



**MWRA Advisory Board Summary
of the
MWRA Board of Directors Meeting
Wednesday, September 16, 2009**

A meeting of the Board of Directors of the Massachusetts Water Resources Authority was held on September 16, 2009 at the Charlestown Navy Yard. **Present:** Chair Ian Bowles, Joel Barrera and Michael Gove, Gubernatorial Appointees; John Carroll, Andrew Pappastergion and Joseph Foti, Advisory Board Representatives; Vincent Mannering, Kevin Cotter and James Hunt III, City of Boston Representatives; Jack Walsh, City of Quincy Representative; Marie Turner, Town of Winthrop Representative.

REPORT OF THE CHAIR

Ian Bowles, Chairman of the MWRA Board of Directors, thanked the Board Members who came out to the Governor's event on Deer Island to mark the installation of wind turbines. He said MWRA's leadership on renewable energy is appreciated. He noted that the MWRA is well represented on the State Revolving Funds (SRF) intended use plan. Chairman Bowles stated that the state was facing difficult financial times and budget cuts were looming. He stated that the Governor and the Legislature were working together on an expanded Bottle Bill and that such a bill would be good for the MWRA and the environment.

REPORT OF THE EXECUTIVE DIRECTOR

MWRA Executive Director Fred Laskey stated that there was an ongoing conversation about email retention (in public agencies and authorities) and the open meeting law. He noted that MWRA Board Members are impacted and fall under the scope of the public meeting law.

Mr. Laskey reported that there were no findings in the internal audit process. He noted that swine flu planning is in full swing; there is a new software program in place to track staff and sick time determining who is in and who is out. Swine flu training is in place.

Mr. Laskey stated that there was an article in the *New York Times* that falsely reported the number of violations at the Deer Island Wastewater Treatment Plant. He said the article was based on faulty data from the Environmental Protection Agency (EPA) and staff are working to correct the information. He noted that the October Board of Directors meeting would be held at the Quabbin Reservoir.

APPROVALS

MEMORANDUM OF AGREEMENT BETWEEN MASSACHUSETTS WATER RESOURCES AUTHORITY AND THE TOWN OF ARLINGTON RELATED TO THE REPLACEMENT OF MWRA WATER MAINS BY THE TOWN DURING ITS MILL BROOK CULVERT REPLACEMENT CONTRACT

The Board voted to authorize the Executive Director, on behalf of the Authority, to execute a Memorandum of Agreement with the Town of Arlington, related to reimbursement to the Town for engineering and construction costs associated with replacement of MWRA's water mains, Sections 36 and 28, located beneath the Brattle Street culvert in the Town's culvert reconstruction contract.

The Town of Arlington needs to repair a portion of its field stone culvert crossing Brattle Street that has partially failed. The culvert also crosses MWRA's Section 28 and Section 36 water mains. MWRA plans to clean and cement line Section 28, which has no impact on the culvert; however, MWRA plans to replace Section 36 in the future, increasing its diameter to improve its hydraulics, which in turn will improve the operation of the Brattle Court Pump Station and support the WASM3 Rehabilitation project. For this reason,

and the added benefit of having both pieces of work completed at the same time, which would likely produce a better end result, staff have been coordinating with the Town of Arlington to include the replacement of a short length (80 feet) of both MWRA pipelines located under the culvert as part of the Town's culvert reconstruction contract.

The total amount of the MOA is \$430,000, which consist of the following components: Construction, Field Inspection Services by Arlington consultant, Potential Change Orders.

The Final FY10 CIP includes a budget of \$350,000 for this MOA; the actual agreement will be a not-to-exceed amount of \$430,000. The adjusted subphase total is \$80,000 over budget. This amount will be covered in the five-year CIP spending cap.

SELECTION OF UV EQUIPMENT FOR THE ULTRAVIOLET DISINFECTION SYSTEM AT THE JOHN J. CARROLL WATER TREATMENT PLANT: CALGON CARBON CORPORATION

The Board voted to approve the selection of Calgon Carbon Corporation to provide ultraviolet (UV) disinfection equipment for the John J. Carroll Water Treatment Plant (CWTP) and to authorize the Executive Director, on behalf of the Authority, to execute a Memorandum of Agreement with Calgon Carbon Corporation, substantially in the form presented and filed with the records of the meeting, that will contain the terms and conditions under which the UV equipment will be furnished.

The conceptual design for the addition of UV disinfection at the CWTP has been completed. Due to the differences in the UV equipment between manufacturers, the next phase of design must be based on the actual UV equipment to be installed. Therefore, staff recommend a "pre-selection" of the specific equipment around which the overall system would be designed.

The pre-selection procurement was advertised on June 20, 2009 and three pricing forms were received. Staff believe that Calgon Carbon Corporation's proposal is reasonable and appropriate. Pre-selection of the UV equipment and execution of the MOA have no immediate fiscal impact. The cost for the UV equipment will be included in the construction contract for Ultraviolet Disinfection Facilities at the John J. Carroll Water Treatment Plant, Contract 6924. The UV system supplier will be paid directly by the construction contractor. The Approved FY10 CIP contains \$34 million for this construction.

Board Member Jack Walsh asked if the costs for treatment will be reduced. Jae Kim, Director of Water Engineering, replied that there will be one-third less ozone used in the future so the overall costs will be reduced.

EXTENSION OF EMPLOYMENT CONTRACT, MANAGER, SECURITY SYSTEMS AND PLANNING, OFFICE OF EMERGENCY PREPAREDNESS

The Board voted to approve the extension of the employment contract for Mr. Joseph Goodwin, Manager, Security Systems & Planning, Office of Emergency Preparedness, for a period of one year from October 6, 2009 through October 5, 2010, at the current hourly rate of \$28.00, for an annual compensation not to exceed \$54,800.

The Office of Emergency Preparedness continues to have a need for assistance in completing required administrative tasks related to regulatory and grant requirements, including keeping plans updated and maintaining contact with municipal emergency and public safety personnel. Mr. Goodwin has been critical in evaluating technology in order for the staff to make informed decisions on acquisitions and recommendations. Since October 2008, Mr. Goodwin has provided extensive support and assistance to the Director of the Office of Emergency Preparedness. Significant funds for this position are budgeted in the FY10 Current Expense Budget.

EXTENSION OF EMPLOYMENT CONTRACT, SENIOR LABORATORY TECHNICIAN, DEPARTMENT OF LABORATORY SERVICES, DEER ISLAND

The Board voted to approve the extension of the employment contract for Ms. Nicole Johnson, Senior Laboratory Technician, Department of Laboratory Services, Deer Island, for a period of one year from

September 21, 2009 through September 20, 2010, at the current hourly rate of \$18.00, for an annual compensation not to exceed \$37,440.00.

The Department of Laboratory Services has a continuing need for contract staff to assist with both seasonal workload increases and the additional work that resulted from MWRA's decision to bring in house more of the Harbor and Outfall Monitoring sampling now required by its NPDES permit. Ms. Nicole Johnson has been a contract employee at MWRA since September 22, 2008 performing routine lab testing and field sampling. She performs prescribed procedures on water and wastewater samples. Ms. Johnson has one year of directly relevant experience and during the past year she has become trained and certified on a variety of chemistry tests and has become an integral part of the laboratory team. There are sufficient funds available for this position in the Department of Laboratory Services' FY10 CEB.

HEALTH CARE CONTRIBUTION PROGRAM/ VOLUNTARY RETIREMENT INCENTIVE

The Board voted to authorize the adoption of the Commonwealth's healthcare contribution benefit (St. 2000, c.65, 29) for MWRA employees who are participants of the MWRA Retirement System and who satisfy the provisions of subsections (a)-(c) of the statute.

In an effort to assist state agencies in reducing staffing levels and reducing costs, the Commonwealth is offering an incentive program that includes a voluntary retirement incentive, lower healthcare contributions for retirees, and other workforce reduction programs. The MWRA is allowed to offer similar incentives to its employees, and the two retirement incentives would provide a means to reach the FY2010 staffing goal. The deadline for filing for retirement is October 1, 2009.

The costs associated with this program will vary based on the number of employees who elect to retire and receive the incentive payment. Total costs will include the incentive payments, other applicable benefit time payouts and the costs for healthcare insurance. Based on estimates ranging from 10 employees to 30 employees, costs theoretically range from \$263,000 to \$789,000, but are offset by reductions in salary expenses during the second half of FY10 for a net savings in the range of \$102,000 to \$306,000 based on these scenarios. These savings estimates assume no backfills at this time and would be adjusted to reflect decisions to backfill certain critical vacated positions.

Board Member Joe Foti asked how staff can ensure there will be no backfilled positions. Mr. Foti said there is no way to know how many people will leave; at some point staff will want to back fill.

Board Member Michael Gove stated that the policy indicates that management will have final approval over who can go. Mr. Laskey responded that it gets tricky when there are some employees who can take advantage of the program and some who cannot.

Mr. Foti stated if there are five people who leave from the same division, there will have to be backfills. He noted that the state's program calls for a 30% backfill cap. Mr. Gove responded that management controls who gets approved for the program.

Board Member Andrew Pappastergion asked why we are so concerned about lowering staffing levels. Why are we so worried about buying into a program that reduces staff when we've been doing rightsizing our staff for ten years?

Board Member John Carroll suggested adopting the provisions with a backfill cap of 50%.

Board Member Marie Turner stated that she has concerns about cutting staff; the MWRA system needs to be maintained and the Authority has been trimming staff and running a tight ship; just because the state is now addressing this doesn't mean the Authority hasn't been working on this for years.

Michael Hornbrook, Chief Operating Officer, noted that key positions will have to be backfilled if too many retire, although no one can predict exactly how many will go.

CONTRACT AWARDS

DIGESTER SLUDGE PUMP REPLACEMENT – DEER ISLAND TREATMENT PLANT: INTERSTATE ENGINEERING CORP., CONTRACT 7123

The Board voted to approve the award of Contract No. 7123, Digester Sludge Pump Replacement – Deer Island Treatment Plant, to the lowest eligible and responsible bidder, Interstate Engineering Corporation, and to authorize the Executive Director, on behalf of the Authority, to execute and deliver said contract in the bid amount of \$1,396,000 for a term of 365 calendar days from the Notice to Proceed.

Normal operation at Deer Island requires two sludge pumps to be working; a third is used as a back-up. Maintenance requirements and costs for the sludge pumps have been increasing significantly. In addition, the variable frequency drives (VFDs) for the pumps have become technically obsolete and spare parts are difficult to obtain.

Contract 7123 is the first phase of a two-phase program to improve the overall reliability and performance of the sludge transfer system. The first phase includes the installation of one centrifugal sludge pump and one flushing pump. These new pumps will operate at a higher velocity to ensure that grit does not settle out of the sludge before reaching the Pelletizing Plant. Contract 7123 was advertised and bid; three bids were received and Interstate Engineering Corp. submitted the lowest bid (approximately 29% lower than the Engineer's Estimate). Staff are of the opinion that Interstate Engineering Corp. possesses the skill and ability necessary to complete the work under this contract.

The FY10 CIP contains \$3.8 million for the Digester Sludge Pump replacement project at Deer Island, which will be completed in two phases. There are sufficient funds for Contract 7123.

Mr. Walsh asked if Deer Island is moving from three pumps to two, what happens if one is down. Rick Adams, Manager of Engineering Services, responded that it is a fully redundant system and that will not be a problem.

ONE-YEAR PURCHASE ORDER CONTRACT FOR THE SUPPLY AND DELIVERY OF HYDROFLUOSILICIC ACID TO THE JOHN J. CARROLL WATER TREATMENT PLANT: SOLVAY FLUORIDES, LLC, BID WRA-3018

The Board voted to approve the award of Contract WRA-3018, a one-year purchase order contract for the supply and delivery of hydrofluosilicic acid to the John J. Carroll Water Treatment Plant to the lowest eligible and responsible bidder, Solvay Fluorides, LLC, and to authorize the Executive Director, on behalf of the Authority, to execute and deliver said contract in an amount not to exceed \$1,111,302 for a period of one year, from October 1, 2009 through September 30, 2010.

Hydrofluosilicic acid is a source of fluoride that is commonly added to public drinking water supplies to reduce dental decay. The Carroll Water Treatment Plant uses approximately 360 tons of hydrofluosilicic acid each year.

Contract WRA-3018 was advertised and bid; two bids were received and Solvay Fluorides submitted the lowest bid. Staff have been satisfied with the product and service provided by Solvay and staff have determined that the bid meets all of the requirements of the specification.

The Field Operations Department's FY10 CEB includes \$952,241 for hydrofluosilicic acid. Any overspending in FY10 will be absorbed within the Operations Departments FY10 CEB.

ONE-YEAR PURCHASE ORDER CONTRACT FOR THE SUPPLY AND DELIVERY OF LIQUID OXYGEN TO THE JOHN J. CARROLL WATER TREATMENT PLANT: AIRGAS EAST, INC., BID WRA-3010

The Board voted to approve the award of Contract WRA-3010 for the supply and delivery of liquid oxygen to the John J. Carroll Water Treatment Plant, to the lowest eligible and responsible bidder, Airgas East, Inc., and to authorize the Executive Director, on behalf of the Authority, to execute and deliver said contract in an

amount not to exceed \$1,000,206.25 for a period of 23 months from September 16, 2009 through August 14, 2011.

MWRA uses liquid oxygen as part of the ozonation process at the Carroll Water Treatment Plant (CWTP). Liquid oxygen is stored in three 24,000-gallon tanks. The CWTP uses approximately 8,500 tons of liquid oxygen per year.

Contract WRA-3010 was advertised and bid; two bids were submitted and Airgas East, Inc. submitted the lowest total bid price for this two-year contract. Staff reviewed the bid and determined it meets all requirements.

There are sufficient funds available for the first portion of this two-year contract in the Operations Division's FY10 Current Expense Budget. Appropriate funding will be included in subsequent Proposed CEB requests for the remaining term of the contract.

OAKDALE FACILITY – PHASE 1A ELECTRICAL UPGRADE, DESIGN, CONSTRUCTION ADMINISTRATION AND RESIDENT ENGINEERING SERVICES: FAY, SPOFFORD & THORNDIKE, LLC, CONTRACT 7229

The Board voted to approve the recommendation of the Consultant Selection Committee to select Fay, Spofford & Thorndike, LLC to provide design, construction administration and resident engineering services for the Oakdale facility – Phase 1A Electrical Upgrade project, and to authorize the Executive Director, on behalf of the Authority, to execute a contract with Fay, Spofford & Thorndike, LLC in an amount not to exceed \$799,880.00 for a term of 40 months from the Notice to Proceed.

MWRA's Oakdale Facility is located at the west end of the Wachusett Reservoir at the outlet of the Quabbin Aqueduct, a 24-mile tunnel that transfers water from the Quabbin Reservoir to the Wachusett Reservoir. It consists of a hydroelectric power station and associated electrical substations. Power generated at the facility is sold in accordance with the terms of a power purchase agreement with the West Boylston Municipal Light Plant and administered by the Massachusetts Municipal Wholesale Electric Company. The goal of this project is to rehabilitate electrical transmission equipment, upgrade the plant's electrical and controls systems, and other ancillary systems to extend the useful life of the facility.

The proposals were received in the procurement process. Fay, Spofford & Thorndike, LLC's (FS&T) bid price was lower than staff's estimate and the other firm's prices. Staff are of the opinion that FS&T has the necessary experience and personnel to complete this project.

The FY10 CIP includes a budget of \$941,000 for Contract 7229; the recommended contract award amount is \$799,880.

CONTRACT AMENDMENTS/CHANGE ORDERS

FIRE ALARM AND FIRE SPRINKLER SYSTEM SERVICE: SULLIVAN AND McLAUGHLIN COMPANIES, INC., CONTRACT OP-50, CHANGE ORDER 4

The Board voted to authorize the Executive Director, on behalf of the Authority, to approve Change Order No. 4 to decrease the amount of Contract No. OP-51 with Sullivan and McLaughlin Companies, Inc., Fire Alarm and Fire Sprinkler Service, in a lump sum credit amount of \$17,841.67

Contract OP-50 provided fire alarm and fire sprinkler system testing and monitoring services, non-emergency and emergency repair services, and replacement parts for equipment located at various MWRA facilities. Change Order 4 consists of the following item:

Increases/Decreases in Unit Price and Allowance Items (\$17,841.67)

This item, comprised of multiple increases and decreases in the estimated quantities of unit price bid items to reflect the actual quantities used during the contract is for a net credit amount of (\$17,841.67) and includes five credits totaling (\$40,584.24) and two additions totaling \$22,742.57, with an absolute value of \$63,326.81.

The cumulative value of all change orders to this contract (including Change Order 4) will total \$104,924.30 or 29.7% of the original contract amount. Work on this contract is 100% complete.

CRANE MAINTENANCE SERVICE: CAPCO CRANE & HOIST,, INC. CONTRACT OP-51, CHANGE ORDER 2

The Board voted to authorize the Executive Director, on behalf of the Authority, to approve Change Order No. 2 to decrease the amount of Contract No. OP-51 with Capco Crane & Hoist, Inc., Crane Maintenance Service, for a lump sum credit amount of \$132,908.46.

Contract OP-51 provided periodic and frequent inspection services, load testing, routine preventive maintenance and non-emergency repair services for more than 130 MWRA overhead or “gantry” cranes located at various MWRA water and wastewater facilities. These overhead cranes are permanently attached to the ceilings of these facilities and are used to lift, load or move heavy equipment and materials.

Change Order 2 consists of one item:

Decreases in Unit Price and Allowance Items	(\$132,908.46)
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This item is comprised of multiple decreases in the estimated quantities of unit price bid items and allowance to reflect the actual quantities used during the contract.

The cumulative value of all change orders to this contract will total (\$116,138.46) or (51.6%) of the original contract amount. Work on this contract is 100% complete.

ELECTRICAL EQUIPMENT MAINTENANCE – DEER ISLAND TREATMENT PLANT: AMERICAN ELECTRICAL TESTING COMPANY, CONTRACT OP-36, CHANGE ORDER 1

The Board voted to authorize the Executive Director, on behalf of the Authority, to approve Change Order No. 1 to decrease the amount of Contract No. OP-36 with American Electrical Testing Company, Electrical Equipment Maintenance – Deer Island Treatment Plant, for a lump sum credit amount of \$444,776.34.

Contract OP-36 was a three-year contract that provided annual maintenance and testing on all 43 electrical substations on Deer Island, as well as technical assistance on an as-needed basis.

Change Order 1 consists of the following:

Decreases in Unit Price and Allowance Items	(\$444,776.34)
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This item is comprised of five decreases in the estimated quantities of unit price bid items and allowances to reflect the actual quantities used during the contract as outlined in the attached table.

The cumulative total value of all changes orders to this contract will be (\$444,776.34) or (26.9%) of the original contract amount. Work on this contract is 100% complete.

NORTH DORCHESTER BAY CSO STORAGE TUNNEL: SHANK/BALFOUR BEATTY/BARLETTA JV, CONTRACT 6244, CHANGE ORDER 16

The Board voted to authorize the Executive Director, on behalf of the Authority, to approve Change Order No. 16 to decrease the amount of Contract No. 6244 with Shank/Balfour Beatty/Barletta JV, North Dorchester Bay CSO Storage Tunnel, for a lump sum credit amount of \$830,000.

The North Dorchester Bay CSO Storage Tunnel contract is the largest construction contract associated with the North Dorchester Bay CSO Control Plan, which is intended to eliminate CSO discharges and greatly reduce stormwater discharges to the South Boston beaches. Contract 6244 includes the construction of: a 17-foot-diameter, 10,832-foot-long tunnel in soft ground using a tunnel boring machine (TBM); a mining shaft at the downstream end of the tunnel in Massport’s Conley Terminal; an equipment removal shaft at the upstream end of the tunnel near the State Police Barracks; six intermediate drop shafts at the existing CSO

outfalls; CSO and stormwater diversion and control structures; and associated shallow piping and utility conduits. The contract is now approximately 98% complete.

Change Order 16 is for a credit amount of (\$830,000) and consists of the following item:

Decrease Police Detail Allowance	(\$830,000)
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The original contract included an allowance of \$3,000,000 for police detail service. Although the project is not complete at this time, it is clear that there will be a significant under run in police details due, in part, to the tunnel work being completed ahead of schedule.

The cumulative value of all change orders to this contract will total \$1,248,986.04 or 0.85% of the original contract amount.

The FY10 Capital Improvement Program budget includes \$146,291,000 for Contract 6244. Including this change order for an amount of (\$830,000) the adjusted subphase total is \$146,982,194.04 or \$691,194.04 over budget. This amount will be covered within the five-year CIP spending cap.

UNIVERSITY AVENUE WATER MAIN: P. GIOIOSO & SONS, INC., CONTRACT 6445, CHANGE ORDER 6

The Board voted to authorize the Executive Director, on behalf of the Authority, to approve Change Order No. 6 to decrease the amount of Contract No. 6445 with P. Gioioso & Sons, Inc., University Avenue Water Main, for a net credit amount of \$202,087.57.

Under Contract 6445, approximately 10,300 feet of 36-inch water main was installed in University Avenue in Norwood, providing an alternate way for Norwood, Westwood and Canton to receive water from MWRA's system. This construction contract was declared substantially complete and has been in service since November 7, 2008.

Change Order 6 is for a net credit amount of (\$202,087.57) with an absolute value of \$259,438.77; the change order consists of three items:

Increases/Decreases in Unit Price and Allowance Items	(\$162,978.20)
Delete Mobilization, Set-Up of Jacking Equipment and Thrust Block/Mud Mat	(\$15,574.70)
Delete Contract-Specified Revenue Meter and Vault	(\$23,534.67)

The cumulative total value of all change orders to this contract will be (\$34,451.54) pr (0.56%) of the original contract amount. Work on this contract is 100% complete.

The FY10 CIP includes a budget of \$6,172,000 for Contract 6445. Including this change order for (\$202,087.57), the adjusted subphase total will be \$6,137,448.46.

INFORMATION

DELEGATED AUTHORITY REPORT- JULY AND AUGUST

Staff presented a listing of delegated authority actions over \$25,000 for the period July 1 through August 31, 2009. This report is broken down into two sections: construction/professional services and purchasing.

FY09 FOURTH QUARTER ORANGE NOTEBOOK

Staff gave a presentation to the Board on the "Orange Notebook", which presents performance indicators for operational, financial, workforce and customer service parameters tracked by MWRA management each month for Deer Island and Clinton Wastewater Treatment Operations, Maintenance and NPDES Permit Compliance; Field Operations; Construction; Drinking Water Quality and Supply; Community Flows and Programs; and Management/Finance.

Mr. Hornbrook commented on highlights within the Orange Notebook including total energy pricing which has shown favorable trends, preventative maintenance kitting, and tracking systems to monitor sick leave usage.

Board Member Joel Barrera asked staff for updates regarding the upcoming flu season. Mr. Laskey noted that there would be a special report/update on that topic.

Mr. Mannering asked if personal time was allowed for staff; he asked if a tie-in between sick time and personal time had been considered. He asked how the Authority used the Family Medical Leave Act (FLMA).

Bob Donnelly, Director of Human Resources, responded that the Benefits Manager oversees FLMA.

FY09 YEAR-END CAPITAL PROJECT PERFORMANCE REPORT (PPR)

During Fiscal Year 2009, MWRA made great progress on several major projects: the completion of the North Dorchester Bay Tunnel; the launch of the East Boston Relief Sewer Construction and Reserved Channel Sewer Separation projects; and substantial completion on the Southern Spine Distribution Mains Section 107 Phase 1 Construction and University Avenue Water Main projects. Many of these major accomplishments came in under budget and ahead of schedule.

Total FY09 capital spending was \$182.2 million which is \$63.4 million or 26% less than the \$245.6 million budgeted including contingency.

The FY09 underspending is consistent with recent years' trends. The Authority has traditionally budgeted conservatively with regard to engineer estimates, inflationary factors, contingency and timing. The Authority continues to evaluate and modify procedures and key assumptions that may tighten variances, but actual contract awards and timing will always impact spending trends in any given year as evidenced in Fiscal Year 2009.

Spending on several programs such as the Community Managed CSO Program, Infiltration/Inflow Local Financial Assistance Program, Local Water Pipeline Improvement Loan Program and Watershed Land Purchases account for approximately 11% of the total CIP. These programs are not directly managed by the MWRA. In FY09, these programs accounted for \$45.5 million or approximately 25% of actual spending.

FY09 FINANCIAL UPDATE AND SUMMARY AS OF JUNE 2009

Consistent with MWRA's 18-month budget strategy, staff continued to implement cost savings measures and cut spending in order to grow the FY09 surplus to help address the significant financial challenges facing the Authority in FY10 and FY11.

Through June 2009, total revenue was \$663.8 million, \$0.7 million or 0.1% more than the amended budget. After the year-end defeasance, total expenses were \$630.7 million, \$2.3 million or 0.4% less than the amended budget.

Mr. Barrera asked what happened with the swaps. Rachel Madden, MWRA's Chief Financial Officer, responded that the \$2.1 million in funds are still there; the complexity of the Lehman Brothers bankruptcy makes things a challenge. MWRA General Counsel Steven Remsberg stated that the bankruptcy court is about to rule on the claims.

Mr. Barrera noted that energy costs have gone up significantly; what are the major concerns for FY11? Ms. Madden responded that our projections show a 6.4% rate increase – including reserves. She said that is a sizable rate increase and staff has concerns about it.

Mr. Walsh asked if the Authority was doing anything to reduce the 60% debt service it is currently carrying. Mr. Laskey responded that there is a multi-year strategy to combat it but really the debt is a result of the years of underfunding from the Metropolitan District Commission (MDC).

JULY 27, 2009 INCIDENT REPORT – INTERMEDIATE PUMP STATION (IPS)

On July 27, 2009, a SCADA system failure at the IPS caused a pump shutdown, which resulted in flooding of the lower level of the facility. Staff have determined that the failure was caused by water that migrated into

the SCADA control panel from an HVAC condensation tray blockage located in a level above the control room. Although staff responded to the station's alarms and began to address operational issues in a timely manner, they were unable to prevent the lower level flooding. The facility was operational within several hours of the events. All repairs and upgrades to the facility have been or will be completed by September 30. This is the first incident with the facility's SCADA system since the facility became operational in 2005.

Staff have conducted a detailed analysis of this event to identify "lessons learned," which can then be applied to standard operating procedures for the IPS, as well as other operational facilities, to ensure that similar occurrence is avoided in the future.

Staff estimate the damage to the facility's control, electrical, and mechanical equipment to be approximately \$80,000. Overtime costs associated with the initial incident and for ongoing dedicated coverage needs is approximately \$12,000.

Mr. Pappastergion asked if the \$80,000 in damage was due to the flooding. He asked how much damage would have been done if the situation was caught before the flooding. He noted that the big lesson is how to prevent this from happening again.

Mr. Trubiano responded that the damage was caused by the flooding.

Gerard Gallinaro, MWRA Director of Wastewater Operations & Maintenance, stated that the SCADA screen showed that it was in normal operation. He noted that the glitch has now been fixed.

Mr. Gove asked if other SCADA systems have similar glitches. Mr. Gallinaro responded that they had been fixed.

Mr. Walsh stated that there is no such thing as a false alarm. The major flaw is not recognizing that there was a real alarm. The system gave warning and staff ignored the alarm. Mr. Laskey stated that it was a combination of system and procedural error and it was not the Authority's finest hour. Mr. Trubiano said that staff did not ignore the alarm. Mr. Walsh stated that the Authority will move forward and be sure to pay attention in the future.

QUABBIN RESERVOIR ZEBRA MUSSEL UPDATE

On July 15, 2009, the Department of Conservation and Recreation (DCR), Division of Water Supply Protection (DWSP) and MWRA staff briefed the Board on the discovery of zebra mussels (a prolific and potentially devastating invasive species) in Laurel Lake in Lee, Massachusetts and the risk for transmittance to the drinking water supply reservoirs. Much of the discussion centered on the private boat access program for Quabbin Reservoir, managed by the DCR. At the July 15, 2009 Board meeting, the Board of Directors voted to approve and support the decision of DCR to promptly close the Quabbin Reservoir to boats other than those presently available for rental through DCR. Furthermore, the Board voted that during the closure periodic tests, inspections and surveys for the presence of zebra mussels in MWRA drinking water source supplies be undertaken, that MWRA and DCR evaluate the practice of allowing privately-owned boats in drinking water reservoirs and consider the potential for requiring the future inspection/cleaning of such boats prior to use in drinking water reservoirs, and the MWRA and DCR will adjust their water supply/watershed management plans accordingly.

In response to the Board's direction, MWRA and DCR staff conducted a survey of Quabbin for zebra mussels, developed and implemented a pilot program for private boats, adopted procedures for private boat inspections, decontamination and sealing and conducted a survey of other public water suppliers as to access by boats to reservoirs.

After these steps were taken, the Quabbin Reservoir was re-opened to private boats on August 16, 2009, due to the stated success of the decontamination pilot program. Private boat launch is now contingent on the new requirement that all boats have an intact boat and trailer seal indicating prior decontamination and Quabbin-only use.

Over the winter, MWRA staff will work with DCR to continue refinement of plans for long-term monitoring and control of aquatic invasive species. Zooplankton sampling will continue through the fall and then resume next

spring. The locations, administrative logistics, and financing procedures of a long-term boat inspection and decontamination program needs to be developed before next spring. A site-specific research program will be developed to determine the suitability of actual Quabbin water for the reproduction and growth of zebra mussels. A long-term program of inspections of the reservoir, water bodies in the watersheds and intake facilities for invasive species will be developed.

Mr. Carroll stated that he has a motion to ban off-site private fishing boats from the Quabbin Reservoir, but will hold the motion until another month. He said that he is concerned about the potential of invasive species. He said it's not clear whether zebra mussels are a threat to the Quabbin or not, but it should be studied. He said if no threat exists, then the pilot program is overkill; however, no one will say that there is absolutely no threat. Mr. Carroll said if there is a threat, then the program is inadequate. He said if they are a threat, then despite best efforts, the present system is subject to breakdown and will not work. Mr. Carroll suggested the Authority look at the capital costs of buying a new fleet of fishing boats for the rental program. He said that is what should be done if there is a threat. Mr. Carroll said that national studies show that private boating is not allowed in most reservoirs – or that boats have to be kept at the reservoir; if there is a reason to believe boats can bring zebra mussels, they have to be kept out.

Mr. Gove stated that it doesn't matter if the Quabbin is subject to a zebra mussel infestation by boat, the issue is all invasives.

Chairman Bowles said that we might as well build a dome over the reservoirs. He said that this is the framework we need to look at the problem: what are all the threats? How do we deal with them?

Ms. Turner stated that the burden of cost is not on the MWRA – the goal of the MWRA is to protect drinking water for 2.5 million consumers. Why should the MWRA spend money to allow boaters this privilege? The MWRA's primary goal is to protect drinking water.

Board Member Jim Hunt said the MWRA should have a panel of experts at the meeting in October. He said that he agrees with Ms. Turner – the Authority's goal is to protect drinking water, but we have to understand the larger context. Science should drive our decision making.

Chairman Bowles thanked the staff of MWRA and DCR for putting together a pilot program. He stated that the Commonwealth is in control of protecting the watershed and the MWRA is in the water delivery business. He said that the organizations are working together and that is good; this Board of Directors does not have sole authority to make this decision.

Mr. Barrera thanked the staff for their hard work on this topic. He noted that there is no recreational boating allowed on the Wachusett Reservoir, only on the Quabbin. Chairman Bowles stated that DCR could provide the history if needed.

Board Member Kevin Cotter stated that the MWRA is heavily regulated, but there are no regulations from EPA about recreational usage of reservoir; we should get information on practices on other reservoirs.

Chairman Bowles stated that the best way to move forward is for the two agencies to work together.

Mr. Pappastergion asked if there has been any testing at Quabbin.

Jonathan Yeo, Director of the DWSP, said testing has been done every two weeks for two years.

Mr. Pappastergion asked if anyone had specifically tested zebra mussels in an aquarium full of Quabbin water to see if they would survive.

Mr. Hunt asked how many private boats fish on the Quabbin. Mr. Pula responded that there are 40,000 fishermen over the season and approximately 1,000 boats.

Mr. Barrera asked who is paying for the decontamination of the boats under the pilot program. Mr. Pula responded that MWRA/DCR are currently paying and there are discussions that need to happen over the winter regarding payments, strategies, etc.

Mr. Laskey stated there are administrative details regarding staffing and logistics that need to be established; the program has made leaps and bounds in establishing boundaries.

Mr. Mannering stated that the final analysis needs to determine: who is responsible for the program, who is responsible if something goes wrong? The entity that allowed the boats to be there will be held responsible.

AQUATIC INVASIVE PLANTS CONTROL AT MWRA/DCR RESERVOIRS

MWRA and the Department of Conservation and Recreation's Division of Water Supply Protection have been actively addressing aquatic invasive plants since 2002 at both source and distribution reservoirs. MWRA has funded aquatic plant surveys since 2002 at both source and distribution reservoirs. MWRA has funded aquatic plants surveys, which have provided baselines on which to make management decisions concerning aquatic invasive plants that are present in some level at many of the reservoirs. The primary submerged aquatic plants currently being addressed include Eurasian water milfoil, Fanwort, and Water Chestnut. While some of these plants are present at Wachusett Reservoir, Sudbury Reservoir and certain emergency distribution reservoirs, none have been discovered at Quabbin Reservoir.

Over the next 6-12 months, DCR will conduct a comprehensive assessment of risk to the entire watershed system posed by aquatic invasive species. There will be close coordination with MWRA staff on this project.

MWRA funds aquatic invasive plants control in the CEB under Western Operations/Reservoir Operations Invasives Control Services. To date MWRA has invested more than \$550,000 in the aquatic invasive plants control efforts. MWRA's Fiscal Year 2009-2011 CEB includes \$168,000 for all reservoir aquatic invasive plants control efforts. The DCR-DWSP annual budget also includes aquatic invasive plant control activities.

UPDATE ON WATER QUALITY RESULTS AND OTHER REGULATORY MATTERS

Finished water quality at the Carroll Water Treatment Plant (CWTP) and throughout MWRA's service area communities has been excellent to date in 2009. Water quality remains high as relates to bacteria levels, color, taste and odor. The CWTP continues to produce water that customers find to be of high quality and MWRA tap water continues to be the selection of choice in comparisons with bottled water conducted by universities and hospital as they move away from the use of bottled water.

In the last 12 months, from September 1, 2008 to August 31, 2009, more than 20,000 analyses were conducted in the MWRA and fully-served communities' water systems with only 13 positive coliform results. Since the activation of the CWTP, Total Coliform Rule (TCR) compliance has been excellent.

It should be noted that the 2009 summer temperature did not reach normal highs until late August. Water demand has also been very low. With the hot temperatures in late August and increases in water demand, staff began to see higher levels of bacterial activity in MWRA and community TCR samples. Algae levels have remained low and no copper sulfate treatments have been required for the third year in a row.

UPDATE ON THE START-UP OF THE BILL HILLS COVERED STORAGE TANKS

The Blue Hills Reservoir, constructed in the 1950s, was removed from service due to water quality problems in 1981. In April 1997, the Board approved a contract to develop an Environmental Impact Report and Conceptual Design for the Blue Hills Covered Storage Facility. On August 27, 2009, after more than a decade of planning, coordination, environmental reviews, court challenges and, public meetings, MWRA staff successfully opened the valve introducing MWRA water from the tanks into the Southern High System for the first time, marking the establishment of the long-desired redundancy to Quincy, Milton, Brookline, Roxbury, West Roxbury, Jamaica Plain, Roslindale, Mattapan and Hyde Park. There have been no water quality complaints received since the opening.

The tanks were constructed under a Design/Build Project, approved by the Board and awarded to Barletta Heavy Division, Inc. on November 15, 2006 in the amount of \$37,766,275. The project consists of two 10-million-gallon covered water tanks buried within the footprint of the eastern half of what was formerly an open reservoir in the Blue Hills Reservation in Quincy. The Blue Hills Covered Storage Facility is part of a system of five covered storage facilities constructed as part of MWRA's Integrated Water Supply/Quality Improvement Program. The major objective of the improvement plan is the replacement of open-air distribution storage facilities with covered water storage tanks.

The tanks are covered under a two-year warranty; sometime between 20 and 24 months after Substantial Completion, the tanks will be inspected and a leakage test will be performed. Responsibility for operation and maintenance of the tanks will be with the Operations Division.

Mr. Laskey thanked all staff who worked on this project. He stated that it had been a long, long process and the staff deserves kudos. He thanked the Board for its support throughout the process.

NORTHERN INTERMEDIATE HIGH ASSESSMENT AND CONCEPT PLAN

MWRA initiated the Northern Intermediate High Assessment and Concept Plan in March 2006 with the purpose of developing an overall concept level plan to address identified deficiencies in the Northern Intermediate High (NIH) system. The plan includes the identification and evaluation of additional storage sites and pipeline routing alternatives that can provide long-term redundancy to the NIH system. Another critical element of this contract is to identify and design short- or long-term system improvements that better allow MWRA to respond in the event of a pipeline or pump station failure affecting the NIH system.

The NIH system serves Reading, Stoneham, Wakefield, Winchester, Wilmington and Woburn with a 2008 average daily demand of 9.3 million gallons per day. These communities have a total population of approximately 150,000.

The Consultant, Fay, Spofford & Thorndike, initially identified nine potential storage sites from the existing Bear Hill tank site in Stoneham north to Reading. Using criteria, one preferred site and two potential back-up locations were identified. The preferred location is in the Southwest corner of the Route 128/Route 28 interchange on land owned by the Massachusetts Highway Department but located in Reading at the Stoneham line. Back-up sites include two in Reading that were purchased by the town for water storage. An initial presentation was made to the Reading Board of Selectmen in early 2008 and at that time, initial concerns were expressed about the height of the tank at the preferred location. A Town Working Group was formed to meet and discuss options.

Regardless of the outcome of the storage tank siting discussions, the pipeline route as currently configured still makes sense. The route connects with all of the community meters in the NIH which is necessary to achieve full redundancy in the event of an emergency.

MWRA's current approach is to proceed with the design and construction of the redundant pipeline from Gillis Pump Station through Stoneham and across Reading to the communities' meters at Mishawun Road. Design would begin in July 2010 and construction would begin in July 2012. If a storage tank site can be identified, design and construction of the tank could be initiated as a separate project phase. Design on the redundant pipeline can be done in such a way to accommodate connections to the potential storage locations.

The approved FY10 CIP includes \$61.7 million for design and construction of the redundant pipeline and storage tanks. Additionally, \$6.7 million is included for the design and construction of short-term improvements.

*This summary does not include every item discussed by the Board, nor the full extent of the discussions.
Please contact Christine Hevelone-Byler at the Advisory Board office with questions, comments or requests for more information.*