MASSACHUSETTS WATER RESOURCES AUTHORITY

Board of Directors Report

on

Key Indicators of MWRA Performance

for

Second Quarter FY2011

Q1	Q2	Q3	Q4

Frederick A. Laskey, Executive Director
Michael J. Hornbrook, Chief Operating Officer
April 13, 2011

Board of Directors Report on Key Indicators of MWRA Performance for Second Quarter FY2011

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

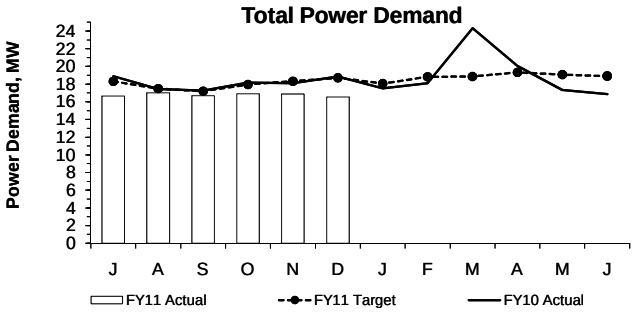
Frederick A. Laskey, Executive Director
Michael J. Hornbrook, Chief Operating Officer

April 13, 2011

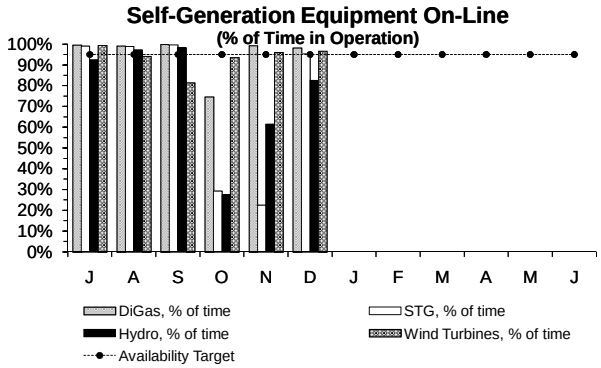
OPERATIONS AND MAINTENANCE

Deer Island Operations

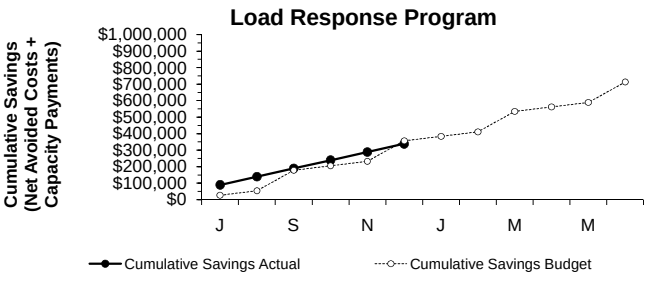
2nd Quarter - FY11



Total Power Demand in the 2nd Quarter was 8% lower than target as Total Plant Flow for the quarter was also lower than expected. Power Demand in each month of the quarter was 6% to 11% lower than target. During the 2nd Quarter, Power Demand for pumping was 13.6% lower than expected as Total Plant Flow was 12% lower than expected. Power Demand from all of the other treatment processes was also lower or similar to the expected Power Demand for the quarter due to the lower-than-expected plant flow; plant flow impacts power demand.

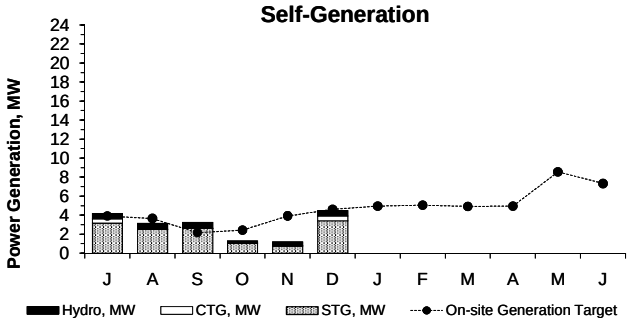


The DiGas, STG, and Hydro Turbine systems all fell below their 95% Availability Target for the 2nd Quarter (90.7%, 49% and 57.1%, respectively), while the Wind Turbines met the target. The DiGas system was off-line several days for routine scheduled maintenance. The STG was off-line for approximately 40 days for a 5-Year Major Overhaul Service and was taken off-line again from November 22 - 23 to correct a meter calibration bias issue. Both Hydro turbines were also off-line for a significant portion of the quarter due to a broken cable on the intake gate (Turbine 1) and to a failed shaft seal (Turbine 2). Please note the 95% Availability Target for the Wind Turbines is an overall annual Availability Target as specified in the turbine vendor's contract (and is not a monthly target).

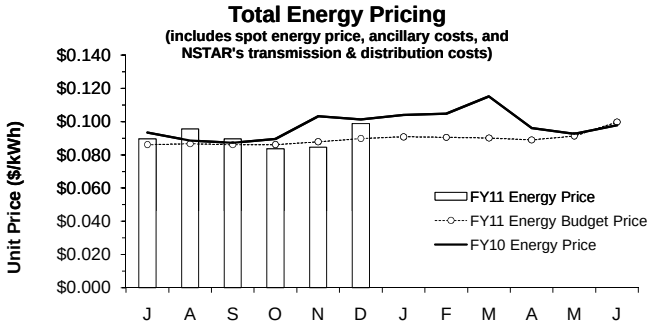


DI participated in one demand response event on December 20. Payment estimates have not yet been supplied by MWRA's electricity supplier.

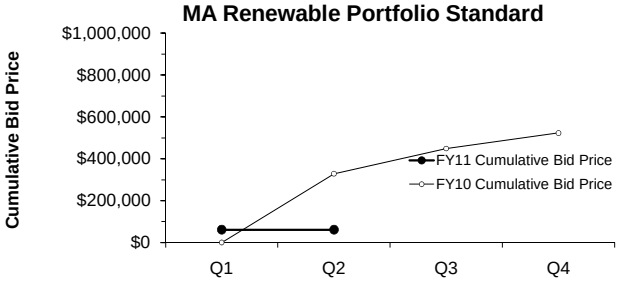
Deer Island participates in the ISO-New England Load Response Programs. By agreeing to have its Combustion Turbine Generators available to run and thus relieve the New England energy grid of Deer Island's load during times of high energy demand or high pricing, MWRA receives monthly Capacity Payments 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 - estimated to be $338,377 through the 2nd Quarter compared to the budgeted savings of $356,700.



Power generated on-site was 26% lower than target for the 2nd Quarter. The STG, Solar Panels, and Hydro Turbines all fell below their generation targets for the quarter by 36%, 30%, and 24%, respectively (see Self Generation Equipment On-Line Graph), while generation by the CTGs and Wind Turbines exceeded their targets by 87% and 37%, respectively. Solar Power generation was 0.70% and Wind Turbine generation was 13.2% of the total power generated on-site for the 2nd Quarter. The CTGs were operated for a total of 37.6 hours in the quarter, of which 17.1 hours were for NSTAR maintenance, 2.68 hours for an ISO-NE curtailment audit of the Demand Response Program, 16.53 hrs on December 26-27 during a State of Emergency/Storm Event in parallel with NSTAR power to maintain plant operation during an extreme weather event, and 1.3 hours for routine maintenance.



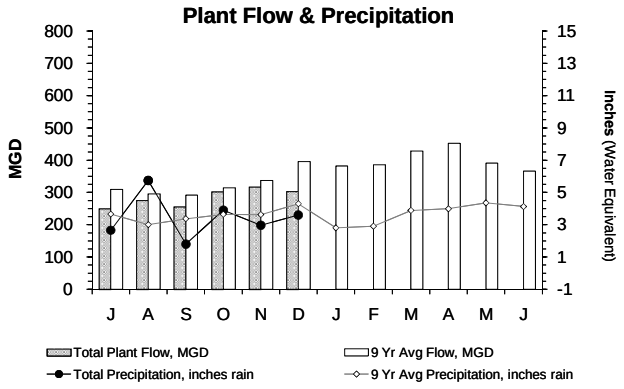
Overall, the total energy price in the 2nd Quarter was 1% higher than the budgeted spot energy price. The total energy price includes a fixed block price, spot energy price, transmission & distribution charges, and ancillary charges. Please note December's total energy price is an estimate as the invoice has not been received. Year-to-date costs are estimated at approximately $163,957 more than budgeted through the 2nd Quarter of FY11, primarily because the ancillary charges were 53% higher than budgeted.



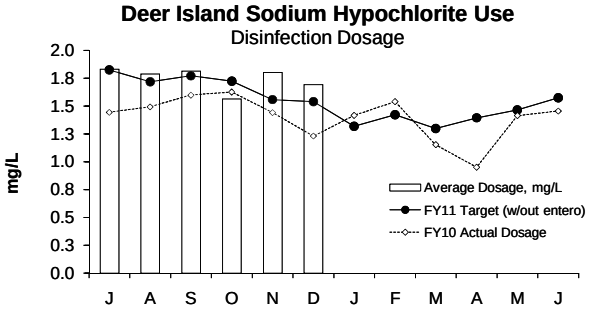
There were no Renewable Energy Certificate (REC) bids in the 2nd Quarter. REC credits have been temporarily banked (not provided for bidding) until the market improves. The hope is to be on target by the end of FY11. REC prices reflect the bid prices on the date that bids are accepted. Cumulative bid price reflects the total value of bids received to date. The FY11 budgeted cumulative bid estimate through the 2nd Quarter is $309,732 while the actual bid total is $61,288.

Deer Island Operations

2nd Quarter - FY11



The Total Plant Flow for the 2nd Quarter was 12% lower than the 9-year average flow estimate (307.5 mgd actual vs. 349.2 mgd expected) as precipitation was 10% lower than the 9-year average for the quarter (10.47 inches actual vs. 11.58 inches expected).



The disinfection dosing rate was slightly above target for the 2nd Quarter. The average dosing rate for the quarter of 1.69 mg/L was 5% higher than the 1.61 mg/L expected. Actual sodium hypochlorite usage in gallons was 8.1% lower than the budget estimate for the quarter, indicating a higher chlorine dose was necessary for maintaining a target chlorine residual in the more concentrated wastewater.

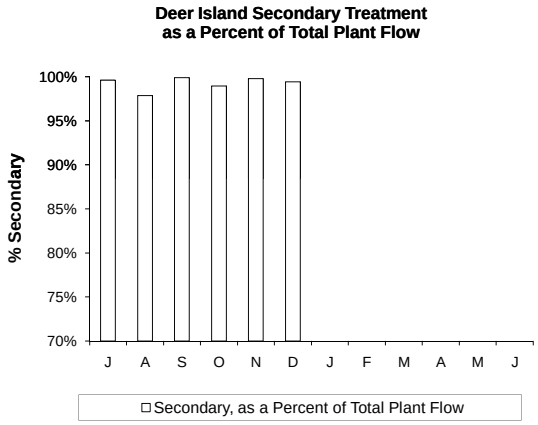
The overall disinfection dosing rate (target and actual) is dependent on plant flow, target effluent total chlorine residual levels, effluent quality and NPDES permit levels for fecal coliform.

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	1	1	0	99.6%	4.5
A	3	3	0	97.9%	19.51
S	1	1	0	99.9%	2.24
O	2	2	0	99.0%	12.81
N	2	2	0	99.8%	5.62
D	1	1	0	99.4%	7.62
J					
F					
M					
A					
M					
J					
Total	10	10	0	99.2%	52.3

There were five separate blending events during the 2nd Quarter. There were two separate blending events in October, two in November, and a single event in December resulting in a total of 26.1 hours of blending and 176.4 million gallons of primary-only treated flow blended with secondary effluent.

All secondary blending events that occurred during the quarter were due to rain resulting in high plant flows. **Secondary permit limits were met at all times in the 2nd Quarter.**



Overall, 99.4% of the total plant flow to DITP received Secondary treatment during the 2nd Quarter. The Maximum Secondary Capacity for the entire quarter was 700 mgd.

Deer Island Operations & Maintenance Report

Environmental/Pumping:
The plant achieved a maximum average hourly flow rate of 1,053 mgd on October 6 as a result of several rainstorms that began on October 4 and intensified on October 6 producing a total of 1.89 inches of precipitation over the course of three days. A near-blizzard northeaster snowstorm event on December 27 into December 28 brought damaging winds and surf to the region and produced 18.2 inches of snow (1.61 water equivalent inches of precipitation) as recorded at Boston's Logan Airport weather station.
Pumping and treatment operations continued without incident throughout these storm events, as well as, throughout the entire quarter.

Primary and Secondary Treatment:
Progress on the major Primary and Secondary Clarifier Rehabilitation Project continued through the 2nd Quarter. Rehabilitation work on a total of seven Primary clarifiers and seven Secondary clarifiers was completed during the quarter. Rehabilitation of approximately 72% of all of the clarifiers has been completed as of the end of the 2nd Quarter. Rehabilitation of all the clarifiers in Primary Battery C is scheduled to be completed in January 2011.

Deer Island Operations & Maintenance Report (continued)

Secondary Treatment:
Annual turnaround maintenance was performed at the Cryogenic Oxygen Facility during the second two weeks of November. This turnaround maintenance is performed on roughly half of the components and systems in the facility and allows the remaining half of the facility to continue to operate and produce oxygen uninterrupted. Deer Island began operating the Cryogenic Oxygen Facility near the end of November using the routine winter operating guidelines where the continuous operation of only one "cold box" rather than two units, is needed for the effective operation of the Secondary activated sludge process. Less oxygen is needed in the winter as there is a decrease in microbiological activity with the cooler wastewater temperature.

Odor Control:
Spent activated carbon was replaced with new (regenerated) carbon material for Carbon Adsorber 3 in the East Odor Control Facility, and for Adsorber 3 and 4 in the Residuals Odor Control Facility in October. Adsorber 1, 2, and 4 in the West Odor Control (WOC) Facility received new carbon media in December. The internal surface of WOC Adsorber 4 was recoated with an acrylic paint prior to the addition of new carbon media as a preventative maintenance measure to ensure the integrity of the underlying internal structure of the Adsorber by preventing corrosion and wear as the existing coating has aged over time; WOC Adsorber 8 was in the process of being recoated as of the end of December.

Energy:
The Wind Turbines on DI reached a milestone one-year anniversary on November 9.

The 5-Year Major Overhaul Service on the Steam Turbine Generator (STG) began on October 11 and continued through November 19. The system was taken off-line again from November 22 to November 23 to correct a power generation meter calibration bias issue. The annual maintenance on the individual and on the common steam systems for the two Zurn boilers and the STG was performed from October 11 into October 15. Both boilers were back in operation before the end of the month. Additionally, a number of connections necessary for the future installation of the replacement dump condenser for the Thermal Power Plant were also installed in October while the Thermal Power Plant was off-line for scheduled maintenance activities.

Combustion testing was performed on both Zurn boilers from December 28 - 30 to develop start-up limits as required for the air emissions permit.

Clinton Wastewater Treatment Plant Operations & Maintenance Report

Auxiliary Pumps Project: The design for the permanent mounted auxiliary pumps in the influent and intermediate wet wells is progressing. A delay in design occurred due to necessary instrumentation and control coordination with another project, the Secondary aeration efficiency project.

Digester Rehabilitation Project: The design for the digester rehabilitation project is also progressing. The current estimate of the total timeframe for the rehab of both digesters is 30-36 months.

P**hosphorous Limit:** In anticipation of the newly imposed phosphorous limit in Clinton's NPDES permit, staff have scheduled a pilot test of the selected technology for treatment (disc filtration). This pilot test will take place in March 2011 and is anticipated to cost approx $20,000. The technology must certify at 0.1mg/l; the new limit will be 0.15mg/l.

Influent Gates: The design of two influent gates (one for the Clinton influent and one for the Lancaster Sewer District) is nearly complete. These gates will protect the plant's assets from extreme wet weather flows by throttling the influent to the plant, if necessary.

Operations and Maintenance:
Headworks Building - Staff Installed counter-weight support cables on Grit Bucket Elevator 1; installed new water lines on the lower idler sprocket for the grit elevator; and installed a lower sprocket and shaft on Grit Bucket Elevator 1.

Dewatering Building - Staff realigned the belt on Belt Press 1; cleared a blockage from the floor drains in the sludge garage; removed a broken valve operator on Sludge Transfer Pump 3; replaced a bent support pipe in Gravity Thickener 1; set up staging inside the tank for welding the brackets; replaced and realigned the tank's skimming arm; painted the new components, removed staging and placed the tank back on line.

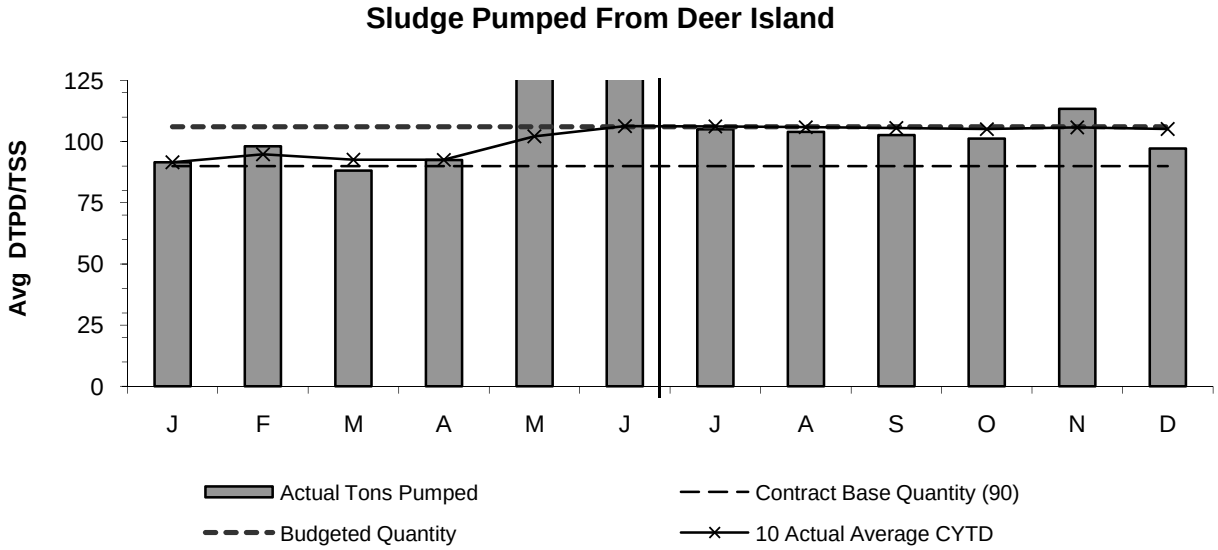
Chemical Building - Staff replaced the low pressure air blower for the contact chamber.

Digester Building - Staff adjusted the packing on Recirculation Pump 1 and flushed out all three recirculation pumps and removed an accumulation of rags found in the check valves.

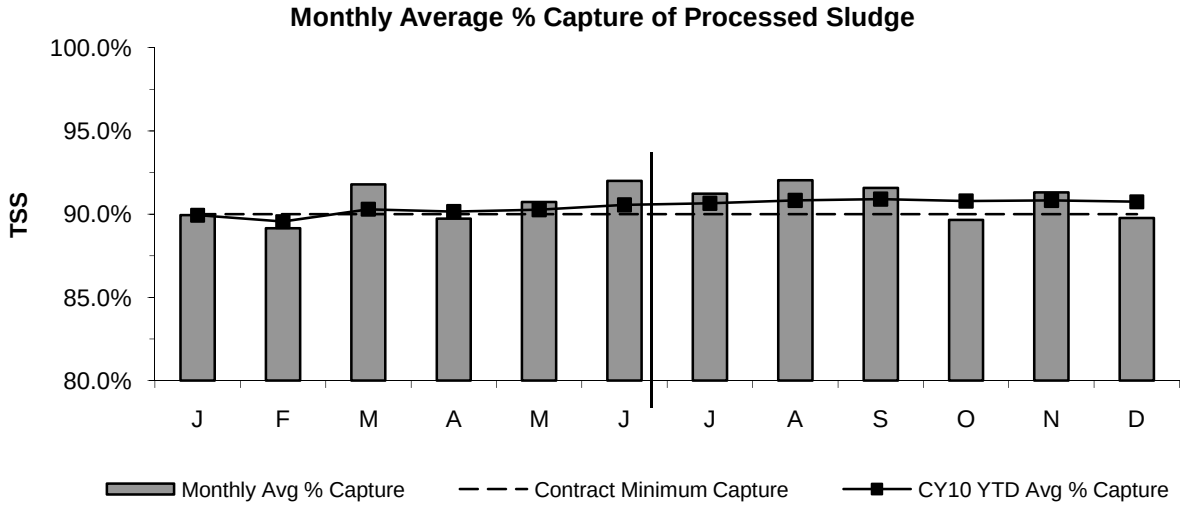
Deer Island Residuals

2nd Quarter - FY11

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 (FY11's budget is 106 DTPD/TSS).



The average total quantity of sludge pumped from DITP to FRSA in the 2nd Quarter was 103.9 DTPD, which is less than FY11's budget of 106 DTPD. The lower quantity is a result of less Secondary sludge going to digestion, as well as increases in the amount of sludge held in inventory at DITP. Changes in sludge inventory, the performance of Primary and Secondary treatment, and upset conditions can all impact sludge quantities.



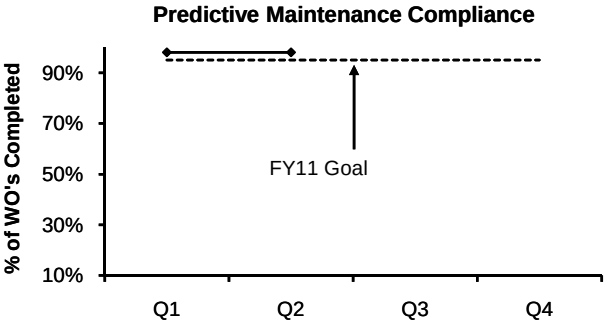
The contract requires NEFCo to capture at least 90% of the solids delivered to the Pelletizing Plant at FRSA. Staff monitor NEFCo's capture rate on a monthly basis and determine contract compliance on an annual basis using the monthly average. The average solids capture rate for the 2nd Quarter was 90.24; the average solids capture rate for CY10 was 90.74.

Deer Island Maintenance

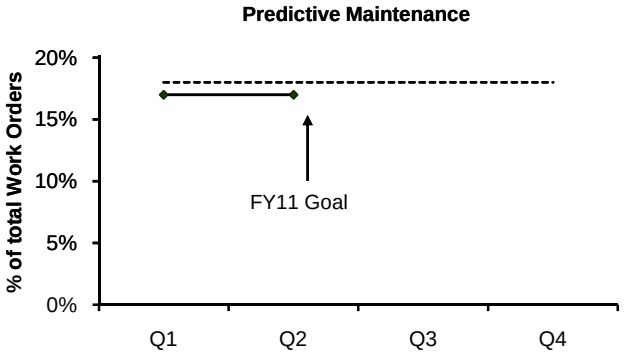
2nd Quarter - FY11

Productivity Initiatives

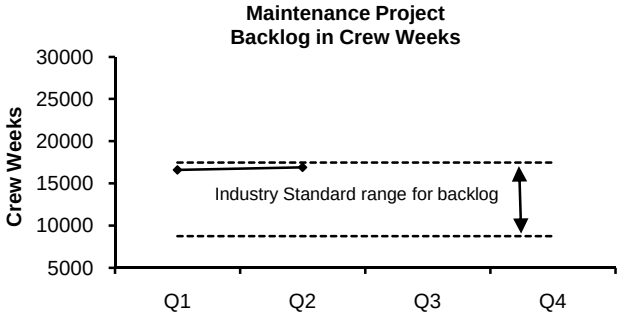
Productivity initiatives include increasing predictive maintenance tasks. Accomplishing this initiative should result in a decrease in the overall maintenance backlog.



Deer Island is continuing with an aggressive predictive maintenance program. Deer Island's FY11 predictive maintenance goal is completion of 95% of all PdM work orders; Deer Island met this goal as it completed 98% of its PdM work orders in the 2nd Quarter.



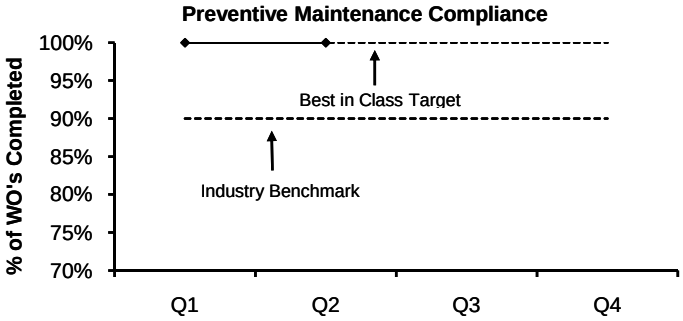
Deer Island's FY11 goal is to increase PdM work orders to 18% of total work orders. The industry is moving toward increasing predictive maintenance work to reduce down time and to better predict when repairs are needed. DITP completed 17% this quarter.



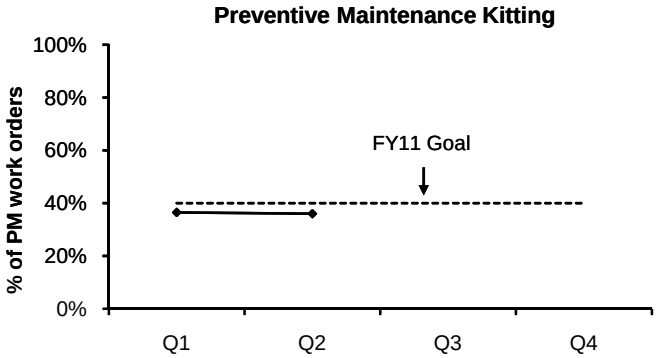
DITP's average backlog this quarter was 16,895 hours. The industry standard for maintenance backlog with 97 staff (currently planned staffing levels) is between 8,730 hours 17,460 hours so Maintenance is currently within the industry benchmark. Management continues to monitor backlog to ensure that all critical equipment and systems are available.

Proactive Initiatives

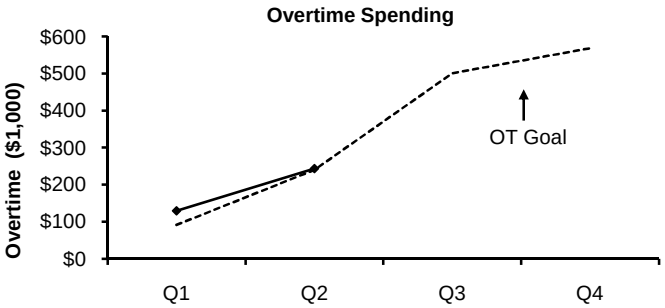
Proactive initiatives include completing 100% of all preventive maintenance tasks and increasing preventive maintenance kitting. These tasks should result in lower maintenance costs.



Deer Island's FY11 preventive maintenance goal is completion of 100% of all PM work orders from Operations and Maintenance. DITP met this goal as it completed 100% of its PMs this quarter.



Deer Island's FY11 preventive maintenance kitting goal is 40%; Deer Island completed 36% maintenance kitting this quarter. Kitting is staging of parts/materials necessary to complete maintenance work. This will result in more wrench time and increased productivity.

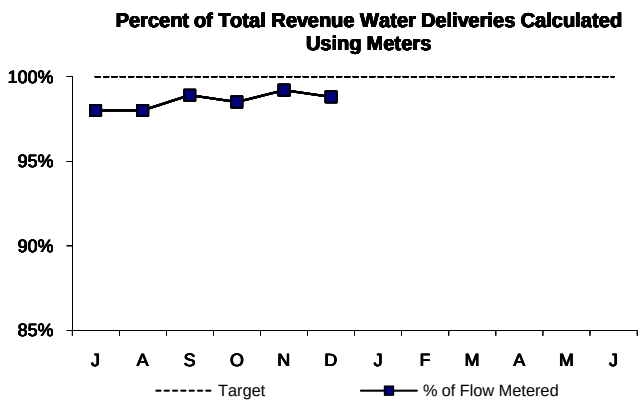


Overtime spending was $35K under budget for the 2nd Quarter and Maintenance is over budget by $3K for the year. Overtime in Q2 was used for storm coverage, "His/Her" hot water shutdown, a planned boiler outage, testing NMPS Pump 5, and Primary and Secondary Clarifier work. Management continues to limit overtime to critical maintenance activities only.

Operations Division Metering

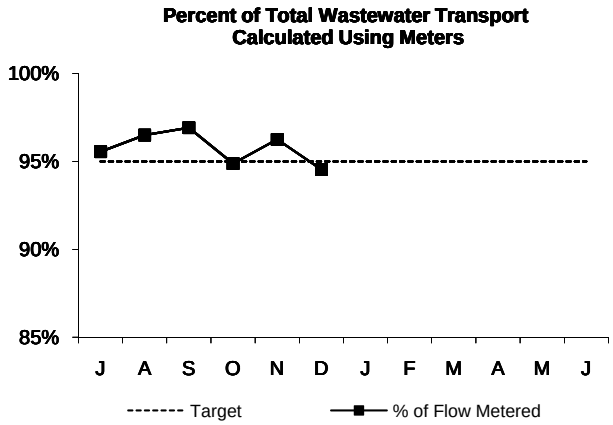
2nd Quarter - FY11

WATER METERS

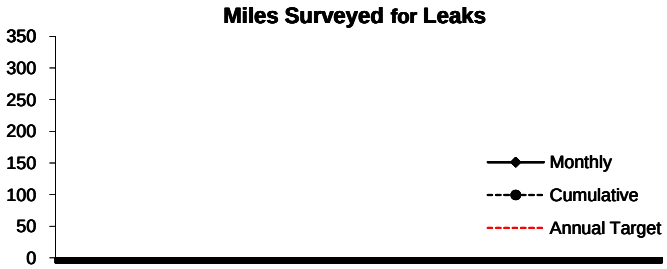


The target for revenue water deliveries calculated using meters is 100%. Estimates are generated for meters that are out of service due to instrumentation problems or in-house and capital construction projects. During the 2nd Quarter, meter actuals accounted for 98.8% of flow; only 1.2% of total revenue water deliveries were estimated. The following is the breakdown of estimations:
In-house and Capital Construction Projects - 0.9%
Instrumentation Failure - 0.3%

WASTEWATER 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 2nd Quarter, meter actuals accounted for 95.22% of flow; 4.78% of wastewater transport was estimated.

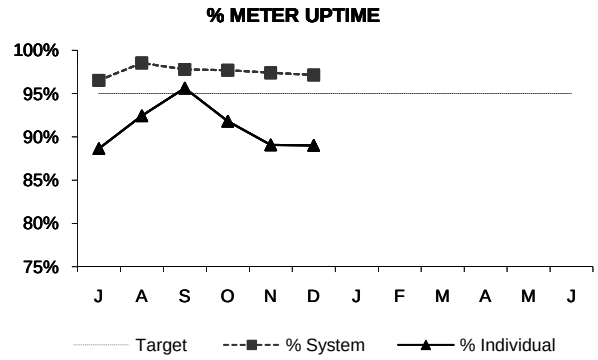


During the 2nd Quarter, staff inspected 56.14 miles of MWRA water mains; this brings the total for the fiscal year to 126.35 miles.

Water Distribution System

Month	J	A	S	O	N	D	J	F	M	A	M	J
Leaks Detected	0	0	1	0	0	0						
Leaks Repaired	0	0	1	0	0	0						
Backlog	0	0	0	0	0	0						
Avg. Lag Time	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**						

No leaks were found during the 2nd Quarter. Therefore, the leak backlog for FY11 remains at zero. 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 no more than two leaks outstanding at year's end.



For the 2nd Quarter, out of a possible 1,595,712 data points, only 39,312 points were missed resulting in an average system-wide up time of 97.41%. Of the average 183 revenue meters installed, on average, 18 experienced down time greater than the 5% target resulting in a 90.0% individual meter uptime. A number of the meters experienced modem issues related to Verizon's upgrade to its 4G network, which started during November. Staff continue to work with Verizon to resolve this issue. For the 2nd Quarter, down time for an individual meter is defined by any individual meter, on average, having less than 2,797 data points.

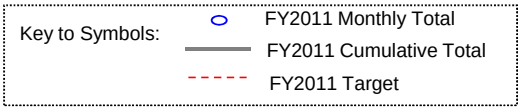
Water Distribution System Valves

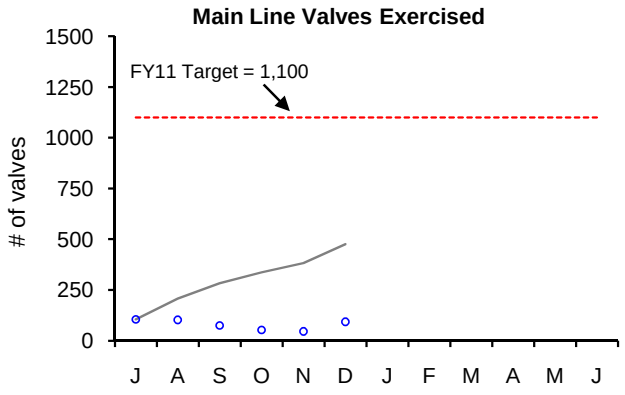
2nd Quarter - FY11

Background

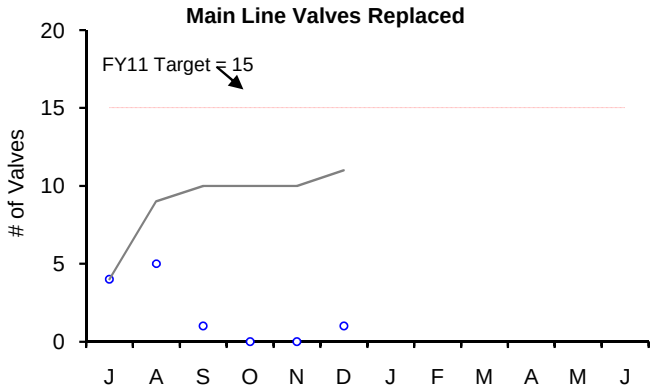
Valves are exercised, rehabilitated, or replaced in order to improve their operating condition. This work occurs year round. Valve replacements occur in roadway locations during the normal construction season, and in off-road locations during the winter season. Valve exercising can occur year round but 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	
		FY11 to Date	FY11 Targets
Main Line Valves	2,083	87.8%	87%
Blow-Off Valves	1,193	90.9%	94%
Air Release Valves	1,335	91.3%	92%
Control Valves	48	94.0%	92%

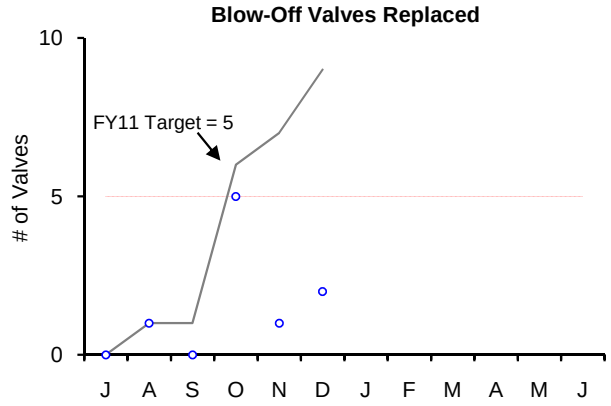




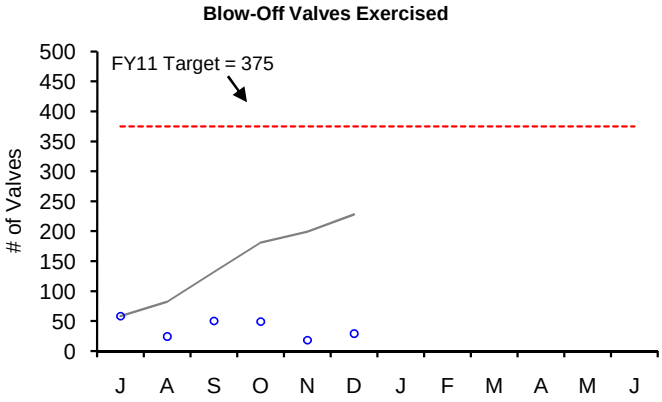
During the 2nd Quarter, staff exercised 192 main line valves bringing the total for the fiscal year to 475.



Staff replaced one main line valve during the 2nd Quarter, which brings the total to date in FY11 to 11.



Staff replaced eight blow-off valves this quarter bringing the total for the fiscal year to nine.



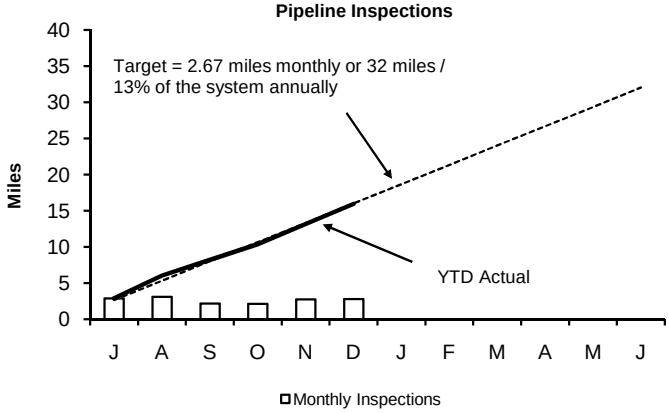
During the 2nd Quarter, staff exercised 96 blow-off valves bringing the total for the fiscal year to 228.

Wastewater Pipeline and Structure Inspections and Maintenance

2nd Quarter - FY11

Inspections

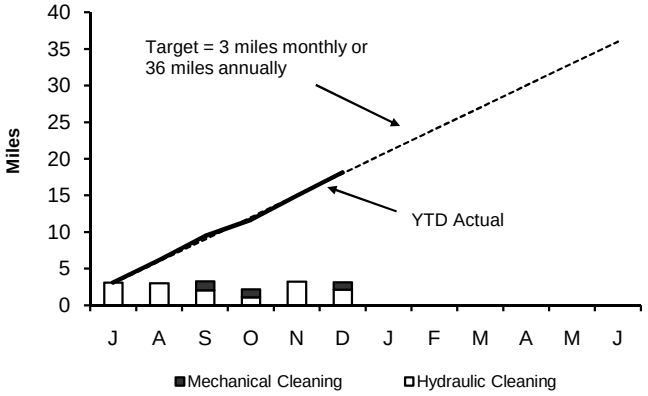
Pipeline Inspections



Staff internally inspected 7.75 miles of MWRA sewer pipeline in the 2nd Quarter, which is just about on target for the first half of the fiscal year (15.97 miles). Staff also provided Community Assistance to the Town of Milton (986 linear feet of sewer line inspection) and the City of Chelsea (210 linear feet of sewer line inspection).

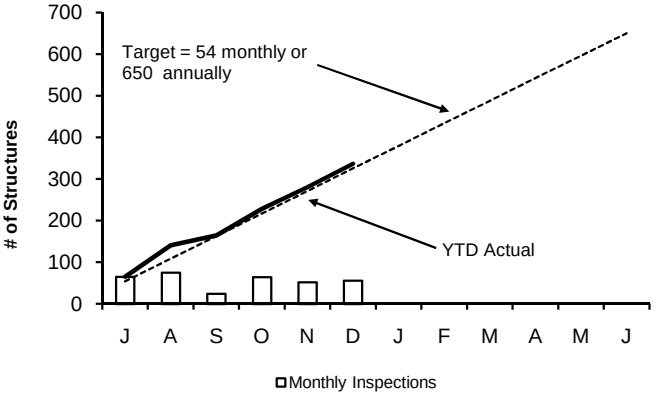
Maintenance

Pipeline Cleaning



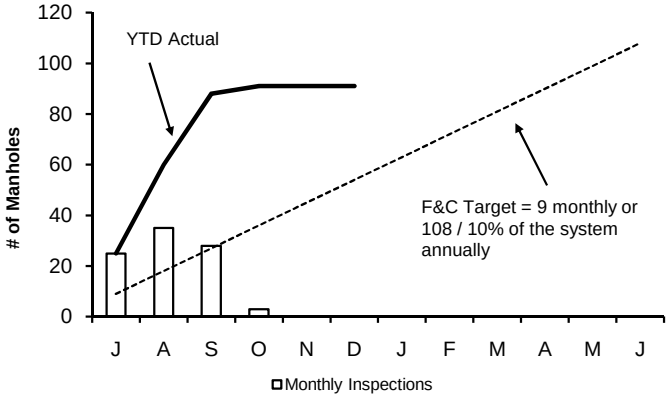
Staff cleaned 8.66 miles of MWRA's sewer system and removed 14 cubic yards of grit and debris during the 2nd Quarter bringing the total to date in FY11 to 18.13 miles, slightly ahead of the target for the first half of the fiscal year. No Community Assistance was provided this quarter.

Structure Inspections



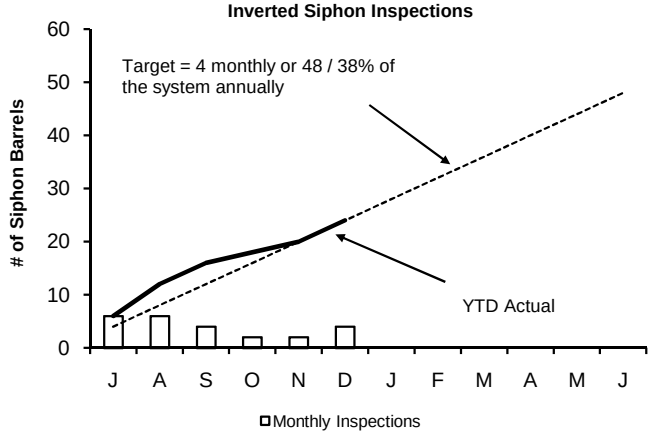
Staff performed a total of 208 inspections in the 2nd Quarter, which brings the total to 336 thus far in FY11, slightly ahead of the target for the first half of the fiscal year. Staff also inspected the 12 CSO structures each month during the quarter.

Manhole Rehabilitation



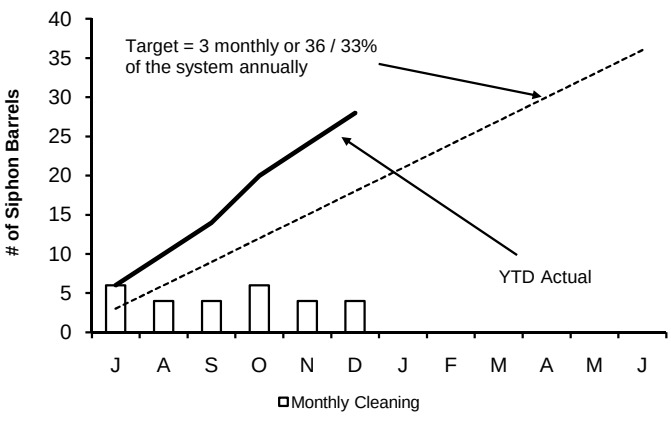
Staff replaced three frames and covers in October bringing the total for FY11 to 91, well ahead of the FY11 target through the first half of the fiscal year. Staff have been re-assigned to inside masonry projects at water and wastewater facilities for the winter months. Outside work will resume in April 2011.

Inverted Siphon Inspections



Staff inspected eight siphon barrels in the 2nd Quarter bringing the total to date in FY11 to 24, which is right on target for the first half of the fiscal year.

Inverted Siphon Cleaning

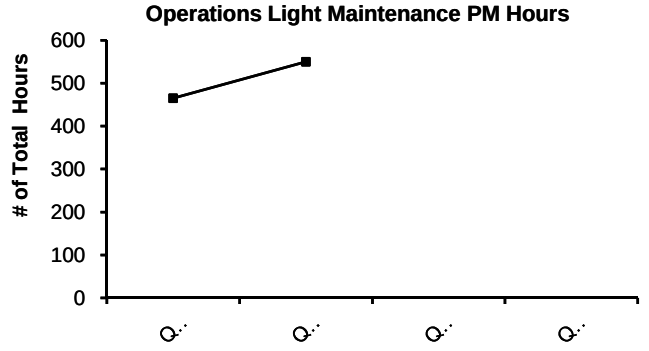


In the 2nd Quarter, staff cleaned 14 siphon barrels. The total to date in FY11 is now at 28, well above the target thus far for the fiscal year.

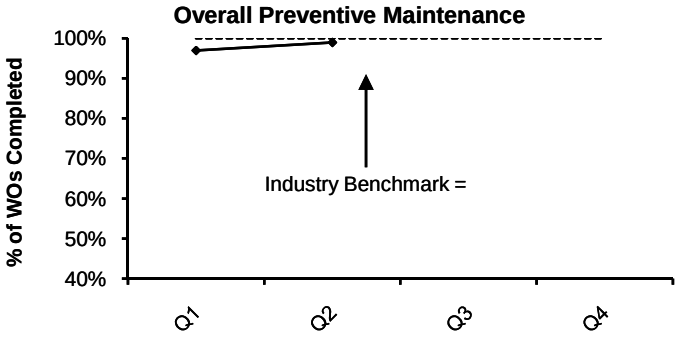
Field Operations' Metropolitan Equipment & Facility Maintenance

2nd Quarter - FY11

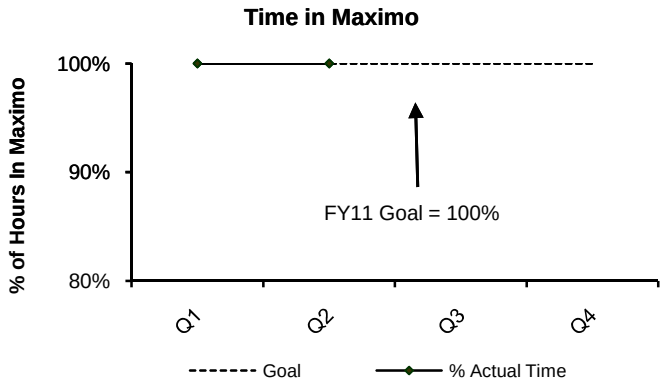
Several maintenance and productivity initiatives are in progress; Operators now performing light maintenance tasks is one of those productivity initiatives. This frees up maintenance staff to perform corrective maintenance and project work, thus reducing maintenance spending. The backlog and overtime metrics monitor the success of these maintenance initiatives.



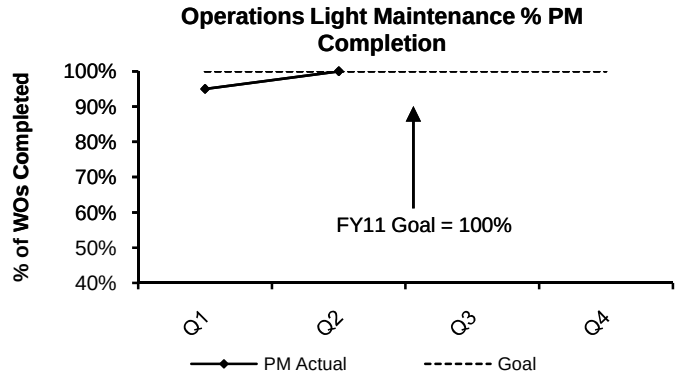
Operations staff averaged 547 hours of preventive maintenance during the 2nd Quarter, an average of 24% of the total PM *hours* for the 2nd Quarter, which is above the industry benchmark of 10% to 15%.



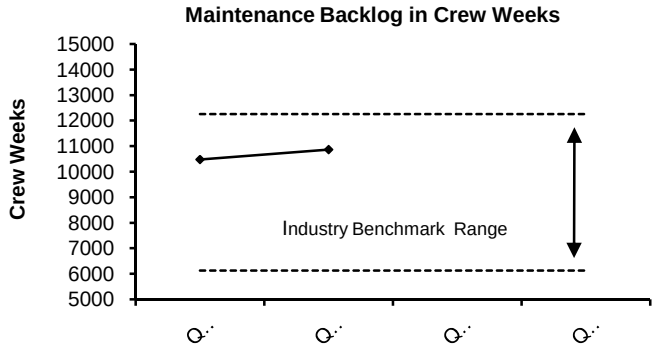
FOD's preventive maintenance goal for FY11 is 100% of all PM work orders. Staff completed an average of 99% of all PM work orders in the 2nd Quarter.



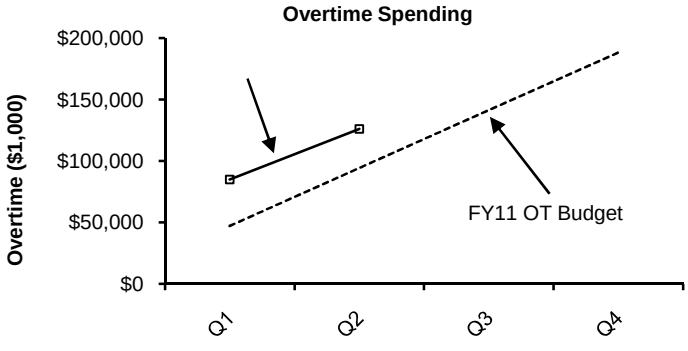
To ensure accurate data in the Maximo database, 8 hours of staff time each day must be entered into Maximo. The FY11 goal is 100%; 100% of time was entered in the 2nd Quarter.



Operations' FY11 PM goal is completion of 100% of all PM work orders assigned. Operations completed an average of 100% of PM work orders in the 2nd Quarter.



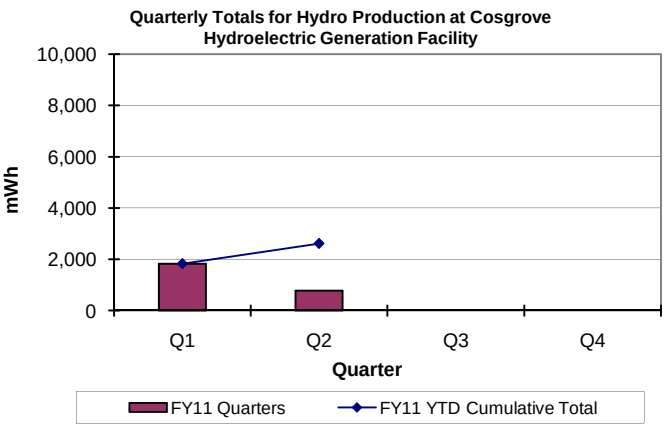
The 2nd Quarter backlog average is 10,866 hours. The backlog for Mechanics has remained high due to additional project-related work. Management's continued goal is to control overtime and still stay within the industry benchmark of 3,160 to 12,260 hours.



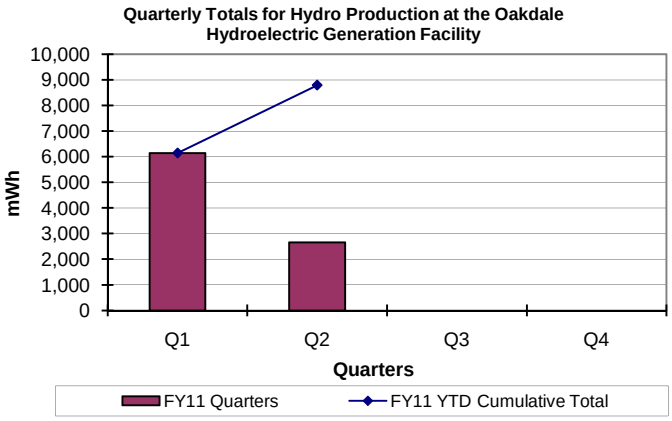
Maintenance overtime was ($6K) under budget for the 2nd Quarter and is $32K over budget in total for FY11. In the 2nd Quarter, overtime was used to complete a variety of repairs related to critical operational needs, as well as staff coverage during multiple snow storm events.

Field Operations Green Energy Quarterly Report

2nd Quarter - FY11



In the 2nd Quarter, the Cosgrove Hydroelectric Station generated a net of 784 MWh; 7% less power than was generated during the same quarter in FY10. The revenue generated at Cosgrove in the 2nd Quarter was $32,046, which brings the total revenue generated to date in FY11 at Cosgrove to $137,974.



In the 2nd Quarter, the Oakdale Station's hydroelectric plant generated a net of 2,649 MWh; 15% less power than was generated during the same quarter in FY10. The revenue generated at Oakdale in the second quarter was $199,879, which brings the total revenue generated to date at Oakdale in FY11 to $658,335. (Oakdale's operating protocol dictates that power is generated when water is transferred from Quabbin to Wachusett unless conditions result in flows that are in excess of generating capability.)

Loring Road Hydroelectric Project: Under the American Recovery and Reinvestment Act for Green Infrastructure projects, MWRA received $1.5 million in stimulus funding from SRF for this project. The turbine generator was delivered on November 16, 2010 and was installed during the 2nd Quarter; start-up is expected to begin in February 2011.

Wachusett Dam Hydroelectric Generation Study: MWRA completed a feasibility study of hydroelectric power at the Wachusett Dam. A generator would be installed at the existing gatehouse through which water is discharged to the South Branch of the Nashua River. MWRA was awarded a $375,000 grant for design and construction under Massachusetts Technology Council's Small Hydropower Initiatives Program. Permitting and design have been delayed until agreement on stream releases and system expansion moves forward.

Carroll Water Treatment Plant (CWTP) Photovoltaic: A feasibility study was completed for the placement of a solar power system up to 480 kW on either the Dissolved Air Floatation. Under the American Recovery and Reinvestment Act for Green Infrastructure projects, MWRA received $1.5 million in stimulus funding from SRF for this project. The Notice to Proceed (NTP) was issued in January 2010 and staff expect work to be completed by the end of February 2011.

Southborough: An audit conducted in conjunction with NSTAR of the Southborough facility recommended a review of the HVAC system. Staff completed the review and have recommended the installation of an energy management system or EMS similar to the one being installed at the Chelsea Facility. Staff are working with NSTAR to evaluate the work necessary to implement this project and determine the appropriate incentive that NSTAR would provide MWRA for the resulting energy savings.

Wind Power: Under the American Recovery and Reinvestment Act for Green Infrastructure projects, MWRA received $4.75 million in stimulus funding from SRF for a wind turbine at the DeLauri Pump Station. MWRA issued an NTP for design/build of a 370-foot turbine in March 2010. Work is on-going and according to the current schedule, staff expect the turbine to be installed by April 2011.

CWTP Energy Audit: Installation of boiler controls for energy savings is being evaluated by staff for CWTP. If a determination is made to go forward with this project, it will be coordinated with NGRID so that MWRA will receive the allowed financial incentive.

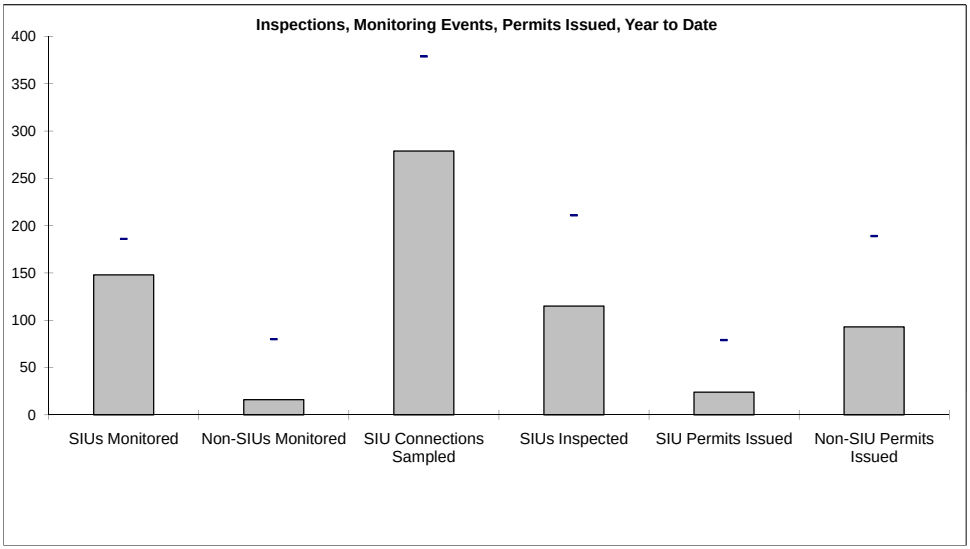
Chelsea Facility Energy Audit: The detailed audit of the Chelsea facility recommended installing an EMS for the Administration Building along with some equipment updates. Staff are proceeding with this recommendation and are working with NSTAR and its contractor to put together a specifications package system to be completed by January 31, 2011. NSTAR has agreed to provide a $168,000 incentive to MWRA for the installation of the EMS. In addition, energy-efficient lighting will be installed in the parking areas at the Chelsea Facility in the 3rd Quarter. NSTAR has committed to providing a $46,000 incentive toward the cost of the parking lot lighting project.

Energy Audit of Eight FOD Facilities: MWRA staff identified multiple facilities that would benefit from a comprehensive energy audit. Implementation of the audit recommendations began at the end of the 1st Quarter of FY11 and continued into the 2nd Quarter (and is still on-going). There are five FOD facilities on the south shore that are in NGRID's service area and audits of these facilities are being conducted through NGRID.

Energy Audit of Fourteen FOD Facilities: Audits of 14 additional FOD facilities began in the 1st Quarter of FY11 and are on-going. Staff expect all 14 audits to be completed by the end of the 3rd Quarter of FY11.

Toxic Reduction and Control

2nd Quarter - FY11



EPA Required SIU Monitoring Events
for FY11: 186
YTD : **148**

Required Non-SIU Monitoring Events
for FY11: 80
YTD : **16**

SIU Connections to be Sampled
For FY11: 379
YTD: **279**

EPA Required SIU Inspections
for FY11: 211
YTD: **115**

SIU Permits due to Expire
In FY11: 79
YTD: **24**

Non-SIU Permits due to Expire
for FY11: 189
YTD: **93**

Significant Industrial Users (SIUs) are MWRA's highest priority industries due to their flow, type of industry, and/or their potential to violate limits. SIUs are defined by EPA and require a greater amount of oversight. EPA requires that all SIUs *with flow* be monitored at least once during the fiscal year. The "SIU Monitored" data above reflects the number of industries monitored. However, many of these industries have more than one sampling point and the "SIU Connections Sampled" data reflect samples taken from multiple sampling locations at these industries.

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's monitoring plan requires one additional sampling event for 40% of the SIUs and two additional sampling events for 10% of the SIUs. 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.

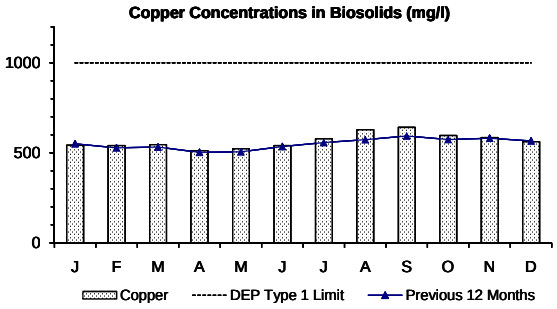
Number of Days to Issue a Permit

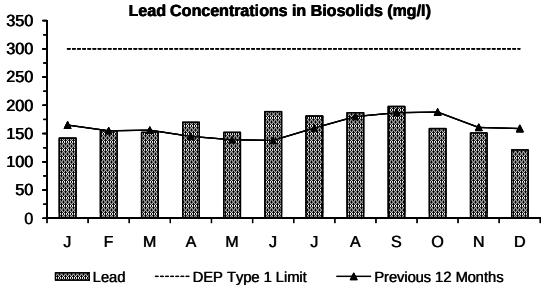
	0 to 120		121 to 180		181 or more		Total Permits Issued	
	SIU	Non-SIU	SIU	Non-SIU	SIU*	Non-SIU	SIU	Non-SIU
Jul	2	5	0	0	0	0	2	5
Aug	0	13	1	1	3	6	4	20
Sep	4	19	0	1	2	2	6	22
Oct	5	9	0	0	0	2	5	11
Nov	3	13	0	3	0	4	3	20
Dec	3	11	0	1	1	3	4	15
Jan							0	0
Feb							0	0
Mar							0	0
Apr							0	0
May							0	0
Jun							0	0
% YTD	**71%**	**75%**	**4%**	**6%**	**25%**	**18%**	**24**	**93**

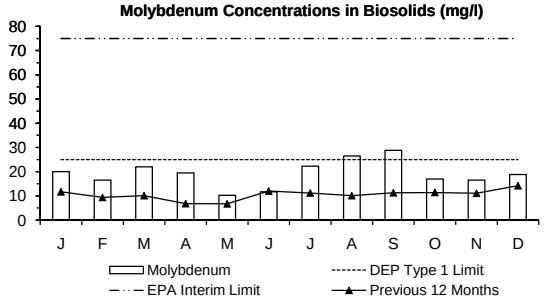
EPA requires MWRA to issue or renew 90% of SIU permits within 120 days of receipt of the application or the permit expiration date - whichever is later. EPA also requires the remaining 10% of SIU permits to be issued within 180 days. Staff workload issues related to PIMS implementation resulted in one SIU permit issuance slipping beyond 180 days in the 2nd Quarter.

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.

During Fiscal Years FY09 and FY10, MWRA met DEP's Type 1 Molybdenum limit for the full year. Summer 2010 was reported to be the hottest summer on record in the Northeast and a corresponding increase in molybdenum levels appeared to support that fact. In August and September 2010, the average concentrations exceeded the state standard for unrestricted use as a fertilizer within Massachusetts. In October, molybdenum levels returned to below the state limit and remained below through the end of the 2nd Quarter. Staff will review MWRA's current voluntary program to evaluate whether or not a regulatory program is needed to control molybdenum levels.







Field Operations Highlights

2nd Quarter – FY11

Western Water Operations & Maintenance

- Carroll Water Treatment Plant (CWTP): Operations and Maintenance staff began the winter maintenance period by placing the CWTP into half-plant operation on November 22. At the end of the December, the hatches and mud valves on Storage Tank A were closed so that the tank could be refilled. While the A Train was down, staff supported an OEM service engineer while adjusting the influent knife gates, and replaced 10 mud valves in the storage tank. Fuji Electric Corp. completed the overhaul of Ozone Generators 2 and 3. Also, the Department of Environmental Protection conducted a sanitary inspection of the treatment plant.

- Shaft 5A Leak Activities: Staff isolated and dewatered the MetroWest Tunnel from Shaft NE to Valve Chamber 5A-1 to allow the contractor to make internal repairs to two couplings located between Shaft 5A and Valve Chamber 5A-1. In conjunction with the tunnel isolation, the Hultman Aqueduct from Shaft L to Shaft 5 was activated to supply the City Tunnel. Upon completion of the repairs, this section of the MetroWest Tunnel was placed back into service and the Hultman Aqueduct from Chamber N-2 to the bifurcation valves was isolated.

- Oakdale Power Station: Staff repaired a spool-type auxiliary valve on the hydro turbine casing. The spool valve works in conjunction with the hydro turbine's pressure relief valve. Staff also shut down the station to allow a contractor to replace cross arms on the overhead lines feeding the transformer yard.

Metro Water Operations & Maintenance

- Water Pipeline Program: Staff completed eight blow-off retrofits in the 2nd Quarter; a fire hydrant was replaced on Deer Island; and work was completed on the front entrance walkway at the MWRA Chelsea facility. Staff also completed repairs to the access road to the Bear Hill Tank, including the installation of several drainage conduits. Work began on the next Northern Intermediate High emergency connection site, which is a connection between Lexington and Woburn.

- Pipeline and Meter Activations: The newly completed portion of Section 107 in Milton and the reconstructed Meter 107 were placed in service during November. Meter 27 to Milton was isolated in December for project work to continue. WASM 11 and WASM 11A were filled, flushed, pressure-tested, disinfected, and returned to service upon completion of work by the Section 28 Rehabilitation contractor; this allowed the Brattle Court Pump Station to be returned to service on November 23.

Wastewater Operations & Maintenance

- Training: Wastewater Operations staff attended the Spill Prevention Control and Countermeasure (SPCC) Plan Training this quarter. The training focused on spill detection, prevention, and response at unstaffed MWRA facilities. Staff also attended First Responder Awareness Training, which included who to call if a leak or spill of oil or hazardous material has been detected, where shut offs for power and equipment are located, and where the spill containment equipment cabinet is located at each facility. Staff also attended Chemical Testing Refresher Training.

TRAC

- Somerville Marginal CSO Facility: On October 8, staff responded to a report of illegal dumping of a black, tarry material in the parking area of the Somerville Marginal CSO Facility. Staff collected samples, which showed high metals and petroleum. The material was cleaned up by Cyn Environmental and DEP was notified. Staff were unable to identify the source of the material.

- Compliance/Enforcement: On November 17, TRAC issued 10 Penalty Assessment Notices (PANs) totaling $5,200 to companies that failed to submit annual Compliance Reports as required by the Group Permit for Food Processing Operations (G2 Group Permit). The due date for filing was June 30, 2010; penalties range from $250 to $1000. As of the beginning of January, four facilities had paid the penalties; two had filed for appeal through adjudicatory hearings; one failed to appeal but has claimed financial hardship; two sent no response, and one PAN was re-issued in December.

TRAC (Continued)

- Permitting - Suffolk Downs Race Track: A meeting was held with representatives of Suffolk Downs Race Track to discuss MWRA's Sewer Use Regulations with respect to a potential discharge from the stables' area. EPA had suggested that the race track investigate sewer discharge of process water from the areas where the horses are kept and fed. The area falls under EPA regulations applicable to Concentrated Animal Feeding Operations. A second meeting with representatives from EPA and Suffolk Downs is scheduled for January 2011.

Metro Equipment and Facility Maintenance

- Prison Point Detention Tank Spray Line Rebuilds: The PVC line supports in the detention tanks used for cleaning after activation were corroded and are being replaced. The supports, piping, and nozzles are being replaced one tank at a time to restore the system to full operation. All piping has been upgraded in the 6 detention tanks. New supports are being fabricated for one tank and will be installed when completed.

- Cottage Farm Gate Actuators for Detention Basins: Staff installed a new actuator for Detention Basin 6 and repaired the actuator for Detention Basin 2.

- Caruso Pump Station Repairs: J.F. White divers, assisted by MWRA staff, repaired Sluice Gate 4 and Wetwell 2 dewatering piping over two nights during facility shutdowns.

- Dam Maintenance: Staff cleared Fells Dam 2's shore line and Dams 6, 7, and 8 were cleared at the toe as a result of recent dam engineering inspections so that seeps could be more readily identified.

- Equipment Maintenance Support: Masons cored holes for the plumbers at New Neponset and Framingham for the installation of sump pump vent lines, at the Braintree Weymouth Pump Station for safety railing installation, at Nut Island for the installation of hydrogen sulfide sensors, in Chelsea for the Lab's air conditioning unit, and in Hingham for an electrical conduit. Staff also built staging for the New Neponset Station, Intermediate Pump Station, and Framingham for plumbing work

- Facility Repairs: Carpenters repaired the hatch at Nonantum Road; replaced ceiling tiles at Nut Island and the Columbus Park Headworks; installed new countertops in the Chelsea Headworks. Carpenters also constructed forms for the installation of bollards at the Belmont Pump Station; made repairs to the wastewater pipeline garage area; and repaired the fascia in the Chelsea Administration garage. Masons re-graded the Nut Island Grit Bay to provide better drainage.

Operations Support

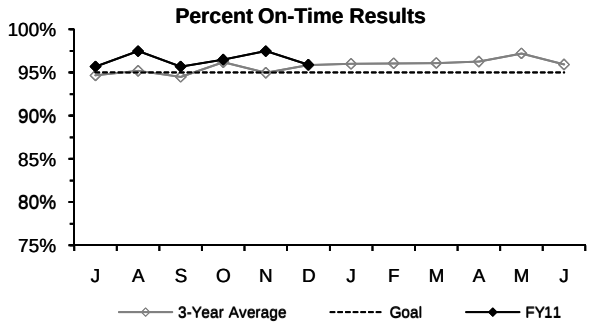
- Development of ERP Training Programs: In the 2nd Quarter, staff continued developing a comprehensive annual emergency plan training program to comply with DEP requirements. This training will be provided for MWRA staff and a version of the training will also be provided to staff from MWRA's water communities. The ongoing MetroWest repairs delayed implementation of the training so delivery is now expected to begin in 2011 and will be continued annually, delivered in a series of sessions spread throughout next year.

- Cyber Assessment: Staff continued participating in an internal cyber security audit covering the SCADA system and MIS's administrative networks. In the 2nd Quarter, staff continued working on some of the detailed audit reviews but have already implemented some further protective actions to improve SCADA network security.

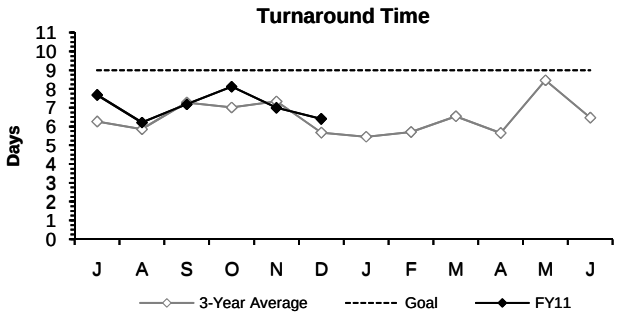
- Online Water Quality Monitoring: Staff continued working on updating the distribution water quality monitoring analyzer system. Equipment delivery for the initial two sites is expected in January and a training program has been drafted and is under review. Staff continued planning the associated data collection network with Verizon and are still waiting for vendor submittals to begin site preparation work.

Laboratory Services

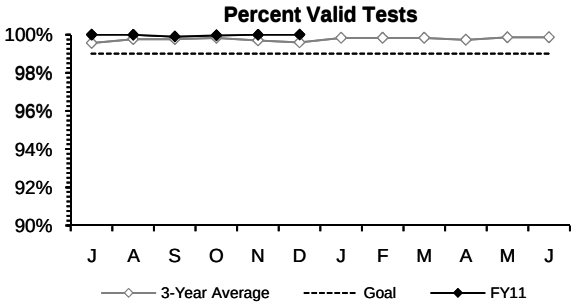
2nd Quarter - FY11



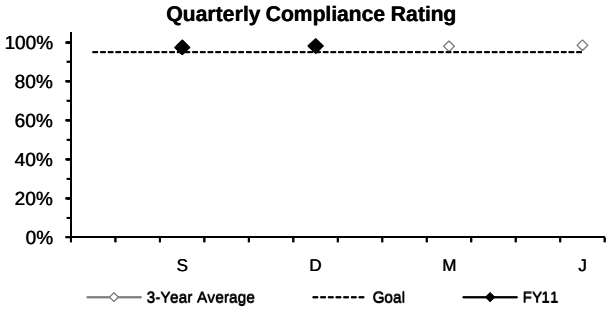
The Percent On-Time measurement was above the 95% goal for each month during the 2nd Quarter.



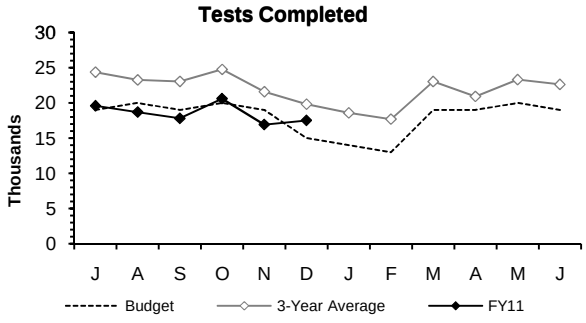
Turnaround Time was faster than the 9-day goal in the 2nd Quarter.



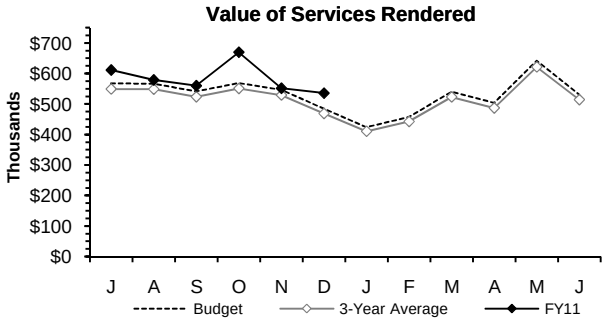
The Percent Valid Tests measurement for the 2nd Quarter was above the 99% goal.



An audit of sampling and sample custody at the five lab locations found good compliance with requirements. Compliance audits are performed in September, December, March, and June.



The Tests Completed measurement was above the seasonally adjusted budget goal for two months of the 2nd Quarter. The 3-Year average is based on the old LIMS test counting scheme.



The Value of Services Rendered measurement was above the seasonally adjusted budget projection for each month of the 2nd Quarter.

Highlights:

Quality Assurance: DEP audited the Central Lab at the end of June and the draft audit report was received early in December 2010. This was the first full audit under the new LIMS and no significant issues were found. DEP audited the Southborough Lab on December 7 and no significant issues were found. DLS provided comments for NACWA on revisions to the approved NPDES methods proposed by EPA for 40 CFR 136. Participated in EPA's on-line meetings on bacteria methods for the Total Coliform Rule. EPA is planning a study to evaluate the 12 currently-approved Total Coliform methods.

DITP: MIT tested MWRA's fertilizer pellets for molybdenum by using its nuclear reactor to perform Neutron Activation Analysis. The results agreed with MWRA's results using Inductively Coupled Plasma Optical Emission Spectrometry.

ENQUAD: Tested rush samples from an illegal dumping outside the Somerville Marginal CSO Facility. Tested practice sample of Mass Bay "fat particles" from a net tow for mercury and organic contaminants in preparation for the revised Ambient Monitoring Plan.

FOD/Water Quality Assurance: Completed the large semi-annual Lead and Copper Rule project. Results were available quicker than in the past because they were tested by ICP/MS, which can test for both lead and copper simultaneously. Provided suggestions to DEP on how to improve DEP's eDEP electronic data reporting system. DEP is embarking on a project to speed up the processing of drinking water data.

Outside Customers: Wilmington is considering using MWRA's labs for its chemistry testing and has requested pricing. For 2011, DCR/Wachusett has requested to focus about half of its tributary monitoring program on wet-weather events. Overall, the lab testing volume will be about the same but there will be a need for some overtime during lengthy wet-weather events.

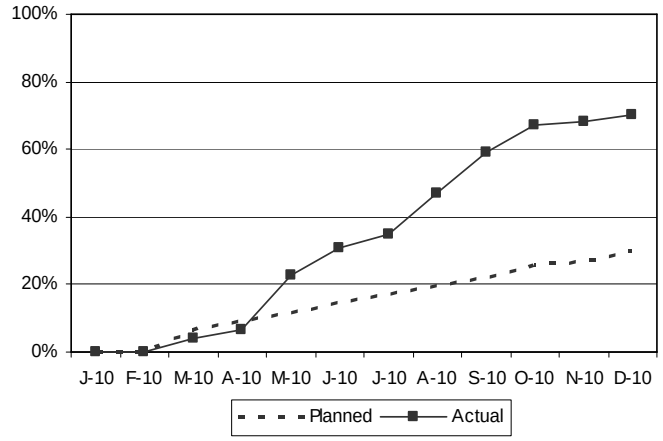
CONSTRUCTION PROGRAMS

Projects In Construction - 1

2nd Quarter Fy11

(Progress Percentages based on Construction Expenditures)

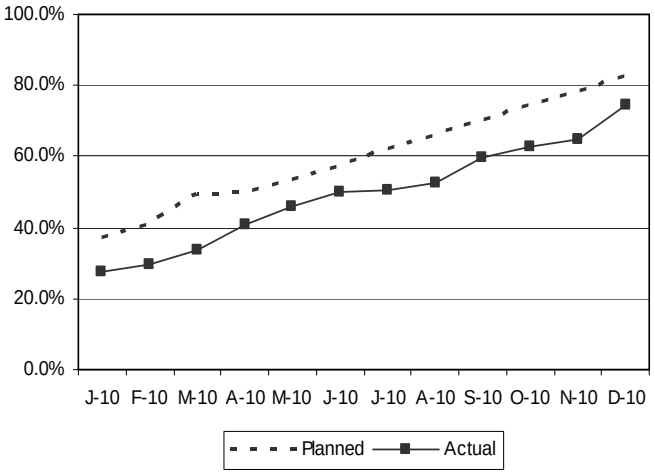
Southern Spine Water Mains Rehabilitation - Section 107
Progress - December 2010



Project Summary: This project for Section 107 includes the removal of 17,000-linear feet (lf) of 24-inch water main, installation of 9,400-lf of new 48-inch water main, replacement of three revenue meters, and the cleaning and lining of 1,000-lf of 24-inch & 1,500-lf of 48-inch water main.

Status and Issues: In Milton, the contractor installed 56 linear feet of 48" Ductile Iron Pipe (DIP) along Adams St in Milton. The contractor installed 81 linear feet of MWRA 24-inch DIP within Lower Mills between Elliot St Bridge and Neponset River Bridge. The contractor has assigned four construction crews to this work, more than originally scheduled. More crews along with favorable weather in early 2010 has put the contract ahead of schedule.

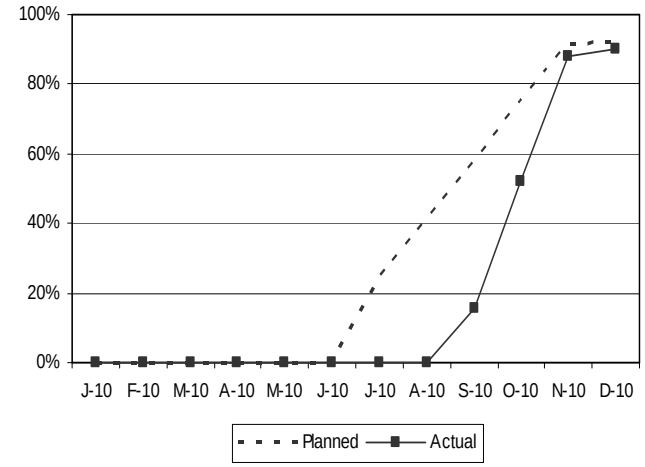
North Dorchester Bay Pump Station and Sewers
Progress - December 2010



Project Summary: Construction of 15-MGD CSO pump station, approximately 3,200 linear feet of 24-inch force main and 640 linear feet of 30-inch gravity sewers and appurtenant work.

Status and Issues: At the pump station site, the contractor completed all masonry work, placement of the roof slab, special coating to the wetwell and weatherizing the lower roof. The contractor started installation of the upper roof. The contractor continued transport and disposal of excess excavated materials off-site, along with site utilities and restoration work. At the Shore Road site, the contractor completed the installation of the 10-inch water service piping line. Force main installation reached 100% completion in August and the gravity sewer installation reached 100% in September The contractor is reporting that construction completion will be in accordance with the court ordered milestones.

Braintree/Weymouth Section 624 Rehabilitation
Progress - December 2010



Project Summary: Installation of cured-in-place pipe (CIPP) in approximately 2,050 linear feet of 60-inch x 57-inch sewer in North Weymouth.

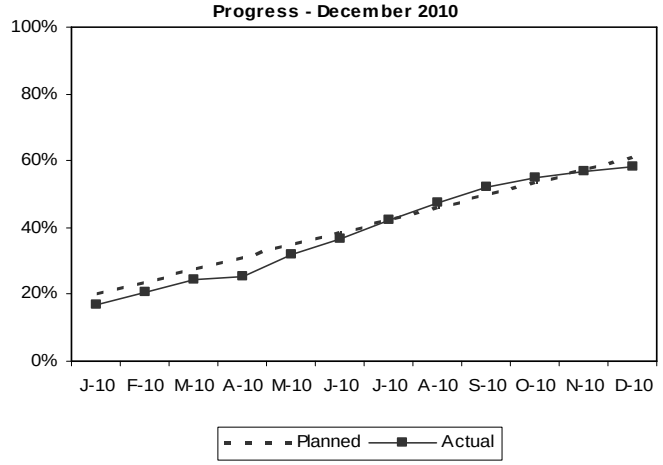
Status and Issues: During November, the contractor completed tin-in of the Hingham force main. All permanent connections to the new main are complete and the manhole has been restored. The temporary force main pipe was removed, trench backfilled and the area over the trench was temporarily paved.

Projects In Construction – 2

2nd Quarter FY11

(Progress Percentages based on Construction Expenditures)

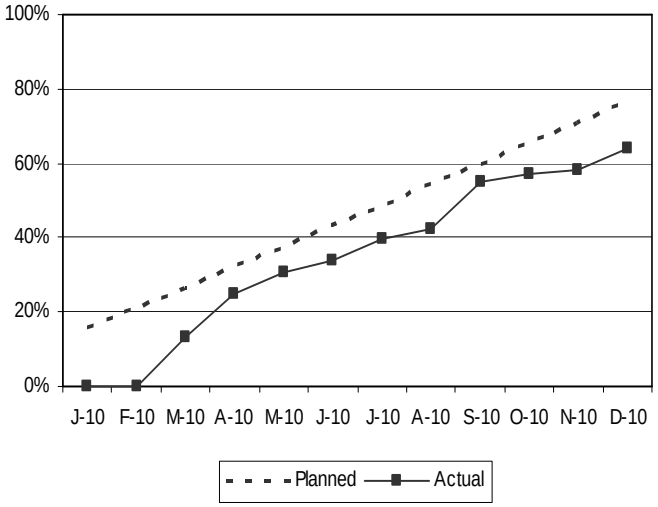
Section 18, 50 & 51 Rehabilitation in Medford/Somerville
Progress - December 2010



Project Summary: This project is one of the Shaft 7 to WASM 3 phases (CP-5) and provides for the rehabilitation of valves and 15,000 linear feet of 48, 20 and 16-inch pipe in Medford and Somerville including replacement of revenue Meter 32 in Somerville.

Status and Issues: On Section 18, the contractor pressure tested the new line from Sta. 166+40 to Sta. 196+00 and the section passed testing. Pressure testing of Section 18 from Sta. 154+00 to Sta.161+50 failed the pressure test and a leaky valve was discovered and fixed. On Section 51, two test pits were dug to locate the city water main. On Section 50, all construction work is complete.

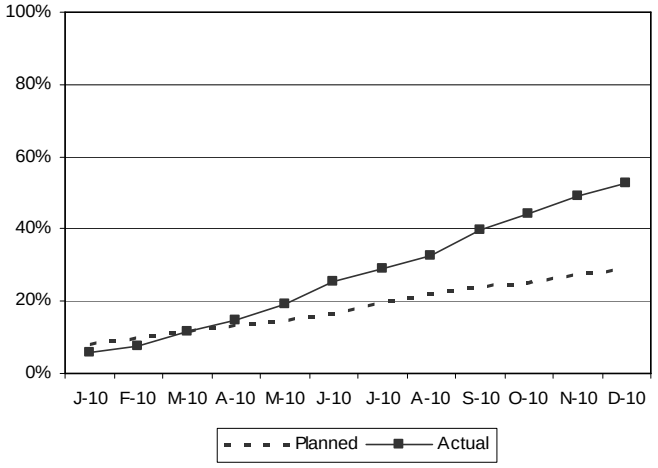
North Dorchester Bay Ventilation Building
Progress - December 2010



Project Summary: Construction of a ventilation building, interconnection to the NDB storage tunnel maintenance access structure at BOS-087 and final restoration of the -087 work area.

Status and Issues: At the ventilation building site, the contractor completed placement of the sub-grade concrete vent shafts and removal of the steel cofferdam system. Work continued on backfilling around the building. At the Yard Work location, the contractor began preparing for the utility connection between the building and the tunnel shaft.

Hultman Aqueduct Interconnections Project
Progress - December 2010



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: The contractor completed pipe disinfection and began flushing the Hultman between VC-L2 and E3. Installation of the new 84-inch Butterfly Valve pipe at River Road on the Hultman Branch line was completed. The line was disinfected and returned to service. The contractor also completed the installation of meter M252 and cathodic protection at L2 and OS2. The contractor is ahead of schedule at the request of the MWRA.

CSO CONTROL PROGRAM

2nd Quarter - FY11

Of the 35 projects in MWRA's Long-Term CSO Control Plan, 27 are complete, including a project completed in the past quarter - Alewife Brook Interceptor Connection Relief and Floatables Control (by City of Cambridge). Five projects are in construction. MWRA expects Cambridge to commence construction of the CAM004 Stormwater Outfall and Wetland Basin project soon; MWRA plans to commence design of the MWR003 Gate and Floatables Control, Rindge Ave. Siphon Relief and SOM01A Interconnection Relief and Floatables Control project in 2012; and MWRA has recommended to the Federal Court and court parties that the Charles River Interceptor Gate Controls project be removed from the Long-Term Control Plan and Schedule Seven. Progress on the eight CSO projects not yet complete and on other CSO related work is presented in the table below.

Project	Court Milestones in Schedule Seven (Shaded milestones are complete)			Status
	Commence Design	Commence Construction	Complete Construction	
North Dorchester Bay Storage Tunnel and Related Facilities	Aug 97	Aug 06	May 11	MWRA continues to make progress with construction of the $272 million CSO control plan for the South Boston beaches and is on schedule to bring all project components on-line in May 2011 in compliance with Schedule Seven. CSO Storage Tunnel: The tunnel contract is complete. Dewatering Pump Station and Force Main: The $26.9 million contract is 75% complete. The contactor has completed installation of the force main and its connections to the pumping station and the local BWSC sewer system. The contractor is installing the pumps and other mechanical, electrical and plumbing equipment in the pumping station and is finishing the exterior of the station, including the roof and brick facing. Below-Ground Ventilation Building: The $5.2 million contract is 64% complete. The contractor has completed the roof slab and waterproofing and has commenced backfilling. The contractor is installing interior plumbing, fire protection and electrical equipment and will soon commence the installation of major equipment including fans and odor control.
Charles River Interceptor Gate Controls and Additional Interconnections	Jan 08	Jan 10	Jan 11	On December 14, 2010, MWRA submitted additional technical information to the U.S. Environmental Protection Agency, Region 1, (EPA) and the Massachusetts Department of Environmental Protection (DEP) regarding MWRA's engineering study of the Charles River Valley/South Charles Relief Sewer Gate Controls and Additional Interceptor Connections in response to additional EPA comments. MWRA continues to conclude that no interceptor optimization alternative can appreciably reduce CSO discharges at the Cottage Farm CSO Facility or at other hydraulically related CSO outfalls to the Charles River beyond the levels of control in MWRA's approved long-term control plan without raising the hydraulic grade lines in the sewer system to unacceptable levels. MWRA recently submitted a draft court motion and supporting memorandum to the court parties seeking to amend Schedule Seven by deleting milestones for the implementation of gate controls and additional interconnections.
Reserved Channel Sewer Separation	Jul 06	May 09	Dec 15	In December 2010, BWSC completed the first of nine planned construction contracts for the $67.2 million Reserved Channel Sewer Separation project. BWSC recently issued the Notices to Proceed for three additional contracts and plans to issue the Notice to Proceed for a fifth contract soon. All work is scheduled to be complete by December 2015 in compliance with Schedule Seven.

Project		Court Milestones in Schedule Seven (Shaded milestones are complete)			Status
		Commence Design	Commence Construction	Complete Construction	
Brookline Sewer Separation		Nov 06	Nov 08	Jul 13	The Town of Brookline completed the first of two construction contracts for this $25.7 million project in early 2010. On January 19, 2010, Brookline issued the Notice to Proceed for the second contract in the low-bid amount of $16.6 million. The second contract involves micro-tunneling along Beacon Street to install new sewers at significant depths, as well as the construction of several special structures that will connect the new sewers to existing laterals and to MWRA's interceptors. Main trunk combined sewers will be converted to storm drains. The contract calls for Substantial Completion in January 2013, in advance of the July 2013 milestone in Schedule Seven. MWRA Outfall MWR010: As reported last quarter, MWRA has completed internal inspections of CSO Outfall MWR010, which will convey the separated Brookline stormwater to the Charles River. MWRA expects to commence the cleaning work in December 2011 and complete the work by August 2012. Funds for the outfall work are included in the FY11 CIP and the total project cost ($25.7 million as noted above).
Cambridge/ Alewife Brook Sewer Separation	CAM004 Outfall and Wetland Basin (Contract 12)	N/A	Mar 11*	Mar 13*	On July 2010, Cambridge received construction bids for the CAM004 Stormwater Outfall and Wetland Basin (Contract 12), and it has since issued a Letter of Intent to Award Contract 12 in the low-bid amount of $14.8 million (approximately $2.3 million to be funded by MWRA). Cambridge recently received a construction permit from DCR for work in the Alewife Reservation. Negotiations for certain private property easements have become more complicated with recent or pending sales of the properties. Cambridge is working to complete the negotiations and hopes to secure the remaining easements in March 2011, and then issue the Notice to Proceed for construction.
	CAM004 Sewer Separation	Jan 97	Jul 98 Jul 12*	Dec 15*	Cambridge completed initial construction contracts several years ago and plans to award three additional contracts to complete this project. Cambridge recently resumed design activities and plans to award the next construction contract by July 2012.
	CAM400 Manhole Separation	Oct 08*	Jan 10*	Mar 11*	In January 2010, Cambridge issued the Notice to Proceed for the $3.9 million construction contract that includes both of these projects. The contractor completed the Interceptor Connection Relief and Floatables work in October 2010 and is on schedule to complete the CAM400 Manhole Separation work by March 2011.
	Interceptor Connection Relief/ Floatables	Oct 08*	Jan 10*	Oct 10*	
	MWR003 Gate and Rindge Ave. Siphon	Apr 12*	Jun 14*	Aug 15*	MWRA plans to commence design of this last Alewife Brook project in April 2012.
Other CSO Related Work					
South Dorchester Bay Sewer Separation (Project is complete per Court Order)		Jun 96	Apr 99	Nov 08	BWSC continues to pursue additional stormwater inflow removal (i.e., downspout disconnections) from the sanitary sewer system in order to mitigate the remaining risks of sewer system flooding in large storms. On November 11, 2010, BWSC issued the Notice to Proceed for a design contract to identify and recommend additional source of inflow removal. The consultant has initiated field investigations and is developing a flow metering program. BWSC expects to receive recommendations in early 2012.

Project	Court Milestones in Schedule Seven (Shaded milestones are complete)			Status
	Commence Design	Commence Construction	Complete Construction	
Lower Dorchester Brook Sewer Regulator Relocation and Sewer Separation	N/A	N/A	N/A	In August 2010, BWSC issued the Notice to Proceed for construction in the low-bid amount of $5,997,447.50, of which $1,452,882 is eligible for MWRA funding. BWSC and MWRA agreed to a cap on MWRA funding for this project of $2,030,000. BWSC is using the balance of the capped funds for design and construction administration services. Construction completed to date includes 283 linear feet of 15-inch and 18-inch storm drain, an extensive amount of sheeting and pile support for special structures at the NStar property entrance on Massachusetts Avenue, and installation of a stormwater particle separator. The contract is scheduled to be substantially complete in July 2011.

* Current schedule. Alewife Brook project schedules were delayed at least 27 months beyond the Schedule Seven milestones due to past wetlands permit appeals. Additional time needed to obtain permits, land, easements, and Article 97 legislation for the CAM004 Outfall and Wetland Basin project (Contract 12) and more recent schedule delay due to protracted easement negotiations are incorporated into these new schedules. MWRA plans to seek revisions to the milestones in Schedule Seven reflecting updated project schedules once Cambridge has secured easements and issued the Notice to Proceed for Contract 12.

CIP Expenditures
Second Quarter FY11

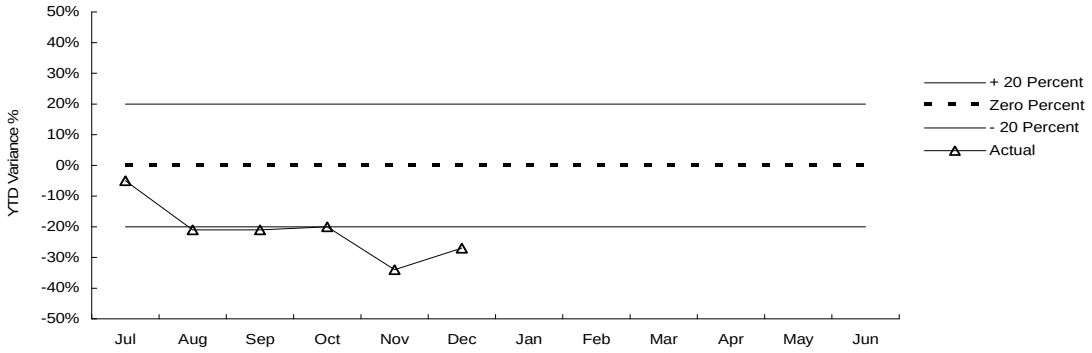
The Year-To-Date variances are highlighted below:

FY11 Capital Improvement Program Expenditure Variances through December by Program ($000)				
Program	FY11 Budget Through December	FY11 Actual Through December	Variance Amount	Variance Percent
Wastewater	58,919	44,871	(14,048)	-24%
Waterworks	27,528	20,880	(6,648)	-24%
Business and Operations Support	9,761	4,217	(5,544)	-57%
Total	**$96,208**	**$69,968**	**($26,240)**	**-27%**

Underspending within Wastewater is primarily attributable to projected tasks on the North Dorchester Pump Station & Sewers contract being less than originally anticipated, delay in award of the second Brookline Sewer Separation contract, delay in award of Cambridge Sewer Separation Contract 12, final contract costs for the East Boston Branch Relief Sewer being less than originally anticipated, and timing of work for DI Electrical Equipment Upgrade 3. This was partially offset by accelerated progress on the DI Primary & Secondary Clarifier Rehabilitation, Heat Loop Pipe Replacement, and DITP Roof Replacement contracts. Underspending within Waterworks is primarily due to lower community requests for loans, timing of Watershed Land purchases, work scheduled for FY11 completed in FY10 for the Rehabilitation of Five Pumping Stations, and re-scheduling Quabbin Aqueduct Inspection work to be part of the Winsor Dam Hydroelectric/Pipeline Replacement project. This was partially offset by accelerated progress on the Lower Hultman Aqueduct Rehabilitation (CP6A) contract. Business and Operations Support underspending is primarily due to delay in the Charlestown Wind Turbine project.

CIP Expenditure Variance

Total FY11 CIP Budget of $208,000,000.



Construction Fund Management

All payments to support the capital program are made from the Construction Fund. Sources of fund revenues 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 1/22/11	$94 million
Unused capacity under the debt cap:	$617 million
Estimated date for exhausting construction fund without new borrowing:	May-11
Estimated date for debt cap increase to support new borrowing:	FY2013
Commercial paper outstanding:	$194 million
Commercial paper capacity:	$350 million
Budgeted FY11 capital spending*:	$199 million
Projected FY10 grant and SRF receipt:	$13 million

* Cash based spending is discounted for construction retainage.

DRINKING WATER QUALITY AND SUPPLY

Source Water – Microbial Results

2nd Quarter – FY11

Background

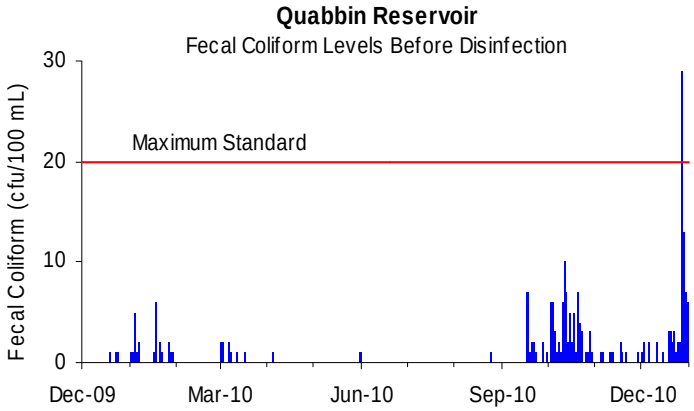
Total coliform bacteria are monitored in both source and treated water to provide an indication of overall bacteriological activity. Most coliforms are harmless. However, fecal coliform, a subclass of the coliform group, are identified by their growth at temperatures comparable to those in the intestinal 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 entering the CVA system.

All samples collected during October and November were below 20 cfu/100ml. On December 27, there was blizzard with high winds for approximately six hours, which resulted in one of the samples in exceeding a count of 20 cfu/100ml.

For the current six-month period, 0.5% of the samples collected exceeded a count of 20 cfu/100mL.



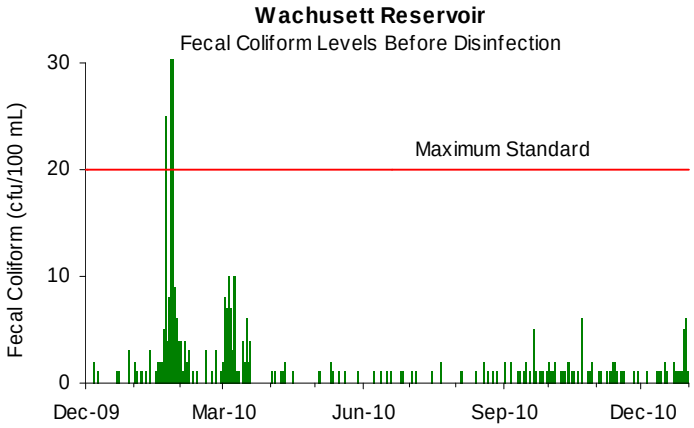
Sample Site: Wachusett Reservoir

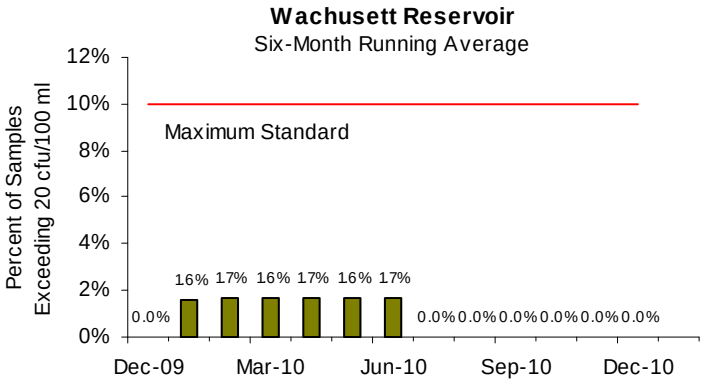
Wachusett Reservoir water is sampled at the CWTP raw water tap in Marlborough before it enters the MetroWest/Metropolitan Boston systems.

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 birds away from the intake area.

All samples collected during the 2nd 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

2nd Quarter – FY11

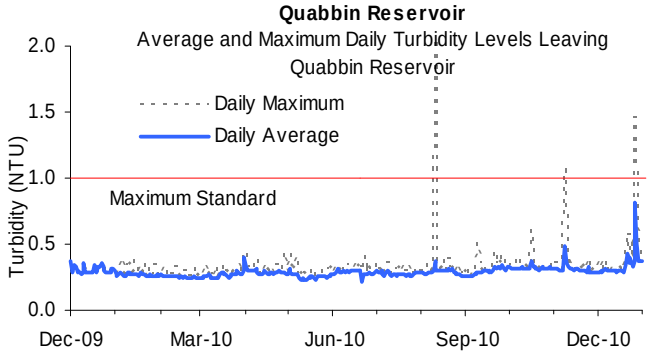
Background

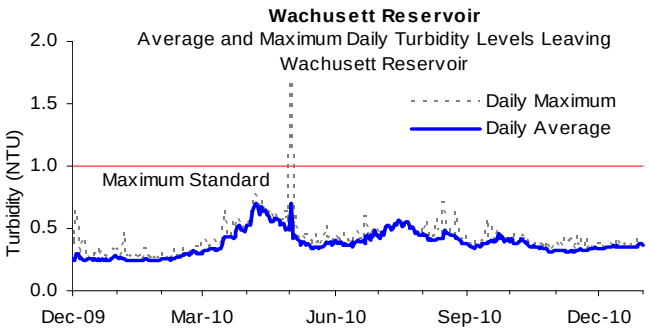
Turbidity is a measure of suspended and colloidal particles including clay, silt, organic and inorganic matter, algae and microorganisms. The effects of turbidity depend on the nature of the matter that causes the turbidity. High levels of particulate matter may have a higher chlorine demand or may protect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

Samples for turbidity from Quabbin Reservoir are collected at the Ware Disinfection Facility before chlorination. Samples from Wachusett Reservoir are taken at the CWTP's inlet (raw water line) before ozonation. The Massachusetts Department of Environmental Protection standard for source water turbidity for unfiltered water supply systems is a maximum of 1.0 NTU; the EPA standard is a maximum of 5.0 NTU. Maximum turbidity results at Wachusett were within DEP standards for the quarter. Quabbin maximum turbidity results were within DEP standards in October (see below for November and December).

•On November 8, there was a turbidity spike, which exceeded 1 NTU at the Ware Disinfection Facility (WDF) for a duration of 40 minutes. Required disinfection levels, as measured by CT, were met at all times. Daily total coliform results downstream were coliform free, and required disinfection residuals were maintained. Therefore, as there was no disruption of treatment effectiveness, this turbidity excursion is not a violation of the Surface Water Treatment Rule.

•On December 27, there was blizzard with high winds for approximately six hours resulting in a turbidity spike, which exceeded 1 NTU at WDF from 5:25 am to 9:47 am. The chlorine dose was temporarily increased from 1.3 mg/L to 1.4 mg/L during the event. Required disinfection levels, as measured by CT, were met at all times. Daily total coliform results downstream were coliform free, and required disinfection residuals were maintained. Therefore, as there was no disruption of treatment effectiveness, this turbidity excursion is not a violation of the Surface Water Treatment Rule.



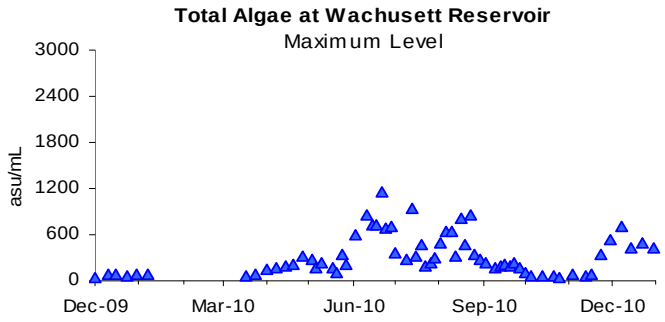


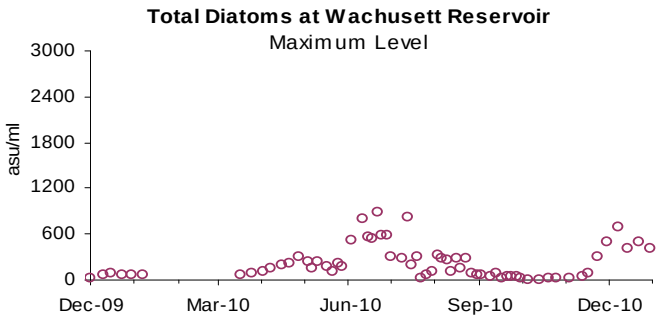
Source Water – Algae

Algal 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 algaecide. 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.

Of the 15 complaints received during the 2nd Quarter from local water departments, none concerned taste and odor that may be due to algae.





Treated Water – Disinfection Effectiveness

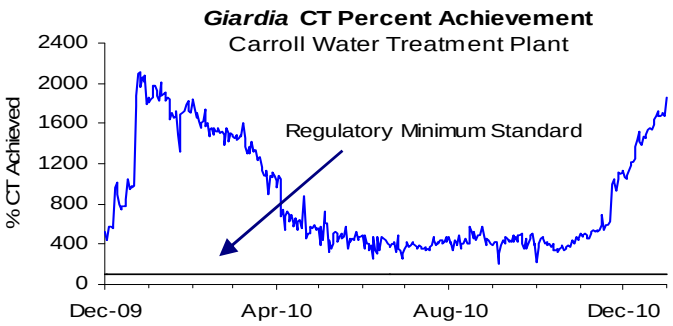
2nd Quarter – FY11

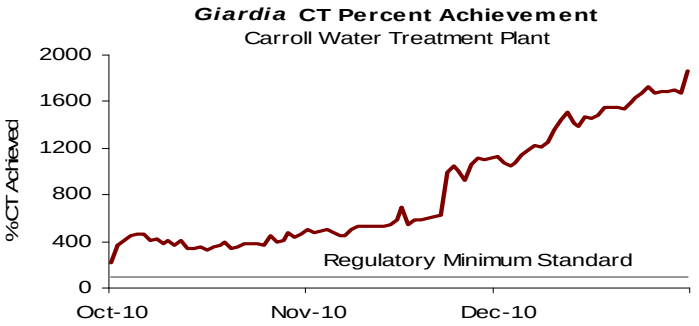
Background

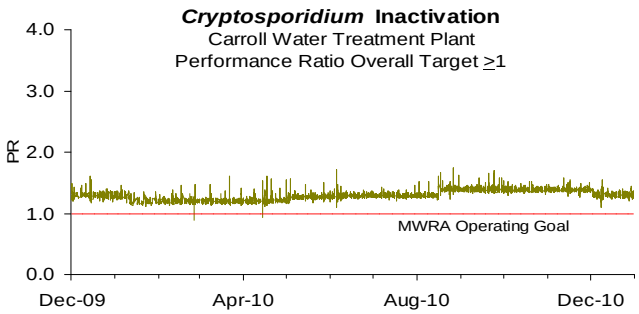
With the activation of the Carroll Water Treatment Plant (CWTP), MWRA now reports on both regulatory required 99.9% inactivation for *Giardia* (reported as "CT"), and its voluntary operating goal of 99% inactivation for *Cryptosporidium*. MWRA calculates hourly CT inactivation rates and reports daily 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 the 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.

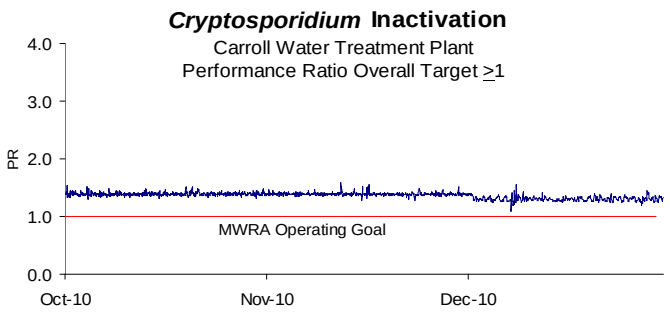
Wachusett Reservoir – MetroWest/Metro Boston Supply:

- CT was maintained above 100% at all times the plant was providing water into the distribution system this quarter.
- MWRA's operating goal to meet a PR of 1 was met for every hour of the quarter.
- Ozone dose at the CWTP varied between 1.4 to 3.7 mg/L for the quarter.
- During months when the water is cold, a higher level of disinfection is required to achieve MWRA's PR target for *Cryptosporidium*; this results in a much higher CT achievement for *Giardia*.



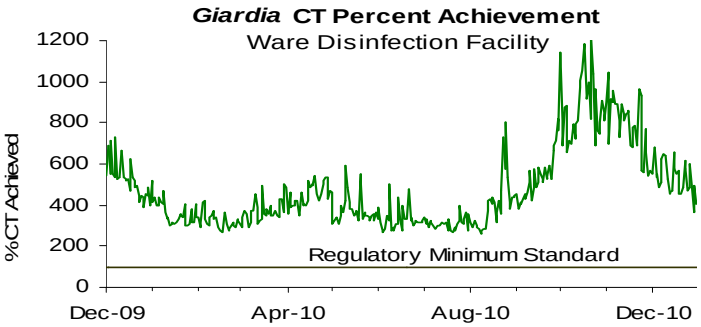


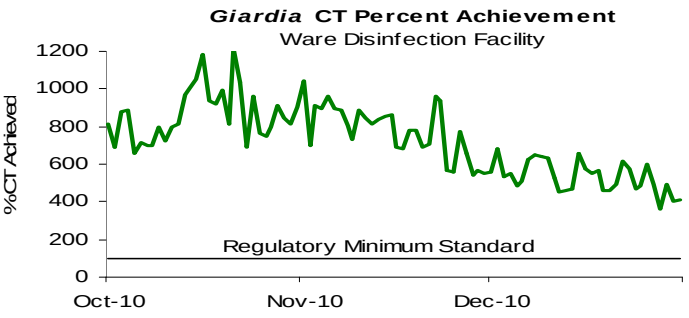




Quabbin Reservoir at Ware Disinfection Facility (CVA Supply):

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. On October 21, the chlorine dose was lowered to 1.4 mg/L from 1.5 mg/L. On November 24, the chlorine dose was lowered again to 1.3 mg/L. On December 27, the chlorine dose was raised temporarily to 1.4 mg/L due to a turbidity event. The dose was lowered back to 1.3 mg/L on December 29.



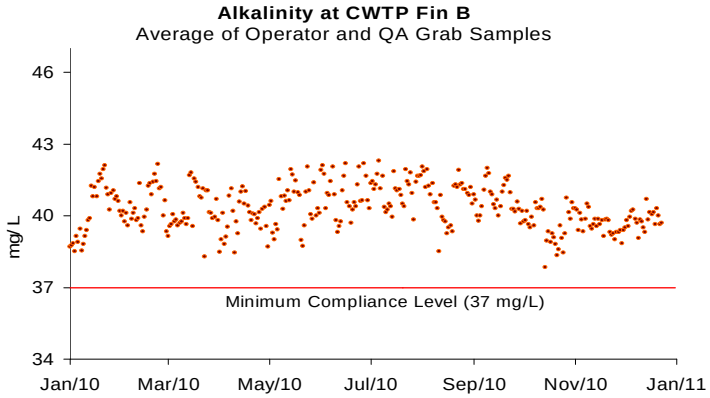


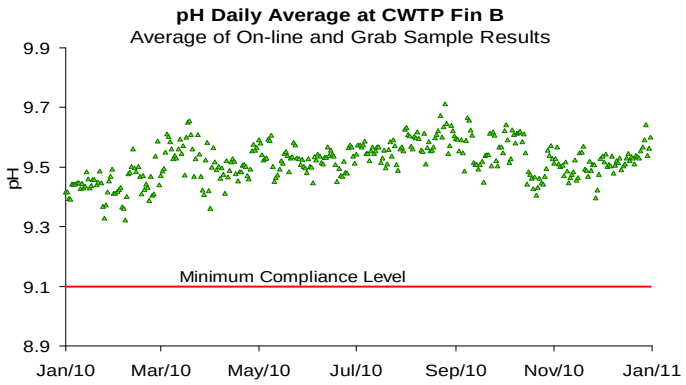
Treated Water – pH and Alkalinity Compliance

2nd Quarter – FY11

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's target for distribution system pH is 9.3; the target for alkalinity is 40 mg/l. Per DEP requirements, samples from the CWTP Fin B tap 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 this level for more than nine days during a six-month period. MWRA tests finished water pH and alkalinity daily at the CWTP Fin B sampling tap. Distribution system samples are collected in March, June, September, and December.

Distribution system samples were collected on December 13, 2010; sample pH ranged from 9.1 to 9.5 and alkalinity ranged from 38 to 41 mg/L. No sample results were below DEP limits for this quarter.





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

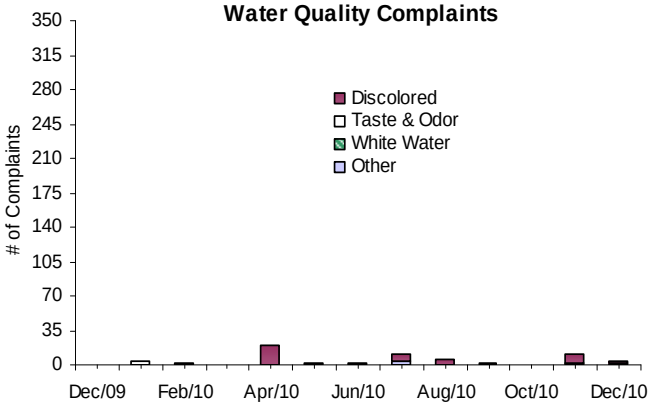
Background

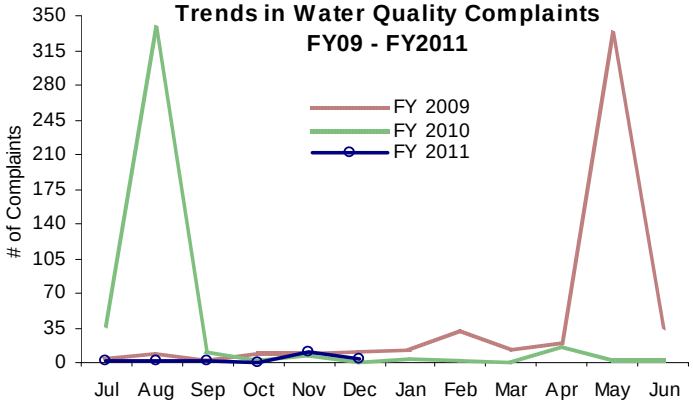
MWRA collects information on water quality complaints that typically fall into four categories: 1.) discoloration due to MWRA or local pipeline work; 2.) taste and odor due to algae blooms in reservoirs or chlorine in the water; 3.) white water caused by changes in pressure or temperature that traps 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 15 complaints during the 2nd Quarter. Of these complaints, 12 were for "discolored water;" six of which were reported from Arlington in November when a water main broke. There were also three "taste and odor" complaints .





Bacteria & Chlorine Residual Results for Communities in MWRA Testing Program

2nd Quarter – FY11

While all communities collect bacteria samples for the Total Coliform Rule (TCR), 41 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 2nd Quarter, 13 of the 5,747 community samples (0.23% system-wide) submitted to MWRA labs for analysis tested positive for coliform (South Hadley, Stoneham - October; Framingham, Somerville - November). Somerville violated the TCR in November. Four of the 2,098 (0.19%) MWRA samples tested positive for total coliform. No sample tested positive for *E.coli*. All 41 systems that submitted chlorine residual data maintained an average disinfectant residual of at least 0.2 mg/L. Only 3.6% 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	168	0 (0%)	0.0%		0.01	1.70
BELMONT	104	0 (0%)	0.0%		0.95	1.82
BOSTON	731	0 (0%)	0.0%		0.30	2.12
BROOKLINE	221	0 (0%)	0.0%		0.01	2.04
CHELSEA	171	0 (0%)	0.0%		0.90	2.05
DEER ISLAND	52	0 (0%)	0.0%		1.76	2.07
EVERETT	130	0 (0%)	0.0%		0.48	1.07
FRAMINGHAM	222	2 (0.9%)	0.0%	No	0.22	1.80
HANSCOM AFB (Bedford) (b)	27	0 (0%)	0.0%		0.00	1.12
LEXINGTON	117	0 (0%)	0.0%		0.50	2.00
LYNNFIELD	18	0 (0%)	0.0%		0.25	1.09
MALDEN	195	0 (0%)	0.0%		1.30	1.38
MARBLEHEAD	72	0 (0%)	0.0%		0.21	1.70
MARLBOROUGH (b)	139	0 (0%)	0.0%		0.06	1.78
MEDFORD	221	0 (0%)	0.0%		0.51	1.72
MELROSE	117	0 (0%)	0.0%		0.02	0.84
MILTON	96	0 (0%)	0.0%		0.79	1.76
NAHANT	29	0 (0%)	0.0%		0.09	1.29
NEEDHAM (b)	123	0 (0%)	0.0%		0.01	0.58
NEWTON	278	0 (0%)	0.0%		0.15	1.78
NORTHBOROUGH	48	0 (0%)	0.0%		0.02	0.80
NORWOOD	117	0 (0%)	0.0%		0.04	1.40
QUINCY	299	0 (0%)	0.0%		0.08	1.74
READING	130	0 (0%)	0.0%		0.04	1.52
REVERE	195	0 (0%)	0.0%		1.00	1.95
SAUGUS	104	0 (0%)	0.0%		1.59	1.96
SOMERVILLE	318	9 (2.83%)	0.0%	Yes	0.43	2.00
SOUTH HADLEY FD1 (c)	51	1 (1.96%)	0.0%	No	0.03	0.41
SOUTHBOROUGH	30	0 (0%)	0.0%		0.05	1.60
STONEHAM	97	1 (1.03%)	0.0%	No	0.79	2.11
SWAMPSCOTT	49	0 (0%)	0.0%		0.08	1.24
WAKEFIELD (b)	132	0 (0%)	0.0%		0.23	1.30
WALTHAM	216	0 (0%)	0.0%		0.88	2.15
WATERTOWN	130	0 (0%)	0.0%		0.22	1.74
WELLESLEY (b)	107	0 (0%)	0.0%		0.02	0.66
WESTBORO HOSPITAL	15	0 (0%)	0.0%		0.11	0.84
WESTON	48	0 (0%)	0.0%		1.14	1.98
WILMINGTON (b)	87	0 (0%)	0.0%		0.07	1.63
WINCHESTER (b)	65	0 (0%)	0.0%		0.10	0.99
WINTHROP	72	0 (0%)	0.0%		0.28	0.97
WOBURN (b)	195	0 (0%)	0.0%		0.06	0.75
Total:	5747	13 (0.23%)	0.0%			
MASS. WATER RESOURCES AUTHORITY (d,e)	2098	4 (0.19%)	0.0%	No	0.01	1.90

(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. Some MWRA TCR sites which are entry points to the community had low chlorine residuals due to various reasons.

(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

2nd Quarter – FY11

Background

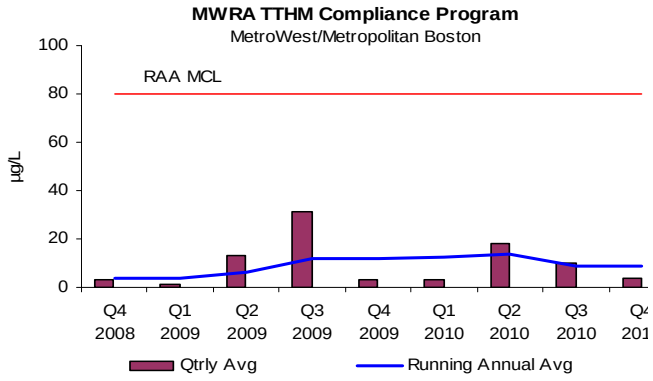
Total Trihalomethanes (TTHMs) and Haloacetic Acids (HAA5s) are by-products of disinfection treatment with chlorine. TTHMs and HAA5s are of concern due to their potential adverse health effects at high levels. EPA's running annual average (RAA) standard is 80 ug/L for TTHMs and 60 ug/L for HAA5s. The switch from chlorine to ozone for primary disinfection and the consolidation of treatment has lowered DBP formation and results are now more uniform. DEP requires that compliance samples be collected quarterly. Partially served communities are responsible for their own compliance monitoring and reporting and must be contacted directly for their results.

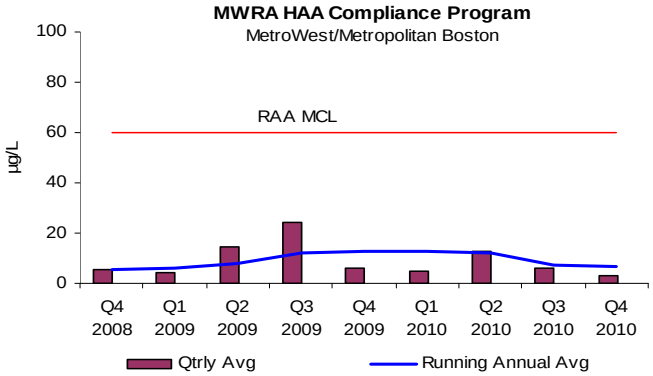
Absorbance, measured as UV-254, is a surrogate measure of reactive organic matter. Regulated DBPs have dropped to very low levels with the CWTP coming on-line. However, UV-254 levels remain useful for estimating ozone dosage and serving as a trigger for Quabbin transfer consideration.

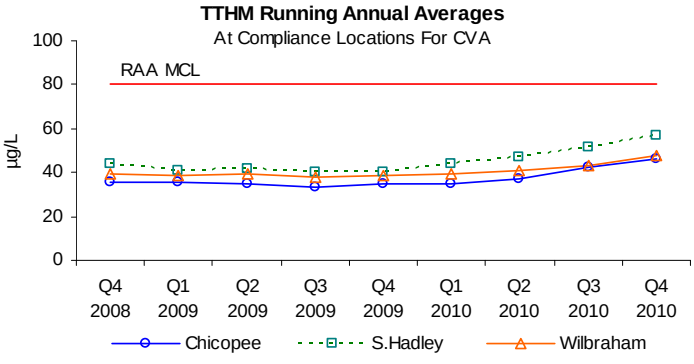
Bromate is tested monthly per DEP requirements for water systems that treat with ozone. Bromide in the raw water may be converted into bromate following ozonation. EPA's RAA MCL standard for bromate is 10 ug/L.

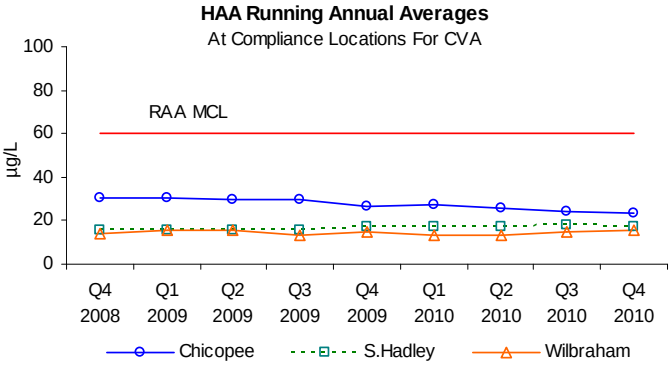
Outcome

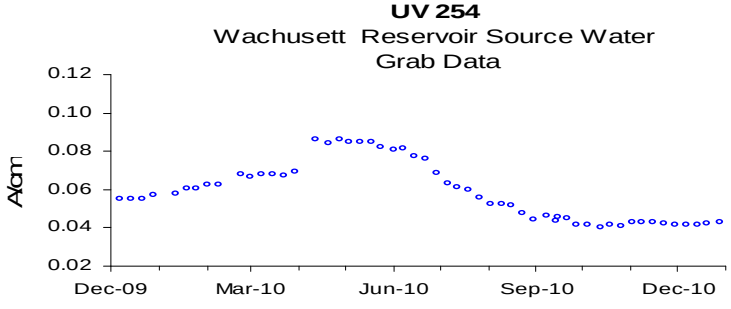
The RAA for TTHMs and HAA5s for MWRA's Compliance Program (represented as the line in the top two graphs below) remained below current standards. The RAA for TTHMs = 8.9 ug/L; HAA5s = 6.7 ug/L. CVA's DBP levels continue to be below current standards. UV-254 levels are currently around 0.04 A/cm. The current RAA for Bromate = 0.0 ug/L.











Water Supply and Source Water Management

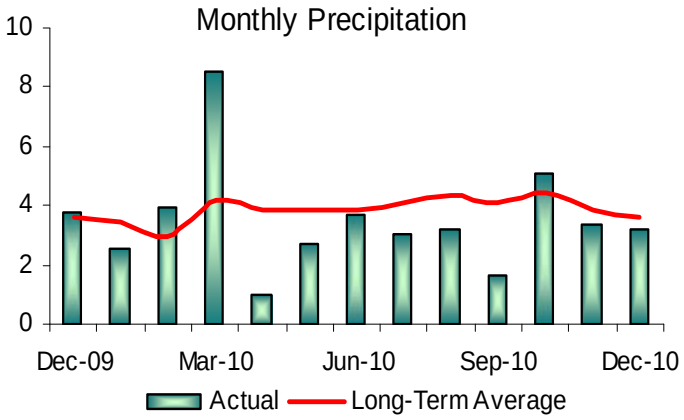
2nd Quarter – FY11

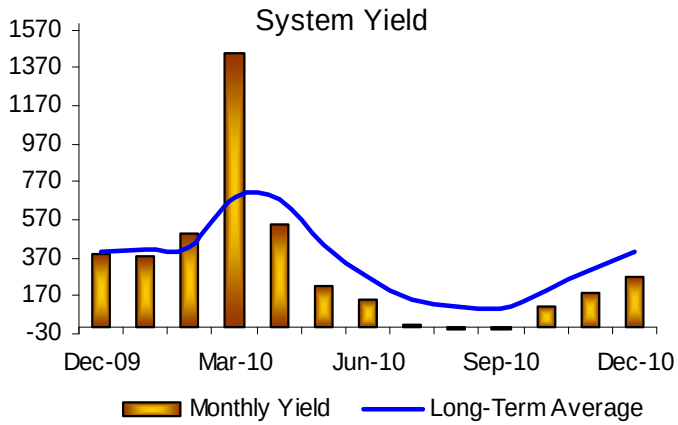
Background

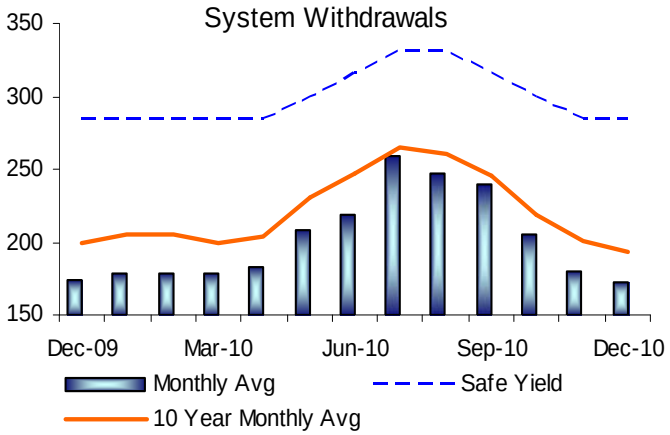
A reliable supply of water in MWRA's reservoirs depends on adequate precipitation during the year and seasonal hydrologic inputs from watersheds that surround the reservoirs. Demand for water typically increases with higher summer temperatures and then decreases as temperatures decline. Quabbin Reservoir 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.

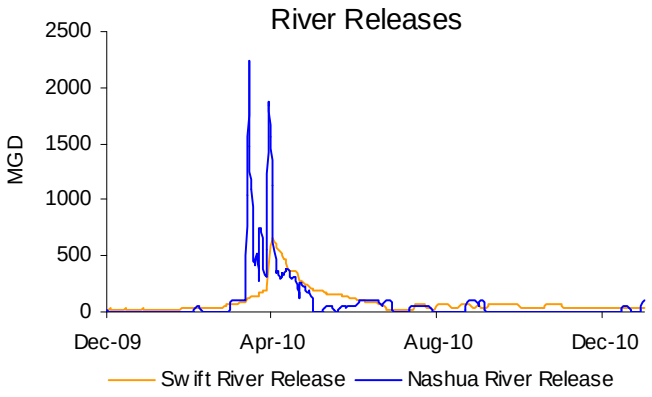
Outcome

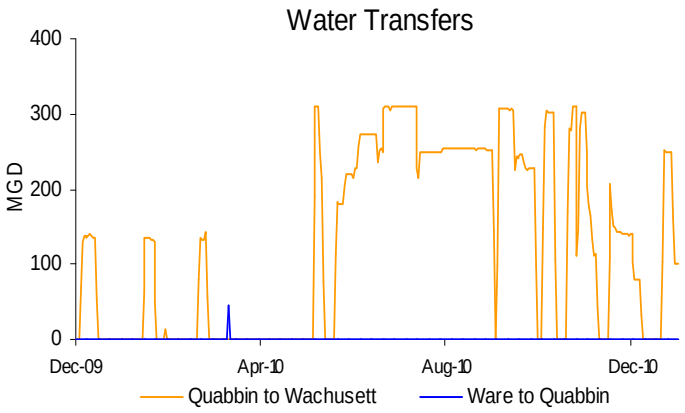
Precipitation and yield were below average for the quarter but the Quabbin Reservoir level remains above the normal operating range for this period of the year. The Reservoir was at 88.4% of capacity as of December 31, 2010; 7.2% lower than the same time last year, which represents a decrease of almost 30 billion gallons of storage. Quabbin is within its normal range. System withdrawals continue to be below the safe yield and long-term averages for this quarter.

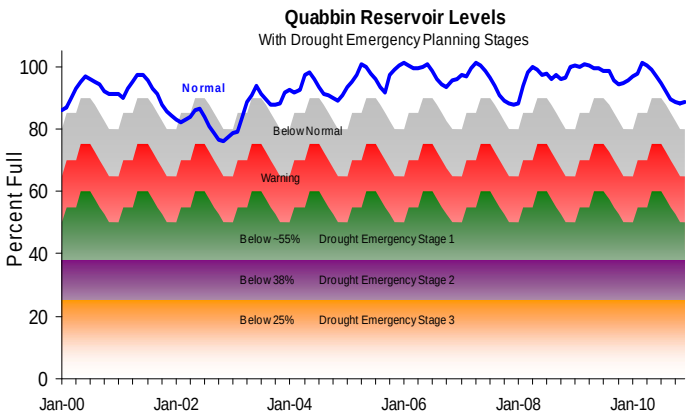












WASTEWATER QUALITY

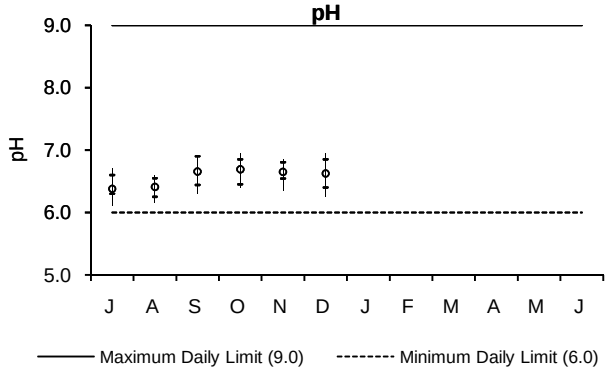
NPDES Permit Compliance: Deer Island Treatment Plant

2nd Quarter - FY11

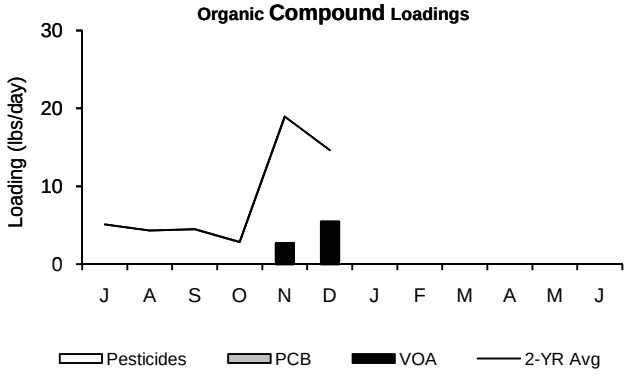
NPDES Permit Limits

Effluent Characteristics		*Units*	*Limits*	*October*	*November*	*December*	*2nd Quarter Violations*	*FY11 YTD Violations*
Dry Day Flow:		mgd	436	318.0	316.6	309.8	0	0
cBOD:	Monthly Average	mg/L	25	3.9	5.4	5.8	0	0
	Weekly Average	mg/L	40	5.4	6.6	7.8	0	0
TSS:	Monthly Average	mg/L	30	4.6	6.1	7.4	0	0
	Weekly Average	mg/L	45	6.6	8.6	11.2	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	383.6	97.4	12.3	0	0
	Weekly Geometric Mean	col/100mL	14000	109.6	9.3	6.4	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	6.4-7.0	6.4-6.9	6.3-7.0	0	0
PCB, Aroclors:	Monthly Average	ug/L	0.000045	UNDETECTED			0	0
Acute Toxicity:	Mysid Shrimp	%	50	>100	>100	65.9	0	0
	Inland Silverside	%	50	67.1	70.7	>100	0	0
Chronic Toxicity:	Sea Urchin	%	1.5	100	100	100	0	0
	Inland Silverside	%	1.5	6.25	50	50	0	0

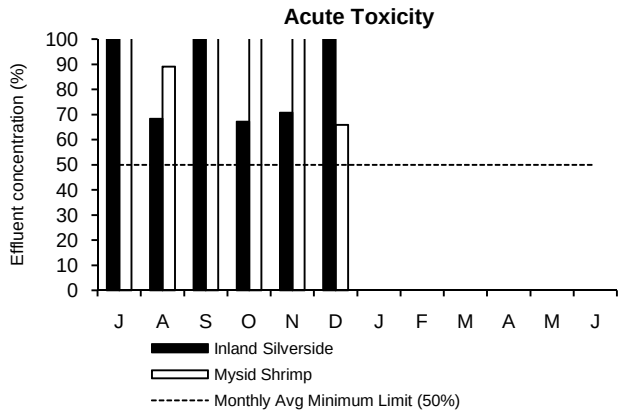
To date, there have been no permit violations at the Deer Island Treatment Plant in FY11.



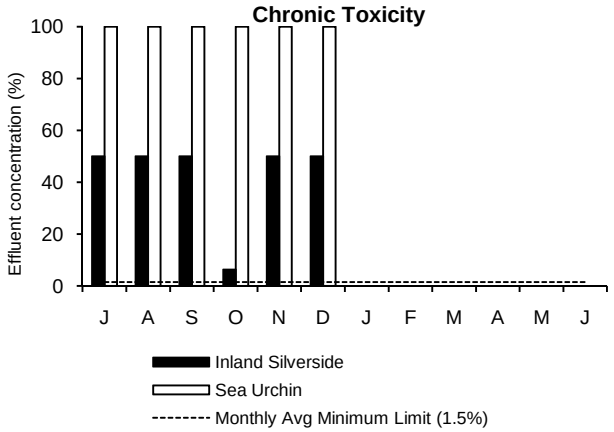
pH is a measure of the alkalinity or acidity of the effluent. Fluctuations in pH do not have adverse effects on marine environments. Because of the pure oxygen used in the activated sludge reactor, the effluent pH tends to be at the lower range. pH measurements for the 2nd Quarter were within the daily 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 compound loadings 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 2nd 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, 1.5% of the effluent must show no observed effects on the growth and reproduction of the test species. Chronic toxicity permit limits were met for the 2nd Quarter for both the inland silverside and sea urchin.

NPDES Permit Compliance: Clinton Wastewater Treatment Plant

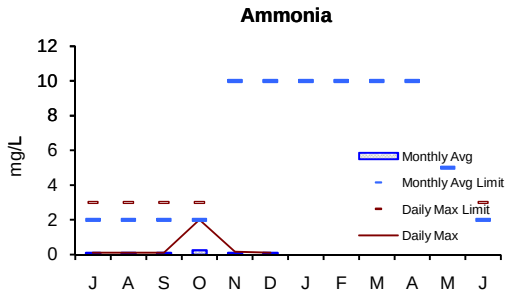
2nd Quarter - FY11

NPDES Permit Limits

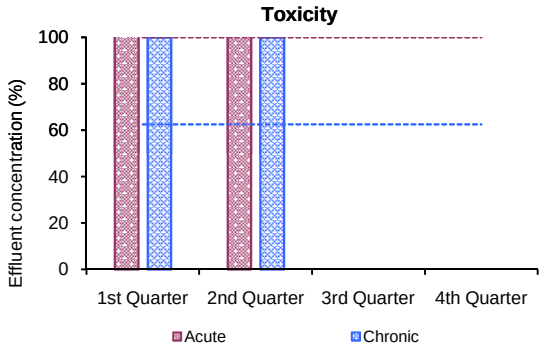
Effluent Characteristics		*Units*	*Limits*	*October*	*November*	*December*	*2nd Quarter Violations*	*FY11 YTD Violations*
Flow:		mgd	3.01	3.16	3.10	3.04	3	6
BOD:	Monthly Average:	mg/L	20	3.9	4.8	8.7	0	0
	Weekly Average:	mg/L	20	5.9	6.1	9.2	0	0
TSS:	Monthly Average:	mg/L	20	5.2	4.5	6.6	0	0
	Weekly Average:	mg/L	20	11.4	4.8	6.9	0	0
pH:		SU	6.5-8.3	7.1-7.5	7.0-7.6	6.9-7.6	0	0
Dissolved Oxygen:	Daily Minimum:	mg/L	6	7.5	7.1	9.8	0	0
Fecal Coliform:	Daily Geometric Mean:	col/100mL	400	42	8	15	0	0
	Monthly Geometric Mean:	col/100mL	200	5	4	4	0	0
TCR:	Monthly Average:	ug/L	50	0	0	0	0	0
	Daily Maximum:	ug/L	50	0	0	0	0	0
Total Ammonia Nitrogen:	Nov 1 - Mar 31							
	Monthly Average:	mg/L	10.0	0.3	0.1	0.1	0	0
	Daily Maximum:	mg/L	35.2	2.0	0.2	0.1	0	0
Copper:	Monthly Average:	ug/L	20	13.8	6.3	8.7	0	0
Phosphorus:	May 1 - Oct 31							
	Monthly Average:	mg/L	1.0	0.19	N/A	N/A	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

The monthly average flows at the Clinton Plant exceeded the permit limit of 3.01 mgd in October (3.16 mgd), November (3.10 mgd), and December (3.04 mgd).

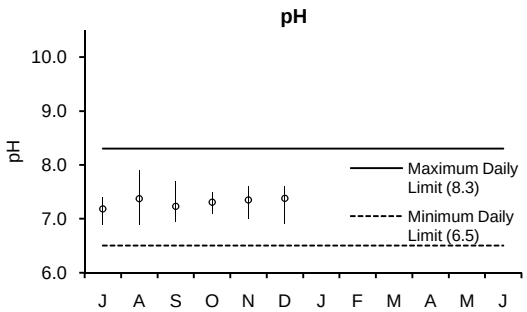
Toxicity testing is conducted on a quarterly basis.



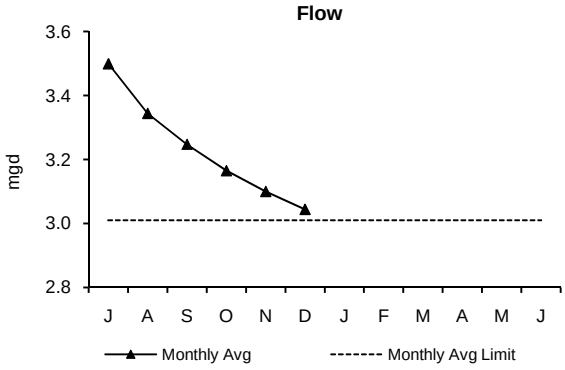
The 2nd Quarter monthly average and daily maximum concentrations were below the permit limits. The monthly average and daily maximum limits for the period of November 1 - March 31 are 10 mg/L and 35.2 mg/L, respectively. The permit limits are most stringent from June to October, when warm weather conditions 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 2nd Quarter.



pH is a measure of the alkalinity or acidity of the effluent. All daily pH results for the 2nd Quarter were within the range set by the permit.



The graph above depicts the average monthly flow, measured in million gallons per day, entering the plant. The average monthly flows during the 2nd Quarter exceeded the permit limit of 3.01 mgd but have been trending downward since the start of FY11.

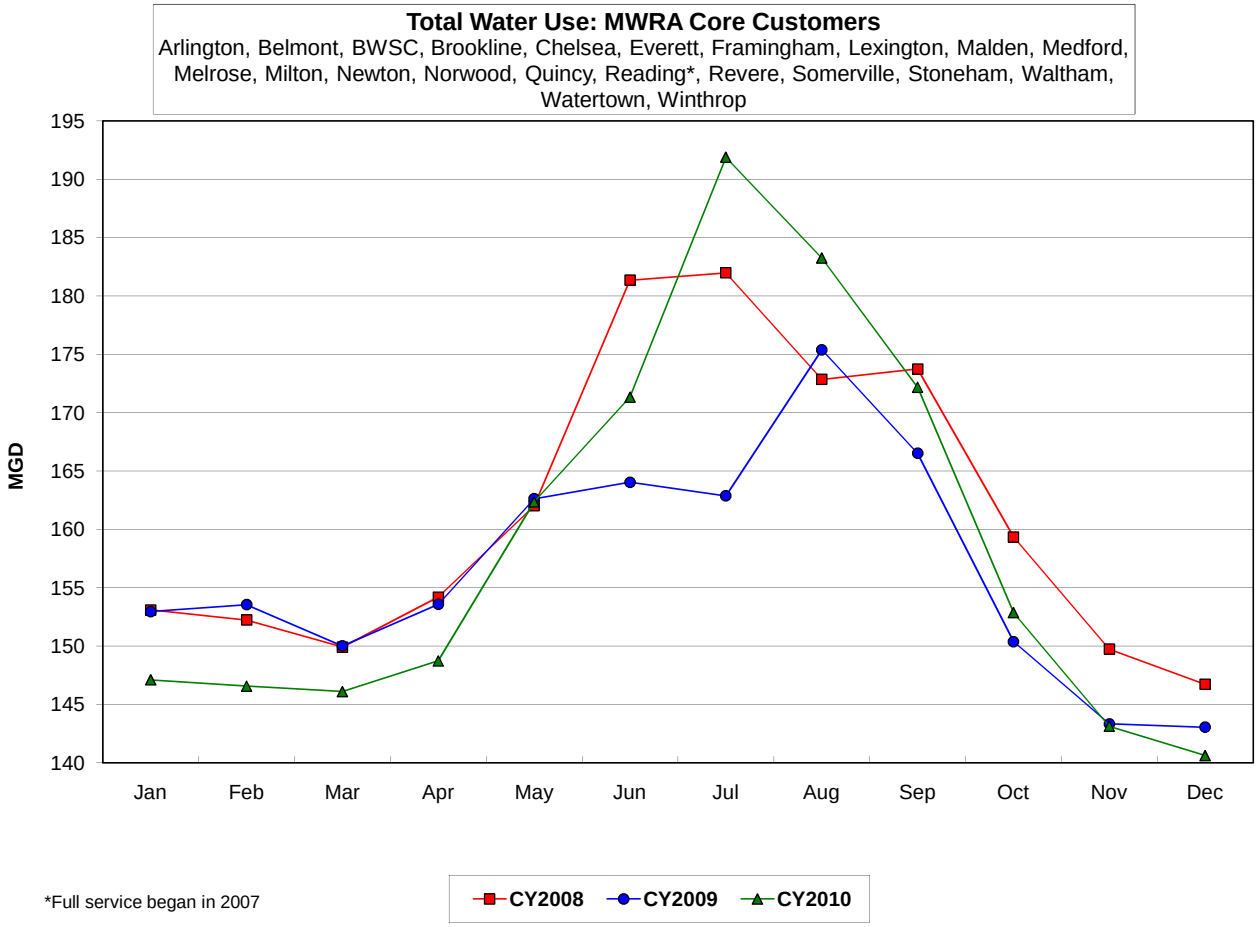
COMMUNITY FLOWS AND PROGRAMS

Massachusetts Water Resources Authority

Water Supplied: MWRA Core Communities

MGD	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Average
CY2008	153.088	152.234	149.917	154.190	162.017	181.350	181.977	172.851	173.742	159.347	149.732	146.722	161.444
CY2009	152.955	153.548	150.008	153.576	162.628	164.037	162.866	175.388	166.509	150.376	143.335	143.043	156.543
CY2010	147.109	146.572	146.104	148.736	162.362	171.323	191.877	183.238	172.181	152.865	143.132	140.618	158.944

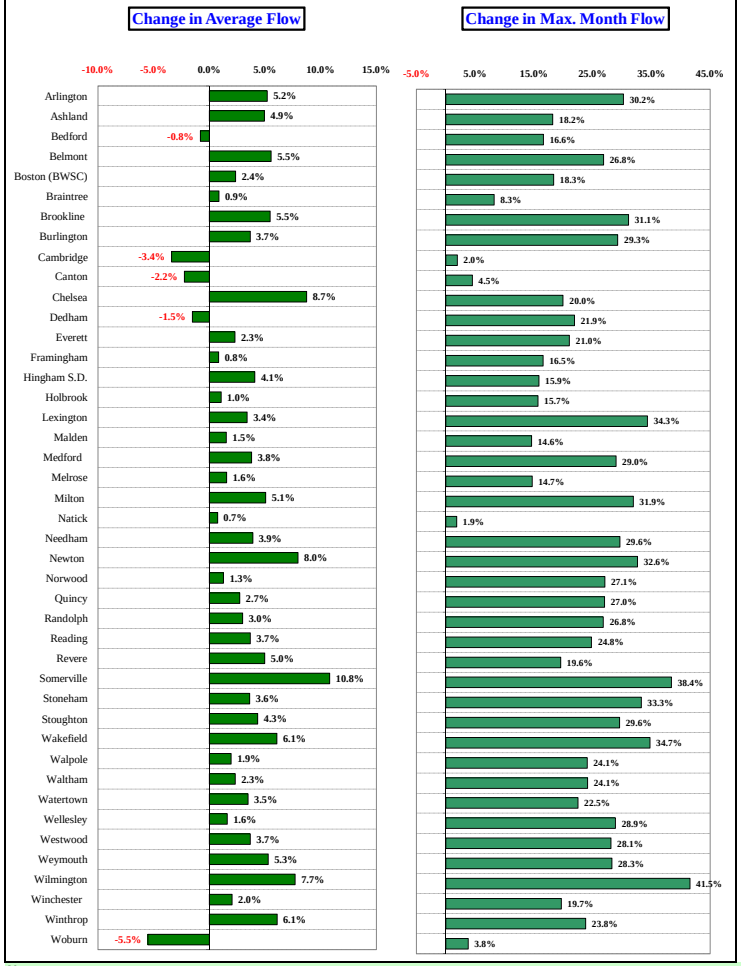
MG	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
CY2008	4,745.722	4,414.773	4,647.415	4,625.691	5,022.518	5,440.499	5,641.288	5,358.375	5,212.249	4,939.760	4,491.952	4,548.371	59,088.614
CY2009	4,741.614	4,299.349	4,650.244	4,607.285	5,041.476	4,921.104	5,048.836	5,437.043	4,995.272	4,661.647	4,300.060	4,434.327	57,138.257
CY2010	4,560.379	4,104.007	4,529.220	4,462.067	5,033.225	5,139.704	5,948.173	5,680.375	5,165.444	4,738.813	4,293.973	4,359.154	58,014.534



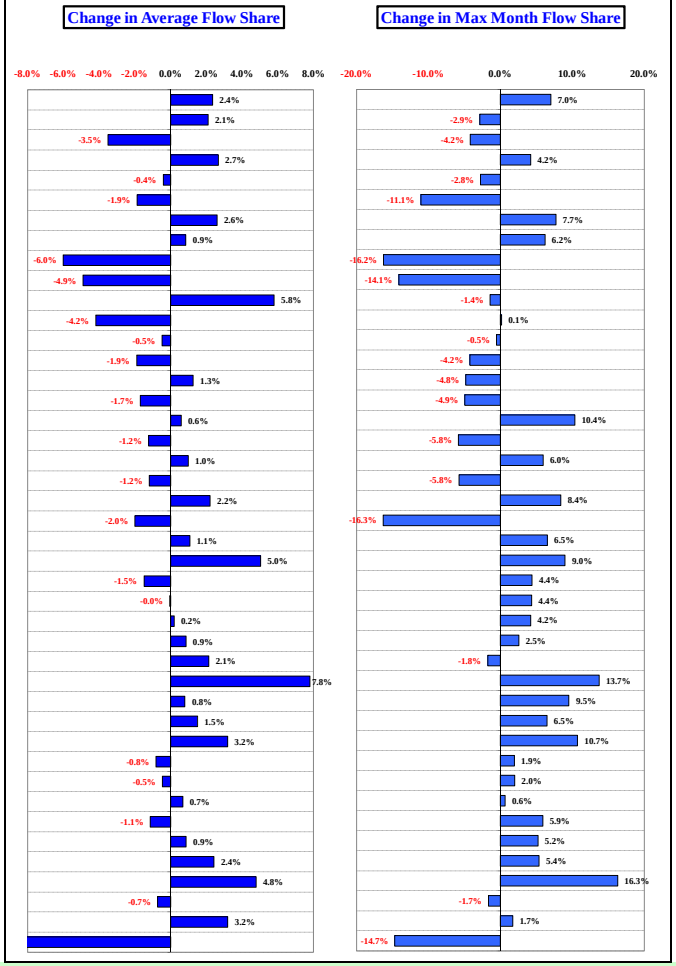
*Full service began in 2007

How CY2010 Community Wastewater Flows Could Effect FY2012 Sewer Assessments

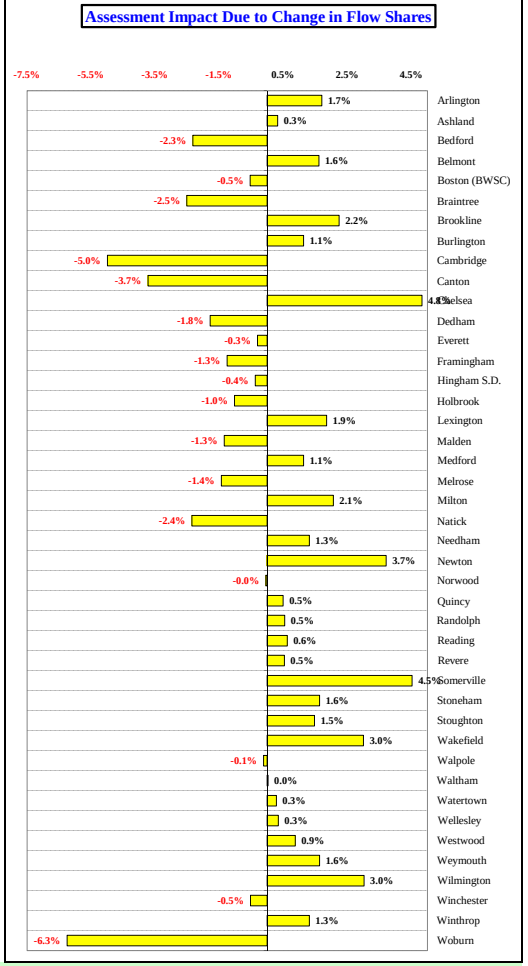
The flow components of FY2012 sewer assessments will be calculated using a 3-year average of CY2008 to CY2010 wastewater flows compared to FY2011 assessments that used a 3-year average of CY2007 to CY2009 wastewater flows.



But as MWRA's sewer assessments are a ZERO-SUM calculation, a community's assessment is strongly influenced by the RELATIVE change in CY2008 to CY2010 flow share compared to CY2007 to CY2009 flow share, compared to all other communities in the system.



Flow shares represented more than 54% of the FY11 assessment calculation. The chart below illustrates the estimated impact of flow share changes on FY2012 sewer assessments. [3]



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 CY2007 to CY2010 average wastewater flows as of 2/10/11. Flow data is preliminary and subject to change pending additional MWRA and community review.

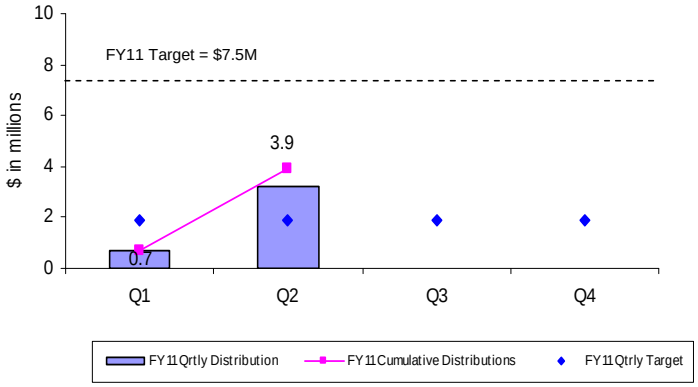
[3] Represents the assessment impact resulting from the changes in average and maximum wastewater flow shares.

Community Support Programs
2nd Quarter – FY11

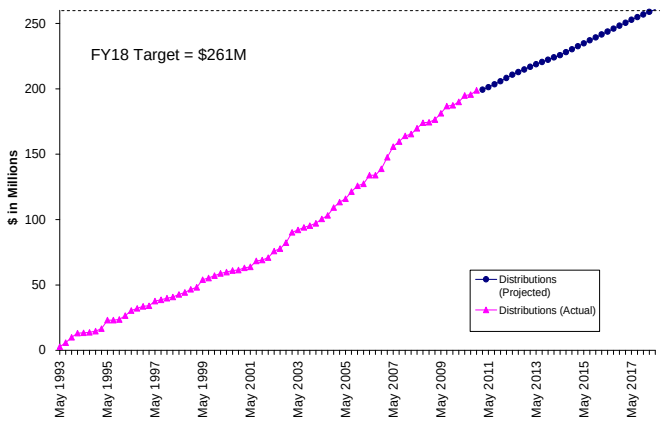
Infiltration/Inflow Local Financial Assistance Program

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

FY11 Quarterly Distributions of Sewer Grant/Loans



I/I Local Financial Assistance Program Distribution FY93-FY18

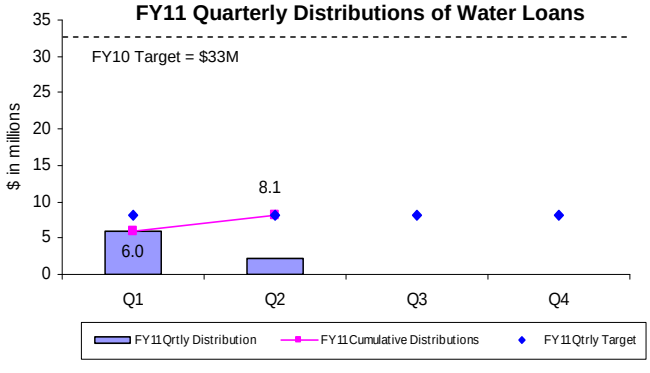


During the Second Quarter of FY11, $3.2 million in financial assistance (45% grants and 55% interest-free loans) was distributed to fund local sewer rehabilitation projects in Needham, Waltham and Weymouth. Total grant/loan distribution for FY11 is $3.9 million. From FY93 through the Second Quarter of FY11, all 43 member sewer communities have participated in the program and more than $198 million has been distributed to fund 395 local I/I reduction and sewer system rehabilitation projects. Distribution of the remaining funds has been approved through FY18 and community loan repayments will be made through FY23. All scheduled community loan repayments have been made.

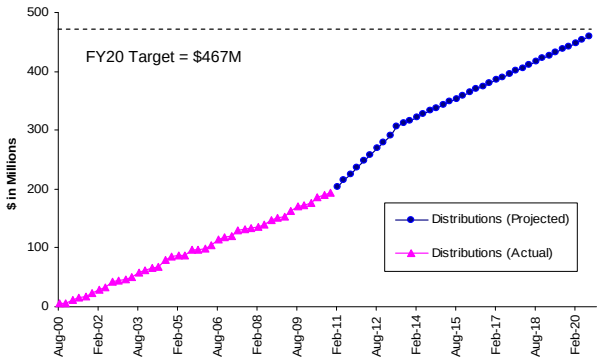
Water Local Pipeline and Water System Assistance Programs

MWRA's Local Pipeline and Water System Assistance Programs (LPAP and LWSAP) provide $467 million in interest-free loans (an average of about $23 million per year from FY01 through FY20) to member water communities to perform water main rehabilitation projects within their locally-owned water distribution systems. Eligible project costs include: water main cleaning/lining, replacement of unlined water mains, lead service replacements, valve, hydrant and 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.

FY11 Quarterly Distributions of Water Loans



Local Pipeline and Water System Assistance Programs Distribution FY01-FY20

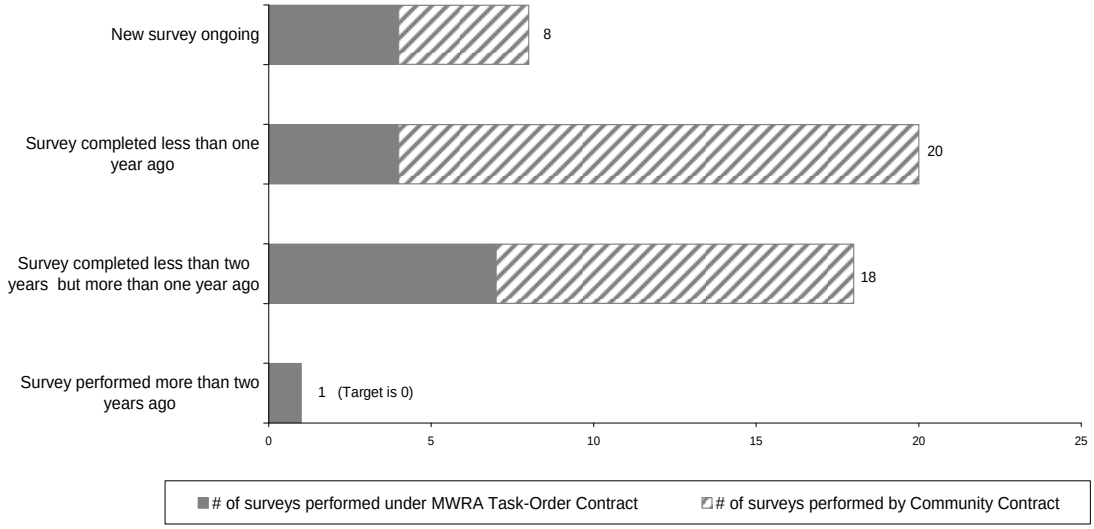


During the Second Quarter of FY11, $2.1 million in interest-free loans was distributed to fund local water projects in Canton and Waltham. Both communities are first-time users of MWRA water financial assistance funds. Total loan distribution for FY11 is $8.1 million. From FY01 through the Second Quarter of FY11, more than $193 million has been distributed to fund 225 local water system rehabilitation projects in 33 MWRA member water communities. Distribution of the remaining funds has been approved through FY20 and community loan repayments will be made through FY30. All scheduled community loan repayments have been made.

Community Support Programs
2nd Quarter – FY11

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 contractor 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 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 by MWRA and the costs are billed to the community the following year. During the Second Quarter of FY11, one member water community (Everett) was out of compliance with MWRA's Leak Detection Regulation. Everett was one of eight MWRA water communities that had applied for 2011 Water Conservation Grants from MADEP. Based on a 1/4/11 news release from MADEP, five MWRA member communities were awarded grants (Canton, Clinton Dedham/Westwood Water District, Stoughton and Wilmington). Unfortunately, Everett, along with Northborough and Winchester, were not grant recipients. MWRA staff are coordinating with Everett to determine their plan to comply with the water system 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. For FY11, the target for educational brochures has been lowered and the target for low-flow fixtures has been increased based on distribution trends over the last few years.

	Annual Target	Q1	Q2	Q3	Q4	Annual Total
Educational Brochures	150,000	8,152	19,802			27,954
Low-Flow Fixtures (showerheads and faucet aerators)	10,000	2,615	1,313			3,928
Toilet Leak Detection Dye Tablets	-----	8,218	1,651			9,869

BUSINESS SERVICES

Procurement: Purchasing and Contracts

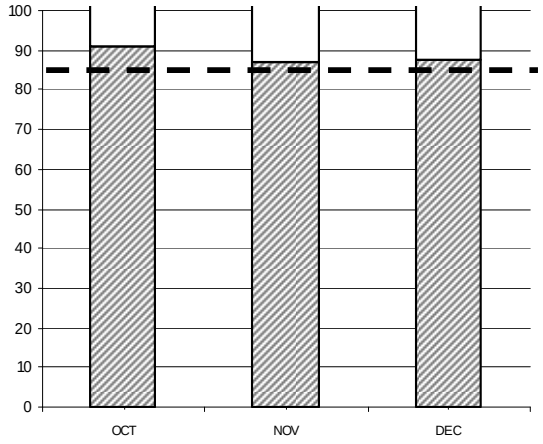
Second Quarter FY11

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

Outcome: Processed 89% of purchase orders within target; Avg. Processing Time was 6.46 days vs. 4.22 days in Qtr 2 of FY10. Processed 56% (9 of 16) contracts within target timeframes; Avg. Processing Time was 138 days vs. 82 days in Qtr 2 of FY10.

Purchasing

Purchase Orders - Percent in Target



	NO.	TARGET	PERCENT IN TARGET
$0 - $500	1657	4 DAYS	93.6%
$500 - $2K	801	7 DAYS	88.9%
$2K - $5K	198	10 DAYS	67.7%
$5K - $10K	91	25 DAYS	79.1%
$10K - $25K	79	30 DAYS	70.9%
$25K - $50K	16	60 DAYS	43.8%
OVER $50K	26	80 DAYS	53.8%

- Purchasing Unit processed 2868 purchase orders, 84 fewer than the 2952 processed in Qtr 2 of FY10, for a total value of $10,626,676 vs. a dollar value of $17,134,947 in Qtr 2 of FY10.

- The target was not achieved for the $2k - $5k category due to clarification of specifications from the end user and sourcing of alternate vendors, the $5k - $10k category due to an extended bid review and clarification of specifications, the $10k - $25k category due to revisions in specifications, alternate vendor sourcing, and numerous vendor questions, and the over $50k category due to multiple re-bids and extended bid review.

Contracts, Change Orders and Amendments

- Seven contracts were not processed within target timeframes. Reasons include; the need for numerous addenda and thorough review of qualifications, a re-bid, contractor delay in submission of required documents, holding the contract until the services were needed, and one contract was processed within two weeks of target time frame.

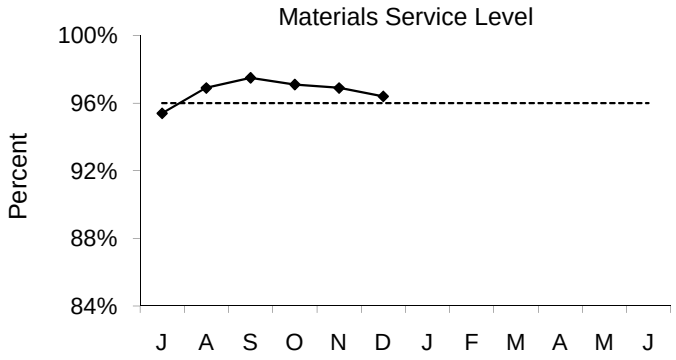
- Procurement processed sixteen contracts with a value of $6,859,081 and six amendments with a value of $10,009,036.

- Forty-eight 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 2nd quarter FY11 was $2,649,993 and the value of credit change orders was ($1,917,469).

- In addition, staff reviewed 112 proposed change orders and 60 draft change orders.

Materials Management

2nd Quarter, FY11



The service level is the percentage of stock requests filled. The goal is to maintain a service level of 96%. Staff issued 8,080 (96.8%) of the 8,348 items requested in Q2 from the inventory locations for a total dollar value of $1,055,908.

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 FY11 goal is to reduce consumable inventory from the July '10 base level ($7.35 million) by 2.0% (approximately $147,061), to $7.20 million by June 30, 2011 (see chart below).

Items added to inventory this quarter include:

- Deer Island – rotork electric actuator, explosion proof plugs, CPU board and power supply for Liquid Train; key pads for RSL pump for Electrical; gauges, adapters and sheet metal screws for Power and Pump.
- Chelsea – Oil pump, shaft assembly, spiral gear set and Hymax couplings for FOD; ballasts and bulbs for Facilities; vibration sensor for SCADA; heater block and motor for Work Order Coordination Group; grommet and air filters for VMM.
- Southboro – Flouride electrode and calibration gas for Carroll Water Treatment Plant; safety vests and head lamps for Safety.

Property Pass Program:

- Audits were conducted at Chelsea Water Maintenance, Chelsea TRAC, Southboro Masons, Southboro VMM and Southboro Paint Shop during Q2.
- Numerous obsolete computers, printers, monitors, mice and scanners 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 $3,590.

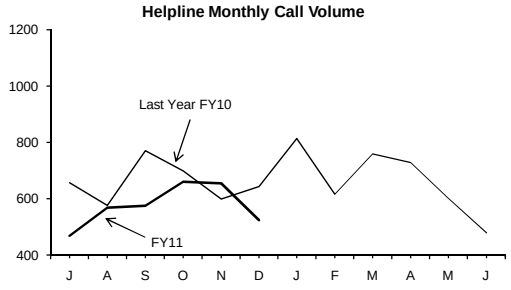
Items	Base Value July-10	Current Value w/o Cumulative New Adds	Reduction / Increase To Base
Consumable Inventory Value	7,353,045	7,335,048	-17,997
Spare Parts Inventory Value	6,888,860	6,791,537	-97,323
Total Inventory Value	**14,241,905**	**14,126,585**	**-115,320**

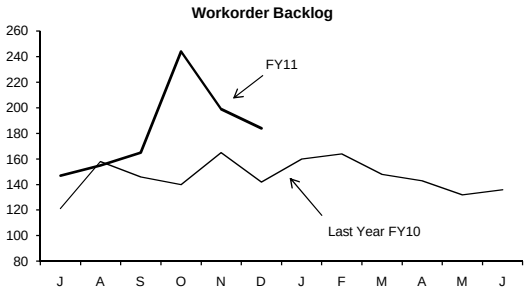
Note: Approximately $548,486 worth of MIS equipment remains under warehouse inventory awaiting issue in Q3 FY11 following new Windows 7 configuration and support related training. This equipment's value is reflected in the consumable inventory value.

MIS Program
2nd Quarter FY11

Operations

Highlights:



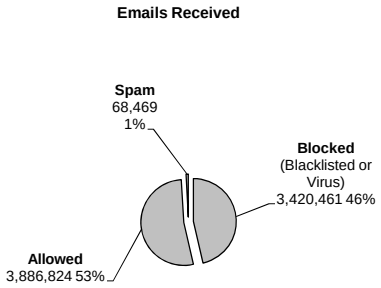


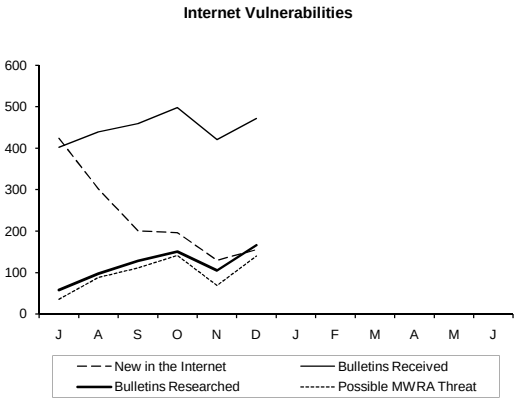
Performance

- Call volume peaked in October and has decreased by 12.52% from Q2 last year. The backlog also peaked in October and is above the targeted benchmark range. The mix of calls for the quarter do not indicate any major problems.

Business System Plan

- Cyber Security: During Q2, staff pushed security fixes and updates to desktops and servers throughout the quarter in order to protect against the 84 newly revealed vulnerabilities.
- LANDesk Antivirus quarantined 35 distinct viruses from 39 MWRA computers. MWRA's systems are current with anti-virus providers' signatures for all known malware.





Applications/Training/Records Center

Area	Significant Accomplishments
Electronic Timesheet Approvals Pilot	Completed the user and security configurations for Lawson Electronic Timesheet Approval module. Testing intially began with the the Finance Department and was followed by parallel tests with the Finance Department, MIS Department and Executive Office. Created a new screen to display and report log changes through time entry and approval process. Additionally, staff added JavaScript to the timesheet in Lawson to enable users to add comments to timesheets.
LIMS	Worked with LIMS consultant from LabWare to develop several reporting enhancements requested by the Department of Laboratory Services (DLS). The main report lists changes to static table data (projects, specifications, pollutants, etc.) and automatically emails the report to DLS customers. The LabWare consultant was required to develop this report because the data needed to be unencrypted by LabWare.
ArcServer v10	Web server software has been installed on the development server and is currently being tested. This version enables the GIS system to utilize Adobe products for map generation. The cartography (look and feel) of the map has been finalized and significant enhancements have been made to speed up the generation of an image. One view, which represents a standard "basemap," is drawing-based and contains street, open space, water features and building footprints. The other view is photographic image-based and contains the MassGIS 2008-09 orthophotos with street names overlayed. The two views let users very quickly 'toggle' between the vector and raster basemaps. Additional ArcServer web services have been installed on the development server. These web services allow users to overlay pipes, meters, valves, etc. onto the cached base maps. During Q3, the Flex viewer will be 'built out' using the out-of-the-box configurable 'widgets'. These widgets will enable the user to easily find and get information on MWRA facilities and structures.
MAXIMO	Added 2400 pipe sections and updated 4,000 GPS coordinates to maintain data consistency with the SAMS (Sewer Analysis and Management System) database, the depository on all of the MWRA sewer transport system infrastructure items such as, pipe location, public and private sewer connections, geology conditions, etc... Defined process for DITP/VMM staff for attaching documents to Maximo equipment and workorders. This feature is expected to be used heavily by the Vehicle Maintenance group to take photos of its assets to track vehicle condition.
Munease	Migrated MUNEASE database to the new production server and upgraded application that tracks bonds issued by MWRA and supports reporting and various calculation needs of the organization to version 14.05.
Windows 7	Completed the upgrade of reports on the OTTracking Application and Surplus Property Tracking Application to ensure compatibility with Windows 7.
Library & Records Center	Continued management of Shaft 5 Evidence room access and assets. The Library completed 75 research requests, added 64 books, distributed 91 periodicals and 3329 electronically linked articles to staff. The Records Center added 111 boxes, conducted 5 training sessions, and attended 3 Record Conservation Board Meetings.
Training	For the quarter, 217 staff attended 26 classes and 24 workshops. 8% of the workforce have attended at least one class year-to-date.

Legal Matters
2nd Quarter FY11

PROJECT ASSISTANCE

COURT AND ADMINISTRATIVE ORDERS

- **Boston Harbor Litigation and CSO:** Submitted annual summary regarding the sewage pumpout boat supplemental environmental project to the United States in accordance with September 8, 2008 Stipulation and Order in the Boston Harbor case. Submitted annual report to EPA and DEP providing updated information on the landfill sites that NEFCO identified as acceptable landfill sites for use as part its emergency residuals disposal back up plan in accordance with the September 28, 2005 Order issued pursuant MWRA's Motion to Vacate the Second Long-Term Residuals Management Scheduling Order. Drafted and filed Compliance and Progress Report and CSO Quarterly Progress Report with Federal District Court.

- **NPDES:** Reviewed and filed 120-day and 180-day submittals to MADEP related to Administrative Consent Order with Penalty for diesel fuel spill at Cottage Farm CSO facility. Reviewed and submitted updated semi-annual *Consultant's Deer Island Energy Recommendations Tracking Sheet* to DEP and EPA. Drafted and submitted letter to EPA requesting that EPA issue MWRA a NPDES permit for the discharge related to the annual maintenance activities at the Carroll Water Treatment Plant.

REAL ESTATE AND CONTRACT AND OTHER SUPPORT

- **Fore River Railroad Corporation:** Submitted certificate of change of board of directors for the Fore River Railroad Corporation to the Massachusetts Secretary of State's office. Reviewed, commented on and drafted two sections of a draft License and Operating Agreement to support the procurement of the new operator. Drafted a license agreement for National Grid to install a gas main under the tracks and right-of-way for the Fore River Railroad at two (2) locations in Quincy.

- **FloDesign Wind Turbine License:** Finalized License terms with FloDesign to site a demonstrator wind turbine generator on Deer Island.

- **NEFCo Claims:** Participated in mediation with NEFCo in an attempt to resolve several outstanding claims.
- **Section 156 Sewer Interceptor:** Drafted proposed legislation to allow an alternative means of procurement to construct the Section 156 Sewer Interceptor Project.
- **Weston Water Main:** Provided support and guidance regarding potential litigation claims arising out of the water main break on May 1, 2010 and other litigation strategy issues.
- **Miscellaneous:** Reviewed and approved eighteen (18) Section 8(m) Permits, and one (1) Direct Connect Permit; continued work re: Methuen Construction and Fishback & Moore.

ENVIRONMENTAL

- **Statutes/Regulations-Amendments:** Reviewed and notified staff of changes to c. 30A which governs the Secretary of State's procedures for the promulgation, amendment or repeal of regulations by state agencies, and provided guidance to staff on how these changes might impact TRAC's current and future regulations. Reviewed and conferred with staff regarding i) Chapter 240 of the Acts of 2010 which adds G.L. c. 43E that authorizes a new expedited permitting program, and ii) the Permit Extension Act which establishes an automatic two-year extension to certain permits and licenses that concern the use or development of real property.

- **Wetlands Protection Act:** Provided guidance on determining the parameters of the Emergency Certification (EC) provision of the Wetlands Protection Act, and the Notice of Intent filing requirements as they pertain to work authorized by an EC.

- **Dept. of Transportation Regulations:** Assisted in drafting SOP pertaining to transportation of chemicals. Determined that the federal Dept. of Transportation/Hazardous Materials Regulations do not apply to transportation of such materials by state employees for solely noncommercial governmental purposes.

LABOR, EMPLOYMENT AND ADMINISTRATIVE

New Matters Sixteen demands for arbitration were filed.

Matters Concluded Received an arbitrator's decision in favor of the Union on the grounds that the MWRA had changed the duties of an employee.

LITIGATION/TRAC

New Lawsuits During the Second Quarter of FY2011, two new lawsuits were reported received.

(Former Employee) v. MWRA, et al.: In this action, plaintiff is challenging his termination on April 28, 2010 as Facilities Manager at DITP. As to the defendant MWRA, plaintiff alleges: wrongful termination and discharge in violation of public policy, breach of section 301 of the Labor Relations Act, unfair labor practices in violation of National Labor Relations Act, breach of implied covenant of good faith and fair dealing, and breach of implied contract. MWRA will shortly file a motion to dismiss all counts of the complaint against it.

Gilchrist Metal Fabricating Co., Inc. v. City Lights Electrical Co.: This is a third party action by City Lights Electrical Company. City Lights Electrical has been sued by its metal work subcontractor, Gilchrist Metal Fabricating Company, in connection with Deer Island Treatment Plant Contract No. 6855, Electrical Equipment Upgrade Construction, #3 and City Lights' denial of Gilchrist's change order claim amounting to approximately $210,000. City Lights Electrical seeks contribution and indemnification against MWRA to the extent damages are assessed against City Lights Electrical.

Significant Developments

(Former Employee) v. MWRA. This is an employment case in which the plaintiff alleges that he has been retaliated against because he reported "health, safety and environmental issues to other public bodies." Plaintiff claims retaliation, civil rights infractions, intentional interference with contractual relations, civil conspiracy, and intentional infliction of emotional distress. The status conference scheduled for December 7, 2010, was postponed, pending the outcome of mediation, scheduled for Wednesday, January 19, 2011.

Davison, et al v. MWRA. This is an action for damages resulting from the taking by the MWRA of easements in Suffolk County by eminent domain. The property is located at 1625 VFW Parkway, West Roxbury, MA. On or about April 13, 2005, the MWRA made a taking of temporary and permanent easements to construct, inspect, repair, renew, replace, operate and maintain a sewer line in and under certain parcels of land owned by Plaintiffs all in connection with the Upper Neponset Valley Replacement Sewer, MWRA Sewer Sections 685 and 686 West Roxbury, MA. A pre-trial conference is scheduled for January 12, 2011.

Commercial Masonry v. Barletta Engineering, et al.: This matter is a Keeper of Records Deposition subpoena requesting documents relating to Union Park Detention/Treatment Facility, MWRA Contract No. 6265. MWRA is not a party to this suit, but is subject to a subpoena seeking records of the Authority. The subpoena was served by the plaintiff, Commercial Masonry, a subcontractor on an MWRA project. The defendant, the General Contractor, Barletta, moved for summary judgment, and persuaded the Court to defer action on plaintiff's pending discovery. On December 14, 2010, the Superior Court in Plymouth granted Commercial Masonry's motion to compel production of documents, requiring MWRA to produce documents.

Closed Cases No cases were reported closed during the Second Quarter FY2011.

Subpoenas During the Second Quarter of FY2011 two new subpoenas were received and one subpoena was pending at the end of the Second Quarter FY2011.

Public Records During the Second Quarter of FY2011 ten new public records requests were received and seven requests were closed at the end of Second Quarter FY2011.

SUMMARY OF PENDING LITIGATION MATTERS

TYPE OF CASE/MATTER	As of Dec 2010	As of Sept 2010	As of Jun 2010
Construction/Contract/Bid Protest (other than BHP)	3	3	4
BHP Claims/Contract Cases	0	0	0
Tort/Labor/Employment	8	5	7
Environmental/Regulatory/Other	1	1	2
Eminent Domain/Real Estate	2	2	2
Total – all defensive cases	**14**	**11**	**15**
Affirmative Cases: MWRA v. (current employee) MWRA v. Chutehall Construction Co., Ltd, et al.	2	2	2
Other Litigation matters (restraining orders, etc.)	0	0	0
Total – all pending lawsuits	**16**	**13**	**17**
Significant claims not in suit: Geico/Travelers Insurance Claims	2	2	2
Bankruptcy	4	3	8
Wage Garnishment	7	7	5
TRAC/Adjudicatory Appeals	3	3	2
Subpoenas	1	3	2
TOTAL – ALL LITIGATION MATTERS	33	31	36

TRAC/MISC.

New Appeals: Two new appeals were received in the 2nd Quarter FY2011.

- Boston Salads & Provisions Co., Inc., MWRA Docket No. 10-04
- Steve Connolly Seafood Co., Inc., MWRA Docket No. 10-05

Settlement by Agreement of Parties One case was settled by Agreement of Parties in 2nd Quarter FY2011.

- Digital Silver Imaging, MWRA Docket No. 10-03

Joint Stipulation of Dismissal with Prejudice One case was disposed of by Joint Stipulation of Dismissal with Prejudice.

- Barletta Heavy Division, Inc., MWRA Docket No. 10-02

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 2nd Quarter FY2011.

Final Decisions No Final Decisions were issued during the 2nd Quarter FY2011.

Internal & Contract Audit Program
2nd Quarter FY11

Highlights

CONSULTANT INCURRED COST (Completed: December 31, 2010)

The audit reviewed $18.4 million in billings for work performed between October 2004 and September 2009 on 14 MWRA contracts and one BWSC CSO contract. A total of $83,994 is due from the consultant because final indirect rates were lower than the rates billed and paid.

CONSULTANT INCURRED COST AUDIT (Completed: November 30, 2010)

This brief audit reviewed $100,911 in billings for work performed between June 10, 2009 and June 30, 2010 on one MWRA contract. A total of $29,432 was refunded by the consultant as a result of labor rates being billed that were higher than the wages actually paid.

Status of Open Audit Recommendations (8 recommendations closed in the 2nd 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 96% of recommendations have been implemented.

Report Title (date)	Recommendations Pending Implementation	Closed Recommendations
Financial & Management Controls of the Fore River Railroad (3/1/07)	1	6
Audit of Buying Practices (9/15/08)	1	10
Boston Water & Sewer Commission CSO Financial Assistance Agreement (9/18/09)	1	2
Construction Change Order Pricing (12/31/09)	5	0
Chelsea Data Center Physical Controls (5/5/10)	3	8
Review of Emergency Action Plans (6/30/10)	3	4
Warehouse Practices (9/30/10)	4	6
Total Recommendations	**18**	**36**

Audit Savings

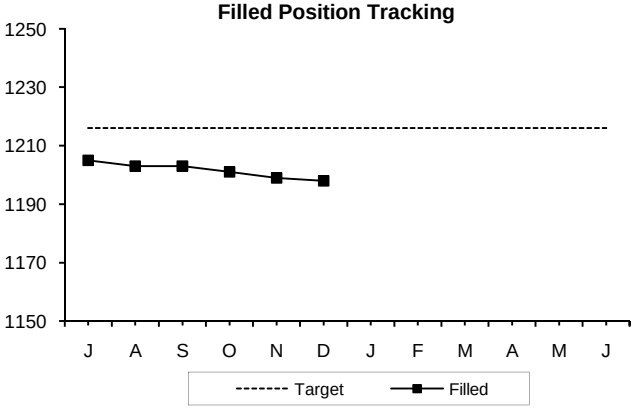
The Internal Audit Department's target is to achieve at least $1 million in cost savings each year. Cost savings vary each year based upon many factors. In some cases, cost savings for one year may be the result of work in prior years.

Savings	FY07	FY08	FY09	FY10	FY11 (2Q)	TOTAL
Consultants	$358,341	$55,901	$316,633	$194,238	**$265,635**	$1,190,748
Contractors & Vendors	$637,378	$2,147,311	$1,262,088	$599,835	**$2,187,760**	$6,834,372
Internal Audits	$183,840	$0	$438,027	$206,282	**$6,750**	$834,899
Total	**$1,179,559**	**$2,203,212**	**$2,016,748**	**$1,000,355**	**$2,460,145**	**$8,860,019**

OTHER MANAGEMENT

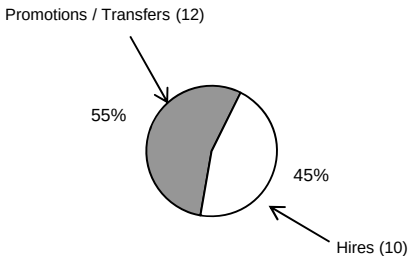
Workforce Management
2nd Quarter FY11

Filled Position Tracking



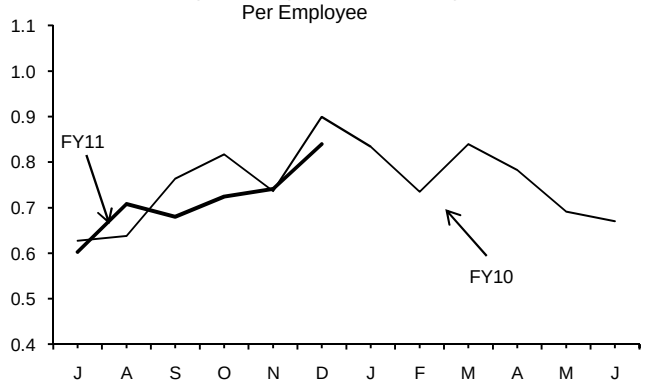
FY11 Target for Filled Positions = 1216
Filled Positions as of December 2010 = 1198

Positions Filled by Hires/Promotions
FY11



	Pr/Trns	Hires	Total
FY08	63 (62%)	39(38%)	102
FY09	63 (73%)	23(27%)	86
FY10	66 (76%)	21(24%)	87

Average Monthly Sick Leave Usage
Per Employee

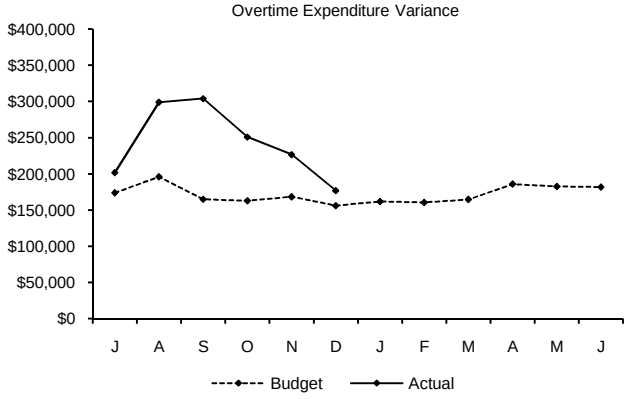


In FY11, the average monthly sick leave usage has decreased 4.14% from the same time last year.

	Number of Employees	YTD	Annualized Total	Annual FMLA %	FY10
A&F	194	3.90	7.81	24.4%	N/A
Aff. Action	7	2.87	5.74	15.4%	N/A
Executive	4	1.23	2.45	0.0%	3.96
Int. Audit	8	1.38	2.76	0.0%	N/A
Law	18	5.09	10.18	3.3%	10.03
OEP	5	2.75	5.51	0.0%	N/A
Operations	929	4.46	8.92	21.7%	9.26
Planning	21	2.40	4.80	2.5%	6.08
Pub. Affs.	13	3.80	7.60	32.4%	N/A
MWRA Avg	**1199**	**4.32**	**8.64**	**21.5%**	**9.03**

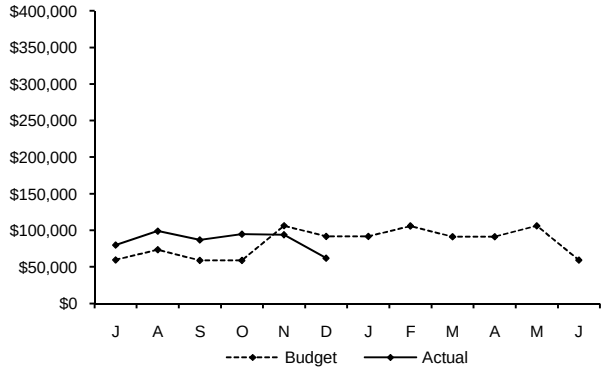
Percent of sick leave usage attributable to Family and Medical Leave Act (FMLA) leave is 21.5% ending December 31, 2010.

Field Operations
Overtime Expenditure Variance



Overtime spending in the 2nd Quarter was $654,460 or 34.4% over budget. Most of the overage occured in October and November and was related to emergency response and continued coverage needs resulting from the August leak at Shaft 5A in Weston and wet weather mobilization and response activities.

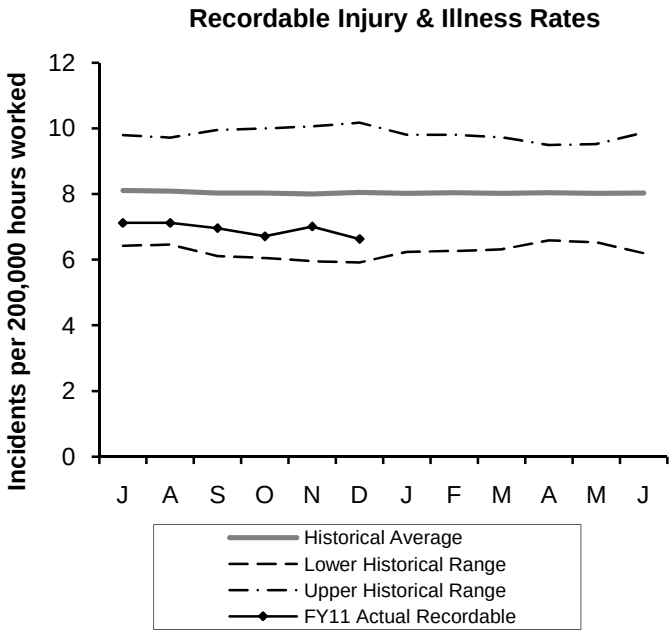
Deer Island Treatment Plant
Overtime Expenditure Variance

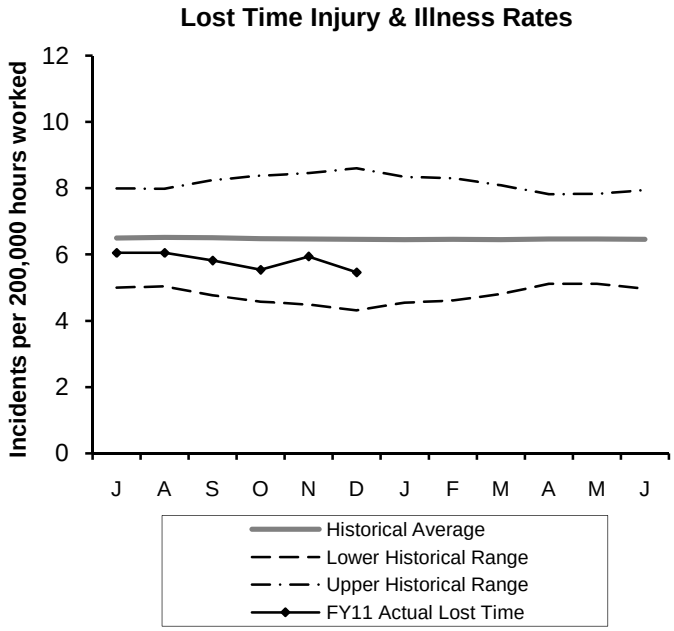


Overtime spending in the 2nd Quarter totaled $250,590, which was ($5,890) under budget, mainly due to management's limiting maintenance overtime to critical equipment and systems only.

Workplace Safety

2nd Quarter FY11





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 FY10. The “Upper” and “Lower Historical Ranges” are computed using these same data – adding and subtracting two standard deviations respectively. FY11 actual incident rates can be expected to fall within this historical range.

Workers Compensation Claims Highlights

	New	Closed	Open Claims
Lost Time	7	8	59
Medical Only	46	52	49
	New		**YTD Returns**
Light Duty Returns	0		1

Highlights / Comments

Light Duty Returns

none

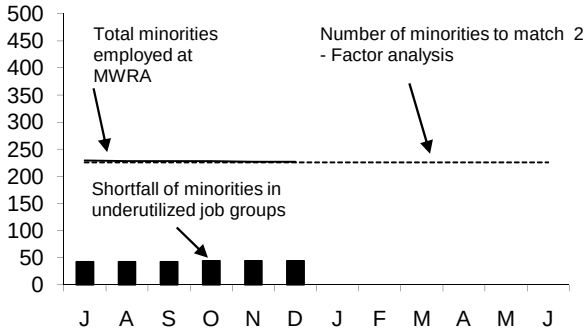
Regular Duty Returns

10 employees returned to regular duty from IA.

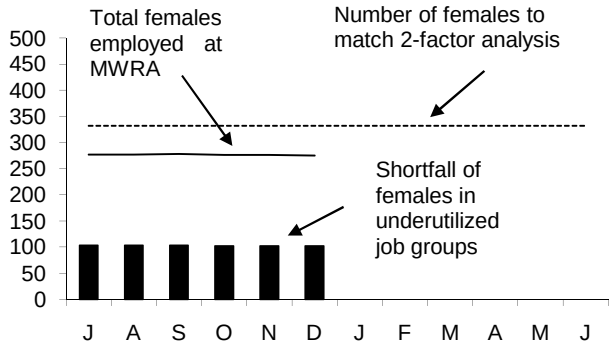
1 employee returned to regular duty from light duty.

MWRA Job Group Representation

Minority - Affirmative Action Plan Goals



Female - Affirmative Action Plan Goals



Highlights:

At the end of Q2 FY11, 8 job groups or a total of 44 positions are underutilized by minorities as compared to 8 job groups or a total of 40 at the end of Q2 FY10; for females 13 job groups or a total of 102 positions are underutilized by females as compared to 13 job groups or a total of 87 at the end of Q2 FY10. During Q2, 3 minoritiy and 0 females were hired. During this same period, 3 minorities and 3 females terminated.

Underutilized Job Groups - Workforce Representation

Job Group	Employees as of 12/31/2010	Minorities as of 12/31/2010	Achievement Level	Minority Over or Under Under utilized	Females As of 12/31/2010	Achievement Level	Female Over or Under Under utilized
Administrator A	17	3	2	1	2	5	-3
Administrator B	24	0	4	-4	6	6	0
Clerical A	47	21	11	10	41	12	29
Clerical B	36	9	8	1	16	3	13
Engineer A	84	16	14	2	11	15	-4
Engineer B	47	9	3	6	6	24	-18
Craft A	121	15	21	-6	0	6	-6
Craft B	144	27	19	8	3	8	-5
Laborer	64	16	11	5	5	10	-5
Management A	106	18	20	-2	33	42	-9
Management B	56	10	12	-2	14	28	-14
Operator A	66	5	7	-2	2	4	-2
Operator B	67	7	13	-6	4	4	0
Para Professional	59	11	26	-15	28	52	-24
Professional A	37	2	9	-7	23	15	8
Professional B	164	40	30	10	74	77	-3
Technical A	52	16	11	5	4	12	-8
Technical B	10	2	2	0	3	4	-1
Total	**1201**	**227**	**223**	**48/-44**	**275**	**327**	**50/-102**

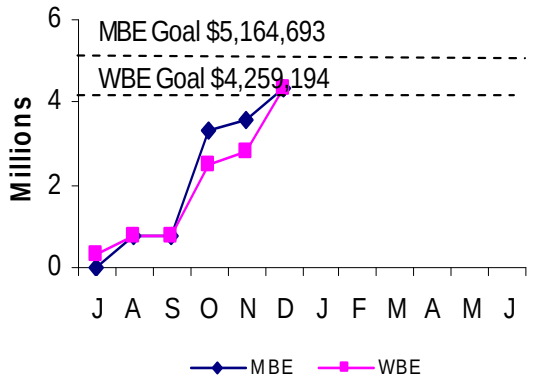
AACU Candidate Referrals for Underutilized Positions

Job Group	Title	# of Vac	Requisition Int. / Ext.	Promotions/ Transfers	AACU Ref. External	Position Status
Craft A	M&O Sepcalist	1	Int	0	0	New Hire-W/M
Craft A	Research Vessel Operator	1	Int/Ext	0	10	Pending
Craft A	General Foreman-Grounds	1	Int	0	0	Pending
Craft A	WDS General Foreman	1	Int	0	0	Pending
Craft B	Master Welder	1	Ext	0	0	New Hire-W/M
Craft B	Metal/Fabricator Worker	1	Int/Ext	0	0	New Hire-W/M
Craft B	Plumbing Operations Supervisor	1	Int	1	0	Promo-N/M
Craft B	Plumbing Operations Supervisor	2	Int	0	0	Pending
Craft B	Electrician	1	Int/Ext	0	0	Pending
Engineer A	Principal Civil Engineer	1	Int	1	0	Promo-W/M
Engineer A	Sr. Engineer	1	Ext	0	0	Pending
Engineer B	Project Manager	1	Int	0	0	Pending
Laborer	Building & Grounds Worker	1	Int/Ext	0	0	New Hire-W/M
Para Professional	Planning & Scheduling Coord.	1	Int	1	0	Promo-W/M
Professional B	Microbiologist	1	Int	0	0	New Hire-W/F
Professional B	Sr. Laboratory Technician	1	Ext	0	0	Pending
Professional B	Sr. Financial Analyst	1	Int	0	0	Pending
Operator A	Area Supervisor	1	Int	1	0	Promo-W/M
Operator B	Operator	1	Ext	0	0	New Hire-W/M

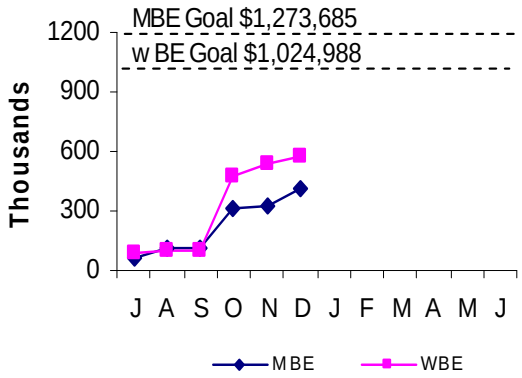
MBE/WBE Expenditures
Second Quarter FY11

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 December.

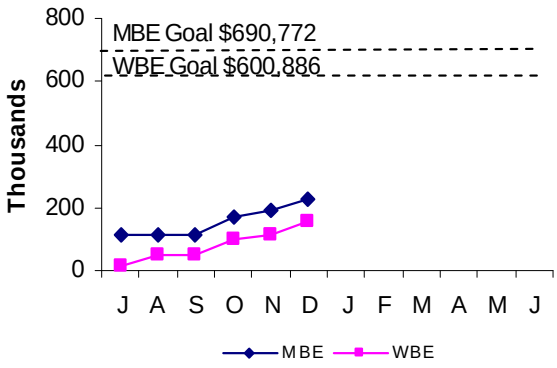
Construction



Professional



Goods/Services



FY11 spending and percentage of goals achieved, as well as FY10 performance are as follows:

	MBE				WBE			
	FY11 Year-to-Date		FY10		FY11 Year-to-Date		FY09	
	Amount	Percent	Amount	Percent	Amount	Percent	Amount	Percent
Construction	4,360,624	84.4%	5,267,811	69.1%	4,335,474	101.8%	9,419,315	148.9%
Professional Svc.	414,759	32.6%	1,516,786	134.7%	573,029	55.9%	921,543	101.8%
Goods & Svcs.	228,104	33.0%	514,900	72.5%	152,664	25.4%	386,870	62.6%
Total	**$5,003,487**	**70.02%**	**$7,299,497**	**77.2%**	**$5,061,167**	**86.0%**	**$10,727,728**	**136.7%**

MWRA FY11 CEB Expenses through
Second Quarter FY11

	December 2010 Year-to-Date					
	Period 6 YTD Budget	Period 6 YTD Actual	Period 6 YTD Variance	%	FY11 Approved	% Expended
EXPENSES						
WAGES AND SALARIES	$ 43,187,099	$ 41,851,344	$ (1,335,755)	-3.1%	$ 91,151,296	45.9%
OVERTIME	1,600,077	2,162,428	562,351	35.1%	3,310,659	65.3%
FRINGE BENEFITS	8,957,332	8,628,902	(328,430)	-3.7%	17,995,660	47.9%
WORKERS' COMPENSATION	935,002	1,259,573	324,571	34.7%	1,870,000	67.4%
CHEMICALS	5,022,026	4,613,290	(408,736)	-8.1%	9,797,118	47.1%
ENERGY AND UTILITIES	10,949,078	10,786,758	(162,320)	-1.5%	23,314,734	46.3%
MAINTENANCE	13,514,436	12,601,580	(912,856)	-6.8%	28,759,673	43.8%
TRAINING AND MEETINGS	127,184	58,267	(68,917)	-54.2%	231,783	25.1%
PROFESSIONAL SERVICES	2,869,856	2,855,618	(14,238)	-0.5%	5,961,508	47.9%
OTHER MATERIALS	1,663,932	1,693,384	29,452	1.8%	4,612,316	36.7%
OTHER SERVICES	11,303,637	10,959,564	(344,073)	-3.0%	22,607,937	48.5%
TOTAL DIRECT EXPENSES	**$ 100,129,659**	**$ 97,470,708**	**$ (2,658,950)**	**-2.7%**	**$ 209,612,684**	**46.5%**
INSURANCE	$ 1,292,998	$ 822,177	$ (470,821)	-36.4%	$ 2,586,000	31.8%
WATERSHED/PILOT	12,372,462	12,161,114	(211,348)	-1.7%	24,744,920	49.1%
BECo PAYMENT	1,921,758	1,909,410	(12,348)	-0.6%	4,174,256	45.7%
MITIGATION	759,197	736,198	(22,999)	-3.0%	1,518,401	48.5%
ADDITIONS TO RESERVES	(203,789)	(203,789)	-	0.0%	(407,581)	50.0%
RETIREMENT FUND	5,342,856	5,342,856	-	0.0%	5,342,856	100.0%
POST EMPLOYEE BENEFITS	-	-	-	---	-	---
TOTAL INDIRECT EXPENSES	**$ 21,485,482**	**$ 20,767,966**	**$ (717,516)**	**-3.3%**	**$ 37,958,852**	**54.7%**
DEBT SERVICE	$ 173,430,818	$ 163,686,504	$ (9,744,314)	-5.7%	$ 354,326,676	46.2%
DEBT SERVICE ASSISTANCE	-	-	-	---	-	---
TOTAL DEBT SERVICE	**$ 173,430,818**	**$ 163,686,504**	**$ (9,744,314)**	**-5.7%**	**$ 354,326,676**	**46.2%**
TOTAL EXPENSES	**$ 295,045,959**	**$ 281,925,178**	**$ (13,120,779)**	**-4.4%**	**$ 601,898,212**	**46.8%**
REVENUE & INCOME						
RATE REVENUE	$ 284,900,002	$ 284,900,002	$ -	0.0%	$ 569,800,000	50.0%
OTHER USER CHARGES	3,305,455	3,405,536	100,081	3.0%	7,065,350	48.2%
OTHER REVENUE	3,242,338	3,293,298	50,960	1.6%	4,693,216	70.2%
RATE STABILIZATION	2,514,870	2,514,870	-	0.0%	5,029,744	50.0%
INVESTMENT INCOME	7,657,038	7,310,570	(346,468)	-4.5%	15,309,902	47.8%
TOTAL REVENUE & INCOME	**$ 301,619,703**	**$ 301,424,276**	**$ (195,427)**	**-0.1%**	**$ 601,898,212**	**50.1%**

As of December 2010, total revenue was $301.4 million, $195,000 less than budget. Total expenses were $281.9 million, $13.1 million or 4.4% less than budget.

Expenses –

- **Direct Expenses** are $97.5 million, $2.7 million or 2.7% less than budget.
- **Wages and Salaries** are $1.3 million or 3.1% underspent due to less filled positions than budgeted, higher leave balance accrual use, and more employees out on work related injury or unpaid leave status than anticipated.
- **Maintenance** is $913,000 or 6.8% underspent year-to-date of which $49,000 is for material purchases and $864,000 is for services. The majority of this underspending is timing related.
- **Overtime** is $562,000 or 35.1% over budget due to emergencies such as the Shaft 5A leak and hurricane preparations.
- **Chemicals** are $409,000 or 8.1% less than budget mostly due to lower usage and pricing of Sodium Hypochlorite of $239,000 at DITP offset by higher Nitrazyme of $125,000 in the Framingham Extension Relief Sewer for odor control.
- **Other Services** are $344,000 or 3.0% under budget mostly due to sludge pelletization of $147,000 due to lower quantities, Other Services of $75,000, Telephones of $51,000, and Health/Safety of $38,000.
- **Fringe Benefits** are $328,000 or 3.7% under budget for lower Health Insurance of $221,000, Dental Insurance of $61,000, Unemployment Insurance of $29,000, and Medicare of $26,000.
- **Workers' Compensation** is $325,000 higher than budget mostly driven by projected reserve requirements contingent upon the number and severity of the cases and effect of any settlements.
- **Utilities** are $162,000 or 1.5% under budget due to lower Electricity of $133,000 due to lower usage at DITP offset by higher pricing in Field Operations and Natural Gas of $60,000 offset by higher Diesel Fuel of $28,000.
- **Training & Meetings** are $69,000 or 54.2% less than budget
- **Indirect Expenses** are $20.8 million, $718,000 or 3.3% under budget due to lower Insurance payments of $471,000 due to lower claims and lower Watershed Reimbursements of $211,000 for FY10 overaccrual.
- **Debt Service Expenses** totaled $163.7 million, $9.7 million or 5.6% less than budget due to favorable variable interest rates.

Revenue and Income –

- **Total Revenue / Income** for December was $301.4 million, $195,000 or 0.1% less than budget. This decrease is due to lower Investment Income of $346,000 driven by lower rates, offset by higher net Non-Rate Revenue of $151,000 which is comprised of a variety of smaller variances.

Cost of Debt
Second Quarter FY11

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.

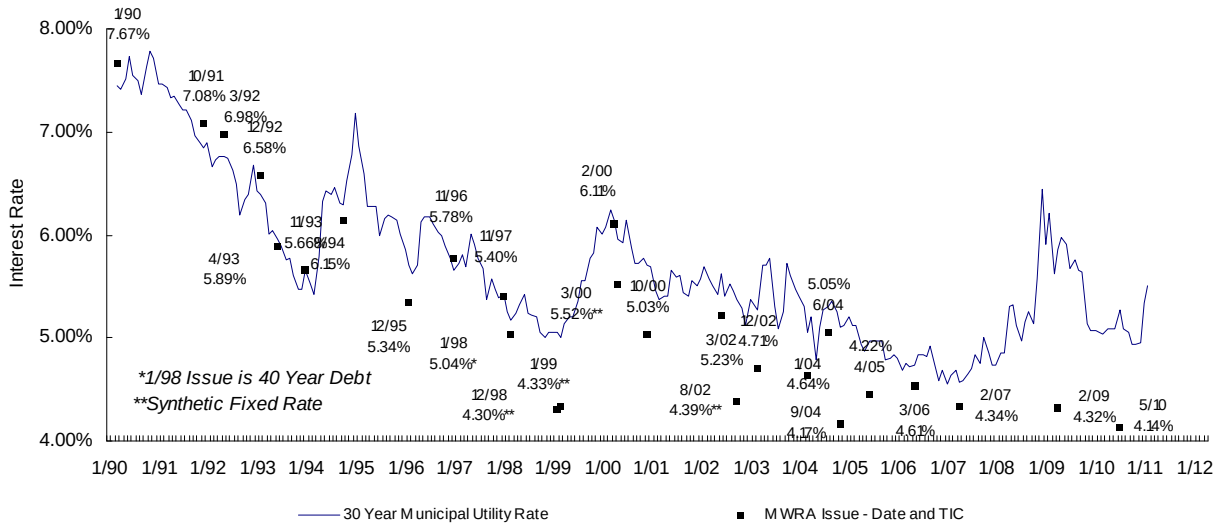
Average Cost of MWRA Debt

Fixed Debt ($3,974)	4.55%
Variable Debt ($566)	0.87%
SRF Debt ($1,060)	1.05%
Weighted Average Debt Cost ($5,601)	3.51%

Most Recent Senior Fixed Debt Issue
May 2010

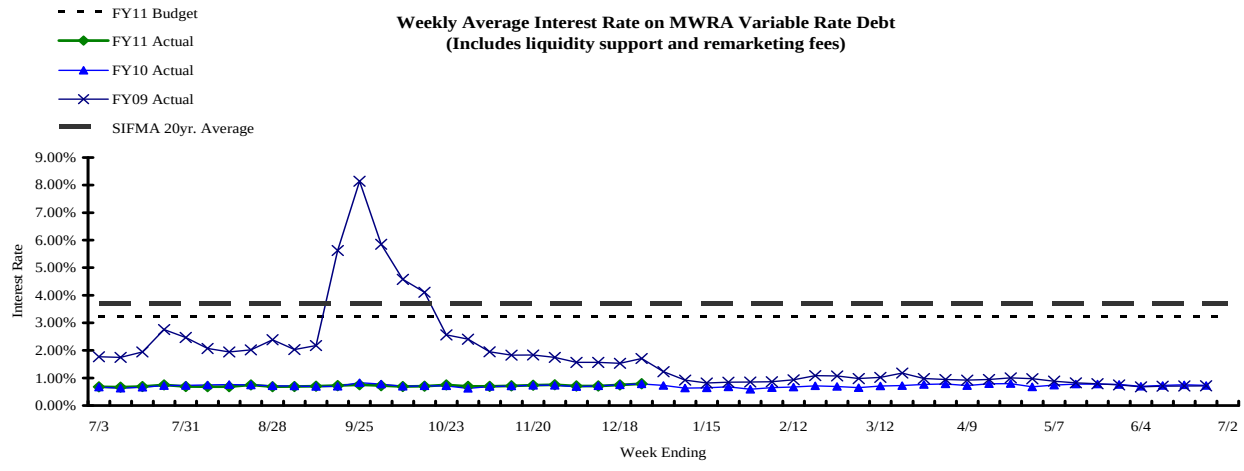
2010 Series A & B ($284)	4.14%

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 $1.3 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 December, SIFMA rates fluctuated with a high of 0.34% and a low of 0.27%. 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
Second Quarter FY11

Actual interest income varies from budgeted amounts because either fund balances or interest rates are greater or lower than budgeted.

YTD Investment Income vs. Budget
($000)

	Impact on Investment Income due to Variance in Fund Balances				Impact on Investment Income due to Variance in Interest Rates			Combined Impact on Investment Income	
Fund	Average Budgeted Balance	Average Actual Balance	Variance	Impact	Budget	Actual	Impact	Impact	%
Combined Reserves	$92,179	$91,553	($626)	($14)	4.62%	4.43%	($85)	(98)	-4.7%
Construction	$82,080	$126,986	$44,906	$73	0.50%	0.34%	($64)	9	4.3%
Debt Service	$105,317	$98,349	($6,967)	($17)	0.50%	0.33%	($82)	(99)	-38.5%
Debt Service Reserves	$255,902	$255,347	($556)	($9)	3.49%	3.41%	($103)	(112)	-2.6%
Operating	$56,032	$51,697	($4,334)	($31)	1.26%	1.48%	$60	30	8.6%
Revenue	$89,764	$92,323	$2,558	$6	0.62%	0.49%	($57)	(51)	-18.9%
Redemption	$32,851	$32,849	($2)	($0)	0.94%	0.78%	($25)	(25)	-16.3%
Total	$714,124	$749,103	$34,979	$8	2.20%	2.00%	($355)	(346)	-4.5%

YTD Investment Income Variance