MASSACHUSETTS WATER RESOURCES AUTHORITY

Board of Directors Report

on

Key Indicators of MWRA Performance

for

First Quarter FY2009

Q1	Q2	Q3	Q4

Frederick A. Laskey, Executive Director
Michael J. Hornbrook, Chief Operating Officer
December 17, 2008

Board of Directors Report on Key Indicators of MWRA Performance for First Quarter FY2009

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

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

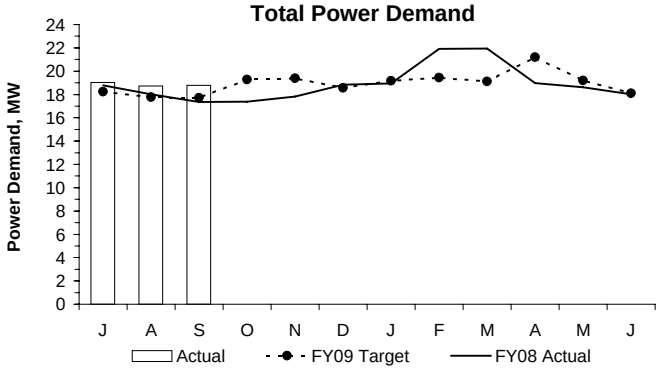
December 17, 2008

OPERATIONS AND MAINTENANCE

Deer Island Operations - Energy

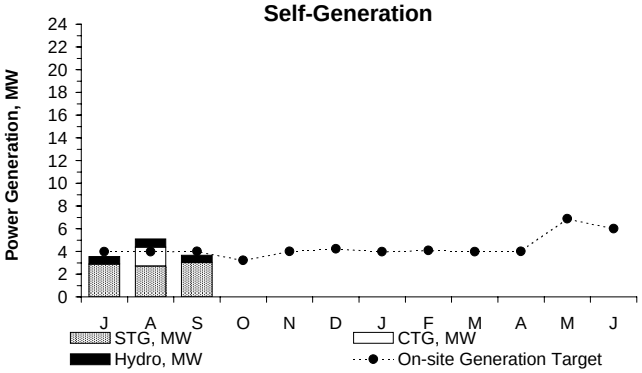
1st Quarter - FY09

Total Power Demand



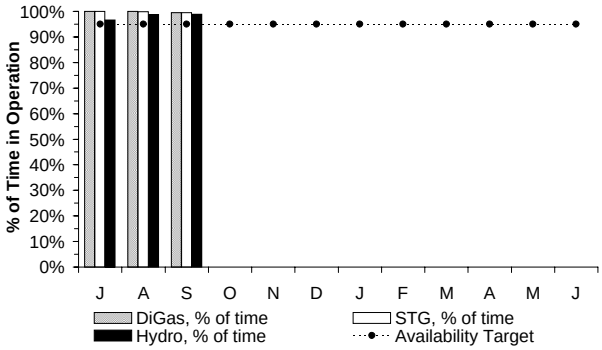
Total Power Demand for the 1st Quarter was slightly higher than both the FY09 target level and the FY08 actual for the same period, +5%. Total Plant Flow for the 1st Quarter was 10% higher than the 8-yr historical average.

Self-Generation



Power generated on-site met the target for the 1st Quarter. The STG generation was 11% lower than the target level but higher than the 3-year average for the same period. The hydro turbines met the target level and CTGs exceeded target levels for the quarter. The CTGs were operated briefly for a total of 1.4 hours on four days in the quarter for maintenance/checkout purposes, for a total of 78.6 hours from August 12-20 to allow for NSTAR work; and for two hours for a demand response event on August 21.

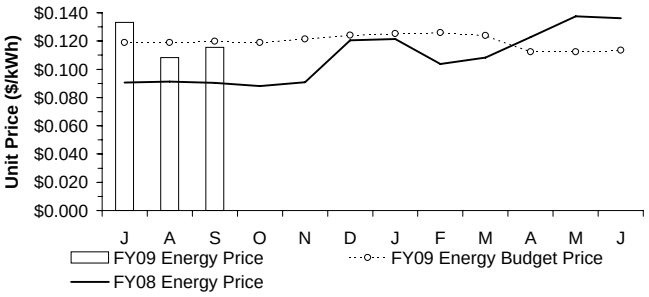
Self-Generation Equipment On-Line



The DiGas, STG and hydro turbine systems all exceeded their availability targets for each month during the 1st Quarter.

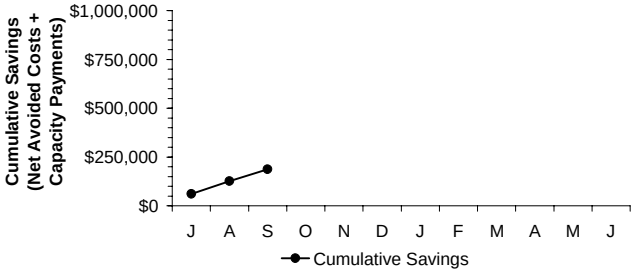
Total Energy Pricing

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



Under the current energy supply contract, all of DI's energy is purchased in real time. The total energy price in the 1st Quarter was consistent with the FY09 budget target due to lower-than-budgeted spot energy prices in August and September and higher-than-budgeted prices in July. Please note that September's total energy price is an estimate as the invoice has not been received.

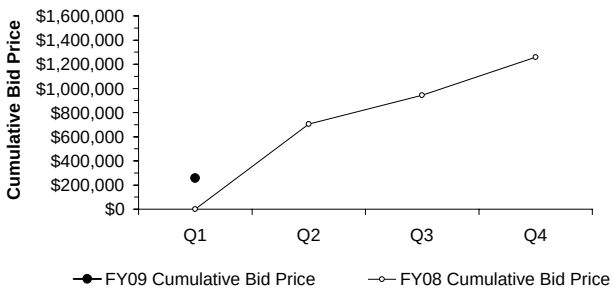
Load Response Program



DI participated in one demand response event during the 1st Quarter of FY09 on August 21 (the only event called).

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.

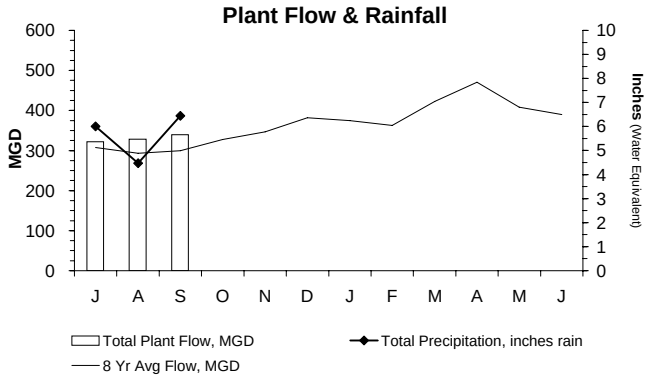
MA Renewable Portfolio Standard



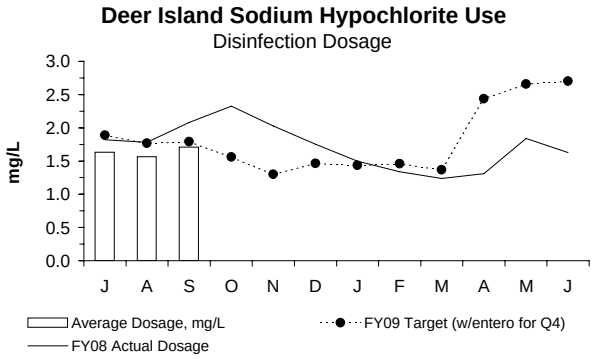
Bids were taken in August for the sale of 6,145 Renewable Energy Certificates, for a total value of $256,300. No bids were received in July or September. RPS bid prices have declined over the last year, due to the increased supply of renewable energy generation.

Deer Island Operations

1st Quarter - FY09



Total Plant Flow for the 1st Quarter was 10% higher than the 8-year average because rainfall was 68% higher than the 8-yr average for the quarter (16.92 inches actual vs. 10.04 inches expected). Rain that fell during the quarter was largely absorbed into the dry ground, thus not impacting flows as significantly as would otherwise be expected.



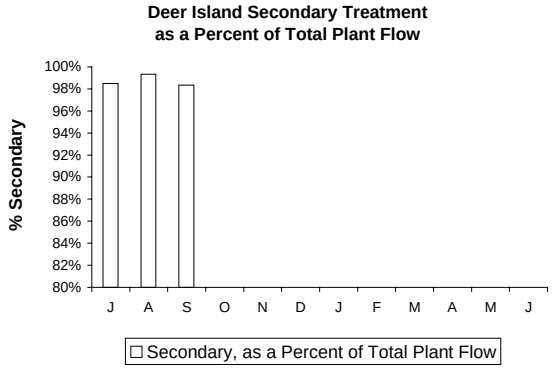
The disinfection dosing rate was 10% lower than the target for the 1st Quarter and 14% lower than the FY08 actual dosage for the same period.

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	5	5	0	98.5%	21.0
A	2	2	0	99.3%	8.64
S	4	4	0	98.3%	28.12
O					
N					
D					
J					
F					
M					
A					
M					
J					
Total	11	11	0	98.7%	57.7

There were a number of heavy rain events during the quarter, which resulted in 11 separate blending events totaling 57.7 hours of blending; 385.4 million gallons of flow blended with secondary effluent. Secondary permit limits were met at all times.



Overall, 98.7% of the total plant flow to DITP was treated through secondary treatment during the 1st Quarter. The Maximum Secondary Capacity for the entire quarter was 700 mgd.

Deer Island Operations & Maintenance Report

Environmental/Pumping:

Precipitation for the 1st Quarter of FY09 was much higher than the 8-year historical average with a total of 16.92 inches of precipitation falling on 37 days. Precipitation for each month exceeded the monthly 8-year historical average.

The total plant flow for the quarter was 10% higher than expected (330.0 mgd actual vs. 300.1 mgd expected) and 30% higher than the FY08 total plant flow for the same period.

The plant achieved a maximum average hourly flow rate for the quarter of 1,089 mgd on July 24 as a result of several flooding rain storms that produced a total of 2.16 inches of rain for the day. Significant rain had already fallen during the previous four days resulting in a five-day total rainfall of 4.36 inches. Pumping and treatment operations continued without incident through these storm events, as well as throughout the entire quarter.

Deer Island Operations & Maintenance Report (continued)

Disinfection: The internal linings to Sodium Hypochlorite Storage Tanks 2 and 4 were replaced during the 1st Quarter due to the deterioration in the lining resulting from age. The relining of Tank 2 was completed in July and was turned over to Operations in August. Sodium hypochlorite was added to Tank 2 on October 1. Tank 4's relining was completed and the inspected by the end of September. Additional tests to check for leaks in the new liner is scheduled for early October.

Odor Control: The activated carbon media in four carbon adsorber units was changed out in July and August as part of routine maintenance. The carbon was changed out in the East Odor Control Facility (three units) and in the North Main Pumping Odor Control Facility (one unit). Also, the scrubber media in a total of five wet chemical scrubber units was changed out during the 1st Quarter.

Energy: Deer Island was taken off the electrical grid on six separate days during the period from August 12 through August 20 for approximately 12 hours each day to allow NSTAR to perform work involving the cross-harbor electrical cable. The purpose of this outage was to permit the Army Corps of Engineers to precisely pinpoint the horizontal and the vertical position of the cable at numerous points within the Reserve Channel (South Boston). One or both CTGs were operated during this NSTAR outage and generated the majority of the power for Deer Island during these periods. The CTGs were operated a combined total of 78.6 hours with a total output of 50.3 megawatts during this NSTAR requested outage. There were no interruptions whatsoever to the power on Deer Island. Both the EPA and DEP were notified in advance of this outage.

The annual Continuous Emissions Monitoring System (CEMS) test for the Thermal Power Plant boilers (Relative Accuracy Test Audit – RATA) was successfully completed on both boilers on July 23-24.

A design/build contract was advertised in July for two 600-kW wind turbines on Deer Island with bids scheduled to be received in October.

Regulatory: Emissions compliance testing on the East Odor Control (EOC) system was conducted in September. The EOC system treats process air from Primary Batteries A and B, as well as from the Grit Facility. MA DEP requires that DITP conduct emissions compliance testing for the various emission units once every five years. This testing requires the continuous emissions monitoring of the inlet and outlet of the odor control system over a 48-hour period. The final report summarizing the test results is currently being prepared by MWRA's consultant that performed the test.

Several DEP officials were on site on September 25 for an unannounced site visit to the treatment plant. The officials were given a comprehensive plant tour covering the entire wastewater and residuals treatment facilities and process areas.

Clinton Wastewater Treatment Plant

Soda Ash System Replacement Project: Project is complete except for a few punchlist items. The temporary feed system has been dismantled and removed. Training on the system operation has also been completed.

Secondary Aeration Efficiency Study: The study has been completed with recommendations to replace the mechanical aerators with a fine bubble diffused air system with an estimated cost of <$400,000. The study projects annual electricity savings of ~$52,000, approximately 20% of the plant's annual electrical budget. A life cycle cost analysis estimated a payback of 6.8 years. With the addition of an energy rebate, the payback is five years.

Headworks Building: Staff replaced drive belts on the lift pumps; replaced the motor and clutch assembly on the bar rack system and sent old motor out to be rebuilt; and removed and replaced the boiler heating system.

Gravity Thickener 1: Staff repaired the sump pump in the scum well and unplugged the skimming trough.

Dewatering Building: Staff removed Digester Recirculating Pump 2's motor, had it repaired and then reinstalled it. Staff also replaced packing set on Thickened Sludge Transfer Pump 3.

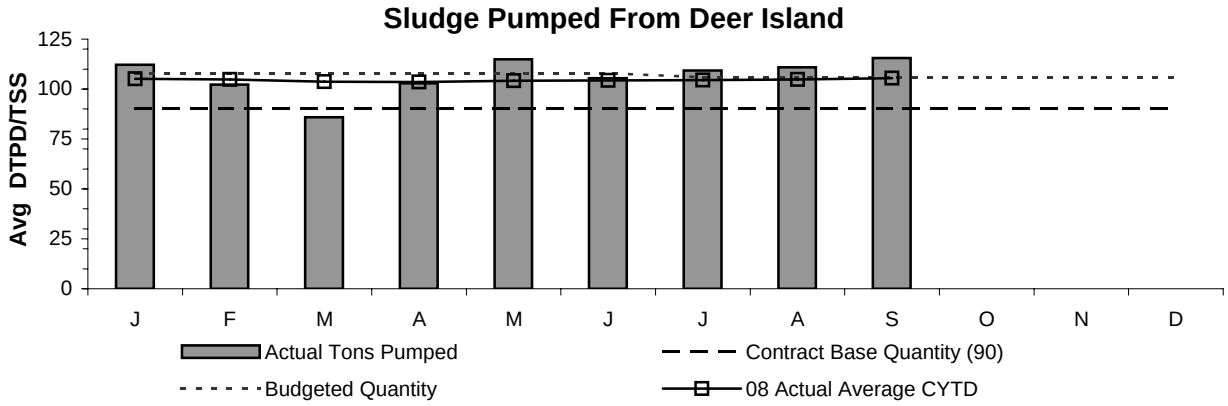
Digester Building: Staff cleared a blockage from the primary digester overflow pipe; adjusted the packing on Sludge Transfer Pump 2; and cleared debris from a roof drain.

General Maintenance: Staff washed down the Clinton and Lancaster influent channels, final clarifier and gravity thickeners, and performed weekly inspections of fire sprinkler valves and the emergency eyewash and shower stations. A contract instrumentation service technician calibrated the ultrasonic flow meters at the influent and effluent Parshal flumes and calibrated the hazardous gas detectors in all buildings.

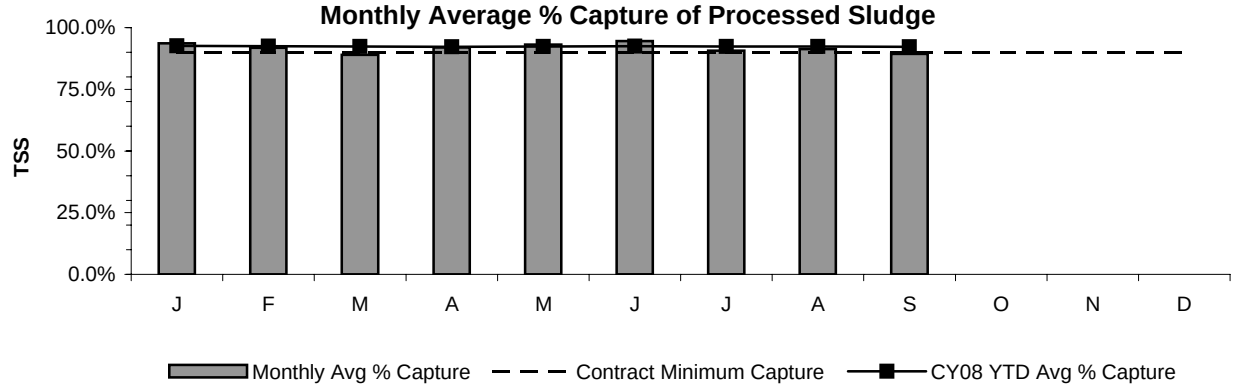
Deer Island Residuals

1st Quarter - FY09

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 (FY09's budget is 106 DTPD/TSS).



The average total quantity of pumped sludge for the 1st Quarter was 112 DTPD, which was higher than the FY09 budget of 106 DTPD. The quantitiy of sludge is typically higher in the 1st Quarter corresponding to warmer temperatures in the summer. Sludge quantities can vary based on a number of factors, including flow, changes in sludge inventory, and the performance of primary and secondary treatment. Upset conditions can also affect sludge quantities.



The contract requires NEFCo to capture at least 90% of the solids delivered to the Pelletizing Plant at FRSA; the solids capture rate was fairly steady during the 1st Quarter although in September, it dipped to 89.3%. Deer Island's inventory adjustments resulted in varying sludge thickness, which appears to have made centrifuge capture more difficult. In addition, NEFCo also conducted several polymer tests during the month that may have contibuted to the problem. Per past practice, staff will continue to monitor NEFCo's performance relative to solids capture rate on an overall annual basis and will pursue cost recovery if appropriate.

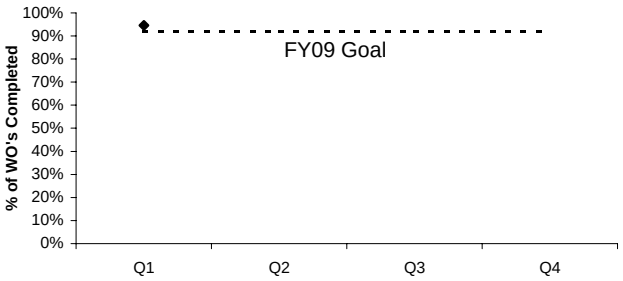
Deer Island Maintenance

1st Quarter - FY09

Productivity Initiatives

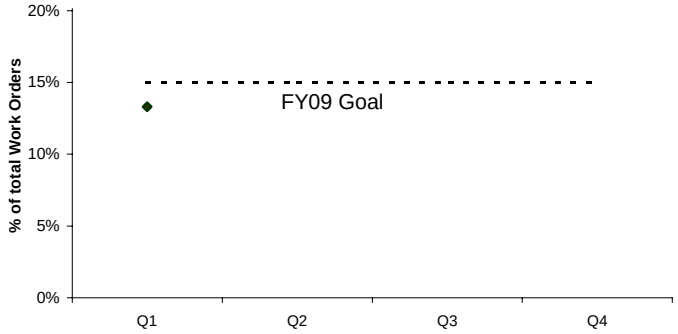
Productivity initiatives include increasing predictive maintenance tasks. Accomplishing this initiative should result in a decrease in the overall maintenance backlog.

Predictive Maintenance Compliance



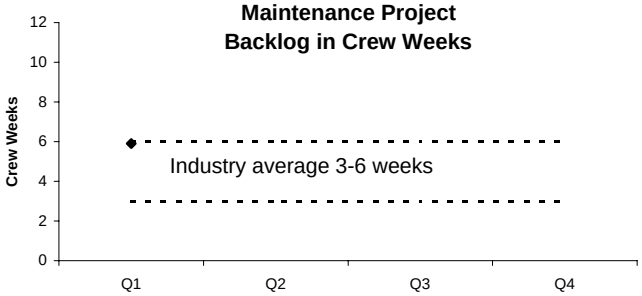
Deer Island's FY09 predictive maintenance goal is completion of 92% of all PdM work orders. This quarter's performance was 94.6%.

Predictive Maintenance



Deer Island's FY09 goal is to increase PdM work orders to 15% of total work orders. The industry is moving toward increasing predictive maintenance work to reduce down time and better predict when repairs are needed. DITP reached 13.3% this quarter.

Maintenance Project Backlog in Crew Weeks



The industry average for maintenance backlog is 3-6 weeks. Deer Islands FY09 goal is to stay within the industry average. Maintenance backlog was 5.9 weeks for this quarter. The are currently two staff vacancies that are impacting the backlog.

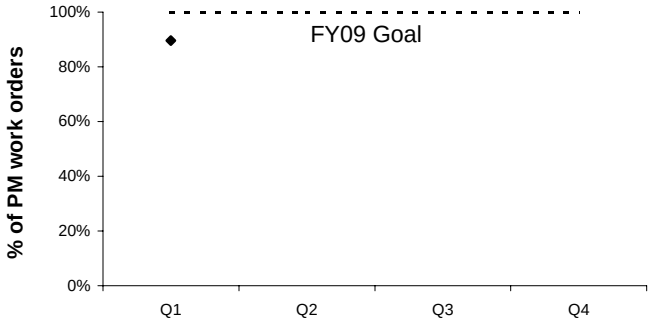
Proactive Initiatives

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

Preventive Maintenance Compliance

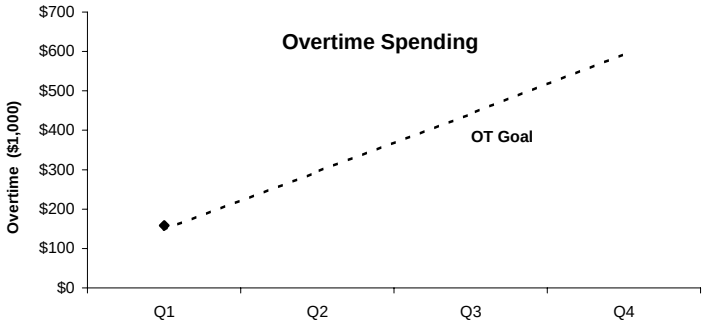
Deer Island's FY09 preventive maintenance goal is completion of 100% of all PM work orders. Staff met the goal this quarter.

Preventive Maintenance Kitting



Deer Island's FY09 preventive maintenance kitting goal is 100% of all PM work orders. Steady progress has been made and staff are identifying all PM schedules that do not include materials and will not require kitting. DITP completed 89.6% this quarter.

Overtime Spending

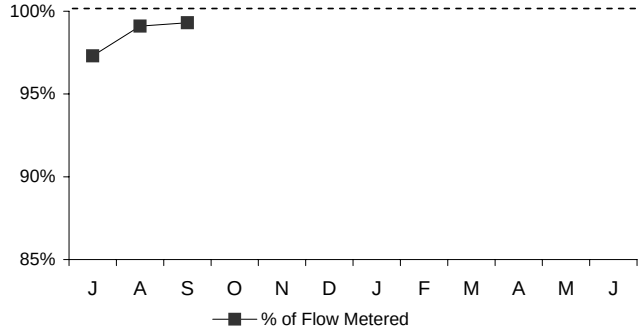


Overtime was $7K over budget for the quarter. This quarter's overtime was necessary to prepare and install ferrous piping in Residuals, and interim piping from the hypo. valve nest to the hypo. tank farm. OT was also necessary to complete modifications to the waste gas burners, and to provide coverage for an NStar outage and wet weather events.

Operations Division Metering
1st Quarter - FY09

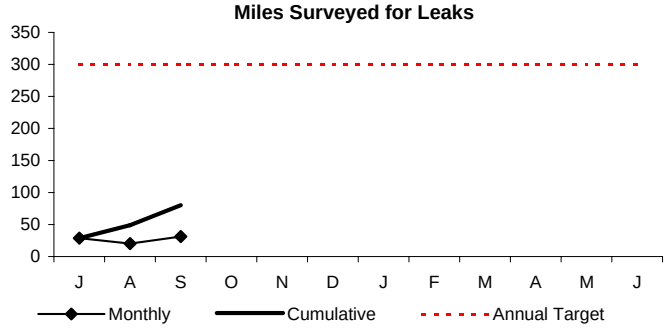
WATER METERS

Percent of Total Revenue Water Deliveries Calculated Using Meters



The target for revenue water deliveries calculated using meters is 100%. During the 1st Quarter, meter actuals accounted for 98.6% of flow; only 1.4% of total revenue water deliveries were estimated. Estimates are generated for meters that are out of service due to instrumentation problems or in-house and/or capital construction projects. The following is the breakdown of estimations this quarter:
In-house/Capital Construction Projects - 0.25%
Instrumentation Failure - 1.12%

Miles Surveyed for Leaks



Staff inspected 80.19 miles of MWRA water mains in the 1st Quarter.

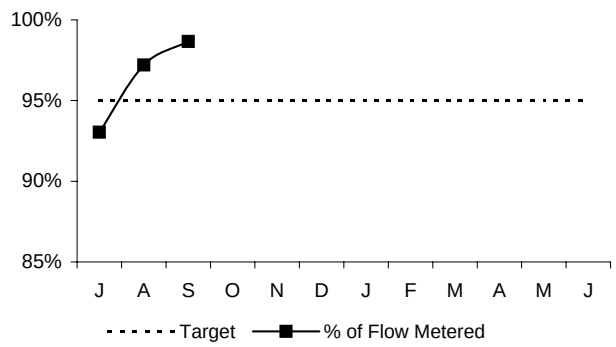
Water Distribution System

Month	J	A	S	O	N	D	J	F	M	A	M	J
Leaks Detected	1	0	0									
Leaks Repaired	1	0	0									
Backlog	0	0	0									
Avg. Lag Time (days)	4.0											

The leak backlog for FY09 is currently at zero. One leak was found and repaired during the 1st Quarter. The Pipeline Program's goal is to repair all leaks found during the fiscal year.

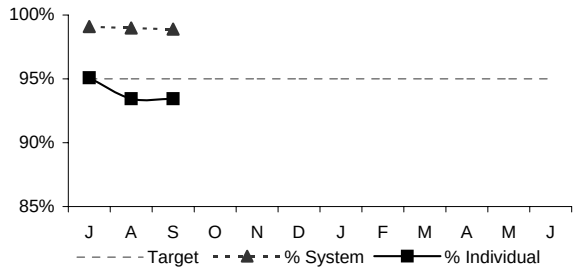
WASTEWATER METERS

Percent of Total Wastewater Transport Calculated Using Meters



During the 1st Quarter, out of a possible 1,616,256 data points, only 15,599 points were missed resulting in a system-wide up time of 99.0%. Staff continue to work with meter system vendors to improve performance and reduce estimates. During the quarter, only 3.7% of the total flow was estimated.

% METER UPTIME



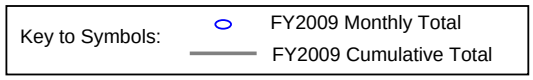
Of the 183 revenue meters installed, an average of 11 meters experienced down time in excess of the 5% target primarily due to maintenance activities, resulting in a 93.99% individual meter uptime. For the 1st Quarter, down time for an individual meter is defined by any individual meter having less than 2,797 data points.

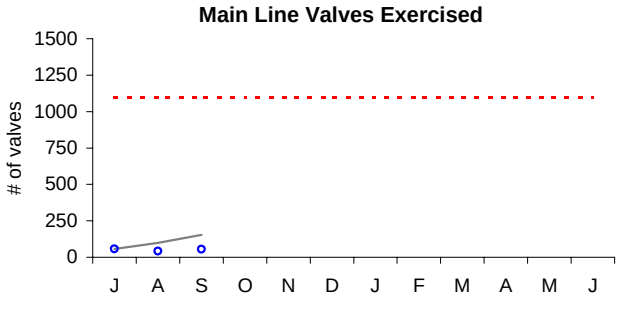
Water Distribution System Valves
1st Quarter - FY09

Background

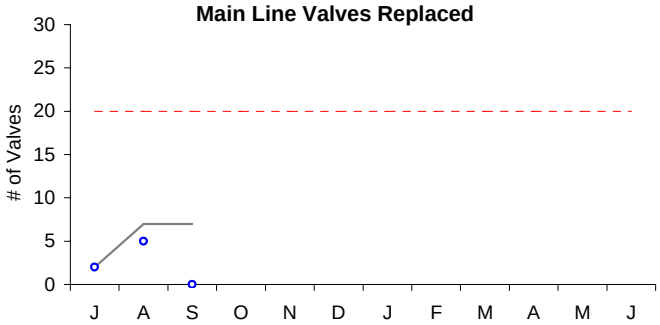
Valves are exercised, rehabilitated, or replaced in order to improve their operating condition; this work occurs year round. Valve replacements occur in roadway locations during the normal construction season, and in off-road locations during the winter season. Valve exercising can occur year-round but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

Type of Valve	Inventory #	Operable Percentage	
		FY09 to Date	FY09 Targets
Main Line Valves	1,283	86.1%	87%
Blow-Off Valves	1,161	90.7%	94%
Air Release Valves	1,330	92.1%	92%
Control Valves	48	94.0%	92%

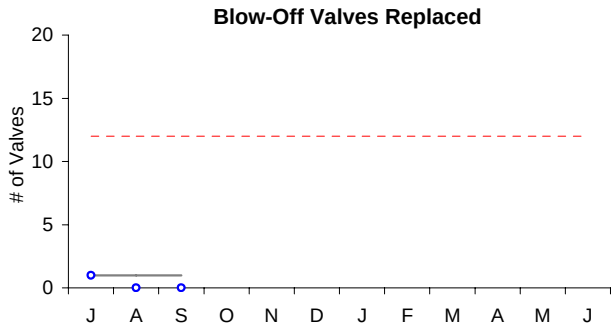




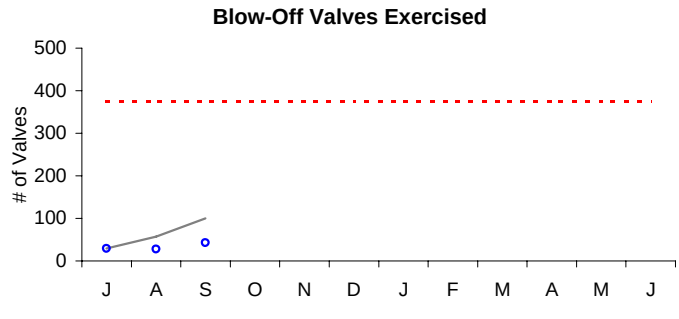
During the 1st Quarter, staff exercised 153 main line valves.



Staff replaced seven main line valves during the 1st Quarter.



Staff replaced one blow-off valve in the 1st Quarter.



Staff exercised 100 blow-off valves this quarter.

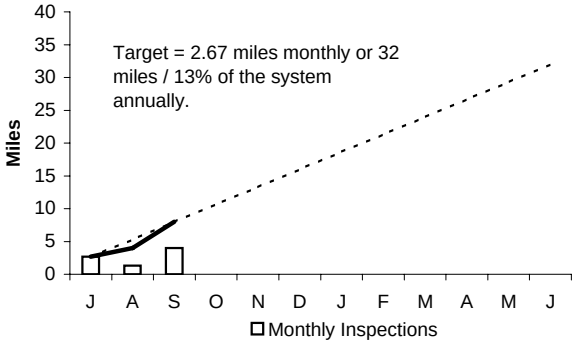
Wastewater Pipeline and Structure Inspections and Maintenance

1st Quarter - FY09

YTD Actual _____
Target .....

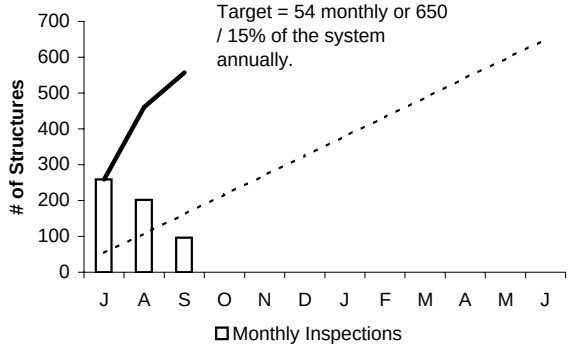
Inspections

Pipeline Inspections



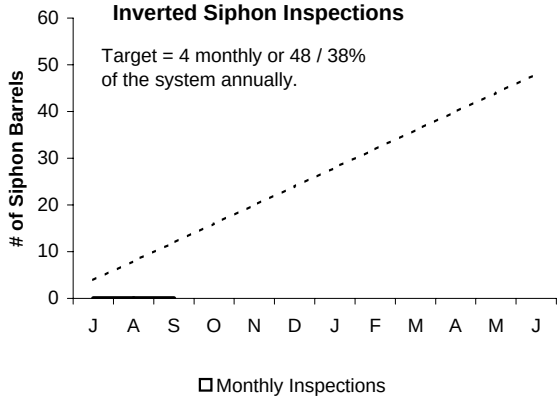
Staff internally inspected 8.0 miles of MWRA sewer pipeline this quarter. Staff also inspected a total of 1.08 miles of community pipeline in Somerville, Chelsea, Quincy, Medford, Boston and Arlington as part of the Community Assistance Program.

Structure Inspections



Staff inspected 557 manhole structures this quarter.

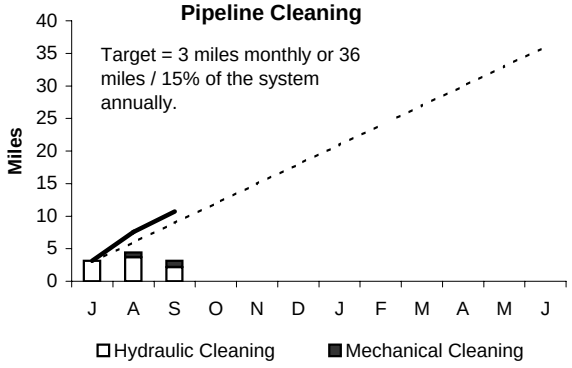
Inverted Siphon Inspections



No siphon barrels were inspected this quarter as MWRA's sonar camera is in need of replacement.

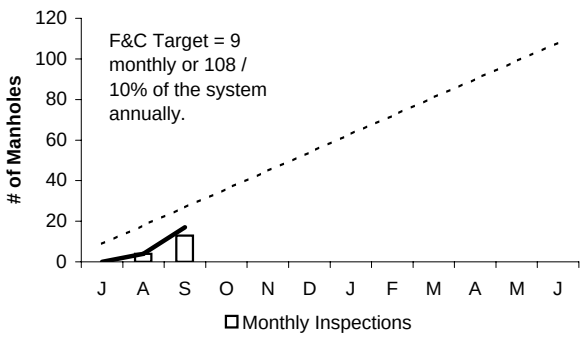
Maintenance

Pipeline Cleaning



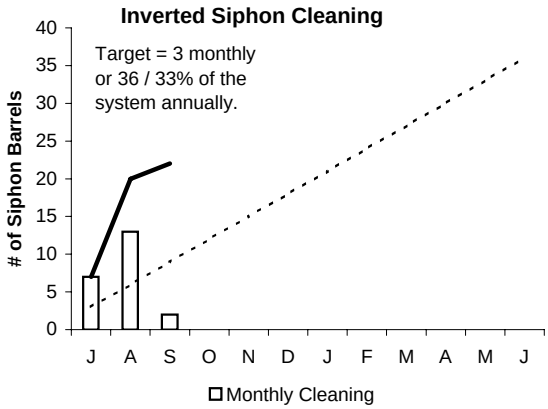
Staff cleaned 9.94 miles of MWRA's sewer system and removed 101.5 cubic yards of grit and debris during the 1st Quarter. Staff also cleaned a total of .28 miles in Revere and Medford as part of the Community Assistance Program.

Manhole Rehabilitation



Staff replaced 17 frames and covers in the 1st Quarter.

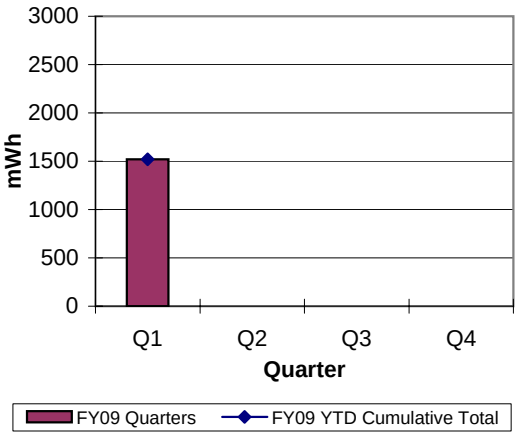
Inverted Siphon Cleaning



Staff cleaned 22 siphon barrels this quarter.

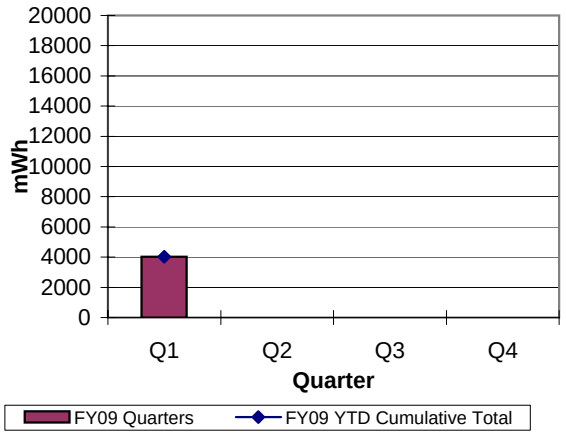
Field Operations Hydroelectric Generation Quarterly Report
1st Quarter - FY09

Quarterly Totals for Hydro Production at Cosgrove Hydroelectric Generation Facility



In the 1st Quarter, the Cosgrove Hydroelectric Station generated a net of 1,521 mWh, resulting in total revenue of $104,598. Generation was up from the same quarter last year. Staff plan to continue the practice, begun last year, of operating the station at reduced flow during the winter months when the Carroll Water Treatment Plant is at "half-plant" operations, rather than shutting it down completely.

Quarterly Totals for Hydro Production at the Oakdale Hydroelectric Generation Facility



In the 1st Quarter, the Oakdale Station Hydroelectric Plant generated 4,029 mWh producing revenue totaling $398,195. Generation this quarter was 40% lower compared to the same quarter in FY08 because this summer was much wetter than summer 2007. Therefore, less water was transferred from the Quabbin Reservoir to the Wachusett Reservoir. (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.)

Energy Program Highlights

Wind Power : All issues related to the Nut Island wind turbine that have been identified by MWRA's internal review process and through the public outreach process continue to be reviewed by Black & Veatch and MWRA staff. Installation of wind turbines is also being explored for the Carroll Water Treatment Plant (CWTP), the Southborough Facility, Delauri Pump Station, and the Norumbega Covered Storage Facility.

Loring Road Hydroelectric Generation: Preliminary design work continued. The facility would generate approximately 1.2 million kWh annually.

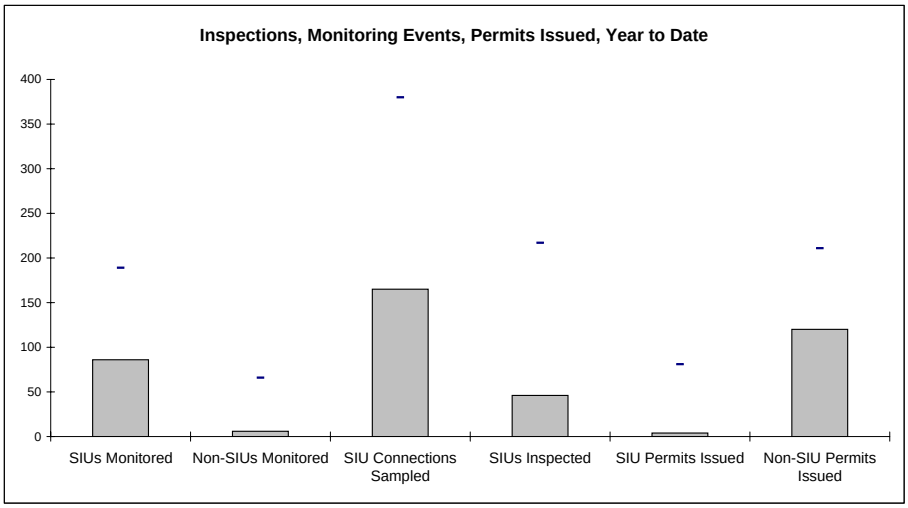
Wachusett Dam Hydroelectric Generation Study: MWRA is completing a feasibility study of hydroelectric power at the Wachusett Dam. A generator would be installed at the existing gatehouse through which water is discharged to the South Branch of the Nashua River. Staff are submitting a grant application for design and construction under MTC's Small Hydropower Initiatives Program.

CWTP Energy Audit: National Grid (NGRID) and its contractor conducted an energy audit of the CWTP in FY08. The first phase of the auditcovered lighting only; NGRID's contractor recommended changing out the high pressure sodium lights for much more energy-efficient lighting and installing occupancy and daylight sensors, as appropriate. This work is scheduled to begin in December 2008 and, when complete, will save MWRA approximately 450,000 kWh annually. The second phase was an audit of the HVAC and process equipment at the plant (excluding the ozone equipment); a final report was submitted to MWRA by NGRID's contractor in September 2008 with six recommendations. One recommendation, turning off the Philadelphia mixers that mix the soda ash with water, was implemented by plant staff immediately. MWRA will save approximately $200,000 in electricity costs annually. Staff endorsed two additional recommendations, while three others require further study. Recommended measures requiring equipment changes automatically qualify for the utility rebate program.

Chelsea Facility Energy Audit: As a result of an NSTAR audit, installation of energy-efficient lighting will begin in December 2008 and when complete, will save MWRA approximately 188,000 kWh annually. The second phase of the audit, focusing on the HVAC system, will be complete in February 2009. NSTAR will provide automatic rebates for up to 50% of any energy saving measure implemented as a result of the audit.

Toxic Reduction and Control

1st Quarter - FY09



EPA Required SIU Monitoring Events
for FY09: 189
YTD : **86**

Required Non-SIU Monitoring Events
for FY09: 66
YTD : **6**

SIU Connections to be Sampled
For FY09: 380
YTD: **165**

EPA Required SIU Inspections
for FY09: 217
YTD: **46**

SIU Permits due to Expire
In FY09: 81
YTD: **4**

Non-SIU Permits due to Expire
for FY09: 211
YTD: **120**

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.

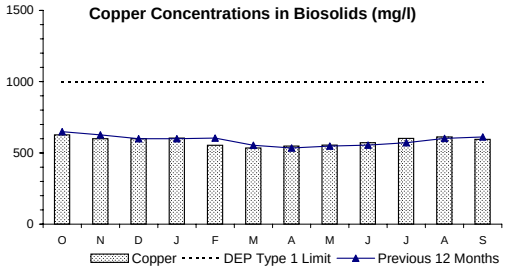
The annual goal is set at the beginning of the fiscal year but it can fluctuate due to the actual number of SIUs at any given time. During the course of the year, some SIUs do not discharge and cannot be monitored. TRAC's monitoring plan requires one additional sampling event for 40% of the SIUs and two additional sampling events for 10% of the SIUs. TRAC also monitors one-third of the non-SIUs each year.

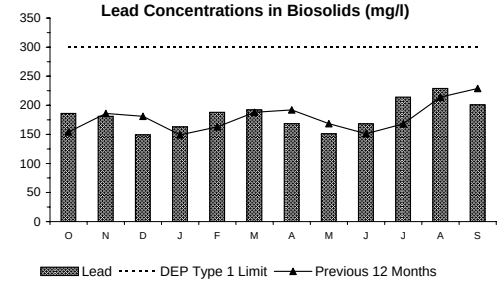
SIU and Non-SIU permits are issued with durations of two to five years, depending on the category of industry, varying the number of permits that expire in a given year.

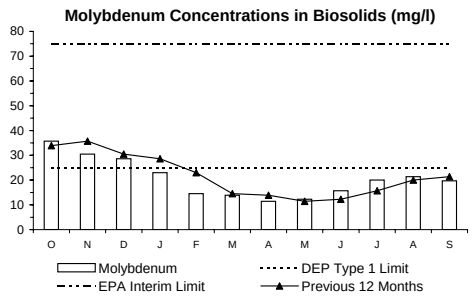
Number of Days to Issue a Permit								
	0 to 120		121 to 180		181 or more		Total Permits Issued	
	SIU	Non-SIU	SIU	Non-SIU	SIU	Non-SIU	SIU	Non-SIU
Jul	0	8	0	1	0	0	0	12
Aug	2	90	1	4	0	6	3	100
Sep	0	6	1	1	0	1	1	8
Oct							0	0
Nov							0	0
Dec							0	0
Jan							0	0
Feb							0	0
Mar							0	0
Apr							0	0
May							0	0
Jun							0	0
% YTD		87%		5%		6%	4	120

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.

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.







Field Operations Highlights
1st Quarter - FY09

Western Water Operations & Maintenance

- Carroll Water Treatment Plant (CWTP): Staff replaced the inverter cooling fans on all four of the power supply units for the ozone generators. Staff also replaced parts on all of the variable speed, direct current motors that drive the chemical metering pumps. Staff worked with SCADA staff upgrading uninterruptible power supply units. Staff rebuilt four of the five sodium bisulfite feed pumps in the Ozone Building and replaced a failed calibration column on the sodium hypochlorite system in the Chemical Building. Staff also flushed the 30-inch pipeline that feeds Marlborough's Cedar Hill Pumping Station.

- Cosgrove Intake and Power Station: Staff adjusted the main bearing on Hydro Turbine 2. Operations staff also conducted a turbine trip test to determine if a trip at 150 mgd would have any hydraulic impacts at CWTP. The plant operated through the turbine trip without incident.

- Wachusett Aqueduct: Staff freed up the bolts on both of the 120-inch-diameter caps within the temporary connection structure; this structure allows the Wachusett Aqueduct Extension to be connected to the Hultman Aqueduct, if required.

- Sudbury Reservoir: Staff installed stop planks in the Sudbury Aqueduct Gatehouse to support troubleshooting of the failed actuator on Sluice Gate 7. Staff also completed a project at the Lightning Arrester Building, adjacent to the dam, in which the soffit and all of the trim was rebuilt.

- Hultman Aqueduct: The "D" valve, located within the yard piping of Shaft 4, failed in the closed position and was replaced. This valve is located between the Sudbury Reservoir and both Shaft 4 and the Weston Aqueduct. Staff also replaced the windows and repaired the trim on the Intake Building located adjacent to Shaft C.

- Oakdale Power Station: PCB remediation within the substation was completed (by a contractor) and MWRA staff constructed a new containment under the transformer.

- MetroWest Water Supply Tunnel: Valves in one of the chambers were locking up when placed in the fully-closed position. Staff supported the OEM of the valve actuator in adjusting the stops to prevent this failure from reoccurring.

- Reservoir 3 Gatehouse: Staff removed, repaired and replaced the slate roof on the gatehouse's quadrilateral cupola. Staff also installed stop logs to support a confined space entry required to remove a blockage and to repair a failed support rod.

- Microwave Tower Sites: Staff removed graffiti and then re-painted the buildings with anti-graffiti paint at both the Nobscot Hill and MDC Hill microwave tower sites. Staff also completed tree removal at both sites.

Metro Water Operations & Maintenance

- Chestnut Hill Emergency Pump Station Test: The pumps at Chestnut Hill were test run on August 20; three of the four pumps ran successfully. Pump 3 ran but had intermittent vibration issues. This will be resolved before the next quarterly testing is performed.

- Valve Replacements: Water Pipeline staff replaced six valves on Sections 30 and 44 in Hyde Park and installed a new 20-inch valve on Section 18 in Malden. Work also began on valve replacement preparation at Pleasant Street and Main Street in Malden.

- Availability of Meter 145 to Cambridge: During the extensive CIP work on the East/West Spot Pond Mains, the emergency connections to Cambridge at Meter 52 (Cambridge Common) and Meter 145 (Norfolk Court) were in and out of service at various points over the last several years. One of the two connections was always available in the event that the city needed water. Meter 145 was returned to active status on July 11, which means that the connection is open to the nearest downstream Cambridge valve. Meter 52 was already in this state. In the event of an emergency, Cambridge can open one valve and augment or replace its supply.

- Pump Station Rehabilitation Contract: The 21-day acceptance testing for the Belmont Pump Station was completed on July 30; the contractor continues to be responsible for the station. However, the station is being monitored by the OCC in Chelsea.

Metro Water Operations & Maintenance (Continued)

- Valve Replacements at Vose Avenue in Hyde Park on Sections 30 and 44: Boston Public Works notified MWRA that Vose Avenue in Hyde Park is to be paved this summer and requested that MWRA complete all work as soon as possible. Several valves on Sections 30 were in need of replacement. Valves were replaced on Section 30 with no impact to service. A trial run performed on Section 44 determined that a two-day shutdown was the limit for supply to be maintained through Section 30 in conjunction with the Milton Water Tank. Several valves were replaced on Section 44 and each was completed with a single day's shutdown of the pipeline. The last remaining valve required both pipes to be isolated. Staff installed a new "tee" in an existing Milton piping chamber to allow for the temporary installation of a trailer-mounted pump to provide service to portions of Milton and Hyde Park while the cross-over valve replacement occurred. The work was successfully completed and all valves were reopened and the systems returned to normal.

- Dig Safe Pilot Program: The pilot continues successfully for MWRA water pipelines in Chelsea; staff will add Brookline and Saugus in October.

- Loring Road Covered Storage Tanks: The intrusion alarm contractor started work at Loring Road. MWRA staff removed and replaced the large concrete hatch covers for Tank 2 and the tank was isolated on September 29 to allow for work over the open water. Water quality samples were taken and tested prior to the start of work. Tank 2 will be returned to service in early in October and then the same process will be followed for Tank 1.

- Arlington Covered Reservoir Isolation: The Arlington Covered Reservoir (ACR) was isolated on September 30 so the Phase 6 valve contractor could begin work to install a new tank isolation valve. Prior to the tank's isolation, the pressure reducing valves (PRVs) from the Northern Extra High (NEH) Service Area to the Intermediate High (IH) were brought on line to replicate service from the ACR and the Belmont Pump Station. The ACR will be returned to service next month.

- University Avenue Pipeline on Section 108: The new University Avenue Pipeline (Section 108) was activated on September 29. In addition, a newly installed PRV, which will supply Norwood, will be activated. The new PRV needs to be activated to allow for the isolation of Meter 163 to Norwood. This is required prior to the connection of the new Section 108 to the existing Section 77 on Route 1.

Wastewater Operations & Maintenance

Headworks and Pumping

- The Nut Island and Columbus Park Headworks have undergone internal SCADA review with new screen data configuration and set points for the new system.

Technical Inspection

- Staff internally inspected 8.0 miles (42,240 linear feet) of MWRA sewer interceptors and 557 structures. Community Assistance was provided to Medford, Boston, Arlington, Somerville, Chelsea and Quincy, by inspecting a total of 1.08 miles (5,702 linear feet) of sewer pipelines.

Wastewater Pipeline

- Staff maintained 9.94 miles (52,482 linear feet) of various diameter sewer lines and removed 101.5 yards of debris. Staff also replaced 17 frames and covers and cleaned 22 siphon barrels. Community Assistance was provided to Medford and Revere by cleaning a total of 0.28 miles (1,478 linear feet) of sewer lines and removing one yard of debris.

TRAC

- Emergency Response - Harvard Pipe Lining: On August 1, TRAC staff responded to a report of solvent odors and alarms at the Ward Street Headworks and determined that the odors and alarms were caused by a styrene discharged from a pipe lining operation in Allston conducted by Harvard University's Allston Redevelopment Group. MWRA issued a Cease and Desist Letter to Harvard. On August 15, staff issued an Approval for a One-Time-Only Discharge into MWRA's sewer system, allowing the discharge of curing and cooling wastewater to the sanitary sewer system if Harvard could prove that it was in compliance with MWRA limits. Harvard conducted operations and sampled the water but it contained styrene well above MWRA's limit of 1 mg/l. As a result, Harvard pumped wastewater in the newly lined pipe to holding tanks. On August 22, there was another report of odors at Ward Street as one of Harvard's contractors accidentally released wastewater containing styrene to the sewer system; the discharge was stopped when it was discovered. In September, Harvard

completed treatment of the contaminated wastewater through carbon filtration and was then permitted to discharge it to the sewer system after samples indicated it was in full compliance with MWRA's discharge limits.

- Emergency Response: On July 8, staff responded to a report of black water entering the Clinton Treatment Plant. Staff contacted industrial user and municipalities discharging to the plant and determined the source a pipe cleaning operation conducted by the Town of Clinton. The discharge had no impact on the quality of the effluent from the Clinton Treatment Plant.

- PIMS**:** The PIMS consultant trained staff in July to use the system and conducted sessions to develop SOPs. At the same time, contract labs submitting data on behalf of TRAC's permitted users, tested the new electronic data submittal application. August 18 was the official "Go Live" date for PIMS. The vendor is required to be on site for 30 days following "Go Live" to assist staff and to deal with system start-up issues. TRAC and MIS staff received technical training on database administration in September and the consultant continued working on system start-up issues.

Metro Equipment and Facility Maintenance

Equipment Maintenance Program

- New Neponset Wet Well Lighting: The original wet well lighting and conduit was replaced by new explosion-proof lighting and conduit.

- Columbus Park Ejector Panel: Electricians found a short in the control wiring of the ejector panel at Columbus Park, which prevented grit and screening from being ejected from the two channels. The wiring and conduit was removed, new conduit installed, and new control wiring was installed.

- Nut Island Classifier Chute 6: Mechanics disassembled the screw and removed the wear liners of Classifier Chute 6 at Nut Island because of a leak. Replacement liners were installed and the classifier was reassembled and placed back in service.

- Intermediate Pumping Station: Pump 4's variable frequency drive (VFD) was experiencing intermittent over temperature failures. Electrical staff found one of the four cooling fans failed. With assistance from the VFD manufacturer, MWRA staff disassembled the VFD and replaced the fan; the equipment was then placed back in service. Also, the water main in the boiler room was leaking needed repair, which required a facility water shutdown. Parts were pre-fabricated and repairs were made and the facility was back on line within eight hours.

- Alewife Pump Station: Muffin Monster (grinder) 2's drive shaft sheared between the gear drive and cutter drum. Mechanical staff removed the cutter drum and sent it to the manufacturer for a rebuild. As a temporary repair, a spare drum from Framingham Pump Station was installed and the unit was placed back in service.

- Commonwealth Avenue Pump Station: HVAC and Pipeline staff worked jointly to replace the air conditioning condensing unit, which required the use of a crane because of its size.

- Prison Point Engine Gear Drives: Mechanical staff filtered oil from the three of the four drives after samples were taken from each drive and showed contamination that required filtration. The filtered oil was pumped back to the sump and the drives were returned to service.

- Shaft 8: Electricians installed 90 feet of conduit in the underground confined space containing the PRV controls and sensing instruments so that signals on PRV position will be displayed via the SCADA system at the Operations Control Center (OCC) in Chelsea.

- Emergency Response Boat: Electricians installed spot lighting, a distribution panel, and utility service outlets in a boat used for boom deployment by the Emergency Services Unit.

Grounds/Custodial Maintenance

- Security at the Fells: Additional fencing was installed and repairs made to the fencing at the Fells at the request of MWRA's Security Task Force.

Metro Equipment and Facility Maintenance (Continued)

- Easement Clearing: Clearing was performed at Section 70 (Fellsway off Ravine Road) to provide access to Meter 141 for rehabilitation by Water Pipeline staff. Meters 100 and 53 were cleared as well as Section 8 and NO-CT-3. Clearing was also performed at Section 613, Section 53 and Overlook Drive. Clearing at Meter 203 included the removal of a large amount of poison ivy.

- Chelsea Facility: Several trees were moved and the site cleared for a new guard shack at the entrance.

- Hough's Neck: A major clearing effort was done at the high level sewer. Broken fence gates were replaced and other fence repairs were made.

- Chestnut Hill Reservoir: The Slopemaster was used to clear access along the bowl of the reservoir so that Water Pipeline crews could install anchor bolts in the rip rap to secure the floating booms if necessary to keep any debris contained.

- Special Projects: The site at the South Gate House was cleared and the fenced area enlarged to accommodate the storage of emergency response equipment. A major clearing effort was performed at Bear Hill to accommodate training activities for the ESU. The clearing enabled the ESU to conduct training much differently than originally planned.

- DCAM Surplusing of Facilities: Extensive clearing work was completed at Fox Point and Commercial Point and Commercial Remote in preparation for decommissioning the facilities.

Facility Maintenance

- Emergency Shower Installation: Masons cored multiple holes at the three headworks for the installation of exterior emergency showers for chemical deliveries.

- Pipe Storage Shed: An open shed was constructed in Water Pipeline's outdoor storage area to accommodate the storage of pipe in a somewhat-weather-protected area.

- Trailer/Van Fit Out: Work was completed on fitting out the two ESU trailers and one of two new inspection vans; work began on the second inspection van.

- Roof Leaks: Staff repaired roof leaks at the Bellevue Tanks.

- Shaft 9A Rehabilitation: The equipment in the Shaft 9A Facility was being upgraded to accommodate SCADA. Staff used this opportunity to rehabilitate the station itself. One wall was sheathed for hanging equipment, the interior of the building was totally repainted; and rusted columns on the exterior are being replaced.

Operations Support

Emergency Planning

- In the first quarter, procurement of mobile analytical equipment and water quality sensors continued as authorized by last year's DHS grant award. SOPs have been prepared for the new equipment.

Operations Engineering

- Staff continued start-up testing of the rehabilitated Belmont Pump Station; testing was essentially completing in September. Hyde Park and Brattle Court work will require similar start-up work later in FY09.

- In July and August staff planned and coordinated some difficult valve rehabilitation shutdowns, including removal of an old Revere meter and implementation of a temporary pumping feed to Milton's SEH area to allow the single connection to be shut down temporarily.

- In September, staff began developing testing plans for activation of the Walnut Street Line, including PRV testing and Meter 5 testing.

Operations Support (Continued)

- In September, staff also prepared for the planned activation of the new Section 107 and the Section 22 line stopping for control valve installation.

SCADA

- In the first quarter, work at Chelsea Creek Headworks neared completion and staff are preparing for start-up testing in October. Completion of work at other headworks is expected later in FY09.

Wastewater Metering

- Since the beginning of Calendar Year 2008, staff has been very successful at reducing data estimation needed at wastewater meter sites through aggressive maintenance.

- A new contract for temporary flow testing is being procured to provide further flow tests at some problem sites and to review selected un-metered drainage area contributions as part of quality assurance on flow methodology.

- Staff are making preparations for the end of the comprehensive three-year maintenance agreement (October 2008) that was built into the original installation contract. Upon expiration, replacement parts will be purchased directly from the vendors and installed by MWRA staff.

Water Quality Assurance

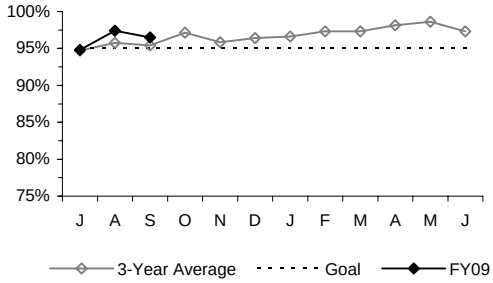
- Throughout the first quarter, staff continued to monitor summer CWTP performance to assess the impact of the measures taken as part of last year's expert panel recommendations. Water quality results continue to show improvement from the similar period last year

- Staff have installed S::CAN Spectrolysers at CWTP as a pilot test of a new on-line organics monitoring technology and are evaluating performance through seasonal changes in water quality.

Laboratory Services

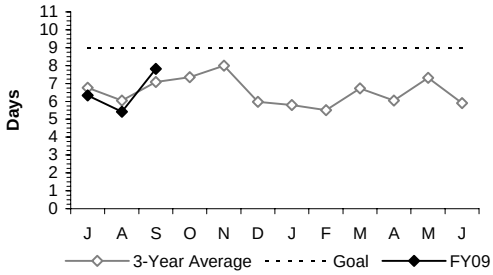
1st Quarter - FY09

Percent On-Time Results



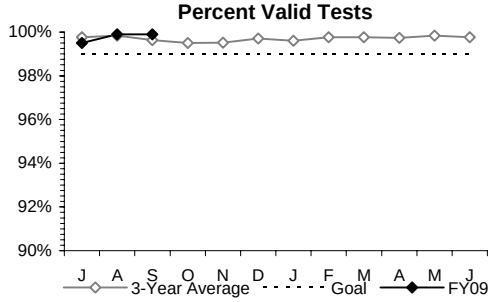
The Percent On-Time measurement was above the 95% goal for two out of three months this quarter.

Turnaround Time



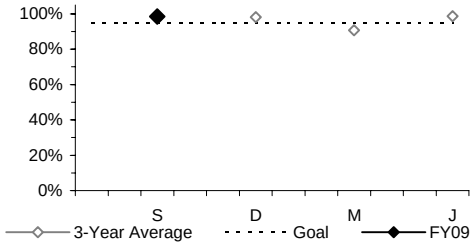
Turnaround Time was faster than the 9-day goal each month during the 1st Quarter.

Percent Valid Tests



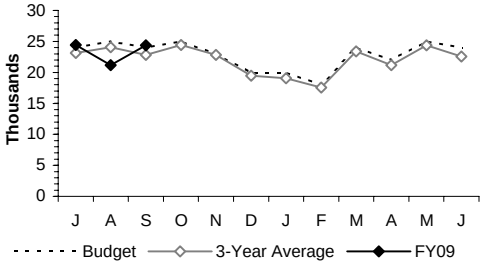
The Percent Valid Tests measurement stayed above the 99% goal for each month during the 1st Quarter.

Quarterly Compliance Rating



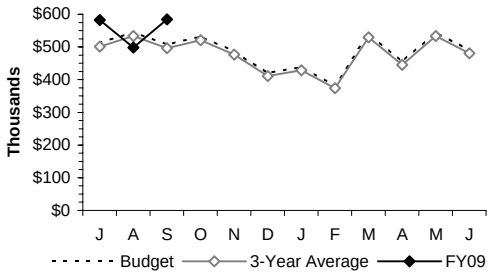
An audit of standard & reagent and temperature & balance logbooks at all five Lab locations found good compliance with requirements. Quarterly compliance audits are performed in September, December, March and June.

Tests Completed



The Tests Completed measurement was above the seasonally-adjusted budget goal for two out of three months this quarter.

Value of Services Rendered



Value of Services Rendered was above the seasonally-adjusted budget projection for two out of three months this quarter.

Highlights: Construction of the lab room for the new Inductively Coupled Plasma/Mass Spectrometer is now complete.

LIMS: Staff continue to work on configuring the lab analyses part of the new LIMS. Staff began the "Conference Room Pilot" phase and the first phase of "Go-Live", is scheduled for January 2009 (drinking water bacteria). The final phase of "Go-Live" is scheduled for April 2009.

Security: Met with National Guard to evaluate its approach to electrical and environmental controls for a mobile lab vehicle. Reviewed a new draft of the guidance document "Guide to Evaluating and Selecting Disinfection in a Security-Conscious Environment". Steve Rhode was asked by AWWA to present the final results for this project at the Water Security Congress in April.

Quality Assurance: Preparing for a DEP audit for three new parameters: mercury by atomic fluorescence, PCBs by micro extraction, and acid/base/neutral semi-volatile organics. DEP audited the Chelsea and Southborough Labs and only a few minor deviations were noted.

Clinton: Continued to test samples from a large TRAC special project on possible waste that might be affecting plant performance continued.

DITP: Tested emergency volatile organics rush and follow-up samples for styrene from a sewer emergency, daily sodium hypochlorite samples from delivery trucks, and extra samples for hypochlorite strength due to temporary changes in the delivery schedule.

ENQUAD: Annual benthic sediment samples from Mass. Bay and Boston Harbor are nearing completion.

FOD/TRAC: Provided rapid turnaround for samples from the Harvard pipe lining project.

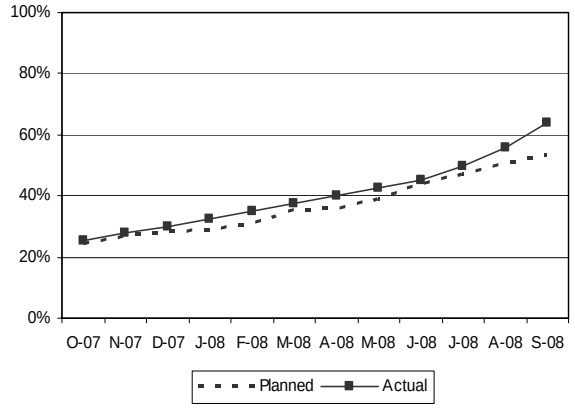
FOD/Water Quality Assurance: Continued "profiling" testing and DBP testing in support of the relocation of the chlorine injection point at CWTP. Tested bacteria samples from a special Marlborough/CWTP study, semi-annual Lead and Copper Rule samples, and samples from Reading due to a concern of possible nitrification at one of its coliform sampling sites.

Outside Customers: Began receiving Total Coliform Rule samples for Hanscom Air Force Base, at the Base's expense. Collected an extra Pleasure Bay beach sample to re-open the beach after a heavy rain. Tested extra samples from a DCR beach so that DCR could re-open it for the Labor Day weekend, and Fort Point Channel samples for a special 7-day project for Save The Harbor/Save The Bay. Completed Woburn's semi-annual Lead and Copper Rule testing, as well as its annual Secondary Contaminants testing, and received Reading's 3rd round of Stage 2 DBP Rule IDSE samples.

CONSTRUCTION PROGRAMS

Projects In Construction - 1
September 2008
(Progress Percentages based on Construction Expenditures)

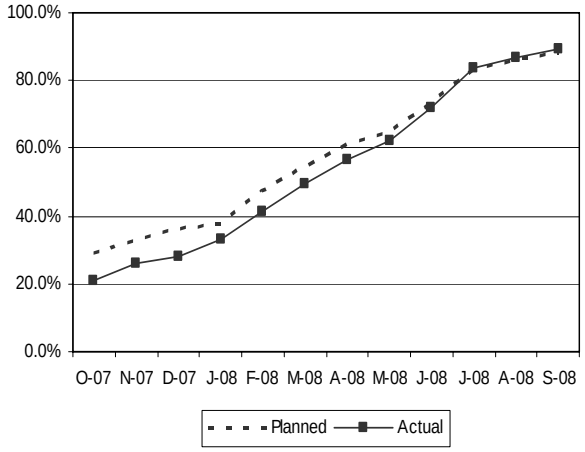
Blue Hills Covered Storage Design Build Project
Progress - September 2008



Project Summary: This project includes of a 20 million gallon covered storage facility at the Blue Hills Reservation, providing sufficient distribution storage to the communities of MWRA's Southern High Storage Area.

Status and Issues: During September, the contractor continued forming, installing rebar and placing concrete for the rings and walls in Tank 1 & 2. The contractor completed 80% of the tank perimeter base slab rings on Tank 1 and 100% on Tank 2. Wall panels reached 80% completion on Tank 1 and 86% on Tank 2. Interior slabs reached 67% completion on Tank 1 and 75% completion on Tank 2. The contractor completed 85% installation of precast columns, beams and roof planks on Tank 2 and 65% on Tank 1. Installation of piping and valves in the valve vault continued.

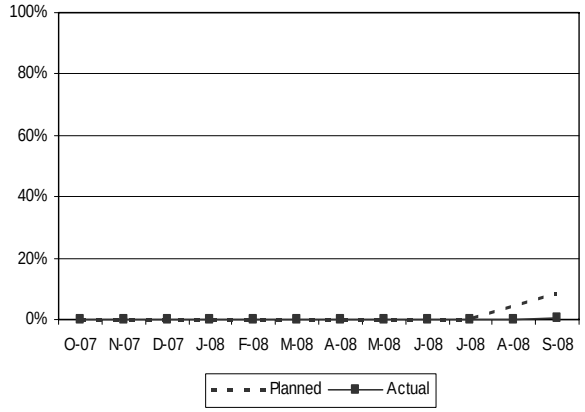
North Dorchester Bay CSO Tunnel/Shafts
Progress - September 2008



Project Summary: Construction of 10,872 LF of 17-ft diameter segment lined storage tunnel with 7 diversion structure/drop shafts and associated sewer and drainage separation pipework.

Status and Issues: During September, the contractor installed traffic control devices, completed the pedestrian access, installed a temporary stormwater by-pass system and completed driving the steel sheet cofferdam at CSO-081 and -082. At -083 the contractor continued trench and curbline restoration. At -084 work continued on the installation of stormwater and CSO collection piping between I St. and the BOS084 CSO. Trench restoration commenced, traffic control devices and a pedestrian access were installed, and DCR's lighting ductbank and power cables around the cofferdam area were relocated. At -086 the contractor completed restoration of Gavin Way and continued work on the Hydraulic Control Vault fit out. At -087 the contractor completed TBM retrieval and disassembly of the temporary work slabs.

East Boston Branch Relief Sewer
Progress - September 2008

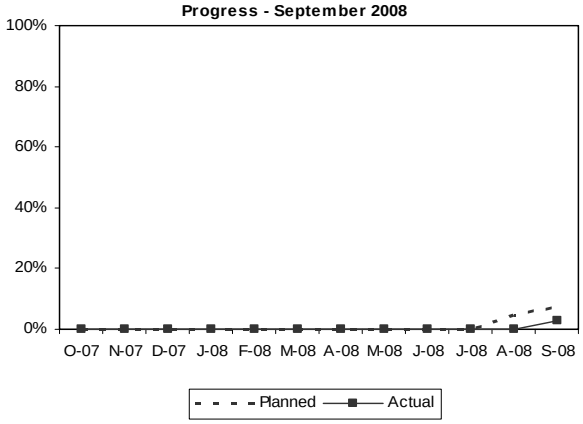


Project Summary: Construction of 14,500 feet of replacement sewers primarily by microtunneling.

Status and Issues: The contractor continued to mark project alignment and control point location survey. Work began on the layout of jacking and receiving shafts as well as the Dig-safe programs. Utility coordination meetings have been held with NGRID, NSTAR, MBTA, Verizon, Comcast and BWSC.

Projects In Construction – 2
September 2008
(Progress Percentages based on Construction Expenditures)

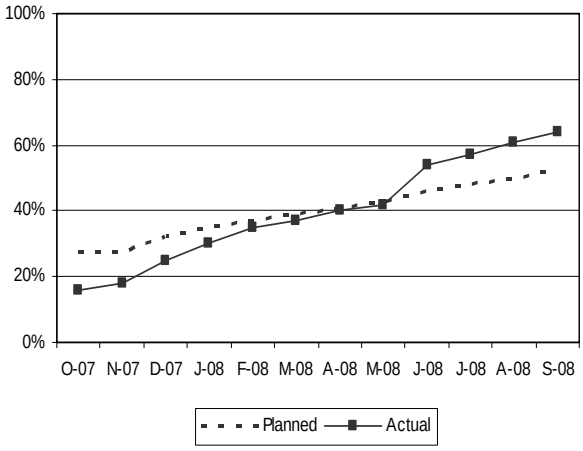
Cottage Farm/Brookline Connection and Inflow Controls
Progress - September 2008



Project Summary: Construction will activate the existing 45" Brookline Connection, modify and build an interconnection between two existing overflow chambers, replace sluice gates, and provide remote monitoring of flows to optimize the operation of the Cottage Farm CSO.

Status and Issues: During September the contractor continued to work on submittals and construction related permits. The field trailer was set up. Plans for October include the installation of a perimeter fence and dewatering wells.

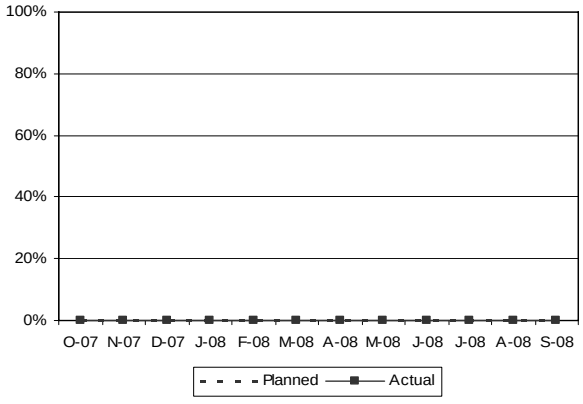
Rehabilitation of Water Pumping Stations
Progress - September 2008



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 replacement of Section 11A piping out to Brattle St. and successfully pressure tested the line. Work began on wiring the HVAC, NStar pulled the primary cable and the contractor completed wiring of the battery charges for the generator. At Hyde Park, the contractor completed installation of the new perimeter ground cable and primary cable for the transformer and switch. Other ongoing work includes wiring for the HVAC, testing of gear in preparation of energizing the transformer, and installation of the perimeter drain lines. At Belmont the contractor installed the front and rear entrance doors, completed all floor tile, installed a new perimeter fence, and replaced the sidewalk handicap ramp. At Reservoir Road the contractor completed conduit and wire installation for security, fire and lighting. Boston Fire completed a walk through and reviewed plans for the fire alarm system.

Hultman Aqueduct Interconnections Project
Progress - September 2008



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 consultant worked on preparing bid-ready documents and a meeting to discuss the documents was held with Procurement on 9/26. The consultant is currently revising the specifications for resubmission. This will be a four year construction contract with a latest engineering estimate of $52.7 million.

CSO Update
1st Quarter - FY09

North Dorchester Bay Tunnel and Related Facilities: On August 13, 2008, the tunnel contractor completed the 10,832-foot-long, 17-foot-diameter, soft-ground storage tunnel ahead of the contract schedule when the tunnel boring machine (TBM) "holed-through" the wall of the retrieval shaft adjacent to the South Boston State Police building. The contractor was able to complete the tunnel in only 10 months, six months earlier than the contract schedule. After completing the tunnel, the contractor disassembled the TBM and removed it from the retrieval shaft. The contractor has commenced the installation of the five short adit connections between the tunnel and the diversion system drop shafts at the existing CSO outfalls. In addition, the contractor completed installation of the diversion conduits to redirect CSO and stormwater flows from CSO Outfall BOS083, which will be abandoned, to Outfall BOS084. The contractor also completed installation of the new drainage system upstream of Outfall BOS086 from Moakley Park to Logan Way, but the installation of the drainage system along Logan Way has been delayed pending re-design to avoid subsurface utilities and related hazardous material. The contractor also commenced the installation of the steel cofferdams for the diversion structures at CSO Outfalls BOS081, BOS082 and BOS084.

MWRA also made progress with design of the tunnel-related facilities, including the 15-million-gallon-per-day dewatering pumping station at the downstream end of the tunnel at Conley Terminal, the 24-inch dewatering force main, and the remote odor control facility at the upstream end of the tunnel. A work plan and schedule for preparing separate construction documents for the remote odor control facility are now being drafted. Meanwhile, the design consultant is moving the contract package for the pumping station and force main forward on schedule, submitting the second 100% design documents in September. The design consultant also submitted the Draft CSO Outfall Sedimentation Study. This study is intended to support a recommended plan to ensure the reliable hydraulic performance of the existing outfalls after the storage project is brought on-line and the outfalls then rarely activate. The design consultant plans to submit all remaining construction permit applications and complete the construction contract documents for the pumping station and force main for advertisement in December 2008.

East Boston Branch Sewer Relief: On July 29, 2008, MWRA issued a Notice to Proceed for construction of Contract 6257, one month later than the respective milestone in Schedule Seven. It is the second and largest of the three contracts that comprise the East Boston Branch Sewer Relief project. MWRA completed the first construction contract in 2004 and is currently completing design of the third contract.

Contract 6257 ($59.9 million) involves the installation of 2.5 miles of new sewer interceptor along Border, Condor, East Eagle and Chelsea streets and along Marginal, Orleans and Bremen streets, primarily using micro-tunneling methods to minimize conflicts with congested utilities and high traffic volumes along East Boston streets. MWRA is evaluating the effect of the one-month delay in commencing the contract, as well as potential construction changes that have been suggested by the contractor, which include revised shaft locations along the route of the microtunneling, additional utility relocations, and recommendations from MWRA's continuing coordination with ongoing or proposed construction activities in the area by other parties, including Boston Water and Sewer Commission, Boston Public Works Department, Massachusetts Highway Department, National Grid and ConocoPhillips.

In the meantime, the contactor has made progress with early construction-related activities, including commencement of pre-construction surveys and laying out micro-tunnel jacking shafts, receiving shafts and geotechnical equipment installation points. The contactor also completed the marking of utilities by Dig Safe and leased a field office. The contractor is also coordinating the relocation of utilities with the various utility owners.

MWRA continues to make progress with design of the third East Boston construction contract, Contract 6841, which involves replacement and upgrade of approximately one mile of interceptor sewers in upstream areas using "pipe bursting" methods. MWRA received the 100% design plans and specifications on August 25, 2008 and expects to advertise the construction contract for bids later this year.

Brookline Connection and Cottage Farm Overflow Chamber Interconnection and Gate Controls: Notice to Proceed for this $1,976,000 construction contract was issued on June 30, 2008, in compliance with Schedule Seven and the contractor has made various required submissions through the 1st Quarter. This project is intended to reduce treated CSO discharges from the Cottage Farm CSO Facility to the Charles River Basin by increasing the conveyance of related wet-weather flows to the Ward Street Headworks and Deer Island Wastewater Treatment Plant. The project involves modifications to existing MWRA facilities on both the Cambridge side and the Boston/Brookline side of the Charles River. These modifications will improve the conveyance capacities of the two MWRA sewers already in service that carry flows across the Charles River and bring into service a previously un-utilized 54-inch-diameter sewer (the "Brookline Connection") constructed nearly 40 years ago by the Metropolitan District Commission.

Charles River Interceptor Gate Controls and Additional Interceptor Connections:
MWRA's engineering consultant has made considerable progress with the hydraulic model evaluations that will support design of the gate controls at existing interconnections between the Charles River Valley Sewer and the South Charles Relief Sewer and possible modifications to the existing connections between the North Charles Metropolitan Sewer and the North Charles Relief Sewer. The hydraulic study is also intended to determine whether additional interceptor connections can improve system performance and further reduce CSO discharges in accordance with a January 2009 milestone in Schedule Seven. In the past quarter, the engineering consultant substantially completed the hydraulic evaluations of the sewer system baseline condition and the alternatives for system optimization that were included in the contract scope, culminating in submission of the Draft Hydraulic Modeling Technical Report on August 28, 2008. The consultant has also completed the geotechnical and hazardous materials exploration program in areas of potential construction to reasonably assess the construction requirements and costs of the system optimization alternatives. The consultant is currently preparing the Draft Geotechnical and Hazardous Materials Report and a draft of the Preliminary Design Report, which will recommend a system optimization plan.

South Dorchester Bay Sewer Separation: By letter dated October 12, 2007, BWSC informed MWRA that it had closed all identified CSO regulators tributary to MWRA's Commercial Point and Fox Point CSO treatment facilities following its substantial completion of the South Dorchester Bay sewer separation project. Accordingly, MWRA decommissioned both facilities on November 1, 2007. Since 2006, BWSC has metered flows in the newly separated sewer system and conducted hydraulic evaluations to verify whether hydraulic performance goals have been met. On September 8, 2008, BWSC submitted a report to MWRA that presents the results of the flow monitoring and hydraulic analysis program and identifies the potential for localized flooding of the system in large storms in certain areas. To mitigate this risk, the BWSC report evaluates technology options, including off-line storage and inflow removal. The report concludes that disconnecting the most difficult building roof leader connections, which were not included in the completed construction contracts, appears to be more cost-effective than constructing storage facilities. BWSC continues to identify and remove private inflow sources, and MWRA continues to fund this work in accordance with the Approved FY09 CIP. All CSO regulators remain closed.

Morrissey Boulevard Storm Drain: A component of the North Dorchester Bay CSO control plan, the Morrissey Boulevard Storm Drain Project is intended to direct some of the North Dorchester Bay stormwater away from MWRA's recommended CSO storage tunnel in storms greater than the 1-year design storm. Construction of the Morrissey Boulevard Storm Drain commenced in December 2006, in compliance with Schedule Seven, and BWSC's initial construction contract is complete. BWSC issued a Notice to Proceed for the second, much larger construction contract on September 24, 2007. During the past quarter, BWSC's contractor continued to install the 12-ft. x 12-ft. box culvert. To date, more than 1,600 feet of box conduit has been installed. The installation of the pile cap continued between the Boston College High School service road and the UMass access road. The contractor has also begun to install piles for "Manhole A" and "Particle Separator A." The particle separator will provide a level of treatment to the stormwater flows prior to discharge to Savin Hill Cove. Work continues in the area south of Mt. Vernon St. with pre-trenching for trench support sheeting. Also, the contractor completed the sheeting installation at the sea wall for the Savin Hill Cove outfall. The construction completion date is June 30, 2009, in compliance with Schedule Seven.

Reserved Channel Sewer Separation: This project is intended to minimize CSO discharges to the Reserved Channel by separating combined sewer systems in adjacent areas of South Boston. Implementation of the recommended sewer separation plan will reduce the number of overflows to Reserved Channel from as many as 37 to 3 in a typical year. BWSC submitted the preliminary design report to MWRA in spring 2008. As expected, and previously reported, the project cost estimate to lay the new storm drains through the congested residential and commercial streets and tight utility corridors that characterize the Reserved Channel area has increased to $113.8 million in the Approved FY09 CIP with no increase in the predicted level of CSO control or water quality benefit. BWSC continues with final design and has provided MWRA with the 50% design drawings for the first of nine planned construction contracts (including six major sewer separation contracts and three downspout disconnection and paving contracts). The project schedule calls for the first contract to be advertised by December 2008 and commence by April 2009, in compliance with Schedule Seven.

Bulfinch Triangle Sewer Separation: The goal of the Bulfinch Triangle sewer separation project is to minimize CSO discharges to the Charles River by separating combined sewer systems in the area of Boston roughly bounded by North Station, Haymarket Station, North Washington St., Cambridge St. and immediate environs. The recommended sewer separation plan is intended to reduce the number of overflows to the Charles River, reduce overflows to the Prison Point CSO facility and close Outfall BOS049. BWSC advertised the construction contract on May 14, 2008; received bids on June 26; and issued a Notice to Proceed in early October, in advance of the November 2008 milestone in Schedule Seven.

Brookline Sewer Separation: This project involves sewer separation in several areas of Brookline, totaling 72 acres, where there are remaining combined sewers tributary to MWRA's Charles River Valley Sewer. The project is intended to reduce discharges to the Charles River at the Cottage Farm facility. The Town of Brookline split the project into two construction contracts; the town recently advertised the first contract and plans to award it in November 2008, in compliance with Schedule Seven. The first contract has an estimated value of $1.75 million and includes installation of storm drains north and south of Beacon Street. Brookline plans to advertise the second contract, with an estimated value of $15.7 million, in spring 2009. It includes installation of sanitary sewers in Beacon Street, St. Mary's Street, and Monmouth Street.

Cambridge/Alewife Brook Sewer Separation: MWRA and the City of Cambridge reached substantial agreement on a plan, schedule and cost share to implement the Alewife Brook Sewer Separation plan. On July 16, 2008, MWRA's Board approved the agreement and authorized an amendment to the Memorandum of Understanding and Financial Assistance Agreement with the City of Cambridge that increases the financial award amount (MWRA cost share) from $21.6 million to $60.0 million, in addition to $2.7 million MWRA will spend to implement its MWR003 Gate and Rindge Avenue Siphon Relief project. The total cost of the contracts Cambridge and MWRA have planned for the Alewife Brook Sewer Separation project (MWRA and Cambridge cost shares) is $117.4 million. MWRA and Cambridge expect to execute the amendment to the agreements, coordinate necessary contract work and commence remaining design services by October 30, 2008. The five projects that comprise the Alewife Brook CSO plan have been delayed a total of 27 months beyond their respective design and construction milestones in Schedule Seven, primarily due to the citizens' appeals of wetlands permits issued by the Cambridge Conservation Commission and the Massachusetts Department of Environmental Protection for a key component of the project.

A portion of the Cambridge/Alewife sewer separation project is being implemented by MWRA. The work involves installation of an overflow control gate and floatables control at Outfall MWR003 and hydraulic relief of an MWRA siphon near Rindge Avenue. Due to delays associated with Cambridge's wetlands permit, MWRA has revised its schedule for the MWR003 improvements and Rindge Avenue Siphon and now plans to commence design by April 2011.

Other CSO Control Work:

BWSC continues to perform minor work and system performance assessments in the areas of the completed South Dorchester Bay, Stony Brook and Fort Point Channel sewer separation projects.

CIP Expenditures
September 2008

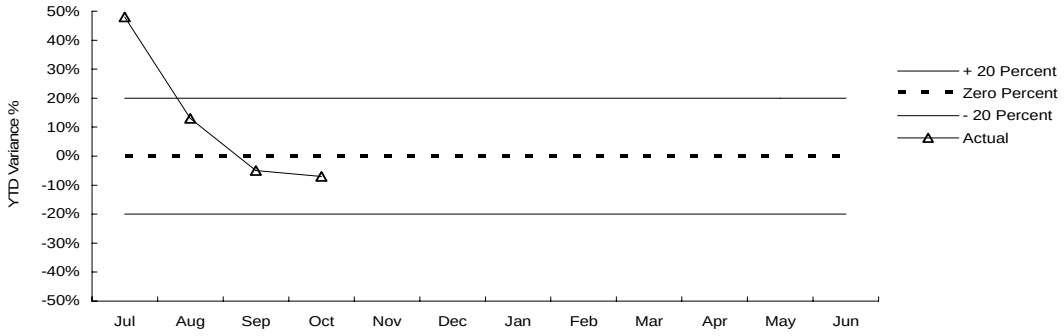
Accurate projections of CIP spending are one measure of effective project management and are important to ensuring that funds are available to support MWRA's capital program.

FY09 Capital Improvement Program Expenditure Variances through September by Program ($000)				
Program	FY09 Budget Through September	FY09 Actual Through September	Variance Amount	Variance Percent
Wastewater	49,713	40,692	(9,022)	-18%
Waterworks	12,451	19,689	7,238	58%
Business and Operations Support	2,038	599	(1,439)	-70%
Total	$64,202	$60,980	($3,222)	-5%

Underspending within Wastewater is primarily attributable to delay in payments for Morrissey Boulevard and Commercial Point CSO projects pending final review of eligible costs. Overspending in Waterworks is primarily due to contractor progress on the Blue Hills Covered Storage project.

CIP Expenditure Variance

Total FY09 CIP Budget of $230,022,000.



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 10/25/08	$68 million
Unused capacity under the debt cap:	$864 million
Estimated date for exhausting construction fund without new borrowing:	Jan-09
Estimated date for debt cap increase to support new borrowing:	FY2011
Commercial paper outstanding: Commercial paper capacity:	$241 million $350 million
Budgeted FY09 capital spending*:	$206 million
Projected FY09 grant and SRF receipt:	$103 million

* Cash based spending is discounted for construction retainage.

DRINKING WATER QUALITY AND SUPPLY

Source Water – Microbial Results

1st Quarter - FY09

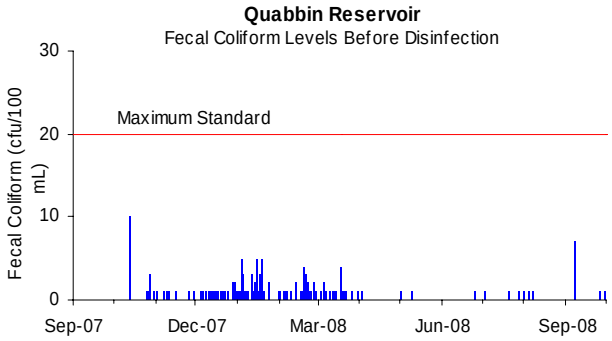
Background

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 allow 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.

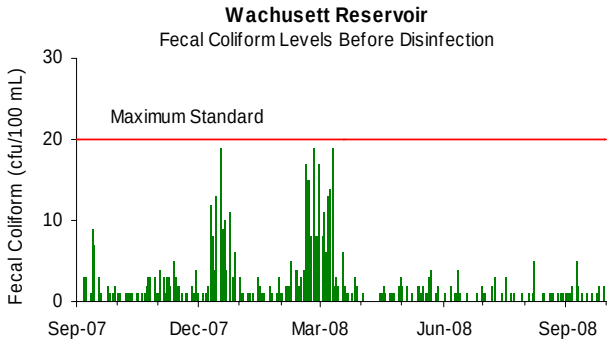
All samples collected during the 1st Quarter were below 20 cfu/100ml. For the current six-month period, 0.0% of the samples exceeded a count of 20 cfu/100ml.

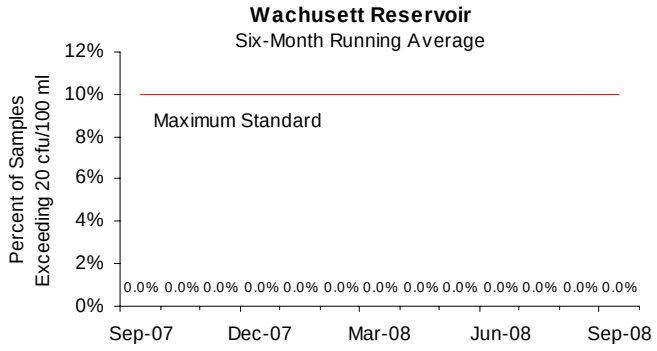


Sample Site: Wachusett Reservoir

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

All samples collected during the 1st Quarter were below 20 cfu/100ml. For the current six-month period, 0.0% of the samples exceeded a count of 20 cfu/ 100ml.





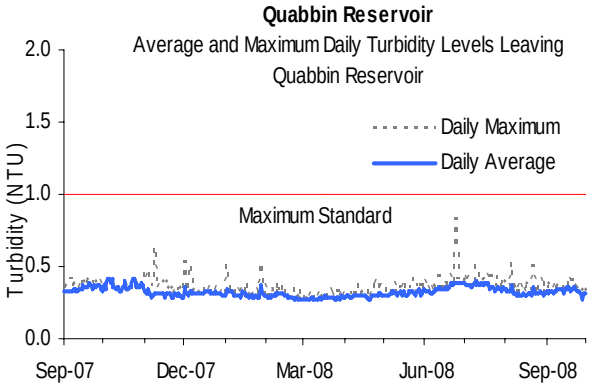
Source Water – Turbidity

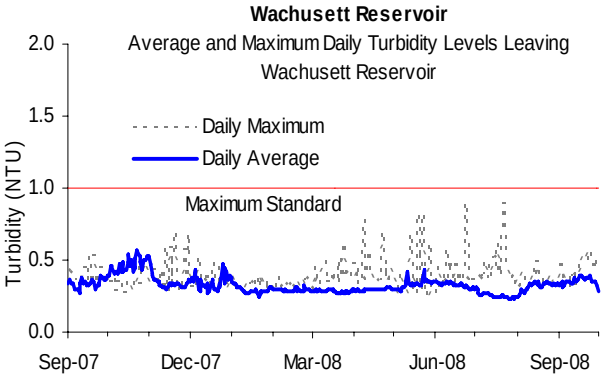
1st Quarter - FY09

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.



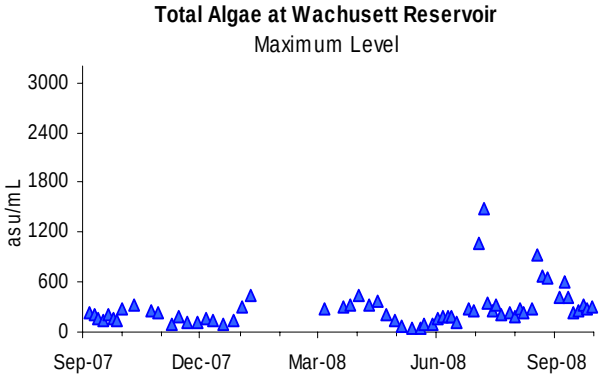


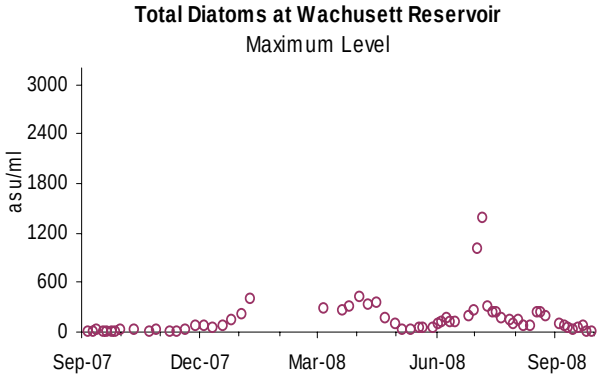
Source Water – Algae

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 algaecide. 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 are currently low.

Algal levels were low during the 1str Quarter.





Treated Water – Disinfection Effectiveness

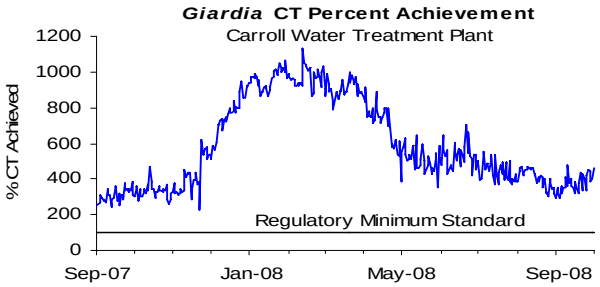
1st Quarter - FY09

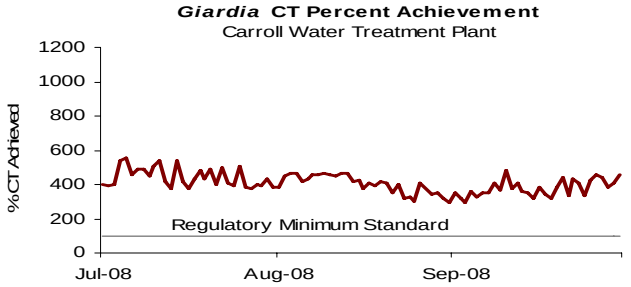
Background

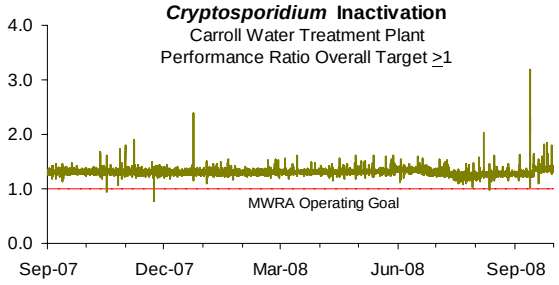
With the activation of the Carroll Water Treatment Plant (CWTP), MWRA now reports on both regulatory required 99.9% inactivation for *Giardia* (reported as "CT"), and its voluntary operating goal of 99% inactivation for *Cryptosporidium*. MWRA calculates hourly CT inactivation rates and reports daily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

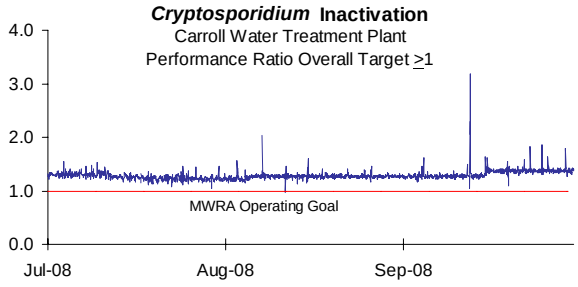
Wachusett Reservoir – MetroWest/Metro Boston Supply:

- CT was maintained above 100% at all times the plant was providing water into the distribution system this quarter.
- On July 17 (at 5:35 am), there was a problem with Ozone Analyzer 4 on Contactor 1. The membrane of this analyzer was replaced returning to normal operation at 10:00 am. While the analyzer problem results in a lack of confirmatory data, MWRA staff believe that the PR target was in fact met. As the *Cryptosporidium* inactivation target is voluntary, this does not represent a regulatory violation.
- On August 11, maintenance work at the CWTP resulted in one of two ozone generators shutting down. Ozone feed continued with the on-line generator but there was a dip in PR to 1.0; the second generator was quickly restarted and there were no compliance or treatment issues that resulted from this event.
- Ozone dose at the CWTP varied between 1.8 to 2.3 mg/L for the quarter.



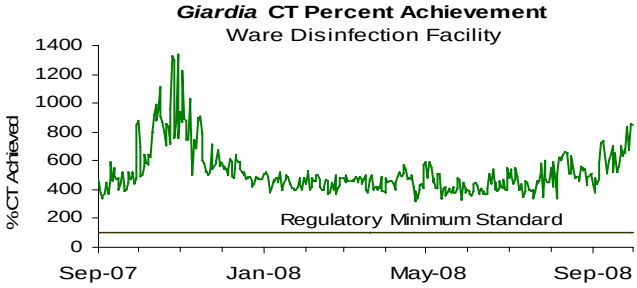


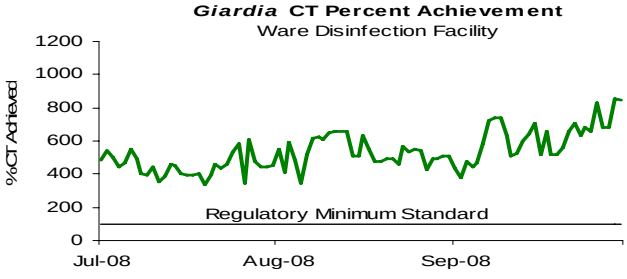




Quabbin Reservoir at Ware Disinfection Facility (CVA Supply):

Chlorine dose remained at 1.3 mg/L. CT was met each day this quarter, as well as every day for the last fiscal year.



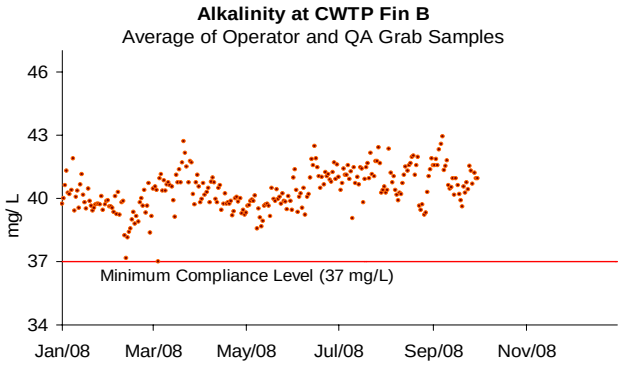


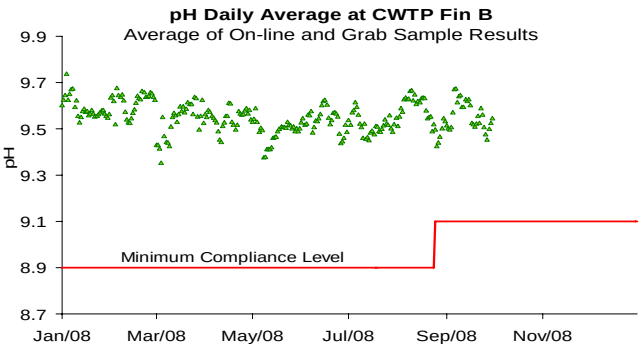
Treated Water – pH and Alkalinity Compliance

1st Quarter - FY09

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. Recognizing the effectiveness of MWRA's treatment targets, DEP changed the minimum compliance level upwards by 0.2 units on August 25, 2008. This change was initiated September 2008. Per DEP requirements, samples from the CWTP's 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 September 24, 2008. Distribution system sample pH ranged from 9.3 to 9.5 and alkalinity ranged from 41 to 43 mg/L. No sample results were below DEP limits for this quarter.





Drinking Water Quality Customer Complaints: Taste, Odor or Appearance

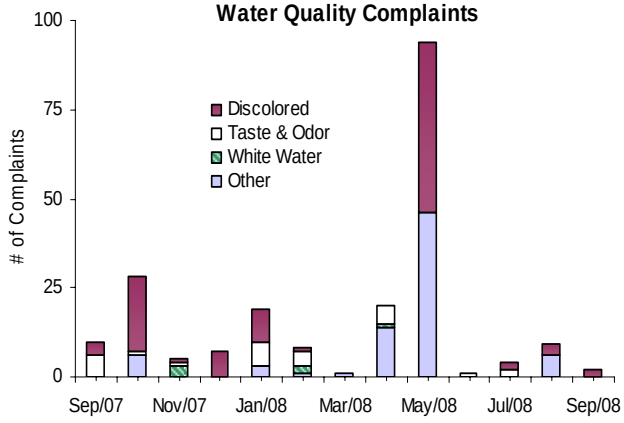
Background

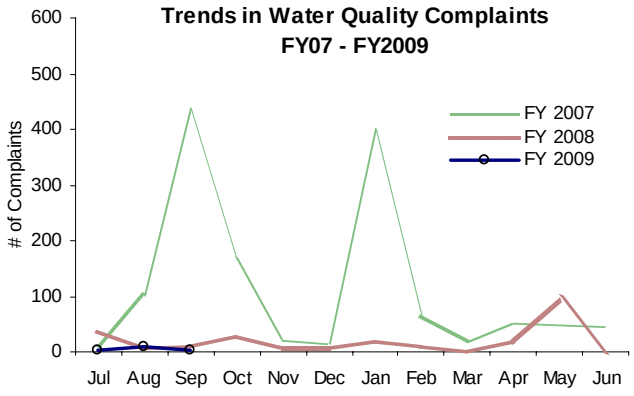
MWRA collects information on water quality complaints that typically fall into four categories: 1.) discoloration due to MWRA or local pipeline work; 2.) taste and odor due to algae blooms in reservoirs or chlorine in the water; 3.) white water caused by changes in pressure or temperature that trap air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

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

Outcome

Communities reported 15 complaints this quarter compared to 53 complaints for the 1st Quarter of FY08. Of these, seven were "discolored water" complaints; two were "taste and odor", and six were "other" complaints.





Bacteria & Chlorine Residual Results for Communities in MWRA Testing Program

1st Quarter - FY09

While all communities collect bacteria samples for the Total Coliform Rule (TCR), 38 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 0.2 mg/L a minimum target level of disinfectant residual at all points in the distribution system.

Highlights

In the 1st Quarter, two of the 5,652 community samples (0.04% system-wide) submitted to MWRA labs for analysis tested positive for coliform (Marlborough, July and Framingham, August). Four of MWRA's 2,256 (0.18%) 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 2.1% 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	183	0 (0%)	0.0%		0.07	1.88
BELMONT	104	0 (0%)	0.0%		0.28	1.99
BOSTON	740	0 (0%)	0.0%		0.08	2.37
BROOKLINE	221	0 (0%)	0.0%		1.16	2.50
CHELSEA	130	0 (0%)	0.0%		0.45	2.41
DEER ISLAND	50	0 (0%)	0.0%		1.47	2.05
EVERETT	130	0 (0%)	0.0%		1.00	1.07
FRAMINGHAM	219	1 (0.46%)	0.0%	No	0.34	2.12
HANSCOM AFB (Bedford) (b)	27	0 (0%)	0.0%		0.01	1.50
LEXINGTON	117	0 (0%)	0.0%		1.54	2.63
LYNNFIELD	18	0 (0%)	0.0%		0.30	1.38
MALDEN	196	0 (0%)	0.0%		1.20	1.30
MARBLEHEAD	72	0 (0%)	0.0%		0.38	2.10
MARLBOROUGH (b)	202	1 (0.50%)	0.0%	No	0.50	2.21
MEDFORD	238	0 (0%)	0.0%		0.24	1.93
MELROSE	117	0 (0%)	0.0%		0.02	0.96
MILTON	96	0 (0%)	0.0%		0.92	1.65
NAHANT	30	0 (0%)	0.0%		0.00	1.40
NEEDHAM (b)	121	0 (0%)	0.0%		0.03	0.71
NEWTON	276	0 (0%)	0.0%		0.35	2.31
NORTHBOROUGH	48	0 (0%)	0.0%		0.20	1.84
NORWOOD	119	0 (0%)	0.0%		0.02	1.60
QUINCY	311	0 (0%)	0.0%		0.31	2.12
READING	140	0 (0%)	0.0%		0.24	2.14
REVERE	170	0 (0%)	0.0%		1.03	2.09
SAUGUS	104	0 (0%)	0.0%		1.84	2.22
SOMERVILLE	261	0 (0%)	0.0%		0.43	2.34
SOUTH HADLEY FD1 (c)	48	0 (0%)	0.0%		0.03	0.23
SOUTHBOROUGH	30	0 (0%)	0.0%		0.71	1.95
STONEHAM	91	0 (0%)	0.0%		1.23	2.46
SWAMPSCOTT	54	0 (0%)	0.0%		0.26	1.99
WAKEFIELD (b)	143	0 (0%)	0.0%		0.11	1.36
WALTHAM	218	0 (0%)	0.0%		0.15	2.36
WATERTOWN	120	0 (0%)	0.0%		0.25	1.94
WELLESLEY (b)	108	0 (0%)	0.0%		0.20	0.87
WESTBORO HOSPITAL	15	0 (0%)	0.0%		0.24	1.54
WESTON	48	0 (0%)	0.0%		0.15	2.29
WINCHESTER (b)	70	0 (0%)	0.0%		0.26	1.56
WINTHROP	72	0 (0%)	0.0%		0.00	1.57
WOBURN (b)	195	0 (0%)	0.0%		0.03	1.09
Total:	5652	2 (0.04%)				
MASS. WATER RESOURCES AUTHORITY (d)	2256	4 (0.18%)	0.0%	No	0.02	2.14

(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

1st Quarter - FY09

Background

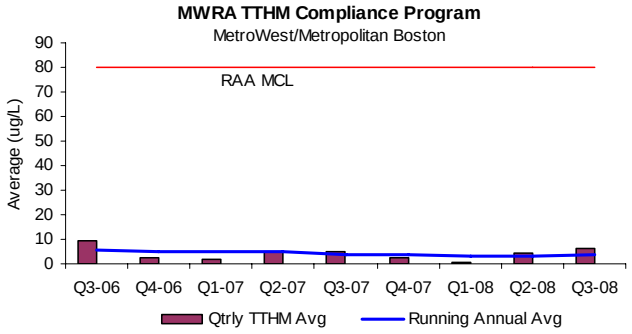
Total Trihalomethanes (TTHMs) and Haloacetic Acids (HAA5s) are by-products of disinfection treatment with chlorine. TTHMs and HAA5s are of concern due to their potential adverse health effects at high levels. EPA's running annual average (RAA) standard is 80 ug/L for TTHMs and 60 ug/L for HAA5s. The switch from chlorine to ozone for primary disinfection and the consolidation of treatment has lowered DBP formation and made results 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.

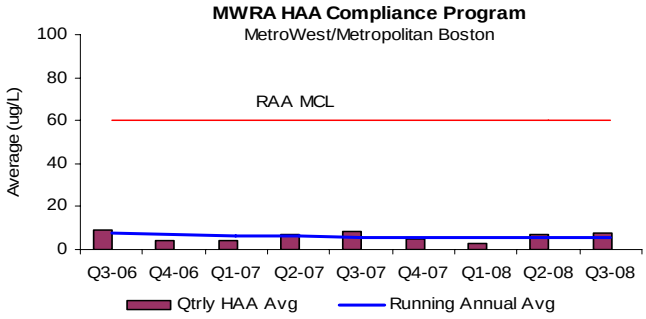
Absorbance, measured as UV-254, is a surrogate measure of reactive organic matter. Regulated DBPs have dropped to very low levels with the CWTP coming on-line. However, UV-254 levels remain useful for estimating ozone dosage and serving as a trigger for Quabbin transfer consideration.

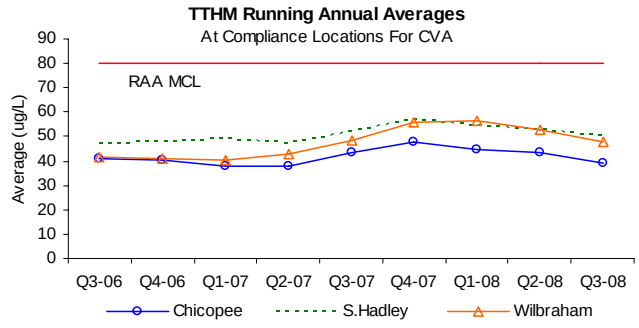
Bromate is tested monthly per DEP requirements for water systems that treat with ozone. Bromide in the raw water may be converted into bromate following ozonation. EPA's RAA MCL standard for bromate is 10 ug/L.

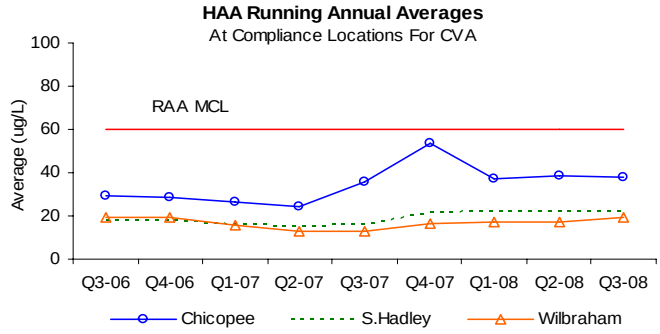
Outcome

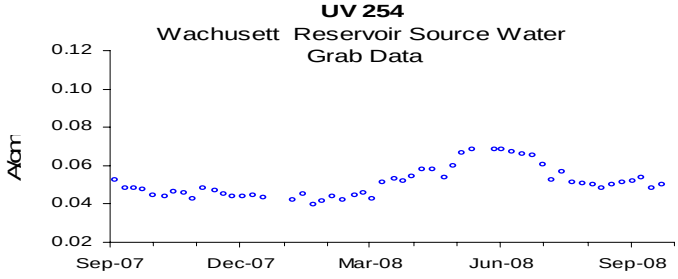
The RAA for TTHMs and HAA5s for MWRA's Compliance Program (represented as the line in the top two graphs below) remained below current standards. TTHM levels at all sampling locations for the MetroWest/Metropolitan Boston communities have declined dramatically since August 2005 following activation of the CWTP. The RAA for TTHMs = 3.5 ug/L; HAA5s = 5.5 ug/L. CVA's DBP levels continue to be below current standards. UV-254 levels are currently around 0.05 A/cm. The current RAA for Bromate = 0.0 ug/L.











Water Supply and Source Water Management

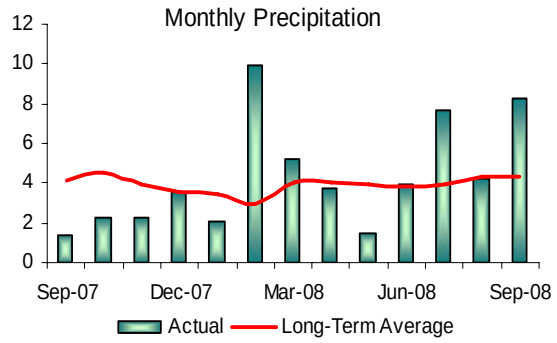
1st Quarter - FY09

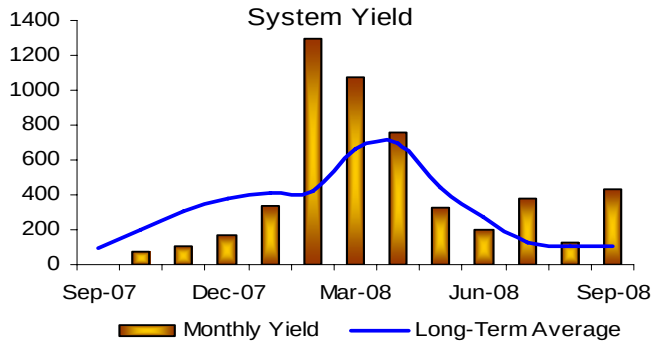
Background

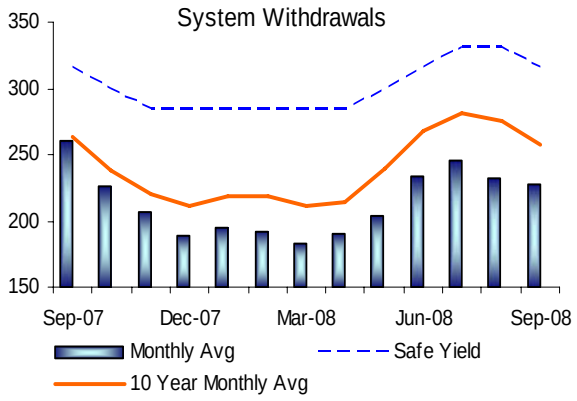
A reliable supply of water in MWRA's reservoirs depends on adequate precipitation during the year and seasonal hydrologic inputs from watersheds that surround the reservoirs. Demand for water typically increases with higher summer temperatures and then decreases as temperatures decline. Quabbin Reservoir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

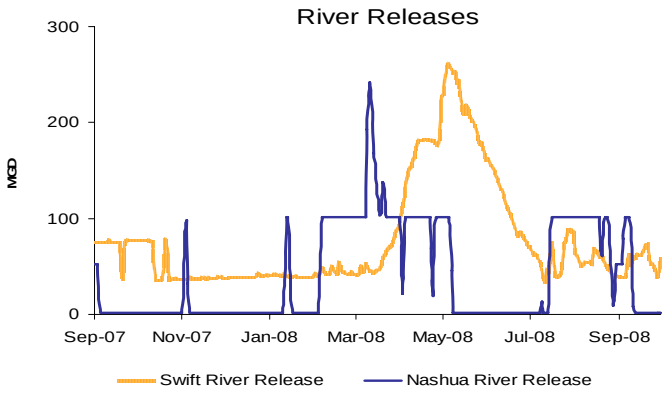
Outcome

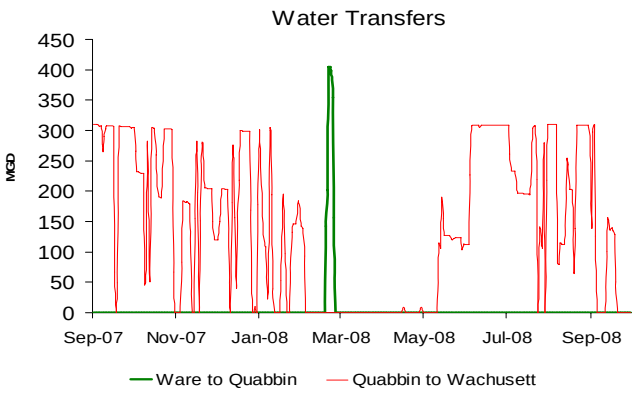
Quabbin Reservoir level is above the normal operating range for this period of the year. Quabbin Reservoir was at 97.3% of capacity as of September 30, 2008, 6.4% higher than same time last year. This is an increase of more than 26 billion gallons of storage. Above-average precipitation for the quarter resulted in spillage at the lower spillway for most of the quarter and above-average system yields. Lower system withdrawals also contributed to the above-average yields for the quarter.

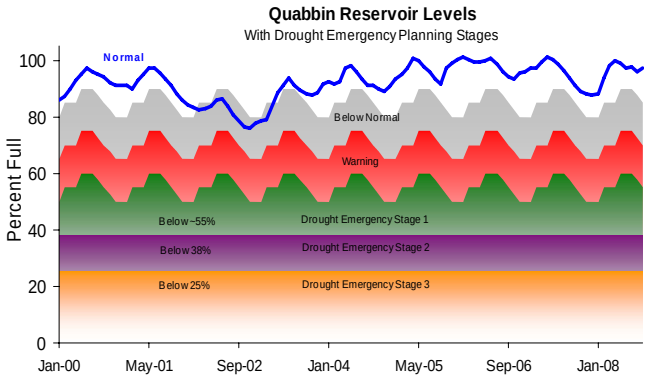












WASTEWATER QUALITY

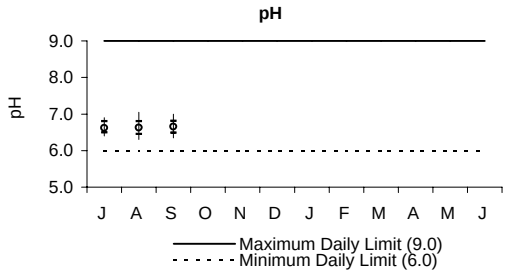
NPDES Permit Compliance: Deer Island Treatment Plant

1st Quarter - FY09

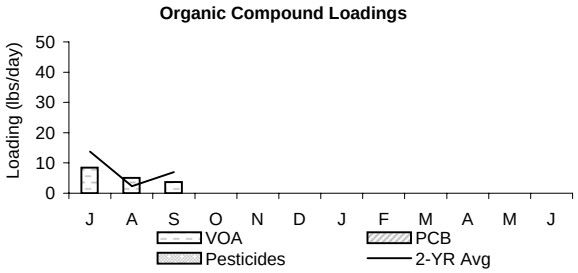
NPDES Permit Limits

Effluent Characteristics		*Units*	*Limits*	*July*	*August*	*September*	*1st Quarter Violations*	*FY09 YTD Violations*
Dry Day Flow:		mgd	436	322.2	296.4	302.6	0	0
cBOD:	Monthly Average	mg/L	25	4.1	3.6	4.1	0	0
	Weekly Average	mg/L	40	4.7	3.9	6.2	0	0
TSS:	Monthly Average	mg/L	30	7.9	5.5	6.2	0	0
	Weekly Average	mg/L	45	10.0	6.5	9.8	0	0
TCR:	Monthly Average	ug/L	456	40	40	40	0	0
	Daily Maximum	ug/L	631	50	40	40	0	0
Fecal Coliform:	Daily Geometric Mean	col/100mL	14000	16.5	58.1	127.6	0	0
	Weekly Geometric Mean	col/100mL	14000	9.0	23.4	36.0	0	0
	% of Samples >14000	%	10	0	0	0	0	0
	Consecutive Samples >14000	#	3	0	0	0	0	0
pH:		SU	6.0-9.0	6.4-6.9	6.3-7.1	6.4-7.0	0	0
PCB, Aroclors:	Monthly Average	ug/L	0.000045	UNDETECTED			0	0
Acute Toxicity:	Mysid Shrimp	%	50	>100	>100	>100	0	0
	Inland Silverside	%	50	>100	>100	>100	0	0
Chronic Toxicity:	Sea Urchin	%	1.5	100	100	100	0	0
	Inland Silverside	%	1.5	50	100	50	0	0

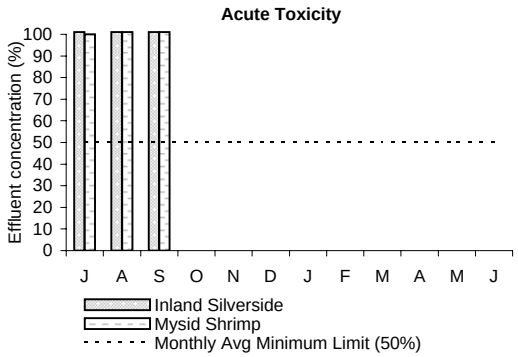
There were no permit violations at the Deer Island Treatment Plant in the 1st Quarter.



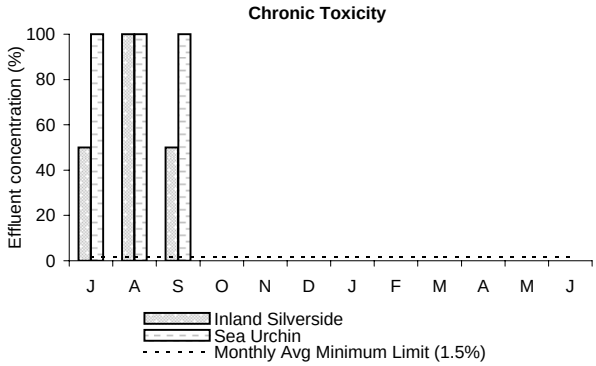
pH is a measure of the alkalinity or acidity of the effluent. Fluctuations in pH do not have an adverse effect on marine environments. Because of the pure oxygen used in the activated sludge reactor, the effluent pH tends to be at the lower pH range. pH measurements for the 1st Quarter were within the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



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



The acute toxicity test simulates the short-term toxic effects of chemicals in wastewater effluent on marine animals. The test measures the concentration (percent) of effluent that kills half the test organisms within four days. The higher the concentration of effluent required, the less toxic the effluent. For permit compliance, the effluent concentration that causes mortality to mysid shrimp and inland silverside must be at least 50%. Acute toxicity permit limits were met for the 1st Quarter for both the inland silverside and mysid shrimp.



Typically, effects of chronic exposures differ from those of acute exposures. Because of this, chronic toxicity responses are not necessarily related to acute toxicity. The chronic toxicity test simulates the long-term toxic effects of chemicals in wastewater effluent on marine animals. To meet permit limits, 1.5% effluent concentration must show no observed effects on the growth and reproduction of the test species. Chronic toxicity permit limits were met for the 1st Quarter for both the inland silverside and sea urchin.

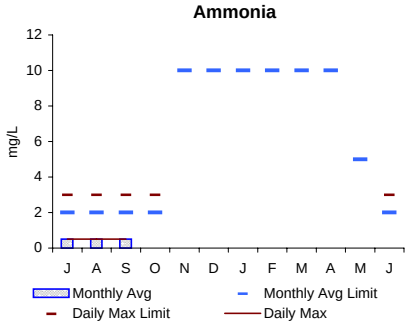
NPDES Permit Compliance: Clinton Wastewater Treatment Plant

1st Quarter - FY09

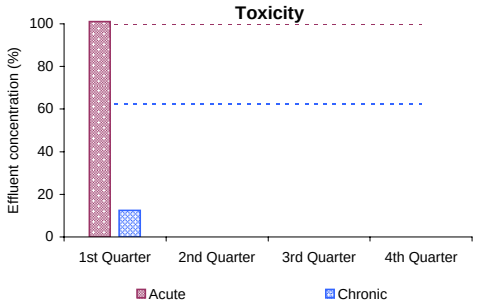
NPDES Permit Limits

Effluent Characteristics		*Units*	*Limits*	*July*	*August*	*September*	*1st Quarter Violations*	*FY09 YTD Violations*
Flow:		mgd	3.01	2.94	3.00	3.08	1	1
BOD:	Monthly Average:	mg/L	20	2.5	2.4	2.7	0	0
	Weekly Average:	mg/L	20	2.9	2.6	3.5	0	0
TSS:	Monthly Average:	mg/L	20	3.2	3.1	4.0	0	0
	Weekly Average:	mg/L	20	3.8	3.7	5.0	0	0
pH:		SU	6.5-8.3	6.5-7.6	6.9-7.5	6.8-7.4	0	0
Dissolved Oxygen:	Daily Minimum:	mg/L	6	6.3	6.9	6.9	0	0
Fecal Coliform:	Daily Geometric Mean:	col/100mL	400	7	7	11	0	0
	Monthly Geometric Mean:	col/100mL	200	2	3	3	0	0
TCR:	Monthly Average:	ug/L	50	0	0	0	0	0
	Daily Maximum:	ug/L	50	0	0	0	0	0
Total Ammonia Nitrogen:	6/1-10/31							
	Monthly Average:	mg/L	10.0	0.5	0.5	0.5	0	0
	Daily Maximum:	mg/L	35.2	0.5	0.5	0.5	0	0
Copper:	Monthly Average:	ug/L	20	7.2	6.8	4.7	0	0
Phosphorus:	May 1 - Oct 31							
	Monthly Average:	mg/L	1.0	0.19	0.24	0.35	0	0
Acute Toxicity:	Daily Minimum:	%	100	N/A	N/A	>100	0	0
Chronic Toxicity:	Daily Minimum:	%	62.5	N/A	N/A	12.5	1	1

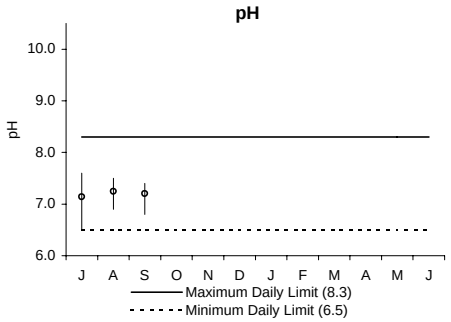
There were two permit violations at the Clinton Wastewater Treatment Plant in the 1st Quarter. September's monthly average flow of 3.08 mgd exceeded the permit limit of 3.01 mgd. Flow is calculated using a 12-month running average. The actual measured average flow for September was 3.03 mgd with a daily maximum of 4.92 mgd. During the chronic toxicity test in September, only 12.5% of the concentrated effluent caused mortality in the test species. The permit limit of 62.5% for chronic toxicity means that no less than 62.5% of the effluent can cause mortality in the test species. Toxicity testing is conducted on a quarterly basis.



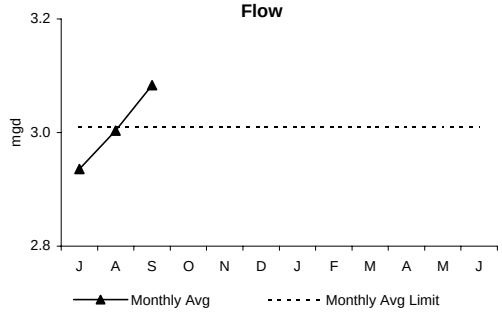
The 1st Quarter's monthly average and daily maximum concentrations were below the permit limits. The monthly average and daily maximum limits for the period of November 1 - March 31 are 10 mg/L and 35.2 mg/L, respectively. The permit limits are most stringent from June to October when warm weather conditions 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. Acute toxicity limits were met in the 1st Quarter but chronic results were below permit limits.



pH is a measure of the alkalinity or acidity of the effluent. All daily pH results for the 1st Quarter were within the range set by the permit.



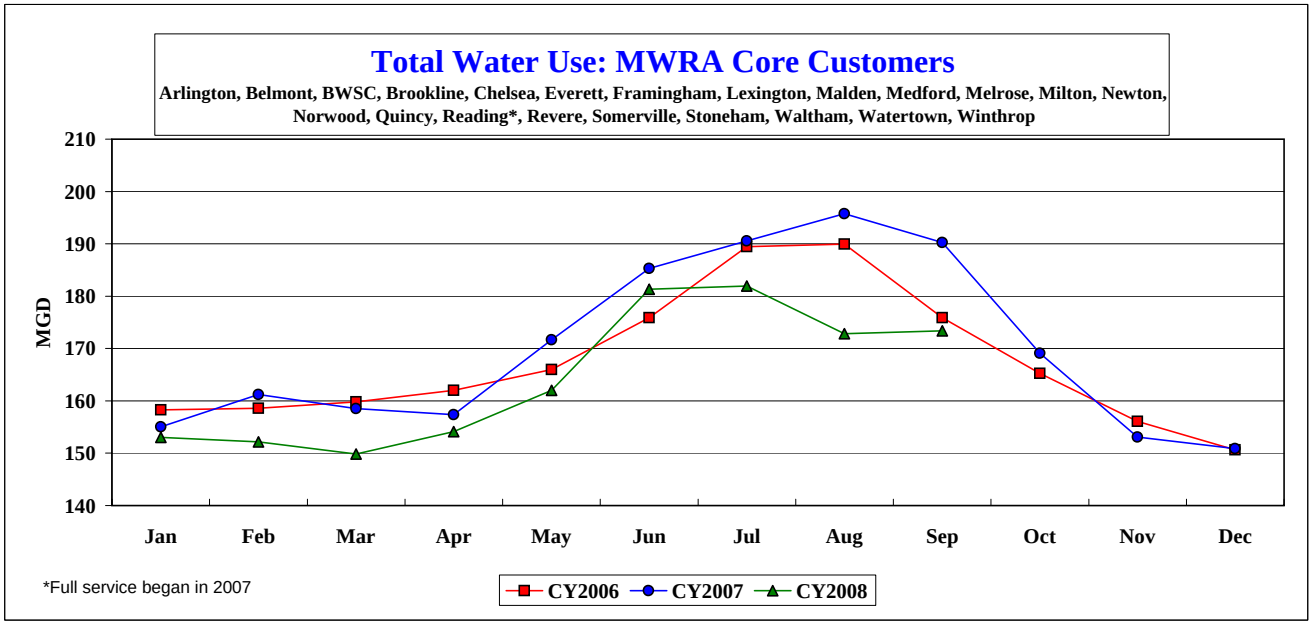
The graph depicts the average monthly flow, measured in million gallons per day, entering the plant. The average monthly flow for September (3.08 mgd) exceeded the permit limit of 3.01 mgd.

COMMUNITY FLOWS AND PROGRAMS

Total Water Use: MWRA Core Customer Communities

MGD	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Average
CY2006	158.305	158.563	159.814	161.991	166.013	175.903	189.446	189.942	175.866	165.227	156.078	150.623	167.385
CY2007	155.061	161.227	158.519	157.376	171.642	185.297	190.539	195.762	190.260	169.111	153.066	150.887	169.949
CY2008	153.011	152.183	149.867	154.137	161.996	181.312	181.943	172.800	173.381	0.000	0.000	0.000	164.549

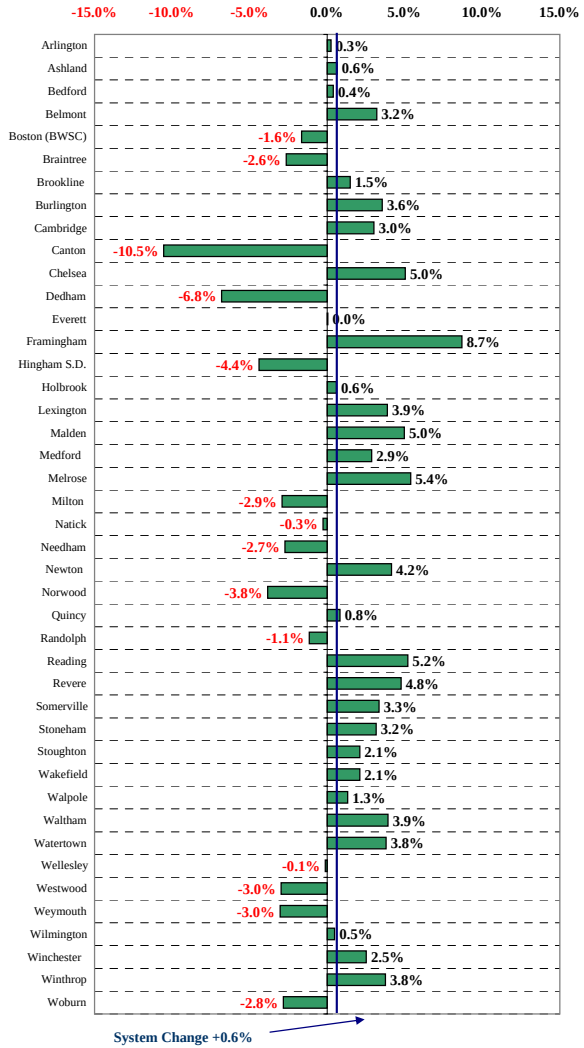
MG	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
CY2006	4,907.441	4,439.761	4,954.227	4,859.730	5,146.393	5,277.092	5,872.840	5,888.199	5,275.991	5,122.038	4,682.351	4,669.320	61,095.384
CY2007	4,806.893	4,514.365	4,914.084	4,721.268	5,320.891	5,558.920	5,906.704	6,068.612	5,707.813	5,242.433	4,591.980	4,677.497	62,031.459
CY2008	4,743.336	4,413.302	4,645.878	4,624.095	5,021.882	5,439.368	5,640.248	5,356.812	5,201.422	0.000	0.000	0.000	45,086.345



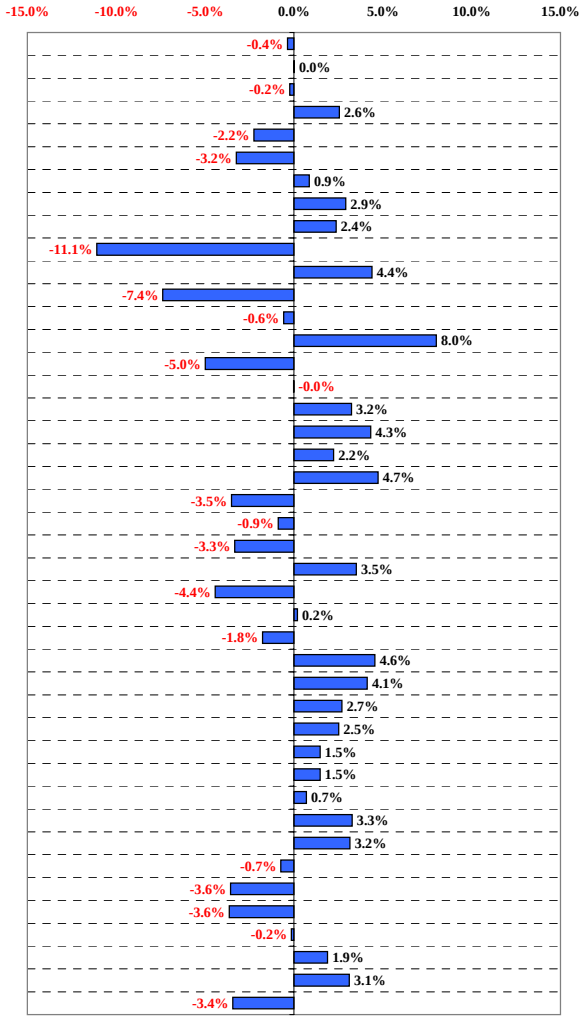
How CY2008 Community Wastewater Flows Through Eight Months Could Effect FY2010 Sewer Assessments [1,2,4]

FY2010 sewer assessments will use a 3-year average of CY2006 to CY2008 wastewater flows compared to FY2009 assessments that used a 3-year average of CY2005 to CY2007 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 CY2006 to CY2008 flow share compared to CY2005 to CY2007 flow share, compared to all other communities in the system.** → **Changes in flow shares are only a part of the assessment calculation as illustrated by the estimated impact of flow share changes on FY2010 sewer assessments.**

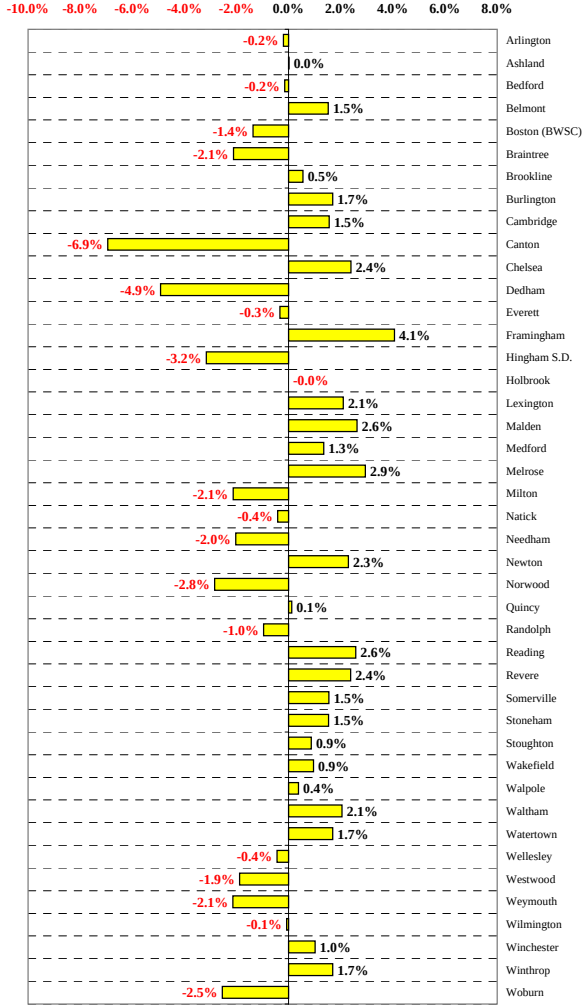
Change in community absolute flow



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] MWRA's wastewater metering system replacement began in March 2004 and was completed in March 2005. Therefore, wastewater flows for each month during this period are an average of the three prior years. Flow data is preliminary and subject to change pending additional MWRA and community review.

[3] Add this figure to the projected FY2010 system-wide average sewer rate increase of 9.5% (June 2008) to estimate each communitiy's FY2010 sewer assessment change from FY2009.

[4] Based on CY2006 to CY2008 average wastewater flows as of 10/27/08.

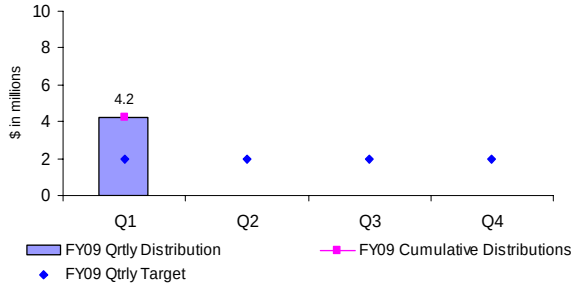
Community Support Programs

1st Quarter – FY09

Infiltration/Inflow Local Financial Assistance Program

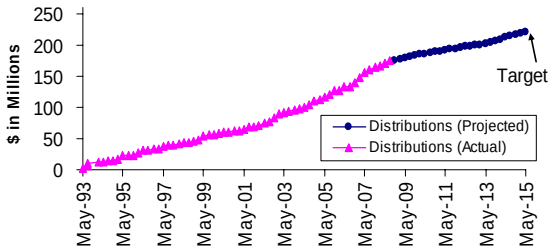
The MWRA's Infiltration/Inflow (I/I) Local Financial Assistance Program provides $220.75 million in grants and interest-free loans (average of about $10 million per year from FY93 through FY15) to member sewer communities to perform I/I reduction and sewer system rehabilitation projects within their 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.

FY09 Quarterly Distributions of Sewer Grant/Loans



I/I Local Financial Assistance Program

Distribution FY93-FY15 Target is $220M

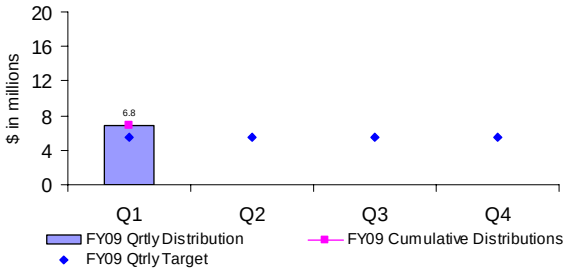


During the first quarter of FY09, $4.2 million in 45% grants and 55% interest-free loans was distributed to fund local sewer projects in Belmont, Boston, Newton, Norwood, Stoughton, and Waltham. From FY93 through the first quarter of FY09, all 43 member sewer communities have participated in the program and more than $174 million has been distributed to fund 359 local I/I reduction and sewer system rehabilitation projects. Distribution of the remaining funds has been approved through FY15 and community loan repayments will be made through FY20. All scheduled community loan repayments have been made.

Water Local Pipeline Assistance Program

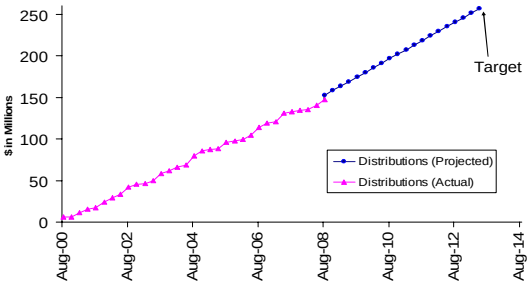
The MWRA's Local Pipeline Assistance Program (LPAP) provides $256,723,500 in interest-free loans (an average of about $20 million per year from FY01 through FY13) to member water communities to perform water main rehabilitation projects within their locally-owned water distribution system. Eligible project 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.

FY09 Quarterly Distributions of Water Loans



Water Local Pipeline Assistance Program

Distribution FY01-FY13 Target is $256M

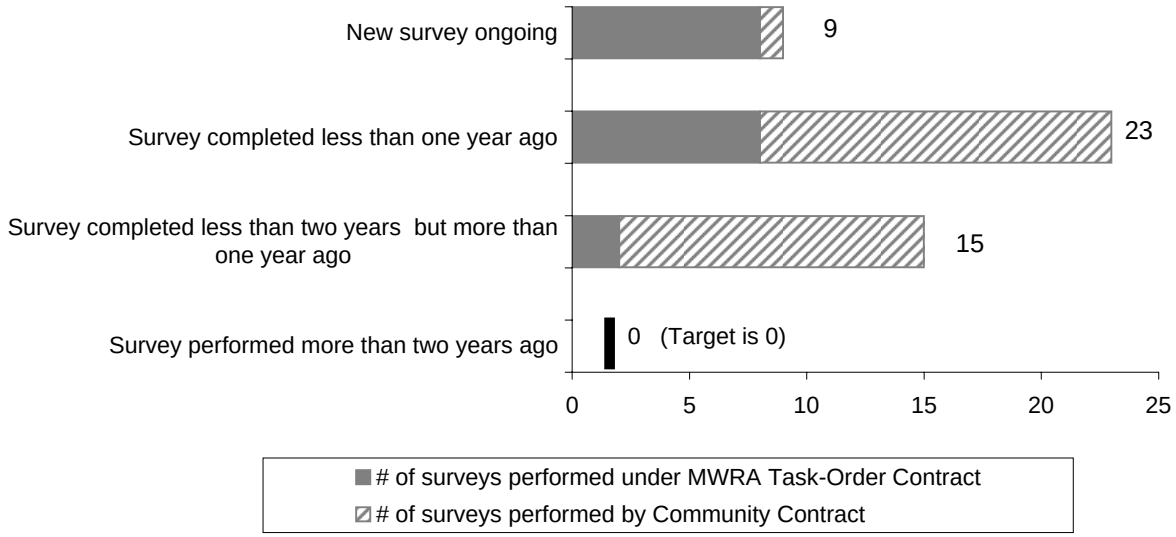


Community Support Programs

1st Quarter – FY09

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 average annual water demand is less than 220 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 with an annual target distribution of 200,000 educational brochures and 6,000 water conservation fixtures. Through the first quarter of FY09, local distribution included: 4,534 educational brochures, 2,957 shower heads, and 6,167 faucet aerators, and 5,818 toilet dye tabs.

BUSINESS SERVICES

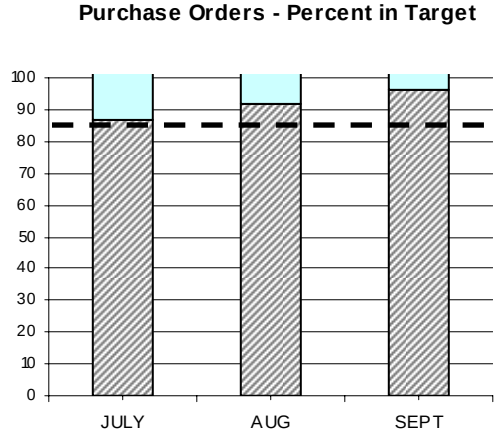
Procurement: Purchasing and Contracts

First Quarter FY09

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

Outcome: Processed 92% of purchase orders within target; Avg. Processing Time was 4.50 days vs. 6.27 days in Qtr 1 of FY08. Processed 79% (19 of 24) contracts within target timeframes; Avg. Processing Time was 145 days vs. 172 days in Qtr 1 of FY08.

Purchasing



	NO.	TARGET	PERCENT IN TARGET
$0 - $500	1105	4 DAYS	90.5%
$500 - $2K	739	7 DAYS	93.8%
$2K - $5K	239	10 DAYS	90.0%
$5K - $10K	115	25 DAYS	94.8%
$10K - $25K	64	30 DAYS	92.2%
$25K - $50K	21	60 DAYS	85.7%
OVER $50K	27	80 DAYS	92.6%

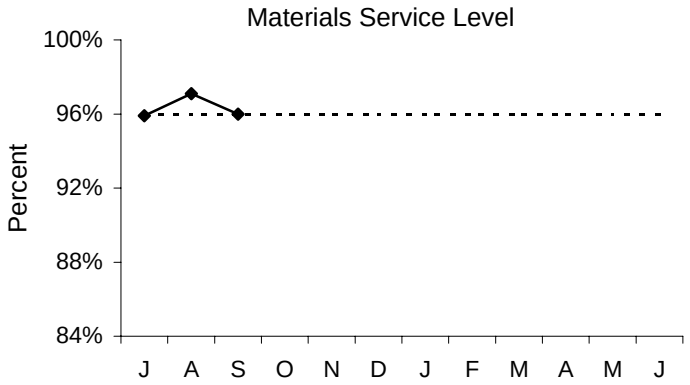
- Purchasing Unit processed 2340 purchase orders, 284 more than the 2056 processed in Qtr 1 of FY08, for a total value of $12,530,880 vs. a dollar value of $8,784,197 in Qtr 1 of FY08.
- The purchase order-processing target was achieved for all dollar categories.

Contracts, Change Orders and Amendments

- Procurement processed twenty-four contracts with a value of $74,784,079 and five amendments with a value of $201,982.
- Five contracts were not processed within target timeframes for the following reasons: a delay in order to review and determine the appropriate procurement method, multiple revisions to specifications and delay in vendor submittal of documents.
- Twenty-two 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 the 1st quarter FY09 was $816,670 and the value of credit change orders was ($241,082). The net dollar value of all change orders was $575,588.
- In addition, staff reviewed 80 proposed change orders and 44 draft change orders.

Materials Management

1st Quarter, FY09



The service level is the percentage of stock requests filled. The goal is to maintain a service level of 96%. Staff issued 10,168 (96.4%) of the 10,545 items requested in Q1 from the inventory locations for a total dollar value of $1,116,722.

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 FY09 goal is to reduce consumable inventory from the July '08 base level ($6.84 million) by 2.0% (approximately $136,823), to $6.70 million by June 30, 2009 (see chart below).

Items added to inventory this quarter include:

- Deer Island – switches, segments, sprockets, stainless steel nuts, bolts and washers and flow meters and assemblies for Electrical, Maintenance and I&C.
- Chelsea – steering knuckles, HP Printers and battery assemblies for Maintenance, MIS and Operations.
- Southboro - miscellaneous plumbing supplies, sensors, safety chaps, clothing, motor brushes, kopkits, valve sleeves and valves for Western Operations, Maintenance and the Carroll Water Treatment Plant.

Property Pass Program:

- Over the past quarter numerous obsolete items such as computers, monitors, printers, hard drives, network equipment and computer batteries have been recycled through our established recycling vendor.
- In addition, various metals and fibers have been scrapped providing a monetary return of $13,546.
- Numerous equipment/tool repairs were made resulting in a cost savings of $11,424.
- Tool/equipment audits were conducted throughout Support and Operations (VMM, Emergency Preparedness and Paint Shop) and surplusing efforts are ongoing.

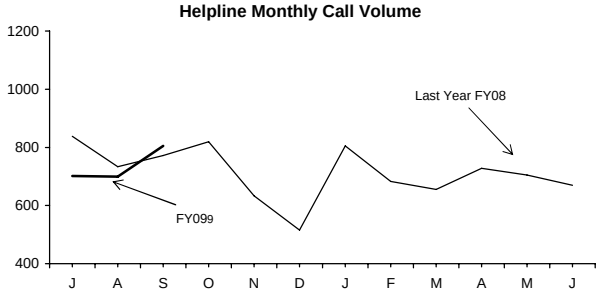
Items	Base Value July-08	Current Value w/o Cumulative New Adds	Reduction / Increase To Base
Consumable Inventory Value	6,841,161	6,912,718	71,557
Spare Parts Inventory Value	6,940,392	6,790,617	-149,775
Total Inventory Value	13,781,553	13,703,335	-78,218

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

MIS Program
1st Quarter FY09

Operations

Highlights:

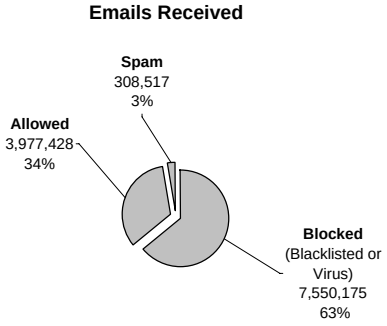


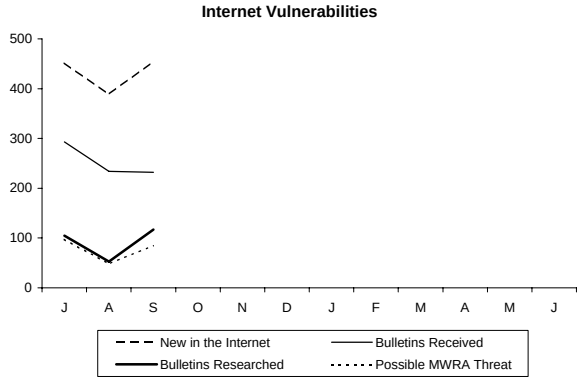
Performance

Call volume peaked in September and has decreased by 5.89% from Q1 last year. The backlog also peaked in September and is above the targeted benchmark range. The mix of calls for the quarter do not indicate any major problems.

Business System Plan

- Cyber Security: During Q1, staff pushed security fixes and updates to desktops and servers throughout the quarter in order to protect against the 1236 newly revealed vulnerabilities.
- Five files were identified with viruses on MWRA computers this quarter and infected files were cleaned or deleted before any damage ensued.





- Network Enhancements - Network staff upgraded the memory on the 3 core switches at Chelsea, CNY and DI during off business hours. Additionally, staff upgraded all network gigabit switches to the latest code and added a new network switch to Chelsea's Maintenance building to accommodate additional networking requirements.
- Green Computing: MIS met with senior staff to discuss green computing standards recommended by the state. MWRA previously implemented variations of these practices. Flat panel monitor replacements of traditional tube monitors began in 2005 and 95% have been replaced. The exceptions were larger specialty monitors that are scheduled for replacement this calendar year. In addition to the Flat Panels recently installed, Verdiem's Surveyor software, an energy savings/monitor package has been purchased and installed. Verdiem Energy saving software implementation began in October 2007 and was completed in December 2007. The current configuration projects to annually save the MWRA $27,600 in energy costs and 89.6 tons of greenhouse gas emissions. Also note, the MWRA received a rebate check for $8,860.00 from NSTAR for using the Verdiem Surveyor software.

Applications/Training

Area	Significant Accomplishments
GIS	The procurement process to solicit bids for the GIS Integration services has begun. This project is for the development of a standard web-based viewer that will be integrated with the new Pretreatment Information Management System (PIMS). This effort will be the foundation for subsequent integration projects between GIS and many of MWRA's information systems.
PIMS (TRAC-IS Replacement)	The TRAC department went live with the new PIMS on August 18. This system replaces the legacy TRAC-IS application that has been in use since February 1992. PIMS is fully supported by the vendor, Inflection Point Solutions, and is running on a fully supported platform.
Lawson Upgrade	A&F team continues to work on the Lawson System Foundation 9 (LSF 9) and Lawson Application Upgrade. All team members continue to upgrade our custom configured objects (screens, reports, fields, etc) to version 9. At the end of Q1, 73-78 % of the Easy, 88-90% of the Medium, and 86-87% of the Hard objects have been upgraded respectively.
Library & Records Center	The library completed distribution of 1688 electronic articles to staff desktops using set of 18 topic alerts (search terms and date ranges used by Lexis/Nexis & Google) including newspapers and federal register sources. (80% increase is a reflection of Library service expansion and a result of WEBSENSE blocked sites.) The Records Center added 194 new boxes to the Record Center, prepared Historic Sewer Permits for towns A thru C for scanning and microfilming and completed first floor Bar Coding process (101 pallets or 3518 Boxes).
Training	For the quarter, 272 staff attended, 45 classes and 15 workshops. 4% of the workforce have attended at least 1 class year-to-date. In addition to ongoing classes, new PIMs application training was offered in Q1.

Legal Matters
1st Quarter FY2009

PROJECT ASSISTANCE

COURT AND ADMINISTRATIVE ORDERS

- **Boston Harbor Litigation and CSO**: Reviewed final drafts of amendment 8 to memorandum of understanding and financial assistance agreement with City of Cambridge for the implementation of CSO projects. Drafted letter for delivery of sewage pumpout boat to City of Boston as part of a supplemental environmental project. Revised blending notification letter to conform to stipulation and order relating to blending activities at DITP. Filed Quarterly Compliance and Progress Report and CSO Quarterly Progress Report with the Court. Provided written notice to the United States that MWRA met milestones for the commencement of the cleanup of marine debris and floatables, the award of the contract for design and construction of the sewage pumpout boat, and the delivery of the sewage pumpout boat to the City of Boston. Provided written notice to the United States that MWRA submitted payment of the $305,000 civil penalty, by wire transfer, to the United States.

- **NPDES**: Drafted letter supplementing Clinton NPDES permit renewal application. Reviewed and updated CSO language in final draft CSO Phase II modification to DITP NPDES permit in preparation for supplement to DITP NPDES permit renewal application. Drafted letter notifying DEP and EPA of problem at MWRA's BOS019 CSO storage facility. Drafted letter notifying DEP and EPA of discharge of potable water from DITP storm drain.

REAL ESTATE AND CONTRACT

- **Fore River Railroad Corporation**: Prepared final draft Sixth Supplemental Indenture of Lease for new Engine House.

- **Section 97A, East Boston**: Obtained executed license agreement from MBTA. Reviewed final plans. Prepared finalized and recorded Order of Taking for permanent easement on two public ways**.**

- **East Boston Branch Sewer Relief**: Obtained and recorded Order of Taking. Reviewed and revised notices to land owners. Finalized and recorded Grant of Easement for BWSC and Boston Public Schools

- **Hultman Interconnections Project**: met with MTA staff to discuss grant of permanent access and utility easements in Weston. Drafted proposed Permanent Easement documents with Mass Turnpike Authority concerning the grant of permanent access and utility easements in Weston.

- **MWRA Meter 32 – Somerville**. Revised temporary construction license and permanent easement, and forwarded to 7-Eleven, Inc.

- **Brookline Transformer House**: Reviewed with town counsel ownership issues at transformer house located at Warren and Boylston Streets. Met with MWRA staff and reviewed available documentation.

- **DCR Watershed Lands**: Reviewed real property issues concerning Nelson property in Sterling.

- **North Dorchester Bay**: had various conferences with City of Boston counsel concerning addition of force main work to storage tunnel permit from Public Improvement Commission. Attended two PIC hearings. Drafted provisions for inclusion in the Grant of License with the City of Boston's Public Improvement Commission concerning the storage tanks and force main work to storage tunnel permit from Public Improvement Commission.

- **Eastern Salt 8(m) Permit**: Reviewed and revised permit revisions proposed by Permittee.

- **River's Edge 8(m) Permit**: Added final conditions concerning no planting of trees on easement area.

- **Charles River CSO Interceptor Optimization Evaluation**: Prepared and revised PIC License for installation of monitoring wells.

- **South Diversion Pipeline Abandonment**: Advised staff on NStar's proposed release and indemnification agreement.

- **Weston Wells**: Attended staff meeting. Reviewed and revised letters to property owners relating to their remaining on municipal water lines rather than returning to original wells.

- **WASM Section 28 Brattle Street, Arlington**. Met with staff to review easement plans and discuss related issues.

- **Columbus Park Headworks**. Discussed the terms of a license agreement with staff concerning a community group's use of land for a dog run area.

- Advised on contract matters with Procurement and Operations Division staff; revised a Memorandum of Understanding with the State Plumbing Board; drafted amendments to two Tolling Agreements with design consultants; drafted and finalized Settlement Agreement and Releases to resolve claims by and against two design consultants; advised staff on the application form for the Regional Greenhouse Gas Initiative Allowance Auction; reviewed and provided a recommendation on a construction contractor claim made in connection with the Braintree-Weymouth Pump Station project; provided guidance on Chapter 91 Waterways License application; met with staff to review and make recommendations concerning three claims made by the pelletizing plant operator; made initial inquiries and retained the services of outside counsel regarding export of power across HEEC cable, continued advice regarding FSA/DCAP issues, provided input on record retention rules for Board members, completed due diligence review for Kristoff/TPL parcel, drafted MOA between MWRA and Winthrop re: Homeland Security grant, and continued work/research re: open issue concerning QWAC and WRWAC advisory roles to DCR/DWSP. Met with operations personnel regarding utility conflicts on East Boston Branch project, contract 6257 and drafted standard form "Orders for Utility Relocation for the project; reviewed and provided guidance on Senate No. 1847 concerning the requirement of an "Independent Engineer" on large Massachusetts projects; had correspondence with both outside counsel and counsel for NStar regarding the possible entry of MWRA into the Forward Capacity Market; Drafted letters to employees affected by FSA and DCAP research; additional consideration and research concerning Brookline transformer building; drafted litigation status reports and footnotes for contingent liability disclosures for MWRA and Commonwealth/AG financials. Reviewed and drafted memo summarizing new regulations concerning road flaggers and police details for public works projects; met with staff and outside consultants concerning the use of alternate material rather than proprietary material on the East Boston Branch Sewer Interceptor project; discussed possible restoration or settlement options concerning two wells in the Town of Weston; conferred with outside counsel regarding the possible entry of MWRA into the Forward Capacity Market and use of the existing harbor cable; researched procedures for de-barring a construction contractor; researched the permit limits of use of the CTG's on Deer Island; provided support in the Seaver and Chappy litigations.

ENVIRONMENTAL

- **Landlocked Tidelands/Proposed Regulations**: Reviewed proposed regulations implementing recent amendments to c. 91 and MEPA pertaining to work in landlocked tidelands;

- **EEA Secretariat Proposed Regulations**: Reviewed semi-annual list of prospective regulations expected to be promulgated by EEA agencies in the next six months to determine if any are likely to be relevant to MWRA activities;

- **NPDES General Permit**: Reviewed new NPDES Noncontact Cooling Water General Permit which covers discharges of noncontact cooling water into waters of Massachusetts; reviewed and discussed with staff the proposed General Permit for dewatering activities, especially as it impacts discharges of potable water. Reviewed proposed regulations relevant to mercury-containing products that prohibit their disposal as a solid waste, ban the sale of certain ones, and impose additional labeling requirements.

- **Water System Expansion**: Reviewed proposal to apply "smart growth" criteria to communities seeking admission to the MWRA water system. Reviewed MEPA's "integrated review" policy to determine applicability to the MEPA Interbasin Transfer Act provisions.

- **Wetlands/New Neponset Valley Sewer Relief**: Researched approvals necessary to perform work along sewer easement. Met with MWRA and DCR staff to discuss planned maintenance work on a segment of the sewer line that runs through DCR land in the Blue Hills and to review mitigation plan of another area where tree removal had occurred during routine maintenance of sewer easement.

- **Ground Water**: Reviewed latest draft legislation concerning ground water levels. Reviewed, compared and commented upon most recent version of proposed state legislation regulating the use of groundwater resources, particularly those portions which focused on activities impacting groundwater levels and liability for damages resulting there from.

- **NPDES Discharge Permits**: Reviewed EPA's proposed 2008 NPDES General Permit for Stormwater Discharges from new dischargers engaged in large and small construction activities; no significant changes noted from previous General Permit.

MISCELLANEOUS

Analyzed options for streamlining of MEPA and IBT regulatory reviews for potential system expansion initiative; provided advice for completion of work to surplus remainder of Framingham South Sudbury parcels; drafted proposed revisions to 8(m) permits re: release from potential damage claims; resolved lease vs. license issue with respect to railroad engine house; provided input for revisions to Cambridge MOU/FAA; coordinated drafting of counter-memorandum responding to allegations in EPA/DOJ enforcement Complaint; negotiated terms of resolution of Central Artery adjudicatory appeal by way of dismissal of claims.

LABOR, EMPLOYMENT AND ADMINISTRATIVE

New Matters:

One demand for arbitration was filed.

Matters Concluded:

Received an arbitration decision in favor of the MWRA.

Complainant withdrew a charge of his retaliation at the EEOC after the filing of the MWRA's response.

LITIGATION/TRAC

New Matters:

No new cases were reported in the First Quarter of FY 2009.

Significant Developments:

There were no significant developments reported in 1st Quarter FY 2009.

***Concluded Cases**:*

There were 2 cases reported closed in the 1st Quarter FY 2009.

Obayashi Corporation v. Modern Continental Construction Company, Inc., et al.

This was an action by Obayashi Corporation against Modern Continental Construction for breach of contract, breach of fiduciary duty, breach of good faith and fair dealing, conversion, fraudulent transfer, constructive trust, aiding and abetting a breach of fiduciary duty, a declaratory judgment on indemnification and for an injunction. This case arose out of Modern's alleged failure to pay debts that it owes to Obayashi pursuant to the joint venture agreements between the parties, which concern projects completed in connection with Central Artery Tunnel Project. Obayashi also asserted "reach and apply" claims against, MWRA, Mass Turnpike Authority and others, seeking to have any monies or assets owed by MWRA, et al. to Modern to be paid directly to Obayashi, up to the amount of damages sought, $20,000,000. A preliminary injunction hearing was held on February 28, 2006, at which Obayashi secured an order enjoining MWRA, et al. from paying or transferring any money owed to Modern Continental, up to the amount of $7, 399,900.00, pending the resolution of the lawsuit. Based upon the amounts which appeared available and owed to Modern by other reach and apply defendants, the preliminary injunction was amended and MWRA was relieved of the obligation to withhold funds due to Modern. MWRA also filed a cross-claim against Modern, asserting set-off claims for defective work, estimated to be between $558,000.00 and $1,000,000.00. Ultimately MWRA and Modern, with the involvement of Modern's sureties, negotiated a settlement of MWRA's cross-claim for defective work, and Modern's contract retainage. Of the $991,477.00 of contract funds held by MWRA on two contracts with Modern, the parties agreed to allocate the retainage as follows: MWRA received $625,477.00 and Modern Continental received $366,000.00. A Settlement Agreement and Release was executed by the parties, and a Stipulation of Dismissal With Prejudice was filed for the principal action filed by Obayashi, and as to MWRA's cross-claim.

MWRA v. (former employee)

This was an action by MWRA to enjoin the defendant, a former MWRA employee, from threatening or harassing MWRA employees, and from coming on or near MWRA premises or work site. On Thursday, October 19, 2006, it was reported to Management that during the course of the work day, (former employee) drove by an MWRA work site and threatened other employees. On October 23, 2006, a temporary restraining order was issued as requested. On November 1, 2006, a preliminary injunction was issued by the Court. On July 14, 2008, there having been no further incidents reported, the

MWRA moved for voluntary dismissal of the case. The Clerk of the Superior Court informed the MWRA that the Court was granting MWRA's Motion for voluntary dismissal without prejudice.

Subpoenas:

During the First Quarter of FY 2009, no subpoenas were received and 1 subpoena was pending at the end of 1st Quarter FY 2009.

Public Records:

During the First Quarter of FY 2009, 6 new public records requests were received and 7 requests were closed at the end of First Quarter FY 2009.

SUMMARY OF PENDING LITIGATION MATTERS

TYPE OF CASE/MATTER	As of Sep 2008	As of Jun 2008	As of Mar 2007
Construction/Contract/Bid Protest (other than BHP)	5	6	5
BHP Claims/Contract Cases	0	0	0
Tort/Labor/Employment	8	8	9
Environmental/Regulatory/Other	2	2	2
Eminent Domain/Real Estate	2	2	1
total – all defensive cases	**17**	**18**	**17**
Affirmative Cases: MWRA v. (current employee)	1	1	1
Other Litigation matters (restraining orders, etc.) MWRA v. (former employee)	1	2	2
total – all pending lawsuits	**19**	**21**	**20**
Significant claims not in suit: CDM Walnut Hill	1	1	1
Bankruptcy	2	2	1
Wage Garnishment	7	7	6
TRAC Appeals	3	3	4
Subpoenas	1	2	2
Public Records Requests	10	13	13
TOTAL - ALL LITIGATION MATTERS	**43**	**49**	**47**

TRAC

New Appeals:

1 new appeal was received in the 1st Quarter FY 2009.
Massachusetts General Hospital 08-01

Pre-Hearings Held

1 pre-hearing was held in the 1st Quarter FY 2009.
Massachusetts General Hospital 08-01

Status Conferences Held

No status conferences were held in 1st Quarter FY 2009.

Joint Motion to Dismiss

1 case was dismissed by Joint Motion to Dismiss in the 1st Quarter FY 2009.
Offset Prep 07-08

Joint Stipulations of Dismissals

No cases were dismissed by Joint Stipulation after fine was paid in the 1st Quarter FY 2009.

Joint Stipulations of Dismissals – Claims Dismissed

No cases were dismissed by Joint Stipulations of Dismissal, claims dismissed in the 1st Quarter FY 2009.

Settlement by Agreement of Parties

No cases were settled by Agreement of Parties in 1st Quarter FY 2009.

Hearings Held

No hearings were held in the 1st Quarter FY 2009.

Tentative Decision

No Tentative Decisions were issued in 1st Quarter FY 2009.

Final Decisions

No Final Decisions were issued during the 1st Quarter FY 2009.

Internal & Contract Audit Program
1st Quarter FY09

Highlighted Audit Reports

I/I AND LOCAL PIPELINE COMMUNITY ASSISTANCE PROGRAMS (Issued: Jul 31, 2008)
Communities are current on their loan re-payments. The report contains observations and recommendations addressing Local Pipeline program funding, the retroactive funding of projects, the funding of projects by phase, the use of accumulated interest in community MMDT accounts, the submission of progress reports by communities, the performance and documentation of project inspections, and the update of MBE/WBE participation percentages.

AUDIT OF BUYING PRACTICES (Issued: Sep 15, 2008)
The report contains observations and recommendations addressing the delegation of authority levels for approving purchase orders, estimating the value and ensuring the timely award of Authority contracts, the identification of opportunities to award additional Authority contracts, the inclusion of prompt payment terms on purchase orders, the enhancement of the competitive bidding process and the periodic rotation of buyer assignments.

CONSULTANT INCURRED COST (Issued: Sep 22, 2008)
This audit reviewed $14.2 million in billings on 20 MWRA contracts and 3 BWSC CSO contracts from January 2005 through December 2007. A total of $92,234 is due from the consultant primarily as a result of final indirect cost rates being lower than the rates billed and paid.

Status of Open Audit Recommendations

The Internal Audit Department follows up on open recommendations on 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, 79% of recommendations have been implemented.

Report Title (date)	Pending Implementation	Closed Recommendations
Field Operations Maintenance Management Practices (9/16/05)	3	9
Accounts Payable Activities (10/11/05)	6	6
Controls Over Gasoline & Diesel Fuel (5/3/06)	1	15
Field Crew Practices (11/14/06)	1	8
Financial & Management Controls of the Fore River Railroad (3/1/07)	2	5
Infiltration & Inflow and Local Pipeline Programs (7/31/08)	3	7
Audit of Buying Practices (9/15/08)	4	7
Total Recommendations	**20**	**57**

Audit Savings

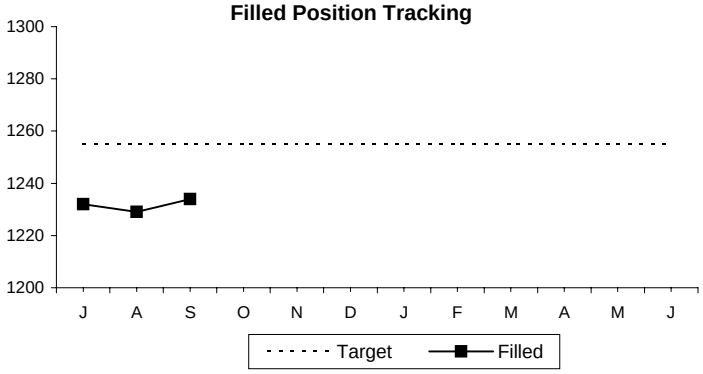
The Internal Audit Department's target is to achieve at least $1 million in cost savings each year. Cost savings vary each year based upon many factors. In some cases, cost savings for one year may be the result of work in prior years. Commencing in FY07 cost savings include the dollar impact, if measurable, of internal assignments.

Savings	FY05	FY06	FY07	FY08	FY09 1Q	TOTAL
Consultants	$483,968	$768,394	$358,341	$55,901	$53,648	$1,720,252
Contractors & Vendors	$1,551,139	$456,968	$637,378	$2,147,311	$54,324	$4,847,120
Internal Audits	0	0	$183,840	0	$219,990	$403,830
Total	**$2,035,107**	**$1,225,362**	**$1,179,559**	**$2,203,212**	**$327,962**	**$6,971,202**

OTHER MANAGEMENT

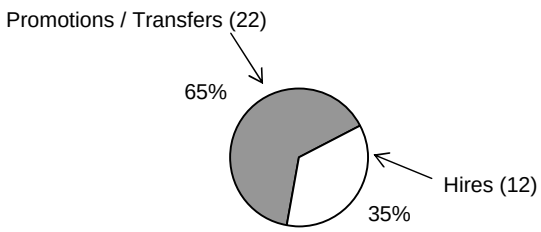
Workforce Management
1st Quarter FY09

Filled Position Tracking



FY09 Target for Filled Positions = 1255
Filled Positions as of September 2008 = 1234

Positions Filled by Hires/Promotions
FY09



	Pr/Trns	Hires	Total
FY06	41 (65%)	22 (35%)	**63**
FY07	52 (56%)	41(44%)	**93**
FY08	63 (62%)	39(38%)	**99**

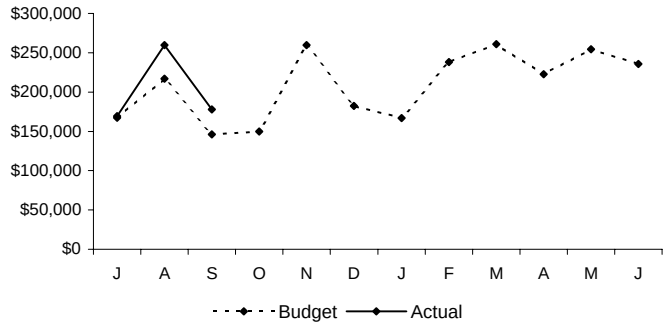
In FY09, the average monthly sick leave usage has increased 0.20% from the same time last year.

Average Monthly Sick Leave Usage
Per Employee

	Number of Employees	FY09 YTD	Annualized Total	Annual FMLA %	FY08
Law	18	2.00	8.01	14.7%	8.73
Planning	24	1.71	6.83	29.8%	6.91
Operations	960	2.08	8.31	19.8%	8.94
Support	196	1.59	6.35	16.1%	8.46
Finance	43	1.98	7.91	23.6%	8.64
Executive	7	1.63	6.53	0.0%	5.18
MWRA Av	**1248**	**1.98**	**7.94**	**19.5%**	**8.79**

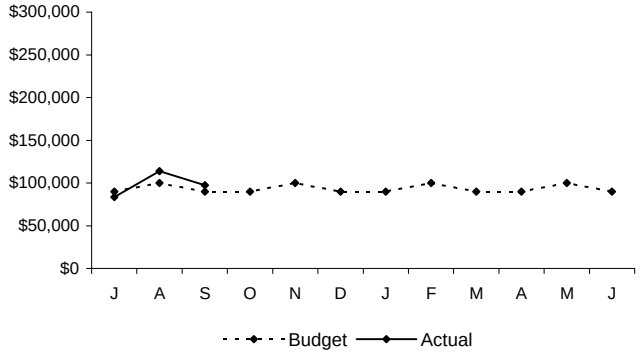
Percent of sick leave usage attributable to FMLA leave is 19.5% ending September 30, 2008. FY08 sick time of 8.79 days is reduced to 7.47 days if employees on long-term sick leave (20 or more days used) are excluded from the calculation.

Field Operations
Overtime Expenditure Variance



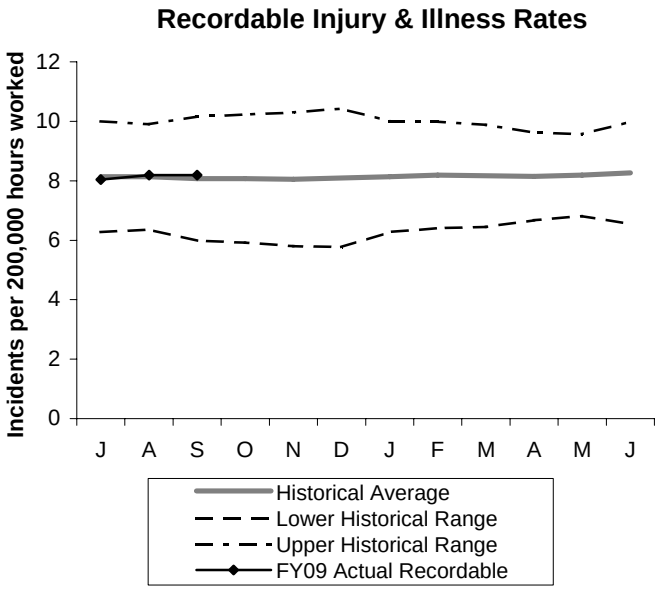
Field Operations overtime spending in the first quarter was $77,000 (14.5%) more than budgeted, primarily due to wet-weather coverage in August and September.

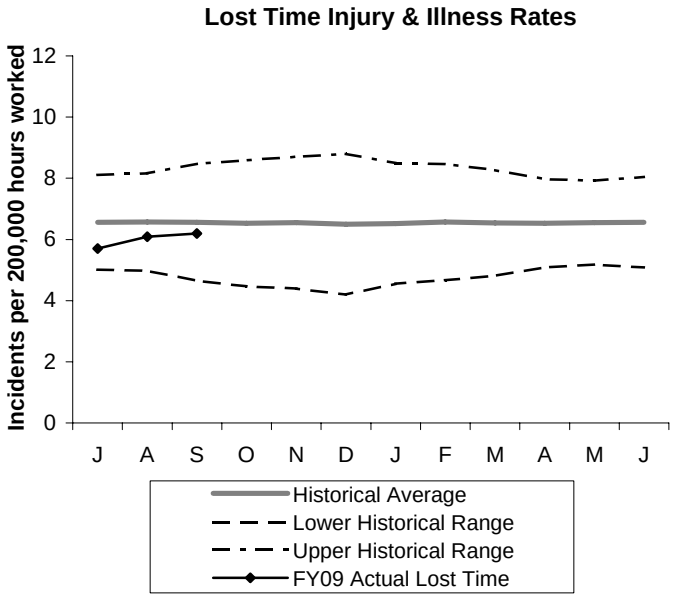
Deer Island Treatment Plant
Overtime Expenditure Variance



Deer Island overtime spending was $15,200 (5.4%) greater than budgeted, primarily due to NStar's cable outage in August which required crews from Operations, Thermal/Power Plant and Maintenance to be on-hand.

Workplace Safety
1st Quarter FY09





1 “Recordable" incidents are all work-related deaths and illnesses, and those work-related injuries which result in 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 FY08. The “Upper” and “Lower Historical Ranges” are computed using these same data – adding and subtracting two standard deviations respectively. FY09 actual incident rates can be expected to fall within this historical range.

Workers Compensation Claims Highlights

	New	Closed	Open Claims
Lost Time	5	10	48
Medical Only	33	38	32
	New		**YTD Returns**
Light Duty Returns	2		2

Light Duty Returns:

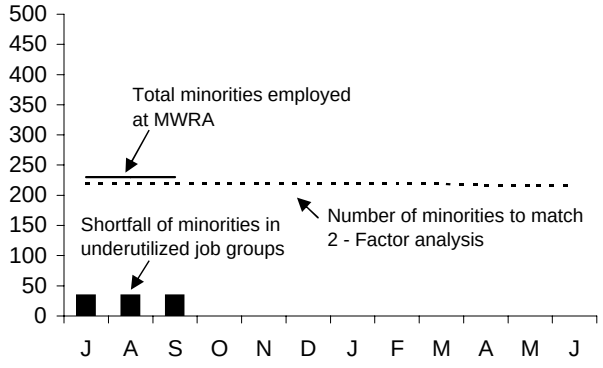
One employee returned to light duty at the DITP Warehouse.

One employee returned to own position at Nut Island and then to Chelsea.

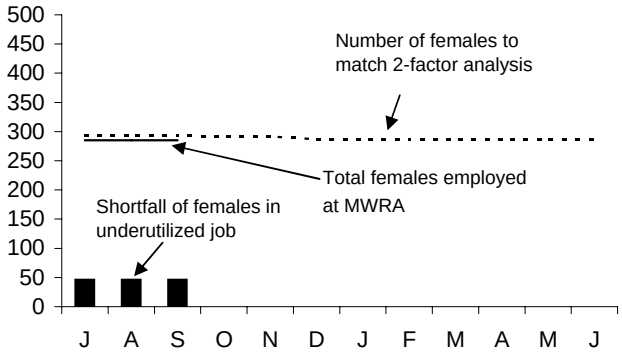
Three employees returned to work in their regular positions.

MWRA Job Group Representation
Quarter 1, FY 2009

Minority - Affirmative Action Plan



Female - Affirmative Action Plan



Highlights: At the end of Q1 FY09, 9 job groups or a total of 40 positions are underutilized by minorities as compared to 9 job groups or a total of 36 at the end of Q1 FY08; for females 11 job groups or a total of 82 positions are underutilized by females as compared to 9 job groups or a total of 49 at the end of Q1 FY09. During Q1, 1 minorities and 4 females were hired. During this same period, 0 minorities and 2 females terminated.

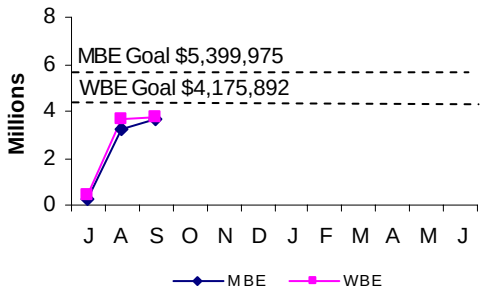
Underutilized Job Groups - Workforce Representation

Job Group	Employees as of 9/30/2008	Minorities as of 9/30/2008	Achievement Level	Minority Over or Under Under utilized	Females As of 9/30/2008	Achievement Level	Female Over or Under Under utilized
Administrator A	19	3	1	2	3	4	-1
Administrator B	25	0	4	-4	6	7	-1
Clerical A	51	23	10	13	44	12	32
Clerical B	44	8	10	-2	17	3	14
Engineer A	86	16	11	5	13	11	2
Engineer B	52	9	5	4	6	19	-13
Craft A	121	15	21	-6	0	8	-8
Craft B	151	28	19	9	4	7	-3
Laborer	62	15	10	5	4	8	-4
Management A	101	17	19	-2	32	38	-6
Management B	57	9	12	-3	12	27	-15
Operator A	70	6	7	-1	2	2	0
Operator B	75	8	11	-3	4	3	1
Para Professional	63	11	27	-16	29	54	-25
Professional A	37	2	6	-4	24	9	15
Professional B	173	41	29	12	78	76	2
Technical A	47	15	10	5	3	11	-8
Technical B	14	4	3	1	4	5	-1
Total	**1248**	**230**	**215.0**	**56/-41**	**285**	**304**	**66/-85**

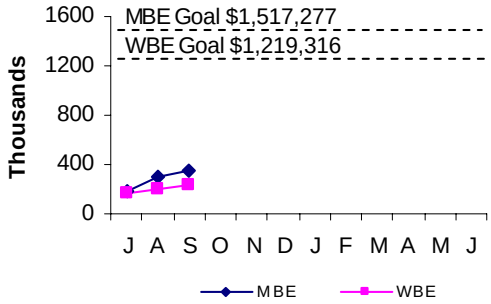
MBE/WBE Expenditures
First Quarter 2009

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 September.

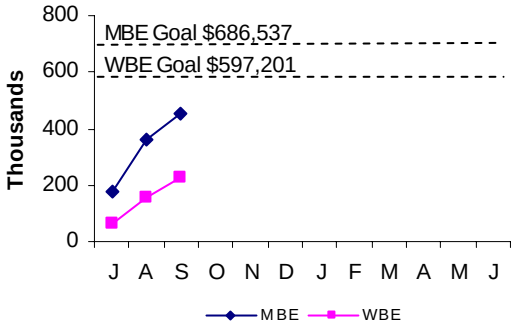
Construction



Professional



Goods/Services



FY09 spending and percentage of goals achieved, as well as FY08 performance are as follows:

	MBE				WBE			
	FY09 Year-to-Date		FY08		FY09 Year-to-Date		FY08	
	Amount	Percent	Amount	Percent	Amount	Percent	Amount	Percent
Construction	3,619,577	67.0%	13,681,272	144.8%	3,785,050	90.6%	9,999,226	212.8%
Professional Svc.	350,235	23.1%	1,867,312	118.3%	239,106	19.6%	863,795	68.1%
Goods & Svcs.	453,962	66.1%	1,523,765	266.1%	227,496	38.1%	627,752	126.0%
Total	$4,423,774	58.2%	$17,072,349	147.1%	$4,251,652	71.0%	$11,490,773	177.7%

MWRA FY09 CEB Expenses through September 2008

	September 2008 Year-to-Date					
	Period 3 YTD Budget	Period 3 YTD Actual	Period 3 YTD Variance	%	FY09 Approved	% Expended
EXPENSES						
WAGES AND SALARIES	$ 21,879,922	$ 21,334,191	$ (545,731)	-2.5%	$ 90,676,105	23.5%
OVERTIME	878,997	959,932	80,935	9.2%	3,906,671	24.6%
FRINGE BENEFITS	4,102,886	4,126,404	23,518	0.6%	16,462,542	25.1%
WORKERS' COMPENSATION	331,250	355,571	24,321	7.3%	1,325,000	26.8%
CHEMICALS	2,582,567	2,477,168	(105,399)	-4.1%	9,876,380	25.1%
ENERGY AND UTILITIES	6,306,615	6,454,452	147,837	2.3%	29,724,532	21.7%
MAINTENANCE	5,722,859	6,141,562	418,703	7.3%	28,089,127	21.9%
TRAINING AND MEETINGS	61,087	40,077	(21,010)	-34.4%	290,913	13.8%
PROFESSIONAL SERVICES	2,069,566	1,613,086	(456,480)	-22.1%	7,252,264	22.2%
OTHER MATERIALS	876,432	978,729	102,297	11.7%	5,170,041	18.9%
OTHER SERVICES	6,092,500	5,899,431	(193,069)	-3.2%	23,145,528	25.5%
TOTAL DIRECT EXPENSES	**$ 50,904,681**	**$ 50,380,603**	**$ (524,078)**	**-1.0%**	**$ 215,919,103**	**23.3%**
INSURANCE	$ 612,500	$ 412,992	$ (199,508)	-32.6%	$ 2,450,000	16.9%
WATERSHED/PILOT	5,770,846	5,685,892	(84,954)	-1.5%	23,083,385	24.6%
BECo PAYMENT	1,004,271	1,011,150	6,879	0.7%	4,161,027	24.3%
MITIGATION	361,309	351,738	(9,571)	-2.6%	1,445,236	24.3%
ADDITIONS TO RESERVES	697,626	697,626	-	0.0%	2,790,504	25.0%
RETIREMENT FUND	7,921,177	4,624,868	(3,296,309)	-41.6%	11,906,836	38.8%
TOTAL INDIRECT EXPENSES	**$ 16,367,729**	**$ 12,784,266**	**$ (3,583,463)**	**-21.9%**	**$ 45,836,988**	**27.9%**
DEBT SERVICE	$ 78,968,895	$ 76,340,337	$ (2,628,558)	-3.3%	$ 328,779,671	23.2%
DEBT SERVICE ASSISTANCE	(2,812,503)	(2,812,503)	-	0.0%	(11,250,000)	25.0%
TOTAL DEBT SERVICE	**$ 76,156,392**	**$ 73,527,834**	**$ (2,628,558)**	**-3.5%**	**$ 317,529,671**	**23.2%**
TOTAL EXPENSES	**$ 143,428,802**	**$ 136,692,703**	**$ (6,736,099)**	**-4.7%**	**$ 579,285,762**	**23.6%**
REVENUE & INCOME						
RATE REVENUE	$ 135,204,750	$ 135,204,750	$ -	0.0%	$ 540,819,000	25.0%
OTHER USER CHARGES	2,014,068	1,961,624	(52,444)	-2.6%	7,576,985	25.9%
OTHER REVENUE	697,451	890,172	192,721	27.6%	5,389,387	16.5%
RATE STABILIZATION	1,268,341	1,268,341	-	0.0%	5,073,363	25.0%
INVESTMENT INCOME	4,582,099	5,412,274	830,175	18.1%	20,427,025	26.5%
TOTAL REVENUE & INCOME	**$ 143,766,709**	**$ 144,737,161**	**$ 970,452**	**0.7%**	**$ 579,285,762**	**25.0%**

Through September 2008, total revenue was $144.7 million, $.9 million or 0.7% more than budgeted. Total expenses were $136.7 million, $6.7 million or 4.7% less than budgeted.

Expenses –

- **Direct Expenses** totaled $50.4 million, $524,000 or 1.0% more than budgeted.
- **Wages and Salaries** are $546,000 or 2.5% less than budgeted as a result of lower regular pay due to fewer than budgeted filled positions.
- **Maintenance** is $419,000 or 7.3% more than budgeted. Overspending results from increased spending for materials of $972,000 of which approximately $500,000 is due to FY08 purchases which carried over into FY09 offset by underspending for services of $553,000 primarily due to the timing of projects.
- **Energy and Utilities** are $148,000 or 2.3% greater than budgeted mostly due to higher electricity $218,000 offset by lower water ($54,000).
- **Professional Services** are $456,000 or 22.1% less than budgeted mainly due to underspending for lab and testing analysis $221,000 mainly in ENQUAD due to delays in harbor and outfall reports and lower as-needed task orders. Underspending in Engineering line of $188,000 due to underaccruals at Deer Island and delay in the use of as-needed services in FOD for work on dams and the water system.
- **Other Materials** are $102,000 or 11.7% more than budget mainly in equipment and furniture of $76,000 due to Lab Services FY08 carryover and in computer hardware of $65,000 in MIS.
- **Other Services** are $193,000 or 3.2% less than budgeted mainly due to underspending for sludge pelletization of $120,000 due to a prior year overaccrual and $68,000 in Real Property is due to lower spending for remediation projects.
- **Indirect Expenses** are $3.5 million or 21.9% less than budget mainly due to the decision to postpone the voluntary Pension Reserve deposit of $3.3 million until later in the fiscal year.
- **Debt Service** totaled $73.5 million, $2.6 million or 3.5% less due to lower than projected rate on variable debt 2.86% actual vs 4% budgeted)

Revenue and Income –

- **Other Revenue** exceeded budget by $193,000 mostly due to the receipt of unbudgeted Homeland Security grant of $237,000 for mobile laboratory equipment to be used for water protection.
- **Investment Income** through September totaled $144.7 million, $970,000 or 0.7% more than budgeted due to $830,000 in higher investment income as a result of higher than budgeted rates.

Cost of Debt
September 2008

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.

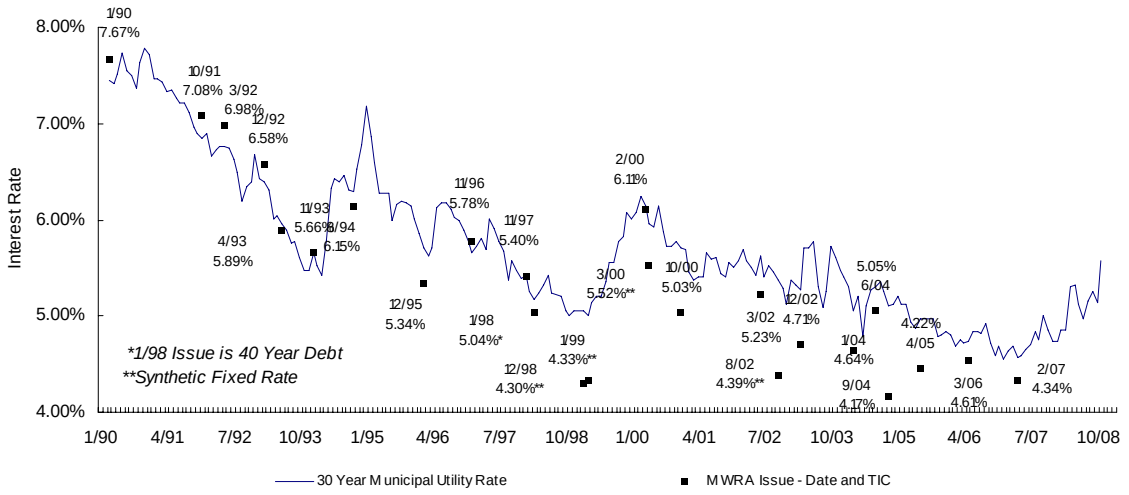
Average Cost of MWRA Debt

Fixed Debt ($3,802)	4.67%
Variable Debt ($594)	2.86%
SRF Debt ($960)	0.92%
Weighted Average Debt Cost ($5,511)	3.83%

Most Recent Senior Fixed Debt Issue
February 2007

2007 Series A & B ($848)	4.34%

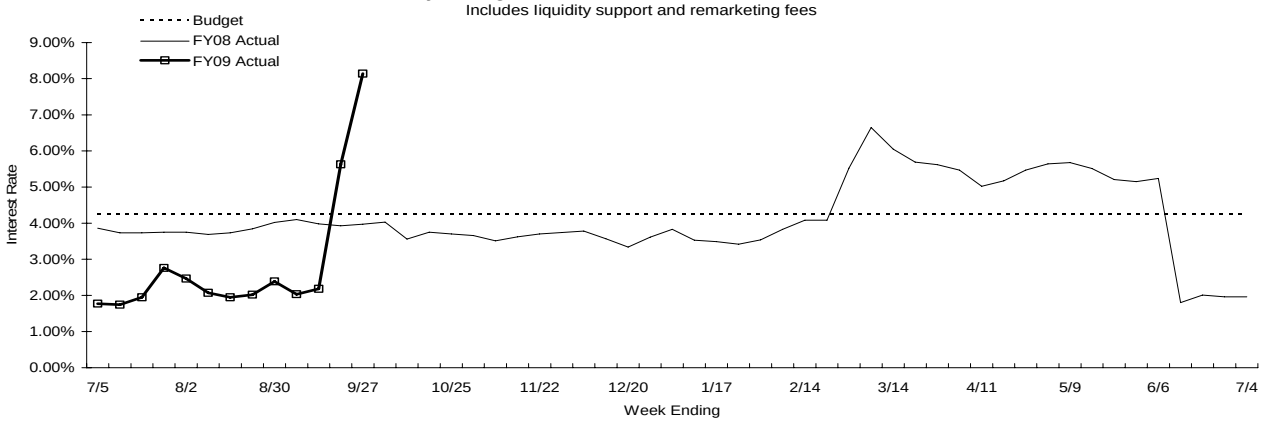
MWRA Fixed Rate Debt vs. 30 Year Municipal Utility Interest Rate



Weekly Average Interest Rates vs. Budget

MWRA currently has nine variable rate debt issues with $594 million 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. During September 2008 the short term market experienced disruption caused by a market wide credit crisis which pushed SIFMA rates to a high of 7.96%. 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.

Weekly Average Interest Rate on MWRA Variable Rate Debt
Includes liquidity support and remarketing fees



Investment Income
September 2008

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

YTD Investment Income vs Budget
($000)

	Impact on Investment Income due to Variance in Fund Balances				Impact on Investment Income due to Variance in Interest Rates			Combined Impact on Investment Income	
Fund	Average Budgeted Balance	Average Actual Balance	Variance	Impact	Budget	Actual	Impact	Impact	%
Combined Reserves	$91,618	$90,369	($1,249)	($16)	4.93%	5.03%	$22	6	0.56%
Construction	$69,752	$61,246	($8,506)	($42)	2.00%	2.75%	$112	70	20.56%
Debt Service	$88,518	$89,427	$909	$4	2.00%	2.70%	$153	158	36.56%
Debt Service Reserves	$237,831	$240,319	$2,488	$17	3.12%	3.78%	$387	403	22.28%
Operating	$52,433	$53,462	$1,029	$6	2.61%	2.77%	$23	28	8.47%
Revenue	$61,982	$66,336	$4,354	$13	2.20%	2.91%	$123	137	41.07%
Redemption	$35,410	$30,802	($4,608)	($22)	2.68%	3.45%	$50	28	11.96%
Total	$637,542	$631,960	($5,582)	($40)	2.95%	3.51%	$870	830.175	18.1%

YTD Investment Income Variance