area was spray disinfected, the line filled and placed back into service.
- Chicopee Valley Aqueduct: Staff made repairs to the access road, culverts and headwalls in the area around Shea Avenue in Belchertown to improve drainage and allow for better vehicle access to three air valves. The work was reviewed by the local conservation commission.
- Canton: Operations Staff set up and ran mobile disinfection to support the town while addressing local positive coliform test results.
- Wachusett Reservoir: Staff applied copper sulfate to the reservoir to treat for *Chryso-sphaerella* three times during the quarter. Also, staff supported the Federal Energy Regulatory Commission (FERC) inspection of the hydro turbines at the Cosgrove and Oakdale Power Stations.
- MWWST: Staff supported the Hultman Aqueduct Interconnections Contractor while replacing the actuators on two 120- inch butterfly valves and one 96-inch butterfly valve in Valve Chamber 5A-1.

Metro Water Operations & Maintenance

- Bedford Water Quality Issue: Metro Operations, Quality Assurance, and Planning Staff met repeatedly with Bedford and DEP staff to assist in resolution of water quality issues within the town's water system. On July 23, MWRA staff assisted the town with the booster chlorination of their Crosby Drive Tank. Assistance to Bedford that began in July continued through the month of August. Metro Operations staff deployed and staffed the Mobile Disinfection Unit (MDU) at several locations through the month of August. Staff also assisted with hydrant flow testing to determine actual flushing flow rates.
- Fells Covered Storage Facility: The chlorine residual in the Fells tank started dropping towards 1.0 mg/l in late August, and by early September, had dropped below 1.0 mg/l. The nitrate levels in the tank rose as the chlorine residual dropped. Cell 3 (10 million gallons) was isolated, drained, and received a chlorine boost. The water quality in Cell 3 returned to normal (good chlorine residual and low nitrate levels) once it was returned to service. Cell 3 was returned to service mid month, and then Cells 1 and 2 (5 million gallons each) were drained, disinfected, and then returned to service in early October. Water supply in the Fells service area remained normal throughout the operation.
- Waltham PRV Operation/WASM Isolation: Isolation of WASM 3 and 4 to allow work on the Hultman Rehabilitation Project valve replacements on River Road in Weston, required that several Pressure Reducing Valves (PRVs) be activated in the Waltham water system to replicate supply from the city's Cedarwood Pump Station and Meter 131 normally supplied from WASM 3. The PRV will remain in operation until a new valve is installed to replace an existing valve on WASM 3 at River Road (Expected mid- October). Service remains normal in the Waltham system, although one PRV requires pressure adjustments for week-day and week-end demand variations.
- Valve Program: Preventative maintenance (PM) tasks included Main Line Valve Exercising, PRV maintenance and fire flow bypass valve maintenance. The portable water fountain was deployed on several occasions. Specific project work included the replacement of a valve actuator at the Gillis Pump Station to allow for the eventual gravity operation of the Fells Covered Storage Facility, isolation and reactivation of the 8-inch Lynnfield pipeline for the CIP contractor; assistance to Woburn with the isolation of their Meter 230 so the city could replace their existing Pressure Reducing Valve, the MDU deployment in Bedford noted above (staffing the MDU, measuring chlorine residuals from hydrants, assisting town staff with flushing, and shuttling sodium hypochlorite to the various MDU deployment sites), and assisting Waltham Water Department Staff with the activation of the city's Lunda Street PRV for testing. Section 72 on Route 1 in Saugus was isolated mid September to allow for the Phase 7 Valve Replacement contractor to install a new valve on Kennedy Drive in Malden. The valves that needed to be operated were located on Route 1 which required extensive coordination with Mass DOT, and extensive traffic safety operations by MWRA staff (valve and pipeline staff). The work was safely performed on Route 1 and the isolation was successfully completed.
- Water Pipeline Program: Work on Deer Island was completed with the replacement of two fire hydrants and three valves. Seven blow-off retrofits were completed during the quarter. Several leaks were dealt with during the quarter. Section 70 on the Lynn Fells Parkway in Saugus had to be briefly isolated to plug a leak on July 2. A leak on Morton Street in Dorchester was plugged with the line live and in service. Section 56 on the General Edwards Bridge between Revere and Lynn was successfully repaired. A second leak had been identified on the run from the tower to the vertical riser shaft of the piping on the bridge. Disinfection and reactivation are planned for next quarter. A leak on Second Street in Everett on September 12 was first believed to be on the Everett water system but was finally determined to be on Section 8, a 42" cast iron MWRA water main. The leak was repaired with the line live and in service by installing a bell joint clamp on the leaking joint. A 4-inch gas main was discovered perpendicular to our pipe, and lying directly on top of it, and gas company has been directed to relocate it. Numerous vandalized and damaged cathodic protection test stations that span the length of Yirell Beach in Winthrop along Shirley Street on Section 98 were restored to their original condition and new security plates installed.
- Dig Safe Pilot Program: The Dig Safe Pilot Program continues to function successfully. Brookline, Chelsea and Saugus are included in the program that is related to MWRA water pipelines. During the first quarter, MWRA received 559 notices, of which 94 were of an emergency nature. Twenty-seven (27) emergency mark outs and 71 regular mark outs were required from the 559 total notices.
- Leak Detection: 84.91 miles of the Metropolitan water system piping was surveyed for leaks during the quarter. No leaks were found as a result of the survey work.

Wastewater Operations & Maintenance

- Marginal Street Oil Tank Fire: On July 23, 2012, Wastewater Operations staff worked with the Chelsea Fire Department and DEP during a fire in determining if any possible water/foam runoff from the site may have entered the sewer system. MWRA facilities downstream from this area's sewer infrastructure were notified and conditions monitored by staff. No hazardous impacts were experienced.
- Underground Storage Tank (UST) Class C Operator Training: Operations Staff participated in a EPA mandated UST Training. Staff were provided facility photographic overviews of the underground oil tank configurations, the emergency fuel pump shut-off locations and a review of response actions. Spill Prevention Control and Countermeasures (SPCC) Refresher Training: Operations completed the Biannual SPCC Refresher Training to provide staff with necessary information regarding oil spill or release detection and the related prevention and response. Annual Right-to-Know (RTK) Training: Staff completed RTK training on chemical classifications, labeling and related Material Safety Data Sheets (MSDS), and related personal safety protections as required by MA State and Federal regulations.
- NSTAR Electric Utility Repairs Impacting Prison Point: On two (2) separate occasions, Authority Operations & Maintenance Staff coordinated back-up power supply for Prison Point due to emergency repairs on NSTAR power lines outside the facility boundaries. This required staff, with NSTAR personnel, to install a portable electric generator and connections in order to maintain electricity supply to operate the facility.
- Spill Prevention Control and Countermeasures (SPCC) Inspections: Operations performed SPCC Inspections at Cottage Farm CSO, Prison Point CSO and Braintree Weymouth Pump Station. The DEP requires inspections to be performed monthly with records placed onsite.
- MWR010 Cleaning Project: Cleaning of the MWR010 outfall in preparation its future use by Brookline to convey storm water is substantially complete. Inspection indicates that it is structurally sound. The site has been fully restored to the satisfaction of MWRA and Boston University.

Toxics Reduction and Control

- Settlement Agreement between Environmental Compliance Corporation (ECC) and MWRA: TRAC and ECC entered into a Settlement Agreement, effective July 11, 2012 to resolve all issues related to the March 13, 2012 Penalty Assessment Notice (PAN). The PAN, for \$58,100 resulted from ECC's discharge of excessive levels of arsenic, antimony, vanadium, chloroform, copper, formaldehyde and Total Toxic Organics into the MWRA's sanitary sewer system after the September 28, 2010 compliance deadline. The Settlement Agreement requires ECC to pay a \$43,000.00 administrative penalty and pay stipulated penalties for a year. ECC returned to compliance with its permit.
- G1 Penalties: On July 17, 2012, TRAC issued 4 Penalty Assessment Notices (PANs), totaling \$2,825 to companies that failed to submit the annual Compliance Report or annual silver sample result as required by the Group Permit for Photo Processing and Printing Operations by April 2, 2012. The penalty amounts ranged from \$275 to \$1,000.
- Permitting: On August 16, 2012, TRAC renewed 106 Group Permits for Photo-Developers and Printers, and 9 Combined Permits, which cover operations from low-flow/low-pollutant facilities that also have photo developing and/or printing operations for five years. In 2007 there were 318 of these type permits. This type of operation has seen a steep decline with the increase in digital photography and x-rays.

Metro Equipment and Facility Maintenance

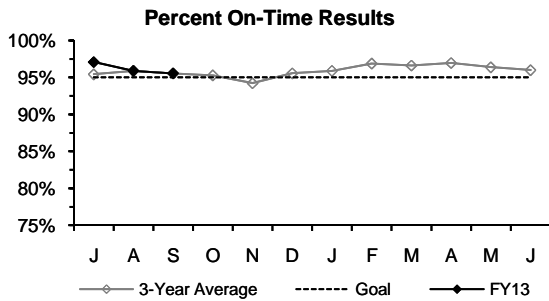
- Ward Street Channel #2: As part of the Equipment Maintenance Channel Rebuild Program, Ward Street Headworks Channel #2 was rebuilt, including the removal and replacement of channel flights, chain, wear strips, sprockets and bearings by Mechanical and Welding staff.
- Chelsea Headworks: Mechanical staff installed new grit screws and bearings in Channel#2 to replace ones which were worn and beyond their useful life. Odor Control Intake Fan Motor #, which is located on the roof, experienced a bearing failure. Replacement by Mechanical, HVAC and Electrical Staff required a crane rental.
- Nut Island: The #2 Screening Conveyor was rebuilt with new drums, shafts, rollers and bearings. The #3 grit belt, which was worn and coming apart at a seam was replaced along with new bearings, repaired shafts, drums, and rollers. Classifier #6 Screw and Trough were worn and beyond useful life, and the trough had developed a hole because of wear. MWRA Machinist and Welder rebuilt the existing trough, and installed a new screw.
- Columbus Park/Chelsea Headworks: Operations Staff recorded ultra sonic thickness readings of grit pipe in both facilities. MWRA Plumbers replaced all piping which did not meet minimum thickness requirements.

Operations Support

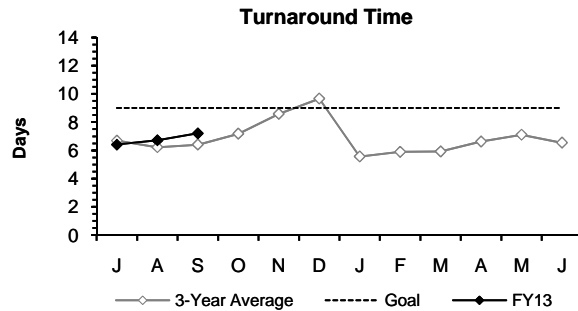
- Review of Metering Wastewater Benefit/Cost Analyses: Staff have begun reviewing where updating may be necessary for community flow formulas to reflect changed local system conditions. The issue was presented initially at the September Advisory Board meeting. Further Advisory Board Operations Committee Meetings are planned to allow input before implementation.
- Online Water Quality Monitoring: Twelve of the distribution water quality monitoring analyzer units have been installed and made operational via SCADA through the 1st Quarter and several more are in progress. Central data collection equipment and its associated server installation are operational. Verizon connections now being available for 7 of the 11 sites. Response SOPs are being developed for alarm response. Planned startup of alarm monitoring is late 2012 to allow for establishing enough performance data for alarm setting.

Laboratory Services

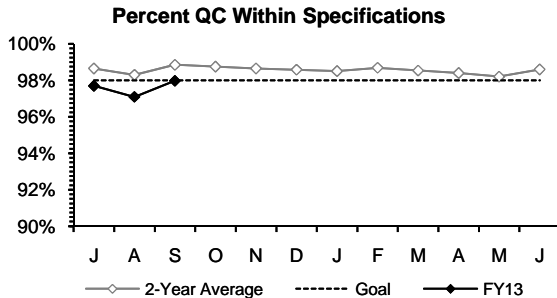
1st Quarter - FY13



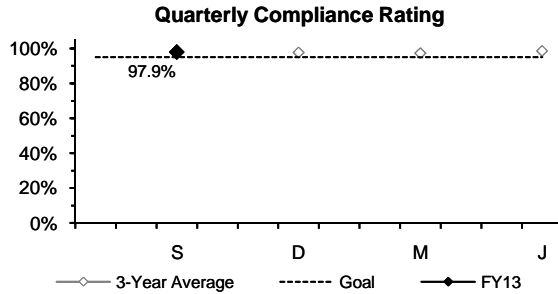
The Percent On-Time measurement exceeded the 95% goal each month this quarter.



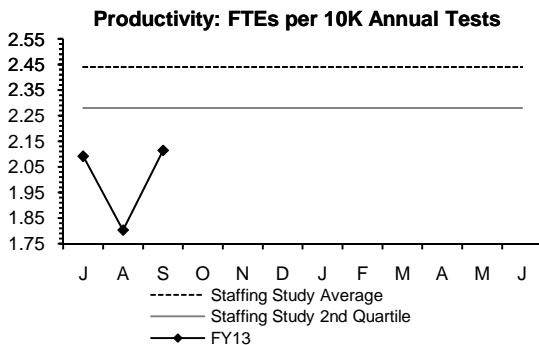
Turnaround Time was faster than the 9-day goal each month this quarter.



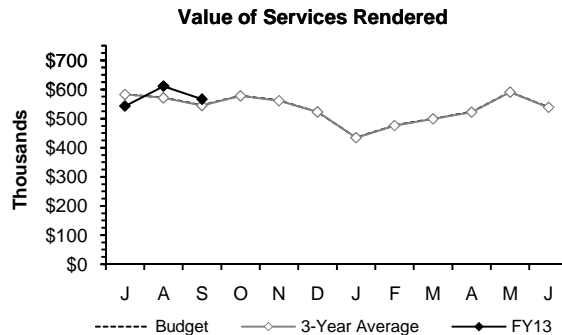
Percent of QC tests meeting specifications was below the 98% goal two months of the quarter due to difficult fish tissue tests.



An audit of SOPs found good compliance with requirements. Compliance audits are performed in September, December, March, and June.



This new productivity metric is based on the recent Staffing Study. Lower values indicate higher productivity because fewer Full Time Equivalents are needed to perform the same number of tests.



Value of Services Rendered was above the seasonally adjusted budget projection two months of the quarter.

Highlights: The on-site construction work to replace six chemical fume hoods used to prepare samples for metals testing at the Central Lab was completed in July. The new fume hoods and the lab's casework are made of polypropylene plastic to prevent samples to be tested for metals from getting contaminated in the lab.

Productivity: A new productivity metric has been added to the Laboratory Services page. Based on the recent Staffing Study the metric of Full Time Equivalents needed to perform 10,000 annual tests shows that MWRA is more productive than over half of the comparable agencies. In this metric lower values indicate higher productivity because fewer FTEs are needed to perform the same number of tests. So far in FY13 we have been more productive than the second quartile level.

Quality Assurance: The final audit report from DEP on the May Central Lab audit acknowledged that the several minor items identified in the audit had been adequately addressed.

Clinton: Beginning in September all quality control test results are being entered into LIMS. This allows the results to be automatically checked against quality control goals and to observe trends over time.

ENQUAD: Completed testing of special Boston Harbor and Mass Bay nutrients samples collected for Red Tide investigations. Tested background mussel samples and flounder samples for Harbor and Outfall Monitoring (HOM).

TRAC: Tested rush samples from a pump station.

Wastewater Operations: Performed rush testing for Brookline Conduit project.

Water Quality Assurance: Performed extra bacteria testing to assist Bedford. Tested special nitrification samples for Canton and complaint samples from Revere, Waltham, Weston, and Winthrop. Tested special school lead and copper samples for Revere. The use of Colilert for testing Total Coliform Rule samples began in January. For the first nine months there were no E. coli positive and only 277 Total Coliform positive sample out of 19,061 samples. Many of the positive samples were from Bedford.

Outside Customers: Beach testing continued for the DCR Boston Harbor, Revere and Winthrop beaches and has now ended for the season.

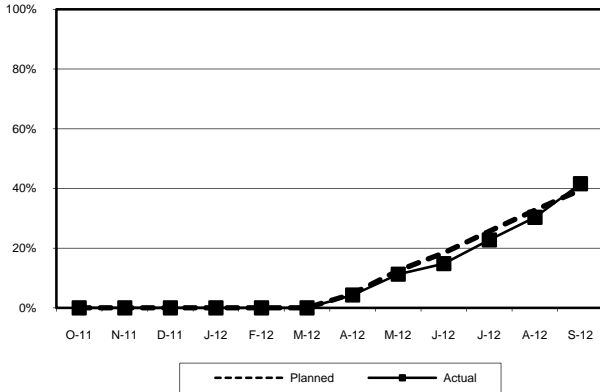
CONSTRUCTION PROGRAMS

Projects In Construction

1ST Quarter- FY13

(Progress Percentages based on Construction Expenditures)

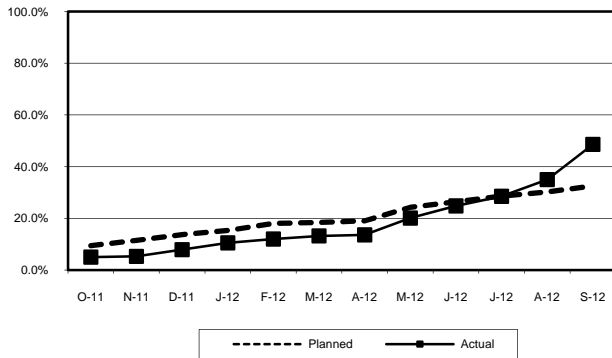
Hultman Aqueduct Interconnection CP-6B
Progress – September 2012



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

Status and Issues: As of September, the Contractor began the fit up and welding of the closure piece at Sta 70+02, installed a valve at the Hosmer Pump Station and continued the selective demolition of large diameter valves and the replacement of small diameter piping and valves.

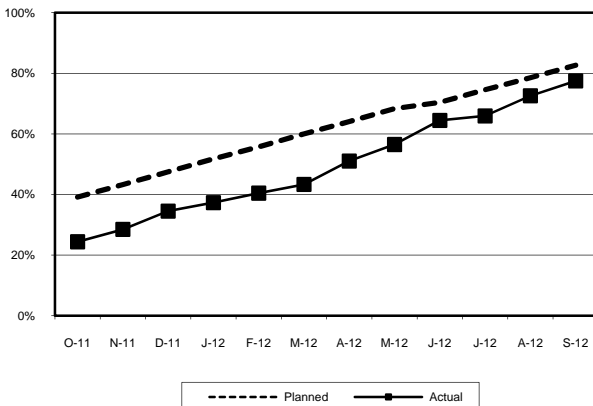
UV Disinfection Facilities CWTP
Progress – September 2012



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

Status and Issues: The Contractor completed the installation of the embedded conduits and placed concrete topping slab for the electrical building on the A side and also continued with installing conduits inside the topping slab of the UV room, B side. Completed the placement of all internal baffle wall concrete. Continued with rebar, formwork and concrete for B side roof slab. Set bridge crane on A side.

Lynnfield/Saugus Pipelines
Progress - September 2012



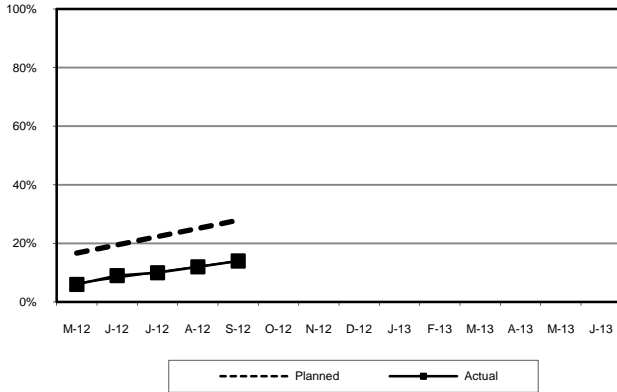
Project Summary: Installation of MWRA water mains including 1,800 linear feet of 36-inch pipe and 4,700 feet of 24-inch pipe. Project also includes 6,000 linear feet of 12-inch pipeline for the Town of Saugus. Pipeline construction is located along Route 1 in Saugus.

Status and Issues: Through September, the Contractor installed 495.25 LF of 12-inch and 941.50 LF of 36-inch water main on Route 1 Northbound and completed the tie in of the new 12-inch main into the existing main at Spring Street and Ila Road. Also, they installed 3 new service connections on Route 1 Southbound.

Projects In Construction 1ST Quarter- FY13

(Progress Percentages based on Construction Expenditures)

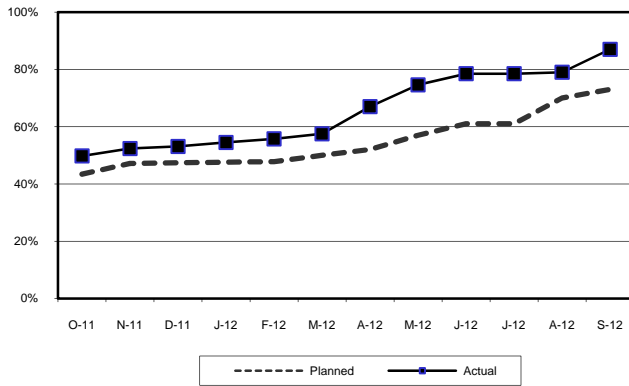
Spot Pond Water Storage Facility
Progress – September 2012



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

Status and Issues: During September, the Contractor completed the Phase 3 excavation to elevation 180, and began the Phase 4 excavation to elevation 160. In addition, they conducted test blasting, after which daily blasting at 10 am and at 2 pm began.

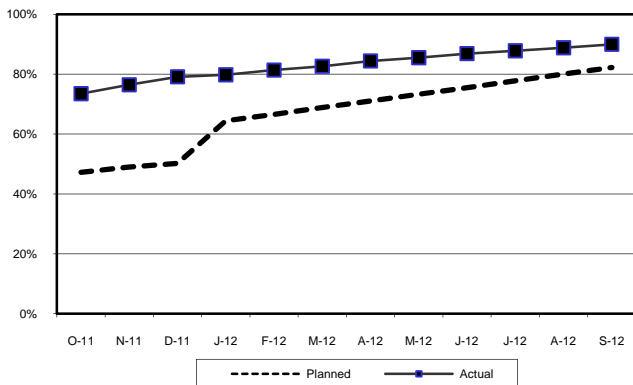
Phase 7 Valve Replacement
Progress – September 2012



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

Status and Issues: During September, the Contractor excavated and removed the 36-inch water line at Kennedy Drive, Malden and set two lengths of 36-inch water main. In addition, they formed, erected steel and placed concrete for the thrust block.

Hultman Aqueduct Interconnections Project
Progress - September 2012



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

Status and Issues: As of September, the Contractor poured a protective concrete slab over the waterproofing membrane on the roof of VC-5A-2 and replaced the MWWST valve actuators at VC-5A-1. In addition, the trench over valve W-5 at Loring Road and the temporary by-pass road on River Road were paved. Contractor prepared for River Rd. work to start on October 1st.

CSO CONTROL PROGRAM

1st Quarter - FY13

The City of Cambridge issued notice to proceed with construction of the first of its three remaining CAM004 (Alewife Brook) sewer separation contracts effective September 29, 2012, in compliance with Schedule Seven. As reported last quarter, 29 of the 35 projects in MWRA's Long-Term CSO Control Plan are complete and 4 CSO projects are in construction. In March 2012, MWRA commenced design of the remaining two projects – Outfall MWR003 Gate and Floatables Control/Rindge Ave. Siphon Relief and Outfall SOM01A Interceptor Connection Relief and Floatables Control – both related to Alewife Brook. Progress of work to complete the CSO plan is described below.

Project	Court Milestones in Schedule Seven (Shaded milestones are complete.)			Status as of September 30, 2012															
	Commence Design	Commence Construction	Complete Construction																
Brookline Sewer Separation	Nov 06	Nov 08	Jul 13	<p>The \$26.0 million Brookline sewer separation project comprises three construction contracts. All work is scheduled to be complete by July 2013, in compliance with Schedule Seven.</p> <p><u>Town of Brookline Sewer Separation Phase 1</u> Brookline attained substantial completion of its \$1.4 million first construction contract in January 2010. The contract involved the installation of 5,658 linear feet of new storm drain.</p> <p><u>Town of Brookline Sewer Separation Phase 2</u> The \$16.6 million second construction contract, which Brookline commenced in January 2011, is approximately 80% complete. This contract involves the installation of 3,790 linear feet of storm drain and 1,290 linear feet of sanitary sewer by open trench method and 4,550 linear feet of sanitary sewer by micro-tunneling. Brookline expects the sewer separation work to be complete by February 2013, ahead of the July 2013 milestone in Schedule Seven. Surface restoration activities will continue into the spring of 2013.</p> <p><u>MWRA Outfall MWR010 Cleaning Contract</u> MWRA issued the Certificate of Substantial Completion effective August 31, 2012.</p>															
Reserved Channel Sewer Separation	Jul 06	May 09	Dec 15	<p>BWSC continues to make construction progress with five of nine planned contracts for the \$64.3 million Reserved Channel Sewer Separation project.</p> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 60%;">Contract 1 - CSO outfall rehab</td> <td style="width: 15%;">\$ 4.2M</td> <td style="width: 25%;">Complete</td> </tr> <tr> <td>Contract 2 – sewer separation</td> <td>\$ 7.0M</td> <td>Complete</td> </tr> <tr> <td>Contract 3A – sewer separation</td> <td>\$10.8M</td> <td>95% complete</td> </tr> <tr> <td>Contract 3B – sewer separation</td> <td>\$10.9M</td> <td>50% complete</td> </tr> <tr> <td>Contract 7 – pavement restoration</td> <td>\$ 1.2M</td> <td>Complete</td> </tr> </table> <p>BWSC issued Notice to Proceed with the \$6.8 million Contract 8 (pavement restoration 2) on October 1, 2012. Contract 8 includes roadway resurfacing associated with sewer separation contracts 3A, 3B and 4. BWSC also issued Notice to Proceed with its \$9.1 million Contract 4 on October 1, 2012. Contract 4 is the last of the major Reserved Channel sewer separation contracts and includes two areas of South Boston totaling 182 acres tributary to outfalls BOS076, BOS078 and BOS079. In the meantime, BWSC continues with the design of the remaining contracts – Contract 5 (existing sewer cleaning and lining) and Contract 6 (downspout disconnections), both of which BWSC plans to award in 2013. BWSC plans to complete all work for the Reserved Channel sewer separation project by December 2015, in compliance with Schedule Seven.</p>	Contract 1 - CSO outfall rehab	\$ 4.2M	Complete	Contract 2 – sewer separation	\$ 7.0M	Complete	Contract 3A – sewer separation	\$10.8M	95% complete	Contract 3B – sewer separation	\$10.9M	50% complete	Contract 7 – pavement restoration	\$ 1.2M	Complete
Contract 1 - CSO outfall rehab	\$ 4.2M	Complete																	
Contract 2 – sewer separation	\$ 7.0M	Complete																	
Contract 3A – sewer separation	\$10.8M	95% complete																	
Contract 3B – sewer separation	\$10.9M	50% complete																	
Contract 7 – pavement restoration	\$ 1.2M	Complete																	

Project		Court Milestones in Schedule Seven (Shaded milestones are complete.)			Status as of September 30, 2012
		Commence Design	Commence Construction	Complete Construction	
Cambridge/ Alewife Brook Sewer Separation	CAM004 Outfall and Wetland Basin		Apr 11	Apr 13	Cambridge continues to make progress with construction of the \$16.8 million CAM004 stormwater outfall and wetland basin (\$3.9 million MWRA share), which Cambridge commenced in April 2011. The contract is more than 75% complete. Cambridge has completed all major excavation and forming of the main basin, the forebay area and the ‘Oxbow,’ a meandering channel off the Little River that is intended to provide spawning habitat for migratory fish. Cambridge has also completed the installation of wetland vegetation and continues to construct pedestrian boardwalks and overlooks. Cambridge has also completed the inlet structure to the forebay and installed and connected the storm drain box culvert to this structure, thereby tying together the storm drain box conduit and wetland basin components of the project. Progress also continues with construction of the remaining sections of the storm drain box conduit that will convey the stormwater to be separated from Cambridge’s combined sewer system (CAM004 Sewer Separation) to the basin. Cambridge expects to complete the outfall and wetland basin by April 2013, in compliance with Schedule Seven.
	CAM004 Sewer Separation	Jan 97	Jul 98	Dec 15	Cambridge completed four initial construction contracts for this project several years ago and plans to award three additional contracts (contracts 8A, 8B and 9) to complete the project. Cambridge issued NTP for Contract 8A effective September 29, 2012, in compliance with Schedule Seven. Cambridge is also making progress with the design of Contract 8B, which it commenced in May 2012, and with the field investigations that will support the design of Contract 9 scheduled to commence in 2013. MWRA’s FY13 CIP includes \$35 million for this project.
			Sep 12		
	MWR003 Gate and Rindge Ave. Siphon	Apr 12	Aug 14	Oct 15	MWRA’s consultant for design services (Contract 6952; NTP March 2012) has completed the field investigations and the updating and recalibration of MWRA’s hydraulic model. MWRA received the draft preliminary design report for the SOM01A project on September 10, and a preliminary design workshop was held on September 27. The consultant has commenced preliminary design evaluations for the MWR003/Rindge Avenue project. Staff have coordinated with DCR and the Cambridge Conservation Commission as needed. MWRA’s FY13 CIP includes \$4.1 million for this project.
SOM01A Connection Relief and Floatables Control	Sep 13		Jun 14		
Other CSO Related Work					
South Dorchester Bay Sewer Separation Post-Construction Inflow Removal	N/A	N/A	N/A		As reported last quarter, BWSC continues to investigate the causes of localized system flooding during extreme storms following the completion of the South Dorchester Bay sewer separation project and closing of the related CSO regulators in 2007. With ongoing flow monitoring and field investigations, BWSC has detected numerous locations of remaining stormwater inflow into sanitary sewers, mostly catch basin laterals. BWSC is sealing lateral connections that can be eliminated, and is planning to advertise a construction contract this fall for the removal of other connections that require excavation. BWSC plans to issue an interim report on the results of the investigations in November 2012 and a final report with recommendations by March 2013. MWRA’s FY13 CIP includes \$5.3 million for these investigations and related construction work.

CIP Expenditures

First Quarter FY13

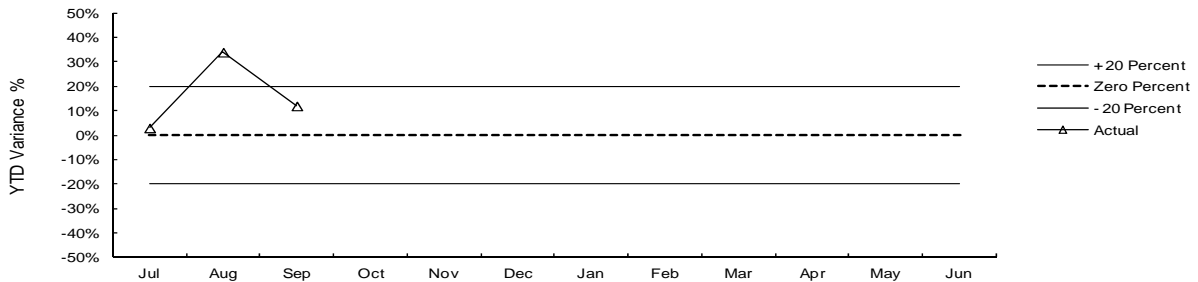
The Year-To-Date variances are highlighted below:

FY13 Capital Improvement Program Expenditure Variances through September by Program (\$000)				
Program	FY13 Budget Through September	FY13 Actual Through September	Variance Amount	Variance Percent
Wastewater	14,954	24,553	9,599	64%
Waterworks	22,607	19,176	(3,431)	-15%
Business and Operations Support	1,919	664	(1,255)	-65%
Total	\$39,480	\$44,393	\$4,913	12%

Overspending within Wastewater is primarily due to greater than anticipated requests for community grants and loans for the I/I program and progress for Clinton Aeration Efficiency work. This was partially offset by timing of payment for Cambridge Sewer Separation, North Main Pump Station Variable Frequency Drives Construction and Melrose Sewer reimbursement. Underspending in Waterworks is due to: timing of community requests for loans and repayments, delay in start of excavation for the Spot Pond Storage Facility Design/Build contract, timing of work for the Lower Hultman Rehabilitation CP-6A, and differing site conditions for the Lynnfield/Saugus Pipeline Rehabilitation Construction 2 contract. This was partially offset by greater than anticipated contractor progress for the Carroll Plant Ultraviolet Disinfection and Upper Hultman Rehabilitation (CP-6B) contracts.

CIP Expenditure Variance

Total FY13 CIP Budget of \$164,912,000.



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 9/29/2012	\$192 million
Unused capacity under the debt cap:	\$604 million
Estimated date for exhausting construction fund without new borrowing:	May-13
Estimated date for debt cap increase to support new borrowing:	FY2020
Commercial paper outstanding:	\$144 million
Commercial paper capacity:	\$350 million
Budgeted FY13 capital spending*:	\$135 million

* Cash based spending is discounted for construction retainage.

DRINKING WATER QUALITY AND SUPPLY

Source Water – Microbial Results

1st Quarter – FY13

Background

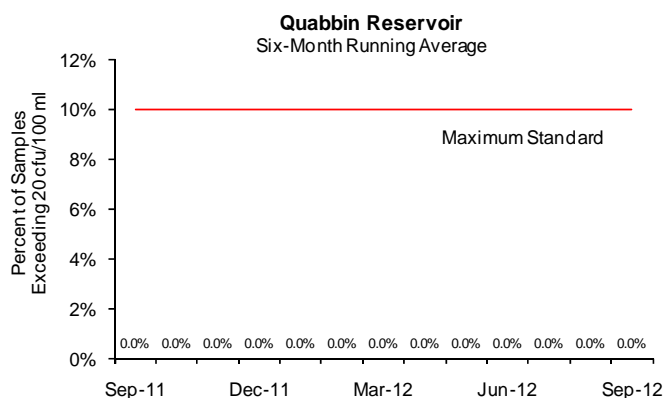
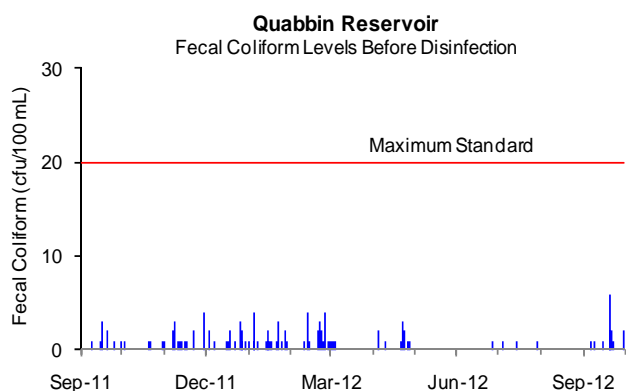
Total coliform bacteria are monitored in both source and treated water to provide an indication of overall bacteriological activity. Most coliforms are harmless. However, fecal coliform, a subclass of the coliform group, are identified by their growth at temperatures comparable to those in the intestinal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

Sample Site: Quabbin Reservoir

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

All samples collected during the 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.



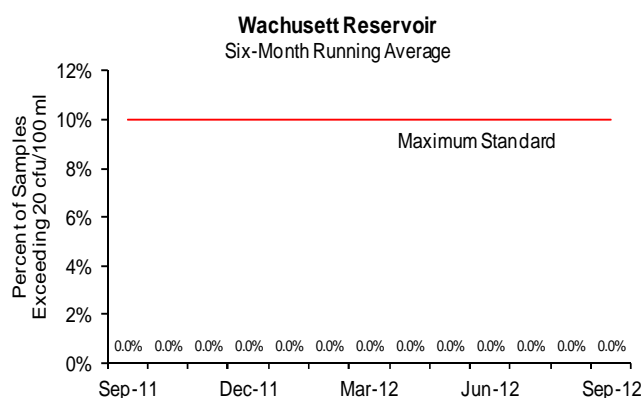
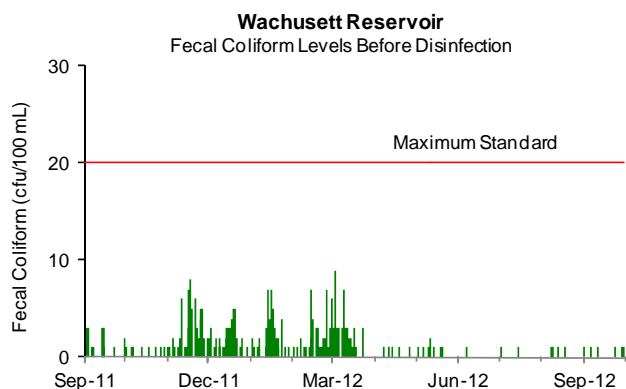
Sample Site: Wachusett Reservoir

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 – Turbidity

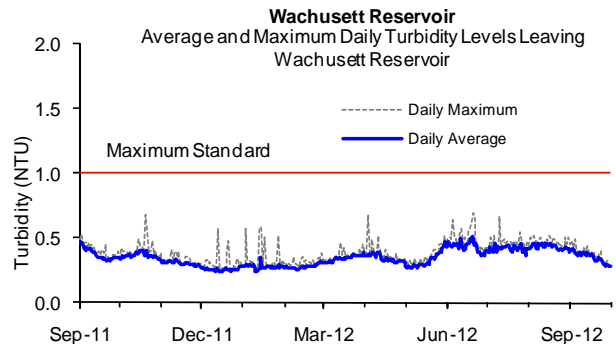
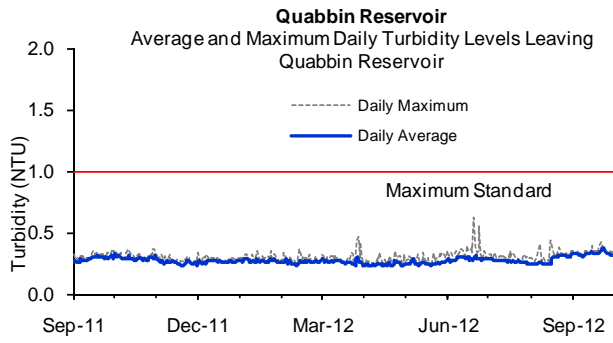
1st Quarter – FY13

Background

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

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

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

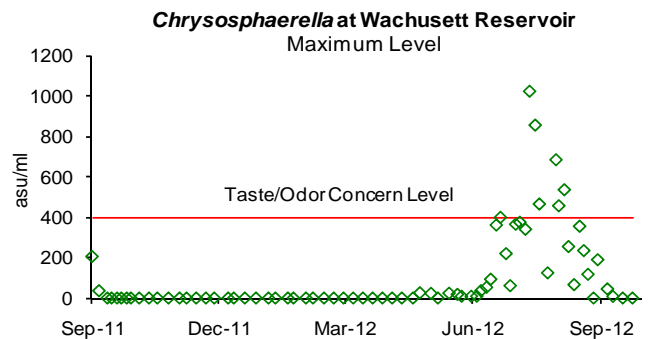
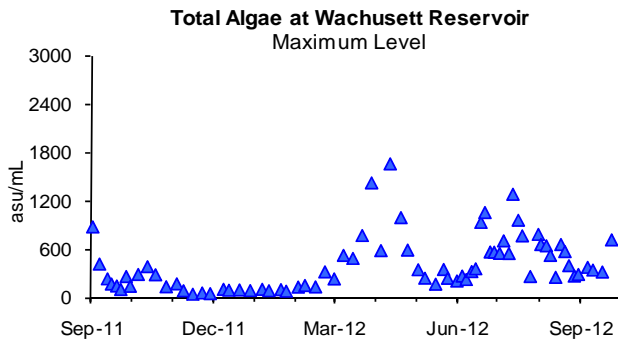


Source Water – Algae

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

Taste and odor complaints at the tap may be due to algae, which originate in source reservoirs, typically in trace amounts. Occasionally, a particular species grows rapidly, increasing its concentration in water. When *Synura*, *Anabaena*, or other nuisance algae bloom, MWRA may treat the reservoir with copper sulfate, an 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 related to algae reported from local water departments. Wachusett Reservoir was treated with copper sulfate three times on July 6, 16, and 25 to control the growth of *Chrysothrix*, a taste and odor causing algae species.



Treated Water – Disinfection Effectiveness

1st Quarter – FY13

Background

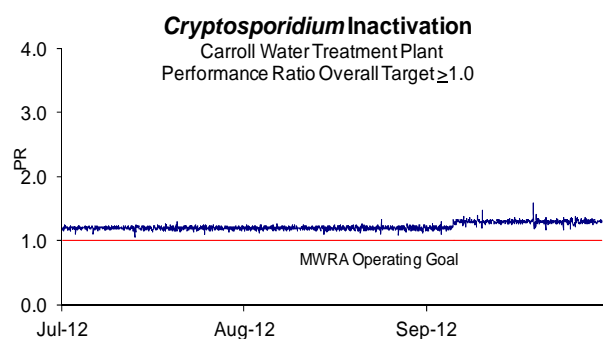
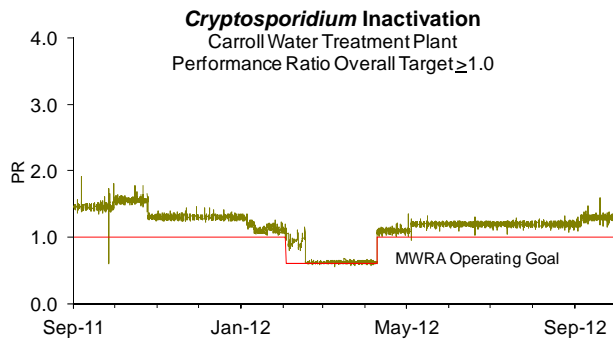
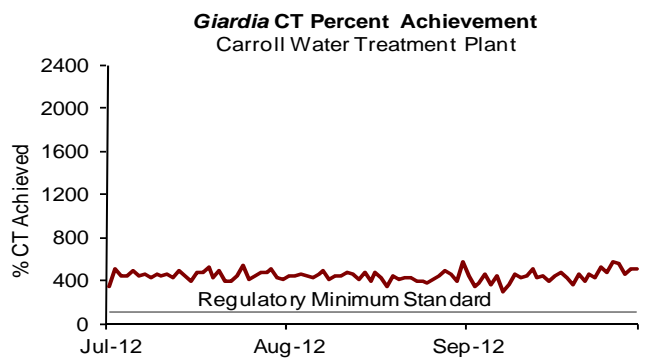
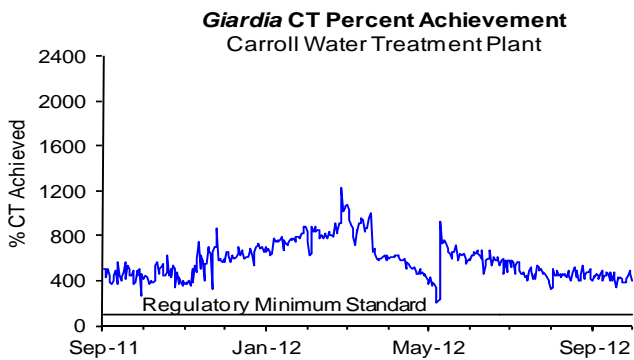
At the Carroll Water Treatment Plant (CWTP), MWRA reports on both regulatory required 99.9% inactivation for *Giardia* (reported as "CT"), and its voluntary operating goal of 99% inactivation for *Cryptosporidium*. MWRA calculates hourly CT inactivation rates and reports daily CT inactivation rates at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

Wachusett Reservoir – MetroWest/Metro Boston Supply:

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

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

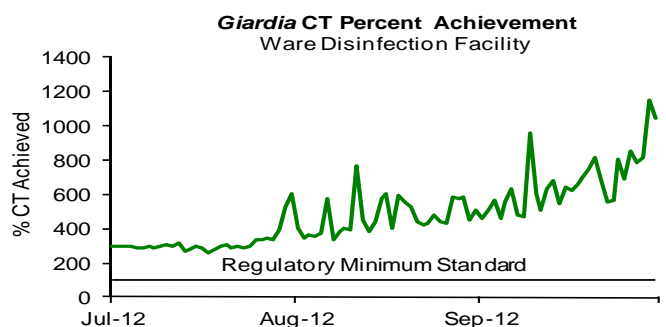
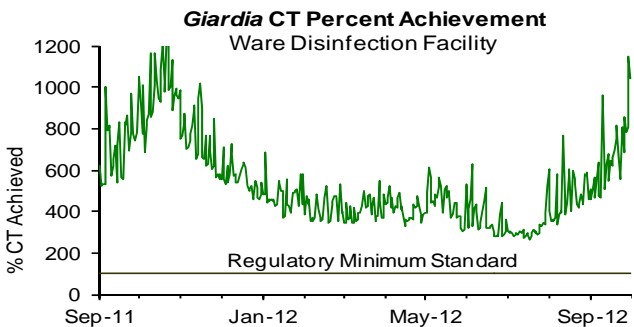
*Ozone dose at the CWTP varied between 1.5 to 2.8 mg/L for the quarter.



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

Quabbin Reservoir at Ware Disinfection Facility (CVA Supply):

CT was maintained above 100% at all times the plant was providing water into the distribution system for the quarter, as well as every day for the last fiscal year. The chlorine dose at Ware Disinfection Facility (WDF) is adjusted in order to achieve MWRA's target of ≥ 0.75 mg/L at Ludlow Monitoring Station. The chlorine dose at WDF varied between 1.5 mg/L to 1.6 mg/L for the quarter.

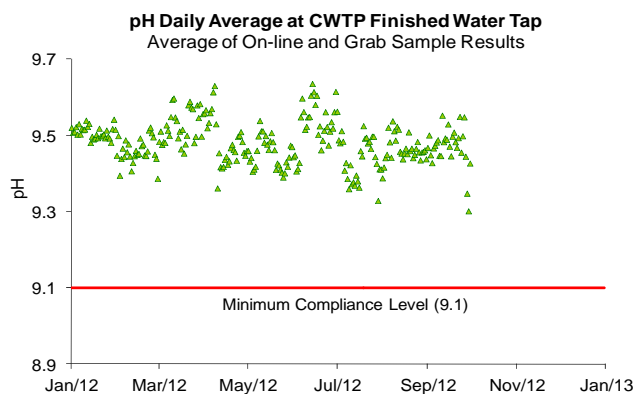
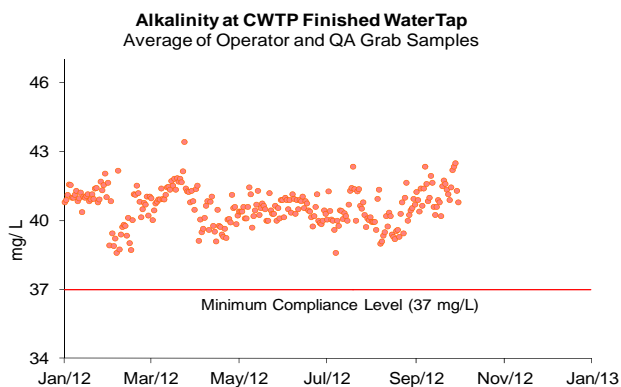


Treated Water – pH and Alkalinity Compliance

1st Quarter – FY13

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 5 and 6, 2012. Distribution system sample pH ranged from 9.1 to 9.6. The alkalinity ranged from 37 to 41 mg/L. No sample results were below DEP limits for this quarter.



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

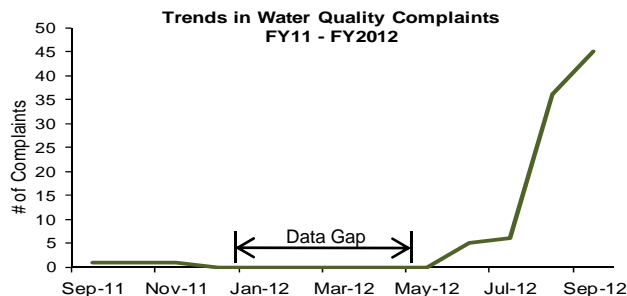
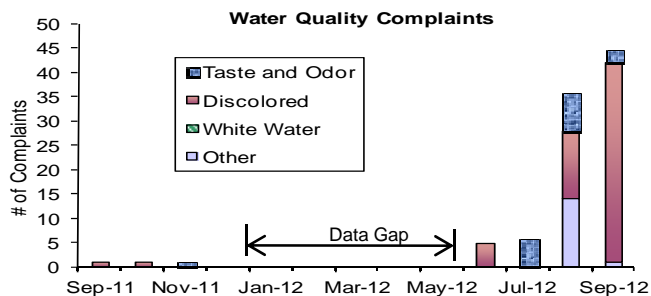
Background

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

MWRA 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.

Outcome

Communities reported 86 complaints during the quarter compared to 4 complaints for the 1st Quarter of FY13. Of these complaints, 54 were for "discolored water", 17 were for "taste and odor" and 15 were for "discolored water". On 9/12, twenty discolored water complaints were reported from Malden due to hydrant flow tests being performed. Area residents were informed of the tests and were instructed to wait a few hours for the water to clear up. From 9/17 thru 9/27, Waltham received ten discolored water complaints due to MWRA valve activations or local hydrant flow tests.



Bacteria & Chlorine Residual Results for Communities in MWRA Testing Program

1st Quarter – FY13

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

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

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

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

Highlights

In the 1st Quarter, two hundred and sixty-one of the 6,244 community samples (4.2% system-wide) submitted to MWRA labs for analysis tested positive for coliform (Bedford, Hanscom AFB, Newton, Somerville, South Hadley FD – in July; Bedford, Boston, Framingham, Hanscom AFB, Needham, Waltham, Wellesley, Westboro SH – in August; Bedford, Boston, Hanscom AFB, Waltham, Westboro SH – in September). Of the 1,957 (0.02%) MWRA samples taken, four tested positive for total coliform. No sample tested positive for *E.coli*. Several communities had local water quality issues and failed the TCR. South Hadley violated the TCR in July. Bedford and Hanscom AFB violated the TCR in July, August and September. Waltham and Westboro SH violated the TCR in August and September. All 42 systems that submitted chlorine residual data maintained an average disinfectant residual of at least 0.2 mg/L. Only 10.7% of samples had any results with a disinfectant residual lower than 0.2 mg/L for the quarter.

TCR results by Community						
Town	Samples Tested for Coliform (a)	Total Coliform # (%) Positive	E.coli % Positive	Public Notification Required?	Minimum Chlorine Residual (mg/L)	Average Chlorine Residual (mg/L)
ARLINGTON	174	0 (0%)	0.0%		0.01	0.94
BEDFORD	336	200 (59.5%)	0.0%	Yes	0.01	0.31
BELMONT	104	0 (0%)	0.0%		0.04	1.15
BOSTON	788	2 (0.3%)	0.0%	No	0.13	1.91
BROOKLINE	221	0 (0%)	0.0%		0.12	1.92
CHELSEA	170	0 (0%)	0.0%		0.93	1.73
DEER ISLAND	63	0 (0%)	0.0%		0.90	1.82
EVERETT	130	0 (0%)	0.0%		0.84	1.05
FRAMINGHAM	219	1 (0.5%)	0.0%	No	0.21	1.60
HANSCOM AFB (b)	63	19 (30.16%)	0.0%	Yes	0.01	0.56
LEXINGTON	116	0 (0%)	0.0%		0.46	1.69
LYNNFIELD	18	0 (0%)	0.0%		0.25	0.99
MALDEN	215	0 (0%)	0.0%		0.10	1.50
MARBLEHEAD	72	0 (0%)	0.0%		0.17	1.49
MARLBOROUGH (b)	126	0 (0%)	0.0%		0.17	1.96
MEDFORD	221	0 (0%)	0.0%		0.39	1.65
MELROSE	117	0 (0%)	0.0%		0.01	0.65
MILTON	96	0 (0%)	0.0%		0.48	1.52
NAHANT	30	0 (0%)	0.0%		0.08	1.20
NEEDHAM (b)	129	2 (1.6%)	0.0%	No	0.01	0.94
NEWTON	280	1 (0.4%)	0.0%	No	0.02	1.51
NORTHBOROUGH	48	0 (0%)	0.0%		0.01	1.11
NORWOOD	108	0 (0%)	0.0%		0.05	0.87
QUINCY	299	0 (0%)	0.0%		0.05	1.19
READING	126	0 (0%)	0.0%		0.02	1.07
REVERE	195	0 (0%)	0.0%		0.99	1.64
SAUGUS	103	0 (0%)	0.0%		0.41	1.35
SOMERVILLE	292	2 (0.7%)	0.0%	No	0.75	1.60
SOUTH HADLEY FD1 (c)	56	5 (8.9%)	0.0%	Yes	0.10	0.65
SOUTHBOROUGH	30	0 (0%)	0.0%		0.10	1.51
STONEHAM	91	0 (0%)	0.0%		0.57	1.80
SWAMPSCOTT	52	0 (0%)	0.0%		0.02	1.02
WAKEFIELD (b)	143	0 (0%)	0.0%		0.20	1.00
WALTHAM	275	22 (8.0%)	0.0%	Yes	0.17	1.79
WATERTOWN	130	0 (0%)	0.0%		0.25	1.64
WELLESLEY (b)	114	2 (1.8%)	0.0%	No	0.02	0.72
WESTBORO HOSPITAL	27	5 (18.5%)	0.0%	Yes	0.02	0.25
WESTON	48	0 (0%)	0.0%		0.12	1.90
WILMINGTON (b)	87	0 (0%)	0.0%		0.10	1.43
WINCHESTER (b)	65	0 (0%)	0.0%		0.27	1.44
WINTHROP	72	0 (0%)	0.0%		0.25	1.10
WOBBURN (b)	195	0 (0%)	0.0%		0.01	1.05
Total:	6244	261 (4.2%)				
MASS. WATER RESOURCES AUTHORITY (d,e)	1957	4 (0.2%)	0.0%	No	0.01	1.75

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

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

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

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

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

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

1st Quarter – FY13

Background

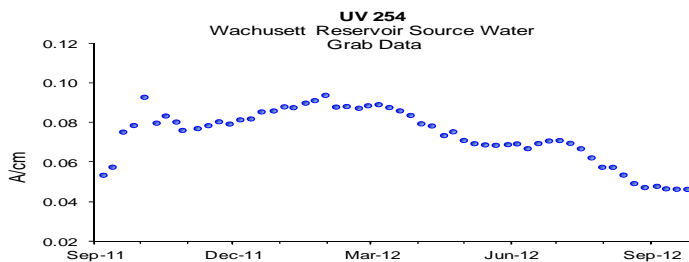
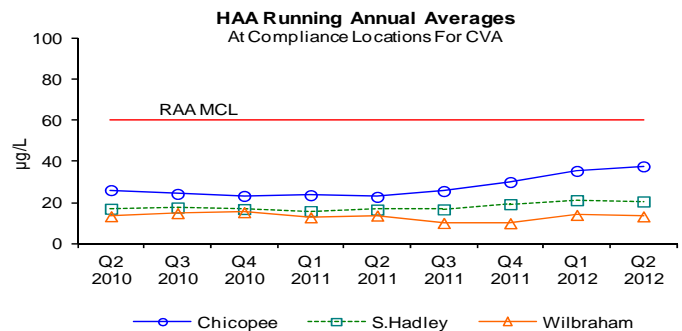
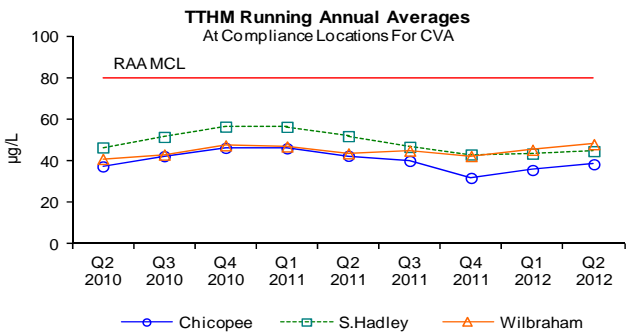
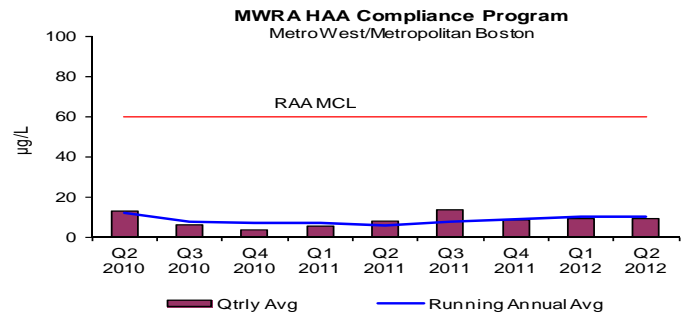
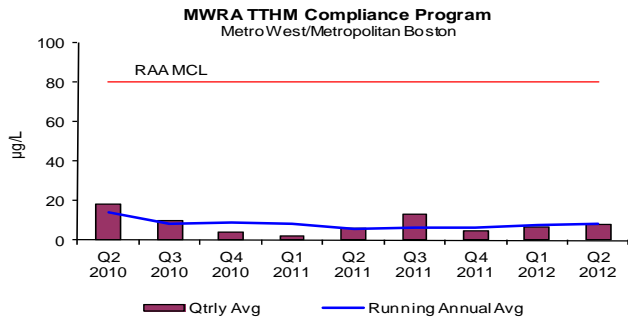
Total Trihalomethanes (TTHMs) and Haloacetic Acids (HAA5s) are by-products of disinfection treatment with chlorine. TTHMs and HAA5s are of concern due to their potential adverse health effects at high levels. EPA's running annual average (RAA) standard is 80 µg/L for TTHMs and 60 µg/L for HAA5s. Effective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

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

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

Outcome

The RAA for TTHMs and HAA5s for MWRA's Compliance Program (represented as the line in the top two graphs below) remained below current standards. The RAA for TTHMs = 7.4 µg/L; HAA5s = 8.7 µg/L. CVA's DBP levels continue to be below current standards. UV-254 levels are currently around 0.05 A/cm. The current RAA for Bromate = 0.0 µg/L.



Water Supply and Source Water Management

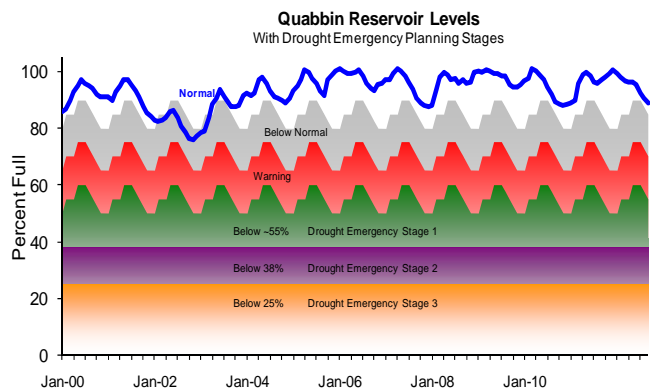
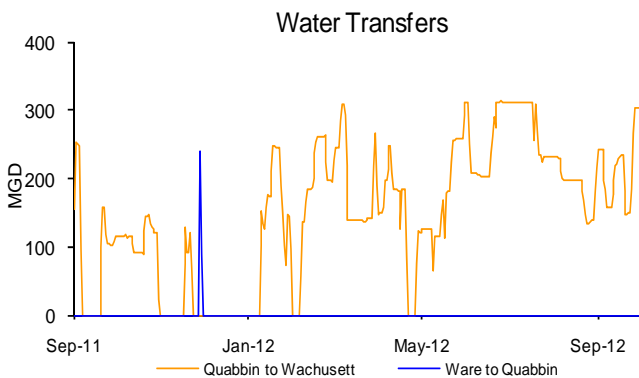
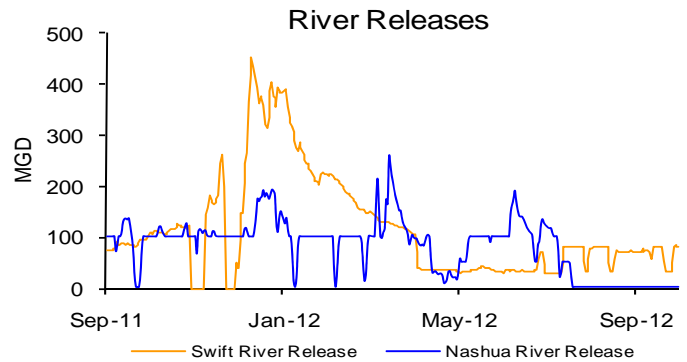
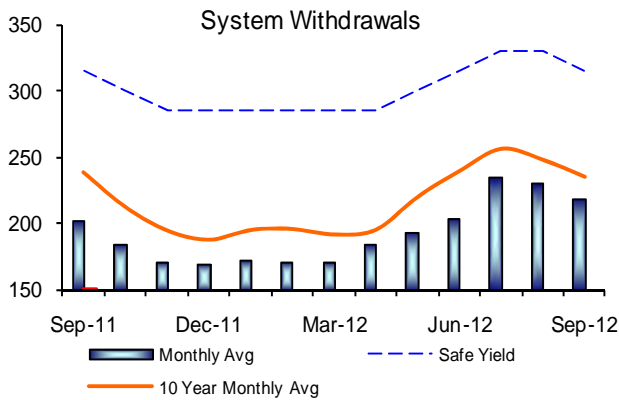
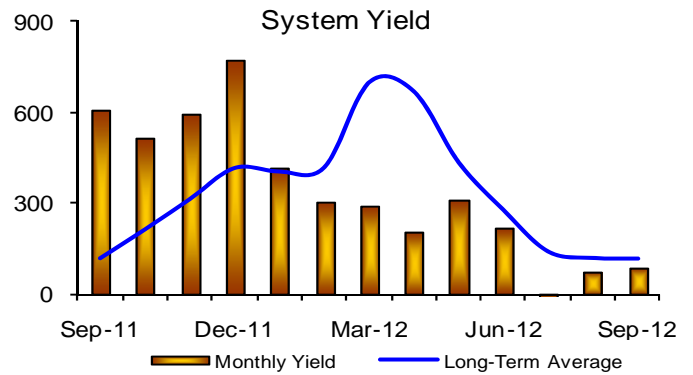
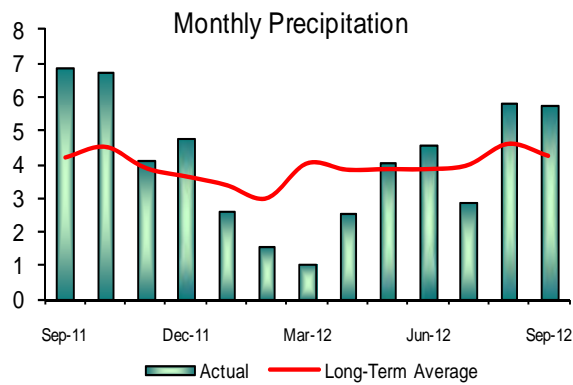
1st Quarter – FY13

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 within the normal operating range for this period of the year. The reservoir was at 89.0% of capacity as of September 30, 2012; a 6.1% decrease for the quarter, which represents a decrease of 24.9 billion gallons of storage. Yield for the quarter was below its long term averages. Monthly withdrawals continue to be below the long-term average.



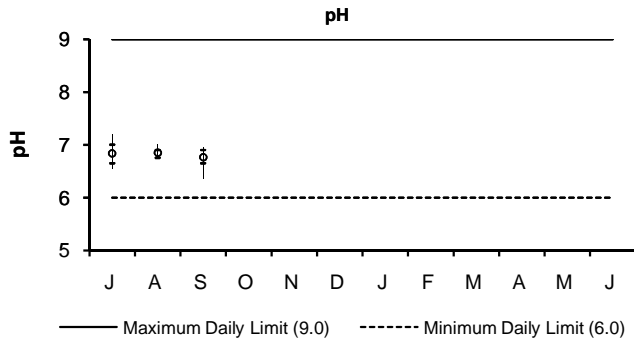
WASTEWATER QUALITY

NPDES Permit Compliance: Deer Island Treatment Plant
1st Quarter - FY13

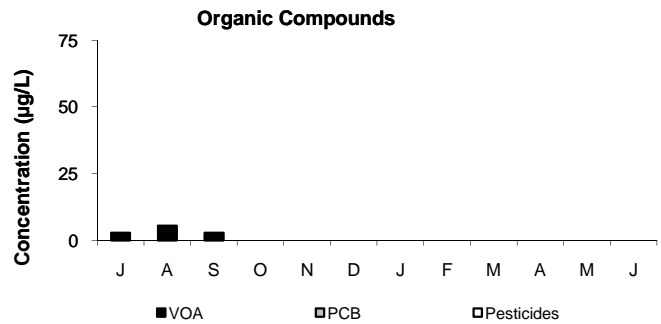
NPDES Permit Limits

Effluent Characteristics		Units	Limits	July	August	September	1st Quarter Violations	FY13 YTD Violations
Dry Day Flow:		mgd	436	303.5	298.5	292.1	0	0
cBOD:	Monthly Average	mg/L	25	5.1	3.8	4.1	0	0
	Weekly Average	mg/L	40	6.9	4.4	4.9	0	0
TSS:	Monthly Average	mg/L	30	7.1	7.7	6.0	0	0
	Weekly Average	mg/L	45	8.9	8.0	8.9	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	14	25	69	0	0
	Weekly Geometric Mean	col/100mL	14000	7	9	9	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	6.6-7.2	6.8-7.0	6.4-7.0	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	50	25	12.5	0	0
	Inland Silverside	%	1.5	25	100	50	0	0

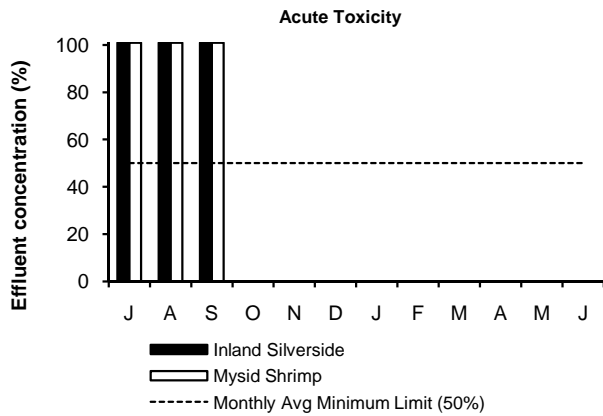
There have been no permit violations in FY13 at the Deer Island Treatment Plant.



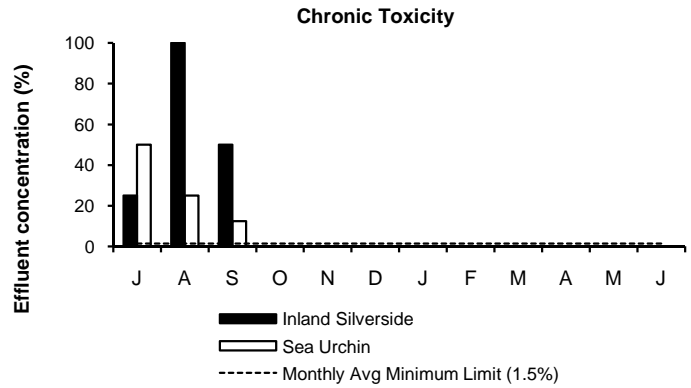
pH is a measure of the alkalinity or acidity of the effluent. Fluctuations in pH do not have an adverse effect on marine environments. Because of the pure oxygen used in the activated sludge reactor, the effluent pH tends to be at the lower pH range. pH measurements for the 1st Quarter were within the 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.



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 - FY13

NPDES Permit Limits

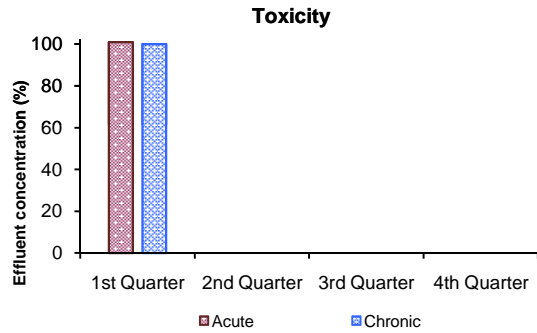
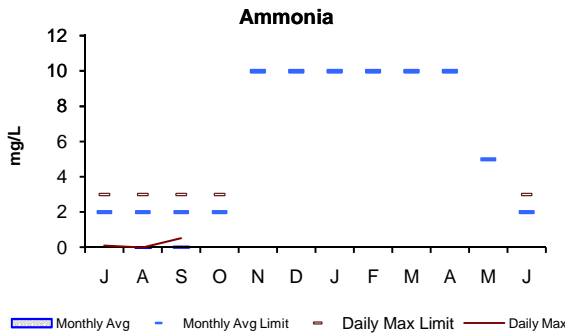
Effluent Characteristics	Units	Limits	July	August	September	1st Quarter Violations	FY13 YTD Violations	
Flow:	mgd	3.01	3.22	3.16	2.97	2	2	
BOD:	Monthly Average:	mg/L	20	2.7	2.2	2.1	0	0
	Weekly Average:	mg/L	20	3.1	2.4	2.5	0	0
TSS:	Monthly Average:	mg/L	20	2.8	1.7	0.9	0	0
	Weekly Average:	mg/L	20	3.3	2.5	2.4	0	0
pH:	SU	6.5-8.3	6.9-7.6	6.6-7.6	6.9-7.5	0	0	
Dissolved Oxygen:	Daily Minimum:	mg/L	6	7.1	6.8	7.4	0	0
Fecal Coliform:	Daily Geometric Mean:	col/100mL	400	17	10	9	0	0
	Monthly Geometric Mean:	col/100mL	200	4	5	4	0	0
TCR:	Monthly Average:	ug/L	50	0	0.7	0.4	0	0
	Daily Maximum:	ug/L	50	0	6.7	6.7	0	0
Total Ammonia Nitrogen: May 1 - May 31								
	Monthly Average:	mg/L	10.0	0.01	0.00	0.06	0	0
	Daily Maximum:	mg/L	35.2	0.10	0.00	0.52	0	0
Copper:	Monthly Average:	ug/L	20	5.8	6.0	7.7	0	0
Phosphorus: May 1 - Oct 31								
	Monthly Average:	mg/L	1.0	0.53	0.18	0.21	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 two permit violations in FY13 at the Clinton Treatment Plant.

1st Quarter:

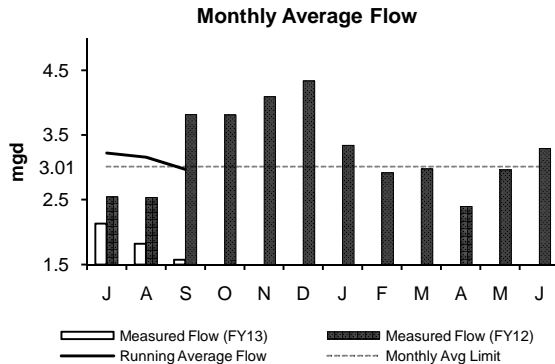
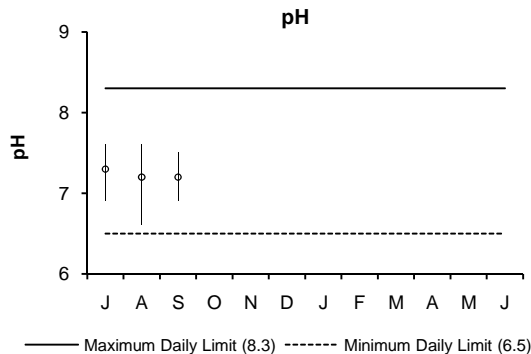
There were two permit violation in the 1st Quarter of FY13. In July and August 2012 the running average flow was 3.22 and 3.16 MGD respectively, above the permit limit of 3.01 MGD. The actual measured flow at the plant for July and August was 2.13 and 1.82 MGD.

*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 4th Quarter are 10.0 mg/L and 35.2 mg/L, respectively. The permit limits are most stringent from June to October when warm weather conditions are most conducive to potential eutrophication.

Acute and chronic toxicity testing simulates the short- and long-term toxic effects of chemicals in wastewater effluent on aquatic animals. For permit compliance, the effluent concentration that causes mortality to the daphnid in acute and chronic testing must be at least >100% and 62.5%, respectively. Toxicity limits were met during the 1st Quarter.



pH is a measure of the alkalinity or acidity of the effluent. 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 above the NPDES permit limit in July and August, but below in September.

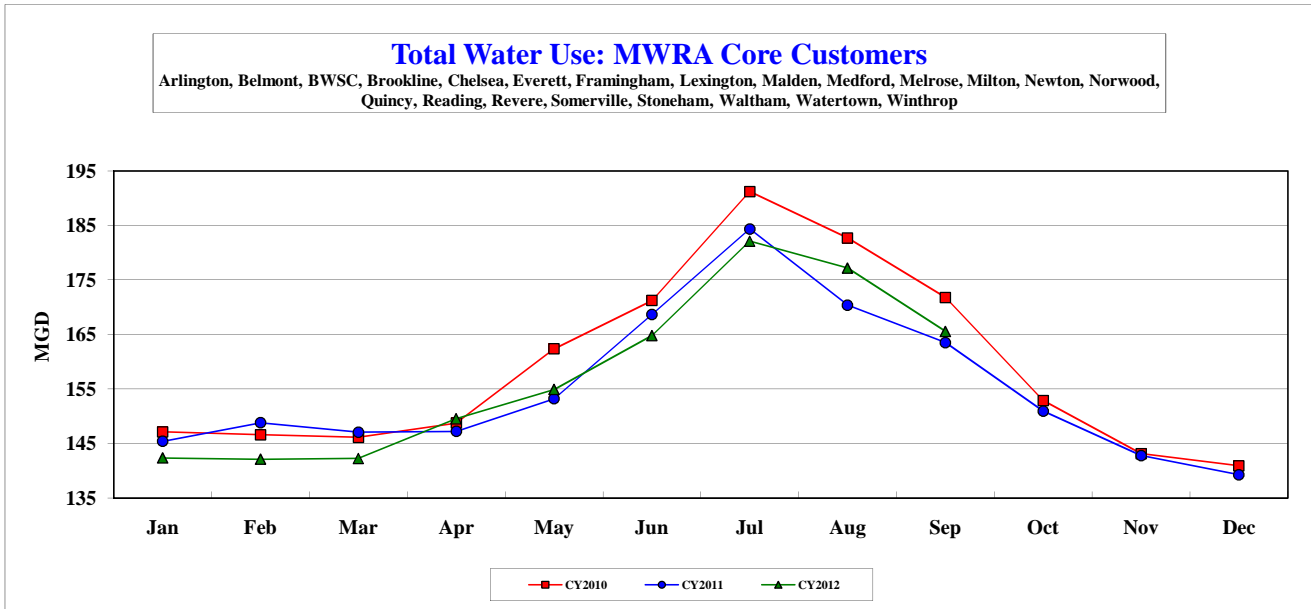
COMMUNITY FLOWS AND PROGRAMS

Water Supplied: MWRA Core Communities

First Quarter FY13

MGD	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Average
CY2010	147.109	146.572	146.104	148.736	162.362	171.224	191.222	182.708	171.780	152.865	143.132	140.875	158.824
CY2011	145.371	148.782	147.051	147.188	153.188	168.673	184.336	170.378	163.482	150.928	142.769	139.250	155.164
CY2012	142.313	142.093	142.231	149.527	154.903	164.777	182.125	177.164	165.538	0.000	0.000	0.000	157.944

MG	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
CY2010	4,560.379	4,104.007	4,529.220	4,462.067	5,033.225	5,136.713	5,927.887	5,663.942	5,153.392	4,738.813	4,293.973	4,367.117	57,970.734
CY2011	4,506.504	4,165.900	4,558.577	4,415.643	4,748.836	5,060.182	5,714.425	5,281.711	4,904.458	4,678.774	4,283.058	4,316.759	56,634.829
CY2012	4,411.716	4,120.685	4,409.148	4,485.812	4,801.999	4,943.308	5,645.866	5,492.091	4,966.141	0.000	0.000	0.000	43,276.768



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

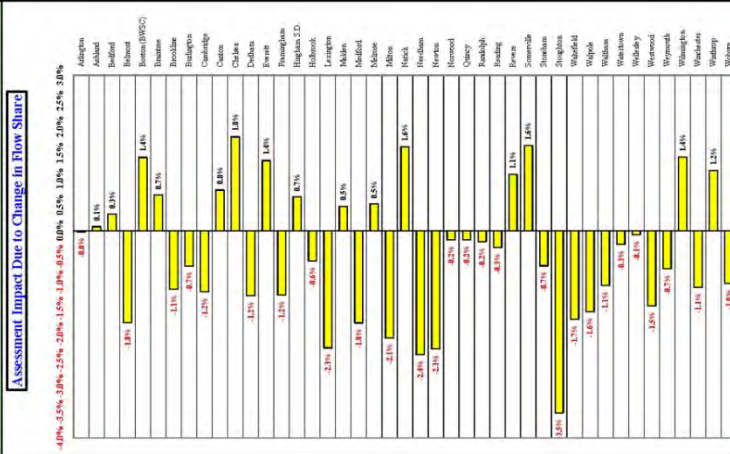
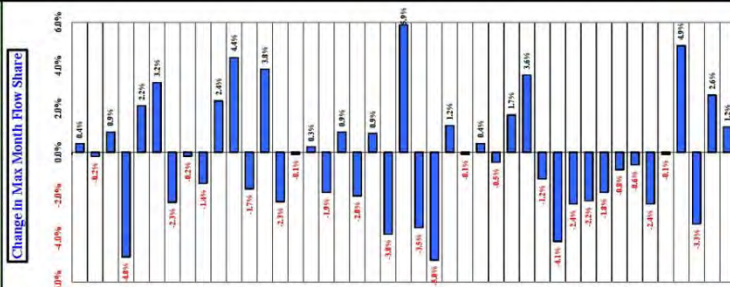
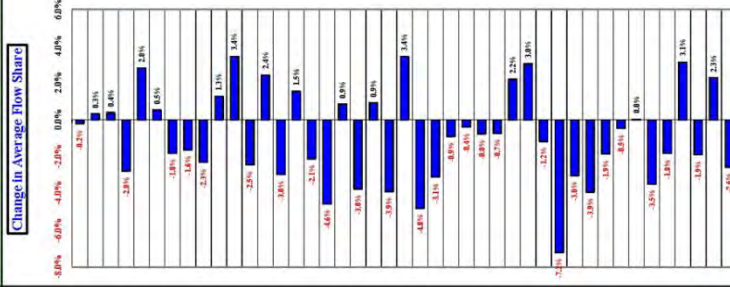
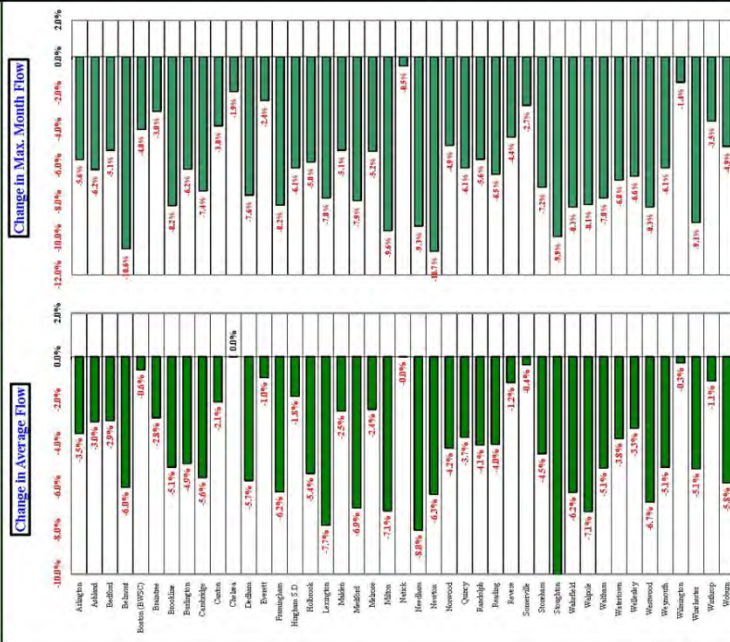
September 2012 water supplied of 205.4 mgd (for revenue generating users) is up 5.8 mgd or 2.9% compared to September 2011. Year-to-date system-wide water consumption for CY12 is also higher than CY11 with 195.1 mgd being supplied to MWRA customers through September. This is 0.7 mgd higher than CY11, an increase of 0.3%.

Community Wastewater Flows

First Quarter-FY13

How Projected CY2012 Community Wastewater Flows Could Effect FY2014 Sewer Assessments 1.2.3

The flow components of FY2014 sewer assessments will be calculated using a 3-year average of CY2010 to CY2012 wastewater flows compared to FY2013 assessments that used a 3-year average of CY2009 to CY2011 wastewater flows.



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 CY2009 to CY2012 average wastewater flows as of 10/23/12. Flow data is preliminary and subject to change pending additional MWRA and community review. ³ CY2009 to CY2011 wastewater flows based on actual meter data. CY2012 flows based on actual meter data for January 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.

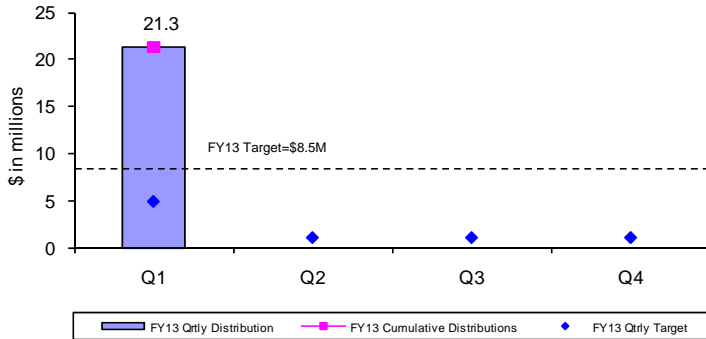
Community Support Programs

1st Quarter – FY13

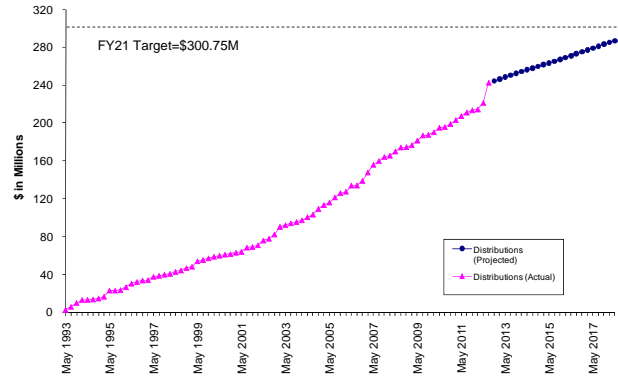
Infiltration/Inflow Local Financial Assistance Program

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.

FY13 Quarterly Distributions of Sewer Grant/Loans



I/I Local Financial Assistance Program Distribution FY93-FY21

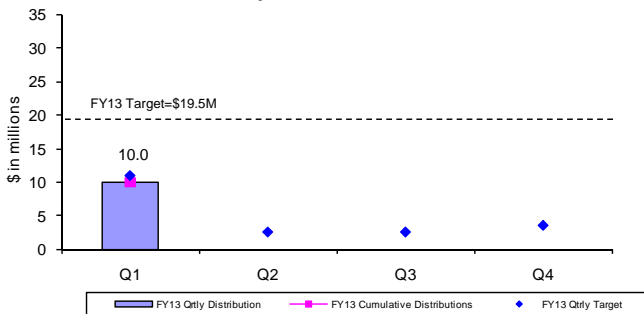


During the 1st Quarter of FY13, \$21.3 million in financial assistance (45% grants and 55% interest-free loans) was distributed to fund local sewer rehabilitation projects in Boston. Total grant/loan distribution for FY13 is \$21.3 million (which includes new Phase 8 funds). From FY93 through the 1st Quarter of FY13, all 43 member sewer communities have participated in the program and more than \$242 million has been distributed to fund 434 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.

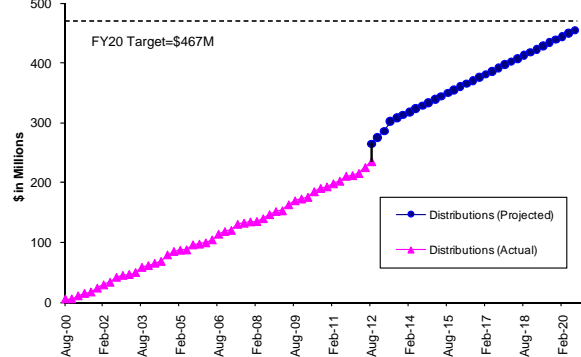
Water Local Pipeline and Water System Assistance Programs

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

FY13 Quarterly Distributions of Water Loans



Local Pipeline and Water System Assistance Programs Distribution FY01-FY20



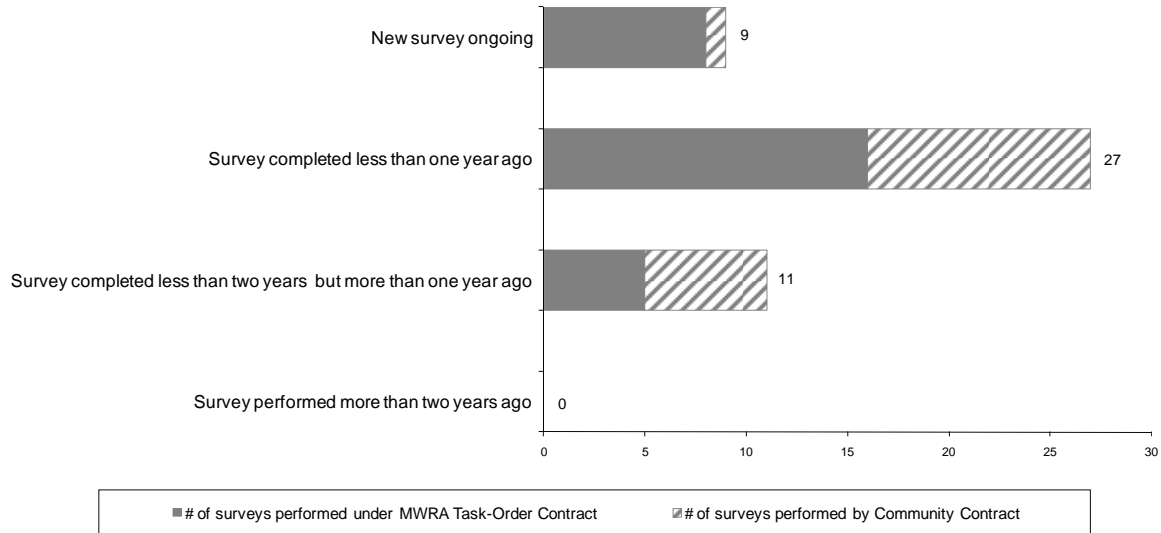
During the 1st Quarter of FY13, \$10.0 million in interest-free loans was distributed to fund local water projects in Arlington, Bedford, Chelsea, Chicopee, Malden, Newton, Norwood, Saugus, Wakefield and Wellesley. Total loan distribution for FY13 is \$10.0 million. From FY01 through the 1st Quarter of FY12, more than \$235 million has been distributed to fund 283 local water system rehabilitation projects in 37 MWRA member water communities. Distribution of the remaining funds has been approved through FY20 and community loan repayments will be made through FY30. All scheduled community loan repayments have been made. FY13 is the last year of community loans under the Phase 1 Local Pipeline Assistance Program (Phase 2 Local Water System Assistance loans began in FY11 and will be distributed through FY20).

Community Support Programs

1st Quarter – FY13

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 FY13, 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.

FY13 DISTRIBUTION	Annual Target	Q1	Q2	Q3	Q4	Annual Total
Educational Brochures	100,000	45,178				45,178
Low-Flow Fixtures (showerheads and faucet aerators)	10,000	1,566				1,566
Toilet Leak Detection Dye Tablets	-----	1,196				1,196

During FY12, requests for educational brochures (indoor and outdoor bill stuffers) were lower than in prior years. For FY13, the target for educational brochure distribution has been lowered from 150,000 to 100,000.

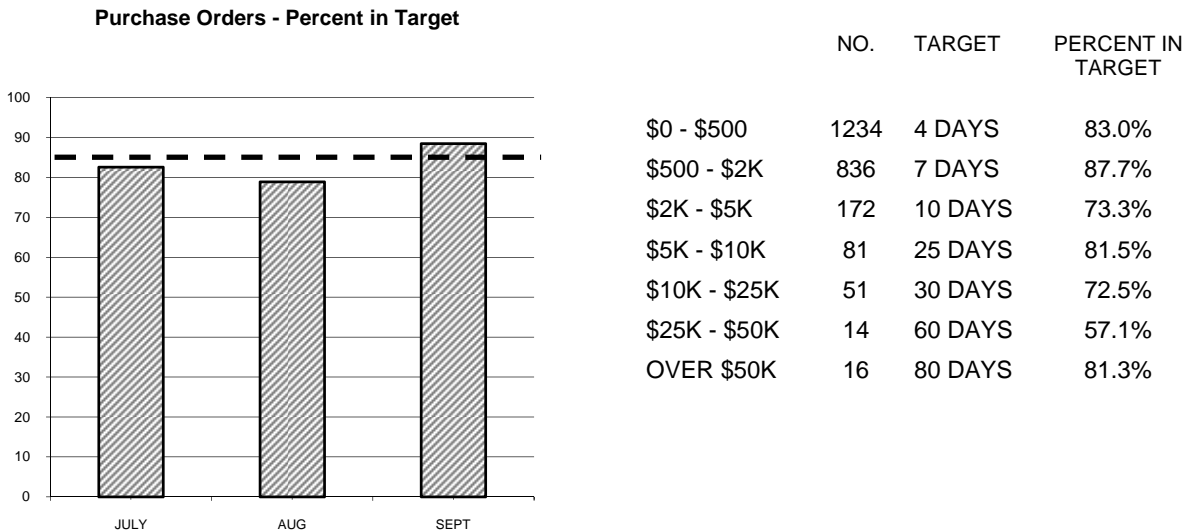
BUSINESS SERVICES

Procurement: Purchasing and Contracts First Quarter FY13

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

Outcome: Processed 83% of purchase orders within target; Avg. Processing Time was 5.95 days vs. 6.73 days in Qtr 1 of FY12. Processed 53% (10 of 19) contracts within target timeframes; Avg. Processing Time was 141 days vs. 151 days in Qtr 1 of FY12.

Purchasing

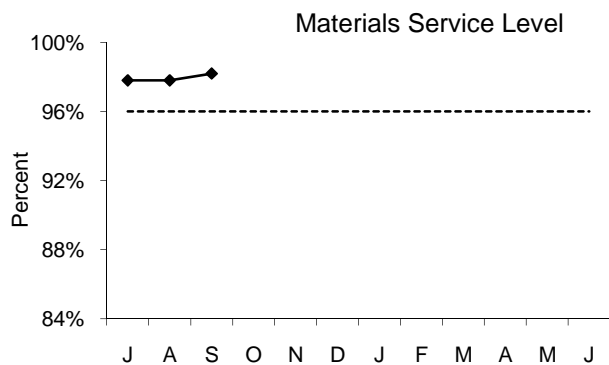


- Purchasing Unit processed 2404 purchase orders, 221 more than the 2183 processed in Qtr 1 of FY12, for a total value of \$7,191,468 vs. a dollar value of \$7,957,347 in Qtr 1 of FY12.
- The target was not achieved for the \$2k - \$5k category due to sourcing of vendors, the \$5k - \$10k category due to pricing confirmation, the \$10k - \$25k category due to extended negotiations, timing of the need for the service and confirmation of end user needs, the \$25k - \$50k category because of several extended bid reviews and a re-bid, and the over \$50k category because of an extended bid review.

Contracts, Change Orders and Amendments

- Nine contracts were not processed within target timeframes. Reasons included extended specification development or extensive revisions during bidding, re-bid of a filed sub-bid, failure of a low bidder to execute the contract, and an extended bid phase to promote competition. In three instances, the contractor delayed submitting documents, and three contracts were processed within two to three weeks of target.
- Procurement processed nineteen contracts with a value of \$5,637,184 and seven amendments with a value of \$160,929.
- Thirty change orders were executed during the period, but some were credit change orders and are recorded as negative numbers. The dollar value of all non-credit change orders during the 1st quarter FY13 was \$645,923 and the value of credit change orders was (\$216,725).
- In addition, staff reviewed 43 proposed change orders and 31 draft change orders.

Materials Management 1st Quarter, FY13



The service level is the percentage of stock requests filled. The goal is to maintain a service level of 96%. Staff issued 8,293 (97.9%) of the 8,467 items requested in Q1 from the inventory locations for a total dollar value of \$1,619,624.

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 FY13 goal is to reduce consumable inventory from the July '12 base level (\$7.7 million) by 4.0% (approximately \$310,231), to \$7.4 million by June 30, 2013 (see chart below).

Items added to inventory this quarter include:

- Deer Island - shim sets, lip seals, wearplates for XR6-12 pump, spacers, connector kit for rotary scum screen and inside collars for Residuals; rosemount analyzer, rosemount probe, graphic plate and membrane and dual function fuse and amp for Core; gate for Liquid Train.
- Chelsea – air pump, mirror assembly, lantern battery, guide pin, wheel nut, oil drain plug and cabin filter for VMM; roller lever, cam bearing, pressure switch, water heater and impeller for Work Order Coordination Group; oxygen and conductivity sensor for Operations.
- Southboro – delfin lift nut, band saw blade for Maintenance and MWRA logo sign, locks and repellent wipes for Operations.

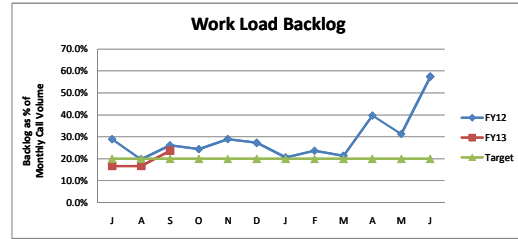
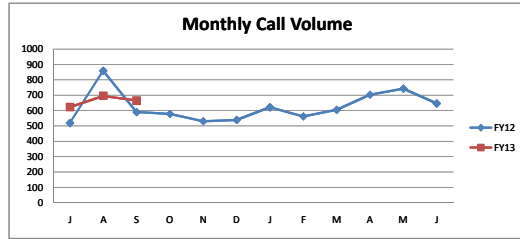
Property Pass Program:

- Audits were conducted at Chelsea TRAC, Sewer Pipe Maintenance, SCADA and Tech Inspections during Q1.
- Numerous obsolete network switches, computers, monitors, printers, keyboards, tape drives, laptops, televisions 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 \$6,096.85.

Items	Base Value July-12	Current Value w/o Cumulative New Adds	Reduction / Increase To Base
Consumable Inventory Value	7,755,777	6,743,695	-1,012,082
Spare Parts Inventory Value	7,368,162	6,035,420	-1,332,742
Total Inventory Value	15,123,939	12,779,115	-2,344,824

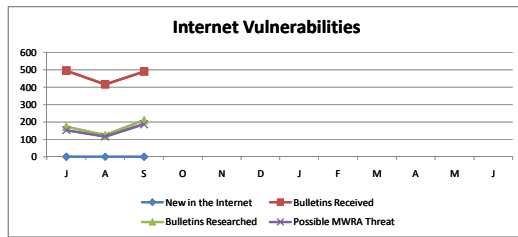
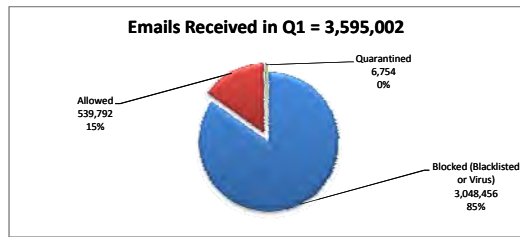
Note: New adds are items added at an inventory location for the first time for the purpose of servicing a group/department to meet their business needs/objectives.

MIS Program 1st Quarter FY13



Performance:

For Q1, call volume peaked in August and calls decreased by 5.21% from Q1 last year. Call backlog peaked in September making the backlog 3.8% 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 36 vulnerabilities.

LANDesk Antivirus quarantined 43 distinct viruses from 33 MWRA computers. MWRA's systems are current with anti-virus providers' signatures for all known malware.

Infrastructure:

Cellular services migration: 215 devices were identified and the migration effort began in March. By the end of September, 157 devices have been migrated. This effort is scheduled to be complete in conjunction with the in-building distributed antenna system deployment.

Oracle Database Consolidation: The Maximo FOD development database has been moved to DIAPPOLO on Oracle 10g. Larger hard drives were installed on Chelsea19 so that PIMS, LIMS, and WWQ databases could be moved.

Applications/Training/Records Center:

Rain Gauge Portal: Data was extracted for some rain gauges for review by staff in the Operations Division. Based on feedback, MIS staff revised the calculations for the SCADA rain gauges for further review. MIS designed and developed a web application to display the last five day daily rain totals. Staff created an evaluation document for StreamerRT (a 3rd party application that provides real-time weather data display) that included mobile application information and weather station camera options, as well as list of locations of WeatherBug weather stations found in MWRA communities. Staff completed the portal web application and conducted peer testing on 8/23/2012 and 8/31/2012, created a web service to access weather data from WeatherBug via StreamerRT, developed a console application to download the data, and created a SQL job on the development server to run the console application every 5 minutes. MWRA Telog data was selected due to its ability to upload data following network interruptions. The test database has collected over 20,000 records from 30 weather stations in the first weekend. Completed testing and remediation of the application for multiple non-Internet Explorer (IE) web browsers and reviewed the application for ADA compliance for web site accessibility. The application was also tested on the Blackberry. The application works on the hand held device without any need to revise the style sheet or codes.

Lawson 9.0.1 Upgrade: Assisted the Payroll department with a parallel payroll run on the upgraded development system. Staff reviewed the results with the Payroll department who were satisfied with the outcome. Staff assisted Procurement and HR/Payroll staff with user tests and completed roll-out of 9.0.1 application to the production server over the weekend of Sept 22nd/23rd. Program code was brought over from development server and staff validated system functions, updated custom database fields, recompiled programs, etc. Minor problems with the 9.0.1 upgrade such as Oracle grants, synonyms, and permission updates, Mobile Supply Chain Management printing and a couple minor screen issues were fixed. Go Live occurred with minimal impact to the users.

Lawson Maintenance: Staff monitored weekly payroll processing at year end to ensure that the new 5 day personal plan worked properly by awarding these days for all union employees. In addition, after payroll was completed staff provided the following support: 1) Uploaded vacation milestone adjustments prepared in June for units 2, 3 and 9 from the file supplied by HR dept.; 2) Monitored salary increases put in by HR dept for Units 1, 3, 6 and 9; and; 3) Ran queries to identify employees with optional life/long term disability insurance to see if their coverage amounts were adjusted to their new salaries. Staff also assisted HR dept by loading non-union retroactive pay raises from the file provided by HR.

Construction Photo Project: Staff, with input from the Executive Office, evaluated services provided by the Digital Commonwealth Organization and decided to have the Organization scan the photo books in the Library. MWRA's Application for Services with Digital Commonwealth Organization was for scanning selected collections including glass negatives, largely housed at State Archives, and MWRA photo albums. The first 5 boxes of glass negatives were delivered to the Digital Commonwealth (DigiCom) Team for free scanning.

Maximo Upgrade: On September 13, 2012 the MWRA sent out a Request for Quote to six companies for the Maximo upgrade project. The current 5.2 version of Maximo is no longer supported by IBM. The upgrade from version 5.2 to 7.5 will bring the MWRA back into full support with IBM. The quote from these companies is due back to the MWRA on October 19, 2012 to be opened.

Library & Records Center: The Library completed 53 research requests added 51 books, distributed 93 periodicals and 2,050 electronically linked articles to staff. The Records Center added 81 boxes, conducted 2 training sessions, and attended 3 Record Conservation Board Meetings. Reviewed and disposed of 133 boxes. Shaft 5 litigation support included hosting attorney visit to review microfilm and research.

IT Training: For the quarter, 40 staff attended 5 classes and 3 workshops. 3% of the workforce have attended at least one class year-to-date. SMART Technology training classes were offered. SMART Board job aids completed and placed in the EOC job-aids binder.

Legal Matters

1st Quarter FY 2013

PROJECT ASSISTANCE

COURT AND ADMINISTRATIVE ORDER

- **Boston Harbor Litigation and CSO:** Drafted compliance and progress report for September; filed quarterly compliance and progress report.
- **NPDES:** Reviewed and revised Cottage Farm outline relative to 2010 oil release; reviewed fact sheet for draft NPDES permit for Carroll Water Treatment Plant and drafted MWRA comments and cover letter and submitted to EPA.

REAL ESTATE, CONTRACT AND OTHER SUPPORT

- **Lynnfield – Saugus Pipeline Project:** Recorded Order of Conditions DEP #67- 695.
- **Fore River Shipyard:** Finalized Letter of Intent with March Fourth, LLC (Quirk) to swap interests in real property located at the Fore River Shipyard in Quincy.
- **MWRA/City of Boston Wind Turbine:** Negotiated final language of 8(m) permit for the City of Boston to site a wind turbine at Deer Island.
- **Northern Low Service Storage Project:** Finalized Amendment #1 to the License for Entry Agreement with the developer of the adjacent property to provide for the use of Parcel M-1 during construction
- **John Carroll Treatment Plant:** Recorded Order of Conditions DEP #212-1097.
- **MassDOT License – Chelsea:** Finalized the negotiations with MassDOT regarding a License for Entry for use of an abandoned rail right-of-way adjacent to the MWRA facility in Chelsea.
- **St. Mary's Street Pump Station Easement – Needham:** Recorded the Grant of Easement from the Town of Needham and the Plan for the easement located at the St. Mary's Street Pump Station.
- **License – 12 Cleverly Court, Quincy, Massachusetts:** Finalized License Agreement with J.F. White Contracting Co. for use of the premises located at 12 Cleverly Court in Quincy for a construction staging area.
- **Miscellaneous:** Reviewed and approved twenty-two (22) Section 8(m) Permits and one (1) Direct Connect Permit.

ENVIRONMENTAL

- **Food Waste Co-Digestion:** Worked with bond counsel to obtain opinion concerning limits upon use of DITP digesters for food wastes.

LABOR, EMPLOYMENT AND ADMINISTRATIVE

New Matters Five demands for arbitration were filed.

Matters Concluded Settled an arbitration in which a union claimed the MWRA violated a collective bargaining agreement when an employee was suspended.

LITIGATION/TRAC

New Matters During the First Quarter of FY 2013 one new lawsuit was received.

Nikeala Porter v. Massachusetts Water Resources Authority: This is an action in which plaintiff seeks to recover money for damage to her car allegedly caused by a "road hazard on River Street, Boston" on or about May 18, 2012. Plaintiff's claim appears to be for property damage, filing fees and "traveling expenses", apparently totaling less than \$300.00. No personal injuries are alleged.

Significant Developments

(Former Employee) v. MWRA: Suffolk Superior Court Civil Action No. SUCV2010-4116-C: In this Superior Court action, Plaintiff challenged his termination on April 28, 2010 from his position, at the Deer Island Treatment Plant. Plaintiff was terminated pursuant to the terms of a Last Chance Agreement executed by Plaintiff and his bargaining unit, United Steelworkers, Local 9360 on or about June 19, 2008. MWRA staff counsel precluded Plaintiff from taking unwarranted discovery and depositions of MWRA employees in a pending Superior Court case where all claims against MWRA were previously dismissed.

(Former Employee) v. MWRA & USW 9360; Mass. Commission Against Discrimination (MCAD) Docket No. 11BEM00424: The same set of allegations contained in the Superior Court complaint, (Former Employee) v. MWRA & USW 9360; Suffolk Superior Court Civil Action SUCV2010-4116-C were the basis for a complaint in a separate proceeding commenced at MCAD in February 2011 by this former employee against MWRA. The employee, a white male supervisor, claimed that he was the subject of discrimination in connection with his dismissal in April 2010. Following an investigation by MCAD, the Commission dismissed the complaint in its entirety as to all parties finding that there was no probable cause to find any discriminatory conduct by any of the named respondents. A hearing on the Petitioner's motion to reconsider the dismissal of the complaint was heard on August 16, 2012. On September 17, 2012 MCAD affirmed the lack of probable cause finding.

SUMMARY OF PENDING LITIGATION MATTERS

TYPE OF CASE/MATTER	As of Sept 2012	As of June 2012	As of Mar 2011
Construction/Contract/Bid Protest (other than BHP)	2	3	2
Tort/Labor/Employment	7	6	7
Environmental/Regulatory/Other	1	1	1
Eminent Domain/Real Estate	1	1	1
total – all defensive cases	11	11	11
Affirmative Cases: <u>MWRA v. (current employee)- closed</u> <u>MWRA v. J. F. Shea Co., Inc., et al.</u>	1	2	2
Other Litigation matters (restraining orders, etc.)	0	0	0
total – all pending lawsuits	12	13	13
Significant claims not in suit: <u>Giaquinto/Geico Automobile Accident Claims</u> <u>Oscar Malera personal injury claim</u> <u>Trooper Walker Injury Claim</u>	3	3	2
Bankruptcy	1	1	3
Wage Garnishment	14	15	8
TRAC/Adjudicatory Appeals	2	1	0
Subpoenas	3	6	4
TOTAL – ALL LITIGATION MATTERS	35	39	30

Matters Concluded	<p><u>P.J. Kennedy & Sons v. J.F. White</u>: The MWRA provided documents to P.J. Kennedy's counsel in response to two third-party subpoenas during the past year. In accordance with the court docket, the parties have reached a settlement, with no further involvement by MWRA. The case has been dismissed.</p> <p><u>(Former Employee) v. MWRA</u>: On August 13, 2012, Plaintiff withdrew his appeal which he filed after the Superior Court entered summary judgment in favor of MWRA on March 23, 2012, thus upholding the Separation Agreement and General Release which was signed in 2008 when he left MWRA's employment. A Judgment of Dismissal was entered by the Superior Court on August 21, 2012.</p> <p><u>MWRA v. (Former Employee)</u>: This is a civil action against a former employee for reimbursement to MWRA for overpayment of workers compensation benefits. A judgment has been recovered and the execution has been sent for recordation against the former employee's real property where it serve as a formal lien against the owner's title and will be paid when the owner next refinances or sells the property.</p>
Subpoenas	During the First Quarter of FY 2013, three new subpoenas were received, one subpoena was re-activated and three subpoenas were pending at the end of the First Quarter FY 2013.
Public Records	During the First Quarter of FY 2013 six new public records requests were received and two remained pending at the end of the First Quarter FY 2013.
TRAC/MISC.	
New Appeals	<p>Two new appeals were received in the 1st Quarter FY 2013.</p> <p><u>Advanced Imaging, Inc.; MWRA Docket No. 12-02</u></p> <p><u>Kirkwood Printing; MWRA Docket No. 12-03</u></p>
Settlement by Agreement of Parties	<p>One case was settled by Agreement of Parties in the 1st Quarter FY 2013.</p> <p><u>Environmental Compliance Corporation ("ECC"); MWRA Docket No. 12-01</u></p>
Stipulation of Dismissal	No cases were dismissed by Stipulation of Dismissal.
Notice of Dismissal Fine paid in full	No cases were dismissed by Notice of Dismissal, fine paid in full.
Tentative Decisions	No Tentative Decisions were issued in the 1 st Quarter FY 2013.
Final Decisions	No Final Decision were issued during the 1 st Quarter FY 2013.

Internal & Contract Audit Program 1st Quarter FY13

Highlights

MIS Equipment Controls

A discussion draft report was issued to management in September. A number of deficiencies were identified, including incomplete recordkeeping, missing equipment, and the storage of equipment in insecure locations. Management was kept informed of deficiencies and has instituted corrective actions. The nature of the deficiencies and corrective actions will require an Internal Audit follow-up in six months.

Chelsea Physical Security

During the audit of MIS Equipment Controls a number of observations were made regarding the physical security at the Chelsea facility. A discussion draft is being prepared recommending the strengthening of controls for the entire facility.

Status of Open Audit Recommendations (4 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
Boston Water & Sewer Commission CSO Financial Assistance Agreement (9/18/09)	1	2
Construction Change Order Pricing (12/31/09)*	3	2
Warehouse Practices (9/30/10)	2	8
Facility Card Access Controls (2/22/11)	3	17
DITP Data Center Access Controls (10/14/11)	11	11
FRRC Financial and Management Controls (12/14/11)	1	6
Review of Fleet Services Activities (1/9/12)	<u>2</u>	<u>3</u>
Total Recommendations	23	49

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

Audit Savings

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

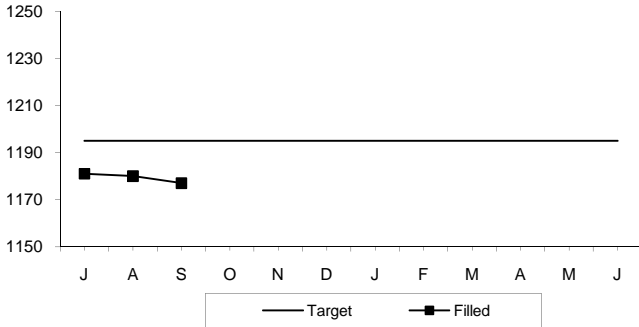
Savings	FY09	FY10	FY11	FY12	FY13	TOTAL
Consultants	\$316,633	\$194,238	\$520,176	\$259,245	\$171,766	\$1,462,058
Contractors & Vendors	\$1,262,088	\$599,835	\$3,129,538	\$435,760	\$149,694	\$5,576,915
Internal Audits	\$438,027	\$206,282	\$152,478	\$407,350	\$36,946	\$1,241,083
Total	\$2,016,748	\$1,000,355	\$3,802,192	\$1,102,355	\$358,406	\$8,280,056

OTHER MANAGEMENT

Workforce Management

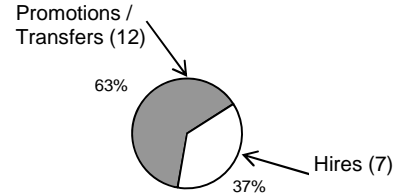
1st Quarter FY13

Filled Position Tracking



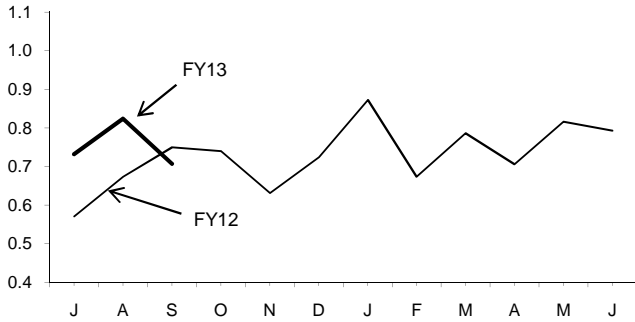
FY13 Target for Filled Positions = 1195
 Filled Positions as of September 2013 = 1177

Positions Filled by Hires/Promotions
 FY13-YTD



	Pr/Trns	Hires	Total
FY10	66 (76%)	21 (24%)	87
FY11	48 (62%)	30 (38%)	78
FY12	42 (61%)	27 (39%)	69

Average Monthly Sick Leave Usage
 Per Employee

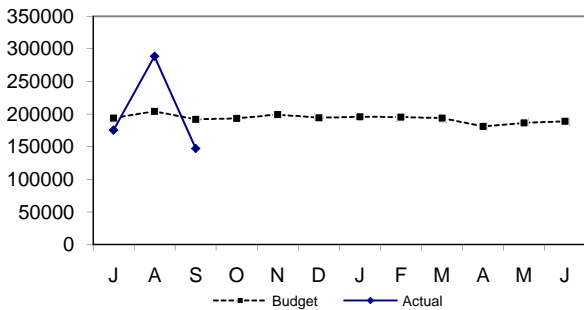


In FY13, the average quarterly sick leave usage has increased 1.13% from the same time last year.

	Number of Employees	YTD	Annualized Total	Annual FMLA %	FY12
A&F	188	1.68	6.71	22.5%	8.18
Aff. Action	7	4.37	17.47	49.4%	13
Executive	5	1.41	5.65	0.0%	6.5
Int. Audit	8	1.00	4.00	0.0%	5.9
Law	17	3.17	12.68	5.3%	11
OEP	4	2.06	8.23	0.0%	5.2
Operations	920	2.41	9.65	29.5%	8.8
Planning	21	0.81	3.24	0.0%	6.6
Pub. Affs.	13	1.44	5.75	0.0%	7.8
MWRA Avg	1183	2.26	9.05	27.9%	8.7

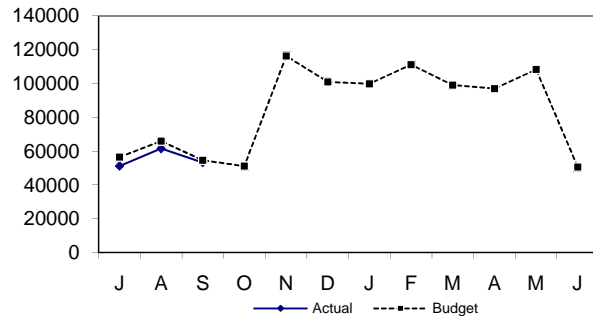
Percent of sick leave usage attributable to Family and Medical Leave Act (FMLA) leave is 27.9% ending September 30, 2012.

Field Operations
 Current Month Overtime \$



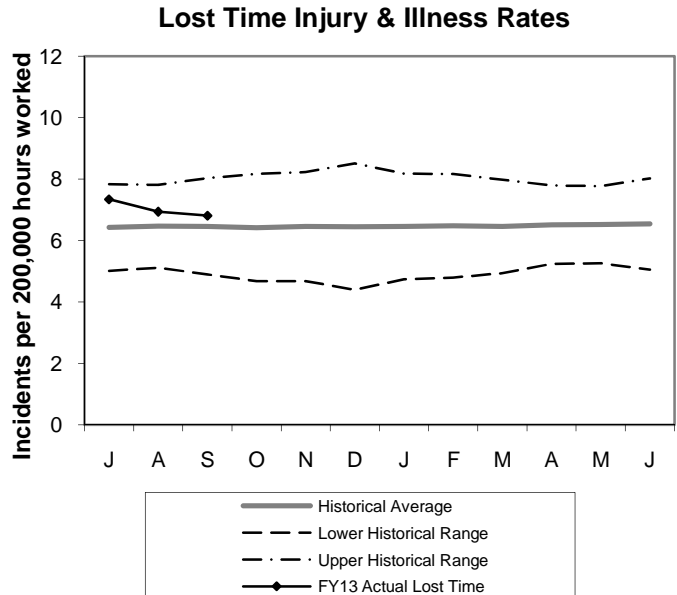
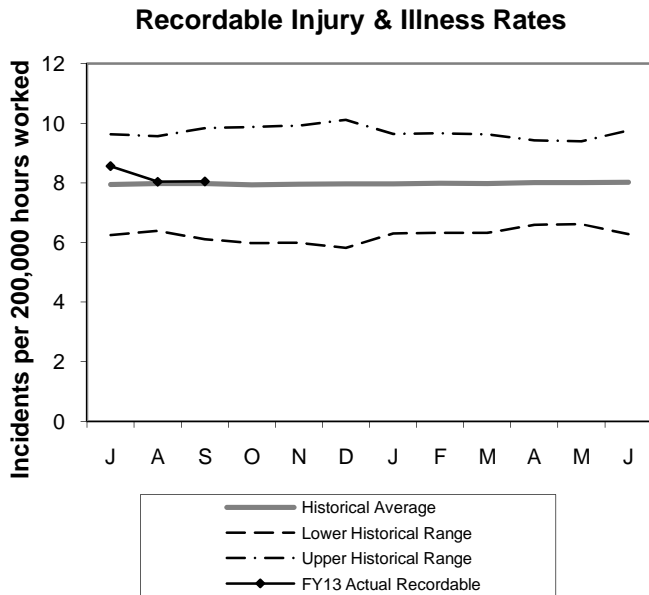
Total Overtime for Field Operations in September was \$147,276 which is \$45k over budget. Emergency overtime was \$80k, which was (\$15k) under budget. Of that amount, \$17k was spent emergency maintenance, \$17k on rain event pre-staging, \$15k on rain events, \$12k on CSO activation, \$10k on emergency operations. Coverage overtime was \$39k, which was (\$11k) under budget. Vacation coverage was \$19k; sick coverage was \$8k; personal coverage was \$5k. Planned overtime was \$29k or (\$19k) under budget. Of that amount, planned operations was \$11k, maintenance off hours work was \$6k, and maintenance work completion was \$3k.

Deer Island Treatment Plant
 Current Month Overtime \$



Deer Island's total overtime expenditure in September 2012 was \$53k, which was (\$1k) or (2.2%) under budget. Maintenance's planned/unplanned overtime was (\$7k) under budget primarily due Management's continued efforts to control overtime spending by allowing overtime for maintenance or repair of critical systems and equipment only. This was offset in part by higher than budgeted storm coverage, \$4K and shift coverage, \$2K. The budget, which was based upon historical actuals, did not anticipate any storm coverage, while 95 hours were actually required and shift coverage was higher due to more than anticipated vacation time.

Workplace Safety First Quarter FY 13



- 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 FY12. The "Upper" and "Lower Historical Ranges" are computed using these same data – adding and subtracting two standard deviations respectively. FY13 actual incident rates can be expected to fall within this historical range.

Workers Compensation Claims Highlights - First Quarter FY13

	New	Closed	Open Claims
Lost Time	7	12	50
Medical Only	45	40	49
	New	YTD Light Duty Returns	
Light Duty Returns	4		4

Highlights/Comments:

Light Duty Returns

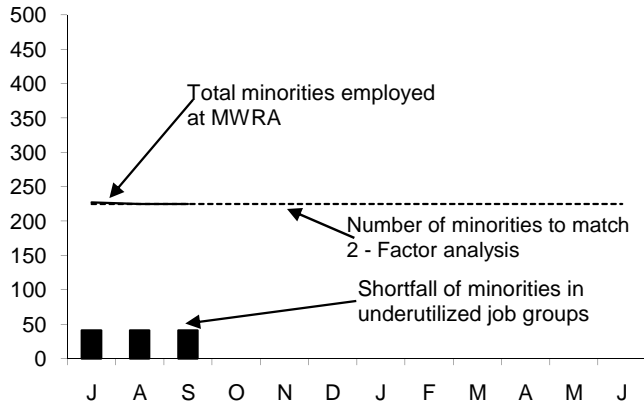
- July** 1 employee returned to work light duty from IA
- Aug** 2 employees returned to work light duty from IA
- Sept** 1 employee returned to work light duty from IA

Regular Duty Returns

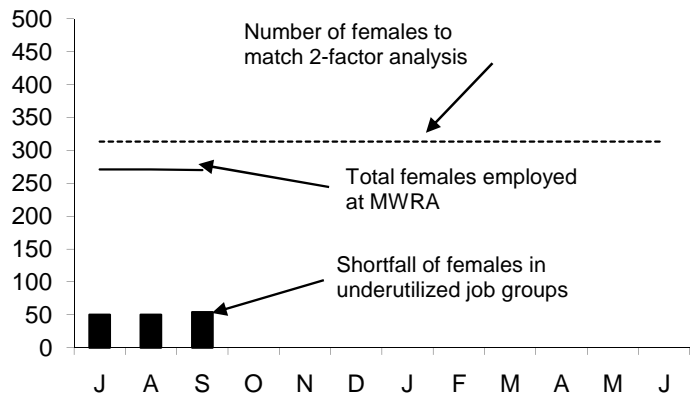
- July** 2 employees returned to work full duty from IA
- Aug** 2 employees returned to work full duty from IA
- 2 employees returned to work full duty from light duty
- Sept** 2 employees returned to work full duty from IA
- 1 employee returned to work full duty for 13 hours then returned to IA

MWRA Job Group Representation First Quarter FY13

Minority - Affirmative Action Plan Goals



Female - Affirmative Action Plan Goals



Highlights:

At the end of Q1 FY13, 8 job groups or a total of 44 positions are underutilized by minorities as compared to 8 job groups or a total of 40 positions at the end of Q1 FY12; for females 13 job groups or a total of 101 positions are underutilized by females as compared to 12 job groups or a total of 87 positions at the end of Q1FY12. During Q1, 1 minorities and 2 females were hired. During this same period, 4 minorities and 1 females terminated.

Underutilized Job Groups - Workforce Representation

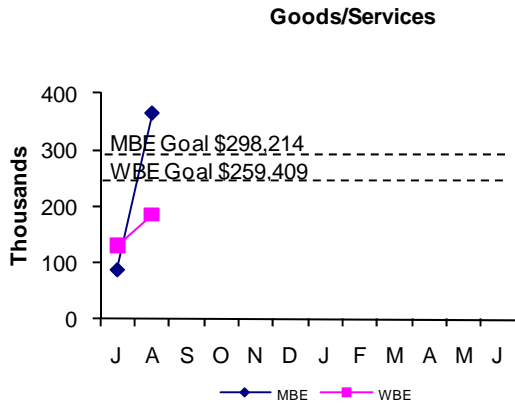
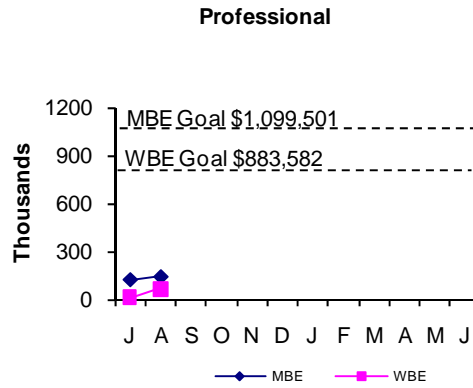
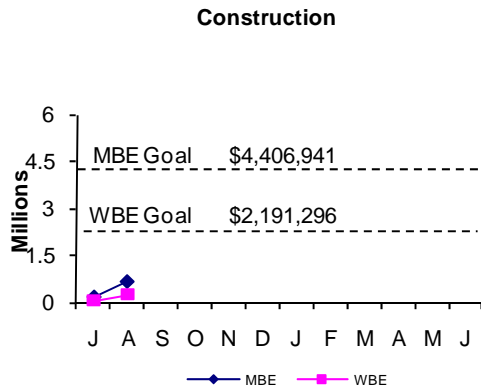
Job Group	Employees as of 9/30/2012	Minorities as of 9/30/2012	Achievement Level	Minority Over or Under Under utilized	Females As of 9/30/2012	Achievement Level	Female Over or Under Under utilized
Administrator A	18	3	2	1	3	5	-2
Administrator B	20	0	3	-3	5	5	0
Clerical A	46	20	11	9	40	4	36
Clerical B	34	8	8	0	15	3	12
Engineer A	84	15	17	-2	12	17	-6
Engineer B	50	12	5	6	6	18	-12
Craft A	114	14	21	-8	0	4	-4
Craft B	146	26	21	6	3	9	-6
Laborer	66	17	11	4	4	16	-12
Management A	102	16	21	-6	31	45	-14
Management B	51	10	11	0	15	25	-11
Operator A	66	5	6	-1	2	3	-1
Operator B	67	7	13	-6	4	5	-1
Para Professional	55	12	24	-14	26	48	-24
Professional A	37	3	7	-4	22	16	6
Professional B	165	39	31	8	76	76	0
Technical A	54	17	10	7	5	11	-6
Technical B	8	1	2	0	1	3	-2
Total	1183	225	224	41/-44	270	313	54/-101

AACU Candidate Referrals for Underutilized Positions

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

MBE/WBE Expenditures First Quarter FY-13

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.



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

	MBE				WBE			
	FY13 Year-to-Date		FY12		FY13 Year-to-Date		FY12	
	<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	676,907	15.4%	3,771,155	112.8%	249,296	11.4%	6,992,984	305.0%
Professional Svc.	137,694	12.5%	1,216,840	97.2%	64,773	7.3%	524,130	52.1%
Goods & Svcs.	366,177	122.8%	879,467	303.3%	185,548	71.5%	737,776	292.5%
Total	\$1,180,778	20.3%	\$5,867,462	120.1%	\$499,617	15.9%	\$8,184,890	232.0%

MWRA FY13 CEB Expenses through First Quarter FY13

	September 2012 Year-to-Date					
	Period 3 YTD Budget	Period 3 YTD Actual	Period 3 YTD Variance	%	FY13 Approved	% Expended
EXPENSES						
WAGES AND SALARIES	\$ 21,797,683	\$ 21,238,844	\$ (558,839)	-2.6%	\$ 94,059,400	22.6%
OVERTIME	825,202	839,102	13,900	1.7%	3,573,495	23.5%
FRINGE BENEFITS	4,525,228	4,400,098	(125,130)	-2.8%	18,241,926	24.1%
WORKERS' COMPENSATION	525,000	457,065	(67,935)	-12.9%	2,100,000	21.8%
CHEMICALS	2,883,650	2,958,004	74,354	2.6%	9,963,496	29.7%
ENERGY AND UTILITIES	4,742,720	4,786,815	44,095	0.9%	23,127,198	20.7%
MAINTENANCE	5,586,110	6,016,493	430,383	7.7%	28,229,070	21.3%
TRAINING AND MEETINGS	120,083	33,577	(86,506)	-72.0%	385,617	8.7%
PROFESSIONAL SERVICES	1,409,238	1,328,605	(80,633)	-5.7%	5,900,785	22.5%
OTHER MATERIALS	732,999	830,715	97,716	13.3%	5,591,291	14.9%
OTHER SERVICES	6,125,607	5,774,388	(351,219)	-5.7%	23,743,608	24.3%
TOTAL DIRECT EXPENSES	\$ 49,273,520	\$ 48,663,706	\$ (609,813)	-1.2%	\$ 214,915,886	22.6%
INSURANCE	\$ 524,469	\$ 494,365	\$ (30,104)	-5.7%	\$ 2,097,875	23.6%
WATERSHED/PILOT	6,603,294	6,369,801	(233,493)	-3.5%	26,413,175	24.1%
BEC _o PAYMENT	891,824	875,520	(16,304)	-1.8%	3,741,915	23.4%
MITIGATION	391,731	377,138	(14,593)	-3.7%	1,566,923	24.1%
ADDITIONS TO RESERVES	349,582	349,582	-	0.0%	1,398,329	25.0%
RETIREMENT FUND	8,112,230	8,128,101	15,871	0.2%	10,474,376	77.6%
POST EMPLOYEE BENEFITS	-	-	-	---	-	---
TOTAL INDIRECT EXPENSES	\$ 16,873,130	\$ 16,594,507	\$ (278,623)	-1.7%	\$ 45,692,593	36.3%
DEBT SERVICE	\$ 92,542,541	\$ 92,542,541	\$ -	0.0%	\$ 375,248,070	24.7%
DEBT SERVICE ASSISTANCE	(87,500)	(87,500)	-	0.0%	-	---
TOTAL DEBT SERVICE	\$ 92,455,041	\$ 92,455,041	\$ -	0.0%	\$ 375,248,070	24.7%
TOTAL EXPENSES	\$ 158,601,691	\$ 157,713,254	\$ (888,435)	-0.6%	\$ 635,856,549	24.8%
REVENUE & INCOME						
RATE REVENUE	\$ 151,878,000	\$ 151,878,000	\$ -	0.0%	\$ 607,512,000	25.0%
OTHER USER CHARGES	1,998,533	1,986,906	(11,627)	-0.6%	7,766,692	25.6%
OTHER REVENUE	916,795	1,333,678	416,883	45.5%	6,116,845	21.8%
RATE STABILIZATION	-	-	-	---	-	---
INVESTMENT INCOME	3,765,736	3,423,115	(342,621)	-9.1%	14,461,012	23.7%
TOTAL REVENUE & INCOME	\$ 158,559,064	\$ 158,621,699	\$ 62,636	0.0%	\$ 635,856,549	24.9%

As of September 2012, total revenue was \$158.6 million, \$63,000 higher than budget. Total expenses were \$157.7 million, \$888,000 or 0.6% less than budget, resulting in a net variance of \$951,000 after the transfer of \$3.3 million to the defeasance account.

Expenses –

- **Direct Expenses** are \$48.7 million, \$610,000 or 1.2% less than budget.
- **Wages and Salaries** are underspent by \$559,000 or 2.6% due to lower headcount and employees on unpaid time off.
- **Maintenance** is \$430,000 or 7.7% more than budget. Material purchases are greater than budgeted by \$467,000 and Services are underspent by \$36,000 mainly due to timing.
- **Other Services** are \$351,000 or 5.7% under budget mainly for lower Sludge Pelletization of \$299,000 and Other Services of \$128,000 mainly for timing of remediation activities.
- **Fringe Benefits** are under budget by \$125,000 or 2.8% mainly due to lower spending for Health Insurance of \$108,000 and Medicare of \$19,000.
- **Other Materials** are \$98,000 or 13.3% over budget due to timing of Computer Hardware of \$95,000, Lab & Testing Supplies of \$45,000, and Work Clothes of \$43,000 offset by lower spending for Other Materials of \$46,000.
- **Training & Meetings** is underspent by \$87,000 or 72.0% mainly due to timing.
- **Professional Services** are \$81,000 or 5.7% under budget due to Lab & Testing Analysis of \$52,000 mainly due to timing of HOM initiatives and Legal expenses of \$23,000.
- **Chemicals** are overspent by \$74,000 or 2.6% due to higher spending for Soda Ash of \$131,000 offset by lower spending for Nitrazyme of \$66,000.
- **Workers' Compensation** is underspent by \$68,000 or 12.9% due to lower actual payments of \$43,000 and reserves of \$25,000.
- **Utilities** are overspent by \$44,000 or 0.9% mainly for higher spending for Electricity of \$67,000 mainly at Deer Island offset by lower spending for Diesel Fuel of \$31,000 mainly in Field Operations.
- **Indirect Expenses** are \$16.6 million, \$279,000 or 1.7% under budget mainly due to an FY12 overaccrual for Watershed Reimbursement of \$233,000 and lower spending for Insurance of \$30,000.
- **Debt Service Expenses** total \$92.5 million, after transferring \$3.3 million to the defeasance account as a result of favorable short-term rates.

Revenue and Income –

- **Total Revenue / Income** for September is \$158.6 million, \$63,000 higher than budget mainly due to higher Other Revenue of \$417,000 mainly for the Federal Emergency Management Agency (FEMA) reimbursement for Tropical Storm Irene costs \$264,000 offset by lower investment Income of \$343,000 due to lower than budgeted short-term rates.

Cost of Debt

First Quarter FY13

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.

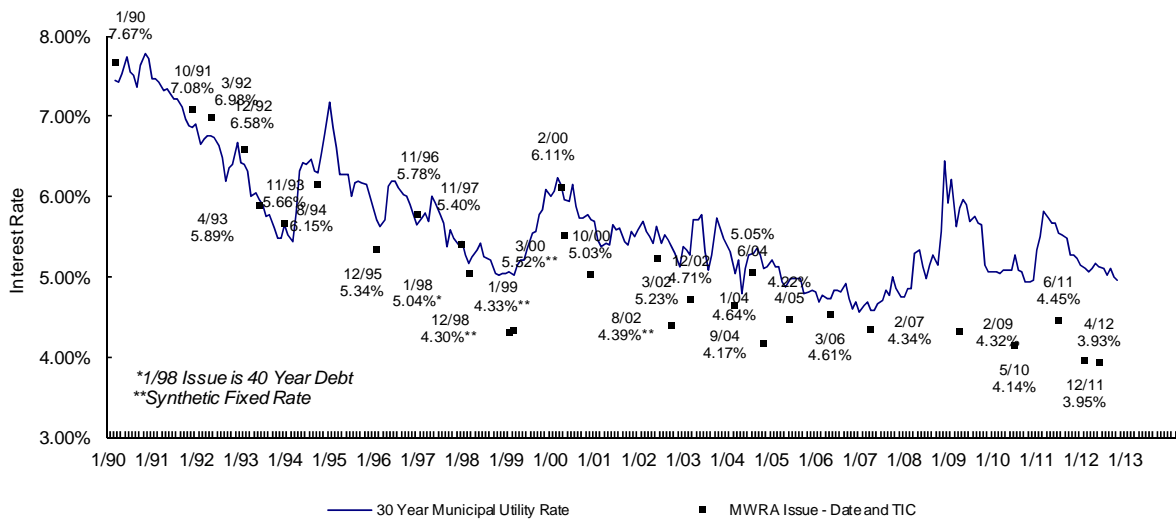
Average Cost of MWRA Debt

Fixed Debt (\$4,071)	4.43%
Variable Debt (\$561)	0.89%
SRF Debt (\$1,037)	1.17%
 Weighted Average Debt Cost (\$5,669)	 3.48%

Most Recent Senior Fixed Debt Issue April 2012

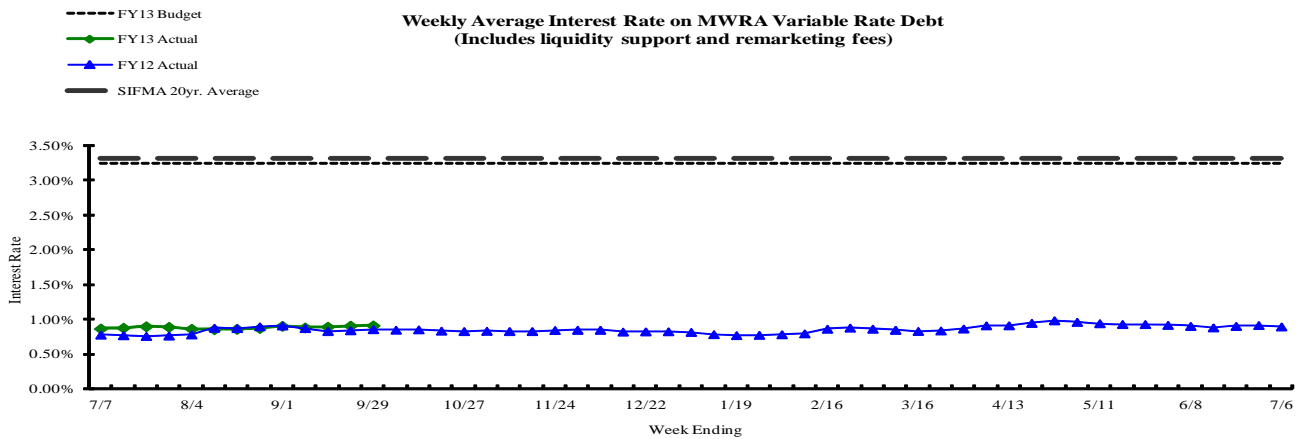
2012 Series A & B (\$236.8)	3.93%
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MWRA Fixed Rate Debt vs. 30 Year Municipal Utility Interest Rate



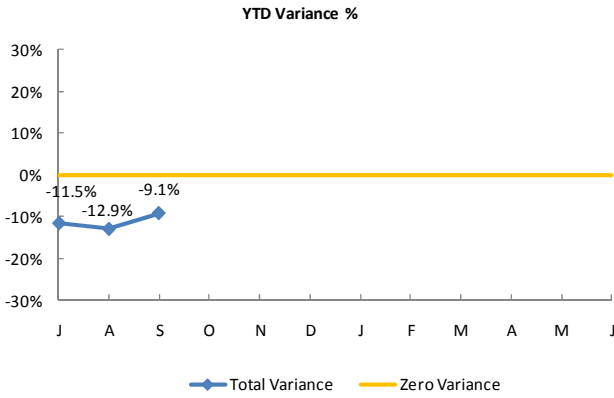
Weekly Average Variable Interest Rates vs. Budget

MWRA currently has nine variable rate debt issues with \$1.2 billion outstanding, excluding commercial paper. Of the nine outstanding series, five have portions which have been swapped to fixed rate. Variable rate debt has been less expensive than fixed rate debt in recent years as short-term rates have remained lower than long-term rates on MWRA debt issues. In September, SIFMA rates fluctuated with a high of 0.18% and a low of 0.15%. 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 First quarter FY13

Year To Date



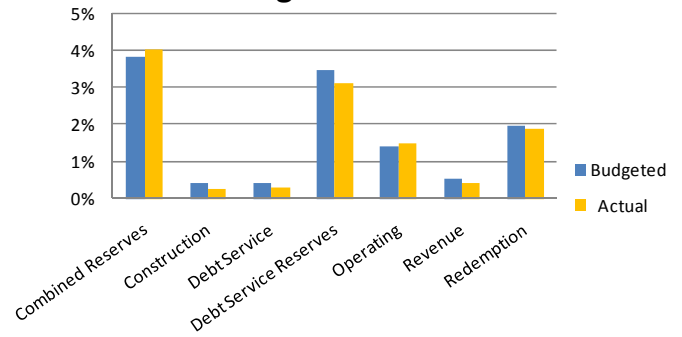
	YTD BUDGET VARIANCE (\$000)			
	BALANCES IMPACT	RATES IMPACT	TOTAL	%
Combined Reserves	\$2	\$42	44	5.4%
Construction	(\$9)	(\$75)	(84)	-35.6%
Debt Service	(\$1)	(\$34)	(36)	-33.6%
Debt Service Reserves	(\$2)	(\$229)	(231)	-10.7%
Operating	(\$14)	\$10	(4)	-2.1%
Revenue	(\$2)	(\$24)	(26)	-25.4%
Redemption	\$0	(\$7)	(7)	-4.2%
Total Variance	(\$27)	(\$316)	(\$343)	-9.1%

➤ The negative balance is attributed to the lower than budgeted interest rates.

YTD Average Balances Budgeted vs. Actual

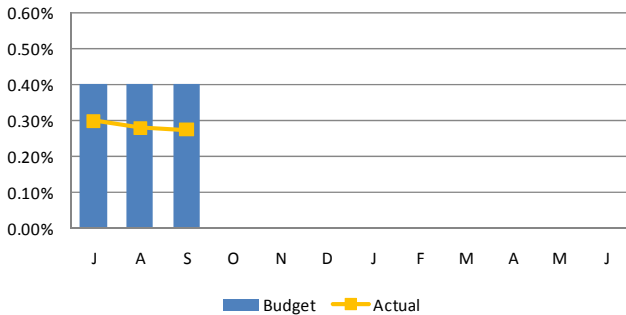


YTD Average Interest Rate Budgeted vs. Actual

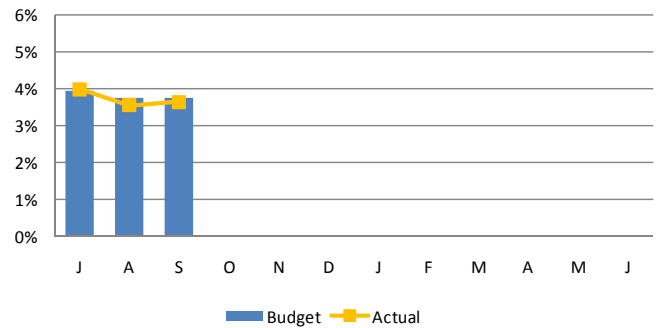


Monthly

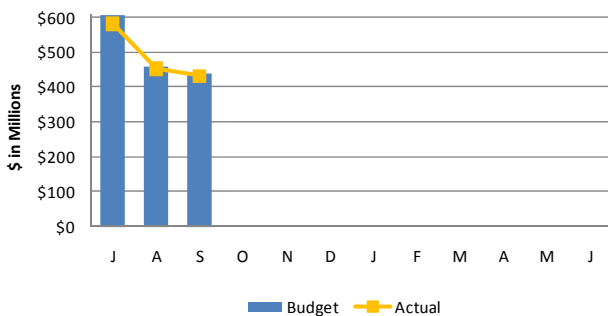
Short-Term Interest Rates



Long-Term Interest Rates



Short-Term Average Balances



Long-Term Average Balances

