

MASSACHUSETTS WATER RESOURCES AUTHORITY

Board of Directors Report

on

Key Indicators of MWRA Performance

for

Third Quarter FY2010

Q1	Q2	Q3	Q4



Frederick A. Laskey, Executive Director
Michael J. Hornbrook, Chief Operating Officer
June 30, 2010

Board of Directors Report on Key Indicators of MWRA Performance for Third Quarter FY2010

Table of Contents

Operations and Maintenance

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

Construction Programs

Projects in Construction	15
CSO Update	17
CIP Expenditures	20

Drinking Water Quality and Supply

Source Water – Microbial Results	21
Source Water – Turbidity and Algae	22
Treated Water – Disinfection Effectiveness	23
Treated Water – pH and Alkalinity, Complaints	24
Bacteria and Chlorine Residual Results	25
Disinfection By-Products, UV 254	26
Water Supply/Source Water Management	27

Wastewater Quality

NPDES Permit Compliance – Deer Island	28
NPDES Permit Compliance – Clinton	29

Community Flows and Programs

Total Water Use – Core Communities	30
Community Wastewater Flows	31
Community Support Programs	32

Business Services

Procurement	34
Materials Management	35
MIS Program	36
Law Dept.-Activities	37
Internal and Contract Audits	41

Other Management

Workforce Management	42
MWRA Workplace Safety Program	43
Job Group Representation	44
MBE/WBE Expenditures	45
CEB Expenses	46
Cost of Debt	47
Investment Income	48

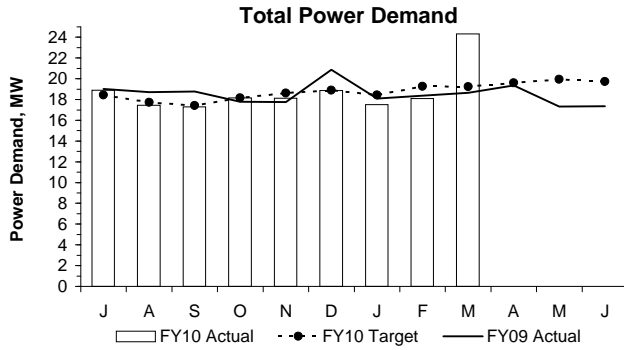
This quarterly report is prepared by MWRA staff to track a variety of MWRA performance measures for routine review by MWRA's board of directors. The content and format of this report is expected to develop as time passes. Information is reported on a preliminary basis as appropriate and available for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

Frederick A. Laskey, Executive Director
Michael J. Hornbrook, Chief Operating Officer
June 30, 2010

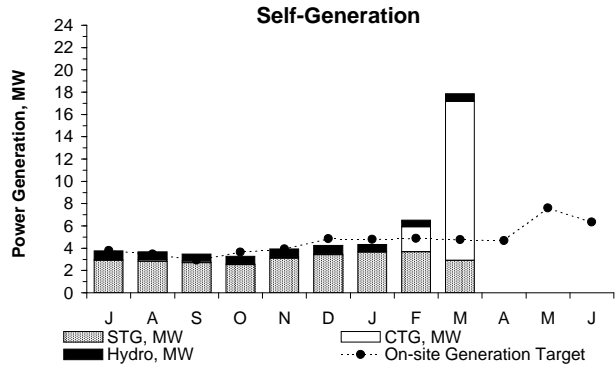
OPERATIONS AND MAINTENANCE

Deer Island Operations

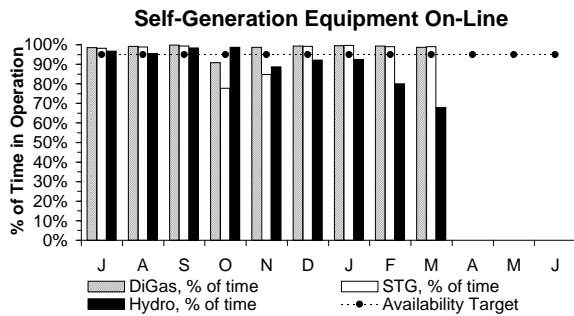
3rd Quarter - FY10



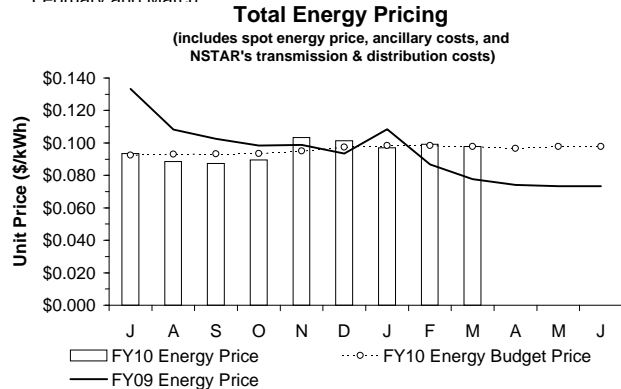
Total Power Demand in the 3rd Quarter of FY10 was 5% higher than target. Total Power Demand was slightly lower than target in January and February as the Total Plant Flow was similar to target. However, power demand in March was 26% higher than expected as plant flow was 68% higher than expected. A number of heavy rainstorms passed through the area starting in late February and through March creating record setting plant flow and pumping records. Power demand for pumping alone was 33% higher than expected for the quarter as DITP managed plant flows at peak capacity on a number of days in March. Power demand for most of the other treatment processes were in general lower than expected for the quarter.



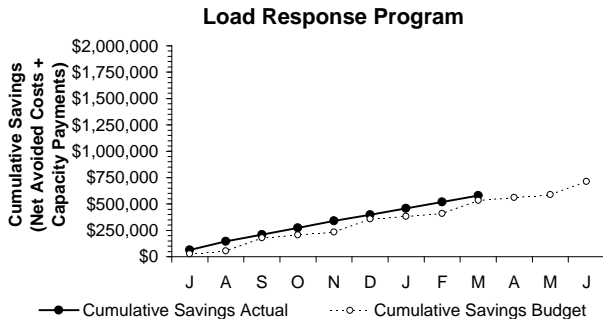
Power generated on-site was more than twice as high as the target for the 3rd Quarter of FY10 as the CTGs operated for approximately 493 hours each, to ensure uninterrupted pumping capabilities in the event of a power failure during the wet weather and high flow conditions, and for 5.4 hours for maintenance. The Wind Turbines produced 19% more energy than targeted, while the Hydro Turbines, STG, and Solar Panels fell below their targets by 14%, 6%, and 75%, respectively, for the quarter. Solar power generation was 0.10% and wind turbine generation was 3.21% of the total power generated on-site for the 3rd Quarter, both skewed low as a result of the much higher than expected portion of power generated by the CTGs in February and March.



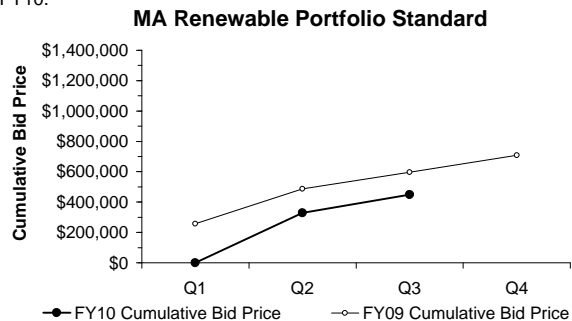
The DiGas and STG systems exceeded their 95% Availability Target for the 3rd Quarter of FY10, while the Hydro Turbine system was 15% below target. The Hydro Turbines were below target mainly because the turbines tripped offline and remained inoperable for lengthy periods of time due to high tunnel shaft levels and high plant flows in late February and on a number of days in March. See the Deer Island Operations and Maintenance Report section at the end for details.



Under the new energy supply contract, a block portion of DI's energy is a fixed rate and the variable load above the block is purchased in real time. Overall, the total energy price in the 3rd Quarter of FY10 was on target with budgeted spot energy prices. The total energy price includes a fixed block price, spot energy price, transmission & distribution charges, and ancillary charges. Please note the January, February, and March total energy prices are estimates as the invoices have not been received. Year-to-date costs as a result of the lower energy pricing are estimated at approximately \$36,816 less than budgeted through the 3rd Quarter of FY10.



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 \$578,568 through the 3rd Quarter compared to the budgeted savings of \$535,050. D did not participate in any demand response events in the 3rd Quarter of FY10 as none were called.

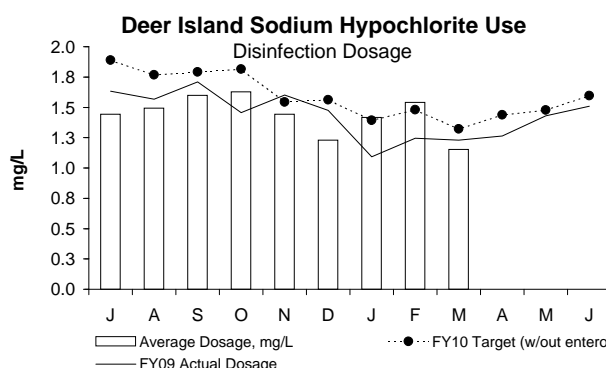
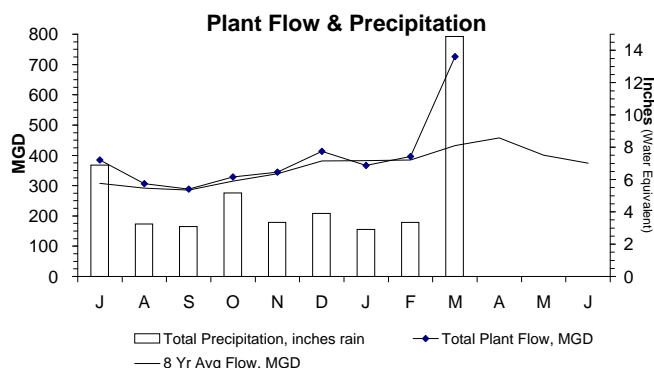


Bids were awarded in March for the sale of 4,864 Renewable Energy Certificates (RECs), for a total value of \$120,236. No bids were awarded in January or February. YTD in FY10, bids were awarded for a total of 18,103 RECs with a total value of \$449,211.

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 FY10 budgeted cumulative bid estimate through the 3rd Quarter is \$464,598.

Deer Island Operations

3rd Quarter - FY10



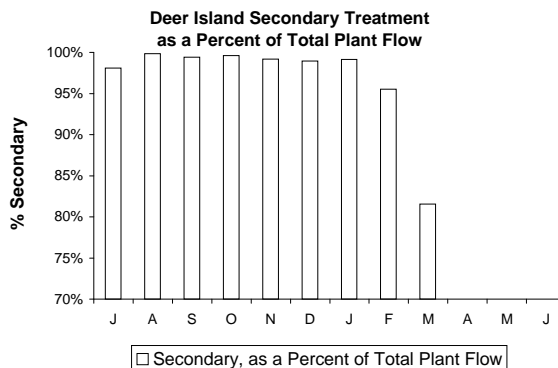
The Total Plant Flow for the 3rd Quarter was 24% higher than the 8-year average flow (496.4 mgd actual vs. 399.9 mgd expected) as precipitation was 115% higher than the 8-year average for the quarter (21.12 water equivalent inches actual vs. 9.83 expected). An unprecedented rainfall amount of 17.04 inches fell during a 36-day period from February 24 to March 31. March 2010 was noted to be the wettest March ever recorded with a rainfall total of 14.87 inches, and was the second wettest month in recorded history. A number of maximum plant flow records at DITP were set in March including Monthly Flow, 7-Day Flow, Daily Flow, and Hourly Flow.

The disinfection dosing rate was only 2% lower than the target for the 3rd Quarter. The disinfection dosing rate was similar to target in both January and February but was 13% lower in March due to a lower chlorine demand as a result of the diluted wastewater from the high flows. However, actual sodium hypochlorite usage in gallons was 13% higher than budgeted in March as there was more wastewater flow to treat.

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	8	8	0	98.1%	30.2
A	1	1	0	99.9%	3.99
S	1	1	0	99.4%	6.34
O	3	3	0	99.6%	8.21
N	2	2	0	99.2%	10.61
D	3	3	0	99.0%	21.77
J	1	1	0	99.2%	10.27
F	6	6	0	95.5%	64.20
M	7	7	0	81.6%	317.52
A					
M					
J					
Total	32	32	0	96.8%	473.1



There were a number of significant rain events during the 3rd Quarter, which resulted in 14 separate blending events for a total of 392 hours of blending and 4,743 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. In February, there were multiple blending events on the same day, while in March a number of single blending events spanned multiple days as numerous flooding rain events hit the area resulting in peak capacity flows on a number of days. **Secondary permit limits were met at all times.**

Overall, 89.6% of the total plant flow to DITP received secondary treatment during the 3rd Quarter. The Maximum Secondary Capacity for the entire quarter was 700 mgd.

Deer Island Operations & Maintenance Report

Environmental/Pumping:

Precipitation for the 3rd Quarter of FY10 was more than double the 8-year historical average for the quarter. A number of communities in MWRA's wastewater service area received even significantly more rainfall than the amount recorded from the weather station at Logan Airport in Boston (approximately 21 inches as measured at the Ward Street Headworks Facility). DITP operated at peak capacity on several days in March and numerous plant flow/pumping records were set as a result of the back-to-back rain events including: Max Monthly Flow (725.65 mgd), Max 7-Day Flow (1,001 mgd), Max Daily Flow (1,262 mgd), and Max Hourly Flow (1,327 mgd) to list a few.

A very brief interruption in pumping occurred as a result of a plant-wide power outage on the morning of February 25 during a period between rain events. Verizon was working with NSTAR performing maintenance activities on its communication line between Deer Island and its K Street Substation when NSTAR power was unexpectedly disrupted. The CTGs were immediately activated to restore power to the plant.

Deer Island Operations

3rd Quarter - FY10

Deer Island Operations & Maintenance Report (continued)

Primary and Secondary Treatment:

Progress on the major Primary and Secondary Clarifier Rehabilitation Project, MWRA Contract 6899, continued through the 3rd Quarter. The primary scope of this contract project is to replace all chains and sprockets in the Primary and Secondary Clarifiers, along with some other limited repairs. Rehabilitation work on a total of five Primary and ten Secondary Clarifiers was completed during the quarter. Some rehabilitation work had to be suspended or delayed during periods of high plant flow conditions.

Odor Control:

Carbon media change-out was completed on one carbon adsorber unit each in the Residuals Odor Control Facility, the East Odor Control Facility, and the West Odor Control Facility in February.

Clinton Wastewater Treatment Plant Operations & Maintenance Report

March Storms: Many records were set with regard to rain and plant flows. The Wachusett Reservoir overflows greatly impacted the Nashua River, which overflowed its banks into the plant property and caused severe flooding.

Aeration System: A consultant review of the plant's aeration system for activated sludge was completed in the 3rd Quarter. The recommendation for a change from mechanical aeration to a fine-bubble, diffused-air system remains the same but there are some remaining issues and concerns that are being discussed.

Phosphorous Treatment: A presentation on phosphorous treatment requirements for the plant was given to the Advisory Board. The requirements will become more stringent in the new permit and will come with an increase in associated costs. Those costs are estimated to be \$3.5 million in CIP and \$130,000 CEB funding.

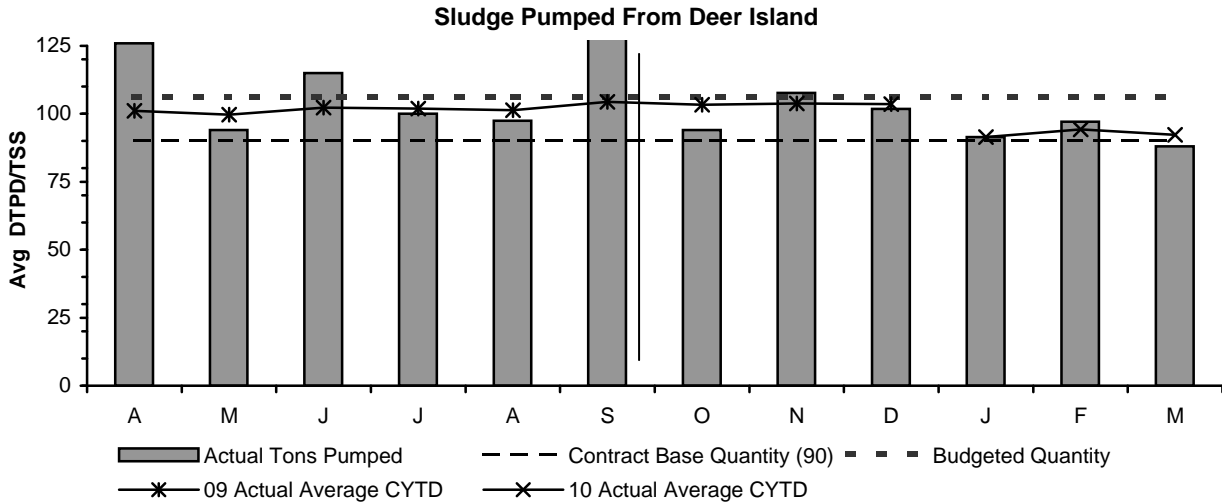
Existing Conditions Survey Report: The final Existing Conditions Survey Report was received from MWRA's consultant. The draft report evaluated conditions at the Clinton Plant and provided recommendations for rehab/repair and costs over a 20-year period. Several recommendations have already been completed, including the high priority replacement of electrical control boxes on the activated sludge tanks.

Operations and Maintenance: All preventive maintenance works orders were completed in the 3rd Quarter. In addition, maintenance staff completed a number of additional corrective, preventive and predictive maintenance tasks this quarter.

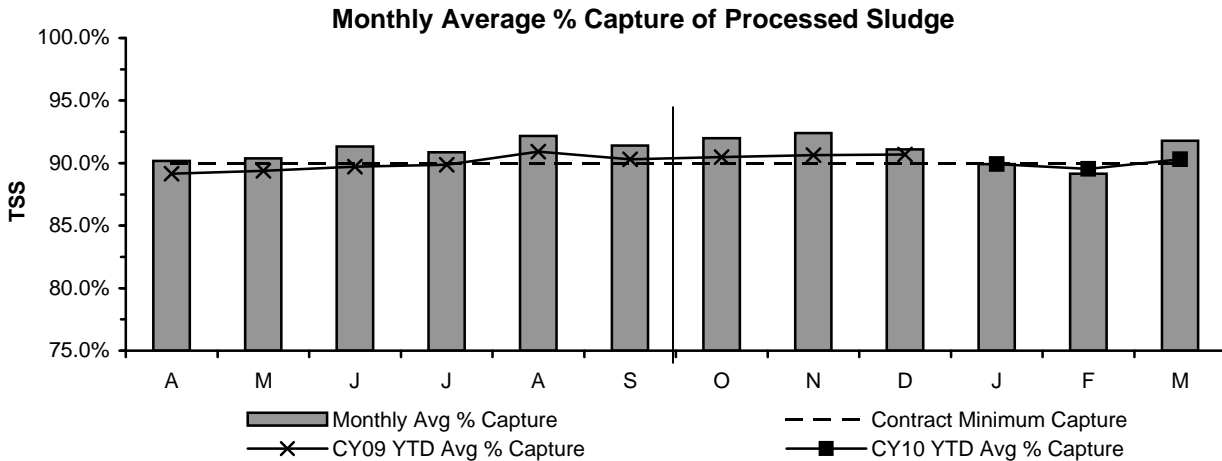
Deer Island Residuals

3rd Quarter - FY10

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 (FY10's budget is 106 DTPD/TSS).



The average total quantity of sludge pumped from DITP to FRSA in the 3rd Quarter was 92.2 DTPD, which is less than FY10's budget of 106 DTPD. The lower quantity reflects more sludge being retained on Deer Island than anticipated, as well as the extremely high flows caused by several significant storm events. 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; Although the average solids capture rate for the 3rd Quarter was 90.29%; the solids capture rate was 89.83 in January (due to polymer testing that NEFCo was conducting) and 89.16 in February (because of debris originating from draining the DI digesters and NEFCo operational adjustments). Staff will review the capture rate for each month at the end of the year to determine if cost recovery should be pursued. The capture rate of solids in March was 91.79%.

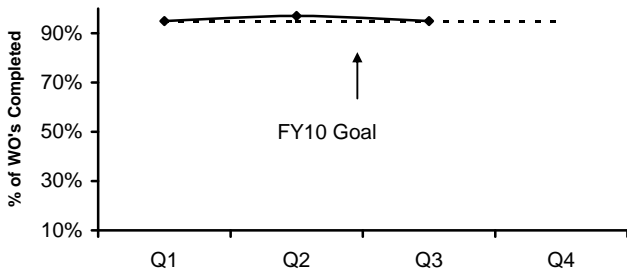
Deer Island Maintenance

3rd Quarter - FY10

Productivity Initiatives

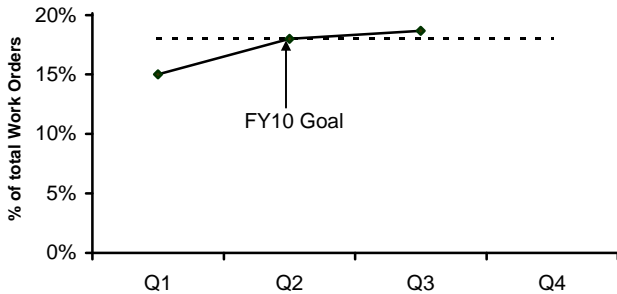
Productivity initiatives include increasing predictive maintenance tasks. Accomplishing this initiative should result in a decrease in the overall maintenance backlog.

Predictive Maintenance Compliance



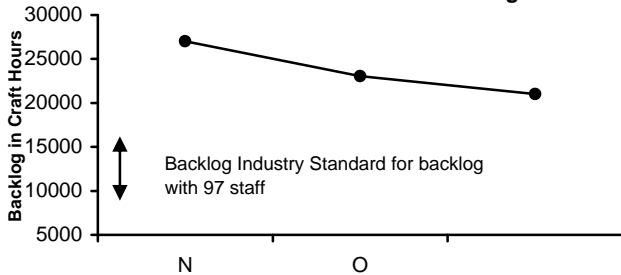
Deer Island is moving forward with an aggressive predictive maintenance program. Deer Island's FY10 predictive maintenance goal is completion of 95% of all PdM work orders; DITP met that goal as it completed 95% of its PdM work orders in the 3rd Quarter.

Predictive Maintenance



Deer Island's FY10 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 exceeded its 18% goal for the 3rd Quarter - 18.7%.

Maintenance Craft Hour Backlog

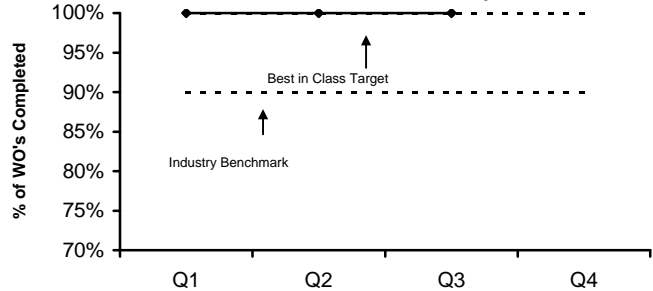


At 3/31, the maintenance backlog at Deer Island was 19,495 hours. The industry standard for maintenance backlog with 97 staff (current planned staffing level) is between 8,730 hours and 17,460 hours. Deer Island's goal is to get to and stay with this range. As a result of having staff on site during the high flows in March, staff were able to further reduce the backlog.

Proactive Initiatives

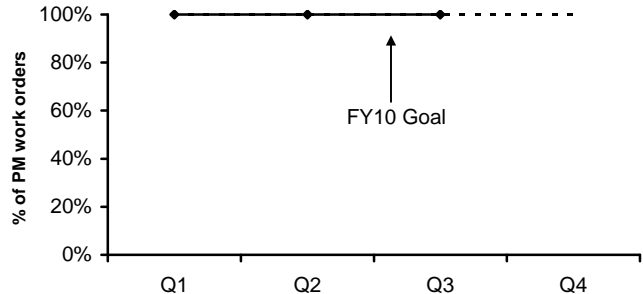
Proactive initiatives include completing 100% of all preventive maintenance tasks and increasing preventive maintenance kitting. These tasks should result in lower maintenance costs.

Preventive Maintenance Compliance



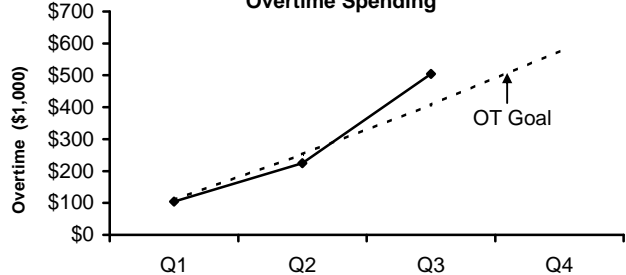
Deer Island's FY10 preventive maintenance goal is completion of 100% of all PM work orders from Operations and Maintenance. DITP met its goal as it completed 100% of all PMs every month this quarter.

Preventive Maintenance Kitting



Deer Island's FY10 preventive maintenance kitting goal is 100% of all PM work orders. DITP met this goal late in FY09 but will audit all PM work orders to ensure that all PMs requiring kitting are complete. Staff will develop a new proactive initiative in April 2010. DITP continued to complete 100% this quarter.

Overtime Spending

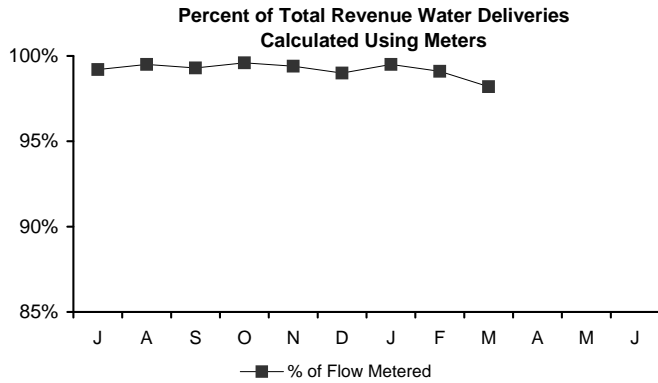


Overtime spending was \$111K over budget for the 3rd Quarter. Overtime was used primarily for storm coverage. The March storms were significant. DITP had Maintenance staff on site 24/7 for nineteen consecutive days. DITP had record flows. Management continues to prioritize work and limit overtime to critical equipment or systems only.

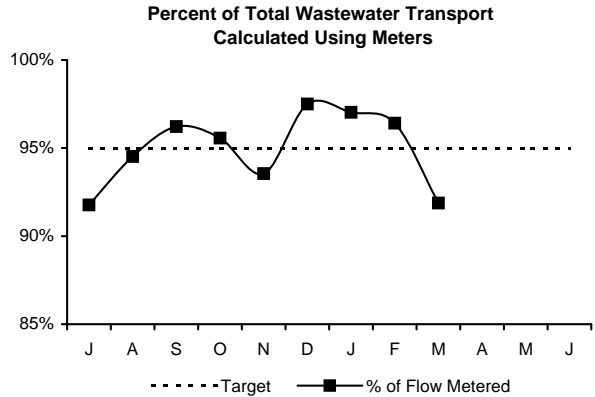
Operations Division Metering

3rd Quarter - FY10

WATER METERS

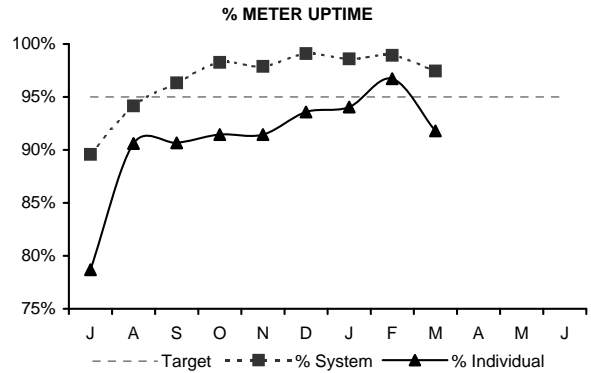
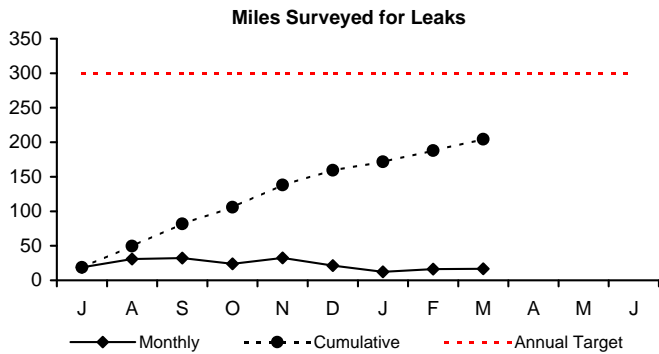


WASTEWATER METERS



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 3rd Quarter, meter actuals accounted for 98.9% of flow; only 1.1% of total revenue water deliveries were estimated. The following is the breakdown of estimations:
 In-house and Capital Construction Projects - 0.4%
 Instrumentation Failure - 0.7%

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 3rd Quarter, meter actuals accounted for 95.1% of flow; on average, 4.9% of wastewater transport was estimated. March saw record storm events causing higher estimations (four meters had to be removed due to surcharged conditions).



In the 3rd Quarter, staff inspected 45.17 miles of MWRA water mains; this brings the total for the fiscal year to 204.55 miles.

For the 3rd Quarter, out of a possible 1,587,072 data points, only 26,963 points were missed resulting in a system-wide up time of 98.3%. Of the 184 revenue meters installed, on average, 11 experienced down time greater than the 5% target (four meters needed to be removed due to surcharge conditions in March) resulting in a 94.2% individual meter uptime. For the 3rd Quarter, down time for an individual meter is defined by any individual meter having on average less than 2,736 data points.

Water Distribution System

Month	J	A	S	O	N	D	J	F	M	A	M	J
Leaks Detected	0	1	1	0	0	2	1	0	0			
Leaks Repaired	0	1	1	0	0	2	1	0	0			
Backlog	0	0	0	0	0	0	0	0	0			
Avg. Lag Time	0.0	3.0	2.0	2.0	2.0	5.8	6.4	6.4	6.4			

Only one leak was detected and repaired in the 3rd Quarter. The leak backlog for FY10 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 not more than two leaks outstanding at year's end.

Water Distribution System Valves

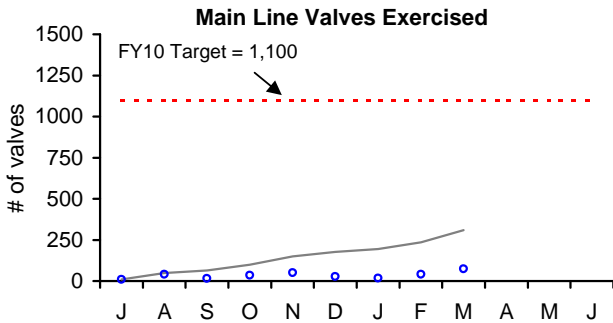
3rd Quarter - FY10

Background

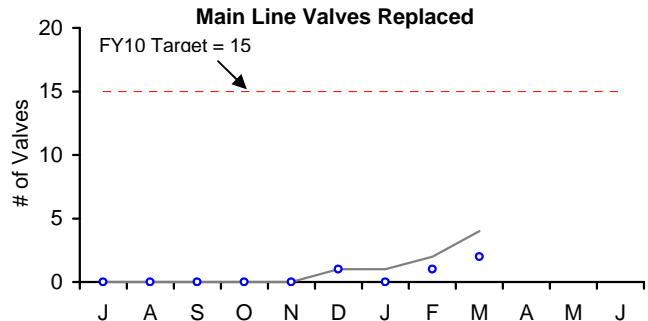
Valves are exercised, rehabilitated, or replaced in order to improve their operating condition. This work occurs year round. Valve replacements occur in roadway locations during the normal construction season, and in off-road locations during the winter season. Valve exercising can occur year round but 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. Since October 2008, Field Operations' valve work has been impacted by construction/work zone safety issues and the use of flaggers.

Type of Valve	Inventory #	Operable Percentage	
		FY10 to Date	FY10 Targets
Main Line Valves	2,083	85.3%	87%
Blow-Off Valves	1,175	92.7%	94%
Air Release Valves	1,338	91.4%	92%
Control Valves	48	94.0%	92%

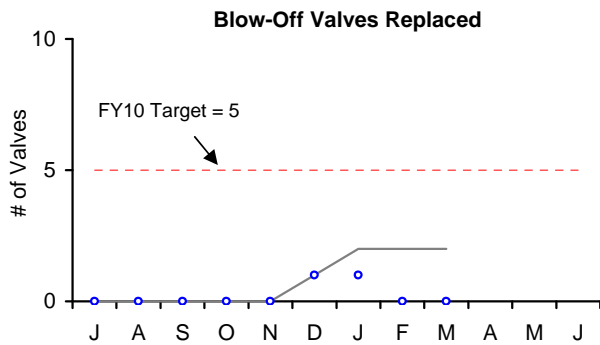
Key to Symbols:
○ FY2010 Monthly Total
— FY2010 Cumulative Total
- - - FY2010 Target



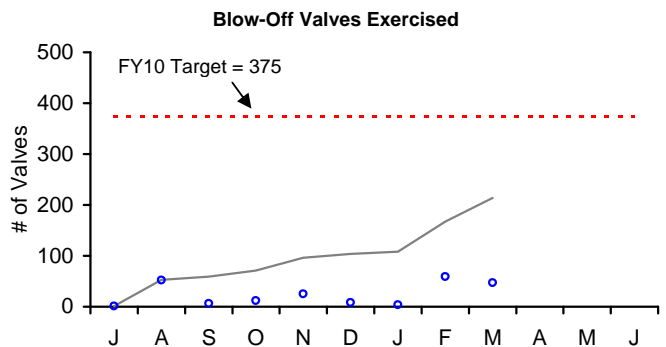
During the 3rd Quarter, staff exercised 132 main line valves bringing the total for the fiscal year to 309.



During the 3rd Quarter, staff replaced three main line valves bringing the total for the fiscal year to four.



Staff replaced only one blow-off valve this quarter. Blow-off valve replacements have been impacted by construction work zone safety/flagger issues and current staffing levels. The March storm events also required a significant portion of staff time and resources for pumping and emergency response.

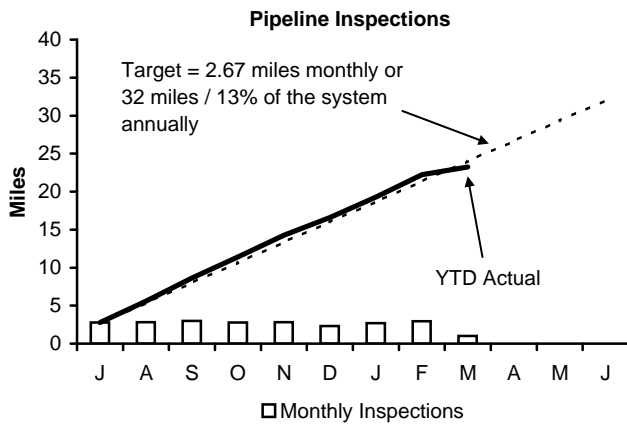


During the 3rd Quarter, staff exercised 110 blow-off valves bringing the total for the fiscal year to 214.

Wastewater Pipeline and Structure Inspections and Maintenance

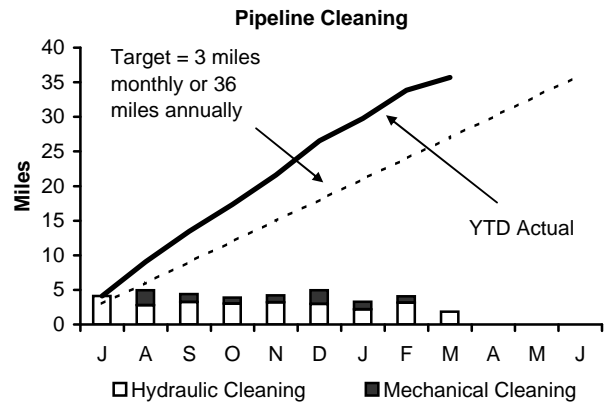
3rd Quarter - FY10

Inspections



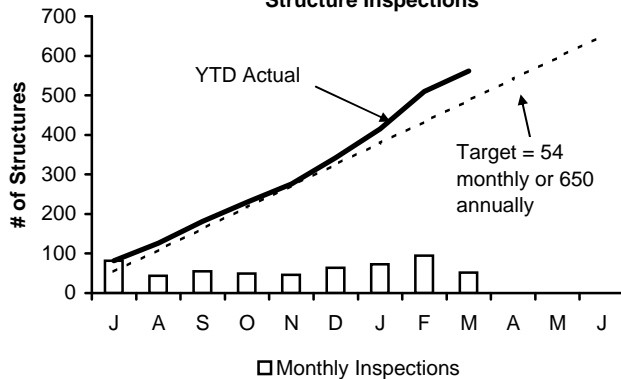
Staff internally inspected 6.66 miles of MWRA sewer pipeline this quarter. Community Assistance was provided as MWRA staff internally inspected 210 linear feet of 12-inch-diameter sewer for the Town of Winthrop. Productivity in the 3rd Quarter was impacted by the extreme wet-weather events in March, which required significant staff time.

Maintenance



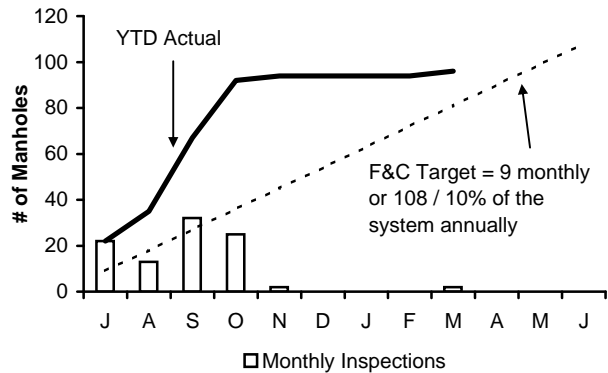
Staff cleaned 9.18 miles of MWRA's sewer system and removed 15 cubic yards of grit and debris in the 3rd Quarter. No Community Assistance was provided this quarter.

Structure Inspections



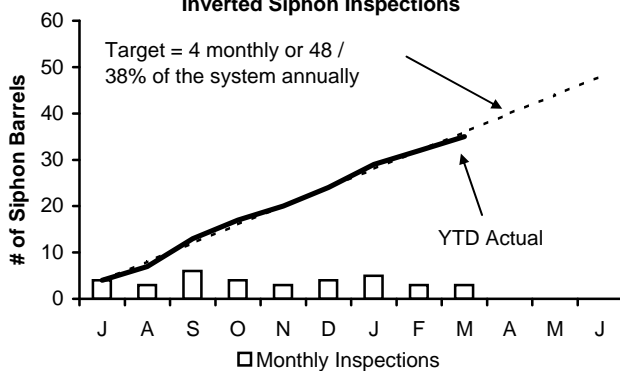
Staff inspected all 12 CSO structures each month during the 3rd Quarter (36 inspections in total) and performed 184 additional manhole/structure inspections this quarter.

Manhole Rehabilitation



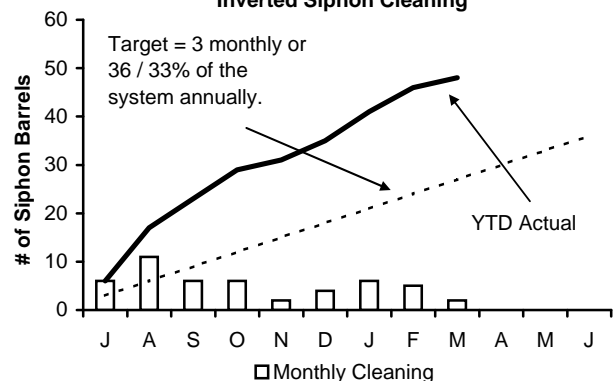
Staff replaced two frames and covers this quarter.

Inverted Siphon Inspections



Staff inspected 11 siphon barrels in this quarter.

Inverted Siphon Cleaning

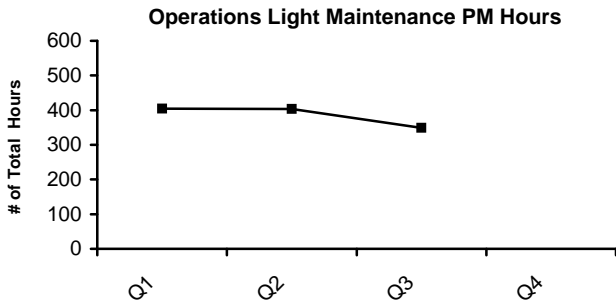


Staff cleaned 13 siphon barrels this quarter.

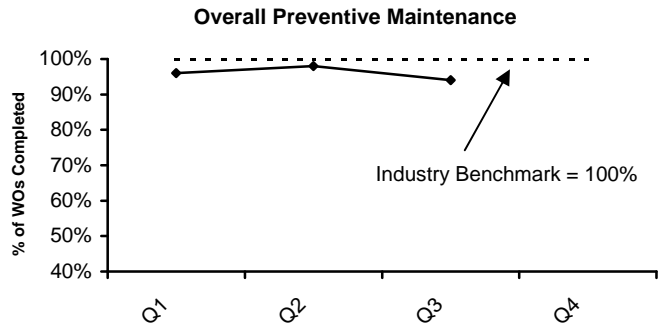
Field Operations' Metropolitan Equipment & Facility Maintenance

3rd Quarter - FY10

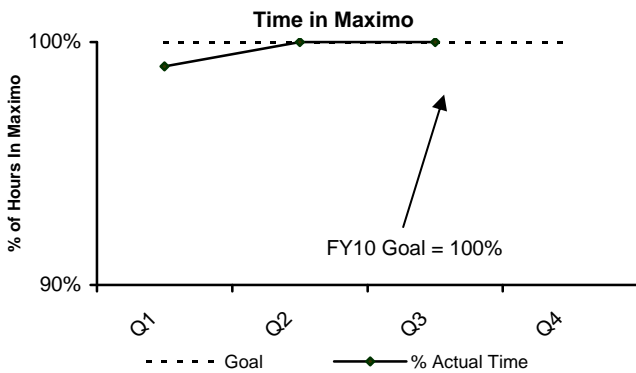
Several maintenance and productivity initiatives are in progress; Operators performing light maintenance tasks is one of those productivity initiatives. This frees up maintenance staff to perform corrective maintenance and project work, thus reducing maintenance spending. Backlog and overtime metrics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



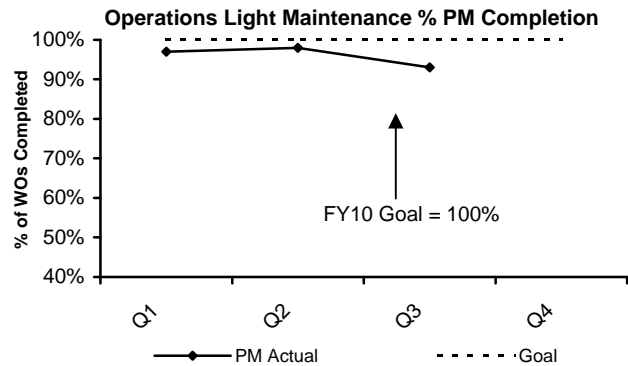
Operations staff averaged 349 hours of preventive maintenance during the 3rd Quarter, an average of 17% of the total PM hours for the 3rd Quarter, which is above the industry benchmark of 10% to 15%.



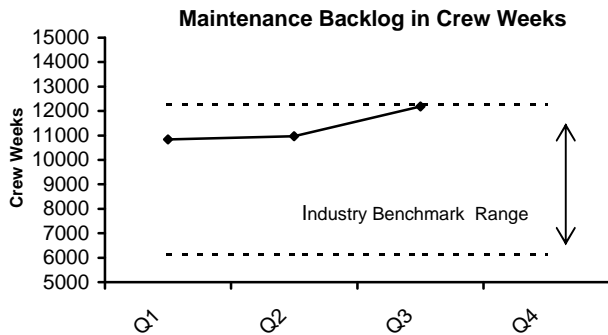
FOD's preventive maintenance goal for FY10 is 100% of all PM work orders. Staff completed an average of 94% of all PM work orders in the 3rd Quarter. The completion rate for the 3rd Quarter was low due to the multiple wet-weather events and the need for operations and maintenance staff to operate the facilities, as well provide emergency maintenance.



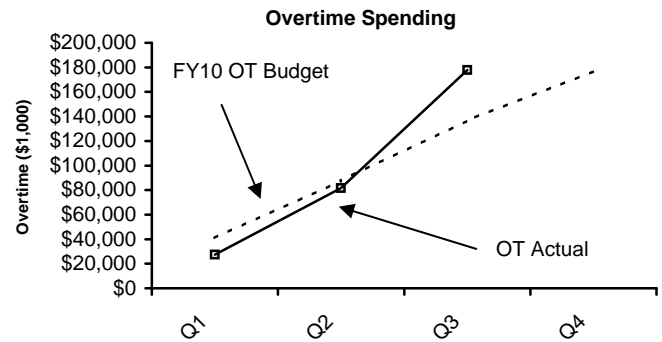
To ensure accurate data in the Maximo database, 8 hours of staff time each day must be entered into Maximo. Staff have developed a new method of time entry into Maximo that, with the issuance of a daily accountability report, has improved time entry. The FY10 goal is 100%; 100% of time was entered in the 3rd Quarter.



Operations' FY10 PM goal is completion of 100% of all PM work orders assigned. Operations completed an average of 93% of PM work orders in the 3rd Quarter. The completion rate for the 3rd Quarter was low due to the multiple wet-weather events as stated above.

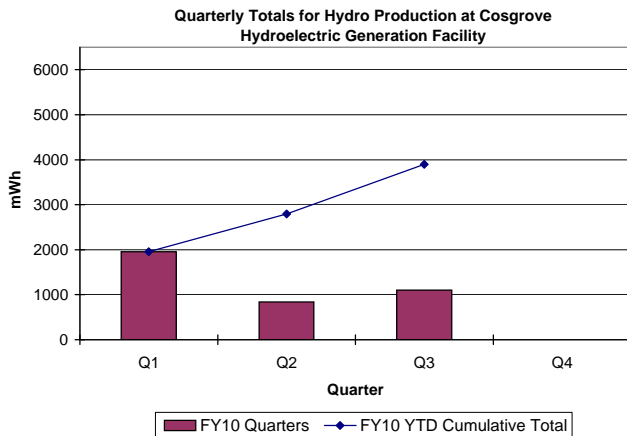


The 3rd Quarter backlog average was 12,191 hours while overtime spending is \$41K over budget for the 3rd Quarter. Mechanics' backlog has increased due to the addition of critical project work. Management's goal is to control the overtime budget and stay within the industry benchmark of 3 to 6 weeks.

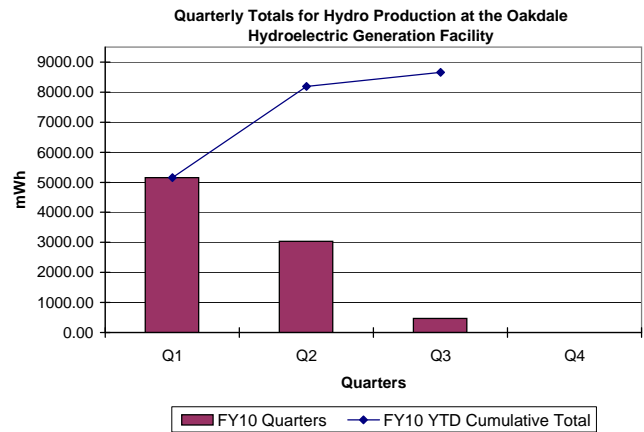


Maintenance overtime was \$41K over budget for the 3rd Quarter. Overtime in the 3rd Quarter was used to complete emergency repairs at various facilities, as well as wet-weather coverage due to the multiple storm events during the month.

Field Operations Hydroelectric Generation 3rd Quarter - FY10



In the 3rd Quarter, the Cosgrove Hydroelectric Station generated a net of 1,103 mWh, which is 105% more power than was generated for the same quarter in FY09. The revenue generated at Cosgrove in the 3rd Quarter was \$47,065. The total revenue generated to date in FY10 \$141,163.



In the 3rd Quarter, the Oakdale Station's hydroelectric plant generated a net of 471 mWh; 69% more power than was generated during the same period in FY09. The revenue generated at Oakdale in the 3rd Quarter was \$33,294. The total revenue to date in FY10 is \$570,937. (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. A construction kick-off meeting was held in January and construction is on-going.

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. Staff continue to work on resolving permitting issues.

Lonegan Intake: MWRA is conducting feasibility studies of hydroelectric power at this facility; initial findings look favorable.

Carroll Water Treatment Plant (CWTP) Photovoltaic: A feasibility study was completed for the placement of a solar power system up to 480 kW at the CWTP. Under the American Recovery and Reinvestment Act for Green Infrastructure projects, MWRA to receive \$1.5 million in stimulus funding from SRF for this project. The Notice to Proceed (NTP) was issued in January and work is expected to be completed by the end of calendar year 2010. Staff are also evaluating the feasibility of installing another solar power system for the roof of the storage tank.

Southborough Photovoltaic: A feasibility study was completed for the Trade Shop roof with favorable results; staff will be completing a grant request for this project within the next six months. The feasibility of installing a system on the roof of the new Lab Building was studied as part of the design and construction of the new building and determined to be not cost effective.

Wind Power: The installation of wind turbines at Nut Island continues to be studied. Currently, staff are working with the City of Quincy to resolve some remaining siting issues. MWRA had previously received a \$500,000 design and construction grant from the Massachusetts Technology Council for this project.

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 DeLauri Station in the 4th Quarter of FY09. MWRA issued an NTP for design/build of a 370-foot turbine in March 2010.

CWTP Energy Audit: Recommendations from the energy audit regarding process changes at CWTP are moving forward, including installation of demand-controlled ventilation in the office space and variable frequency drives (VFDs). Installation of these energy saving initiatives is being coordinated with NGRID so that MWRA will receive the allowed rebate incentive for each measure implemented.

Chelsea Facility Energy Audit: The second phase of NSTAR's energy audit at Chelsea, a study of the HVAC system, was completed in the 1st Quarter. The study recommended installing an Energy Management System (EMS) for the Admin. Building, along with some equipment updates. Staff have recommended proceeding with this recommendation and are working with NSTAR to put together a specifications package system to be completed by August 2010. NSTAR has agreed to provide a \$168,000 incentive to MWRA for the installation of the EMS.

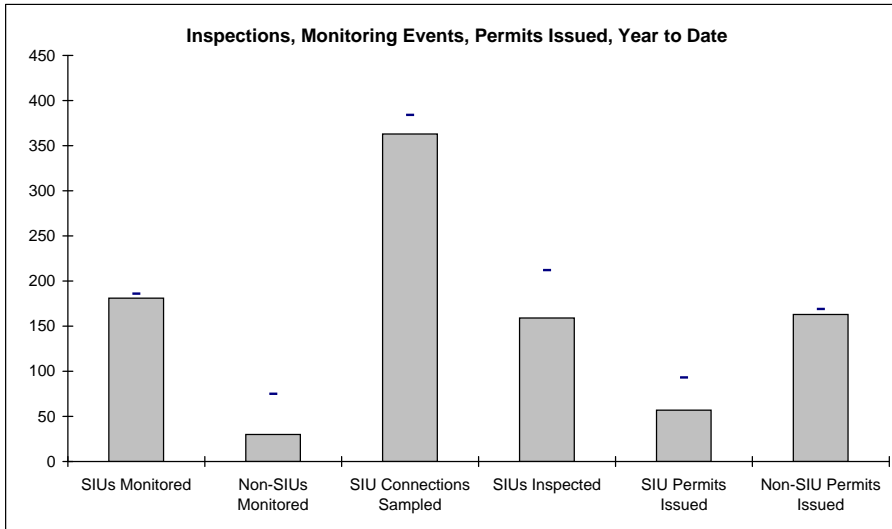
Energy Audit of Eight FOD Facilities: MWRA staff identified multiple facilities that would benefit from a comprehensive energy audit. Phase 1 was conducted in the 4th Quarter of FY09 and included: Chelsea Creek, Columbus Park, and Ward Street Headworks, and Gillis, Newton Street, Commonwealth Avenue, and Prison Point Pump Stations, and the Chelsea Screen House - the focus was lighting, HVAC, pumps, and motors. These audits were completed in the 1st Quarter of FY10 and individual reports for each facility were submitted during the 2nd Quarter. Implementation of the audit recommendations will begin during the 4th Quarter. There are five facilities on the south shore that are in NGRID's service area and audits of these facilities are being conducted through NGRID. The lighting audits were completed and reports submitted in the 2nd Quarter. Evaluations of the pumps and motors were conducted during the 3rd Quarter.

Staff also began working with NSTAR on setting up audits for an additional 14 FOD facilities that will be conducted in the 4th Quarter of FY10 and the 1st Quarter of FY11.

Six Water Pump Station VFD Installations: VFDs are being installed at six water pump stations, Brattle Court, Belmont, Hyde Park, Newton Street, Reservoir Road, and Spring Street for better process control and energy efficiency. Brattle Court has been completed and MWRA received a \$68,000 rebate check from NSTAR. It appears from preliminary data that MWRA is using approximately 50% less energy at the station as a result of the new VFD. Newton Street was completed in the 2nd Quarter and NSTAR issued MWRA a \$35,314 rebate check. The other stations will be completed over the next 12 months.

Toxic Reduction and Control

3rd Quarter - FY10



EPA Required SIU Monitoring Events for FY10: 186
YTD: **181**

Required Non-SIU Monitoring Events for FY10: 75
YTD: **30**

SIU Connections to be Sampled For FY10: 384
YTD: **363**

EPA Required SIU Inspections for FY10: 212
YTD: **159**

SIU Permits due to Expire In FY10: 93
YTD: **57**

Non-SIU Permits due to Expire for FY10: 169
YTD: **163**

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.

The annual goal is set at the beginning of the fiscal year but it 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.

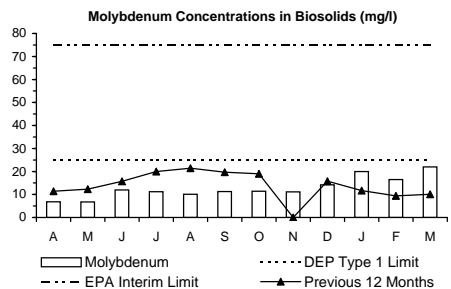
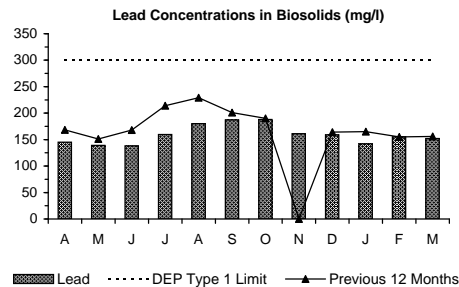
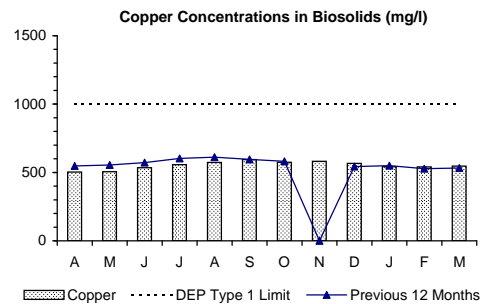
	Number of Days to Issue a Permit						Total Permits Issued	
	0 to 120		121 to 180		181 or more		SIU	Non-SIU
	SIU	Non-SIU	SIU	Non-SIU	SIU*	Non-SIU		
Jul	5	15	0	0	0	0	5	16
Aug	1	4	0	2	0	2	1	8
Sep	6	5	1	0	0	1	7	6
Oct	19	23	1	5	2	0	22	28
Nov	4	18	0	5	2	3	6	26
Dec	5	12	0	1	0	3	5	16
Jan	1	40	0	0	1	1	2	41
Feb	3	1	0	0	0	0	3	1
Mar	6	18	0	1	0	2	6	21
Apr							0	0
May							0	0
Jun							0	0

% YTD	88%	83%	4%	9%	9%	8%	57	163
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EPA requires MWRA to issue or renew 90% of SIU permits within 120 days of receipt of the application or the permit expiration date - whichever is later. EPA also requires the remaining 10% of SIU permits to be issued within 180 days. The higher-than-normal number of non-SIU permits issued in January was due to annual municipal permit renewals. *A small number of SIU permits are issued beyond 180 days for various reasons. These are automatically extended and the reasons for each delayed issuance is provided to EPA in the October annual report.

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. TRAC will continue its voluntary molybdenum reduction program, which has decreased influent loads significantly since 1995.

In prior years, molybdenum levels have exceeded the state standard for four to six months, depending upon the weather. It should be noted that in FY09, MWRA met DEP's Type 1 limit for the entire year, which is a significant event that can be attributed to the aforementioned on-going efforts to push voluntary reductions of molybdenum-based corrosion inhibitors.



Field Operations Highlights

3rd Quarter – FY10

Western Water Operations & Maintenance

- Carroll Water Treatment Plant: Operations and Maintenance staff completed maintenance tasks on Treatment Train B and the plant was transitioned back to full plant operation. In addition to the cleaning of the contactors and tanks, maintenance tasks included repairs to mud valves, contactor doors, the off-gas destruct units and replacement of the rupture disks. Once the plant was back to full operation, staff flushed the upper portion of the MetroWest Tunnel from Shaft D to Shaft E and placed it into service in parallel with the upper portion of the Hultman Aqueduct. The new closed-loop cooling water system for the ozone generators is scheduled to be in service next quarter.
- Flood Control: The region experienced major rain events, which resulted in the Quabbin Reservoir, the Wachusett Reservoir, and all four reservoirs in the Sudbury System cresting. Staff made frequent gate changes during and after the events to minimize flooding, including slowly dropping the position of the new crest gate at the Wachusett Dam.

Metro Water Operations & Maintenance

- March Storm Response: Response to the major rain storms in March consumed a large amount of staff time. Water Pipeline and Valve staff deployed and staffed pumps at the Braintree-Weymouth Pump Station, Bradeen Street, and Business Street in Boston. Staff pumped many manholes and vaults that hold motor-operated valves at many of the water pump stations as a result of the rain water. On March 14, Woburn notified MWRA that the city needed to take all of its water from MWRA due to a sewer overflow into Horn Pond. Woburn was supplied with MWRA water through the month of March. The Town of Ayer called on March 28 seeking advice with regards to its water source and concerns due to flooding in the area.
- Water Pipeline Program: Work began on Phase II of the Northern Intermediate High Valve and Emergency Pumping Project at the Stone Zoo; staff installed new piping and one new valve. Work continued on the Dam Armoring Project at Spot Pond behind the Gillis Pump Station, with the installation of rip rap stone. Staff also installed a series of trench drains and an oil/water separator adjacent to the fuel depot at the MWRA Chelsea Facility. Work began on the replacement of the sleeve valves on WASM 14 at Nonantum Road.
- Valve Program: Valve staff: continued to rebuild a 24-inch PRV at Shaft 9; assisted BWSC with maintenance on its PRV at Meter 188; performed, flushed, and disinfected Section 74 in Hyde Park in conjunction with Barletta on the Phase 2 Pump Station contract; and performed preventative maintenance on the PRV at Meters 93, 153, 175 and 204.

Wastewater Operations & Maintenance

- March Rain Storms: During the rain events, Wastewater Operations staff worked around the clock to ensure all wastewater facilities, including pumping stations, headworks facilities and Combined Sewer Overflow (CSOs) facilities were able to process wastewater flows at full capacity. The four CSO facilities treated more than one billion gallons of combined sewer flows during the month of March.
- Process Control: Modifications were made to the influent gates at the Braintree-Weymouth Relief Pump Station to permit modulating operation; program modifications will be made in the 4th Quarter.

TRAC

- Penalty Assessment Notice Issued To Walgreens: On February 12, TRAC issued a \$480,000.00 Penalty Assessment Notice (PAN) to Walgreens Company (Walgreens) for its submittal of incomplete and photocopied Group Permit Compliance Reports for 48 of its stores permitted by MWRA, and for the company's failure to follow the best management practices and other violations. Walgreens has appealed the PAN to an Adjudicatory Hearing.
- Permitting: On January 26, TRAC staff met with representatives from DEP and EPA to discuss stormwater and groundwater discharges to the sewer system from the Central Artery Tunnels. At MWRA's direction, MDOT plans to install valves to divert the discharge of storm water and ground water from the sanitary sewer system to storm drains but needs DEP and EPA approval for the discharge. DEP and EPA, concerned about water quality issues, have begun to discuss stormwater permit conditions and have agreed to allow the

**TRAC
(Continued)**

discharge to surface water during emergency and high flow situations before the permit is issued. The meeting was held to determine what would constitute a high flow or emergency situation. TRAC staff will continue to work with DEP, EPA and MDOT to cease the discharge of groundwater and stormwater to the sanitary sewer.

- Monitoring: TRAC's Monitoring staff completed all NPDES CSO sampling requirements for the permit year ending August 8, 2010.

**Metro Equipment
and Facility
Maintenance**

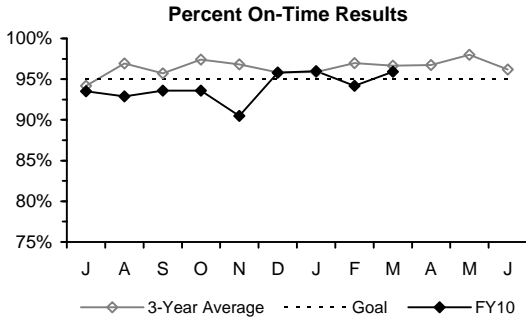
Equipment Maintenance Program

- Columbus Park Channel Rebuild: One and a half channels at the Columbus Park Headworks was completed. Staff replaced chain, wear shoes, and wear strips to improve grit collection. The second channel rebuild will be completed in May.
- Braintree/Weymouth Pump 2: Pump 2 was removed and sent to the manufacturer's representative for inspection. The clearance between the pump impeller and wear ring was found to be out of tolerance. The manufacturer rebuilt the pump with a new wear ring, adjusted the clearance and replaced the mechanical seal. MWRA staff reinstalled the pump, tested it and turned it over to Operations.
- IPS Odor Control Fan 3: Odor Control Fan #3 was experiencing high vibration alarms and there was an indication of potential bearing failure. HVAC staff disassembled the unit, installed new bearings, reassembled and laser-aligned equipment, and placed the unit back into service.
- Prison Point Strainer Rebuild: River water can be used to cool the diesel engines and also for tank cleaning after a rain event. The river water strainer was not working properly and was been repaired by the M&O Specialists. After the repair, the river water flow increased significantly.
- March Storm Support and Post-Storm Cleanups: Grounds staff filled, delivered and installed approximately 500 sandbags to prevent damage to property near overflows, and performed post-storm cleanup and remedial work at numerous locations in the north and south system.
- Equipment Maintenance Support: Carpenters installed backflow preventer storage boxes in all facilities; put in a temporary repair for the floor of a Caruso Air Handling Unit; built concrete forms for electrical conduit at Nut Island, built forms for the Framingham chemical system installation, and built stop logs for the Gillis Spillway. Masons cored and cleared the containment area at Framingham to allow the installation of the new chemical piping and pumps; poured a new containment area and pads; installed new stair treads at the Clinton Wastewater Treatment Plant, and repaired the scrubber berm and other floor repairs at Nut Island. Painters erected staging at Chelsea Screen House to support HVAC repairs, Nut Island to support the Mechanics and Plumbers and removed the staging from Cottage Farm and Framingham.

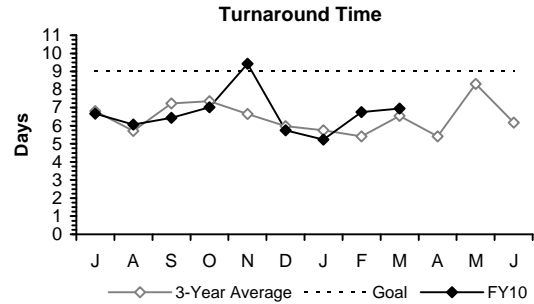
**Operations
Support**

- Development of ERP Training Programs: Staff began 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 water communities. Following DEP approval, the delivery of this training is expected to begin in the 4th Quarter and will continue throughout the year.
- Tank Cleaning: Plans are being finalized for using a diving contractor to clean Nash Hill Tanks in the 4th Quarter.
- Cyber Assessment: During the 3rd Quarter, staff began participating in an internal cyber security audit covering the SCADA system and MIS administrative networks.
- On-line Water Quality Monitoring: Staff continued working on the procurement for updating the distribution water quality monitoring analyzer system. The bid was advertised in February and staff expect to open bids in April. Staff continue to evaluate additional sites for this system.

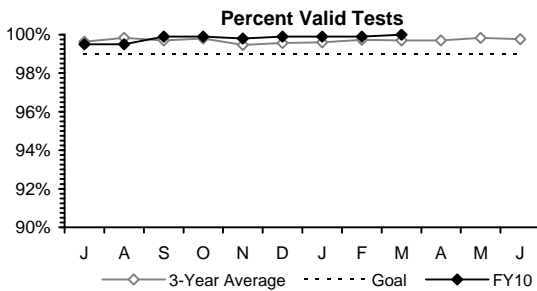
Laboratory Services 3rd Quarter - FY10



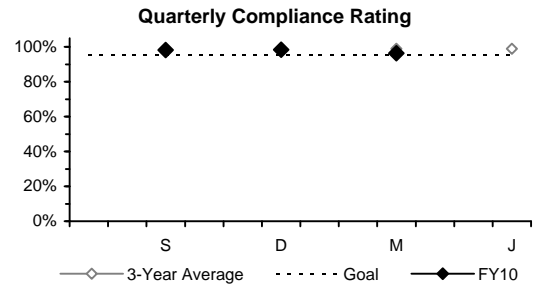
The Percent On-Time measurement was above the 95% goal for two months of the 3rd Quarter.



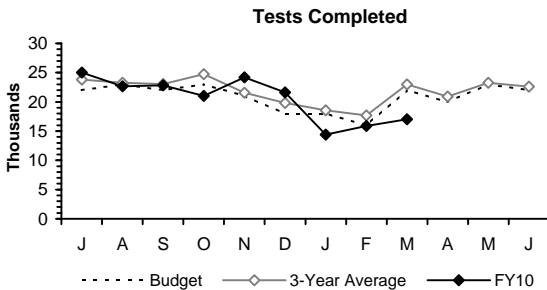
Turnaround Time was faster than the 9-day goal for the quarter.



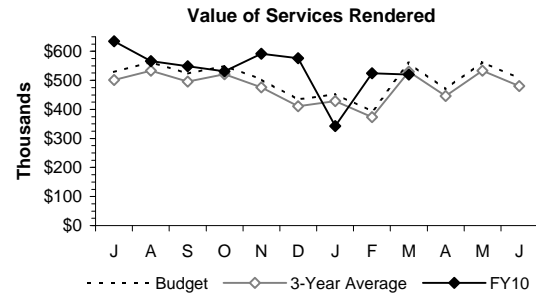
The Percent Valid Tests measurement stayed above the 99% goal for all three months during the 3rd Quarter.



A compliance audit of reporting limit verifications found good compliance with requirements. Compliance audits are performed in September, December, March and June.



The Tests Completed measurement was below the seasonally adjusted budget goal for the quarter, largely due to a change in how tests are counted in the new LIMS.



Value of Services Rendered was slightly below the seasonally adjusted budget projection for the quarter.

Highlights:

LIMS: The final LIMS "Go-Live" for all chemistry and wastewater microbiology occurred on January 1, 2010. The new LIMS has been working successfully at all five lab locations for three months. DLS continues to work with LIMS clients and MIS to define procedures for communicating and making changes to LIMS. Also continuing to work with DEP to adjust electronic submissions for drinking water to comply with new automated compliance checks that DEP has implemented on its system.

Quality Assurance: Received DEP certification for the new ICP/MS instrument for metals; this will allow the lab to run the semi-annual Lead and Copper Rule samples on one instrument instead of two. DLS is working on revisions to the Quality Assurance Management Plan and several SOPs to comport with the new LIMS in anticipation of a DEP lab certification audit later this year.

CSO: Tested special Cottage Farm and Nut Island sodium hypochlorite samples for metals.

DITP: Collected quality control samples for diesel fuel deliveries several times daily over a two-week period.

ENQUAD: Completed the lobster samples for the Harbor and Outfall Monitoring program. Fish and shellfish samples are only tested every three years and this is the first time they are being tested in-house. Performed three adverse conditions bacteria surveys of Mass. Bay and five Nut Island shore surveys for bacteria subsequent to high flows at DITP.

FOD/TRAC: Close coordination continued between TRAC, MIS and DLS to get the PIMS/LIMS interface ready for production. Finalized a procedural document to carefully make changes to the PIMS/LIMS interface when they are needed.

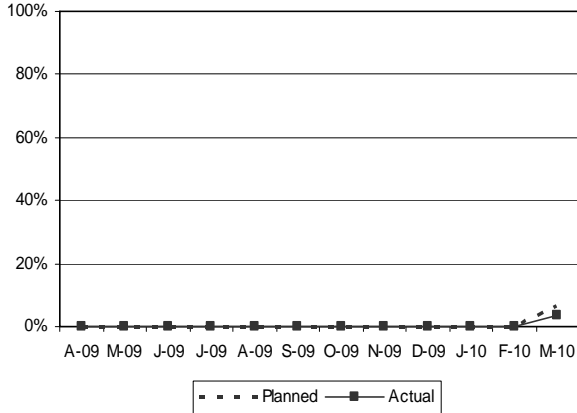
FOD/Water Quality Assurance: Performed NPDES tests on CWTP dewatering samples from half-plant operation. Tested complaint samples from Arlington, Boston, Milton, Reading, and Weston. DLS's existing outside testing contract is being utilized by FOD and DCR to test additional weekly samples from Wachusett tributaries to assess the impact of tributary flows on *Giardia* levels in the reservoir. Making arrangements to send typical and atypical coliform growth out for testing in support of an AWWA research project. The project will use an RNA-based approach to provide additional information on the sources of total coliforms in distribution systems.

Outside Customers: Wilmington indicated that it would like to MWRA's laboratory services starting in July.

CONSTRUCTION PROGRAMS

Projects In Construction - 1 3rd Quarter – FY10 (Progress Percentages based on Construction Expenditures)

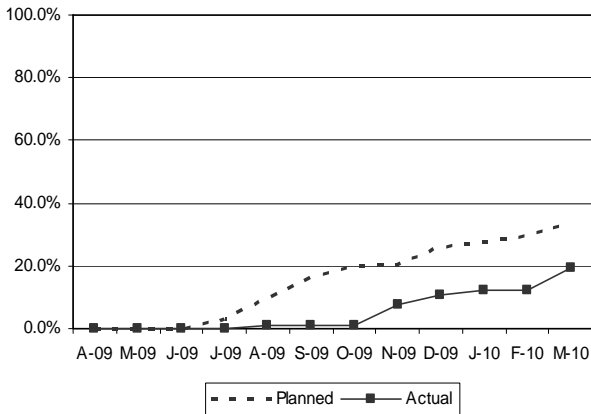
Southern Spine Water Mains Rehabilitation - Section 107
Progress - March 2010



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: The contractor installed temporary bypass piping on High St. and Adams St. associated with the Milton portion of the project. Sub-surface investigation continued on the location of gas mains and pipeline sections 21/41.

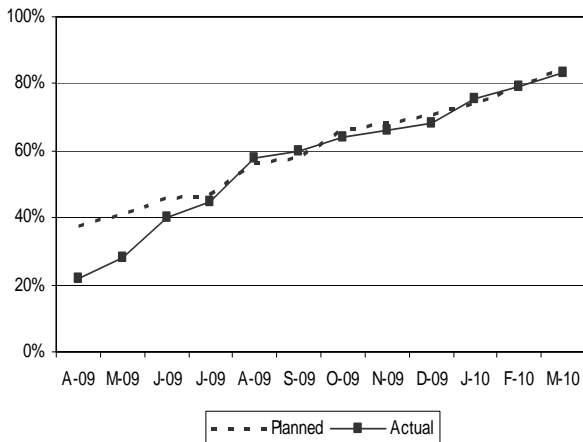
North Dorchester Bay Pump Station and Sewers
Progress - March 2010



Project Summary: Construction of 15-MGC 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: The contractor's late start in the mini-pile installation due to the Peer Review requirement has been made up and as of 3/31/10, this section of work is on schedule. Concrete work will accelerate rapidly during the warmer weather and eliminate the overall project variance. During March, the contractor reached completion of the waterproofing underneath the base slab along with placement of the base slab. Work commenced on the pump station walls to elevation 80. At the force main, no work was completed this period. Force main installation remained at 72% completion.

East Boston Branch Relief Sewer
Progress - March 2010



Project Summary: Construction of 14,500 feet of replacement sewers primarily by microtunneling.

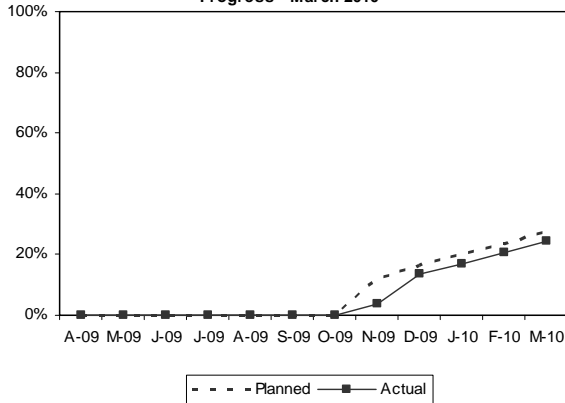
Status and Issues: Microtunneling was completed with Drive #12 from JS-10A to JS-13A with Drive #13 from JS-10A to RE-11. Bypass pumping continued between Orleans St. and Bremen St. Flow fill was placed in the abandoned sewer line between JS-10A and RS-11. A 36-inch PVC pipe was installed between JS-13A and RS-14 and between JS-13A and JS-10A. Installation continued on the 24-inch PVC pipe between JS-12A and SMH-36. Construction continued on the installation of the special "T" manhole section connection at the Caruso Pump Station. Restoration of granite curb and concrete sidewalks began at JS-5A and RS-6A, as well as pavement at JS-12A and RS-14A.

Projects In Construction – 2

3rd Quarter – FY10

(Progress Percentages based on Construction Expenditures)

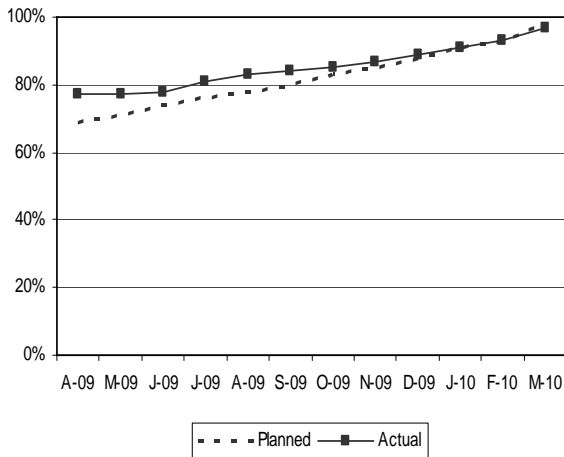
Section 18, 50 & 51 Rehabilitation in Medford/Somerville
Progress - March 2010



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 installed restraint rods, cathodic protection, backfilled and paved the access pit at station 153+20. New air release valve was installed at station 134+15. Successful pressure testing occurred on the pipeline between Alewife Brook Parkway and Boston & College Ave. Chlorination was completed on the pipeline from Mystic Valley Parkway to Boston & College Ave. On Section 50, the contractor installed new 20" piping and gate valves at Meter 129. At station 130+50, the contractor installed and backfilled new blow off piping and a manhole. Installation of cathodic protection and access pits backfilling was completed at stations 135+50, 137+00, 138+20, 138+50 and 141+50.

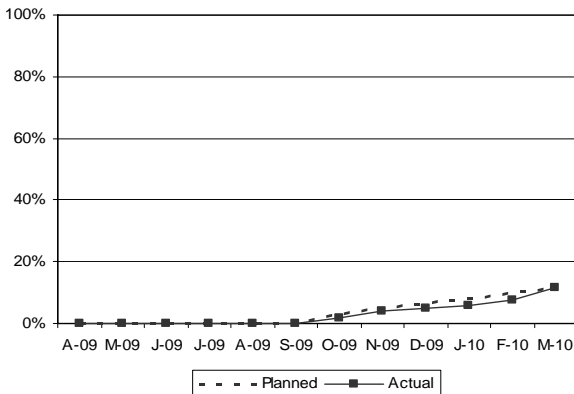
Rehabilitation of Water Pumping Stations
Progress - March 2010



Project Summary: This work provides rehabilitation of a series of water pump stations. At the present time, Brattle Court and Hyde Park are the focus of work.

Status and Issues: At Brattle Court, the contractor completed installation of the fire alarm radio box, replaced motor PF-2, and completed 250 PSI testing on DV 11, 12 & 12A. Work continued on punch list items. At Hyde Park, the contractor completed installation and testing of the new bridge crane and the security system was completed, tested and activated. Stage 2 acceptance testing was successfully completed on March 2nd and pump 3 was placed into rotation. At Reservoir Road the contractor completed all checkout and testing on Pumps 1 & 2. The 14-day acceptance testing commenced on March 24th. At Spring Street the contractor completed installation of the new emergency generator gas line along with startup of the emergency generator and transfer switch. The four-hour performance testing on the new engine drives 1 & 2 was successfully completed.

Hultman Aqueduct Interconnections Project
Progress - March 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 began final delineation of repairs from Rice Rd to VC N2 in Weston. New piping and blowoff manhole structures were completed at two location in Framingham and two in Wayland. At Valve Chamber N2, rock excavation and removal was completed as well as the mud slab foundation. Excavation commenced for chamber sump at VC-L2 and temporary fencing began as OS-3 in Norumbega. Hultman internal repairs began from Shaft L to Rice Road.

CSO CONTROL PROGRAM

3rd Quarter - FY10

Of the 35 projects in MWRA's Long-Term CSO Control Plan, 24 are complete as reported last quarter; eight projects are in construction, some with continuing design of later phased contracts, and two additional projects are in design. MWRA plans to commence design of the one project not yet started, MWR003 Gate and Floatables Control, Rindge Ave. Siphon Relief and SOM01A Interconnection Relief and Floatables Control by April 2012.

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	<p><u>Tunnel Construction:</u> Contractor reached Substantial Completion of this \$147 million tunnel contract on November 30, 2009; completion of punch list items continues.</p> <p><u>Dewatering Pump Station and Sewer Construction:</u> This \$25.9 million contract commenced in May 2009 and was 34% complete by March 2010. Contractor has completed installation of mini-piles, excavation within the slurry wall, and placement of the base slab. Installation of forms for the pump station walls is underway. Contractor has also installed 2,300 feet of the 3,200-foot, 24-inch-diameter force main. Remaining force main section in East Broadway will be installed after school closes in June.</p> <p><u>Ventilation Building Construction:</u> This \$5.2 million contract commenced in November 2009. Contractor has completed test piles, installation of geotechnical instrumentation and observation wells, and steel sheeting excavation support. Excavation for the below-ground building is underway.</p>
East Boston Branch Sewer Relief	Mar 00	Mar 03	Jun 10	<p>MWRA completed a \$5.2 million interceptor rehab contract in 2004 and is making substantial progress with the second and third contracts: Contract 6257 (micro-tunneling) and Contract 6841 (pipe-bursting). Both contracts are on schedule for Substantial Completion by July 2010.</p> <p><u>Contract 6257 (\$62.2 million):</u> Contract is 85% complete and pipe installation 90% complete as of March 2010. The 8,037 feet of Phase I micro-tunneling to install 48-inch- and 66-inch-diameter pipe along Border, Condor, East Eagle and Chelsea streets to the downstream end of the project at MWRA's Caruso Pump Station is complete. The 2,509 feet of Phase III micro-tunneling along Bremen, Orleans and Marginal streets is also complete, and the contractor plans to commence Phase II micro-tunneling along Border Street in April. Open-cut pipe installation on Bremen and Marginal streets is scheduled to be complete in April. Work at most of the shaft locations is complete and these shafts have been backfilled and the surface restored.</p> <p><u>Contract 6841 (\$8.3 million):</u> Contract is 69% complete and pipe installation is 66% complete as of March 2010. The contractor has completed 2,075 feet of pipe-bursting and simultaneous new pipe insertion to increase 12-inch pipe to 16-inch pipe along Marginal, Border, Maverick and New streets. The contractor has also completed 1,523 feet of pipe-bursting and simultaneous new pipe insertion to increase 15-inch pipe to 20-inch pipe along Maverick Street. Work at most of the shaft locations is complete and these shafts have been backfilled and the surface restored.</p>
	Jun 06	Jun 08		
Cottage Farm Brookline Connection and Inflow Controls	Sep 06	Jun 08	Jun 09	The \$2.1 million construction contract was substantially completed on June 30, 2009 in compliance with Schedule Seven. Contractor is completing punch list items and minor change order work and is scheduled to perform final paving and wetlands restoration in spring 2010.

CSO CONTROL PROGRAM

3rd Quarter - FY10 (continued)

Project		Court Milestones in Schedule Seven (Shaded milestones are complete)			Status
		Commence Design	Commence Construction	Complete Construction	
Charles River Interceptor Gate Controls and Additional Interconnections		Jan 08	Jan 10	Jan 11	From an 18-month hydraulic study, MWRA concludes that system optimization measures cannot improve wet weather performance or further reduce CSOs at Cottage Farm Facility without also causing flooding risks. MWRA presented its recommended plan of "no action" in a supplemental technical report submitted to EPA and DEP on September 14, 2009, and in a December 14 MWRA response to EPA comments. MWRA is preparing a second response to a remaining EPA technical comment received in January 2010. MWRA is seeking deletion of related construction milestones in Schedule Seven.
South Dorchester Bay Sewer Separation		Jun 96	Apr 99	Nov 08	BWSC continues to perform stormwater inflow removal (mostly downspout disconnection) to meet sewer system hydraulic performance criteria. BWSC recently advertised an RFP for design services associated with the inflow removal projects.
Reserved Channel Sewer Separation		Jul 06	May 09	Dec 15	BWSC final design and phased construction are underway. In May 2009, BWSC issued Notice to Proceed for the first of nine planned construction contracts, which involves storm drain construction in the South Boston neighborhood area tributary to Outfall BOS080. The contractor has installed approximately 60% of the storm drains of this contract. BWSC plans to award the second construction contract in July 2010 and the third and fourth contracts later this summer.
Bulfinch Triangle Sewer Separation		Nov 06	Nov 08	Jul 13	BWSC is on schedule to complete the sole construction contract in July 2010, three years ahead of the court milestone. The contractor has completed storm drain installations. Remaining work includes sewer cleaning and relining, elimination of connections between the new storm drain system and the sewer system, and final paving.
Brookline Sewer Separation		Nov 06	Nov 08	Jul 13	The first of two Brookline construction contracts is complete. For the second and much larger contract, Brookline is responding to MWRA comments on the plans and specifications (pursuant to 8(m) review) and finalizing the contract bid documents. Though the schedule for completing final design recently slipped a few months, Brookline expects to advertise this contract in June 2010 and complete construction ahead of the July 2013 milestone in Schedule Seven. Meanwhile, MWRA has issued a task order for inspection of outfall MWR010. The scope of the task order also includes developing contract documents for the cleaning and repair of Outfall MWR010 in time for Brookline's project completion.
Cambridge/ Alewife Brook Sewer Separation	CAM004 Outfall and Detention Basin		Jul 08*	Jul 09*	Cambridge continues efforts to obtain construction permits and easements and is coordinating work in Alewife Reservation and related Article 97 legislation with DCR. Cambridge's proposed schedule calls for construction award in July 2010.
	CAM004 Sewer Separation	Jan 97	Jul 98 Jul 09*	Jan 13*	Cambridge plans to resume design in May 2010 and resume construction by July 2012.
	CAM400 Manhole Separation	Jul 06*	Jul 07*	Jul 08*	On January 11, 2010, Cambridge awarded the construction contract that includes both of these projects. Work is underway in the CAM400 area, and Cambridge expects to begin work in Alewife Brook Parkway (at Mass Ave.) soon. The contractor plans to complete all work by December 2010.
	Interceptor Connection Relief/ Floatables	Jul 06*	Jan 08*	Dec 08*	

CSO CONTROL PROGRAM

3rd Quarter - FY10 (continued)

Project		Court Milestones in Schedule Seven (Shaded milestones are complete)			Status
		Commence Design	Commence Construction	Complete Construction	
Cambridge/ Alewife Brook Sewer Separation (cont.)	MWR003 Gate and Rindge Ave. Siphon	Apr 09*	Nov 10*	Jan 12*	MWRA plans to commence design by April 2012.

* Alewife Brook project schedules are delayed at least 27 months due to past wetlands permit appeals. Additional time required for certain Alewife projects due to permits, land, easements and Article 97 legislation requirements for Outfall and Detention Basin. MWRA is presently seeking revisions to the milestones in Schedule Seven based on new project schedules proposed by the City of Cambridge.

CIP Expenditures

3rd Quarter – FY10

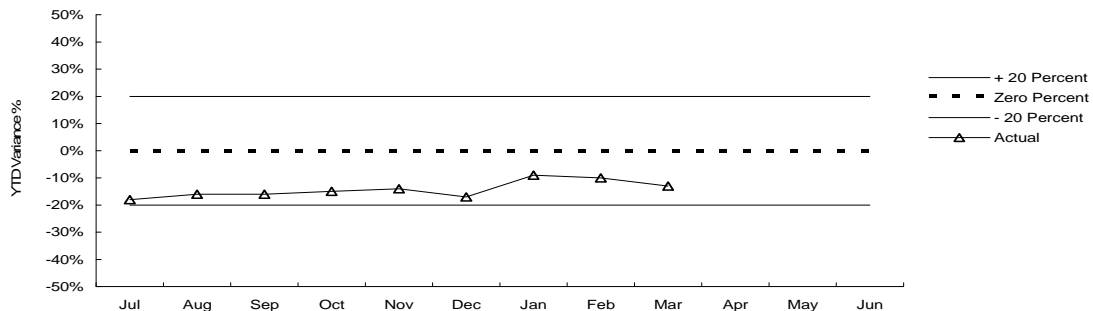
The Year-To-Date variances are highlighted below:

FY10 Capital Improvement Program Expenditure Variances through March by Program (\$000)				
Program	FY10 Budget Through March	FY10 Actual Through March	Variance Amount	Variance Percent
Wastewater	124,270	115,901	(8,368)	-7%
Waterworks	46,251	32,663	(13,587)	-29%
Business and Operations Support	8,987	6,933	(2,054)	-23%
Total	\$179,508	\$155,498	(\$24,010)	-13%

Underspending within Wastewater is primarily attributable to schedule changes and repackaging work for the DI Digester Sludge Pump Replacements, delay of equipment delivery for the STG System Modifications Construction, scope change and consolidation of Variable Frequency Drive Replacements at DI, Low Voltage Lighting Replacement contract work will now be handled in the current expense budget, scope changes to the Power System Improvements contract, delayed start for Digester Modifications Pipe Replacement, and revised expenditure forecast for North Dorchester Dewater/Pump Station & Sewers. Also, projected spending for East Boston Branch Relief Sewer and Cambridge Sewer Separation Design CS/RI contracts being less than anticipated due to project delays, delay in award of the Fort Point Channel Lower Dorchester Brook Conduit and schedule change for Brookline Sewer Separation contract. This was partially offset by higher community requests for grants and loans, progress on the DI Primary & Secondary Clarifier Rehabilitation and Heat Loop Pipe Replacement contracts, progress on the Reserved Channel and Bulfinch Triangle Sewer Separation projects, and DI Roof Replacement work scheduled for FY09 but performed in FY10. Underspending in Waterworks is due to timing of Watershed Land purchases, lower bid awards for the Lower Hultman Rehabilitation and Southern Spine Section 107 Phase 2 projects, work scheduled in FY10 completed in FY09 for Blue Hills Covered Storage, and the net community requests of loans and repayments being less than anticipated.

CIP Expenditure Variance

Total FY10 CIP Budget of \$238,252,000.



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 4/24/10	\$55 million
Unused capacity under the debt cap:	\$676 million
Estimated date for exhausting construction fund without new borrowing:	May-10
Estimated date for debt cap increase to support new borrowing:	FY2011
Commercial paper outstanding:	\$194 million
Commercial paper capacity:	\$350 million
Budgeted FY10 capital spending*:	\$207 million

* Cash based spending is discounted for construction retainage.

DRINKING WATER QUALITY AND SUPPLY

Source Water – Microbial Results

3rd Quarter – FY10

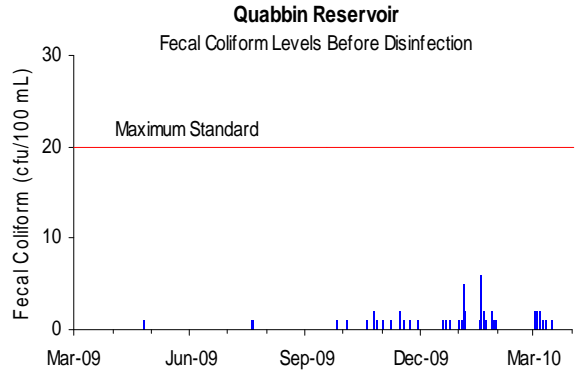
Background

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 the 3rd Quarter were below 20 cfu/100ml. For the current six-month period, 0.0% of the samples exceeded a count of 20 cfu/100ml.



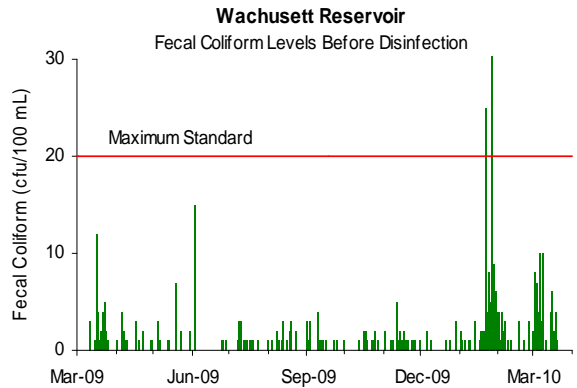
Sample Site: Wachusett Reservoir

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

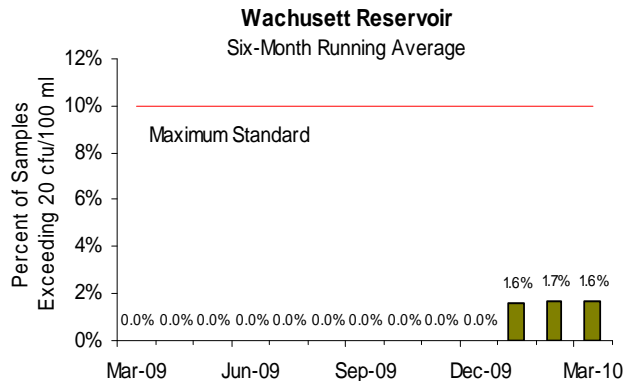
Fecal coliform levels tend to increase during the winter because when water bodies near Wachusett ice over waterfowl seek open water. Many roost at Wachusett, which tends to freeze later in the year than smaller ponds nearby.

In January, ice-over conditions on certain areas of the Wachusett Reservoir made the DCR bird harassment program more challenging to keep the birds away from the intake area.

Of the 90 samples collected during the 3rd Quarter, three exceeded a count of 20 cfu/100ml; these samples were from January.



For the current six-month period, 1.6% of the samples exceeded a count of 20 cfu/ 100ml.



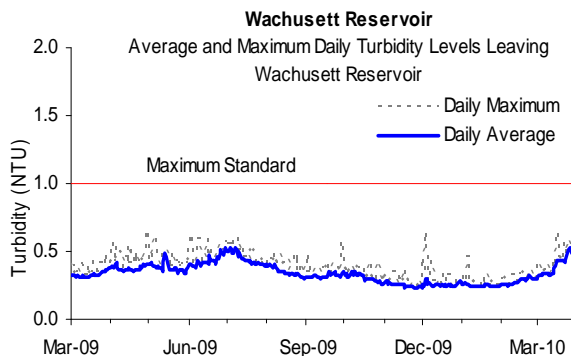
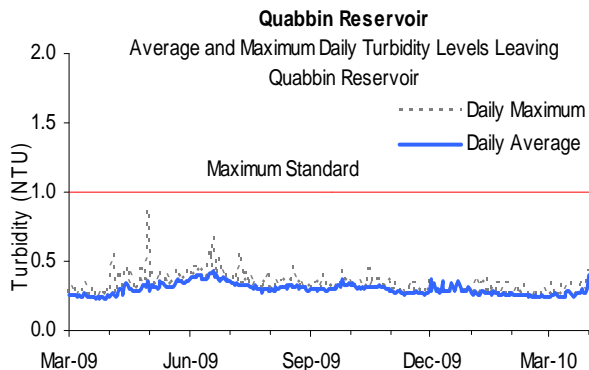
Source Water – Turbidity

3rd Quarter – FY10

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 Quabbin and Wachusett were within DEP standards for the quarter.

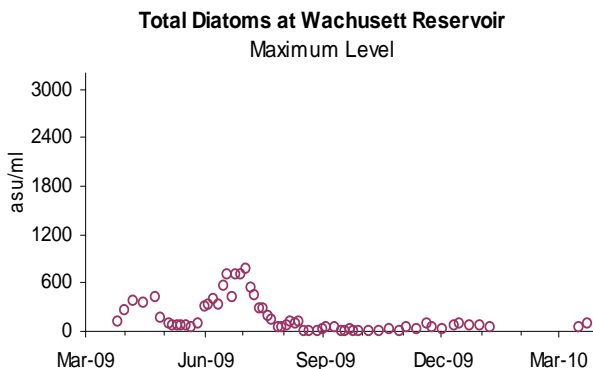
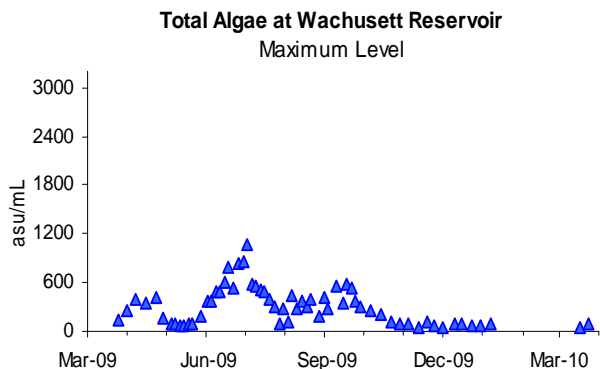


Source Water – Algae

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 algacide. During the winter and spring, diatom numbers may increase. While not a taste and odor concern, consumers using filters may notice more frequent changing of the filters is needed. Diatom levels were low in the 3rd Quarter.

Of the 5 complaints received for the quarter from local water departments, none concerned taste and odor that may be due to algae. Significant ice cover on the reservoir prevented safe algae sampling from January 7 until sampling began again on March 13.



Treated Water – Disinfection Effectiveness

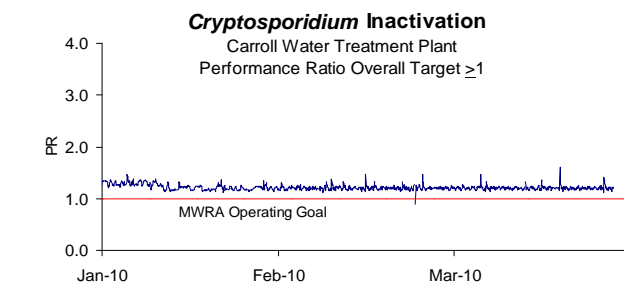
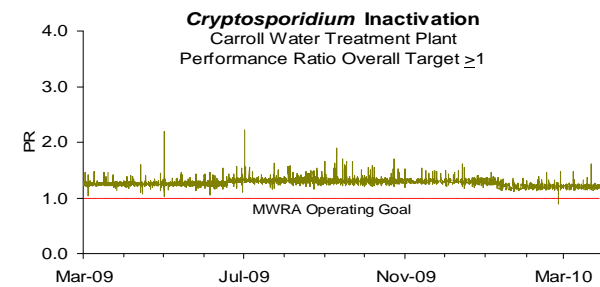
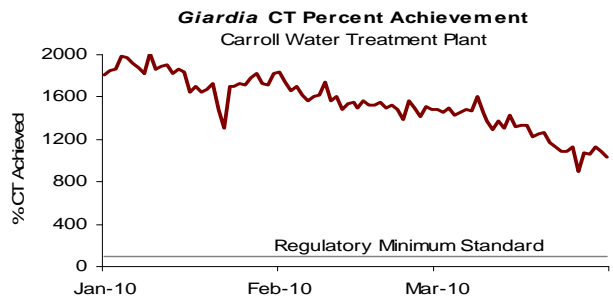
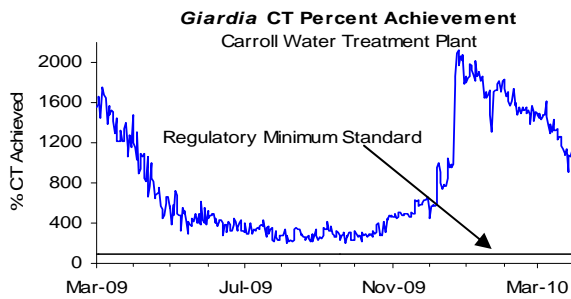
3rd Quarter – FY10

Background

With 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 a percentage 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.

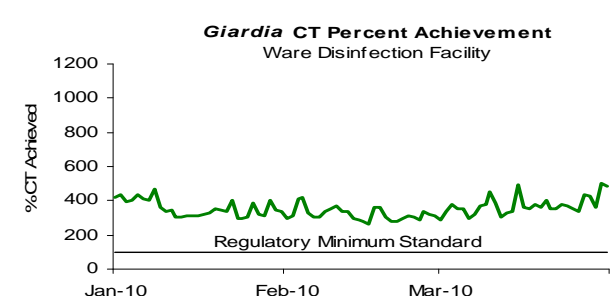
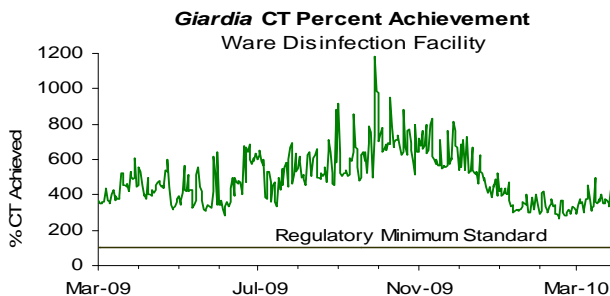
Wachusett Reservoir – MetroWest/Metro Boston Supply:

- 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, except for a brief period following routine maintenance on February 25, 2010. During plant re-starts, staff apply an ozone dose adequate to meet PR at the head-end of the plant and adequate to achieve *Cryptosporidium* inactivation at the end of the primary contactors. Measurements of PR dropped below MWRA’s voluntary target of 1 for 20 minutes, and the hourly average was 0.9, following the plant re-start. **All regulatory targets were met.**
- Ozone dose at the CWTP varied between 2.8 to 4.1 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* in cold temperatures, and in a decreasing level as the water warms up.



Quabbin Reservoir at Ware Disinfection Facility (CVA Supply):

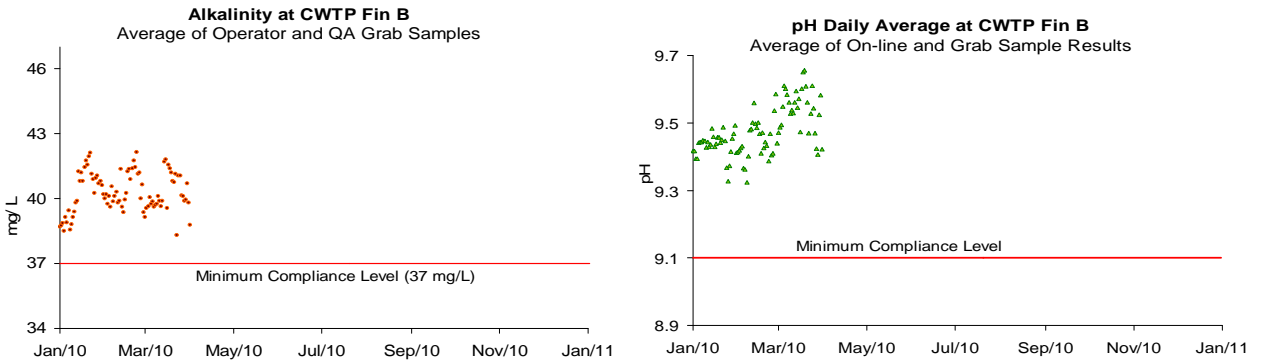
CT was maintained above 100% at all times the plant was providing water into the distribution system for the quarter, as well as every day for the last fiscal year. Chlorine dose was decreased from 1.4 mg/L to 1.3 mg/L on January 3, 2010.



Treated Water – pH and Alkalinity Compliance 3rd Quarter – FY10

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 in 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 March 22, 2010; sample pH ranged from 9.4 to 9.6 and alkalinity ranged from 41 to 43 mg/L. No sample results were below DEP limits for the quarter.



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

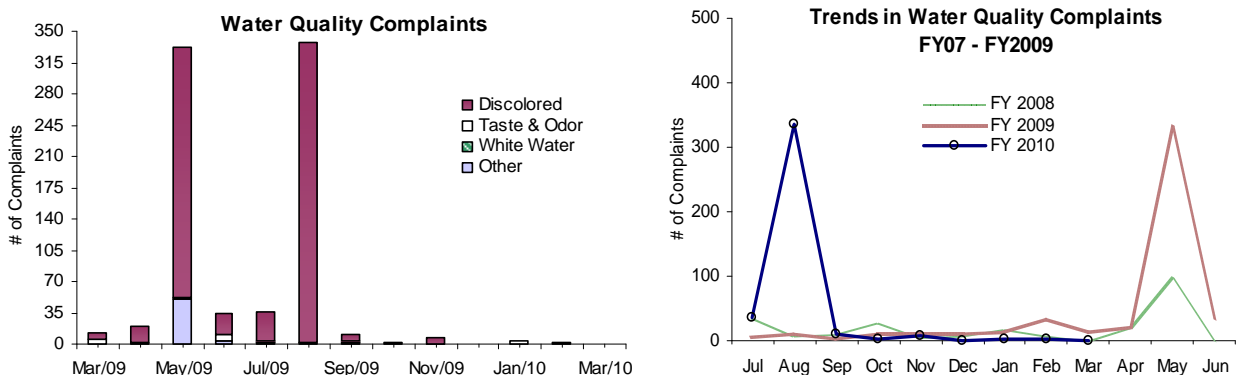
Background

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 five complaints in the 3rd Quarter compared to 58 complaints for 3rd Quarter of FY09. Of these five complaints, four were for "taste and odor" and one was for "other". There were no complaints reported in March.



Bacteria & Chlorine Residual Results for Communities in MWRA Testing Program 3rd Quarter – FY10

While all communities collect bacteria samples for the Total Coliform Rule (TCR), 40 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 140 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 3rd Quarter, one of the 5,513 community samples (0.02% system-wide) submitted to MWRA labs for analysis tested positive for coliform (Chelsea - March)' none of the 2,070 (0.00%) MWRA samples tested positive for total coliform. No sample tested positive for *E.coli*. All 40 systems that submitted chlorine residual data maintained an average disinfectant residual of at least 0.2 mg/L; only 5.3% 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	1.75
BELMONT	104	0 (0%)	0.0%		1.22	1.78
BOSTON	713	0 (0%)	0.0%		1.48	1.99
BROOKLINE	221	0 (0%)	0.0%		0.04	1.97
CHELSEA	133	1 (0.75%)	0.0%	No	0.55	1.93
DEER ISLAND	52	0 (0%)	0.0%		1.75	1.99
EVERETT	130	0 (0%)	0.0%		1.01	1.13
FRAMINGHAM	216	0 (0%)	0.0%		0.33	1.90
HANSCOM AFB (Bedford) (b)	27	0 (0%)	0.0%		0.05	0.99
LEXINGTON	117	0 (0%)	0.0%		0.21	1.86
LYNNFIELD	18	0 (0%)	0.0%		0.36	1.28
MALDEN	195	0 (0%)	0.0%		1.23	1.30
MARBLEHEAD	72	0 (0%)	0.0%		0.22	1.74
MARLBOROUGH (b)	156	0 (0%)	0.0%		0.55	1.49
MEDFORD	221	0 (0%)	0.0%		0.86	1.92
MELROSE	117	0 (0%)	0.0%		0.02	0.79
MILTON	96	0 (0%)	0.0%		0.40	1.66
NAHANT	30	0 (0%)	0.0%		0.09	1.43
NEEDHAM (b)	123	0 (0%)	0.0%		0.10	0.45
NEWTON	276	0 (0%)	0.0%		0.35	1.74
NORTHBOROUGH	48	0 (0%)	0.0%		0.05	1.29
NORWOOD	117	0 (0%)	0.0%		0.05	1.63
QUINCY	298	0 (0%)	0.0%		0.22	1.69
READING	130	0 (0%)	0.0%		0.23	1.66
REVERE	180	0 (0%)	0.0%		1.24	1.85
SAUGUS	96	0 (0%)	0.0%		1.71	1.93
SOMERVILLE	264	0 (0%)	0.0%		0.71	2.04
SOUTH HADLEY FD1 (c)	48	0 (0%)	0.0%		0.04	0.04
SOUTHBOROUGH	30	0 (0%)	0.0%		0.03	1.53
STONEHAM	84	0 (0%)	0.0%		1.36	1.87
SWAMPSCOTT	54	0 (0%)	0.0%		0.64	1.55
WAKEFIELD (b)	132	0 (0%)	0.0%		0.32	1.26
WALTHAM	215	0 (0%)	0.0%		0.01	1.91
WATERTOWN	130	0 (0%)	0.0%		0.33	1.78
WELLESLEY (b)	108	0 (0%)	0.0%		0.08	0.55
WESTBORO HOSPITAL	14	0 (0%)	0.0%		0.53	1.85
WESTON	48	0 (0%)	0.0%		0.82	1.79
WINCHESTER (b)	65	0 (0%)	0.0%		0.11	0.73
WINTHROP	72	0 (0%)	0.0%		0.00	1.40
WOBURN (b)	195	0 (0%)	0.0%		0.05	0.93
Total:	5513	1 (0.02%)				
MASS. WATER RESOURCES AUTHORITY (d)	2070	0 (0%)	0.0%		0.02	1.80

(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.

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

3rd Quarter – FY10

Background

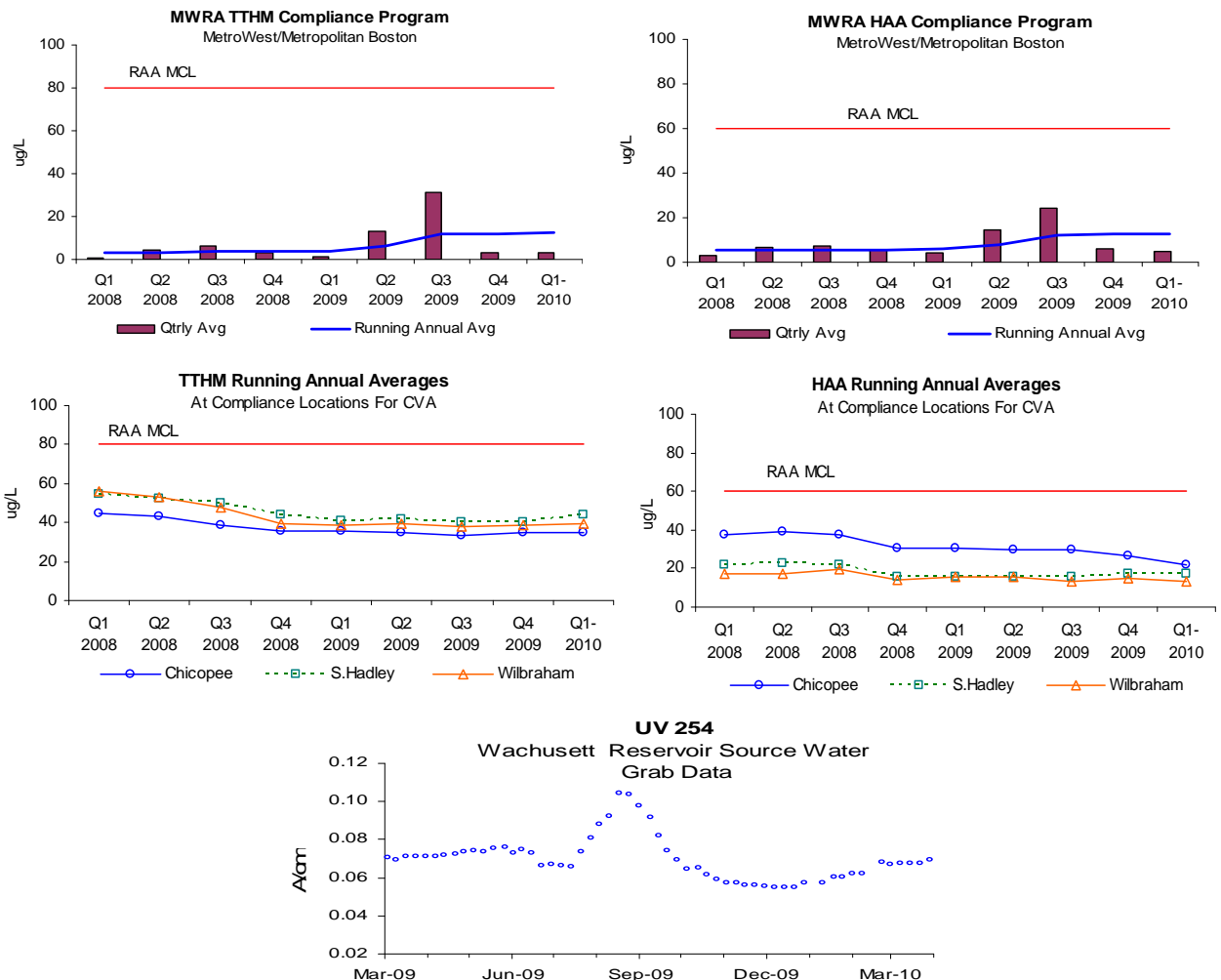
Total Trihalomethanes (TTHMs) and Haloacetic Acids (HAA5s) are by-products of disinfection treatment with chlorine. TTHMs and HAA5s are of concern due to their potential adverse health effects at high levels. EPA's running annual average (RAA) standard is 80 ug/L for TTHMs and 60 ug/L for HAA5s. The 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 = 12.7 ug/L; HAA5s = 12.4 ug/L. CVA's DBP levels continue to be below current standards. UV-254 levels are currently around 0.07 A/cm. The current RAA for Bromate = 0.0 ug/L.



Water Supply and Source Water Management

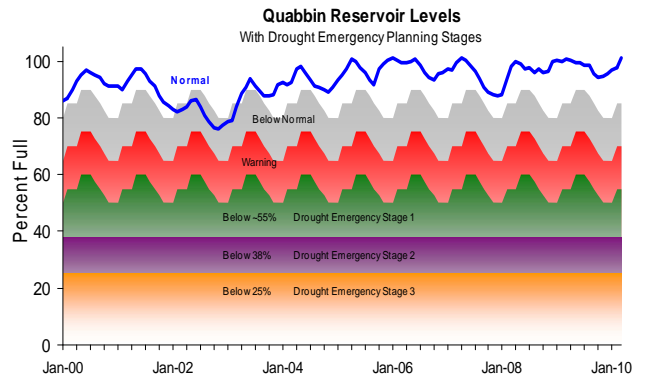
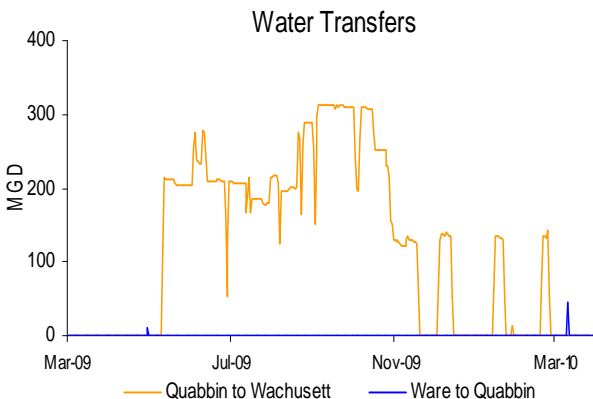
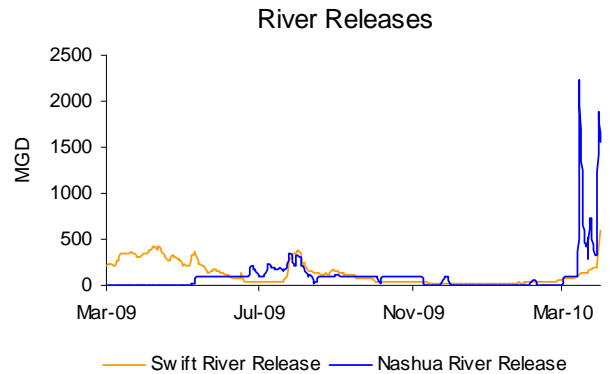
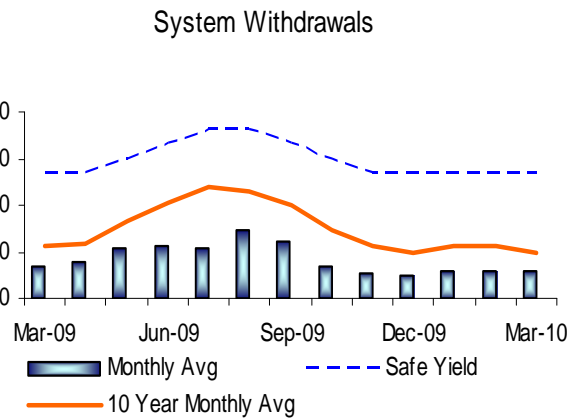
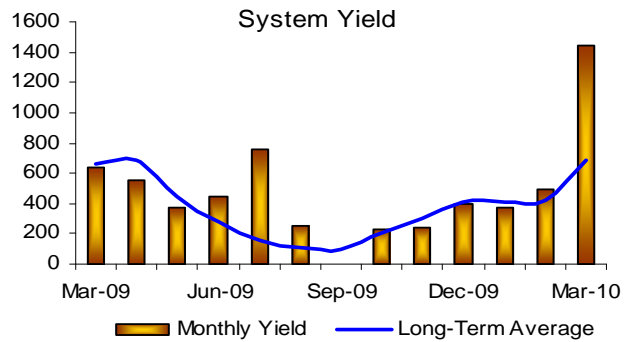
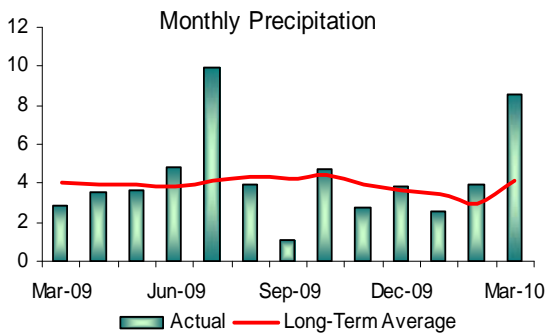
3rd Quarter – FY10

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.

Outcome

The Quabbin Reservoir level was above full capacity and remains above the normal operating range for this period of the year. Quabbin Reservoir was at 101.0% of capacity as of March 31, 2010; 0.3% above the same time last year. This is an increase of more than 1.6 billion gallons of storage. The average withdrawal continues to be below 200 million gallons per day (mgd). The significant precipitation events in the month of March, coupled with the annual spring run-off, resulted in a very high monthly yield for March. River releases were significantly high as well; particularly the Nashua River release during these storm events.



WASTEWATER QUALITY

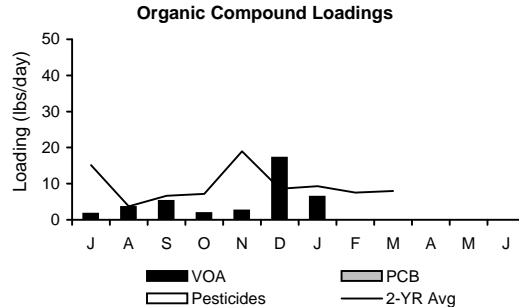
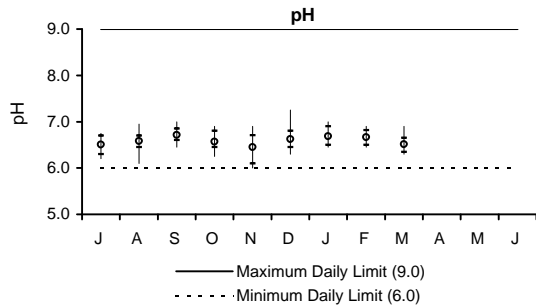
NPDES Permit Compliance: Deer Island Treatment Plant

3rd Quarter - FY10

NPDES Permit Limits

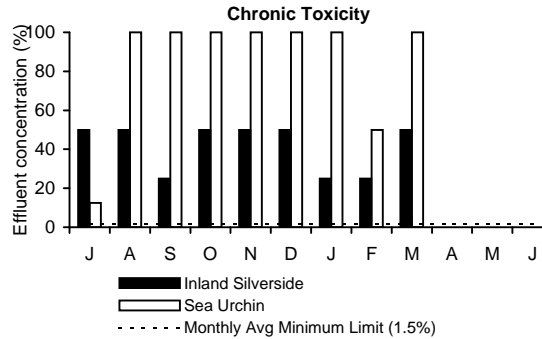
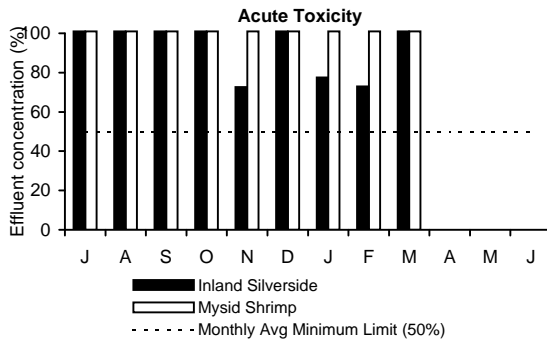
Effluent Characteristics		Units	Limits	January	February	March	3rd Quarter Violations	FY10 YTD Violations
Dry Day Flow:		mgd	436	319.4	319.6	332.5	0	0
cBOD:	Monthly Average	mg/L	25	7.2	7.5	8.6	0	0
	Weekly Average	mg/L	40	8.7	10.9	11.7	0	0
TSS:	Monthly Average	mg/L	30	11.4	12.8	19.1	0	0
	Weekly Average	mg/L	45	16.3	23.1	23.7	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	31.1	192.1	319.1	0	0
	Weekly Geometric Mean	col/100mL	14000	11.6	21.6	131.8	0	0
	% of Samples >14000	%	10	0	0	0	0	0
	Consecutive Samples >14000	#	3	0	0	0	0	0
pH:		SU	6.0-9.0	6.5-7.0	6.5-6.9	6.3-6.9	0	0
PCB, Aroclors:	Monthly Average	ug/L	0.000045	UNDETECTED			0	0
Acute Toxicity:	Mysid Shrimp	%	50	>100	>100	>100	0	0
	Inland Silverside	%	50	>100	>100	>100	0	0
Chronic Toxicity:	Sea Urchin	%	1.5	100	50	100	0	0
	Inland Silverside	%	1.5	25	25	50	0	0

To date, there have been no permit violations at the Deer Island Treatment Plant in FY10, even with the record-breaking storm events of March.



pH is a measure of the alkalinity or acidity of the effluent. Fluctuations in pH do not have an adverse effect on marine environments. Because of the pure oxygen used in the activated sludge reactor, the effluent pH tends to be at the lower. pH measurements for the 3rd 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 (PCBs). 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%; in the 3rd Quarter, acute toxicity permit limits were met for both.

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 effect on the growth and reproduction of the test species. Chronic toxicity permit limits were met for the 3rd Quarter for both the inland silverside and sea urchin.

NPDES Permit Compliance: Clinton Wastewater Treatment Plant

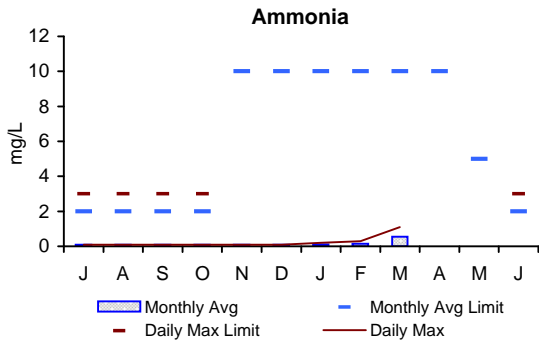
3rd Quarter - FY10

NPDES Permit Limits

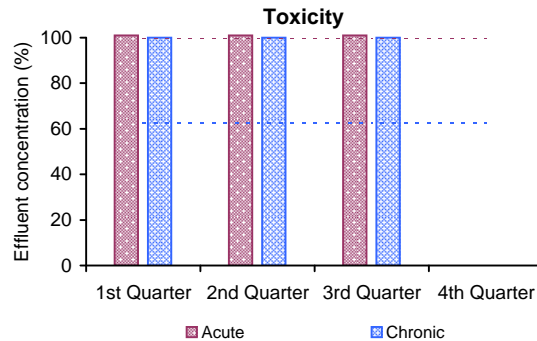
Effluent Characteristics	Units	Limits	January	February	March	3rd Quarter	FY10 YTD	
			Violations	Violations	Violations	Violations	Violations	
Flow:	mgd	3.01	3.29	3.26	3.60	3	9	
BOD:	Monthly Average:	mg/L	20	8.6	4.9	5.0	0	0
	Weekly Average:	mg/L	20	11.8	5.6	7.1	0	0
TSS:	Monthly Average:	mg/L	20	7.4	5.1	5.0	0	0
	Weekly Average:	mg/L	20	10.3	7.0	7.5	0	0
pH:	SU	6.5-8.3	6.8-7.6	6.7-7.4	6.7-7.3	0	0	
Dissolved Oxygen:	Daily Minimum:	mg/L	6	10.1	8.6	6.5	0	0
Fecal Coliform:	Daily Geometric Mean:	col/100mL	400	6	6	0	0	0
	Monthly Geometric Mean:	col/100mL	200	2	2	0	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: 11/1-3/31								
	Monthly Average:	mg/L	10.0	0.1	0.1	0.5	0	0
	Daily Maximum:	mg/L	35.2	0.2	0.3	1.1	0	0
Copper:	Monthly Average:	ug/L	20	11.0	9.2	6.5	0	0
Phosphorus: May 1 - Oct 31								
	Monthly Average:	mg/L	1.0	N/A	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 during the 3rd Quarter exceeded the permit limit of 3.01 mgd. All other permit limits were met during the 3rd Quarter, even with March's record-breaking storm events.

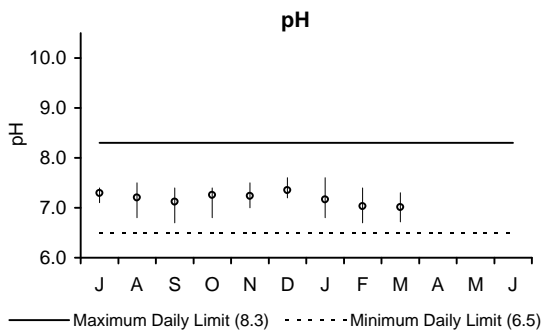
*Toxicity testing at Clinton is only performed on a quarterly basis, generally in March. Due to flood conditions at the plant and the surrounding areas, which resulted from the extreme wet weather events during the month, toxicity testing could not be conducted as typically scheduled. Toxicity tests for the 3rd Quarter were delayed until April 25, 2010 to April 30, 2010. All toxicity permit limits were met.



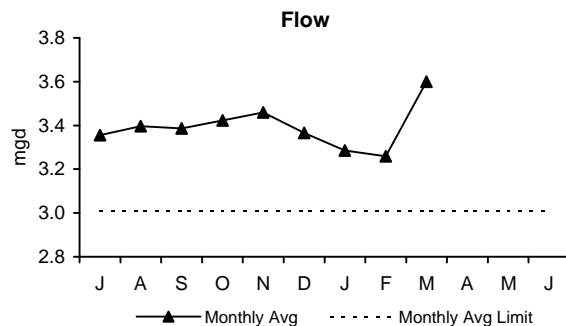
The 3rd Quarter monthly average and daily maximum concentrations were below the permit limits. The monthly average and daily maximum limits for the period of November 1 - March 31 are 10 mg/L and 35.2 mg/L, respectively. The permit limits are most stringent from June to October when warm weather conditions 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 3rd Quarter (testing took place in April due to flooding as discussed above).



pH is a measure of the alkalinity or acidity of the effluent. All daily pH results for the 3rd Quarter were within the range set by the permit.



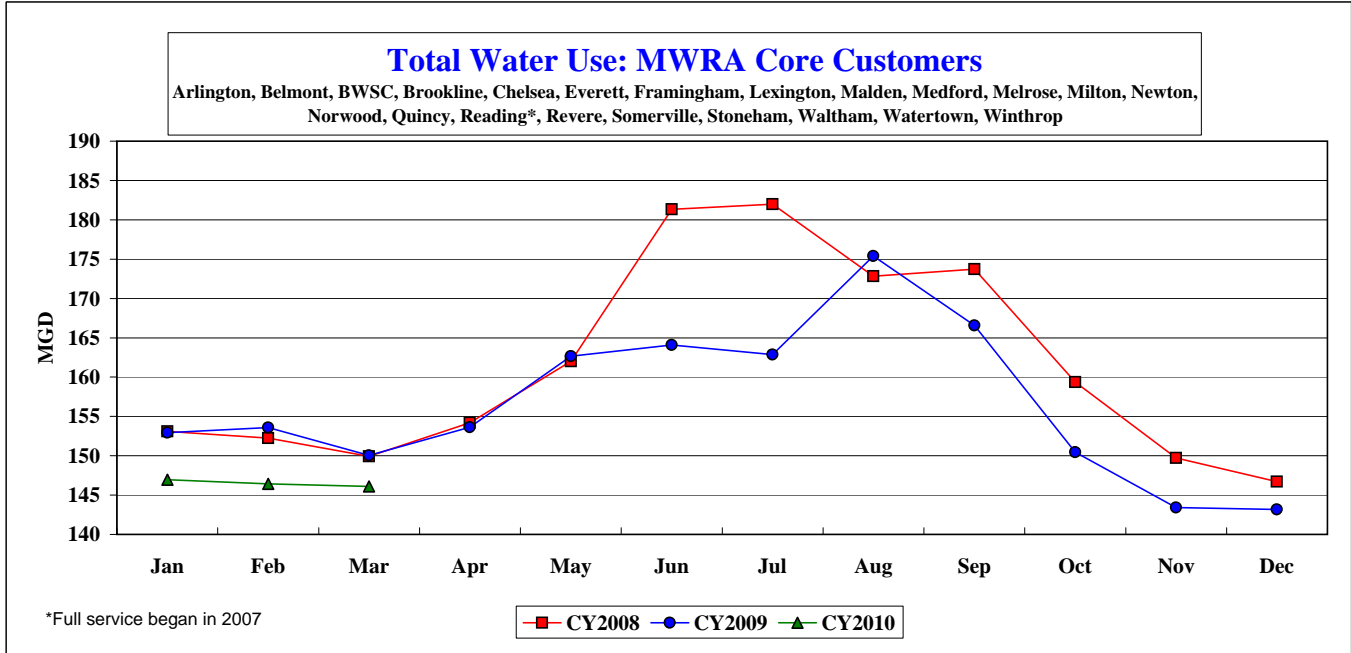
This graph depicts the average monthly flow, measured in million gallons per day, entering the plant. The average monthly flows in January, February, and March were 3.29 mgd, 3.26 mgd, and 3.60 mgd, respectively; the permit limit is 3.01 mgd.

COMMUNITY FLOWS AND PROGRAMS

Total Water Use: MWRA Core Communities
3rd Quarter - FY2010

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	153.584	150.040	153.610	162.670	164.096	162.866	175.400	166.583	150.449	143.414	143.167	156.590
CY2010	146.968	146.445	146.103	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	146.507

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	4,300.347	4,651.228	4,608.285	5,042.784	4,922.882	5,048.836	5,437.393	4,997.482	4,663.925	4,302.417	4,438.185	57,155.379
CY2010	4,556.000	4,100.454	4,529.205	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	13,185.659



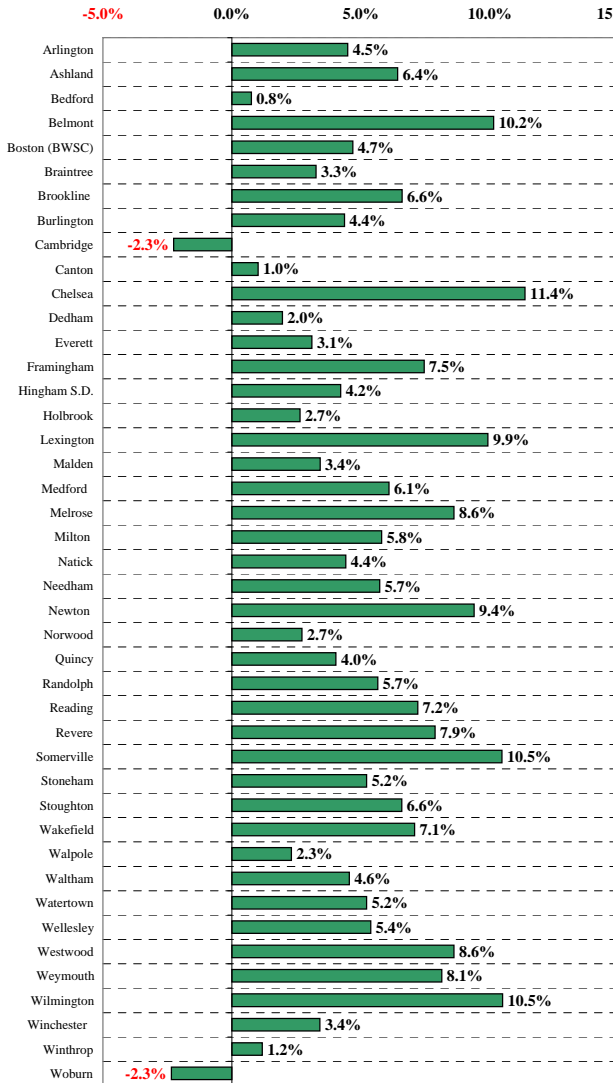
How CY2010 Community Wastewater Flows Through Two Months Could Effect FY2012 Sewer Assessments ^{1,2}

The flow components of FY2012 sewer assessments will be allocated using a 3-year average of CY2008 to CY2010 wastewater flows compared to PFY2011 assessments that used a 3-year average of CY2007 to CY2009 wastewater flows.

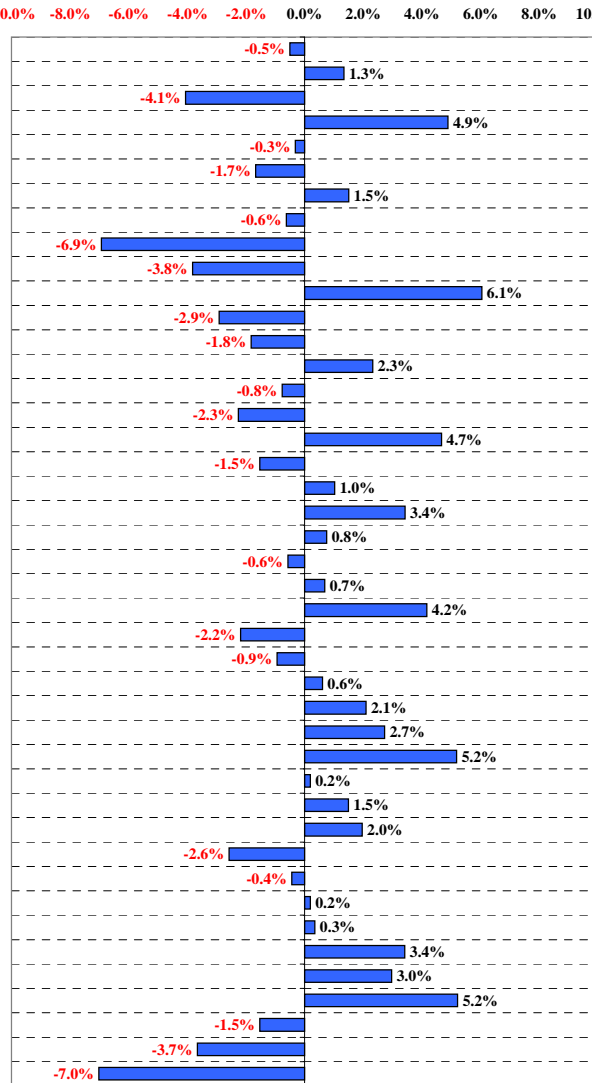
But as MWRA's sewer assessments are a ZERO-SUM calculation, a community's assessment is strongly influenced by the RELATIVE change in CY2008 to CY2010 flow share compared to CY2007 to CY2009 flow share, compared to all other communities in the system.

Change in flow shares are only a part of the assessment calculation as illustrated by the estimated impact of flow share changes on FY2012 sewer assessments.

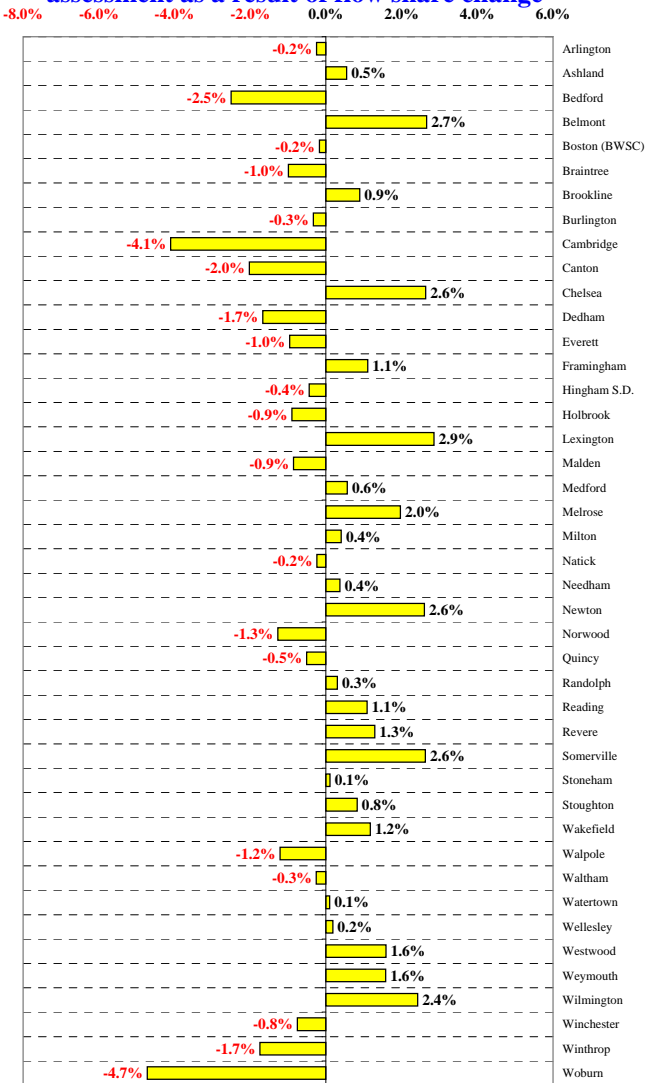
Change in community absolute flow



Change in community flow share



Estimated variance from average system assessment as a result of flow share change ³



¹ MWRA uses a 3-year moving 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 04/14/10. Flow data is preliminary and subject to change pending additional MWRA and community review.

³ Represents the assessment impact of the changes in wastewater flow share.

MARCH DATA STILL UNDER REVIEW DUE TO LARGE STORM EVENTS.

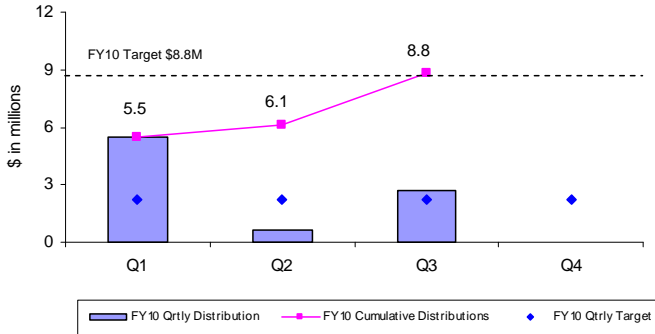
Community Support Programs

3rd Quarter – FY10

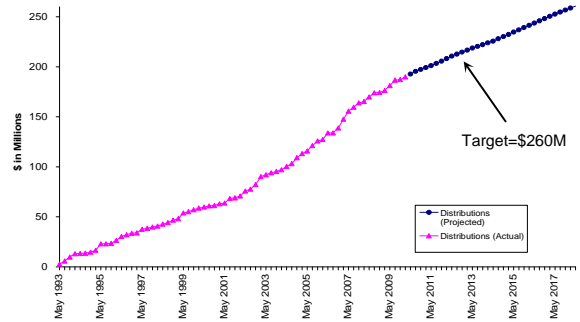
Infiltration/Inflow Local Financial Assistance Program

The 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.

FY10 Quarterly Distributions of Sewer Grant/Loans



I/I Local Financial Assistance Program Distribution FY93-FY18 Target is \$260M

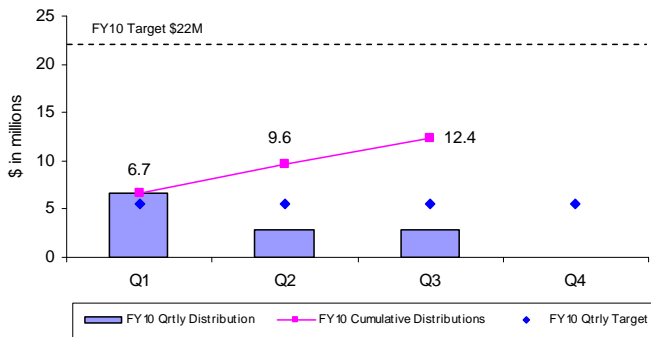


During the third quarter of FY10, \$2.7 million in financial assistance (45% grants and 55% interest-free loans) was distributed to fund local sewer rehabilitation projects in Arlington, Needham, Newton, Randolph, Revere and Winchester. Total grant/loan distribution for FY10 is \$8.8 million. From FY93 through the third quarter of FY10, all 43 member sewer communities have participated in the program and more than \$190 million has been distributed to fund 381 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.

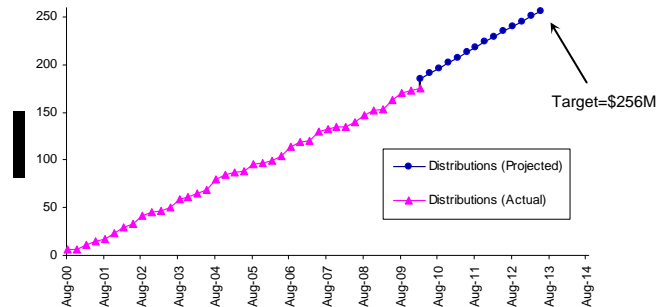
Water Local Pipeline Assistance Program

The MWRA's Local Pipeline Assistance Program (LPAP) provides \$256,796,500 in interest-free loans (an average of about \$20 million per year from FY01 through FY13) to member water communities to perform water main rehabilitation projects within their locally-owned water distribution system. Eligible project costs include: water main cleaning/lining, replacement of unlined water mains, lead service replacements, valve work along the pipe alignment, engineering design, engineering services during construction, etc. LPAP funds are allocated to member water communities based on their percent share of unlined water pipe. 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.

FY10 Quarterly Distributions of Water Loans



Water Local Pipeline Assistance Program Distribution FY01-FY13 Target is \$256M

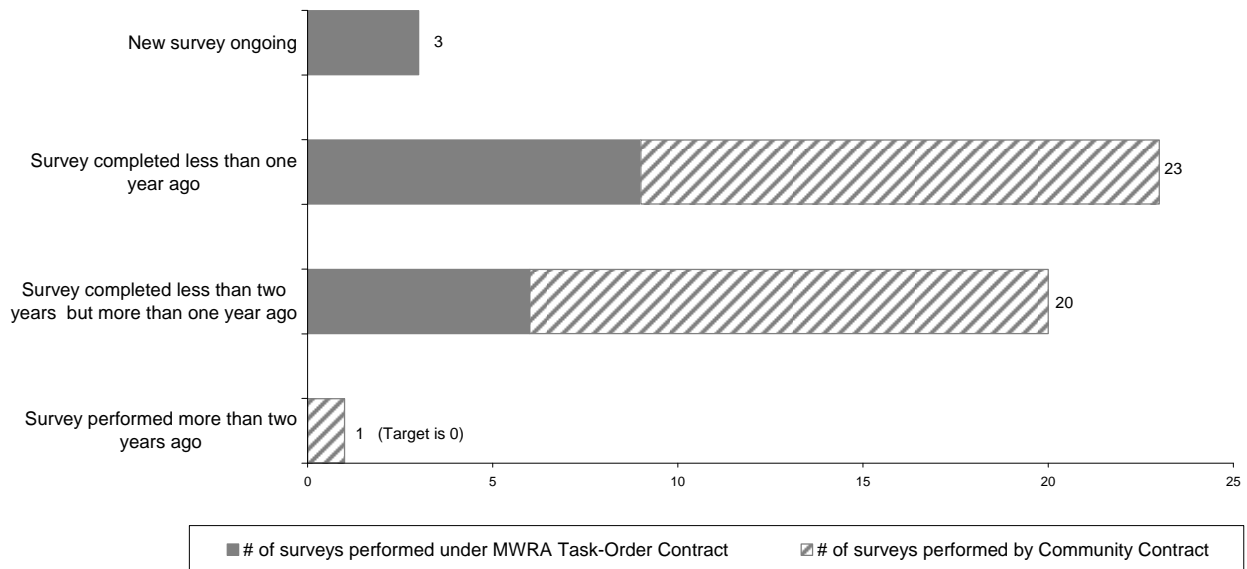


During the third quarter of FY10, \$2.8 million in interest-free loans was distributed to fund local water projects in Boston, Chelsea and Woburn. Total loan distribution for FY10 is \$12.4 million. From FY01 through the third quarter of FY10, \$176 million has been distributed to fund 207 local water pipeline rehabilitation projects in 30 MWRA member water communities. Distribution of the remaining funds has been approved through FY13 and community loan repayments will be made through FY23. All scheduled community loan repayments have been made.

Community Support Programs 3rd Quarter – FY10

Community Water System Leak Detection

To ensure member water communities identify and repair leaks in local-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.



Community Water Conservation Outreach

The 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 regional customers. The annual budget is \$25,000 for printing and purchase of materials. Annual distribution targets and totals are provided in the table below.

	Annual Target	Q1	Q2	Q3	Q4	Annual Total
Educational Brochures	200,000	1,760	22,169	81,488		105,417
Low-Flow Fixtures (showerheads and faucet aerators)	6,000	4,185	2,270	6,268		12,723
Toilet Leak Detection Dye Tablets	-----	4,330	1,246	1,909		7,485

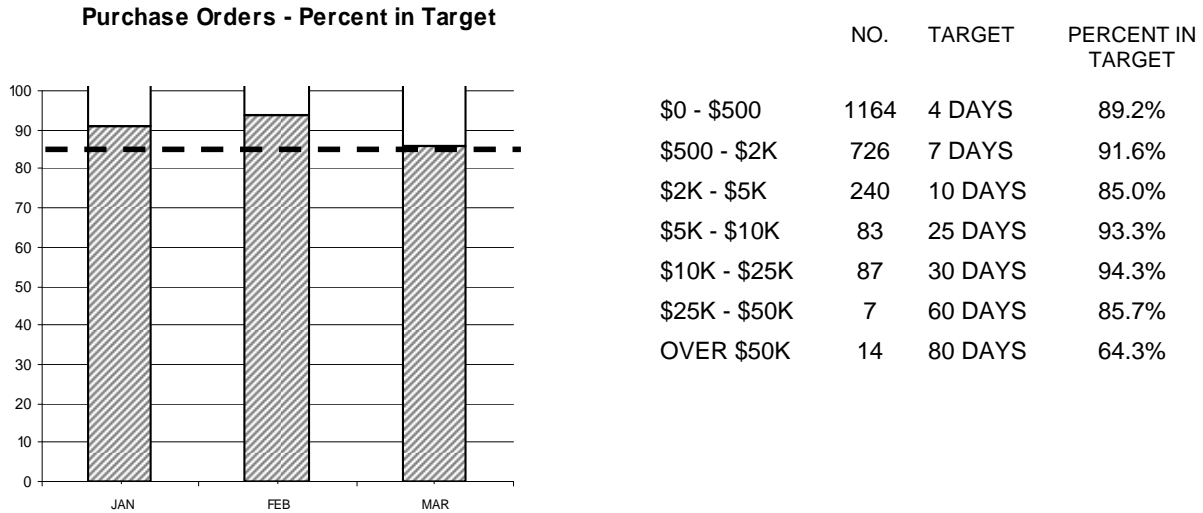
BUSINESS SERVICES

Procurement: Purchasing and Contracts Third Quarter FY10

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

Outcome: Processed 90% of purchase orders within target; Avg. Processing Time was 4.53 days vs. 4.26 days in Qtr 3 of FY09. Processed 74% (14 of 19) contracts within target timeframes; Avg. Processing Time was 133 days vs. 209 days in Qtr 3 of FY09.

Purchasing



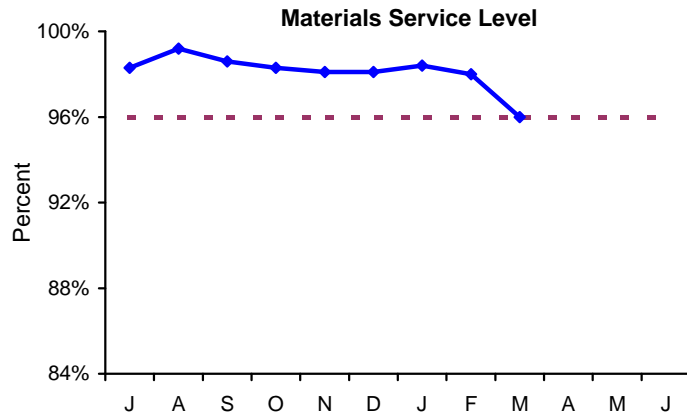
- Purchasing Unit processed 2327 purchase orders, 83 more than the 2244 processed in Qtr 3 of FY09, for a total value of \$8,223,077 vs. a dollar value of \$5,112,508 in Qtr 3 of FY09.
- The target was not achieved for the over \$50k category due to a re-bid, revised specifications and the sourcing of additional vendors

Contracts, Change Orders and Amendments

- Five contracts were not processed within target timeframes. Reasons include: revisions to specifications, late submission of documents by the vendor, extensive negotiations, and in one instance an extended bid review and protest.
- Procurement processed nineteen contracts with a value of \$32,682,936 and ten amendments with a value of \$527,879.
- Twenty-six change orders were executed during the period, but several were large balancing change orders at the end of jobs, and are recorded as credits or negative numbers. The dollar value of all non-credit change orders during Qtr 3 FY10 was \$2,924,098. The net dollar value of all change orders was \$2,255,284.
- In addition, staff reviewed 88 proposed change orders and 48 draft change orders.

Materials Management

3rd Quarter, FY10



The service level is the percentage of stock requests filled. The goal is to maintain a service level of 96%. Staff issued 10,023 (97.5%) of the 10,284 items requested in Q3 from the inventory locations for a total dollar value of \$1,232,333.

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 FY10 goal is to reduce consumable inventory from the July '09 base level (\$6.88 million) by 3.0% (approximately \$206,504), to \$6.67 million by June 30, 2010 (see chart below).

Items added to inventory this quarter include:

- Deer Island – allen screw sets and overload relay for Residuals. Screw machine, swagelok adapter for Liquid Train and abrasive wheel slasher for the Machine shop.
- Chelsea – backflow preventer and rubber kit for the Maintenance group.
- Southboro – check valve and electrode ion for the Carroll Water Treatment Plant.

Property Pass Program:

- Numerous obsolete computers, printers, monitors, keyboards, mice, memory boards, modems, projectors and servers have been received into property pass as surplus. Disposition is being handled as part of our ongoing recycling efforts.
- Scrap revenue for the third quarter amounted to \$1,647.08.
- Tool/equipment reviews were conducted by staff at Chelsea SCADA.

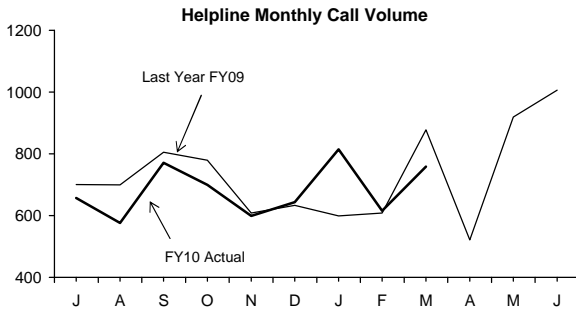
Items	Base Value July-09	Current Value w/o Cumulative New Adds	Reduction / Increase To Base
Consumable Inventory Value	6,883,472	6,752,185	-131,287
Spare Parts Inventory Value	7,243,971	7,043,086	-200,885
Total Inventory Value	14,127,443	13,795,271	-332,172

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

MIS Program 3rd Quarter FY10

Operations

Highlights:



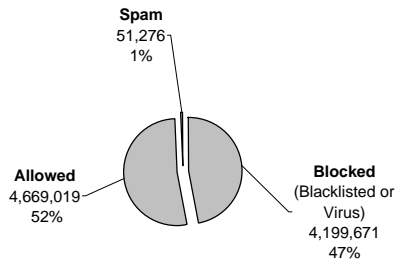
Performance

Call volume peaked in January and has decreased by 2.77% from Q3 last year. The backlog peaked in February and is above the targeted benchmark range.

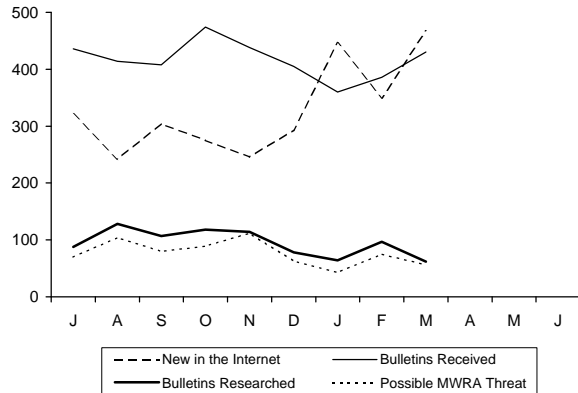
Business System Plan

- Cyber Security: During Q3, staff pushed security fixes and updates to desktops and servers throughout the quarter in order to protect against the 1263 newly revealed vulnerabilities.
- Eight files were identified with viruses on MWRA computers this quarter and infected files were cleaned or deleted before any damage ensued.

Emails Received



Internet Vulnerabilities



- Deer Island Operations and MIS staff installed an 80 KVA 480 volt Uninterruptible Power Supply (UPS) unit to replace an obsolete unit that had been serving the MIS Data Center on Deer Island for 10+ years. The UPS unit provides backup power to the MIS servers and equipment, which are located on the second floor in the Administration/Laboratory building. A typical UPS unit provides backup power to downstream critical equipment by using a DC source (batteries) and converting the DC power to AC in the emergency mode of operation. The UPS continuously supplies normal AC conditioned power to critical and sensitive equipment. In the event of a power loss or power disruption the UPS automatically transfers to the DC source of power.

Applications/Training/Records Center

Area	Significant Accomplishments
GIS/PIMS	(GIS) The web-based searching and viewing of GIS data and special application that allows users to trace up and down a sewer pipe, all without leaving the PIMS application went into user acceptance test during Q3; expected to go live in Q4. Security features have been implemented to restrict PIMS user access from these web applications to the GIS application. (PIMS) The process of generating fees from PIMS for the industrial pretreatment program was completed with invoices (in the amount of \$1.8m) being generated from Lawson.
Community Contacts Application	At the request from Public Affairs, created a web application that will serve as a single source for Community Contacts information (currently, there are multiple sources for this information). Users will be able to use the application to query (i.e. by community or by official title), print mailing labels, and export to different file formats. Awaiting final acceptance from users before going live in Q4.
Lawson	The new Lawson Absence Management Module, which tracks benefit bank accruals (vacation time, sick time, etc.), went live this quarter.
Magic SDE	The new Magic Service Desk Express (SDE) helpdesk system went live this quarter. Staff will phase out the legacy asset tracking database running in parallel for the time being and use the feature in the Magic SDE. Imported inventory records (approximately 2,400 records) from the legacy asset tracking database into the new Magic Service Desk Express (SDE) helpdesk system.
Training	For the quarter, 59 staff attended 20 classes and 7 workshops. Year-to-date, 260 staff have attended 44 classes and 24 workshops. 14.5% of the workforce have attended at least one class year-to-date.
Library & Records Center	The Library completed distribution of 4922 (12,445 YTD) electronic articles to staff desktops including 3362 from combined ENQUAD topics and 587 renewable energy articles. Processed 53 (190 YTD) searches on topics such as USGS topo maps for Revere & Chelsea, Dams, wind turbines, and NOAA historical rainfall data. The Records Center added 175 new boxes (366 YTD).

Legal Matters

3rd Quarter FY2010

PROJECT ASSISTANCE

COURT AND ADMINISTRATIVE ORDERS

- **Boston Harbor Litigation and CSO:** Reviewed final completion report for the supplemental environmental protection project for the installation of low flow toilets. Drafted and filed quarterly compliance and progress report and reviewed and filed CSO annual report.
- **NPDES:** Reviewed 308 request for information pursuant to the Clean Water Act issued for discharge from Carroll Water Treatment Plant and filed response. Drafted written notification of diesel fuel spill at MWRA's Cottage Farm CSO treatment facility with Enquad. Drafted various letters with Enquad notifying EPA and DEP of: the February 25, 2010 power outage at DITP; the bypass that occurred at the Nut Island Headworks; the blending event that occurred at DITP; the SSOs and the north and south systems; and the blending event and bypass that occurred at the Clinton wastewater treatment plant as a result of the March 2010 storm events.

REAL ESTATE AND CONTRACT AND OTHER SUPPORT

- **Low Service Storage Facility – Spot Pond:** Finalized and assured recording of Closing Documents.
- **Watershed Land Acquisition:** Reviewed 3 proposed acquisitions of either Watershed Preservation Restrictions or fee takings of real property.
- **Lynnfield-Saugus Pipeline:** Drafted License for Entry agreement for entry upon the property owned by the City of Lynn and located in Saugus, Massachusetts.
- **Saugus Water Mains:** Drafted an MOA with Saugus for cost sharing during the Project.
- **Carroll Water Treatment Plant:** Finalized an Agreement with the Ozone Generator Manufacturer, Fuji, to provide generator re-build services.
- **Power Purchase Agreement:** Drafted, revised and finalized the Purchase Power Agreement.
- **Statutes/Regulations/Permits:** Reviewed and made a determination regarding the applicability of World Trade Organization treaties to the MWRA with respect to the **Buy American Provision** and ARRA funded MWRA contracts; reviewed federal and state regulations to determine what requirements apply to the transport of hazardous materials in tunnels and on road ways other than the tunnels by MWRA staff and drafted memorandum setting forth requirements and guidelines; reviewed c. 93H and prepared memorandum on the Data Breach Notification Law.
- **Section 8(m) permits:** Reviewed and approved 15 Section 8(m) permits.

ENVIRONMENTAL

- **Statutes/Regulations-Amendments:** Reviewed G.L. c.21E and associated regulations regarding the ability of MWRA to have an MWRA employee act as the Licensed Site Professional for events falling under c. 21E.
- **Storm water:** Drafted summary of the state's (i.e., DEP's) stormwater program and currently proposed regulations regarding stormwater management requirements; reviewed and drafted summary on EPA's draft general permit for small municipal separate storm sewer systems (MS4).
- **Safe Drinking Water:** Completed negotiations with DEP to allow for recognition of MWRA's entitlement to 2 additional years to come into compliance with the Long Term 2 Enhanced Surface Water Treatment Rule.

LABOR, EMPLOYMENT AND ADMINISTRATIVE

New Matters

Seven demands for arbitration were filed.

Two charges were filed at the Massachusetts Commission Against Discrimination.

Matters Concluded

Received an arbitration decision in favor of the MWRA.

LITIGATION/TRAC

New Lawsuits

Three new cases were reported in the Third Quarter of FY 2010.

Liberty Mutual Insurance Company as subrogee to Santa Diaz v. MWRA, et al.: This is a subrogation claim brought by Liberty Mutual Insurance Company as subrogee of Santa Diaz. The plaintiff alleges that on August 27, 2008, an MWRA employee operating an MWRA vehicle, negligently caused a collision between the Diaz vehicle and the MWRA vehicle on Marginal Street in Chelsea, Massachusetts. Plaintiff seeks recovery of \$2,242.31 for Personal Injury Protection (PIP) benefits paid to Diaz, and \$572.85 for property damage. Total damages sought on this subrogation claim are \$2,815.16.

Midland Funding LLC v. employee v. MWRA: A Trustee summons was received on March 3, 2010 from Midland Funding, LLC for (current MWRA employee) to garnish wages in the amount of \$18,589.95.

Safety Insurance Company v. Fore River Railroad Corporation, Fore River Transportation Corporation and MWRA: This is a subrogation claim brought by Safety Insurance Company. The plaintiff, as subrogee of Robert Sullivan, alleges that on August 9, 2009, the defendants negligently maintained the railroad tracks and/or roadway located at or near 641 Commercial Street, Braintree, MA so as to cause a spike and/or bolt to puncture a tire on the motor vehicle belonging to plaintiff's insured, resulting in property damage in the sum of \$7,691.44. On March 25, 2010, Fore River Railroad Corporation (FRRC) and MWRA served a Notice of Lawsuit and Tender of Defense on Fore River Transportation Corporation (FRTC), Twin Rivers Manufacturing Corporation (Guarantor), and Zurich American Insurance Group (FRTC insurer). Pursuant to the License under which FRTC operates the railroad, FRRC and MWRA are entitled to a defense and full indemnification for any liability which may be found against FRRC and MWRA.

Significant Developments

MWRA v. Chutehall Construction Company, et al.: On January 7, 2010, the Superior Court heard oral argument on two motions in MWRA's lawsuit to compel payment of a \$10,000 TRAC penalty by Chutehall Construction, Inc. MWRA is seeking to recover the \$10,000 penalty, plus interest and the costs of bringing this lawsuit. The motions were Chutehall's Motion to Dismiss, and MWRA's Motion for a Preliminary Injunction. On February 17, 2010, the Superior Court issued a decision denying Chutehall Construction Co.'s Motion to Dismiss MWRA's suit and a decision denying MWRA's Motion for a Preliminary Injunction. MWRA has since moved for Summary Judgment and has been negotiating to accept a \$10,000 payment from Chutehall in escrow.

(Former employee) v. MWRA: On Jan 6, 2010, after oral argument, the Suffolk Superior Court denied the Plaintiff's Rule 56(f) to allow him to take discovery in order to respond to MWRA's Motion for Summary Judgment. On March 23, 2010, MWRA's Motion for Summary Judgment was argued before the Court and was taken under advisement.

Lemanski v. MWRA, et. Al., Worcester Superior Court, No. 02-2289-A: On March 30, 2010, MWRA's Motion for Summary Judgment was argued before the Court and was taken under advisement. The Motion for Summary Judgment was also filed on behalf of two MWRA employees that have been named as individual defendants in the lawsuit.

Closed Cases

Four cases were reported closed and one claim was reported closed.

Charter Environmental, Inc. v. MWRA, et al.: This is an action brought by plaintiff Charter Environmental, Inc., against MWRA and M.L. French Excavating Corp. seeking to enjoin the MWRA from awarding MWRA Contract No. OP-107, a non professional services contract, to French, on the grounds that the contract should have been bid pursuant to G.L. c. 30 Section 39M. After a hearing on April 28, 2009, the Court denied plaintiff's motion for a preliminary injunction. A Stipulation of Dismissal has been filed.

Comfort Sit & Sleep, d/b/a Chair Fair vs. MWRA and P. Gioioso & Sons: In December, 2009 the Superior Court allowed the motions of MWRA and P. Gioioso for summary judgment, and

dismissed Comfort Sit's public nuisance lawsuit in its entirety. Plaintiff had alleged that during 2006, MWRA and Gioioso created a public nuisance and caused plaintiff to sustain business losses in connection with construction of the Upper Neponset Valley Replacement Sewer Project, specifically that portion of the construction work performed in the vicinity of plaintiff's furniture business on the VFW Parkway in West Roxbury. Plaintiff claimed that the re-configuration of the road, traffic congestion, and impact on access to plaintiff's store caused plaintiff to lose business. The time for plaintiff to seek reconsideration of the Judge's decision, and/or to file a notice of appeal has expired, and the matter has been closed.

There are two companion cases that closed in March 2010.

Electric Insurance v. MWRA; MWRA v. Ciera Doyle

This litigation arises out of an automobile accident that occurred on October 22, 2007 in Everett, MA between an MWRA truck driven by an MWRA employee and an automobile driven by Ciera Doyle. The accident resulted in \$7,911.00 in damage to the Doyle vehicle, a 1999 Ford Mustang, and \$6,068.47 in damage to the MWRA truck. Liability in this matter was uncertain. As a result, both parties agreed on March 12, 2010 to dismiss their respective lawsuits with prejudice, with no payments by either.

Subpoenas

During the Third Quarter of FY 2010 no subpoenas were received and one subpoena was pending at the end of the Third Quarter.

Public Records

During the Third Quarter of FY 2010 twenty new public records requests were received and six requests were closed at the end of Third Quarter FY 2010.

SUMMARY OF PENDING LITIGATION MATTERS

TYPE OF CASE/MATTER	As of March 2010	As of Dec 2009	As of Sept 2009
Construction/Contract/Bid Protest (other than BHP)	3	4	4
BHP Claims/Contract Cases	0	0	0
Tort/Labor/Employment	7	7	7
Environmental/Regulatory/Other	2	2	2
Eminent Domain/Real Estate	2	2	2
Total – all defensive cases	14	15	15
Affirmative Cases:	2	3	3
<u>MWRA v. (current employee)</u>			
<u>MWRA v. Chutehall Construction Co., Ltd, et al.</u>			
Other Litigation matters (restraining orders, etc.)	2	2	2
<u>MWRA v. (former employee)</u>			
<u>MWRA v. (former employee)</u>			
Total – all pending lawsuits	18	20	20
Significant claims not in suit:	0	2	2
Bankruptcy	9	1	1
Wage Garnishment	8	7	7
TRAC Appeals	3	5	5
Subpoenas	1	1	1
TOTAL - ALL LITIGATION MATTERS	39	36	36

TRAC

New Appeals:

One new appeal was received in the 3rd Quarter FY 2010.

- Walgreens Company; MWRA Docket No. 10-01

**Settlement by
Agreement of
Parties**

No cases were settled by Agreement of Parties in 3rd Quarter FY 2010.

**Notice of Dismissal
Fine paid in full**

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

**Tentative
Decisions**

One Tentative Decision was issued in 3rd Quarter FY 2010.

- New England Wildlife Center: MWRA Docket No. 09-02

**Final
Decisions**

One Final Decision was issued during the 3rd Quarter FY 2010.

- New England Wildlife Center: MWRA Docket No. 09-02

INTERNAL & CONTRACT AUDIT PROGRAM

3rd Quarter FY10

Highlights

Internal Audit was in the process of closing a number of assignments in the third quarter. As part of its ongoing review of MIS general controls a draft report was issued on physical controls at the MIS Chelsea Data Center. A draft report was issued on the review of the construction work in process account. Two reports were issued on the residuals program, a draft report on the Bay State Organic program and an interim report on New England Fertilizer Company's (NEFCO's) financial results from the operation of the pellet plant in Quincy in calendar years 2007, 2008 and 2009. Additional field work is scheduled at NEFCO in April to finalize the 2009 financial results.

Status of Open Audit Recommendations

The Internal Audit Department follows up on open recommendations on a continuous basis. All pending recommendations have target implementation dates and Internal Audit has implemented a tracking system that automatically notifies the responsible managers 30 days prior to the target implementation date. 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 95% 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
Review of Fixed Assets (9/21/09)	5	5
Construction Change Order Pricing (12/31/09)	<u>5</u>	<u>0</u>
Total Recommendations	13	23

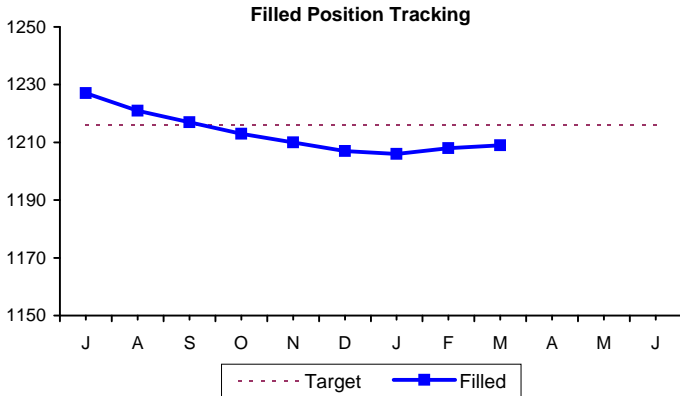
Audit Savings

- 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. Commencing in FY07 cost savings include the dollar impact, if measurable, of internal assignments.
- Through the third quarter, some of the more significant savings include \$265,858 in projected savings from preliminary construction labor burden reviews, \$124,993 in savings arising from audit advisory services during the award of the current security contract, and \$102,394 in tax savings from the MWRA lease of the Engine House to the Fore River Railroad Corporation (FRRC). Staff also recovered \$89,201 and avoided \$52,293 in consultant billings as the result of incurred cost audits.

Savings	FY06	FY07	FY08	FY09	FY10	TOTAL
Consultants	\$768,394	\$358,341	\$55,901	\$316,633	\$163,994	\$1,663,263
Contractors & Vendors	\$456,968	\$637,378	\$2,147,311	\$1,262,088	\$536,606	\$5,040,351
Internal Audits		\$183,840		\$438,027	\$141,477	\$763,344
Total	\$1,225,362	\$1,179,559	\$2,203,212	\$2,016,748	\$842,077	\$7,466,958

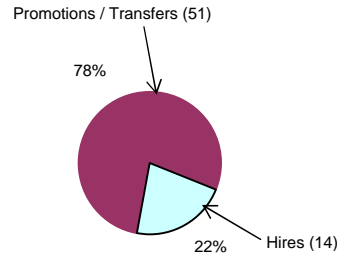
OTHER MANAGEMENT

Workforce Management 3rd Quarter FY10



FY10 Target for Filled Positions = 1216
Filled Positions as of March 2010 = 1209

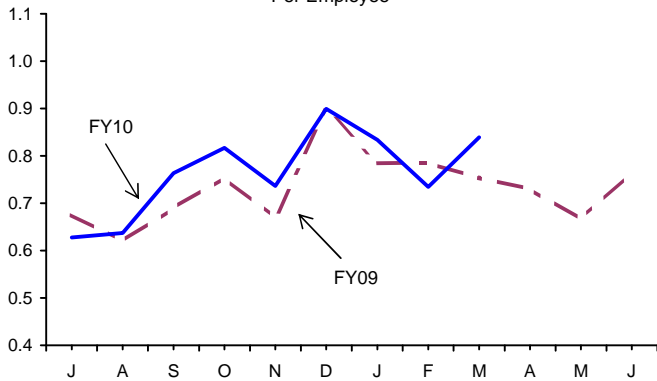
**Positions Filled by Hires/Promotions
FY10**



	Pr/Trns	Hires	Total
FY07	52 (56%)	41(44%)	93
FY08	63 (62%)	39(38%)	99
FY09	63 (73%)	23(27%)	86

In FY10, the average monthly sick leave usage has increased 3.90% from the same time last year.

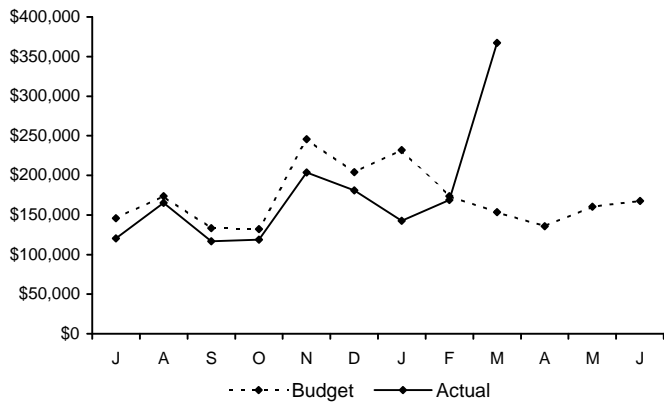
**Average Monthly Sick Leave Usage
Per Employee**



	Number of Employees	YTD	Annualized Total	Annual FMLA %	FY09
Law	18	7.24	9.65	5.3%	7.91
Planning	23	4.89	6.53	20.8%	8.07
Operations	938	7.04	9.38	23.7%	9.11
Support	181	6.13	8.18	35.4%	7.53
Finance	43	8.46	11.29	46.5%	8.45
Executive	8	3.27	4.36	0.0%	6.83
MWRA Avg	1211	6.89	9.19	25.6%	8.79

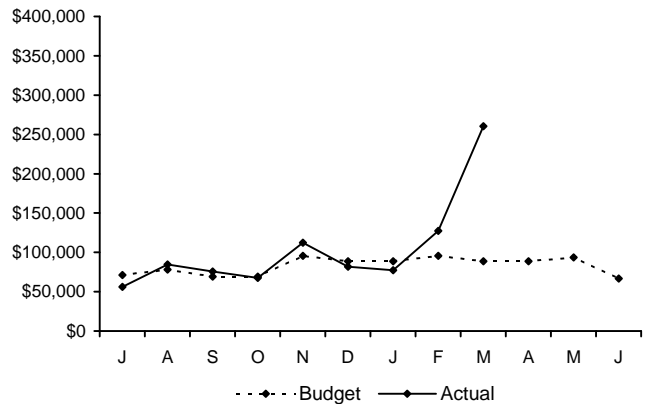
Percent of sick leave usage attributable to Family and Medical Leave Act (FMLA) leave is 25.6% ending March 31, 2010.

**Field Operations
Overtime Expenditure Variance**



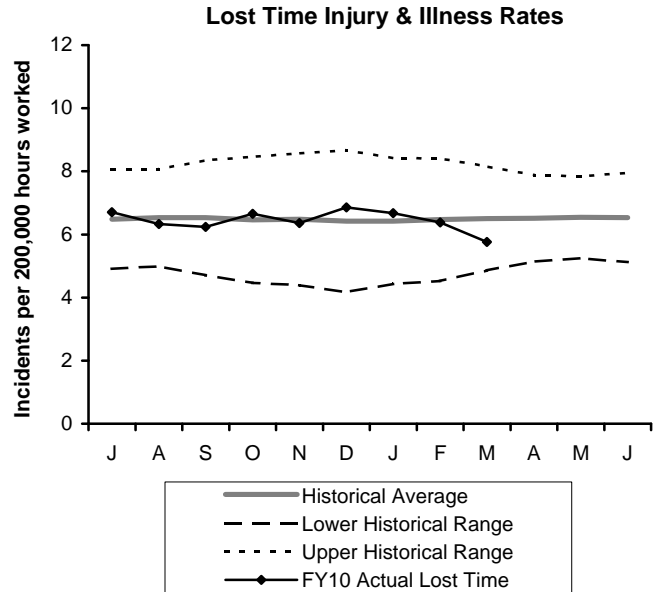
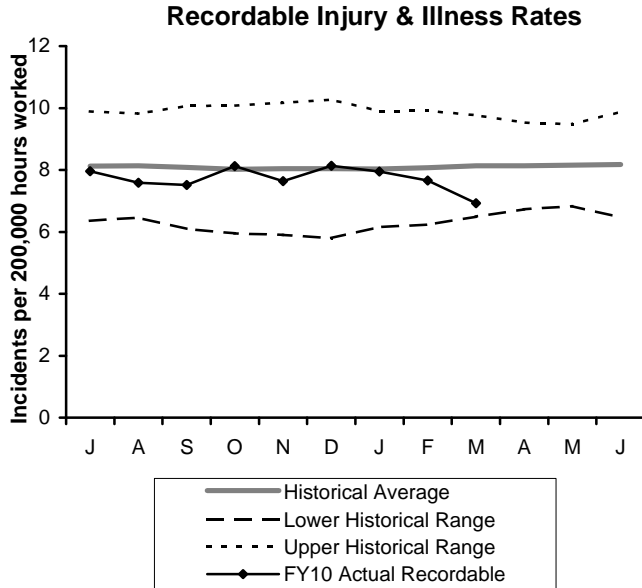
Overtime spending in the third quarter was \$119,992 more than budgeted 21.5%, due to the protracted and unprecedented rain events during almost the entire month.

**Deer Island Treatment Plant
Overtime Expenditure Variance**



Overtime spending in the third quarter was \$192,899 more than budgeted 70.8%, primarily due to storm coverage in Operations, Thermal and Maintenance.

Workplace Safety 3rd Quarter FY10



- 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 FY09. The "Upper" and "Lower Historical Ranges" are computed using these same data – adding and subtracting two standard deviations respectively. FY10 actual incident rates can be expected to fall within this historical range.

Workers Compensation Claims Highlights

	New	Closed	Open Claims
Lost Time	5	10	59
Medical Only	55	52	53
	New		YTD Returns
Light Duty Returns			1

Q3 Highlights / Comments

In January:

- 3 employees returned to work in their regular positions after being on IA.
- 1 employee returned to work light duty for 4 days and then went back on IA.

In February:

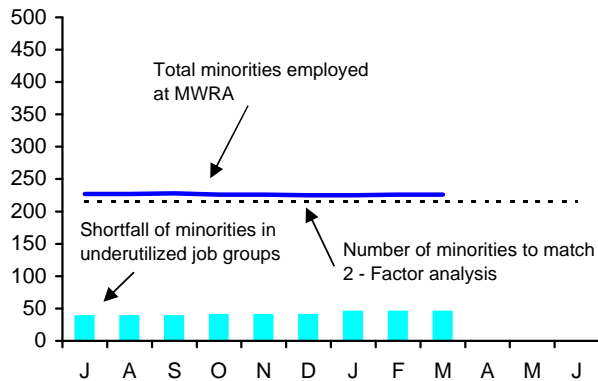
- 1 employee returned to work in his regular job after being on IA.
- 1 employee returned to work light duty for 2 days and then went back on IA.

In March:

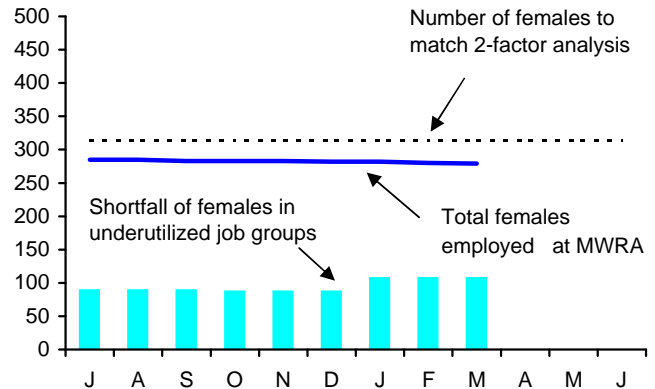
- 1 employee returned to work in his regular job after being on IA.

MWRA Job Group Representation 3rd Quarter, FY10

Minority - Affirmative Action Plan



Female - Affirmative Action Plan Goals



Highlights:

At the end of Q3 FY10, 8 job groups or a total of 45 positions are underutilized by minorities as compared to 7 job groups or a total of 43 at the end of Q3 FY09; for females 14 job groups or a total of 107 positions are underutilized by females as compared to 14 job groups or a total of 88 at the end of Q3 FY09. During Q3, 1 minority and 0 females were hired. During this same period, 0 minorities and 3 females terminated.

Underutilized Job Groups - Workforce Representation

Job Group	Employees	Minorities	Achievement Level	Minority	Females	Achievement Level	Female
	as of 3/31/2010	as of 3/31/2010		Over or Under	As of 3/31/2010		Over or Under
Administrator A	17	3	2	1	2	5	-3
Administrator B	25	0	4	-4	6	6	0
Clerical A	48	21	11	10	42	12	30
Clerical B	37	9	9	0	18	3	15
Engineer A	85	16	14	2	11	15	-4
Engineer B	50	9	4	5	6	25	-19
Craft A	124	16	22	-6	0	6	-6
Craft B	143	26	19	7	3	8	-5
Laborer	62	13	11	2	4	10	-6
Management A	104	16	19	-3	30	41	-11
Management B	56	10	12	-2	14	28	-14
Operator A	64	5	7	-2	2	4	-2
Operator B	68	8	13	-5	4	5	-1
Para Professional	62	11	27	-16	29	55	-26
Professional A	38	2	9	-7	24	16	8
Professional B	170	43	31	12	77	79	-2
Technical A	48	15	10	5	4	11	-7
Technical B	11	3	2	1	3	4	-1
Total	1212	226	226	45/-45	279	333	53/-107

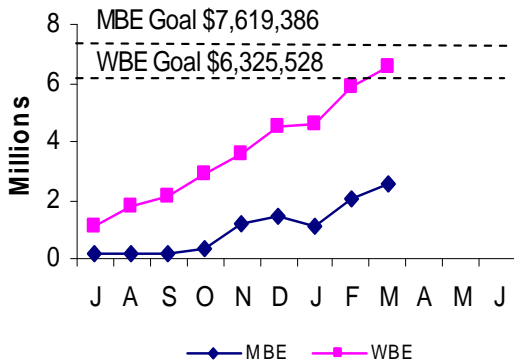
AACU Candidate Referrals for Underutilized Positions

Job Group	Title	# of Vac	Requisition Int. / Ext.	Promotions/ Transfers	AACU Ref. External	Position Status
Craft A	M&O Specialist	1	Int	1	0	W/M
Craft B	Medium Voltage Electrical Sp	1	Int	1	0	B/M
Craft B	Motor Equipment Repairman	1	Int/Ext	0	0	Pending
Craft B	Electrician	1	Ext	0	1	Pending
Engineer A	Sr. Civil Engineer	1	Int	1	0	W/M
Engineer B	Assistant Civil Eng.	1	Int	0	0	Pending
Laborer	OMC Laborer	1	Int	0	0	Pending
Management B	Shift Operations Manager	1	Int	0	0	Pending
Operator A	Area Supervisor	1	Int	0	0	Pending
Technical A	Communication & Control Te	2	Int/Ext	1	0	W/M/Pending

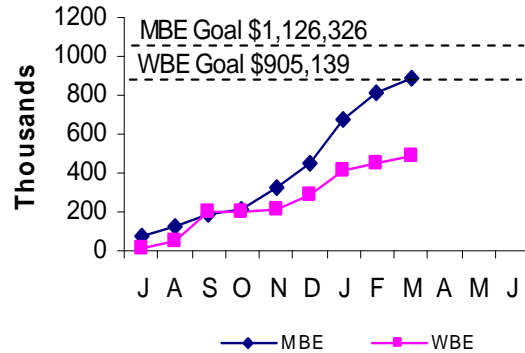
MBE/WBE Expenditures Third Quarter FY 2010

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 March.

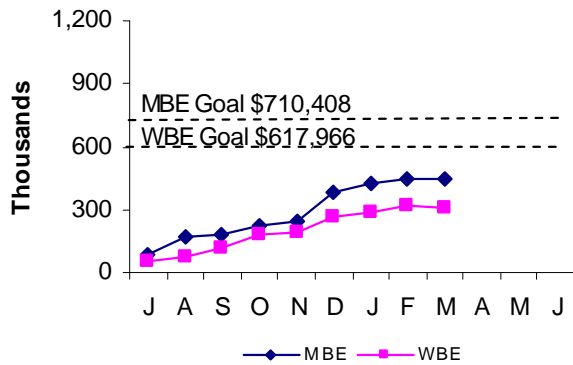
Construction



Professional



Goods/Services



Note: MBE Construction dollars decreased from December to January due to the disallowance of previously reported dollars. This is due to a contractor being sanctioned for non-compliance with contractual requirements.

FY10 spending and percentage of goals achieved, as well as FY09 performance are as follows:

	MBE				WBE			
	FY10 Year-to-Date		FY09		FY10 Year-to-Date		FY09	
	<u>Amount</u>	<u>Percent</u>	<u>Amount</u>	<u>Percent</u>	<u>Amount</u>	<u>Percent</u>	<u>Amount</u>	<u>Percent</u>
Construction	2,556,665	33.6%	6,609,216	122.4%	6,580,970	104.0%	8,770,461	210.0%
Professional Svc.	891,667	79.2%	1,266,243	83.5%	489,703	54.1%	706,320	57.9%
Goods & Svcs.	450,304	63.4%	1,288,538	187.7%	311,910	50.5%	835,066	139.8%
Total	\$3,898,636	41.2%	\$9,163,997	120.5%	\$7,382,583	94.1%	\$10,311,847	172.1%

MWRA FY10 CEB Expenses through 3rd Quarter – FY10

	March 2010 Year-to-Date					
	Period 9 YTD Budget	Period 9 YTD Actual	Period 9 YTD Variance	%	FY10 Approved	% Expended
EXPENSES						
WAGES AND SALARIES	\$ 67,176,156	\$ 65,293,083	\$ (1,883,073)	-2.8%	\$ 91,711,114	71.2%
OVERTIME	2,598,771	2,744,974	146,203	5.6%	3,408,792	80.5%
FRINGE BENEFITS	12,411,374	12,082,277	(329,097)	-2.7%	16,578,832	72.9%
WORKERS' COMPENSATION	993,750	1,449,466	455,716	45.9%	1,325,000	109.4%
CHEMICALS	7,823,221	6,608,892	(1,214,329)	-15.5%	10,363,436	63.8%
ENERGY AND UTILITIES	18,091,840	17,940,599	(151,241)	-0.8%	24,072,215	74.5%
MAINTENANCE	20,220,020	18,230,335	(1,989,685)	-9.8%	28,259,673	64.5%
TRAINING AND MEETINGS	119,015	47,892	(71,123)	-59.8%	164,003	29.2%
PROFESSIONAL SERVICES	4,401,816	4,094,502	(307,314)	-7.0%	5,903,213	69.4%
OTHER MATERIALS	2,905,716	2,578,829	(326,887)	-11.2%	4,603,646	56.0%
OTHER SERVICES	17,375,281	16,554,054	(821,227)	-4.7%	23,222,760	71.3%
TOTAL DIRECT EXPENSES	\$ 154,116,960	\$ 147,624,903	\$ (6,492,057)	-4.2%	\$ 209,612,684	70.4%
INSURANCE	\$ 1,737,000	\$ 2,018,715	\$ 281,715	16.2%	\$ 2,316,000	87.2%
WATERSHED/PILOT	17,662,255	17,475,491	(186,764)	-1.1%	23,549,673	74.2%
BEC _o PAYMENT	2,928,300	2,934,800	6,500	0.2%	3,877,500	75.7%
MITIGATION	1,111,025	1,084,229	(26,796)	-2.4%	1,481,367	73.2%
ADDITIONS TO RESERVES	(489,941)	(489,941)	-	0.0%	(653,254)	75.0%
RETIREMENT FUND	6,995,441	4,210,752	(2,784,689)	-39.8%	8,392,133	50.2%
POST EMPLOYEE BENEFITS	-	-	-	---	800,000	---
TOTAL INDIRECT EXPENSES	\$ 29,944,081	\$ 27,234,047	\$ (2,710,034)	-9.1%	\$ 39,763,419	68.5%
DEBT SERVICE	\$ 258,737,741	\$ 243,732,464	\$ (15,005,277)	-5.8%	\$ 346,876,225	70.3%
DEBT SERVICE ASSISTANCE	(262,500)	-	262,500	-100.0%	-	0.0%
TOTAL DEBT SERVICE	\$ 258,475,241	\$ 243,732,464	\$ (14,742,777)	-5.7%	\$ 346,876,225	70.3%
TOTAL EXPENSES	\$ 442,536,282	\$ 418,591,414	\$ (23,944,868)	-5.4%	\$ 596,252,328	70.2%
REVENUE & INCOME						
RATE REVENUE	\$ 421,073,250	\$ 421,073,250	\$ -	0.0%	\$ 561,431,000	75.0%
OTHER USER CHARGES	5,703,287	5,537,620	(165,667)	-2.9%	7,939,758	69.7%
OTHER REVENUE	3,667,376	4,008,338	340,962	9.3%	4,371,736	91.7%
RATE STABILIZATION	5,484,329	5,484,329	-	0.0%	7,312,438	75.0%
INVESTMENT INCOME	11,277,561	11,236,785	(40,776)	-0.4%	15,197,396	73.9%
TOTAL REVENUE & INCOME	\$ 447,205,802	\$ 447,340,322	\$ 134,520	0.0%	\$ 596,252,328	75.0%

Through March 2010, total revenue was \$447.3 million, \$134,000 greater than budget. Total expenses were \$418.6 million, \$23.9 million or 5.4% less than budget.

Expenses –

- **Direct Expenses** are \$147.6 million, \$6.5 million or 4.2% less than budget.
- **Maintenance** is \$2.0 million or 9.8% under budget mainly for services and mostly due to timing.
- **Wages and Salaries** are \$1.9 million or 2.8% less than budget due to lower headcount, greater attrition than planned, employees out on work related injury or unpaid leave and leave balance accounting treatment.
- **Chemicals** are \$1.2 million or 16.0% under budget mostly due to lower use due to lower flows and dosing.
- **Other Services** are \$821,000 or 4.7% less than budget. Underspending for Sludge Pelletization of \$680,000 due to lower inflation and lower than budgeted quantities, Printing/Duplicating \$65,000, and Space Lease/Rentals of \$47,000.
- **Fringe Benefits** are \$329,000 or 2.7% under budget. Lower Health Insurance of \$307,000, Medicare of \$71,000 and Dental Insurance of \$22,000 offset by higher Unemployment Insurance of \$80,000 due to the extension of benefits.
- **Other Materials** are \$327,000 or 11.3% under budget mostly due to Computer Hardware \$303,000 due to timing, Vehicle Expense of \$220,000 due to lower gas prices and usage, offset by Vehicle Purchases of \$295,000 due to timing and the decision to accelerate some FY11 planned purchases.
- **Professional Services** are \$307,000 or 7.0% less than budget. Underspending for Engineering of \$128,000 and Lab and Testing of \$71,000 due to delays in use of as-needed services and Local Limits, Other of \$98,000 and Legal of \$71,000.
- **Utilities** are \$151,000 or 0.8% under budget. Underspending for Electricity due to CTG use offset by higher Diesel Fuel spending at Deer Island for CTG use during the March storm events.
- **Workers' Compensation** is \$456,000 or 45.9% higher than budget due to the unusually high number of claimants who have applied for and received accidental disability retirements.
- **Overtime** is \$146,000 or 5.6% over budget due to March wet weather events.
- **Indirect Expenses** are \$27.2 million, \$2.7 million or 9.1% under budget mainly due to voluntary pension payment delay of \$2.8 million, higher Insurance claims of \$303,000 primarily due to the accrual of \$500,000 for the Cottage Farm site clean-up based on preliminary estimates, and lower Watershed expenses of \$279,000 due to FY09 over-accrual offset by higher Payment in Lieu of Taxes (PILOT) expenses of \$92,000.
- **Debt Service Expenses** total \$243.7 million, \$14.7 million or 5.7% less than budget mostly as a result of favorable interest rates.

Revenue and Income –

- **Total Revenue / Income** through March was \$447.3 million, \$134,000 greater than budget. This increase is due to higher Other Revenue of \$341,000 mainly due to higher permit fees and energy revenue, offset by lower Other User Charges of \$166,000 mainly due to lower than projected water usage by the Town of Wilmington and \$41,000 less investment income due to lower rates.

Cost of Debt 3rd Quarter – FY10

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.

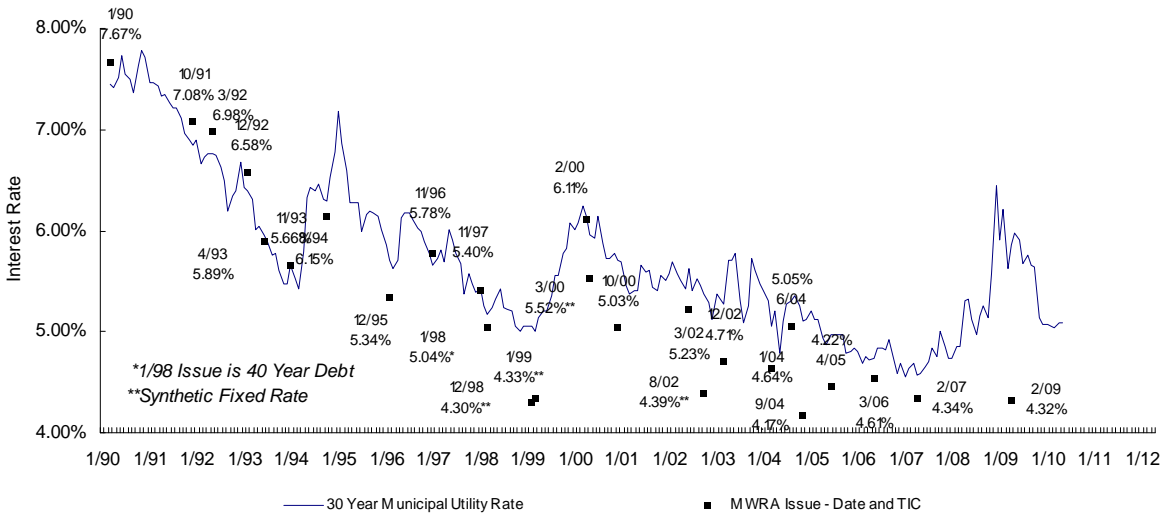
Average Cost of MWRA Debt

Fixed Debt (\$3,877)	4.58%
Variable Debt (\$603)	0.82%
SRF Debt (\$1,056)	1.00%
Weighted Average Debt Cost (\$5,538)	3.49%

Most Recent Senior Fixed Debt Issue February 2009

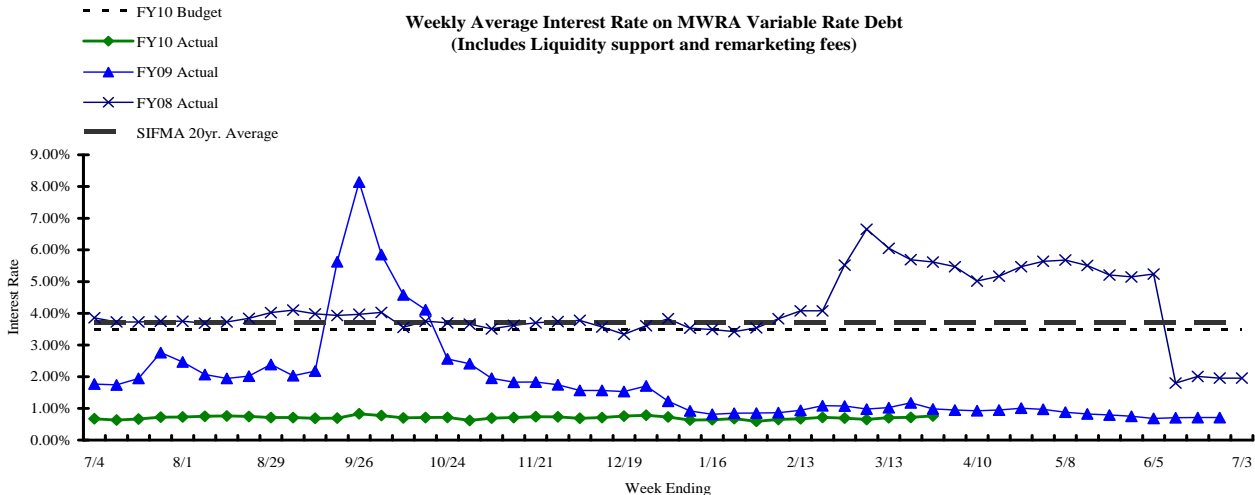
2009 Series A & B (\$383)	4.32%
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MWRA Fixed Rate Debt vs. 30 Year Municipal Utility Interest Rate



Weekly Average variable Interest Rates vs. Budget

MWRA currently has nine variable rate debt issues with \$1.3 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 March, SIFMA rates fluctuated with a high of 0.29% and a low of 0.17%. 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 3rd Quarter – FY10

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)

Fund	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	
	Average Budgeted Balance	Average Actual Balance	Variance	Impact	Budget	Actual	Impact	Impact	%
Combined Reserves	\$92,836	\$92,193	(\$642)	(\$28)	4.57%	4.68%	\$80	52	1.7%
Construction	\$132,495	\$138,269	\$5,773	\$32	0.75%	0.52%	(\$234)	(202)	-27.5%
Debt Service	\$107,281	\$104,676	(\$2,605)	(\$14)	0.75%	0.48%	(\$207)	(221)	-37.2%
Debt Service Reserves	\$252,481	\$251,699	(\$781)	(\$18)	2.85%	3.12%	\$490	472	8.8%
Operating	\$55,121	\$53,862	(\$1,259)	(\$4)	1.46%	1.45%	(\$12)	(16)	-2.7%
Revenue	\$69,230	\$87,933	\$18,703	\$104	0.93%	0.59%	(\$198)	(94)	-19.8%
Redemption	\$32,853	\$32,851	(\$2)	(\$0)	1.68%	1.55%	(\$31)	(31)	-7.5%
Total	\$742,296	\$761,483	\$19,187	\$71	2.05%	1.99%	(\$112)	(41)	-0.4%

YTD Investment Income Variance

