



MASSACHUSETTS WATER RESOURCES AUTHORITY

Charlestown Navy Yard
100 First Avenue, Building 39
Boston, MA 02129

Frederick A. Laskey
Executive Director

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ADMINISTRATION, FINANCE & AUDIT COMMITTEE MEETING

Chair: H. Vitale
Vice-Chair: A. Pappastergion
Committee Members:
A. Blackmon
J. Carroll
K. Cotter
J. Foti
B. Peña
J. Walsh

to be held on

Wednesday, January 18, 2017

Location: 100 First Avenue, 2nd Floor
Charlestown Navy Yard
Boston, MA 02129

Time: 10:00 a.m.

AGENDA


A. Information

1. Delegated Authority Report – December 2016
2. MWRA Compliance with the Amended Massachusetts Public Records Law
3. FY17 Financial Update and Summary as of December 2016

B. Contract Awards

1. Audit Services: CliftonLarsonAllen LLP, Contract F242
2. Drug and Alcohol Testing Program: Advantage Drug Testing, Contract A610

STAFF SUMMARY

TO: Board of Directors
FROM: Frederick A. Laskey, Executive Director 
DATE: January 18, 2017
SUBJECT: Delegated Authority Report – December 2016

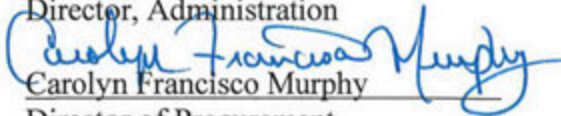
COMMITTEE: Administration, Finance & Audit

INFORMATION
 VOTE



Michele S. Gillen
Director, Administration

Barbara Aylward, Administrator A & F
Preparer/Title


Carolyn Francisco Murphy
Director of Procurement

RECOMMENDATION:

For information only. Attached is a listing of actions taken by the Executive Director under delegated authority for the period December 1 – 31, 2016.

This report is broken down into three sections:

- Awards of Construction, non-professional and professional services contracts and change orders and amendments in excess of \$25,000, including credit change orders and amendments in excess of \$25,000;
- Awards of purchase orders in excess of \$25,000; and
- Amendments to the Position Control Register, if applicable.

BACKGROUND:

The Board of Directors' Management Policies and Procedures, as amended by the Board's vote on October 14, 2009, delegate authority to the Executive Director to approve the following:

Construction Contract Awards:

Up to \$1 million if the award is to the lowest bidder; or up to \$500,000 if the award is to other than the lowest bidder.

Change Orders:

Up to 25% of the original contract amount or \$250,000, whichever is less, where the change increases the contract amount, and for a term not exceeding an aggregate of six months; and for any amount and for any term, where the change decreases the contract amount. The delegations for cost increases and time can be restored by Board vote.

Professional Service Contract Awards:

Up to \$100,000 and one year with a firm; or up to \$50,000 and one year with an individual.

Non-Professional Service Contract Awards:

Up to \$250,000 if a competitive procurement process has been conducted, or up to \$100,000 if a procurement process other than a competitive process has been conducted.

Purchase or Lease of Equipment, Materials or Supplies:

Up to \$1 million if the award is to the lowest bidder; or up to \$500,000 if the award is to other than the lowest bidder.

Amendments:

Up to 25% of the original contract amount or \$250,000, whichever is less, and for a term not exceeding an aggregate of six months.

Amendments to the Position Control Register:

Amendments which result only in a change in cost center.

BUDGET/FISCAL IMPACT:

Recommendations for delegated authority approval include information on the budget/fiscal impact related to the action. For items funded through the capital budget, dollars are measured against the approved capital budget. If the dollars are in excess of the amount authorized in the budget, the amount will be covered within the five-year CIP spending cap. For items funded through the Current Expense Budget, variances are reported monthly and year-end projections are prepared at least twice per year. Staff review all variances and projections so that appropriate measures may be taken to ensure that overall spending is within the MWRA budget.


CONSTRUCTION/PROFESSIONAL SERVICES DELEGATED AUTHORITY ITEMS DECEMBER 1 - 31, 2016

NO.	DATE OF AWARD	TITLE AND EXPLANATION	CONTRACT	AMEND/CO	COMPANY	FINANCIAL IMPACT
C-1.	12/02/16	REHABILITATION OF ANAEROBIC DIGESTERS, PRIMARY CLARIFIERS AND NEW INFLUENT GATES, CLINTON WASTEWATER TREATMENT PLANT DECREASE ESTIMATED QUANTITIES FOR UNSUITABLE EARTH EXCAVATION PER CUBIC YARD, MISCELLANEOUS AND EXTRA EARTH EXCAVATION PER CUBIC YARD AND FIRE DEPARTMENT SERVICES.	7277A	11	R.H. WHITE CONSTRUCTION CO., INC.	(\$48,895.01)
C-2.	12/02/16	CARUSO PUMP STATION IMPROVEMENTS FURNISH AND INSTALL A DUROLAST ROOF MEMBRANE ON ALL SIX ROOFS AT CARUSO PUMPS STATION; EXTEND CONTRACT TERM BY 10 CALENDAR DAYS.	7362	2	WATERLINE INDUSTRIES CORP.	\$221,417.00
C-3.	12/02/16	THERMAL AND HYDRO POWER PLANT MAINTENANCE DITP INCREASE ESTIMATED QUANTITIES FOR REPLACEMENT PARTS AND AUTHORIZED FACTORY SERVICE REPRESENTATIVE.	5551	1	IPC LYDON, LLC	\$240,000.00
C-4.	12/06/16	WACHUSETT AQUEDUCT PUMPING STATION FURNISH AND INSTALL POLY VINYL CHLORIDE COATED CONDUIT, ELECTRICAL WIRING AND DATA CABLE; PERFORM MODIFICATIONS TO THE SCADA SYSTEM; REVISE PUMP STATION FOUNDATION MAT AND WALL SIZE AND ADD ASSOCIATED REINFORCEMENT; FURNISH AND INSTALL FIBER DATA CABLE BETWEEN NEW AND EXISTING EQUIPMENT INSIDE THE OZONE BUILDING, FURNISH AND INSTALL FOUR PATCH PANELS AT EACH PROGRAMMABLE LOGIC CONTROLLER CABINET	7157	4	BHD/BED JV 2015, A JOINT VENTURE	\$199,629.92
C-5.	12/16/16	QUABBIN POWER AND SECURITY IMPROVEMENTS FURNISH AND INSTALL TWO 25-FOOT ALUMINUM LIGHT POLES AND FOUR LED FLOODLIGHTS, TWO POLE MOUNTED BOXES WITH WEATHERPROOF COVERS, A THERMOSTAT, A POLE MOUNTED GANG BOX AND TWO DOCK DE-ICERS, FURNISH AND INSTALL FOUR TERABYTE VIDEO RECORDERS IN LIEU OF THE SPECIFIED.	7338	4	EWING ELECTRICAL COMPANY, INC.	\$68,998.65
C-6.	12/16/16	DIGESTED SLUDGE PUMP REPLACEMENT PHASE 2 DEER ISLAND TREATMENT PLANT FURNISH AND INSTALL TWO 16-INCH INSERTION VALVES AND ONE 16-INCH BY 16-INCH TAP AND BLEEDER VALVE ON THICKENED DIGESTED SLUDGE PIPE AND PROVIDE VACUUM TRUCK AND ACCESSORIES TO REMOVE SLUDGE.	6821	1	WALSH CONSTRUCTION COMPANY	\$88,760.84
C-7.	12/16/16	DEER ISLAND TREATMENT PLANT - LIGHTING IMPROVEMENTS PLAN, PHASE 9 AWARD OF ENERGY EFFICIENT CONTRACT TO EVERSOURCE PREQUALIFIED VENDOR FOR LIGHTING IMPROVEMENTS FOR DEER ISLAND TREATMENT PLANT, PHASE 9 FOR A TERM OF 240 CALENDAR DAYS. REBATE TOTALING \$44,886 WILL BE RECEIVED FROM EVERSOURCE UPON PROJECT COMPLETION, RESULTING IN A PAYBACK PERIOD OF 4.3 YEARS.	5560	AWARD	RISE ENGINEERING	\$99,870.00
C-8.	12/22/16	HYDRAULIC EQUIPMENT SERVICE DECREASE ESTIMATED QUANTITIES FOR PREVENTIVE, NON-EMERGENCY AND EMERGENCY MAINTENANCE SERVICES, REPLACEMENT PARTS AND MARK-UP.	OP-240	3	R. ZOPPO CORP.	(\$109,563.05)
C-9.	12/22/16	SOUTHBOROUGH WATER QUALITY LABORATORY UPGRADES FURNISH AND INSTALL A COUNTER UNIT, PENINSULA UNIT AND A NEW ISLAND UNIT; FURNISH AND INSTALL TWO LAB FAUCETS.	6650A	7	PAUL J. ROGAN CO., INC.	\$26,267.27
C-10.	12/22/16	INSTALLATION OF ENERGY EFFICIENT EXPLOSION PROOF LED INTERIOR LIGHTING AT THE BRAINTREE-WEYMOUTH IPS, PHASE 2 AWARD OF AN ENERGY EFFICIENT CONTRACT TO A NGRID PREQUALIFIED VENDOR FOR THE INSTALLATION OF ENERGY-EFFICIENT EXPLOSION PROOF LED INTERIOR LIGHTING AT THE BRAINTREE-WEYMOUTH IPS, PHASE 2 FOR A TERM OF 150 CALENDAR DAYS. A REBATE TOTALING \$11,274.12 WILL BE RECEIVED FROM NGRID UPON PROJECT COMPLETION, RESULTING IN A PAYBACK PERIOD OF 4.6 YEARS.	OP-341	AWARD	HORIZON SOLUTIONS, LLC	\$32,115.28
C-11.	12/22/16	VALVE AND PIPING REPLACEMENTS AT VARIOUS FACILITIES, DITP ESDC/REI SERVICES INCREASE WITNESS SHOP INSPECTIONS TO ENSURE THE EQUIPMENT ASSOCIATED WITH THE 60-INCH BUTTERFLY VALVES AT THE NORTH MAIN PUMP STATION AND THE GLASS LINED VALVES FOR THE SCUM/SLUDGE PIPING SYSTEMS ARE MANUFACTURED IN ACCORDANCE WITH THE SPECIFICATIONS.	6598	1	AECOM	\$50,000.00
C-12.	12/22/16	INSTALLATION OF ENERGY EFFICIENT EXPLOSION PROOF LED INTERIOR LIGHTING AT THE CARUSO PUMP STATION AWARD OF AN ENERGY EFFICIENT CONTRACT TO A EVERSOURCE PREQUALIFIED VENDOR FOR THE INSTALLATION OF ENERGY-EFFICIENT EXPLOSION PROOF LED INTERIOR LIGHTING AT THE CARUSO PUMP STATION FOR A TERM OF 150 CALENDAR DAYS. A REBATE TOTALING \$17,049.00 WILL BE RECEIVED FROM EVERSOURCE UPON PROJECT COMPLETION, RESULTING IN A PAYBACK PERIOD OF 5.3 YEARS.	OP-342	AWARD	HORIZON SOLUTIONS, LLC	\$71,302.00
C-13.	12/28/16	INSTALLATION OF ENERGY EFFICIENT EXPLOSION PROOF LED INTERIOR LIGHTING AT PRISON POINT PUMP STATION, PHASE 2 AWARD OF AN ENERGY EFFICIENT CONTRACT TO A EVERSOURCE PREQUALIFIED VENDOR FOR THE INSTALLATION OF ENERGY-EFFICIENT EXPLOSION PROOF LED INTERIOR LIGHTING AT THE PRISON POINT PUMP STATION, PHASE 2 FOR A TERM OF 150 CALENDAR DAYS. A REBATE TOTALING \$11,847.00 WILL BE RECEIVED FROM EVERSOURCE UPON PROJECT COMPLETION, RESULTING IN A PAYBACK PERIOD OF 2.8 YEARS.	OP-340	AWARD	HORIZON SOLUTIONS, LLC	\$32,237.00
C-14.	12/28/16	AIR COMPRESSOR SYSTEM SERVICE DECREASE ESTIMATED QUANTITIES FOR ON-SITE NON-EMERGENCY AND EMERGENCY ON-CALL SERVICES, REPLACEMENT PARTS, MATERIAL AND MARK-UP.	OP-221	1	COOLING AND HEATING SPECIALISTS, INC.	(\$31,158.85)
C-15.	12/28/16	CRANE MAINTENANCE SERVICE AWARD OF A CONTRACT TO THE LOWEST RESPONSIVE BIDDER FOR CRANE MAINTENANCE SERVICES ON 161 OVERHEAD AND GANTRY CRANES LOCATED AT VARIOUS FACILITIES FOR A TERM OF 730 CALENDAR DAYS.	OP-333	AWARD	SAFEGWAY OVERHEAD CRANE SERVICE, INC.	\$184,425.00

PURCHASING DELEGATED AUTHORITY ITEMS DECEMBER 1 - 31, 2016

NO.	DATE OF AWARD	TITLE AND EXPLANATION	CONTRACT	AMENDMENT	COMPANY	FINANCIAL IMPACT
P-1.	12/02/16	SUPPLY AND DELIVERY OF FERRIC CHLORIDE TO THE CLINTON WASTEWATER TREATMENT PLANT AWARD OF A PURCHASE ORDER TO THE LOWEST RESPONSIVE BIDDER FOR THE SUPPLY AND DELIVERY OF FERRIC CHLORIDE TO THE CLINTON WASTEWATER TREATMENT PLANT FOR A TERM OF ONE YEAR.	WRA-4301Q		KEMIRA WATER SOLUTIONS, INC.	\$43,240.00
P-2.	12/02/16	DISPOSE OF AND/OR RECYCLE MATERIAL EXCAVATED BY MWRA AWARD OF A PURCHASE ORDER TO THE LOWEST RESPONSIVE BIDDER FOR THE DISPOSAL OF AND/OR RECYCLING OF MATERIAL EXCAVATED BY THE MWRA FOR A TERM OF ONE YEAR.	WRA-4298		NORTHGATE RECYCLING, INC.	\$105,000.00
P-3.	12/06/16	FLO-DAR WASTEWATER FLOW METER REPAIRS AWARD OF A SOLE SOURCE BLANKET PURCHASE ORDER FOR AS-NEEDED REPAIR SERVICES OF FLO-DAR WASTEWATER FLOW METERS AND APPURTENANCES FOR THE TIME PERIOD OF JANUARY 1, 2017 THROUGH DECEMBER 31, 2018.			HACH COMPANY	\$75,000.00
P-4.	12/07/16	REPLACEMENT OF ACTIVATED CARBON AT THE NUT ISLAND HEADWORKS AWARD OF A PURCHASE ORDER TO THE LOWEST RESPONSIVE BIDDER FOR THE REPLACEMENT OF ACTIVATED CARBON AT THE NUT ISLAND HEADWORKS.	WRA-4287		CARBON ACTIVATED CORPORATION	\$237,450.00
P-5.	12/16/16	MAINTENANCE AND SUPPORT OF AUTOCAD PRODUCTS AWARD OF A PURCHASE ORDER TO THE LOWEST RESPONSIVE BIDDER FOR THE MAINTENANCE AND SUPPORT OF AUTOCAD PRODUCTS FOR THE TIME PERIOD OF DECEMBER 13, 2016 THROUGH DECEMBER 12, 2017.	WRA-4306		DLT SOLUTIONS, INC.	\$29,417.38
P-6.	12/16/16	FURNISH AND DELIVER ONE MULTI-ORIFICE CONTROL VALVE AND ACTUATOR FOR THE WESTON AQUEDUCT TRANSFER STATION AWARD OF A PURCHASE ORDER TO THE LOWEST RESPONSIVE BIDDER FOR ONE MULTI-ORIFICE FLOW CONTROL VALVE AND ACTUATOR FOR THE WESTERN AQUEDUCT TRANSFER STATION.	WRA-4279		ATLANTIC FLUID TECHNOLOGY, INC.	\$109,000.00
P-7.	12/19/16	MAINTENANCE AND SUPPORT OF PBX EQUIPMENT AWARD OF A PURCHASE ORDER TO THE LOWEST RESPONSIVE BIDDER FOR MAINTENANCE AND SUPPORT OF PBX EQUIPMENT FOR THE TIME PERIOD OF JANUARY 1, 2017 THROUGH DECEMBER 31, 2017.	WRA-4315Q		METROPOLITAN TELEPHONE COMPANY, INC.	\$37,845.40
P-8.	12/19/16	IMPLEMENTATION SERVICES TO UPGRADE THE WATER QUALITY REPORTING SYSTEM AWARD OF A PURCHASE ORDER TO THE LOWEST RESPONSIVE BIDDER FOR IMPLEMENTATION SERVICES TO UPGRADE THE WATER QUALITY REPORTING SYSTEM.	WRA-4308Q		OVERTURE PARTNERS, LLC	\$66,735.04
P-9.	12/20/16	POLYVINYLIDENE FLUORIDE PIPE AND FITTINGS FOR THE DEER ISLAND TREATMENT PLANT AWARD OF A PURCHASE ORDER TO THE LOWEST RESPONSIVE BIDDER FOR POLYVINYLIDENE FLUORIDE PIPE AND FITTINGS FOR THE DEER ISLAND TREATMENT PLANT.	WRA-4280		METROPOLITAN PIPE & SUPPLY COMPANY	\$26,027.10
P-10.	12/21/16	SUPPLY AND DELIVERY OF CONCRETE PRODUCTS AWARD OF A PURCHASE ORDER TO THE LOWEST RESPONSIVE BIDDER FOR THE SUPPLY AND DELIVERY OF CONCRETE PRODUCTS FOR A TERM OF ONE YEAR.	WRA-4311		AGGREGATE INDUSTRIES	\$71,075.00

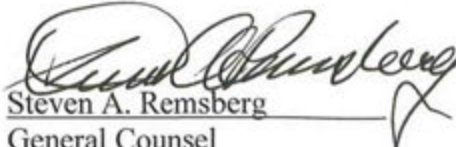
STAFF SUMMARY

TO: Board of Directors
FROM: Frederick A. Laskey, Executive Director 
DATE: January 18, 2017
SUBJECT: MWRA Compliance with the Amended Massachusetts Public Records Law

COMMITTEE: Administration, Finance & Audit

Information
 Vote

Donna McMahon, Staff Counsel, Law Division
Laurie Allen, Sr. Mgr., Operations, Coord. & Control
Preparer/Title


Steven A. Remsberg
General Counsel

RECOMMENDATION:

For information only. This staff summary reports on MWRA's completed efforts to comply with amendments to the Massachusetts Public Records Law, enacted on June 3, 2016. MWRA was in full compliance as of January 1, 2017, the statute's effective date.

DISCUSSION:

The amendments to the pre-existing Public Records Law, as contained in Chapter 121 of the Acts of 2016, have been fully implemented by Authority staff. Efforts to comply with the new provisions of the law were accomplished by a group effort among staff of the Operations, Administration (MIS) and Law Divisions, and of the Executive Office.

Among the key provisions of the amended statute include requirements that agencies and authorities post information, central to their missions and operations, on-line to make access to it automatic and immediate without the time and effort needed for the public to specifically request the information or for agencies to spend time and resources gathering, copying and otherwise responding to such requests. MWRA had, previous to the adoption of the new statute, posted significant amounts of operational information as part of a separate "Transparency" project years earlier. The amended statute did not call for any information to be posted that was not already available at MWRA.com. MWRA staff have begun to receive requests through a newly established entry point at MWRA.com.

The statute further requires the appointment of one or more Records Access Officers who are charged with the responsibility of assisting with, trouble-shooting and expediting of public records disclosures. MWRA has appointed seven such officers throughout the Authority. The new statute also requires that the agency cooperate with the public in providing data, if requested, in an electronic format that is preferred by the requestor. The statute also now requires agencies to document each request and to annually report such information to the secretary of the commonwealth and to the legislature. MWRA is prepared to meet that requirement by way of a data base now in use. Additionally, MWRA has published guidelines to

assist the public in narrowing requests to avoid inclusion of information which remains protected by a series of statutory exemptions to disclosure and, more importantly, to eliminate the time and cost of redaction of exempt information. The amended statute also sets out maximum rates (\$.05/page) at which copying costs may be charged to requestors and requires that the first four hours of document search and segregation time be provided free of charge. MWRA's practice has been not to charge any fees for requests originating in the public sector or in cases where disclosure is in the public interest. Fees have been limited to very cumbersome, expansive and time-consuming requests that are used, in most cases, by private entities or law firms for use in private litigation.

Mindful that not all persons will switch to the automated mode of requesting documents under the amended statute through MWRA.com, MWRA has kept in place the more traditional routes by which the public, state agencies, our community members, and the Authority's contractors and consultants have, over the years, become accustomed to requesting documentation from the Authority. To that end, MWRA continues to accept written and verbal requests which can still be directed to the Assistant Secretary to the Board (Bonnie Hale), to both the water and wastewater sections of the Operations Division (plans and drawings), to the Library in Chelsea (historical/engineering studies) and to the Law Division. Each of those paper and verbal requests will be catalogued with those received electronically so that all requests in whatever format and from whatever source will be captured for MWRA's year-end annual report.

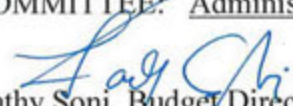
Finally, the amended statute provides that a request must be responded to within ten business days from the day of its receipt. New statutory provisions allow for relief from that deadline in instances in which "good cause" is demonstrated to the Supervisor of Public Records. However, in most cases, the time line of an extension under the amended statute is limited to no more than an additional twenty days.

STAFF SUMMARY

TO: Board of Directors
FROM: Frederick A. Laskey, Executive Director
DATE: January 18, 2017
SUBJECT: FY17 Financial Update and Summary




COMMITTEE: Administration, Finance & Audit


Kathy Soni, Budget Director
Louise L. Miller, Budget Manager
Preparer/Title



INFORMATION
 VOTE


Thomas J. Durkin
Director, Finance

RECOMMENDATION:

For information only. This staff summary provides the financial update and variance highlights through December 2016, comparing actual spending and revenue to the FY17 budget.

DISCUSSION:

Total year-to-date budget variance is \$10.2 million, with total expenses lower than budgeted by \$8.9 million or 2.6% and total revenues higher than budgeted by \$1.3 million or 0.4%.

FY17 Current Expense Budget

The expense variances through December 2016 by major budget category were:

- Net Lower Direct Expenses of \$2.3 million or 2.2%. Spending is lower for Wages and Salaries, Other Services, Utilities, Worker's Compensation, Fringe Benefits, Professional Services, and Training & Meetings. This is offset by higher spending for Maintenance, Chemicals, Other Materials, and Overtime.
- Lower Indirect Expenses of \$124,000 or 0.7% for lower Insurance costs and Watershed reimbursements.
- Lower Debt Service expenses of \$6.4 million or 3.0% mostly related to the favorable short-term variable interest rate, the impact of the August 2016 refunding, and not receiving the budgeted replacement loans as part of the State Revolving Fund (SRF) program.

FY17 Budget and FY17 Actual Year to Date Variance by Expenditure Category

	FY17 Budget YTD	FY17 Actual YTD	\$ Variance	% Variance
Direct Expenses	\$107.7	\$105.3	-\$2.3	-2.2%
Indirect Expenses	\$18.9	\$18.7	-\$0.1	-0.7%
Debt Service	\$213.7	\$207.3	-\$6.4	-3.0%
Total	\$340.2	\$331.3	-\$8.9	-2.6%

Totals may not add due to rounding.

Total Revenues of \$360.5 million were \$1.3 million over budget reflecting primarily \$1.3 million receipt for water usage related to the summer drought and \$299,000 for a class action lawsuit settlement for derivative agreements, offset by lower Investment Income of \$270,000 for unanticipated calls re-invested at lower rates.

Please refer to Attachment 1 for a more detailed comparison by line item of the budget variances for the year to date.

Eversource Cross-Harbor Cable Location Project

For FY17, staff are tracking MWRA's costs for the Eversource Cross-Harbor Cable (HEEC cable) location work which started on November 2, 2016. The investigatory work of the project was defined as two phases (Phase 1A and Phase 1B), followed by remediation work Phase 2 to take place in the summer of 2017 (FY18). Phase 1A consists of locating the cable in the Reserved Channel during November 2- November 4, and Phase 1B will consist of excavating up to four test pits over the path of the cable to verify the precise location and depth data generated during Phase 1A, scheduled for December 8 – January 23, 2017.

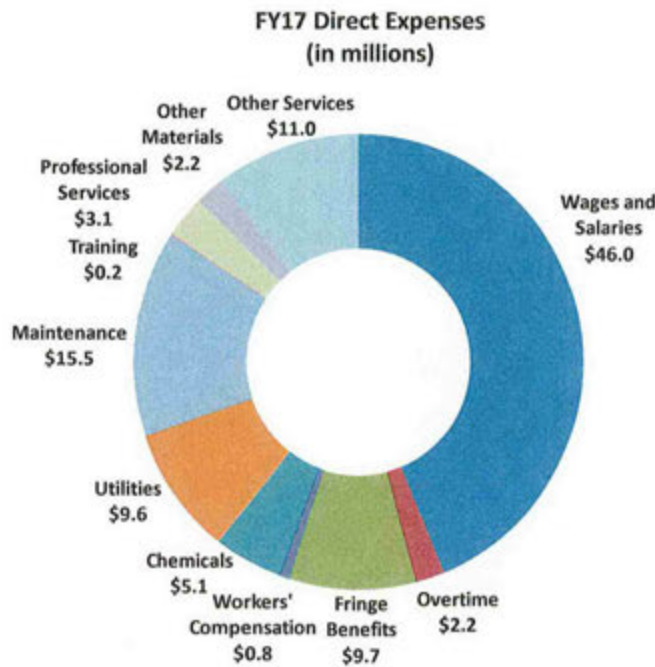
During this work the HEEC cable must be de-energized and MWRA is required to utilize its Combustion Turbine Generators (CTGs) to power the plant. By doing so, MWRA incurred and will incur significant costs related to diesel fuel use, in-house and third party labor, and significant overtime. These additional costs are partially offset by the avoided cost of energy and distribution charges.

The total MWRA estimated net unbudgeted costs for the investigatory Phases are in the range of \$1.0-\$1.2 million. Phase 2 costs are estimated in the range of \$3.5 - \$4.5 million during FY18.

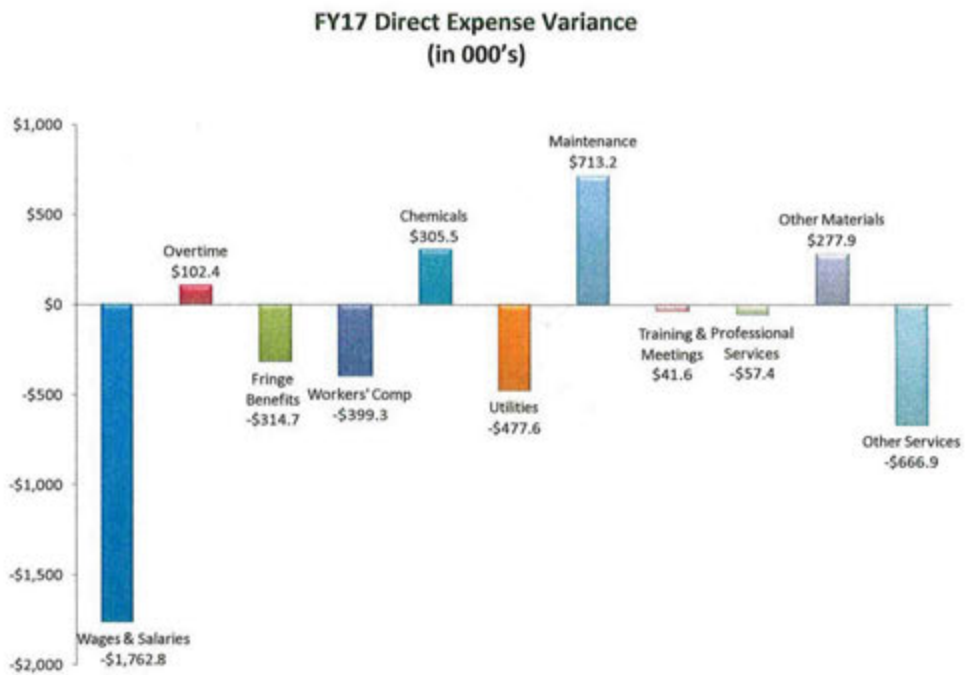
Staff will continue to update the Board on the cost impacts of this work as actual expenses incur.

Direct Expenses

Year-to-date direct expenses totaled \$105.3 million, \$2.3 million or 2.2% less than budgeted.



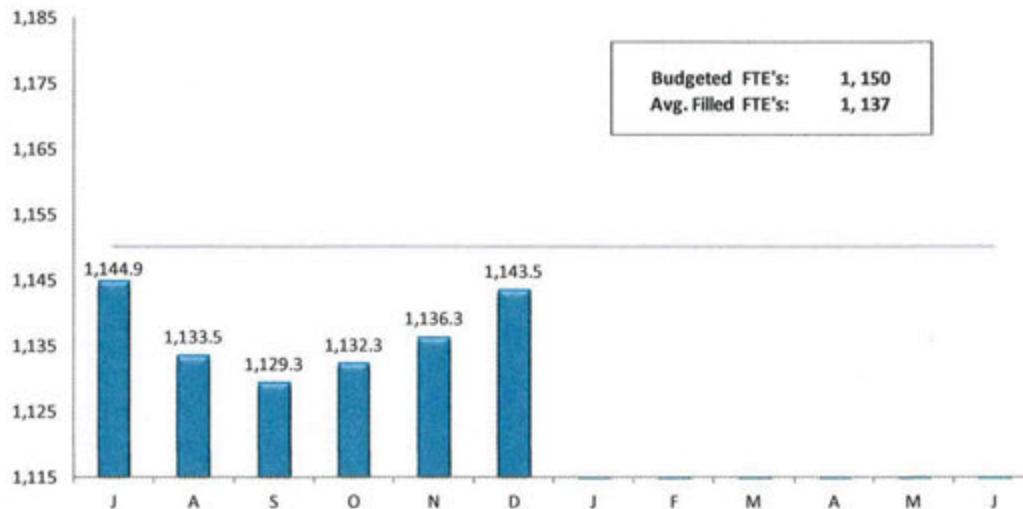
The underspending on direct expenses is related to Wages and Salaries, Other Services, Utilities, Worker's Compensation, Fringe Benefits, Professional Services, and Training & Meetings; offset by higher spending for Maintenance, Chemicals, Other Materials, and Overtime.



Wages and Salaries

Wages and Salaries were underspent by \$1.8 million or 3.7% mainly as a result of lower average Full Time Equivalent positions (FTEs) than budgeted, the timing of backfilling vacant positions, and the salary mix differential between staff retiring and new hires. The average FTEs through December were 1,137, which was 13 positions lower than the 1,150 FTEs budgeted.

FY17 MWRA Full Time Equivalent (FTE) Position Trend



Other Services

Other Services spending was lower than budget by \$667,000 or 5.7% due to lower spending of \$264,000 for sludge pelletization services because of lower year to date quantities; \$195,000 for Space/Lease Rentals due to lower escrow payments at the Chelsea Facility for taxes and insurance, and lower pass-through maintenance cost at the Charlestown Navy Yard Facility; \$128,000 for Grit and Screenings disposal services primarily due to lower quantities; and \$110,000 for Other Services primarily for timing of community lead testing assistance.

Utilities

Utilities were underspent by \$478,000 or 4.7%, due to lower electricity costs of \$268,000, primarily for lower than budgeted pricing at the Deer Island Treatment Plant; and lower expenses of \$183,000 for diesel fuel primarily for Wastewater Operations; and lower natural gas expenses of \$71,000 primarily for the Carroll Water Treatment Plant.

Workers' Compensation

Workers' Compensation expenses were lower than budget by \$399,000 or 34.1% based on lower medical expenses of \$226,000 and compensation payments of \$193,000. In December, actual spending was \$49,000 over budget. The majority of lower expenses are due to reserve decreases earlier in the fiscal year associated with a few cases.

Fringe Benefits

Fringe Benefits spending was lower than budgeted by \$315,000 or 3.1% primarily for lower Health Insurance costs of \$285,000 due to fewer employees and retirees than budgeted participating, and the mix change between family and individual plans.

Maintenance

Maintenance expenses were higher than budgeted by \$713,000 or 4.8%. The Nut Island fire incident accounts for \$410,000 of the variance. The balance is primarily related to higher costs than budgeted for MIS software maintenance and earlier spending than anticipated for maintenance projects including wastewater sewer manhole rehabilitation and DeLauri Pump Station pull out assembly.

Chemicals

Chemicals expenses were higher than budgeted by \$306,000 or 6.4% primarily for Activated Carbon of \$165,000 at Deer Island Treatment Plant and Sodium Hypochlorite of \$75,000 due to higher than budgeted price.

Other Materials

Other Materials were higher than budget by \$278,000 or 14.6% mainly due to timing of Vehicle Purchases of \$245,000; Computer Hardware of \$59,000, Other Materials of \$58,000 primarily for gravel at the Clinton Landfill, and Lab & Testing Supplies of \$50,000. This is offset by lower Vehicle Expenses of \$135,000 due to lower fuel prices and Computer Software of \$56,000.

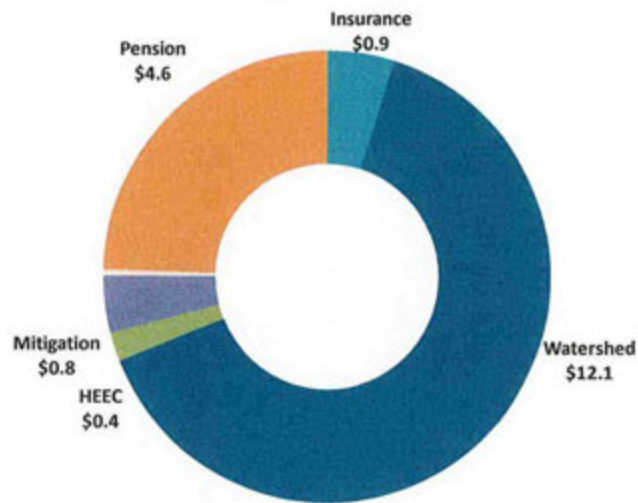
Overtime

Overtime was higher than budget by \$102,000 or 4.9% mainly at the Deer Island Treatment Plant for the HEEC cable location project by Eversource and Metro Maintenance for off-hour maintenance work. This is offset by lower spending in Wastewater Operations related to the North Main Pump Station project at Deer Island.

Indirect Expenses

For the fiscal year, Indirect Expenses totaled \$16.6 million, \$106,000 or 0.6% lower than budget, related to lower than budgeted insurance claims and an over-accrual in FY16 for Watershed management operating expenses.

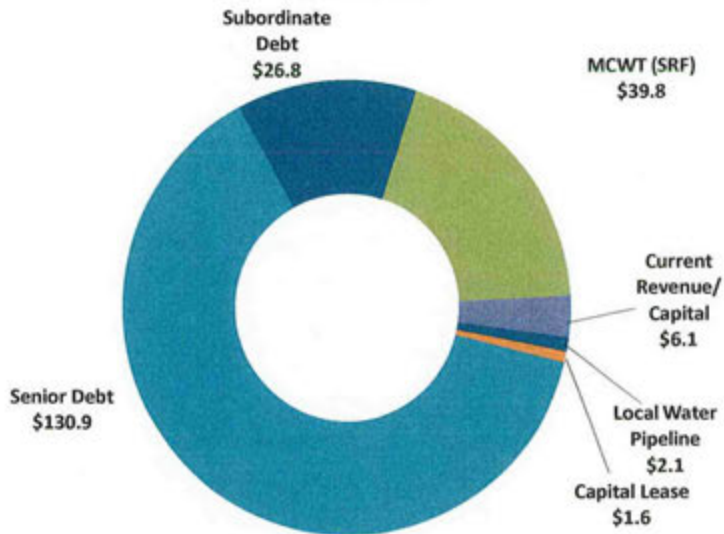
FY17 Indirect Expenses-YTD
(in millions)



Debt Service

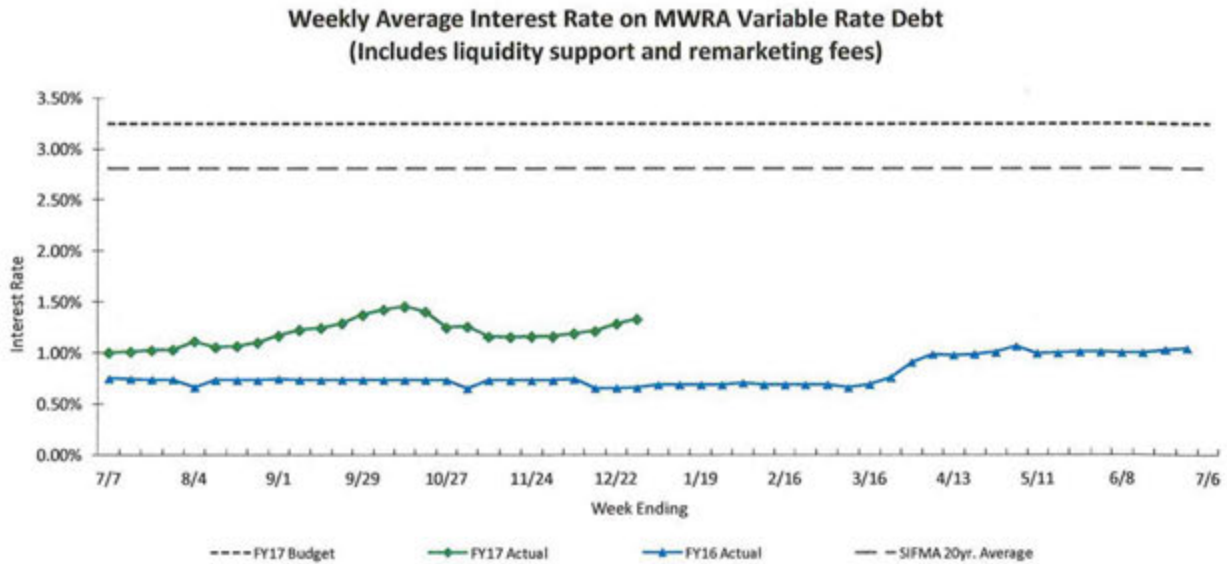
Debt Service expenses include the principal and interest payment for fixed debt, the variable subordinate debt, the Massachusetts Clean Water Trust (SRF) obligation, the commercial paper program for the local water pipeline projects, current revenue for capital, and the Chelsea facility lease payment.

FY17 Debt Expenses-YTD
(in millions)



Debt Service expenses for the fiscal year totaled \$207.3 million, which was \$6.4 million or 3.0% below budget, reflecting lower variable rate of \$5.5 million, \$528,000 for the impact of the August 2016 refunding, and \$408,000 for Clean Water Trust funding.

The graph below reflects the FY17 actual variable rate trend by week over the past year and the FY17 Budget.



Revenue & Income

Total Revenue for the fiscal year totaled \$361.8 million, \$1.3 million or 0.4% higher than budget.

The higher than budgeted non-rate Revenue was driven by the receipt of \$1.3 million for water usage related to the summer drought and \$299,000 for a class action lawsuit settlement for derivative agreements. This is offset by lower Investment Income of \$270,000 for unanticipated calls re-invested at lower rates.

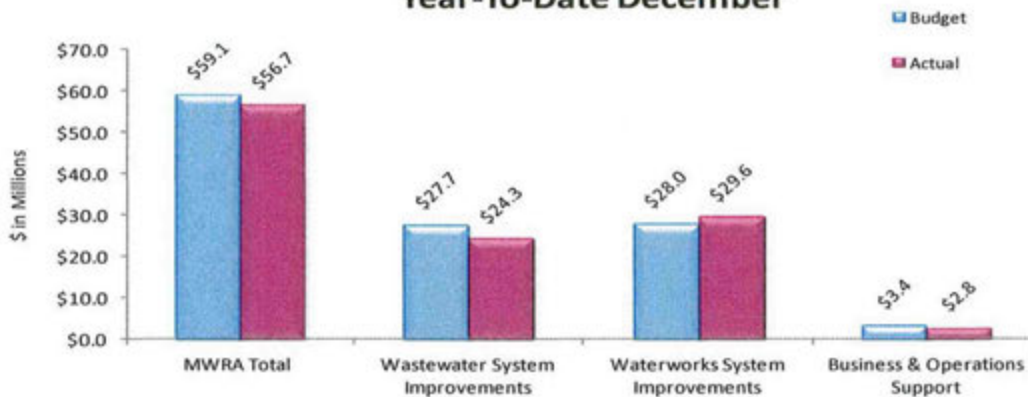
Please refer to Attachment 2 for a more detailed variance explanation by line item.

FY17 Capital Improvement Program

Capital expenditures in FY17 total \$56.7 million through the end of December, \$2.4 million or 4.1% less than budget.

After accounting for programs which are not directly under MWRA’s control, most notably the Inflow and Infiltration (I/I) program, the Local Water Pipeline program, and the community managed Combined Sewer Overflow (CSOs) projects, capital spending totaled \$48.0 million, \$1.7 million or 3.7% over budget.

FY17 CIP Spending Year-To-Date December



Totals may not add due to rounding

Overall underspending reflects the underspending of Wastewater Improvements and Business and Operations Support of \$3.4 million and \$0.5 million, respectively, partially offset by Waterworks Improvements overspending of \$1.5 million.

Spending By Program:

\$ in Millions	Budget	Actuals	\$ Var.	% Var.
Wastewater System Improvements				
Interception & Pumping	9.7	7.4	(2.3)	-23.5%
Treatment	7.2	10.3	3.1	43.0%
Residuals	0.0	0.0	0.0	N/A
CSO	5.9	3.0	(2.9)	-49.1%
Other	4.8	3.5	(1.3)	-27.5%
Total Wastewater System Improvements	\$27.7	\$24.3	-\$3.4	-12.4%
Waterworks System Improvements				
Drinking Water Quality Improvements	1.3	0.6	(0.7)	-55.9%
Transmission	13.5	12.6	(0.9)	-6.8%
Distribution & Pumping	7.5	11.0	3.5	46.7%
Other	5.7	5.3	(0.4)	N/A
Total Waterworks System Improvements	\$28.0	\$29.6	\$1.5	5.5%
Business & Operations Support	\$3.4	\$2.8	(\$0.5)	-15.6%
Total MWRA	\$59.1	\$56.7	-\$2.4	-4.1%

Totals may not add due to rounding

The main reasons for the project spending variances in order of magnitude are:

Water Distribution and Pumping: Net overspending of \$3.5 million

- \$1.4 million for Spot Pond Supply Mains due to additional work for Webster Avenue Bridge Pipe Rehabilitation, \$1.6 million for Section 89/29 Redundancy Phase 1B Construction and \$0.9 million for Southern Extra High Section 111 Construction 1 due to contractor progress.

- The overspending was partially offset by underspending on Weston Aqueduct Supply Mains Section 36/C/S9-A11 Valve of \$0.4 million due to anticipated balancing credit change order for underspent items.

Wastewater Treatment: Net overspending of \$3.1 million

- \$1.5 million for Deer Island Power System Improvements, \$0.8 million for Winthrop Terminal Facility Variable Frequency Drives Replacement Construction and \$0.4 million for Clinton Phosphorus Reduction Construction due to contractor progress, and \$0.5 for Electrical Upgrades Construction 4 due to timing of final work.
- The overspending was partially offset by underspending on Butterfly Valve Replacement of \$0.5 million due to equipment delivery delays.

Combined Sewer Overflow: Net underspending of \$2.9 million

- \$2.8 million for Cambridge Sewer Separation Project due to less than anticipated progress on final restoration work.

Interception & Pumping: Net underspending of \$2.3 million

- \$2.0 million on Caruso Pump Station Improvements Construction due to construction delays.
- \$1.7 million for Chelsea Creek Upgrades Construction and Engineering Services for a later Notice-to-Proceed date than budgeted.
- The underspending was partially offset by \$1.2 million for Alewife Brook Pump Station Rehabilitation Construction due to contractor progress and \$0.5 million for Chelsea Screenhouse Upgrades due to timing of final work.

Other Wastewater: Net underspending of \$1.3 million

- \$1.3 million for Community Infiltration/Inflow (I/I) due to less than anticipated requests for loans and grants.

Waterworks Transmission: Net underspending of \$0.9 million

- \$0.6 million caused by less than anticipated progress for the Sudbury/Weston Aqueduct Repairs.
- \$0.5 million for Cosgrove Tunnel Redundancy primarily due to less than anticipated progress due to construction issues for the Wachusett Aqueduct Pump Station Construction.
- The underspending was partially offset by overspending of \$0.6 million for the Hatchery Pipeline Construction due to contractor progress.

Drinking Water Quality Improvements: Net underspending of \$0.7 million

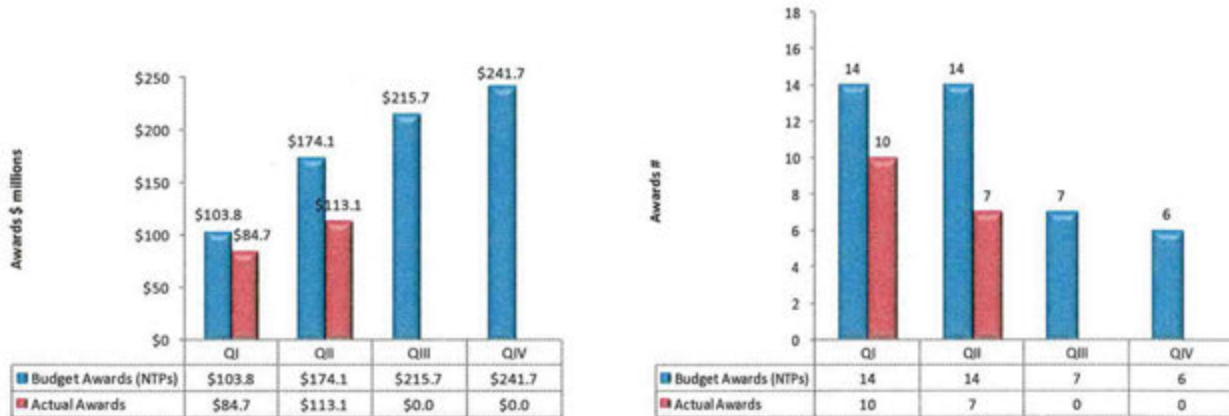
- Spot Pond Storage Facility Design/Build of \$0.4 million due to construction delays, and \$0.2 million for Southborough Water Quality Upgrades pending a final balancing change order.

Waterworks Other: Net underspending of \$0.4 million

- \$0.4 million for Beacon Street Line Repair due to construction issues with vaults at access pits.

Contract Awards

41 Contracts totaling \$241.6 million are planned for FY17. Contract awards are the primary driver of future capital expenditures. Through the end of the second quarter, 17 contracts have been awarded totaling \$113.1 million or nearly 65% of the \$174.1 million planned through December.



Construction Fund Balance

The construction fund balance was at \$64.9 million as of the end of December. Commercial Paper availability was at \$222.0 million to fund construction projects.

- Attachment 1–Variance Summary December 2016
- Attachment 2 – Current Expense Variance Explanations
- Attachment 3 – Capital Improvement Program Variance Explanations

ATTACHMENT I

	December 2016					
	Year-to-Date					
	Period 6 YTD Budget	Period 6 YTD Actual	Period 6 YTD Variance	%	FY17 Approved	% Expended
EXPENSES						
WAGES AND SALARIES	\$ 47,811,157	\$ 46,048,316	\$ (1,762,841)	-3.7%	\$ 101,588,897	45.3%
OVERTIME	2,081,423	2,183,804	102,381	4.9%	4,192,676	52.1%
FRINGE BENEFITS	10,004,307	9,689,604	(314,703)	-3.1%	20,242,323	47.9%
WORKERS' COMPENSATION	1,172,095	772,812	(399,283)	-34.1%	2,344,190	33.0%
CHEMICALS	4,790,837	5,096,351	305,514	6.4%	9,110,407	55.9%
ENERGY AND UTILITIES	10,081,280	9,603,644	(477,636)	-4.7%	21,541,077	44.6%
MAINTENANCE	14,795,053	15,508,221	713,168	4.8%	31,080,642	49.9%
TRAINING AND MEETINGS	214,812	173,218	(41,594)	-19.4%	435,481	39.8%
PROFESSIONAL SERVICES	3,145,892	3,088,463	(57,429)	-1.8%	6,531,939	47.3%
OTHER MATERIALS	1,901,902	2,179,799	277,897	14.6%	6,219,630	35.0%
OTHER SERVICES	11,652,788	10,985,916	(666,872)	-5.7%	22,974,855	47.8%
TOTAL DIRECT EXPENSES	\$ 107,651,546	\$ 105,330,148	\$ (2,321,399)	-2.2%	\$ 226,262,117	46.6%
INSURANCE	\$ 998,949	\$ 933,479	\$ (65,470)	-6.6%	\$ 1,997,898	46.7%
WATERSHED/PILOT	12,145,634	12,090,314	(55,320)	-0.5%	24,291,268	49.8%
BEC _o PAYMENT	386,930	391,314	4,384	1.1%	773,859	50.6%
MITIGATION	779,000	771,400	(7,600)	-1.0%	1,558,000	49.5%
ADDITIONS TO RESERVES	(83,871)	(83,871)	-	0.0%	(167,742)	50.0%
RETIREMENT FUND	4,632,624	4,632,624	-	0.0%	4,632,624	100.0%
POST EMPLOYEE BENEFITS	-	-	-	---	4,876,050	0.0%
TOTAL INDIRECT EXPENSES	\$ 18,859,266	\$ 18,735,260	\$ (124,006)	-0.7%	\$ 37,961,957	49.4%
STATE REVOLVING FUND	\$ 40,168,407	\$ 39,760,853	\$ (407,554)	-1.0%	\$ 86,971,915	45.7%
SENIOR DEBT	131,424,056	130,896,551	(527,505)	-0.4%	268,472,556	48.8%
CORD FUND	-	-	-	---	-	---
DEBT SERVICE ASSISTANCE	-	-	-	---	(873,804)	---
CURRENT REVENUE/CAPITAL	6,100,000	6,100,000	-	0.0%	12,200,000	50.0%
SUBORDINATE MWRA DEBT	32,313,338	32,313,338	-	0.0%	69,997,992	46.2%
LOCAL WATER PIPELINE CP	2,074,621	2,074,621	-	0.0%	4,149,242	50.0%
CAPITAL LEASE	1,608,530	1,608,530	-	0.0%	3,217,060	50.0%
DEBT PREPAYMENT	-	-	-	---	10,994,960	0.0%
VARIABLE DEBT	-	(5,501,286)	(5,501,286)	---	-	0.0%
DEFEASANCE ACCOUNT	-	-	-	---	-	---
TOTAL DEBT SERVICE	\$ 213,688,952	\$ 207,252,607	\$ (6,436,346)	-3.0%	\$ 455,129,921	45.5%
TOTAL EXPENSES	\$ 340,199,764	\$ 331,318,015	\$ (8,881,751)	-2.6%	\$ 719,353,995	46.1%
REVENUE & INCOME						
RATE REVENUE	\$ 347,439,250	\$ 347,439,250	\$ -	0.0%	\$ 694,878,500	50.0%
OTHER USER CHARGES	4,197,247	4,255,408	58,161	1.4%	8,752,834	48.6%
OTHER REVENUE	4,316,123	5,865,957	1,549,834	35.9%	6,519,171	90.0%
RATE STABILIZATION	-	-	-	---	-	---
INVESTMENT INCOME	4,508,943	4,239,123	(269,820)	-6.0%	9,473,490	44.7%
TOTAL REVENUE & INCOME	\$ 360,461,563	\$ 361,799,738	\$ 1,338,175	0.4%	\$ 719,623,995	50.3%

ATTACHMENT 2
Current Expense Variance Explanations

Total MWRA	FY17 Budget YTD December	FY17 Actuals YTD December	FY17 YTD Actual vs. FY17 Budget		Explanations
			\$	%	
Direct Expenses					
Wages & Salaries	47,811,157	46,048,316	(1,762,841)	-3.7%	Underspending is mainly the result of lower average Full Time Equivalent positions (FTEs) than budgeted, the timing of backfilling vacant positions and the salary mix differential between staff retiring and new hires. The average FTEs for the fiscal year was 1,137, which was 13 positions lower than the 1,150 FTEs budgeted.
Overtime	2,081,423	2,183,804	102,381	4.9%	Higher spending at DITP related to the HEEC cable relocation project and Metro Maintenance due to off-hour maintenance work. This is offset by lower spending in Wastewater Operations due to lower than anticipated OT associated with the NMPS work at DITP.
Fringe Benefits	10,004,307	9,689,604	(314,703)	-3.1%	Lower than budget mainly due to Health Insurance of \$285,000, due to fewer than budgeted participation and the mix change between family and individual plans.
Worker's Compensation	1,172,095	772,812	(399,283)	-34.1%	Underspending due to lower medical payments of \$226,000 and compensation payments of \$193,000. In December actual spending was \$49,000 over budget. It is important to note that spending on this line item can change significantly depending on future claims and severity of cases.
Chemicals	4,790,837	5,096,351	305,514	6.4%	Overspending on Activated Carbon of \$165,000 at DITP for odor control (as opposed to use of wet scrubbers); Sodium Hypochlorite of \$76,000 (higher than budgeted cost for new contract); Polymer of \$38,000; Carbon Dioxide of \$27,000; Other Oxidizers of \$25,000; Ferric Chloride of \$24,000; Hydrogen Peroxide of \$21,000; and Soda Ash of \$20,000. This is offset by lower spending on Liquid Oxygen of \$36,000; and Hydrofluosilic Acid of \$21,000.

**ATTACHMENT 2
Current Expense Variance Explanations**

Total MWRA	FY17 Budget YTD December	FY17 Actuals YTD December	FY17 YTD Actual vs. FY17 Budget		Explanations
			\$	%	
Utilities	10,081,280	9,603,644	(477,636)	-4.7%	Underspending in Electricity of \$268,000 primarily at DITP due to lower prices and Wastewater facilities partially for not using wet scrubbers at NI and lower flows throughout the system. This is offset by higher spending at waterworks facilities attributed to pumping more water to Bedford and higher than anticipated demand charges at the new Spot Pond Pump Station. Diesel Fuel is underspent by \$183,000 primarily for Wastewater Operations. Natural Gas is underspent \$71,000 primarily at JCWTP.
Maintenance	14,795,053	15,508,221	713,168	4.8%	Services were overspent by \$991,000 and Materials were underspent by \$278,000. Nut Island fire remediation efforts have costs \$410,000 in FY17 for both materials and services. The rest is primarily related to higher and faster spending than anticipated. Some projects include wastewater sewer manhole rehab, DeLauri PS pull out assembly, and MIS software maintenance.
Training & Meetings	214,812	173,218	(41,594)	-19.4%	Underspending primarily in MIS, Operations and Fleet Services due to timing.
Professional Services	3,145,892	3,088,463	(57,429)	-1.8%	Lower spending on Other Services of \$67,000 primarily in Treasury and HR; \$66,000 for Engineering in SCADA, \$33,000 Resident Inspection; and \$21,000 for Lab & Testing Analysis. This is offset by higher spending for Legal Services of \$143,000 in the Law Department.
Other Materials	1,901,902	2,179,799	277,897	14.6%	Higher than budget spending of \$245,000 due to timing of Vehicle Purchases/ Replacements; \$59,000 for Computer Hardware in MIS; \$58,000 for Other Materials primarily for gravel for Clinton landfill; \$50,000 for Lab & Testing; and \$34,000 for Health/Safety. This is offset by underspending of \$135,000 in vehicle expenses primarily due to lower fuel prices and \$56,000 for Computer Software in SCADA.
Other Services	11,652,788	10,985,916	(666,872)	-5.7%	Lower than budgeted spending of \$264,000 for sludge pelletization services for lower year to date quantities; \$195,000 for Space Lease/Rentals due to lower escrow for Chelsea taxes and insurance and pass through maintenance cost at CNY; \$128,000 for Grit and Screenings disposal services primarily due to lower quantities; and \$110,000 for Other Services primarily for timing of community lead testing assistance.
Total Direct Expenses	107,651,546	105,330,148	(2,321,398)	-2.2%	

ATTACHMENT 2
Current Expense Variance Explanations

Total MWRA	FY17 Budget YTD December	FY17 Actuals YTD December	FY17 YTD Actual vs. FY17 Budget		Explanations
			\$	%	
Indirect Expenses					
Insurance	998,949	933,479	(65,470)	-6.6%	Lower Claims than budgeted of \$69,000 offset by higher premiums of \$4,000.
Watershed/PILOT	12,145,634	12,090,314	(55,320)	-0.5%	Lower Watershed Reimbursement due to over accrual at the end of FY16 as compared to actual invoiced paid.
HEEC Payment	386,930	391,314	4,384	1.1%	
Mitigation	779,000	771,400	(7,600)	-1.0%	Actual inflation rate was 1.5% vs. 2.5% used for the budget.
Addition to Reserves	(83,871)	(83,871)	-	0.0%	
Pension Expense	4,632,624	4,632,624	-	0.0%	
Post Employee Benefits	-	-	-		
Total Indirect Expenses	18,859,266	18,735,260	(124,006)	-0.7%	
Debt Service					
Debt Service	213,688,952	207,252,607	(6,436,345)	-3.0%	Lower variable rate of \$5.5 million.
Debt Service Assistance	-	-	-		
Total Debt Service Expenses	213,688,952	207,252,607	(6,436,345)	-3.0%	
Total Expenses					
Total Expenses	340,199,764	331,318,015	(8,881,749)	-2.6%	
Revenue & Income					
Rate Revenue	347,439,250	347,439,250	(1)	0.0%	
Other User Charges	4,197,247	4,255,408	58,161	1.4%	
Other Revenue	4,316,123	5,865,957	1,549,834	35.9%	\$1.3M for sale of water due to the drought; \$299k for settlement of class action lawsuit for derivative agreements; \$186k from sale of surplus equipment; and \$116k TRAC penalty.
Rate Stabilization	-	-	-		
Investment Income	4,508,943	4,239,123	(269,820)	-6.0%	Investment Income is under budget for unanticipated calls re-invested at lower rates.
Total Revenue	360,461,563	361,799,738	1,338,175	0.4%	
Net Revenue in Excess of Expenses	20,261,799	30,481,723	10,219,924		

ATTACHMENT 3
Capital Improvement Program Variance Explanations
(000's)

	FY17 Budget YTD December	FY17 Actuals YTD December	YTD Actuals vs. Budget		Explanations
			\$	%	
Wastewater					
Interception & Pumping (I&P)	\$9,723	\$7,439	(\$2,284)	-23.5%	<u>Underspending</u> Caruso Pump Station Improvements Construction: \$2.0M (delayed installation of HVAC equipment due to unforeseen roof replacement) Chelsea Creek Headworks Upgrades Construction: \$1.7M (NTP shifted 3 months. Currently, contract is in submittals and RFIs) <u>Offset Overspending</u> Alewife Brook Pump Station Rehab Construction: \$1.2M (project progress) Chelsea Screenhouse Upgrades: \$0.5M (work scheduled for FY16 performed in FY17)
Treatment	\$7,210	\$10,313	\$3,103	43.0%	<u>Overspending</u> Power System Improvements - Construction: \$1.5M (project progress) WTF VFD Replacement - Construction: \$0.8M (spending for bonds and insurances) Electrical Equipment Upgrades Construction 4: \$0.5M (work scheduled and budgeted for FY16 performed in FY17) Clinton Wastewater Treatment Plant Phosphorus Removal - Construction: \$0.4M (project progress) Digested Sludge Pump Replacement - Phase 2: \$0.3M (project progress) <u>Offset Underspending</u> Butterfly Valve Replacement: \$0.5M (longer than anticipated lead time for valves as a result of coating issues)
Residuals	\$0	\$0	\$0	-	
CSO	\$5,924	\$3,016	(\$2,908)	-49.1%	<u>Underspending</u> Cambridge Sewer Separation: \$2.8M (delay in work due to Huron Avenue water main replacement by the City of Cambridge necessitating a six month time extension) Reserved Channel Sewer Separation Design and Construction: \$0.4M (timing of final cost settlement now expected in June 2017)
Other Wastewater	\$4,846	\$3,513	(\$1,333)	-27.5%	I/I Local Financial Assistance: \$1.3M (less than anticipated requests for grants and loans)
Total Wastewater	\$27,702	\$24,281	(\$3,422)	-12.4%	

ATTACHMENT 3
Capital Improvement Program Variance Explanations
(000's)

	FY17 Budget YTD December	FY17 Actuals YTD December	YTD Actuals vs. Budget		Explanations
			\$	%	
Waterworks					
Drinking Water Quality Improvements	\$1,272	\$560	(\$712)	-55.9%	<u>Underspending</u> Spot Pond Storage Facility: \$0.4M (Microwave tower installed. Awaiting delivery and installation of communication shelter.) CP7 Existing Facilities: \$0.2M (pending balancing change order for asbestos removal)
Transmission	\$13,549	\$12,626	(\$923)	-6.8%	<u>Underspending</u> Wachusett Aqueduct Pump Station: \$0.5M (pending redesign of work adjacent to City of Marlborough water pipe and progress less than anticipated at the pump station) Rosemary Brook Building Repair: \$0.7M (anticipated time extension) <u>Offset Overspending</u> Hatchery Pipeline construction: \$0.6M (project progress)
Distribution & Pumping	\$7,523	\$11,039	\$3,516	46.7%	<u>Overspending</u> Section 4 Webster Ave Bridge Pipe Rehab - Construction: \$1.4M (additional change order work based on redesign) Section 89/29 Redundancy Phase 1B Construction: \$1.6M (project progress) Redundancy Pipeline Section 111 Phase 1 Construction: \$0.9M (project progress) <u>Offset Underspending</u> Weston Aqueduct Supply Mains Section 36/C/S9 - A11 Valve: \$0.4M (anticipated credit change order for less than estimated quantities of rock and contaminated soil, and timing of valve installation work)
Other Waterworks	\$5,678	\$5,328	(\$350)	-6.2%	Beacon Street Line Repair - Construction: \$0.4M (delay due to trees relocation and MBTA permits)
Total Waterworks	\$28,023	\$29,554	\$1,531	5.5%	

ATTACHMENT 3
Capital Improvement Program Variance Explanations
(000's)

	FY17 Budget YTD December	FY17 Actuals YTD December	YTD Actuals vs. Budget		Explanations
			\$	%	
Business & Operations Support					
Total Business & Operations Support	\$3,374	\$2,848	(\$526)	-15.6%	<u>Overspending</u> Equipment Purchase: \$0.5M (timing of vehicle purchases) <u>Offset Underspending</u> Application Improvement Program: \$0.5M (timing of IT Strategic Plan implementation)
Total MWRA	\$59,099	\$56,682	(\$2,417)	-4.1%	

STAFF SUMMARY

TO: Board of Directors
FROM: Frederick A. Laskey, Executive Director
DATE: January 18, 2017
SUBJECT: Audit Services
CliftonLarsonAllen LLP
Contract F242





COMMITTEE: Administration, Finance & Audit

INFORMATION
 VOTE

Robert Belkin, Controller
Preparer/Title




Michele S. Gillen
Director, Administration

Thomas J. Durkin
Director, Finance

RECOMMENDATION:

To approve the recommendation of the Consultant Selection Committee to select CliftonLarsonAllen LLP to provide Audit Services to the Authority, and to authorize the Executive Director, on behalf of the Authority, to execute contract F242 with CliftonLarsonAllen LLP for an amount not to exceed \$499,000 for a term of four years, from April 1, 2017 to March 31, 2021.

DISCUSSION:

The MWRA Enabling Act requires that the Authority's financial statements be audited annually by an independent certified public accounting firm. The MWRA Amended and Restated General Revenue Bond Resolution (the Resolution) and certain loan agreements, by reference, specify that the audit be conducted by independent accountants of nationally recognized standing and be satisfactory to the Trustee.

The selected independent certified public accounting firm will provide recurring services to the Authority, including an annual audit of the MWRA's financial statements, financial and internal control reviews, certifications and periodic advice, including an annual letter of comments and recommendations for improvements to the Authority's system of internal controls. The selected firm will also provide an annual certification as to the MWRA's compliance with certain financial requirements of the Resolution.

These services require the firm selected to have significant experience in the public sector and the utility industry, including expertise with significant debt issuance engagements and related involvement with ratings agencies and the investment market.

The Authority also requires that audit procedures be performed in accordance with Uniform Guidance (formerly OMB Circular A-133, *Audits of States, Local Governments, and Non-Profit Organizations*),

with respect to the Authority's major federal programs, primarily passed through the State Revolving Fund (SRF).

Contract F242 encompasses the independent audit of the Authority's financial statements for Fiscal Years 2017 through 2020, including an audit of the Authority's Irrevocable OPEB Trust for each of these years.

Procurement Process

The procurement process to select an Audit Services consultant utilized a one step evaluative Request for Qualifications/Proposals (RFQ/P) that was issued on November 19, 2016. Four firms, CliftonLarsonAllen LLP, KPMG LLP (incumbent), Marcum LLP and RSM US LLP (formerly McGladrey) submitted proposals by December 16, 2016. The Consultant Selection Committee met on December 22, 2016, evaluated and ranked the proposals based on the criteria contained in the RFQ/P (Cost; Experience and Past Performance; Qualifications and Key Personnel; and Capacity, Organization Management and Technical Approach).

The Consultant Selection Committee unanimously ranked CliftonLarsonAllen LLP (CLA) first. CLA provided a comprehensive, well prepared proposal, emphasizing the firm's current and past experience serving multiple state and local government clients, including many in Massachusetts. CLA performs the audit of the MWRA Retirement System. Key personnel from that audit are committed to this engagement. The proposed audit partner demonstrated a hands-on approach that resonated with the Committee. References included entities of significant size and complexity and were extremely satisfied with CLA's performance. The cost for each of the first two years of this proposal is less than the cost of the FY2016 audit performed by KPMG LLP, the incumbent, indicating to the Committee a desire to be price sensitive and competitive.

The second ranked firm, KPMG LLP, has been the incumbent for twenty-one of the last twenty-two years. The audit partner, who has been the key resource for the MWRA for the past eight years, was not included in the proposal and has been rotated off the MWRA engagement. MWRA staff have no working relationship with his successor. References appeared to be clients of the predecessor audit partner, not the successor. Also, it was noted that the Authority experienced quality control and timeliness issues with the incumbent during the course of the FY2016 audit.

The RSM US LLP proposal, while strong, did not contain references of the same significant size and complexity as noted above. The Consultant Selection Committee also expressed concern about the experience level of certain key personnel and no Senior Associate was identified as a team member.

Similarly, significant concerns about the experience of key personnel for Marcum LLP were noted, reducing its overall ranking. No clients were listed in the proposal other than those listed as references and it did not appear that the firm is focused on government sector clients. The Committee also expressed concern about the level of effort of the engagement partner's participation in the audit due to the highest single hourly rates proposed for engagement partners. Such high rates would yield fewer hours of service.

The proposals were ranked as follows:

Ranking Summary

Firm	Overall Rank	Total Points	*Total Rank	Cost	Partner Single Hourly Rate
CliftonLarsonAllen	1	428	5	\$499,000	\$275
KPMG LLP	2	396	12	492,300	350
RSM US LLP	3	398.7	13	494,000	220
Marcum LLP	4	328	20	490,000	368

*Sum of individual selection committee members' rankings.

The RFQ/P cost criteria included a firm fixed price/lump sum for each of four years for the annual audit (total of four years shown above), as well as for an audit in compliance with Uniform Guidance (Single Audit if the Authority is the recipient of federal funds) and single hourly rates for any additional work activated by task order. The Consultant Selection Committee evaluated all of those elements and determined that CLA provided the best overall value.

Staff agree with this determination and recommend CliftonLarsonAllen LLP for award of this contract.

BUDGET/FISCAL IMPACT:

There are sufficient funds in the FY2017 Current Expense Budget to cover this contract. Sufficient funds will be included in the FY2018, 2019 and 2020 Current Expense Budget, as well.

MBE/WBE PARTICIPATION:

There were no MBE/WBE participation requirements established for this contract due to limited opportunities for subcontracting.

STAFF SUMMARY

TO: Board of Directors
FROM: Frederick A. Laskey, Executive Director
DATE: January 18, 2017
SUBJECT: Drug and Alcohol Testing Program
Advantage Drug Testing
Contract A610



COMMITTEE: Administration, Finance and Audit

 INFORMATION
 X VOTE


Karen Gay-Valente, Director of Human Resources
Steven Perry, Manager, Labor Relations & Workers' Comp
Preparer/Title


Michele S. Gillen
Director, Administration

RECOMMENDATION:

To approve the recommendation of the Consultant Selection Committee to select Advantage Drug Testing LLC for the provision of drug and alcohol testing services, and to authorize the Executive Director, on behalf of the Authority, to execute said contract with Advantage Drug Testing LLC in an amount not to exceed \$32,050 for a contract term of 36 months from the Notice to Proceed.

BACKGROUND:

MWRA contracts with an outside agency for drug and alcohol testing services to comply with the Department of Transportation (DOT) regulations for CDL drivers. Additionally, employees are subjected to drug and alcohol testing following certain motor vehicle accidents or instances of reasonable suspicion and follow-up testing in accordance with the MWRA's Drug and Alcohol Testing Policy.

To comply with DOT requirements and the MWRA Drug and Alcohol Testing Policy, testing must be performed at DOT certified laboratories or by certified collectors when performed at MWRA facilities. A minimum of four quarterly random drug and alcohol testing sessions are performed annually at MWRA facilities to comply with DOT regulations.

Under this contract the drug and alcohol testing vendor will provide the following services:

- Compliance with DOT testing regulations for commercial drivers
- DOT and non-DOT drug and alcohol testing
- On-site/after hours testing
- Maintenance of follow up testing schedule

Procurement Process:

On November 23, 2016, staff issued a one-step Request for Qualifications/Proposals for drug and alcohol testing services. The RFQ/P was publicly advertised and a direct solicitation was sent to seven firms. Evaluation criteria were weighted as follows: Cost – 30 points; Capacity Organizational and Management Approach – 25 points; Experience and Past Performance – 25; Qualification and Key Personnel – 15; and Technical Approach – 5 points.

Proposals were received from three firms: Advantage Drug Testing LLC (Advantage), DSI Medical Services Incorporated (DSI) and AllOne Health Resources, Inc. (AllOne Health). The Selection Committee, which included staff from Human Resources and Operations and a union president, reviewed, scored and ranked the proposals as follows:

Vendor	Rank	Points	Not-to-Exceed Cost
Advantage	1	262	\$32,050
DSI	2	237	\$27,750
AllOne Health	3	231	\$34,830

Advantage, MWRA's current vendor, identified the key personnel who would be assigned to the contract. All such personnel met the qualifications and certifications established in the RFQ/P. Advantage has experience in the public sector, including providing drug and alcohol testing services for the Boston Water and Sewer Commission and the City of Cambridge. Advantage provided the second lowest cost proposal (not to exceed \$32,050), which included 10 free, on-site testing sessions. Advantage identified both drug and alcohol testing facilities in Somerville, Worcester, Natick and Winthrop which were within the distance and time parameters required in the scope of services.

DSI identified their key personnel for the contract, all of whom also met the qualifications and certifications established in the RFQ/P. DSI has regional public sector experience, including providing drug and alcohol testing services for the City of Boston, which was its only Massachusetts client identified. While DSI provided the lowest cost proposal (not to exceed \$27,750) it identified only two facilities, in Southborough and Woburn, that perform both drug and alcohol testing; all other identified facilities perform drug testing only. DOT post-accident testing protocols and the MWRA Drug and Alcohol Testing Policy require both drug and alcohol testing when testing is required.

AllOne Health identified the assigned key personnel and all met the required qualifications and certifications. AllOne Health has public sector experience, including the Massachusetts State Police and the Massachusetts Port Authority. It identified clinics in Boston, Winthrop, Woburn, and Southborough and Waltham. AllOne Health, however, provided the highest cost proposal (not to exceed \$34,830) and charged for services that the other proposers provided at no cost.

For the reasons set forth above and based on the final rankings, the Selection Committee recommends the award of this contract to Advantage Drug Testing LLC in an amount not to exceed \$32,050.

BUDGET/FISCAL IMPACT:

Funds have been allocated for this program in the FY17 Current Expense Budget.

MBE/WBE PARTICIPATION:

There were no MBE/WBE requirements assigned to this project due to limited subcontractor opportunities.



MASSACHUSETTS WATER RESOURCES AUTHORITY

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WASTEWATER POLICY & OVERSIGHT COMMITTEE MEETING

Chair: P. Flanagan
Vice-Chair: J. Walsh
Committee Members:
A. Blackmon
J. Carroll
J. Foti
A. Pappastergion
B. Peña
H. Vitale

to be held on

Wednesday, January 18, 2017

Location: 100 First Avenue, 2nd Floor
Charlestown Navy Yard
Boston, MA 02129

Time: Immediately following AF&A Comm.

AGENDA


A. Information

1. Clinton Wastewater Treatment Plant Reissued NPDES Permit

B. Contract Awards

1. Electrical Equipment Testing, Deer Island Treatment Plant: American Electrical Testing Company, Contract S561


STAFF SUMMARY

TO: Board of Directors
FROM: Frederick A. Laskey, Executive Director 
DATE: January 18, 2017
SUBJECT: Clinton Wastewater Treatment Plant Reissued National Pollutant Discharge Elimination Permit (NPDES) Permit

COMMITTEE: Wastewater Policy & Oversight

X INFORMATION
VOTE

Carolyn Fiore, Deputy Chief Operating Officer
Wendy S. Leo, Sr. Program Mgr, NPDES
Betsy Reilley, Director, Environmental Quality
Preparer/Title


Michael J. Hornbrook
Chief Operating Officer

MWRA's Clinton Wastewater Treatment Plant requires a National Pollutant Discharge Elimination System (NPDES) permit to discharge into the South Branch of the Nashua River. The permit currently in effect was issued in September 2000 and has been administratively continued since its November 2005 expiration date. In September 2010, EPA issued a draft permit, with an updated draft issued September 18, 2013. Staff presented informational updates to the Board on September 15, 2010, October 13, 2010, and September 18, 2013. MWRA submitted comments on the 2010 and 2013 draft permits to EPA during the public comment periods. EPA has now issued a Final NPDES permit for the Clinton Plant, December 21, 2016. This staff summary provides an overview of the most significant provisions.

RECOMMENDATION:

For information only. EPA and MassDEP issued a new NPDES permit for the Clinton Treatment Plant on December 21, 2016. Some major provisions of the Clinton NPDES permit are likely to be included in the next Deer Island/CSO NPDES permit, including new requirements for locally-owned "satellite" collection systems and joining tributary communities to these requirements as co-permittees.

DISCUSSION:

The prior Clinton Plant NPDES Permit was issued in September 2000. This is a five year permit which has been administratively continued since 2005. In September 2010, EPA issued a draft permit, and MWRA provided comments. In September 2013, EPA issued another draft permit, and MWRA again provided comments. On December 21, 2016, EPA issued the Final NPDES permit for Clinton Plant with an effective date of March 1, 2017.

Co-permittees

A major item in this permit, which was the subject of MWRA and MWRA Advisory Board comment, is the inclusion of co-permittees for requirements relating to collection system Operation and Maintenance (O&M.) This permit has specific requirements with which the towns

must comply, even though they have not applied for a permit (EPA informed the towns of the regulatory basis for their inclusion in the upcoming permit in letters dated August 26, 2016.) Included in the permit sections applicable to Clinton and the Lancaster Sewer District are reporting requirements for unauthorized discharges from the town collection systems (which include Sanitary Sewer Overflows); and Operation and Maintenance requirements for their respective collection systems, including provisions for infiltration/inflow (I/I) reduction programs.

Specifically, the towns must:

- Within six months of effective date, submit to EPA and DEP a description of the collection system, its management goals, and a schedule for the development and implementation of the O&M Plan (September 1, 2017);
- Within 24 months of effective date – implement the O&M Plan (March 1, 2019);
- Within 30 months of effective date – complete system mapping (September 1, 2019);
- Provide a summary report of collection system O&M activities annually, by March 31.

Note that the 24 month implementation period must include an ongoing program to identify and remove sources of I/I (similar to requirements for communities in recently revised DEP regulations, 314 CMR 12.04(2).)

When the draft permits were issued by EPA in 2010 and 2013, MWRA commented on the co-permittee provisions (in addition to other requirements.) In the meantime, in 2015, EPA's Environmental Appeals Board (EAB), responsible for hearing administrative appeals of permits, ruled against the Charles River Water Pollution Control District (CRWPCD) and others' appeal of similar language in its permit issued in 2014, and upheld EPA's ability to add satellite communities and specific permit requirements to a NPDES permit.

EPA has modified the co-permittee language in the Clinton final permit, clarifying the roles and responsibilities of the towns and MWRA as co-permittees. The permit now states:

Operation and maintenance of the sewer system shall be in compliance with the General Requirements of Part II and the terms and conditions of Part D and Part E of this permit. The permittee and each co-permittee are severally liable under Part D and Part E for their own activities and required reporting with respect to the portions of the collection system that they own or operate. They are not liable for violations of Part D and Part E committed by others relative to the portions of the collection system owned and operated by others. Nor are they responsible for any reporting that is required of other permittees under Part D and Part E.

This language provides some additional clarity regarding the extent of MWRA's and each co-permittee's liability with respect to permit requirements.

Because MWRA commented on the co-permittee language in the Clinton draft NPDES permit, the Authority has standing to appeal these requirements. If the Authority files a petition for review, staff expect that the EAB will issue an order denying review of the Authority's petition because it previously addressed this issue in the CRWPCD appeal and ruled in favor of EPA. Once the EAB process is concluded, the next step in the process would be to appeal EAB's decision to the First Circuit District Court of Appeals for review.

The modified Clinton permit language may not be sufficient to address all MWRA's concerns if EPA were to include MWRA member communities as co-permittees in the Deer Island NPDES permit.

Other permit provisions

Other changes in the permit include:

- More detailed requirements for Operation and Maintenance of the MWRA-owned and Clinton- and Lancaster-owned sewer systems;
- Stringent total phosphorus concentration and load limits (and a compliance schedule that is consistent with MWRA's timeline for completing phosphorus treatment currently under construction at the Clinton Plant);
- Weekly loading limits for biochemical oxygen demand (BOD) and total suspended solids (TSS), in addition to the monthly limits in the existing permit;
- Prohibition of aluminum in the treatment process;
- Methods change for Whole Effluent Toxicity testing; and
- Revised copper limit.

Consistent with the previous permit, MWRA must review its local limits and other aspects of its pretreatment program and propose revisions to EPA as necessary. Staff will return to the Board if significant changes to its program are required.

The new permit retains a limit on flow (12-month rolling average) that the plant occasionally exceeds during normal weather conditions. EPA set the limit at the daily average design flow of 3.01 MGD. The peak hydraulic capacity of the plant is 12.0 MGD and the plant can effectively treat 12 MGD during wet weather events. MWRA had requested an increase in the flow limit. EPA rejected MWRA's analysis due to the lowest weekly flow observed in the Nashua River.

The new permit also carries forward the existing limitations on BOD, TSS, pH, dissolved oxygen, total chlorine residual, ammonia, and whole effluent toxicity, which the plant consistently meets. The bacteria limits in the permit have changed from fecal coliform to *E. coli*, to conform with the revised state water quality standards. Limited monitoring in the Clinton Plant effluent does not indicate staff concern with the ability of the plant to maintain compliance with this limit. Monitoring requirements and changes are summarized in Appendix A.

Operation and Maintenance of the MWRA- and Community-Owned Sewer Systems

Requirements for adequate operation and maintenance staffing, infiltration/inflow reduction to prevent high-flow-related unauthorized discharges from the collection system, preventive maintenance, and alternative power sources are much more detailed than what is in the existing permit. The requirements and schedule listed above apply to MWRA as well as to the towns (as co-permittees.) Each permittee must develop a collection system Operation and Maintenance (O&M) Plan, which "shall be submitted and implemented to EPA and DEP." The Plan must describe staffing, preventative maintenance, funding, I/I program, and related work, and annually report on activities carried out under the O&M Plan.

Compliance Schedule for Total Phosphorus

As expected, the permit contains new stringent effluent limitations for phosphorus that cannot be met by the existing plant; the limits are similar to those required of other wastewater treatment

plants in the Nashua River watershed. Because the 2010 and 2013 draft permits contained these limits on total phosphorus, MWRA has planned, designed, and is constructing new phosphorus treatment facilities at Clinton at an estimated cost of \$7.3 million, and an expected completion date of September 2017. The draft permits contained a multi-year compliance schedule for all phases of the completion of the new phosphorus treatment facility. The final permit has a compliance schedule that requires permit compliance by April 1, 2019. Staff believe this provides sufficient time to complete construction, start-up the new process, and optimize its performance, but will review all aspects of the compliance schedule. An interim phosphorus limit is in place until completion of the phosphorus treatment facilities. The applicable new limits are seasonal, with a lower limit for April through October and a higher limit for November through March.

Prohibition of Aluminum

The final permit prohibits the use of aluminum in the treatment process. In May 2011, the Clinton Plant switched from alum to ferric chloride (for phosphorus control) and the effluent aluminum concentration has gone down. EPA reviewed the most current effluent concentration of aluminum and determined that there was no potential to exceed water quality standards and therefore did not require monitoring of aluminum, but added this prohibition.

Whole Effluent Toxicity (WET) testing

EPA Region I has changed its policy regarding Whole Effluent Toxicity (WET) testing. WET tests measure wastewater's effects on specific test organisms' ability to survive, grow, and reproduce. The final permit requires separate chronic and acute test end-points for compliance monitoring. This will result in small added costs to the toxicity testing contract.

Revised Copper Limit

The limitations on copper are less stringent than in the existing permit because of a change in the State Water Quality Standards for copper for the Nashua River. The plant was not able to consistently meet the more stringent limitation in the present permit and has been operating under an Administrative Order since 2002 for copper. The Clinton Plant effluent is expected to meet the new limit nearly all the time.

BUDGET/FISCAL IMPACT:

Construction of new treatment facilities to meet the new permit limitation for Total Phosphorus is estimated to cost approximately \$7.3 million. Additional MWRA O&M costs for the phosphorus control facilities are estimated to be \$130,000 annually. There will be an additional cost of about \$30,000 for the purchase of laboratory equipment required for DEP certification, and about \$4,500 per year for certification fees and for additional tests required by the new permit.

APPENDIX A


Clinton permit limits - Comparison between current (2000) permit and new (2017) permit

Parameter	applicable	2000 Permit Limit	2017 Permit Limit
Flow	all year	3.01 MGD, 12 month rolling average	3.01 MGD, 12 month rolling average
BOD (Biochemical Oxygen Demand)	all year	20 milligrams/liter average monthly 20 milligrams/liter weekly average 500 lbs/day monthly average (no weekly mass limit) 85% removal minimum monthly average	20 milligrams/liter average monthly 20 milligrams/liter weekly average 500 lbs/day monthly average 500 lbs/day weekly average 85% removal minimum monthly average
TSS (Total Suspended Solids)	all year	20 milligrams/liter average monthly 20 milligrams/liter weekly average 500 lbs/day monthly average (no weekly mass limit) 85% removal minimum monthly average	20 milligrams/liter average monthly 20 milligrams/liter weekly average 500 lbs/day monthly average 500 lbs/day weekly average 85% removal minimum monthly average
pH	all year	within range 6.5 - 8.3	within range 6.5 - 8.3
Dissolved Oxygen	all year	minimum 6 milligrams/liter	minimum 6 milligrams/liter
bacterial indicator	all year	fecal coliform 200 colonies/100 milliliters monthly average 400 colonies/100 milliliters daily maximum	<i>E. coli</i> 126 colonies/100 milliliters monthly average 409 colonies/100 milliliters daily maximum
Total Residual Chlorine	all year	17.6 micrograms/liter monthly average ¹ 30.4 micrograms/liter daily maximum ¹	17.6 micrograms/liter monthly average 30.4 micrograms/liter daily maximum
Total phosphorus	“Growing season”	May 1-October 31 1,000 micrograms/liter monthly average (No mass limit)	April 1 - October 31 150 micrograms/liter monthly average 3.8 lbs/day monthly average Note – compliance schedule through 10/31/2018 (interim limit 1,000 micrograms/liter)
	“Non- growing season”	November 1 - April 30 No limits	November 1 - March 31 1,000 micrograms/liter monthly average 25.1 lbs/day monthly average Note - compliance schedule through 3/31/2019 (no interim limit)
Total ammonia nitrogen	“Growing season”	April 1 - April 30 10 milligrams/liter monthly average	April 1 - April 30 10 milligrams/liter monthly average
		May 1- May 31 5 milligrams/liter monthly average	May 1- May 31 5 milligrams/liter monthly average
		June 1 - October 31 2 milligrams/liter monthly average 3 milligrams/liter daily maximum	June 1 - October 31 2 milligrams/liter monthly average 3 milligrams/liter daily maximum ²
	“Non- growing season”	November 1-March 31 10 milligrams/liter monthly average 35.2 milligrams/liter daily maximum	November 1-March 31 10 milligrams/liter monthly average 35.2 milligrams/liter daily maximum
Total Copper	all year	6.2 micrograms/liter monthly average ² 8.3 micrograms/liter daily maximum ³	11.6 micrograms/liter monthly average 14.0 micrograms/liter daily maximum

¹ Effective limit was 50 due to limitations of test method.

² Due to a change in state water quality standards, an Administrative Order set the effective monthly and daily limits to 20 micrograms/liter.

STAFF SUMMARY

TO: Board of Directors
FROM: Frederick A. Laskey, Executive Director 
DATE: January 18, 2016
SUBJECT: Electrical Equipment Testing - Deer Island Treatment Plant
American Electrical Testing Company, Inc.
Contract S561

COMMITTEE: Wastewater Policy & Oversight

 INFORMATION

 X VOTE



Michele S. Gillen

Director, Administration



Michael J. Hornbrook

Chief Operating Officer

David Duest, Director, Deer Island WWTP
Richard J. Adams, Manager, Engineering Services
Preparer/Title

RECOMMENDATION:

To approve the award of Contract S561, Electrical Equipment Testing - Deer Island Treatment Plant, to the lowest responsive bidder, American Electrical Testing Company, Inc., and to authorize the Executive Director, on behalf of the Authority, to execute said contract in the not to exceed amount of \$1,972,160, for a term of 1,095 calendar days from the Notice to Proceed.

DISCUSSION:

The Deer Island Treatment Plant's electrical distribution system consists of 43 medium- and low-voltage substations, which either distribute power directly or transform (step-down or reduce) and then distribute power to low-voltage process equipment critical for maintaining the overall operation of the wastewater treatment plant. A typical substation is comprised of several components, including a transformer, a load-break switch, switchgear, and either bus duct or cable bus. The electrical distribution system is certainly one of the most critical systems on Deer Island. To ensure proper operation and reliability of this equipment, each substation requires extensive preventative maintenance and frequent testing because of the combination of salt-laden air and the presence of hydrogen sulfide inherent in a coastal wastewater treatment plant.

MWRA staff have developed a comprehensive maintenance and testing program built upon nationally recognized, industry recommendations and standards. An important component of this maintenance program is a separately contracted electrical testing contract with a firm possessing the necessary expertise to test, diagnose, troubleshoot, and recommend corrective measures for all of Deer Island's electrical distribution equipment.

Many of the testing methods employed under this contract are similar to the ones that are used during installation to ensure that the equipment is operating as designed and specified. In addition to operational and performance testing, other tests may include oil analysis to identify overheating issues, infrared scanning for signs of equipment deterioration, or use of other specialized equipment. Visual inspection includes checking for damaged or loose components or signs of corrosion.



Figure 1-Typical Electrical Substation Equipment

MWRA has contracted these specialized electrical testing services since 1999. These services are performed by specially trained electrical test technicians who are required to be certified in accordance with ANSI/NETA EIT, Standard for Certification of Electrical Testing Technicians. All test technicians are required to hold a current certification, Level III or higher. The requirement for certification is attained through a rigorous training and testing program. Each technician is required to have extensive experience in the testing of electrical equipment supplied by 15 different manufacturers to ensure they are qualified to perform the required testing in this Contract. In addition, there is a requirement to have specialized test equipment to perform the work. This equipment must be sent out to a testing laboratory to be calibrated every six months to ensure the equipment is performing correctly. MWRA staff lack the expertise and the equipment to perform this work in house.

The scope of work under this contract includes electrical and mechanical inspection, replacement parts, if required, and regular testing of all 43 electrical substations. Staff developed the frequency of testing based upon a number of factors that include: nationally recognized industry standards; results attained from years of previous electrical testing, which have shown that equipment in certain areas of the plant, particularly exterior locations, require more testing and attention than others; and the age and type of equipment. The contract also includes technical assistance for both emergency and non-emergency work, and an allowance for as-needed spare parts.

Procurement Process

Contract S561 was advertised and competitively bid as a non-professional services contract. Bids were opened on December 8, 2016 with the following results:

<i>Engineer's Estimate</i>	\$1,777,000
American Electrical Testing Company	\$1,972,160
Infra-Red Building and Power	\$2,535,600

The Engineer's Estimate for this work was \$1,777,000; American Electrical Testing Company's (AETCO) bid is 11% higher than this estimate. Staff performed a bid analysis and have determined that the difference was due to the lower burden rate utilized in the Engineer's Estimate (19.4%) compared to the rate that was included in AETCO's bid (30.2%). Staff contacted two other testing firms (Siemens and Emerson) and have verified that the wage rate included in AETCO's bid is reasonable. Staff feel confident that AETCO's bid is within normal industry standards for this type of work.

American Electrical Testing Company has successfully performed a substantial amount of electrical testing for MWRA dating back to the Boston Harbor Project. The company has always bid aggressively and has been the lowest bidder on a number of previous electrical testing contracts, including the last contract. MWRA staff determined that AETCO's performance on these MWRA contracts over the years have been excellent and are very satisfied with the firm's performance.

References were checked and found to be favorable. Staff are of the opinion that the bid price is reasonable and complete. Staff are confident that the firm possesses the skill, ability, and integrity necessary to successfully perform the work under this contract for the price bid. Therefore, staff recommend the award of this contract to American Electrical Testing Company as the lowest responsive bidder.

BUDGET/FISCAL IMPACT:

There are sufficient funds available in the Operations Division's FY17 Current Expense Budget for the first year of this contract. Appropriate funding will be included in subsequent Proposed CEB requests for the remaining two years of the contract.

MBE/WBE PARTICIPATION:

There were no MBE or WBE participation requirements established for this contract because of the limited opportunities for subcontracting.



MASSACHUSETTS WATER RESOURCES AUTHORITY

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Frederick A. Laskey
Executive Director

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WATER POLICY AND OVERSIGHT COMMITTEE MEETING

Chair: A. Blackmon
Vice-Chair: B. Peña
Committee Members:
J. Carroll
J. Foti
A. Pappastergion
H. Vitale
J. Walsh
J. Wolowicz

to be held on

Wednesday, January 18, 2017

Location: 100 First Avenue, 2nd Floor
Charlestown Navy Yard
Boston, MA 02129

Time: Immediately following Wastewater Comm.

AGENDA

A. Information

1. Report on 2016 Water Use Trends and Reservoir/Drought Status
2. Update on EPA Unregulated Contaminant Monitoring Rule (UCMR)

B. Approvals

1. First Amended and Restated Water Supply Continuation Agreement with Town of Wilmington

C. Contract Amendments/Change Orders

1. Settlement Agreement for Various Design Contracts and Hatchery Pipeline and Hydroelectric Project Design, Construction Administration and Resident Inspection Services: Stantec Consulting Services, Inc., Contract 7017A, Amendment 2
2. Northern Intermediate High Redundant Pipeline Design, Construction Administration and Resident Inspection Services: Stantec Consulting Services, Inc., Contract 6906, Amendment 2
3. Northern Intermediate High Section 110 – Reading and Woburn: Albanese D&S, Inc., Contract 7471, Change Order 7

STAFF SUMMARY


TO: Board of Directors
FROM: Frederick A. Laskey, Executive Director
DATE: January 18, 2017
SUBJECT: Report on 2016 Water Use Trends and Drought Status



COMMITTEE: Water Policy & Oversight

X INFORMATION
VOTE

Carolyn Fiore, Deputy Chief Operating Officer
Daniel Nvule, Senior Program Manager
Stephen Estes-Smargiassi, Director, Planning
Preparer/Title


Michael J. Hornbrook
Chief Operating Officer

While the severe drought has continued into the winter, Quabbin storage volumes have stabilized at just under 80 percent, leaving the MWRA system in Below Normal status. Even if the driest conditions seen since the creation of Quabbin were to occur over the next 12 months, the system is unlikely to drop into Drought Warning status. Adequate supply exists in Quabbin and Wachusett Reservoirs to meet the needs of MWRA fully and partially supplied water communities and also, if needed, to continue to augment the supplies of some of the adjacent stressed communities. While no water use restrictions are required for MWRA fully supplied customers, MWRA has been and will continue to urge consumers to use water wisely and is continuing to provide conservation information to communities and customers. Despite the drought, water use in 2016 was up only slightly over 2015, with total sales up by only 2.1 percent. Within the metropolitan area, excluding emergency sales to Cambridge, total sales were actually down by 0.4 mgd (0.2 percent) showing that customers have been responding to regional and statewide drought messaging.

RECOMMENDATION:

For information only. Each January, staff provide the Board with a review of the previous year's water use data and discuss trends.

DISCUSSION:

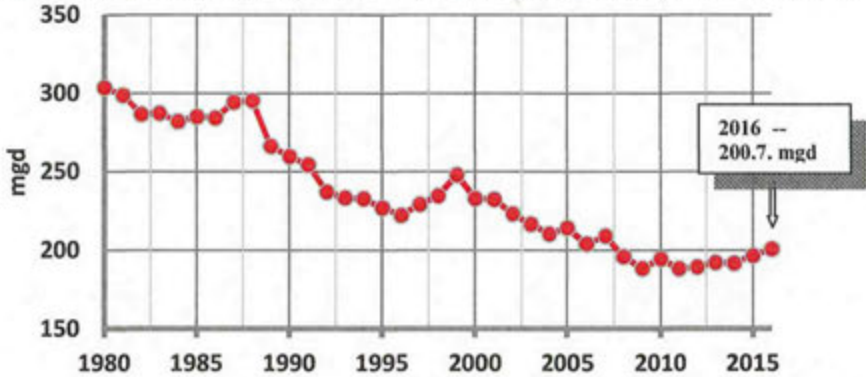
Despite the severe drought, Calendar Year 2016 water use and reservoir withdrawals were only slightly higher than in 2015. The largest component of the increase was the drought emergency supplies for Cambridge and Worcester. Base or indoor demand also seemed to increase very slightly, possibly due to the improving regional economy and growing population out-pacing on-going incremental improvements to water efficiency from appliances and fixtures.

Water Consumption by MWRA Communities

Calendar Year 2016 water consumption by all MWRA communities of 200.7 million gallons per day (mgd) was about 4.2 mgd (2.1 percent) higher than 2015, as shown on Figure 1 on the next page. Included is a combined increase of 4.6 mgd by Cambridge and Worcester which normally

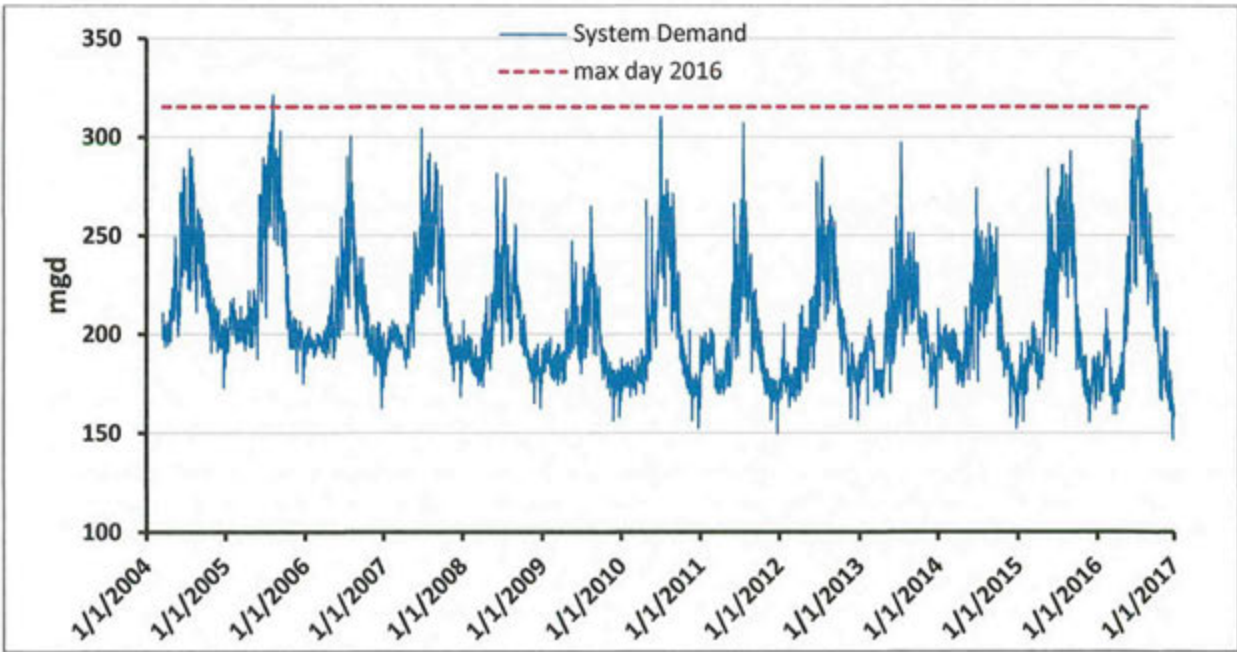
do not purchase MWRA water; demand by all communities excluding Cambridge and Worcester was actually down by 0.4 mgd (0.2 percent)

Figure 1 – Total Consumption by MWRA Communities (1980 to 2016)



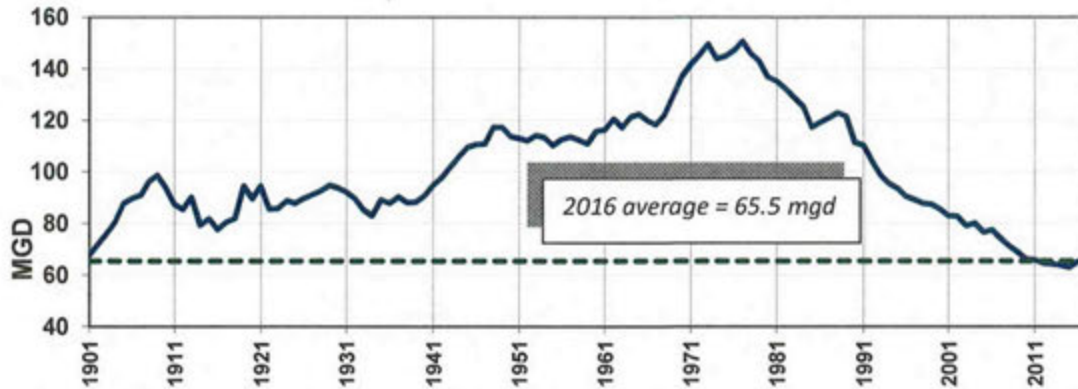
System wide, 2016 had a maximum day demand of 315.3 mgd (7.6 percent higher than 2015) on July 26th. Not since August 2005 has the maximum day demand been this high. At the opposite extreme, Christmas day had the lowest demand for the year at 146.84 mgd setting a record for the lowest single day demand since the creation of the MWRA. Figure 2 below shows daily system demand.

Figure 2: Daily System Demand



Demand from MWRA's largest customer, Boston Water and Sewer Commission (BWSC), was 65.5 mgd, which is slightly higher than last year by about 0.2 mgd (0.3 percent), but still at a level not seen since before 1900 (See Figure 3 below).

Figure 3: Boston Water Use (1900-2016)

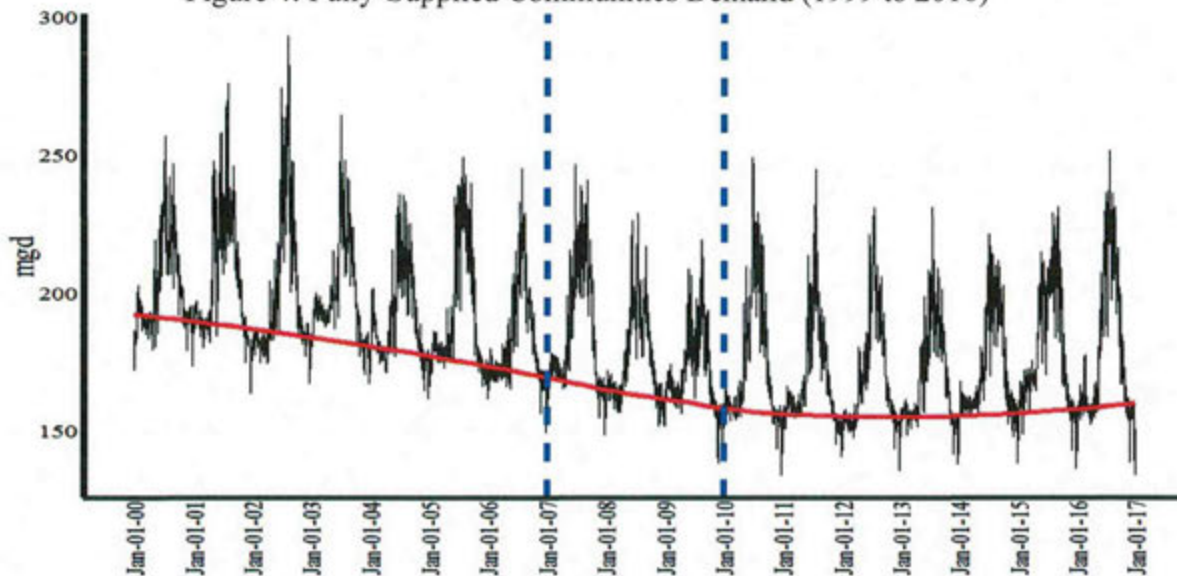


Base or Indoor Demand

Over time, water use reductions have been in both base (or indoor) use, defined as water use from November to March, and outdoor use (or seasonal use), defined as the increase over the base demand during the irrigation season of May to September. Indoor water use has dropped substantially over the past several decades. In reports prior to 2014, base use was shown as decreasing 1.8 percent (3 mgd) per year from 1999 to 2013 using a straight line projection. In 2014, staff refined the methodology for estimating base use in order to lessen the bias of older data and the more refined trend analysis showed that there might be three separate regimes¹. As can be seen on Figure 4 on the next page, the results now show two decline regimes: 1999 to 2006 and 2007 to 2009 (steeper decline, corresponding to the economic recession). A third regime, post recession, still shows a flattened or possibly slight increase in demand with the addition of this year's data. The long-term trend of reductions in base use is believed to be generally due to increases in the efficiency of water use in homes and businesses as water-saving technologies continued to increase market share and consumers reacted to price increases, as well as reduced pipeline leaks. That decreasing trend is counter balanced by increasing use due to the improving regional economic and population growth.

¹ A local regression (LOESS) was used that assigns less weight to data that is further away from the local point.

Figure 4: Fully-Supplied Communities Demand (1999 to 2016)²



Seasonal or Outdoor Demand

Seasonal water use is more variable than indoor demand and driven in large part by weather during the irrigation season. Factors influencing seasonal use include the total irrigation season precipitation, the number of dry days between rainfall events, temperature, and the total amount of sunshine. Over time, water price also influences seasonal use.

During the past 17 years, seasonal use in the fully-supplied communities has varied from a low of 12.6 mgd (6.2 percent of total use) in 2000 to 23.7 mgd (13.2 percent) in 2015, with an average of approximately 16.8 mgd (10 percent). The latter part of 2016 was dominated by the drought and its accompanying conservation messaging. In spite of the drought, seasonal use in the fully supplied communities was down as compared to 2015. Staff attribute this to in part customers voluntarily reducing use in response to news media coverage of the severe drought³.

Figure 5 and 6 on the next page show the variation in seasonal water use over time, and both the relatively small impact that seasonal demand has on total water use and the longer-term decline in both base and total use.

² Certain analyses can only be done on fully-supplied communities where MWRA has information on their daily use available from MWRA's revenue meters. MWRA receives data on monthly total use for partially-supplied communities but not until they provide that data to DEP in their Annual Statistical Reports in March. Fully-supplied communities represent almost 90 percent of the total annual demand.

³ Some partially supplied communities did have mandatory water use restrictions due to their state Water Management Act permits

Figure 5: Fully-Supplied Communities' Annual Seasonal Demand (labels show demand in mgd)

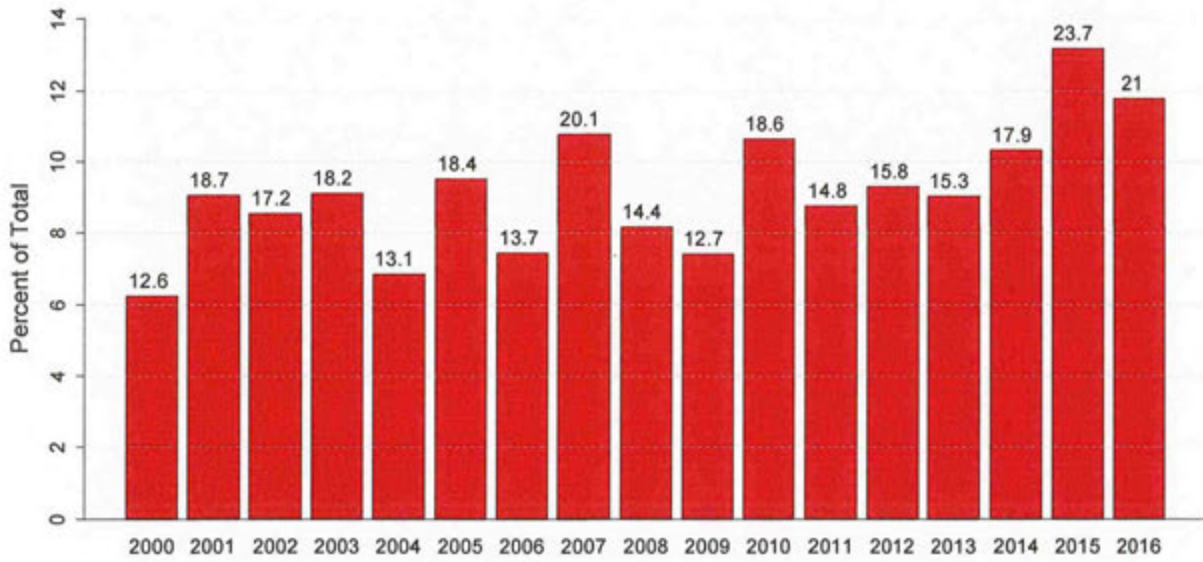
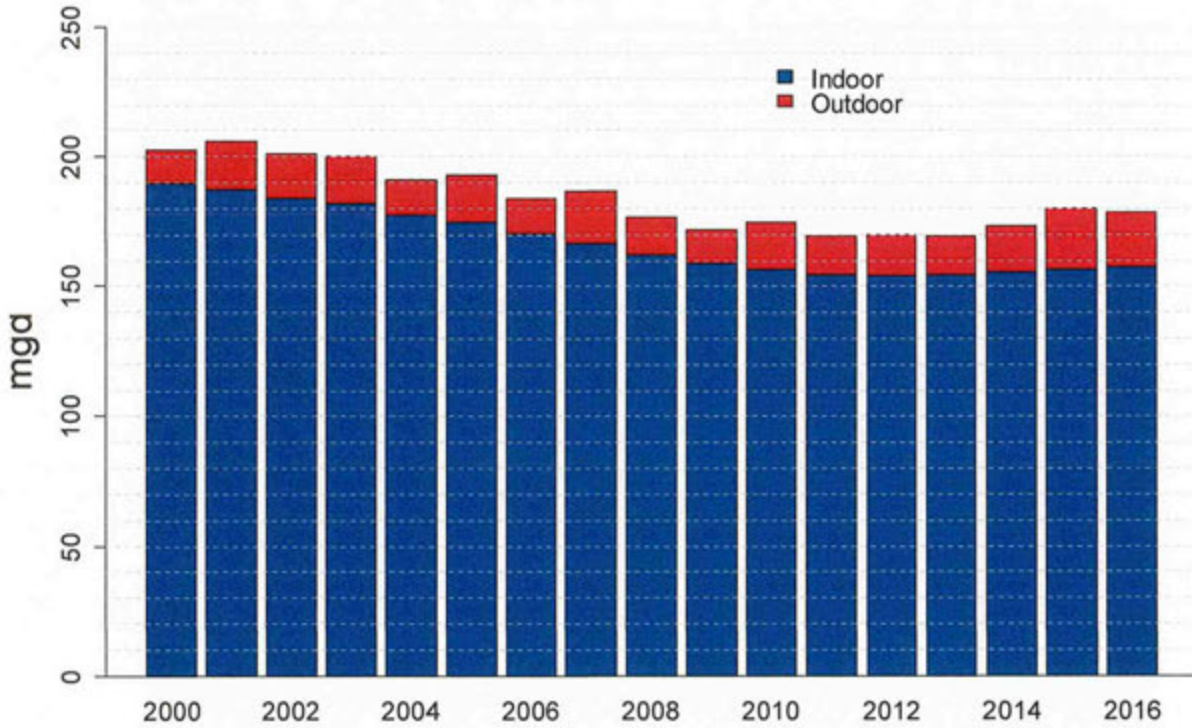


Figure 6: Fully-Supplied Communities Annual Base and Seasonal Demand

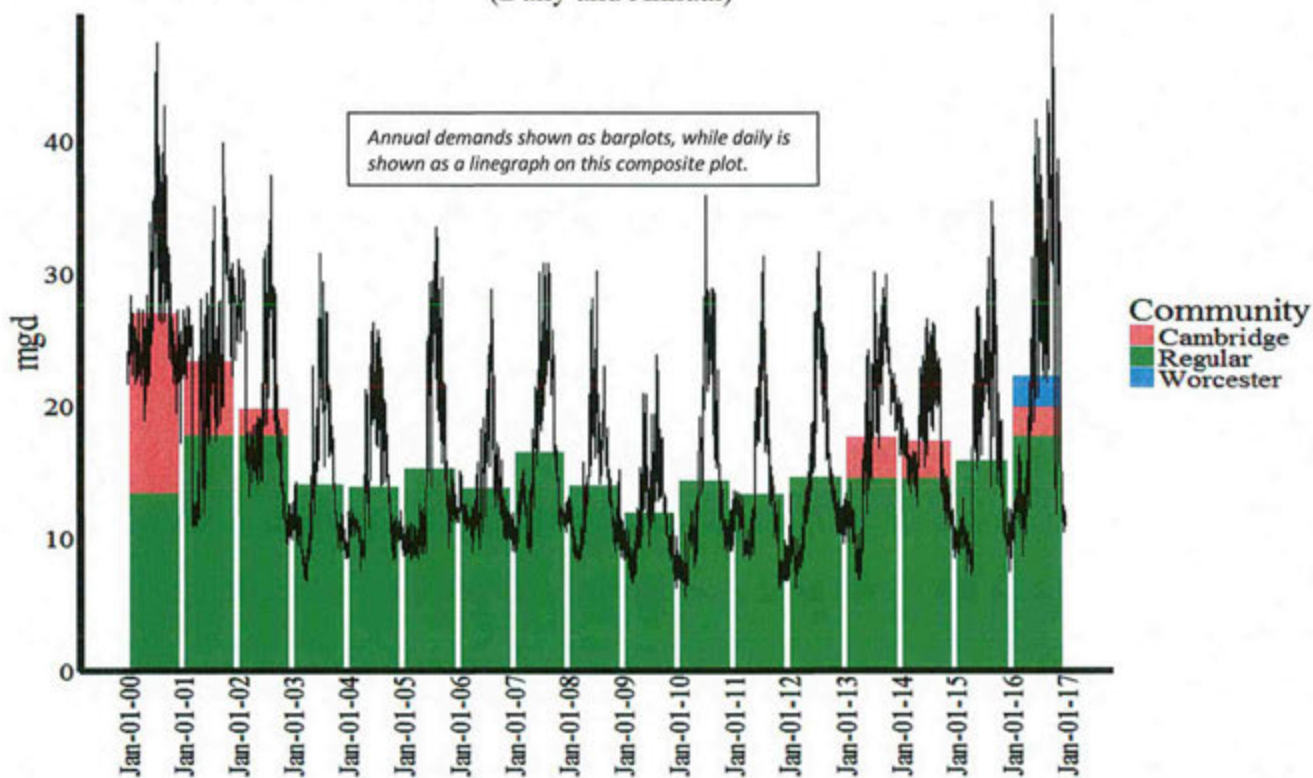


Partially Supplied Communities

Given the drought, staff examined the trend of MWRA sales to the partially supplied communities. These communities generally use their local sources first, and use MWRA water for demand above what they can supply locally. Figure 7 below shows a gradual upward post-recession trend in those communities. The bump up in the annual demands in 2013 and 2014 was due to the City of Cambridge withdrawing an average 3 mgd and 2.78 mgd in those years due to CSO and MWRA construction projects. In 2015, Lynn purchased an additional 0.5 mgd during the rehabilitation of a storage reservoir.

Cambridge's 2.32 mgd withdrawal for 2016 was not all drought-related as it used about 54 percent of that from early February to mid-summer due to ongoing local water infrastructure work with the balance being drought-related later in the year. Worcester on the other hand, pumped their Quinnapoxet Reservoir dry (down to around 11 percent) and had to resort to purchasing MWRA water by pumping from Shaft 3 of the Quabbin Tunnel as the drought intensified. Demand in partially supplied communities was 6.5 mgd higher (41 percent) when compared to 2015. Without sales to Cambridge and Worcester, demand in the partially supplied communities was only about 1.8 mgd (12 percent) higher than 2015.

Figure 7: Partially Supplied Communities – MWRA Supplied Demand (Daily and Annual)

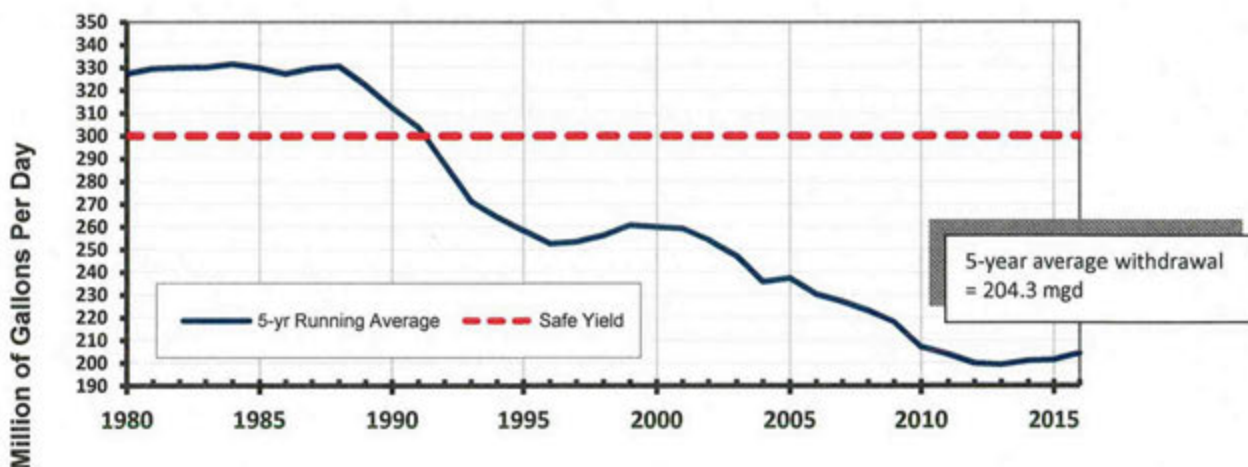


Reservoir Withdrawals and Releases

Reservoir withdrawals are the metric used to compare to the 300 mgd safe yield of the watershed/reservoir system⁴. Withdrawals include water sold to MWRA communities, as well as other uses in the watershed and MWRA system. Total MWRA water withdrawals increased by 1.1 percent in 2016, from 206.74 mgd in 2015 to 208.94 mgd. Worcester, the State's second largest city pumped 5.23 mgd from its reservoirs in the portion of the Wachusett watershed that it shares with MWRA and an extra 2.32 mgd from Shaft 3 for a total of 7.55 mgd. Worcester's total withdrawal for 2015 was 5 mgd. Over the past five years, total MWRA withdrawals have varied up and down from 200.6 to 208.9 mgd, averaging 204.3 mgd.

Figure 8 below shows five-year averages of withdrawals from 1980 to present. The five-year averaging reduces the effects of year-to-year variability due to weather, and provides a good indication of longer-term trends. The average shows a slight increase from 2015. As the economy continues to stabilize and grow over the next few years, staff will monitor any changes in water use, to see if the longer-term downward trend resumes.

Figure 8: Total Reservoir Withdrawals – Five-Year Running Average 1980 to 2016



Drought Outlook

During 2016, Quabbin Reservoir dipped to Below Normal status for the first time since 2002. On January 1, the reservoir was at 79.1 percent full, and has risen slightly since then. The Quabbin watershed yield of 94.4 mgd for the calendar year was the second lowest on record with 1965 being the lowest at 72.8 mgd. The combined two year yield (2015 and 2016) of 121.6 mgd was the fourth lowest on record with the 1964/1965 being the lowest at 87.6 mgd.

On January 6th, Secretary Beaton upgraded the Northeast Massachusetts region, which includes most MWRA served communities, to Drought Watch, down from a Drought Warning; the Central and Connecticut River Valley regions where MWRA reservoirs are located remain in Drought Warning status.

⁴ The 300-mgd safe yield is based on the drought of the 1960s. Use of a less conservative 20-year recurrence drought, as allowed by DEP, would result in a safe yield as high as 350 mgd. MWRA's Water Management Act registration is for 312 mgd.

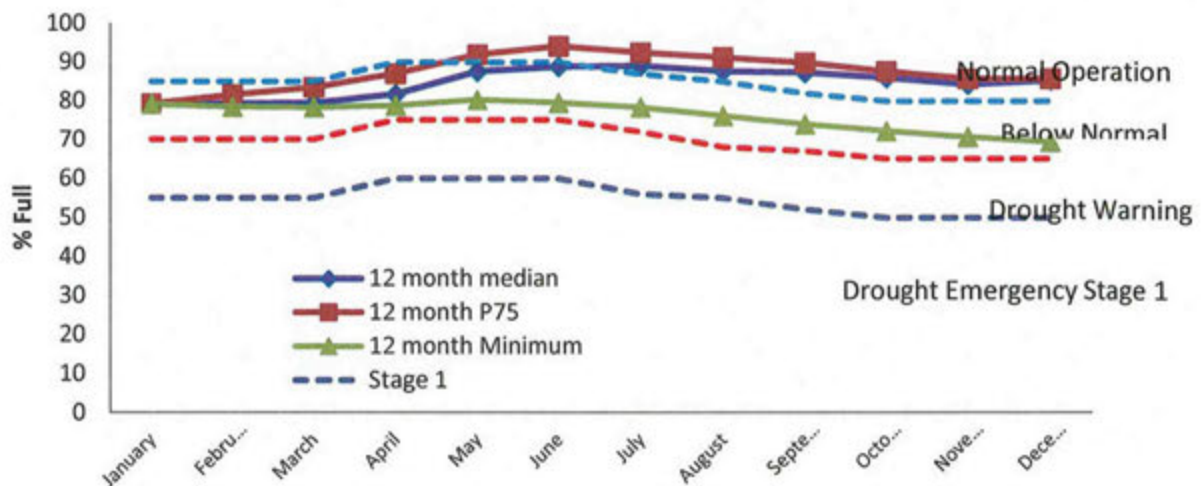
Quabbin Reservoir levels have been modeled for the next 12 months (January 2017 – December 2017) given varying yield conditions, and an annual demand of 220 mgd (conservatively includes a potential 10 mgd increase from current annual demand levels), as shown in Table 1 below.

Table 1: Quabbin Reservoir Status with Varying Reservoir Yield Scenarios Looking Forward from January 1, 2017

	1-Month	3-Months	6-Months	12-Months
Median Yield	Below Normal	Below Normal	Normal	Normal
Dry (75th Percentile)	Below Normal	Below Normal	Below Normal	Normal
Driest (of Record)	Below Normal	Below Normal	Below Normal	Below Normal

The modeling shows that the slow recovery of a multi-year storage reservoir such as Quabbin under conditions of low yield, despite the demands being well below Safe Yield. With average yields, the reservoir will likely return to normal status within six month. Even if the driest conditions seen since the creation of Quabbin were to occur over the next 12 months, the system is unlikely to drop into Drought Warning status. Adequate supply exists in Quabbin and Wachusett Reservoirs to meet the needs of MWRA fully and partially supplied water communities and also, if needed, to continue to augment the supplies of some of the adjacent stressed communities.

Figure 6: Quabbin Reservoir Storage 12-Month Simulation



BUDGET/FISCAL IMPACT:

Due to drought conditions, MWRA provided 515.2 million gallons (mg) of water to the City of Cambridge, 847.3 mg to the City of Worcester, 7.9 mg to the Town of Burlington, and 3.2 mg to the Town of Ashland to supplement local supplies in calendar year 2016. This additional water use resulted in \$4.8 million dollars in revenue.

MWRA also provided 334.1 mg of MWRA water to Cambridge earlier in the calendar year due to a local system improvement project, resulting in \$1.2 million in revenue.

ATTACHMENT:

Community Water Use Data

**Massachusetts Water Resources Authority
MWRA Water Supplied (MGD)**

Reporting Period: December 2016

ALL DATA SUBJECT TO CHANGE OR ADJUSTMENT PENDING ADDITIONAL MWRA AND COMMUNITY REVIEW

Metro-System Customers	Monthly (MGD)			YTD (MGD)			YTD Share		System	Prior Year-End Totals	
	Dec		Flow Change	YTD		Flow Change	Flow Share ¹		% Change in YTD Flow Share	2015	
	2016	2015		2016	2015		2016	2015		Ave. Flow mgd	Flow Share ¹
Arlington	3,295	3,439	-4.2%	3,981	3,927	1.4%	2.1%	2.1%	1.6%	3,927	2.1%
Belmont	1,644	1,607	-9.1%	2,217	2,232	-0.7%	1.2%	1.2%	-0.5%	2,232	1.2%
Boston (BWSC)	60,076	58,463	2.8%	65,530	65,321	0.3%	35.4%	35.2%	0.5%	65,321	35.2%
Brookline	4,030	4,094	-1.6%	5,192	5,561	-6.6%	2.8%	3.0%	-6.4%	5,561	3.0%
Canton (P)	1,288	0,916	40.5%	1,936	1,321	46.6%	1.0%	0.7%	46.9%	1,321	0.7%
Chelsea	3,136	2,994	4.7%	3,275	3,326	-1.5%	1.8%	1.8%	-1.3%	3,326	1.8%
Dedham-Westwood W.D. (P)	0,021	0,010	112.8%	0,226	0,155	45.6%	0.12%	0.08%	45.9%	0,155	0.1%
Everett	3,839	3,685	4.2%	3,953	3,905	1.2%	2.1%	2.1%	1.4%	3,905	2.1%
Framingham	5,104	5,118	-0.3%	6,104	6,439	-5.2%	3.3%	3.5%	-5.0%	6,439	3.5%
Leominster (P)	0,000	0,000	0.0%	0,000	0,000	0.0%	0.0%	0.0%	0.0%	0,000	0.0%
Lexington ²	3,775	3,615	4.4%	5,549	5,800	-4.3%	3.0%	3.1%	-4.1%	5,800	3.1%
Lynn (LWSC) (P)	0,226	0,126	78.9%	0,249	0,659	-62.2%	0.13%	0.35%	-62.1%	0,659	0.35%
Lynnfield W.D.	0,370	0,359	3.0%	0,572	0,508	12.6%	0.31%	0.27%	12.8%	0,508	0.27%
Malden	4,728	5,132	-7.9%	5,158	5,485	-6.0%	2.8%	3.0%	-5.8%	5,485	3.0%
Marblehead	1,295	1,291	0.4%	1,884	1,848	2.0%	1.0%	1.0%	2.2%	1,848	1.0%
Marlborough (P)	3,502	3,435	1.9%	3,739	3,068	21.9%	2.0%	1.7%	22.1%	3,068	1.7%
Medford	4,430	4,526	-2.1%	4,869	5,076	-4.1%	2.6%	2.7%	-3.9%	5,076	2.7%
Melrose	1,776	1,835	-3.2%	2,177	2,301	-5.4%	1.2%	1.2%	-5.2%	2,301	1.2%
Milton	2,354	2,121	11.0%	2,666	2,652	0.5%	1.4%	1.4%	0.8%	2,652	1.4%
Nahant	0,330	0,290	14.0%	0,410	0,376	9.1%	0.22%	0.20%	9.3%	0,376	0.20%
Needham (P)	0,108	0,489	-77.9%	0,846	0,820	3.2%	0.5%	0.4%	3.4%	0,820	0.4%
Newton	7,535	8,687	-13.3%	9,833	10,220	-3.8%	5.3%	5.5%	-3.6%	10,220	5.5%
Northborough (P)	0,820	0,824	-0.4%	0,946	0,896	5.5%	0.5%	0.5%	5.8%	0,896	0.5%
Norwood	2,451	2,365	3.6%	2,825	2,883	-2.0%	1.5%	1.6%	-1.8%	2,883	1.6%
Peabody (P)	1,486	0,635	133.9%	1,478	1,189	24.3%	0.8%	0.6%	24.5%	1,189	0.6%
Quincy	8,107	8,122	-0.2%	9,305	9,294	0.1%	5.0%	5.0%	0.3%	9,294	5.0%
Reading	1,412	1,335	5.8%	1,687	1,665	1.3%	0.9%	0.9%	1.5%	1,665	0.9%
Revere	3,458	3,601	-4.0%	3,735	3,902	-4.3%	2.0%	2.1%	-4.1%	3,902	2.1%
Saugus	2,594	2,394	8.4%	3,016	2,914	3.5%	1.6%	1.6%	3.7%	2,914	1.6%
Somerville	5,427	5,889	-7.8%	6,048	6,044	0.1%	3.3%	3.3%	0.3%	6,044	3.3%
Southborough	0,587	0,673	-12.8%	1,069	1,048	2.0%	0.6%	0.6%	2.2%	1,048	0.6%
Stonham	1,868	1,847	1.1%	2,309	2,505	-7.8%	1.2%	1.3%	-7.8%	2,505	1.3%
Stoughton (P)	0,200	0,403	-50.3%	0,194	0,903	-78.6%	0.1%	0.5%	-78.5%	0,903	0.5%
Swampscott	1,138	1,080	5.4%	1,444	1,447	-0.3%	0.8%	0.8%	-0.1%	1,447	0.8%
Wakefield (P)	1,563	1,080	44.7%	1,657	1,462	13.4%	0.9%	0.8%	13.6%	1,462	0.787%
Waltham	5,271	5,946	-11.3%	6,894	7,406	-6.9%	3.7%	4.0%	-6.7%	7,406	4.0%
Watertown	2,353	2,235	5.3%	2,584	2,597	-0.5%	1.4%	1.4%	-0.3%	2,597	1.4%
Wellesley (P)	0,000	0,000	0.0%	1,329	0,834	59.4%	0.7%	0.4%	59.8%	0,834	0.4%
Weston	0,971	0,870	11.7%	2,150	1,930	11.4%	1.2%	1.0%	11.6%	1,930	1.0%
Wilmington (P)	0,001	0,000	100.0%	0,592	0,555	6.7%	0.32%	0.30%	6.9%	0,555	0.30%
Winchester (P)	0,932	0,477	95.3%	1,618	1,219	32.8%	0.9%	0.7%	33.1%	1,219	0.7%
Winthrop	1,121	1,147	-2.2%	1,232	1,297	-5.0%	0.7%	0.7%	-4.8%	1,297	0.7%
Woburn (P)	1,284	1,280	0.4%	2,773	2,648	4.7%	1.5%	1.4%	5.0%	2,648	1.4%
Subtotal Metro-System	155,907	154,636	0.8%	185,253	185,640	-0.2%	100%	100%		185,640	100%
Chicopee Valley Aqueduct											
Chicopee	4,252	4,416	-3.7%	5,339	5,329	0.2%	69.3%	69.7%	-0.7%	5,329	69.7%
South Hadley FD #1	0,805	0,827	-2.7%	1,132	1,102	2.8%	14.7%	14.4%	1.8%	1,102	14.4%
Willwaham	0,781	0,767	1.8%	1,238	1,209	2.4%	16.1%	15.8%	1.4%	1,209	15.8%
Subtotal CVA System	5,838	6,010	-2.9%	7,709	7,640	0.9%	100%	100%		7,640	100%
Other Revenue Supply											
Cambridge (P)	1,202	0,000	100.0%	2,320	0,022	10642.3%				0,022	
Clinton ³	1,312	1,352	-3.0%	1,699	1,735	-2.0%				1,735	
Worcester (P)	0,610	0,000	100.0%	2,315	0,001	247701.2%				0,001	
Other Revenue Customers⁴	1,441	1,551	-7.1%	1,427	1,486	-4.0%				1,486	
Subtotal Other Revenue Supply⁵	4,565	2,904	57.2%	7,761	3,243	139.3%				3,243	
Total Water Supplied											
Fully Supplied Metro Communities	144,476	144,961	-0.3%	167,669	169,911	-1.3%				169,911	
CVA Communities	5,838	6,010	-2.9%	7,709	7,640	0.9%				7,640	
Partially Supplied Communities	13,243	9,675	36.9%	22,220	15,751	41.1%				15,751	
Other Revenue Customers	2,753	2,904	-5.2%	3,126	3,221	-2.9%				3,221	
Total Water Supplied⁶	166,310	163,550	1.7%	200,724	196,522	2.1%				196,522	

1) System share for each rate revenue community is the community's share of total MWRA water use for all rate revenue communities. System share for each Chicopee Aqueduct Valley (CVA) community is each CVA community's share of total MWRA water supplied to the CVA system. Water assessments for revenue communities are calculated by allocating the total annual water rate revenue requirement based on each community's share of flow. Water assessments for CVA communities are calculated by allocating the annual CVA rate revenue requirement based on each CVA community's share of CVA flow.

2) Lexington supplies Bedford with partial MWRA water service.

3) The Town of Clinton receives up to 800 million gallons of water per year free of charge and is charged a flat wholesale rate per million gallons for water in excess of 800 million gallons per year.

4) Other Revenue Customers: D.C.R. (Parks & Pools), Stone Zoo, Deer Island WWTTP and Department of Youth Services.

5) Other Revenue Customers are charged a flat wholesale rate per million gallons of water supplied.


6) This report includes only water supplied for which revenue is collected in accordance with existing user agreements. It does not include water utilized for system maintenance.

(P) Community is partially supplied by MWRA.

Questions regarding water supplied can be directed to David Livson @ (617) 305-5853 or Leo Norton @ (617) 788-2256.

6-Jan-17

STAFF SUMMARY

TO: Board of Directors
FROM: Frederick A. Laskey, Executive Director 
DATE: January 18, 2017
SUBJECT: Update on EPA Unregulated Contaminant Monitoring Rule (UCMR)

COMMITTEE: Water Policy & Oversight

X INFORMATION
____ VOTE

Joshua Das, Project Manager
Betsy Reilley, Ph.D., Director, Environmental Quality
Steve Rhode, Laboratory Manager
Stephen Estes-Smargiassi, Director, Planning and Sustainability
Preparer/Title


Michael J. Hornbrook
Chief Operating Officer

EPA issued the final 4th round of the Unregulated Contaminant Monitoring Rule (UCMR4) on December 9, 2016. It will require monitoring between 2018 and 2020 for a group of 30 contaminants that EPA is considering developing regulations for, and will provide a national database of occurrence. As with previous UCMR sampling, staff are recommending that MWRA take the lead and conduct coordinated sampling on behalf of MWRA communities. The total cost, spread over four fiscal years, and based on UCMR3 sampling, is anticipated to be an estimated \$450,000. Final costs may vary depending on how many of MWRA's smaller communities are selected by EPA for a random samples of small water systems.

RECOMMENDATION:

Information only.

DISCUSSION:

Under the 1996 Safe Drinking Water Act (SDWA) amendments, EPA is required once every five years to develop a list of up to 30 unregulated contaminants which must be monitored by public water systems. Prior Unregulated Contaminant Monitoring Rules were issued in 1999, 2007, and 2012. A pre-publication copy of the final UCMR4 Rule was issued on December 9, 2016. The UCMR monitoring provides one portion of the information needed by EPA to determine if a drinking water regulation is necessary. To justify a new regulation under the Safe Drinking Water Act, EPA must find that:

1. *"the contaminant may have an adverse effect on the health of persons;*
2. *the contaminant is known to occur or there is a substantial likelihood that the contaminant will occur in public water systems with a frequency and at levels of public health concern; and*

3. *in the sole judgment of the Administrator, regulation of such contaminant presents a meaningful opportunity for health risk reduction for persons served by public water systems.” (Section 1412 of the SDWA)*

The contaminant monitoring conducted under the UCMR provides the national occurrence data necessary to answer the second condition.

UCMR4 requires water systems to monitor for 30 contaminants (20 chemicals and ten cyanotoxins¹) shown in the attached table. The contaminants are broken into lists, and depending on the size of the water system, source type, and treatment, some or all of the contaminants are required to be monitored.

All water systems serving more than 10,000 persons will test for all 30 contaminants. EPA will randomly select 800 small systems serving 10,000 or fewer people to test for the 10 cyanotoxins, and another 800 small systems serving 10,000 or fewer people to sample for the 20 other contaminants. All ground water systems are exempt from testing for cyanotoxins.

For UCMR3, conducted from 2013 to 2015, MWRA staff presented several proposals on how to proceed with the sampling in the most efficient and effective way to the Advisory Board. The chosen way was for MWRA to staff, procure, and pay for most of the compliance tasks on behalf of MWRA water communities. MWRA conducted all required UCMR3 actions for fully supplied communities, and offered partially supplied communities technical assistance and access to MWRA’s commercial laboratory services at contact prices. The UCMR3 sampling was smooth, due to the coordinated efforts of staff across several departments, and staff are proposing a similar proposal for UCMR4. Staff plan to discuss these recommendations with the Advisory Board before proceeding.

Meeting the requirements of the rule will be similar to UCMR3, in that it is moderately complex. Staff anticipate that none of the samples will be able to be analyzed at Deer Island’s Central Laboratory due to the highly specialized methods required, and the fact that the sampling is not expected to continue after the UCMR requirement. A specialized EPA-approved commercial laboratory will be required. Based on which water systems will be definitely required to have samples collected, and, making an assumption about the randomly selected systems, staff estimate that the laboratory costs will total as much as \$450,000. Costs will likely be spread over four fiscal years, depending on when samples are collected from each system.

Sampling itself will be similar to UCMR3, which was labor intensive. The twenty chemicals will require multiple bottles (8-10) be collected at each community “entry point,” and an additional two bottles at the maximum residence sites. Each bottle will have somewhat different sampling or preservation instructions. Samples for the 20 chemicals will be collected from each

¹ Cyanotoxins are released from different types of cyanobacteria (also referred to as blue-green algae) present in some surface waters. These toxins may be associated with and released from a wide range of algae under different conditions, and can potentially affect the central nervous system. Cyanotoxins were the cause of the widely reported August 2014 drinking water advisory in Toledo Ohio caused by a dramatic cyanobacteria bloom in Lake Eire.

system for 4 consecutive quarters over the course of 12 months for a total of 4 sample events. Sample events will occur 3 months apart. The 10 cyanotoxins will only be sampled in finished water at the entry point, and will be sampled twice a month for 4 consecutive months. Samplers will need to be trained to ensure sample integrity so as to avoid accidentally contaminating samples with substances that are not actually in the water. Any detections must be reported in the annual water quality report (Consumer Confidence Report) for five years after the date of detection.

Staff provided a full review of the results of UCMR3 monitoring conducted from 2013 to 2015 to the Board in February 2016.

BUDGET/FISCAL IMPACT:

Depending on how many systems are selected by EPA for the random sample of smaller communities, staff estimate that the cost of commercial laboratory services to meet the requirements of the UCMR4 will be as much as \$450,000. This cost would be spread over FY18 through FY21. If needed, adequate funds exist within the proposed FY18 to begin this program.

ATTACHMENT:

UMCR4 Parameters

Attachment 1 – UCMR4 Parameters

10 Cyanotoxins

total microcystins
microcystin-LA
microcystin-LF
microcystin-LR
microcystin-LY

microcystin-RR
microcystin-LR
nodularian
anatoxin-a
cylindrospermopsin


20 Chemicals

germanium
manganese
alpha-hexachlorocyclohexane
Chlorpyrifos
Dimethipin
Ethoprop
Oxyfluorfe
Profenofos
Tebuconazole
total permithrin

Tribufos
HAA5
HAA6Br
HAA9
1-butanol
2-methoxyethanol
2-prop-1-ol
butylated hydroxyanisole
o-toluidine
quinolone

Analysis of total organic carbon and bromide will also be required in parallel with the UCMR4 contaminants.

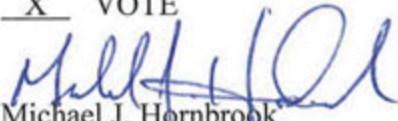
STAFF SUMMARY

TO: Board of Directors
FROM: Frederick A. Laskey, Executive Director 
DATE: January 18, 2017
SUBJECT: First Amended and Restated Water Supply Continuation Agreement with Wilmington

COMMITTEE: Water Policy & Oversight

INFORMATION
 VOTE

Pamela Heidell, Policy and Planning Manager
Carolyn Fiore, Deputy Chief Operating Officer
Preparer/Title


Michael J. Hornbrook
Chief Operating Officer

RECOMMENDATION:

To authorize the Executive Director, on behalf of the Authority, to execute the First Amended and Restated Water Supply Continuation Agreement between MWRA and the Town of Wilmington, substantially in the form attached hereto.

DISCUSSION:

Wilmington was admitted into the MWRA Water System in 2009 as a partially supplied MWRA community, purchasing up to 219 million gallons a year from MWRA, or 0.6 mgd on an annualized basis. The Town entered into a five-year Agreement for 2009-2014 and a subsequent Water Supply Continuation Agreement for the period 2014-2024. The Agreements addressed both MWRA's obligation to supply water and Wilmington's fulfillment of the terms of conditions of its admission to MWRA, including the Town's payment of an Entrance Fee.

Wilmington is one of only two MWRA communities that have twenty-year Entrance Fee payment schedules payable with interest: the other community is Stoughton.¹ On November 17, 2016 the MWRA Advisory Board unanimously approved a motion to reduce interest rates for both Stoughton and Wilmington to reflect MWRA's current average fixed rate cost of debt, reducing such rate from 4.34% to 3.95%. On December 14, 2016, the MWRA Board approved a new Water Supply Continuation Agreement for Stoughton 2017-2026, reflecting the adjusted

¹Since MWRA's creation, four communities and one water district have joined the MWRA. Both Bedford and Reading paid their entrance fee in full upon their admission to MWRA. Wilmington and Stoughton elected to pay their entrance fees over twenty years. Dedham-Westwood Water District paid an entrance fee for its first 0.1 mgd over the course of five years and was paid in full as of 2010. DWWD entered into a revised Agreement with MWRA for an additional 0.1 mgd in 2014 to be paid over a five-year interest free plan, pursuant to MWRA's Policies revised in 2014 for new withdrawals.

interest rate. A similar adjustment is reflected in the attached proposed Amended Water Supply Continuation Agreement with Wilmington.

BUDGET/FISCAL IMPACT:

Wilmington's proposed Amended contract has a revised interest rate of 3.95%, to be applied to Wilmington's remaining thirteen years of payments. The total reduction in interest of Wilmington's entrance fee payments would be \$65,912 over the remaining years of the payment schedule.

The interest rate for entrance fee payment has been the subject of policies adopted by the MWRA Advisory Board and Board of Directors. Whereas the Board adopted revisions to MWRA OP#.10 in 2014 which provided for entrance fee payments to be made pursuant to a 25 year, interest-free payment plan, the Policy explicitly states eligibility for the interest-free payment plan is limited to new communities (e.g., North Reading, Ashland, Union Point/Southfield) pursuing admission to MWRA, and communities admitted since 2002 that wish to increase their MWRA approved withdrawal. At this time, Wilmington is not proposing to increase its withdrawal, other than a temporary increase of approximately 0.10 mgd due to the drought in 2016. Therefore, an interest-free option for Wilmington's remaining payments is not available, per OP#.10.

ATTACHMENT:

Draft Copy of Restated and Amended Water Supply Continuation Agreement with Wilmington

AMENDED AND RESTATED
WATER SUPPLY CONTINUATION AGREEMENT
BETWEEN
MASSACHUSETTS WATER RESOURCES AUTHORITY
AND
THE TOWN OF WILMINGTON

This Amended and Restated Water Supply Agreement (“Agreement”) by and between the Massachusetts Water Resources Authority (“MWRA”) and the Town of Wilmington (“Town” or “Wilmington”) (hereinafter jointly referred to as "the Parties"), documents the amended agreement and understanding of the Parties regarding the arrangement whereby MWRA will continue to supply water to Wilmington and Wilmington will purchase a portion of its water supply from the MWRA water supply system and supersedes the Agreement between the parties dated May, 2014.

RECITALS

- R.1. The MWRA was created by the Massachusetts legislature in December 1984 to operate, regulate, finance, and modernize the waterworks and sewerage systems serving the greater metropolitan Boston area. Operating pursuant to the terms of its Enabling Act, chapter 372 of the Acts of 1984 (the “Act”), the MWRA currently provides water supply and distribution services, and wastewater collection and treatment services, to certain cities, towns and special services districts (“Communities”) within its service area.
- R.2. The MWRA desires to continue to provide safe and sufficient water supplies to the Town.
- R.3. Section 8(d) of the Act permits the MWRA to extend its waterworks system to a new community and to provide the continued delivery of water to the new community under reasonable terms as determined by MWRA provided specific requirements are met.
- R.4. The Town, having met the conditions of Section 8 (d) and the conditions of OP.10, Admission of New Community to the Waterworks System, was duly admitted to the MWRA Waterworks System in May 2009, thereby acquiring certain rights and obligations conferred by that admission.
- R.5. A regulation entitled “Continuation of Water Contract Supply”, promulgated by MWRA at 360 CMR 11.00 (“the Regulation”) defines more specifically the requirements of section 8(d) of the Act and governs the continued delivery of water by the MWRA to communities which purchase water in accordance with contracts.

- R.6. The Town executed a contract dated May 9, 2009 for the purchase of water from the MWRA which contract expired on April 30, 2014.
- R.7 The Town and MWRA subsequently executed a new contract for the purchase of water from the MWRA in 2014 which, by its provisions, would have expired on April 30, 2024.
- R.8. The Town agreed to pay MWRA a Net Entrance Fee of \$2,809,320 for its share of the value of the waterworks system in place at the time of its entrance and associated with an annualized withdrawal of 0.6 mgd. The Net Entrance Fee reflected an Entrance Fee of \$3,126,210 minus the Total Net Asset Value contributions of \$316,890 previously paid pursuant to OP. 05, Emergency Water Supply Withdrawals. The Net Entrance Fee was to be paid to the MWRA in accordance with a schedule of payments established at the time of its entrance and attached to the 2009-2014 Water Supply Agreement. That schedule amortized payments of the Net Entrance Fee over 20 years with interest on the unpaid balance at 4.67%. In 2014, the interest rate upon remaining payments was further reduced for the remaining years of payments to 4.34%.
- R.9. On November 17, 2016 the Advisory Board approved a further reduction in the interest rate upon which the remaining installments of Wilmington's Entrance Fee to 3.95%.
- R.10. In consideration of the payment of the Net Entrance Fee by Wilmington in its entirety, the MWRA agrees to continue to assure a continuation of water supply to Wilmington from the MWRA's water supply system in accordance with the provisions of 360 CMR § 11.00
- R.11. The Town, pursuant to the Regulation, has requested from MWRA that its water supply be continued and has submitted a continuation request and a Supplementary Report including a supply analysis, a demand analysis, a water management plan, an ordinance for the protection of local sources, and description of the local user charges system and accounting system which meets the Regulation's requirements for conservation based rates;
- R.12. The Demand Analysis in the Supplementary Report indicated that Wilmington anticipated its demand from MWRA for the next ten years would not decrease;
- R.13. The Town's Supply Analysis in the Supplementary Report indicated that: (i) the Town has taken five of its nine wells offline due to NDMA and/or nitrite contamination, (ii) the feasibility of providing remediation of those five wells to make them conform with applicable drinking water standards appears uncertain and presents concerns for the Town, and (iii) DEP has agreed that use of those wells should be discontinued for the foreseeable future;
- R.14. The Town's Schedule for Use of New Local Water Sources in the Supplementary Report indicated there was no plan for the evaluation, development, and use of potentially feasible new local water supply sources identified in the Supply Analysis;

- R.15. The Town now requests 219 million gallons of water annually, or 0.6 mgd from MWRA, but may in the future request an additional volume of 401.5 million gallons annually for a total of 620.5 million gallons annually, as permitted through regulatory reviews;
- R.16. MWRA is designing redundancy improvements to the Northern Intermediate High System which are anticipated to be implemented during the contract term, and which are intended to increase reliability and the hydraulic capabilities of the MWRA system to serve and convey water to Wilmington; and
- R.17. MWRA and the Town wish to formalize their rights and obligations regarding the supply of water to Wilmington and therefore enter into this amended and restated Agreement.

NOW, THEREFORE, in consideration of the mutual promises contained herein and for other good and valuable consideration, MWRA and Wilmington agree to the following:

- 1. The term ("Term") of this Agreement shall be ten (10) years beginning on May 1, 2014 and ending at midnight on April 30, 2024.
- 2. MWRA shall during the Term of this Agreement provide the Town with water on an annual volume basis stated in millions of gallons as follows:

<u>2014-2015</u>	<u>2015-2016</u>	<u>2016-2017</u>	<u>2017-2018</u>	<u>2018-2019</u>
219 mg	219 mg	219 mg	219 mg	219 mg
<u>2019-2020</u>	<u>2020-2021</u>	<u>2021-2022</u>	<u>2022-2023</u>	<u>2023- 4/30/2024</u>
219 mg	219 mg	219 mg	219 mg	219 mg

or 0.6 mgd on an average daily basis; up to 1.2 million gallons per day ("mgd") on a typical maximum daily basis, subject to the hydraulic capabilities of MWRA's distribution system. In the event that Wilmington anticipates that its withdrawals from MWRA for the Town's consumption will exceed a flow rate of 1.2 mgd prior to the implementation of redundancy improvements to the MWRA's Northern Intermediate High System, Wilmington shall notify MWRA Operations. If, prior to implementation of Northern Intermediate High System improvements, Wilmington's withdrawals in excess of 1.2 mgd at meter 339 coincide with peak withdrawals of other MWRA Communities in this meter vicinity, MWRA reserves the right to restrict Wilmington's withdrawal to a maximum of 1.2 mgd. Wilmington may also withdraw up to 3.25 mgd for the Town's consumption if unusual conditions arise, after prior written notification to MWRA and written acceptance by MWRA. MWRA reserves the right to restrict peak maximum day withdrawals should problems be encountered.

- 3. The parties understand that long-term water demand in Wilmington is projected to increase and that Wilmington was approved by the Water Resources Commission to purchase up to 620.5 million gallons annually from the MWRA. The parties agree that, with the exception of emergencies, any withdrawal in excess of 219 million gallons

annually will require a written contract revision signed by each of the Parties hereto and a corresponding revision to the Net Entrance Fee.

4. The Parties agree that in the event that Wilmington determines that 219 million gallons per year to be supplied by the MWRA system are insufficient to meet the Town's non-emergency requirements, Wilmington may petition the MWRA to amend this Agreement pursuant to 360 CMR 11.11 and OP.10.
5. Notwithstanding the above, the Parties agree that in the event of an emergency, and in the absence of an Amended Agreement as described in paragraph 4 hereof, Wilmington may request that MWRA supply in excess of 219 million gallons a year, and that a water supply emergency may be an appropriate reason for Wilmington to temporarily increase its maximum annual water volume in excess of the above referenced volume without requiring a revision to this Agreement.
6. The Parties agree that once MWRA's Northern Intermediate High improvements are implemented, maximum day withdrawals at Wilmington's meter 339 may increase. Wilmington agrees that during the Term it will operate its local water supply system in such a manner so as to make maximum feasible use of local water supply sources subject to the limits and conditions imposed by the Water Resources Commission.
7. The Town agrees that MWRA shall not be liable to the Town for any disruption of water service delivery attributable to the water distribution system of Wilmington or of the MWRA.
8. The Town agrees to continue to complete the payment to MWRA of the Net Entrance Fee in accordance with the schedule of payments attached hereto as Exhibit A and incorporated herein, each installment having been calculated at a reduced rate of interest of 3.95% instead of 4.34%. Payments of Net Entrance Fee installments at the reduced rate of interest shall begin with the installment payment due to the Authority on February 1, 2017 and shall continue thereafter until all the remaining installments shown on Exhibit A have been fully paid. It is the express understanding of the Parties, in consideration of Wilmington's payment of the Net Entrance Fee in accordance with the provisions of this and past Agreements, that the Town shall have the right to continuation of its purchase of water supply from the MWRA subject always to its continued compliance with the provisions of Section 8 (d) of the Act and with the Regulation.
9. The MWRA shall bill the Town and the Town shall pay to the MWRA charges for all water supplied under this Agreement at the MWRA's applicable annual prevailing rates. All billing and collection procedures, due dates, and interest charges for late payments shall be in accordance with the Act and MWRA's standard policies and procedures.
10. The Town agrees to continue in effect a full cost pricing system for water received from the MWRA water supply system.
11. The Town agrees that during the Term it shall continue the implementation of its current and proposed local demand management programs, including the following: participation

in MWRA conservation programs, distribution of MWRA-provided materials to all water users, compliance with the MWRA's regulations for town-wide leak detection and repair (360 CMR §12.00), maintaining metering in 100 percent of the Town's distribution system, including all municipal facilities, and maintenance of efficient water fixtures in all public buildings, together with promotion of their use in industrial, commercial and residential areas.

12. The Town agrees that during the Term it shall not abandon any local source and substitute for it water from MWRA sources unless DEP has declared that the local source is to be or has been abandoned, is unfit for drinking, and cannot be economically restored for drinking purposes.
13. The Town agrees that if, during the Term, its plans change with respect either to (i) providing treatment for the five wells it took off-line and/or re-activating those wells, or (ii) evaluating or developing new local water supply sources, it will notify MWRA immediately so that MWRA can plan accordingly in making capital investment decisions;
14. The Town agrees to continue in full force and effect during the Term its Zoning Bylaw Aquifer Protection District to preserve and protect existing and potential sources of drinking water supplies.
15. Any and all disputes arising between MWRA and the Town concerning any matter under this Agreement, including rates or the calculation of Wilmington's assessment, shall be resolved in accordance with MWRA's Rate Basis Data Review and Dispute Resolution Process in accordance with the provisions of the dispute resolution process set forth at 360 CMR § 11.14 and the administrative procedures set forth at 360 CMR § 1.00.

IN WITNESS WHEREOF, the Parties have caused this Agreement to be executed by their duly authorized representatives.

MASSACHUSETTS WATER RESOURCES AUTHORITY

By: _____ Date: _____
Frederick A. Laskey
Executive Director

TOWN OF WILMINGTON


By: _____ Date: _____
Jeffrey M. Hull
Town Manager

EXHIBIT A
 Massachusetts Water Resources Authority
 Wilmington Entrance Fee
 Amortization Schedule
 FY2017 Amendment

Principal	2,082,626.87
Interest Rate	3.950%
Term (years)	13.00
Annual Payment	207,915.46

<u>Year</u>	<u>FY</u>	<u>Beginning Balance</u>	<u>Principal</u>	<u>Interest</u>	<u>Total Payment</u>	<u>Ending Balance</u>
1	2017	2,082,626.87	125,651.70	82,263.76	207,915.46	1,956,975.17
2	2018	1,956,975.17	130,614.94	77,300.52	207,915.46	1,826,360.23
3	2019	1,826,360.23	135,774.23	72,141.23	207,915.46	1,690,586.00
4	2020	1,690,586.00	141,137.31	66,778.15	207,915.46	1,549,448.68
5	2021	1,549,448.68	146,712.24	61,203.22	207,915.46	1,402,736.44
6	2022	1,402,736.44	152,507.37	55,408.09	207,915.46	1,250,229.07
7	2023	1,250,229.07	158,531.41	49,384.05	207,915.46	1,091,697.66
8	2024	1,091,697.66	164,793.40	43,122.06	207,915.46	926,904.26
9	2025	926,904.26	171,302.74	36,612.72	207,915.46	755,601.52
10	2026	755,601.52	178,069.20	29,846.26	207,915.46	577,532.32
11	2027	577,532.32	185,102.93	22,812.53	207,915.46	392,429.39
12	2028	392,429.39	192,414.50	15,500.96	207,915.46	200,014.88
13	2029	200,014.88	200,014.88	7,900.59	207,915.47	0.00
Totals			2,082,626.87	620,274.14		

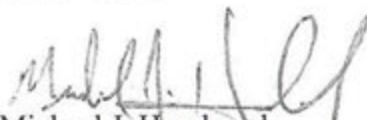
STAFF SUMMARY

TO: Board of Directors
FROM: Frederick A. Laskey, Executive Director 
DATE: January 18, 2017
SUBJECT: Settlement Agreement for Various Design Contracts and Hatchery Pipeline and Hydroelectric Project Design, Construction Administration and Resident Inspection Services, Stantec Consulting Services Inc. Contract 7017A, Amendment 2

COMMITTEE: Water Policy & Oversight

 INFORMATION
 X VOTE

Maureen McAvoy P.E., Program Manager
A. Navanandan, P.E., Chief Engineer
John P. Vetere, Deputy Chief Operating Officer
Preparer/Title


Michael J. Hornbrook
Chief Operating Officer

This staff summary recommends Board approval of a settlement agreement with Stantec Consulting Services, Inc in the amount of \$70,000 for MWRA for claims associated with designer errors and omissions on three completed construction contracts (Contracts 6854, 7259, and 7085A). This staff summary also seeks Board approval of Amendment No. 2 to Contract 7017A, Hatchery Pipeline and Hydroelectric Project with Stantec Consulting Services, Inc. for additional design and construction phase services and a three month time extension at no increase in the contract total cost by applying the \$70,000 settlement amount to this contract and utilizing unspent funds from completed tasks in the contract.

RECOMMENDATION:

To authorize the Executive Director, on behalf of the Authority, to execute a settlement agreement, with Stantec Consulting Services Inc. in the amount of \$70,000, which represents reimbursement to MWRA for claims associated with designer error and omissions in the following Stantec design contracts:

- | | |
|----------------|---|
| Contract 6854 | Lynnfield/Saugus Pipelines Project; |
| Contract 7259 | North Dorchester Bay Ventilation Building; and |
| Contract 7085A | Installation of Second Gaseous Oxygen Line at the John J. Carroll Water Treatment Plant |

Further, to authorize the Executive Director, on behalf of the Authority, to approve Amendment 2 to Contract 7017A, Hatchery Pipeline and Hydroelectric Design, Construction Administration and Resident Inspection Services with Stantec Consulting Services Inc., to extend the contract term by three months from May 31, 2018 to September 1, 2018 with no increase in the contract amount.

DISCUSSION:

Settlement Agreement

MWRA's Consultant Performance Review Committee reviewed all change orders for the above-listed contracts and determined damages sustained as a result of Fay Spofford and Thorndike, LLC (Stantec Consulting Services Inc. has acquired FS&T and all its obligations) design omissions and/or errors. MWRA's initial demand to Stantec was \$152,566 and was based upon:

- Error and/or Omission change orders which resulted in additional costs incurred by MWRA that would not have been incurred but for the deficient performance of FS&T/Stantec;
- "Premium Cost" of Error or Omission change orders (i.e., additional cost incurred for "no-bid" work not included in the original competitive bid pricing).

MWRA's initial demand of \$152, 566 included omissions and errors. The amount was based on 100% of all rework and 5% on omissions. Based upon the negotiations and staff's evaluation of the cost of and potential likelihood of successfully recovering the full amount of the initial demand, staff recommend acceptance of a settlement amount of \$70,000 by Stantec to MWRA.

Staff propose that the settlement amount will be offset against the value of a portion of the additional work included as part of Amendment 2 to Contract 7017A, Hatchery Pipeline and Hydroelectric Design, Construction Administration and Resident Inspection Services, for services already been performed by Stantec and which would be due Stantec except for the agreed upon settlement.

Contract 7017A, Amendment 2

On July 17, 2013, the Board approved the award of Contract 7017A to FS&T (now Stantec) to provide engineering design and construction services for a new pipeline and hydropower facility. The pipeline conveys six million gallons of raw water per day to the Massachusetts Division of Fisheries and Wildlife's McLaughlin Fish Hatchery. The now-constructed 4,500-foot-long, 20-inch-diameter pipeline travels west along the shoulder of Route 9, crosses the Swift River at the Massachusetts Department of Transportation bridge into Belchertown, continues along Route 9 to East Street, and south down East Street to the Hatchery.

The water conveyed by the new pipeline is withdrawn from the deeper waters of Quabbin Reservoir and will provide a continuous, reliable supply of cold water directly to the hatchery. The pipelines replaces the hatchery's river withdrawals and eliminates the threat to the hatchery that occurs when Quabbin Reservoir fills to capacity and spills warm surface water during summer months. Declining water demand and climatic conditions have increased the frequency of the warm water spills, which can severely stress the fish and hamper hatchery operations and production.

The project includes an approximately 65-kW hydropower facility to capture excess energy as water is conveyed from the higher reservoir elevation to the pipeline take-off at the Chicopee Valley Aqueduct. MWRA has received two grants totaling \$714,546 for the hydropower facility's design and construction. For the pipeline portion of the project, MWRA has entered into a Memorandum of Agreement with the Division of Fisheries and Wildlife and the Department of Fish and Game whereby those agencies are providing \$2.7 million for the pipeline design and construction.

Previously, Amendment 1 increased the contract value by \$65,000 for the additional level of effort required to design an above-ground hydropower building instead of a below-ground vault structure and to provide assistance with a Massachusetts Plumbing Code waiver.

This Amendment

This amendment extends the contract completion date by three months from May 31, 2018 to September 1, 2018 and includes additional work associated with additional design improvements. The value of this work is \$146,000. However, this amendment will incorporate the agreed upon offset for the settlement amount of \$70,000 which results in a net value of the Amendment of \$76,000. A transfer of unused allowances in the amount of \$76,000 from Resident Engineering/Resident Inspection services will be used to pay for the balance of the additional work resulting in no additional increase in the overall contract amount. The additional work is described below:

Design Improvements	\$ 83,737
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The following design improvements were added to the original contract scope:

- Additional meter, valve, and hydrant at the Hatchery Mixing Basin which was required for pipe flushing and flow measurements;
- Value engineering to identify potential changes or deletions to the design to reduce costs. A number of these proposed changes were then incorporated into the design. The cost of the value engineering task was \$5,725 and resulted in construction savings of \$102,000.
- Reimbursement for Notice of Intent permit fees to the Commonwealth of Massachusetts and the towns of Ware and Belchertown that were not in the scope of services.

<u>Engineering Services During Construction</u>	\$ 58,093
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The changes to design including the above ground hydro power building, additional meter, valve, and hydrant resulted in additional construction elements including submittals, requests for information, and project elements beyond the original scope and for labor escalation costs.

<u>Project Administration Costs Due to Project Extension</u>	\$ 4,170
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The contract term was extended in Amendment 1 to May 31, 2018 from 19 to 22 months. Amendment 2 extends the contract term an additional 3 months from May 31, 2018 to September 1, 2018, which includes a one-year warranty period after substantial completion. The extended schedule of 3 months results in an additional project administration costs to attend meetings, prepare notes, and perform invoicing.

Amendment Cost Summary

Design, ESDC, time extension	\$146,000
Transfer of unused Allowances	(\$76,000)
<u>Settlement amount</u>	<u>(\$70,000)</u>
Net amount of Amendment 2	\$0

CONTRACT SUMMARY:

	<u>Amount</u>	<u>Time</u>	<u>Dated</u>
Original Contract:	\$749,577	48 Months	07/17/14
Amendment 1*	\$ 65,000	0 Months	06/19/15
Amendment 2	\$ <u> 0</u>	3 Months	Pending
Adjusted Contract:	\$814,577	51 Months	

*Approved under delegated authority


BUDGET/FISCAL IMPACT:

The FY17 CIP includes a budget of \$ 814,276 for Contract 7017A. All settlement funds will be credited to Contract 7017A to offset Amendment 2 costs.

MBE/WBE PARTICIPATION:

There were no minimum MBE and WBE participation requirements for this project. However, Stantec has committed to 4.94% MBE and 9.52% WBE participation.


STAFF SUMMARY

TO: Board of Directors
FROM: Frederick A. Laskey, Executive Director 
DATE: January 18, 2017
SUBJECT: Northern Intermediate High Redundant Pipeline Design, Construction
Administration and Resident Inspection Services
Stantec Consulting Services, Inc.
Contract 6906, Amendment 2

COMMITTEE: Water Policy & Oversight

 INFORMATION
 X VOTE

Patrick T. Barrett, Program Manager
A. Navanandan, P.E., Chief Engineer
Preparer/Title


Michael J. Hornbrook
Chief Operating Officer

RECOMMENDATION:

To authorize the Executive Director, on behalf of the Authority, to approve Amendment 2 to Contract 6906, Northern Intermediate High Redundant Pipeline Design, Construction Administration and Resident Inspection Services, with Stantec Consulting Services, Inc, increasing the contract amount by \$900,854.00, from \$5,422,380.84 to \$6,323,234.84, and extending the contract term by 39-months, from September 23, 2017 to December 23, 2020.

BACKGROUND:

MWRA's Northern Intermediate High service area provides water to the communities of Reading, Stoneham, Wakefield, Wilmington, Winchester, and Woburn through a single 48-inch pipeline, which is fed by the Gillis Pump Station, at Spot Pond in Stoneham. Although some of these communities are partially served by MWRA, the loss of this single transmission main would result in a rapid loss of service in Reading, Stoneham, and Woburn, and potential water restrictions in Wakefield, Wilmington, and Winchester.

The main pipeline that serves this area (Section 89) is a three-mile-long, four-foot-diameter, pre-stressed concrete cylinder pipe (PCCP) transmission main with no redundancy other than the low-capacity, century-old Section 29 that parallels its route for a short distance. The 10,500-foot length of Section 89 northwest of Spot Pond is constructed of PCCP with Class IV reinforcing wire, which was used by the now defunct Interpace Corporation for a short period of time in the 1970s. It has been well documented, based upon catastrophic pipe failures elsewhere in the country, that Class IV reinforcing wire is susceptible to hydrogen embrittlement, which can lead to premature pipe failure. In addition, records indicate that this portion of the Section 89 pipe was manufactured at Interpace's Hudson, New York Plant during a window of time when the concrete coating over the Class IV reinforcing wires was defective, leading to cracking and spalling, which can accelerate the corrosion of the reinforcing wires. Due to the lack of redundancy, Section 89 cannot be taken out of service for inspection or for repairs.

The project's goal is to design and construct a new pipeline that will provide redundancy to the community meters so that Section 89 can be removed from service for inspection and rehabilitation (see Attachment A).

On March 16, 2011, the Board approved the award of Contract 6906 to Fay, Spofford & Thorndike, LLC, now Stantec Consulting Services Inc. (Stantec) for Design, Construction Administration, and Resident Inspection Services for the construction of a proposed pipeline seven miles long that includes a 48-inch pipeline, which will extend from Gillis Pump Station to Meter 229 – Wakefield, and a 36-inch pipeline, which will extend from Meter 229, through Stoneham and Reading, to a looped connection with the north end of the existing pipeline in Woburn. The total estimated cost for construction of the new pipeline is \$47.2 million, as included in the FY17 CIP.

On February 12, 2014 the MWRA Board of Directors Authorized Amendment 1, for \$778,000 to Task 2 Design of the subject contract for additional investigations for alternative route analysis. This alternative analysis was completed in June 2015 and the new route alignment was identified and additional subsurface investigations were performed.

Contract Components and Schedule

The project design originally included the bidding of two separate construction contracts. However, in coordination with the Town of Reading, Town of Stoneham and MassDOT, the project will now be completed with four construction contracts as follows:

- The first construction contract, Contract 7066, consists of 2,400 linear feet of 36-inch water transmission main in the Town of Reading, which was expedited and coordinated with the MassDOT road reconstruction project on West Street. This contract was completed in May 2015;
- The second construction contract, Contract 7471 consists of the construction of 8,800 linear feet of 36-inch water transmission main in the City of Woburn and the Town of Reading. This contract is currently under construction, with a contract substantial completion date of December 2017;
- The third construction contract, Contract 7478, consists of the construction of 7,800 linear feet of 48-inch diameter transmission main in the Town of Stoneham and 2,600 linear feet of 16 and 12-inch diameter transmission main to service Wakefield Meter 96. This contract was approved for award by the Board in November 2016 and is scheduled to be completed in June 2018; and
- The fourth construction contract, Contract 7067, consists of the construction of 14,000 linear feet of 48-inch diameter transmission main in the Town of Stoneham. This contract is ready for advertisement and construction is scheduled to begin May 2017 with a substantial completion date of December 2019.

DISCUSSION:

Amendment 2

Time Extension

39 Months

Due to the rerouting/investigation of the project alignment and repackaging of the construction contracts from two contracts to four contracts the project has been delayed. Additional time to investigate alternative and select new pipe routing, develop the associated design drawings and engineering details associated with the new routings and contracts, and to provide engineering services during a construction period that was extended resulted in this time delay. This delay requires an additional 39 month time extension to the original contract duration.

Task 1 Project Administration

\$103,409

Task 1 provides for the overall project administration of the contract including progress meetings, monthly reporting, invoicing, MBE/WBE reporting, and public meetings. The additional cost associated with the 39 months contract extension and additional member community meetings.

Task 3 Engineering Services during Construction (ESDC)

\$306,722

The project as originally envisioned consisted of simultaneous construction of two construction contracts with a duration of 36 months including construction of a 36-inch diameter pipeline predominantly in the Town of Reading and a 48-inch pipeline in the Town of Stoneham. Due to the route realignment and coordination with MassDOT, the project has been repackaged into four construction contracts. This repackaging requires an increase in level of effort for Engineering Services during Construction. The increased level of effort of ESDC provides for the administration of two additional construction contracts including Monthly Progress/Coordination Meetings, Shop Drawing/Request for Information review, Record Drawing and Detailed Record Drawing preparation, Witness Shop Testing, Licensed Site Professional services, Start-up Services, and Warranty/First Year Certification Reports.

Task 4 Resident Engineering Inspection

\$490,723

The original level of effort provided for a single Resident Engineer and three Resident Inspectors to oversee two concurrent construction contracts. As previously stated, two concurrent construction contracts of 36 months duration have been repackaged to four sequential construction contracts that have limited concurrent work activities. This has reduced the opportunity for overlapping of construction supervision activities and extended the construction duration an additional 39 months for the remaining two contracts to be constructed. Also construction contract 7478, which is anticipated to start physical construction activities in March 2017, has a compressed construction schedule, which requires the contractor to have multiple crews providing pipe installation to meet the specified completion date. This amendment increases the level of effort for the extended construction duration by providing for a full time

Resident Engineer and a part-time Resident Inspector during the active construction seasons for each of the two remaining construction contracts in Stoneham. It is expected that during the construction of these contracts, in addition to consultant resident engineering services, MWRA construction staff will also provide supplemental inspection services to support the multiple construction crews for these contracts.

CONTRACT SUMMARY:

	<u>Amount</u>	<u>Time</u>	<u>Dated</u>
Original Contract:	\$4,644,380.84	2,376 Days	03/23/11
Amendment 1:	\$778,000.00	0 Days	12/01/14
Amendment 2	<u>\$ 900,854.00</u>	<u>1,187 Days</u>	Pending
Amended Contract:	\$6,323,234.84	3,563 Days	

BUDGET/FISCAL IMPACT:

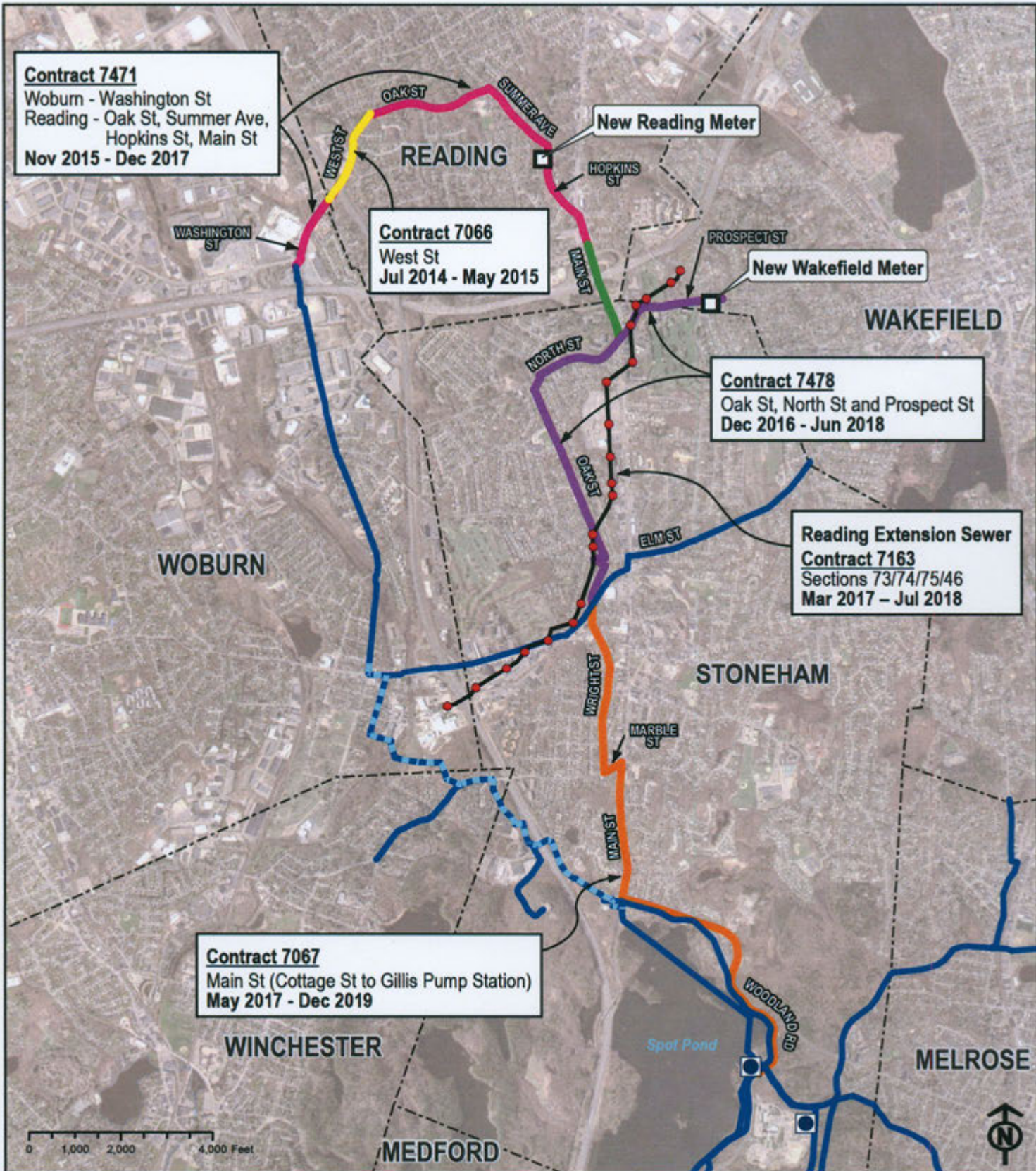
The FY17 CIP includes a budget of \$6,172,381 for Contract 6906. Including this amendment for \$900,854, the adjusted subphase total will be \$6,323,234.84 or \$150,854.00 over budget. This amount will be covered within the five-year CIP spending cap.

MBE/WBE PARTICIPATION:

The minimum MBE and WBE participation requirements for this project were established at 7.18% and 5.77%, respectively. Stantec has committed to 25.83% MBE and 12.04% WBE participation.

ATTACHMENTS:

Attachment A NIH Redundancy Pipeline Route




Attachment A

**MASSACHUSETTS
WATER RESOURCES AUTHORITY**

**Northern Intermediate High Redundant Pipeline
Reading Extension Sewer Rehabilitation
Route Overview**

- Contract 7471
- Contract 7478
- MWRA Mains
- Short-Term Improvements
- MWRA Reading Extension Sewer
- Proposed CIPP Insertion/By-Pass Pumping Locations
- New Meter Locations
- Contract 7066
- Contract 7067
- - - Class IV PCCP

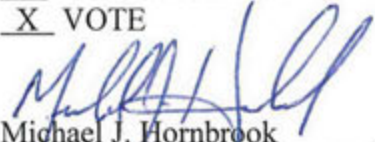
STAFF SUMMARY

TO: Board of Directors
FROM: Frederick A. Laskey, Executive Director 
DATE: January 18, 2017
SUBJECT: Northern Intermediate High Section 110 – Reading and Woburn
Albanese D&S, Inc.
Contract 7471, Change Order 7

COMMITTEE: Water Policy and Oversight

Jeremiah Sheehan, Construction Coordinator
Corinne M. Barrett, Director, Construction
Preparer/Title

INFORMATION
 VOTE


Michael J. Hornbrook
Chief Operating Officer

RECOMMENDATION:

To authorize the Executive Director, on behalf of the Authority, to approve Change Order 7 to Contract 7471, Northern Intermediate High Section 110 – Reading and Woburn, with Albanese D&S, Inc., for an amount not to exceed \$564,239 increasing the contract amount from \$10,013,095.18 to \$10,577,334.18, with no increase in contract term.

Further, to authorize the Executive Director to approve additional change orders as may be needed to Contract 7471 in an amount not to exceed the aggregate of \$250,000, in accordance with the Management Policies and Procedures of the Board of Directors.

DISCUSSION:

MWRA's Northern Intermediate High (NIH) service area provides water to the communities of Reading, Stoneham, Wakefield, Wilmington, Winchester, and Woburn through a single 48-inch pipeline, which is fed by the Gillis Pump Station at Spot Pond in Stoneham. Although some of these communities are partially served by MWRA, the loss of this single transmission main would result in a rapid loss of service in Reading, Stoneham and Woburn, and potential water restrictions in Wakefield, Wilmington and Winchester.

The existing main pipeline that serves this area (Section 89) is a three-mile-long, four-foot diameter, pre-stressed concrete cylinder pipe (PCCP) transmission main with limited redundancy other than the low-capacity, century-old Section 29 that parallels its route for a short distance. Due to the lack of redundancy, Section 89 cannot be taken out of service for inspection or repairs. The project goal is to design and construct a new pipeline that will provide redundancy to the community meters so that Section 89 can be removed from service for inspection and rehabilitation. The route includes a 48-inch pipeline that will extend from Gillis Pump Station to the Reading/Stoneham emergency connection;

and a 36-inch pipeline which will extend from the Reading/Stoneham interconnection to Meter 240 in Woburn, completing a looped service area in four construction phases (See Attachment A).

Under Contract 7471, or Contract 2, the Contractor is constructing 8,800 linear feet of 36-inch water transmission main in the City of Woburn and the Town of Reading.

This Change Order

Change Order 7 consists of the following two items:

Testing, Removal, Handling, Transport and Disposal of Unlined Landfill
Excavated Materials and Asphalt Batch Excavated Materials NotToExceed \$477,000

The specifications require the Contractor to test, prepare the necessary MSR (Material Shipping Record) and BOL (Bill of Lading), dewater, transport and dispose of unlined landfill (Group IA) excavated materials and asphalt batch (Group II) excavated materials at licensed solid waste landfill destinations under the direction of a Licensed Site Professional. The specifications further require the Contractor to include in its Lump Sum Bid an estimated quantity of 400 tons for unlined landfill material and an estimated quantity of 500 tons for asphalt batch materials. The Contractor's Schedule of Values (SOV) contains a unit price of \$63 per ton for soil management, testing, transport and disposal of unlined excavated materials. Similarly, the Contractor's SOV included a unit price of \$87 per ton for soil management, testing, transport and disposal of asphalt batch excavated materials.

Due to the lack of construction lay down area and inability to stockpile soil, the Contractor elected to pre-characterize in place the soils by performing soil borings every 150 feet along the pipeline route and conducted soil analysis on each soil boring prior to installation of the new water main. (See photo at right of Contractor performing pre-characterization borings).

A review by the design consultant (Stantec) of DEP's listing of contaminated soil sites along the alignment and environmental soil testing performed during design discovered some low level contamination in commercial areas along the alignment but not in the residential areas. The Contractor's more extensive "in-situ" testing indicated that low level hydrocarbons were present in the soil in the residential areas that slightly exceeded the DEP limits. As a result, the limits of contaminated soil based on this testing and the DEP's disposal requirements resulted in quantities significantly greater than those identified in the contract.



While the Contractor must maintain the unit prices for the estimated quantity in the contract, this change order is for the increased quantity as the contract also states that if the actual quantity of any class of material varies from the estimated quantity, the Contract Price will be adjusted.

The estimated increase in quantities is 5,100 tons of unlined landfill excavated materials with a not to exceed cost of \$310,000 and 2,000 tons of asphalt batch excavated materials with a not to exceed cost of \$167,000. The new unit price for unlined landfill excavated materials has decreased slightly from \$63 per ton to \$59.02 per ton, and the new unit price for asphalt batch excavated materials has decreased from \$87 to \$83.02 per ton. The additional per ton costs decreased slightly due to the large quantity of contaminated excavated material shipped off site. The revised unit prices for the excavated materials was evaluated and determined to be reasonable as it is comparable to other projects that were recently completed.

The approved PCO for these items has been identified by MWRA staff as an overrun in quantities. MWRA staff, the Consultant, and the Contractor have agreed to an amount not to exceed \$477,000 for this additional work with no increase in contract term. The Contractor proceeded with this work at its own risk in order to proceed with the remainder of the contract work.

Furnish and Install Nitrile Pipe Gaskets in Lieu of Specified Gaskets \$87,239

The contract documents require a regular rubber gasket be used between the two pipes in locations where there is no contamination. However, AWWA recommends the installation of nitrile pipe gaskets in lieu of rubber gaskets in contaminated soil areas as rubber gasket materials cannot resist degradation from volatile organic compounds and become acutely damaged and cause leaks. This change in the contaminated soil limits resulted in the installation of 359 nitrile gaskets in lieu of rubber gaskets.

The approved PCO for this item has been identified by MWRA staff as an unforeseen condition. MWRA staff, the Consultant, and the Contractor have agreed to a lump sum amount of \$87,239 for this additional work with no increase in contract term. The Contractor proceeded with this work at its own risk in order to proceed with the remainder of the contract work.

There is another pending significant change order for ledge overrun which the MWRA and the Contractor are currently negotiating pricing which will require future Board approval.

CONTRACT SUMMARY:

	<u>Amount</u>	<u>Time</u>	<u>Dated</u>
Original Contract:	\$9,888,000.00	808 Days	12/07/15
Change Orders:			
Change Order 1*	\$0.00	0 Days	03/09/16
Change Order 2*	\$0.00	0 Days	03/23/16
Change Order 3*	\$11,211.37	0 Days	08/12/16
Change Order 4*	\$7,368.81	0 Days	09/06/16
Change Order 5*	\$9,500.00	0 Days	09/19/16
Change Order 6*	\$97,015.00	0 Days	12/07/17

Change Order 7	<u>\$564,239.00</u>	<u>0 Days</u>	Pending
Total of Change Orders:	\$689,334.18	0 Days	
Adjusted Contract:	\$10,577,334.18	808 Days	

*Approved under delegated authority

If Change Order 7 is approved, the cumulative value of all change orders to this contract will be \$689,334.18 or 7.0% of the original contract amount. Work on this contract is approximately 72% complete.

BUDGET/FISCAL IMPACT:

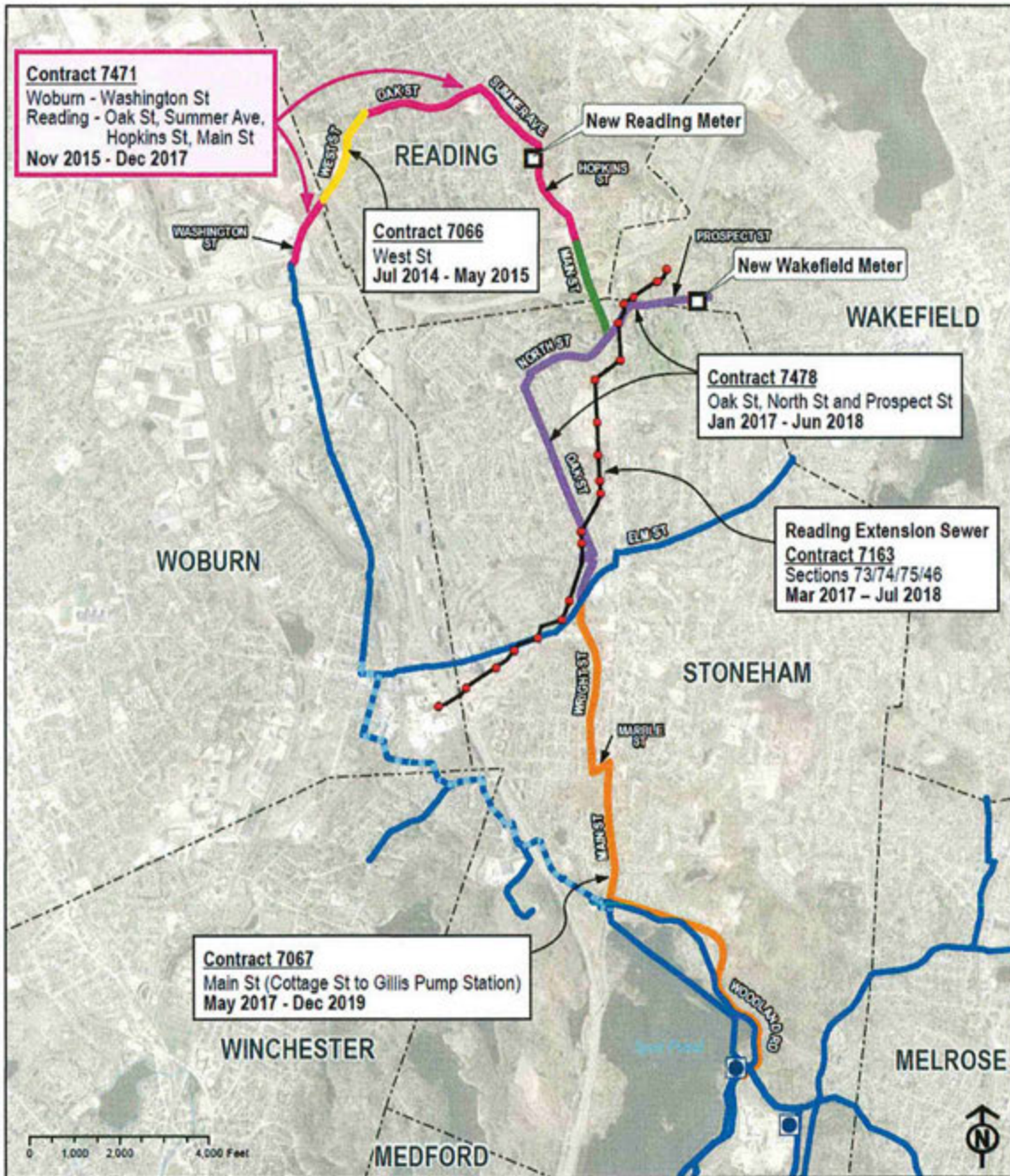
The FY17 Capital Improvement Program budget includes \$9,893,000 for Contract 7471. Including this change order for \$564,239 the adjusted subphase total is \$10,577,334.18 or \$684,334.18 over budget. This amount will be absorbed within the five-year CIP spending cap.

MBE/WBE PARTICIPATION:

The MBE/WBE participation requirements for this project were established at 7.24% and 3.6%, respectively. The Contractor has been notified that these requirements are still expected to be met.

ATTACHMENT:

Attachment A - Northern Intermediate High Redundant Pipeline Project, Route Overview



Attachment A

**MASSACHUSETTS
WATER RESOURCES AUTHORITY**

**Northern Intermediate High Redundant Pipeline
Reading Extension Sewer Rehabilitation
Route Overview**

<ul style="list-style-type: none"> — Contract 7471 — Contract 7478 — MWRA Mains — Short-Term Improvements — MWRA Reading Extension Sewer ● Proposed CIPP Insertion/By-Pass Pumping Locations New Meter Locations 	<ul style="list-style-type: none"> — Contract 7066 — Contract 7067 - - - Class IV PCCP
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MASSACHUSETTS WATER RESOURCES AUTHORITY

Charlestown Navy Yard
100 First Avenue, Building 39
Boston, MA 02129

Frederick A. Laskey
Executive Director

Telephone: (617) 242-6000
Fax: (617) 788-4899
TTY: (617) 788-4971

PERSONNEL & COMPENSATION COMMITTEE MEETING

Chair: J. Wolowicz
Vice-Chair: K. Cotter
Committee Members:
J. Carroll
P. Flanagan
J. Foti
A. Pappastergion
H. Vitale
J. Walsh

to be held on

Wednesday, January 18, 2017

Location: 100 First Avenue, 2nd Floor
Charlestown Navy Yard
Boston, MA 02129

Time: Immediately following Water Comm.

AGENDA

A. Approvals

1. PCR Amendments – January 2017
2. Appointment of Program Manager, Process Engineering, Deer Island

STAFF SUMMARY

TO: Board of Directors
FROM: Frederick A. Laskey, Executive Director
DATE: January 18, 2017
SUBJECT: January PCR Amendments



COMMITTEE: Personnel and Compensation
Karen Gay Valente
Karen Gay-Valente, Director of Human Resources
Joan C. Carroll, Manager Compensation
Preparer/Title

 INFORMATION
 X VOTE
Michele S. Gillen
Michele S. Gillen
Director, Administration

RECOMMENDATION:

To approve the amendments to the Position Control Register (PCR) included in the attached chart.

DISCUSSION:

The Position Control Register lists all positions of the Authority, filled and vacant. It is updated as changes occur and it is published at the end of each month. Any changes to positions during the year are proposed as amendments to the PCR. All amendments to the PCR must be approved by the Personnel Committee of the Board of Directors. All amendments resulting in an upgrade of a position by more than one grade level, and/or an amendment which creates a position increasing annual cost by \$10,000 or more, must be approved by the Board of Directors after review by the Personnel Committee.

January PCR Amendments

There are four PCR amendments, two related to changes in the Operations Division and two related to changes in the Administration Division.

The amendments are:

1. Title and grade change to a filled position in the EQ General Department, Operations Division, Master Welder, Unit 2, Grade 15, to a Master Welder I, Unit 2, Grade 16, due to a union settlement.
2. Title change to a vacant position in the Policy & Administration Department, Operations Division, Executive Secretary, Unit 1, Grade 18, to an Administrative Coordinator, Unit 1, Grade 18, to align job responsibilities with current needs in the department.
3. Title and grade change to a vacant position in the Human Resources Department, Administration Division, Human Resources Specialist, Confidential Unit 6, Grade 9, to a Sr. Human Resources Analyst, Confidential Unit 6, Grade 10, to address future staffing needs in the department.

4. Title and grade change to a vacant position in the Procurement Department, Administration Division, Secretary I, Unit 1, Grade 15, to a Administrative Coordinator, Unit 1, Grade 18, to address future staffing needs in the department.

The first three amendments require approval by the Personnel and Compensation Committee. The fourth requires Board approval after review by the Personnel and Compensation Committee.

BUDGET/FISCAL IMPACT:

The annualized budget impact of these PCR amendments is between a savings of \$22,846 and a cost of \$22,158 depending on the individuals selected for the vacant positions upon the completion of the hiring processes. Staff will ensure that any cost increase associated with these PCR amendments will not result in spending over the approved FY17 Wages and Salary budget.

ATTACHMENTS:

New/Old Job Descriptions

**MASSACHUSETTS WATER RESOURCES AUTHORITY
POSITION CONTROL REGISTER AMENDMENTS
FISCAL YEAR 2017**

PCR AMENDMENTS REQUIRING PERSONNEL & COMPENSATION COMMITTEE APPROVAL - January 18, 2017

Number	PCR #	V/F	Type	Current Title	UN	GR	Amended Title	UN	GR	Salary	New Salary	\$ Impact	For Amendment
P6	Operations EQ General 5470020	F	T,G	Master Welder	2	15	Master Welder I	2	16	\$66,614	\$70,342 - \$70,342	\$3,728 - \$3,728	Union Settlement
P7	Operations Policy & Administration 5910041	V	T	Executive Secretary	1	18	Administrative Coordinator	1	18	N/A	N/A - N/A	N/A - N/A	To align job responsibilities with current needs in the Policy & Administrative Department, Operations Division
P8	Administration Human Resources 8520012	V	T,G	Human Resources Specialist	C6	9	Sr. Human Resources Analyst	C6	10	\$80,962	\$59,966 - \$89,108	-\$20,996 - \$8,146	To meet future staffing needs in the Human Resources Department, Administration Division
PERSONNEL & COMP COMMITTEE TOTAL =					3		SUBTOTAL:					-\$17,268 - \$11,874	

PCR AMENDMENTS REQUIRING BOARD APPROVAL - January 2017

Number	Current PCR #	V/F	Type	Current Title	UN	GR	Amended Title	UN	GR	Current/Budget Salary	Estimated New Salary	Estimated Annual \$ Impact	Reason For Amendment
B24	Administration Procurement 8810006	V	T,G	Secretary I	1	15	Administrative Coordinator	1	18	\$56,919	\$51,341 - \$67,203	-\$5,578 - \$10,284	To meet future staffing needs in the Procurement Department, Administration Division
BOARD TOTAL =					1		SUBTOTAL:					-\$5,578 - \$10,284	
GRAND TOTAL =					4		TOTAL ESTIMATED COSTS:					-\$22,846 - \$22,158	

MWRA
POSITION DESCRIPTION

OLD

POSITION: Master Welder

PCR#:

DIVISION: Operations

DEPARTMENT:

BASIC PURPOSE:

Perform inspection, servicing and maintenance on structural components of vehicles and shop equipment.

SUPERVISION RECEIVED:

Unit Supervisor

SUPERVISION EXERCISED:

None.

RESPONSIBILITIES:

- Inspect structural components of vehicles and equipment to locate trouble and determine needed repairs.
- Performs welding, grinding and cutting procedures under the direction of the Unit Supervisor.
- Assists on road calls and makes repairs either on the road or in the garage.
- Keeps inventory of welding and cutting stock including structural steel members and recommends needed supplies.
- Set-ups and operates hand, electric and air-operated tools hydraulic jacks and hoists using oxyacetylene and electric arc welding equipment for fabrication, repair or alterations to machinery.

- Keeps and updates records of work performed.
- Rigs equipment to be moved using cranes and hoists with lift straps and/or chains.
- Evaluates equipment, reports damage and unsafe conditions and recommends maintenance program requirements.
- With proper training sets up ladders, staging, rigging, and utilizes hoists, dollies, lifts etc., for proper access to job and to remove and install equipment.

SECONDARY DUTIES:

- Performs other related duties as required.

MINIMUM QUALIFICATIONS:

Education and Experience:

- (A) A high school diploma or GED; and
- (B) One (1) year certificate from college or technical school; and
- (C) Three (3) to six (6) years experience in welding, grinding and cutting in an automotive and heavy equipment area; or
- (D) Any equivalent combination of education and experience.

Necessary Knowledge, Skills and Abilities:

- (A) Knowledge of methods, tools, materials and practices used in repairing, rebuilding and adjusting automotive equipment. Welding, grinding and cutting are key skills required.
- (B) Skill in the use of the tools and equipment employed in repairs, rebuilding and adjustment work.
- (C) Skill in diagnosing structural problems in conjunction with Unit Supervisor.
- (D) Ability to operate any motor-driven equipment in section.
- (E) Ability to understand and follow oral and written instructions.
- (F) Excellent interpersonal, oral, and written communications skills.
- (G) Basic reading, writing, mathematical and scientific skills.

SPECIAL REQUIREMENTS:

Valid Class D Massachusetts Motor Vehicles Operator's License.

TOOLS AND EQUIPMENT USED:

Power, hand and welding tools, construction equipment, mobile radio, telephone, personal computers including word processing and other software, copy and fax machine.

PHYSICAL DEMANDS:

The physical demands described here are representative of those that must be met by an employee to successfully perform the essential functions of this job. Reasonable accommodations may be made to enable individuals with disabilities to perform the essential functions.

While performing the duties of this job, the employee is regularly required to use hands to handle, finger, feel or operate objects, tools, or controls and reach with hands and arms. The employee frequently is required to stand and talk or hear. The employee is occasionally required to walk; sit; climb or balance; stop, kneel, crouch, or crawl.

The employee must frequently lift and/or move up to 50 pounds and occasionally lift and/or move more than 100 pounds. Specific vision abilities required by this job include close vision, distance and peripheral vision, depth perception, and the ability to adjust focus.

WORK ENVIRONMENT:

The work environment characteristics described here are representative of those an employee encounters while performing the essential functions of this job.

While performing the duties of this job, the employee occasionally works in outside weather conditions. The employee occasionally works near moving mechanical parts and is occasionally exposed to wet and/or humid conditions and vibration. The employee occasionally works in high, precarious places and is occasionally exposed to fumes or airborne particles, toxic or caustic chemicals and risk of electrical shock. The employee occasionally works in extreme bright light or extreme inadequate light conditions, cramped work space that requires getting into awkward positions.

The noise level in the work environment is usually loud in field settings, and moderately quiet in an office setting.

October 2010

NEW

**MWRA
POSITION DESCRIPTION**

POSITION: Master Welder I
PCR#:
DIVISION: Operations
DEPARTMENT: Pipe Maintenance - Water

BASIC PURPOSE:

Performs inspection, servicing and maintenance on structural components of vehicles, shop equipment and steel water mains.

SUPERVISION RECEIVED:

Sr.WDS Foreman , WDS General Foreman and/or Sr. Program Manager, Pipelines

SUPERVISION EXERCISED:

None.

RESPONSIBILITIES:

- Inspects structural components of vehicles and equipment to locate trouble and determine needed repairs.
- Installs pipe and valve restraints and pipe supports.
- Performs welding, grinding and cutting procedures under the direction of the Sr. WDS Foreman, WDS General Foreman and/or Sr. Program Manager, Pipelines.
- Performs repairs to MWRA steel water mains, tanks and hatches.
- Keeps inventory of welding and cutting stock including structural steel members and recommends needed supplies.

- Keeps and updates records of work performed.

SECONDARY DUTIES:

- Performs other related duties as required.

MINIMUM QUALIFICATIONS:

Education and Experience:

- (A) A high school diploma or GED; and
- (B) One (1) year certificate from college or technical school; and
- (C) Three (3) to six (6) years experience in welding, grinding and cutting in an automotive and heavy equipment area; or
- (D) Any equivalent combination of education and experience.

Necessary Knowledge, Skills and Abilities:

- (A) Knowledge of methods, tools, materials and practices used in repairing, rebuilding and adjusting automotive equipment. Welding, grinding and cutting are key skills required.
- (B) Skill in the use of the tools and equipment employed in repairs, rebuilding and adjustment work.
- (C) Skill in diagnosing structural problems in conjunction with Foreman and Master Mechanic.
- (D) Ability to operate any motor-driven equipment in section.
- (E) Ability to understand and follow oral and written instructions.
- (F) Excellent interpersonal, oral, and written communications skills.
- (G) Basic reading, writing, mathematical, and scientific, skills.

SPECIAL REQUIREMENTS:

Valid Class D Massachusetts Motor Vehicles Operator's License.

TOOLS AND EQUIPMENT USED:

Power, hand and welding tools, construction equipment, mobile radio, telephone, personal computers including word processing and other software, copy and fax machine.

PHYSICAL DEMANDS:

The physical demands described here are representative of those that must be met by an employee to successfully perform the essential functions of this job. Reasonable accommodations may be made to enable individuals with disabilities to perform the essential functions.

While performing the duties of this job, the employee is regularly required to use hands to handle, finger, feel or operate objects, tools, or controls and reach with hands and arms. The employee frequently is required to stand and talk or hear. The employee is occasionally required to walk; sit; climb or balance; stop, kneel, crouch, or crawl.

The employee must frequently lift and/or move up to 50 pounds and occasionally lift and/or move more than 100 pounds. Specific vision abilities required by this job include close vision, distance and peripheral vision, depth perception, and the ability to adjust focus.

WORK ENVIRONMENT:

The work environment characteristics described here are representative of those an employee encounters while performing the essential functions of this job.

While performing the duties of this job, the employee occasionally works in outside weather conditions. The employee occasionally works near moving mechanical parts and is occasionally exposed to wet and/or humid conditions and vibration. The employee occasionally works in high, precarious places and is occasionally exposed to fumes or airborne particles, toxic or caustic chemicals and risk of electrical shock. The employee occasionally works in extreme bright light or extreme inadequate light conditions, cramped work space that requires getting into awkward positions.

The noise level in the work environment is usually loud in field settings, and moderately quiet in an office setting.

September, 2016

MWRA
POSITION DESCRIPTION



POSITION: Human Resources Specialist

PCR#:

DIVISION: Administration

DEPARTMENT: Human Resources

BASIC PURPOSE:

Under general supervision, the Human Resources Specialist will be responsible for both strategic and tactical department initiatives within all areas of human resources (Recruitment, Compensation and Employee Relations).

SUPERVISION RECEIVED:

Works under the supervision of an assigned Human Resources Manager.

SUPERVISION EXERCISED:

May coordinate activities of other staff as assigned on projects and tasks.

ESSENTIAL DUTIES AND RESPONSIBILITIES:

- Discuss personnel needs with department supervisors to prepare and implement recruitment programs. Undertake recruitment activities specifically design to promote a more diverse, technical workforce.
- Review employment applications (internal and external) and evaluates work history, education and training, job skills, compensation needs and other qualifications of applicants.
- Coordinate and participate in the interview process ensuring uniformity of the selection methodology.
- Maintain employment related database, including but not limited to applicants not selected for jobs, lateral transfer requests, job posting files and compensation initiatives.

- Assist in the salary recommendation of prospective employees.
- Undertake a wide range of special projects including the costing of jobs, the review, analysis and recommendation to position hierarchies.
- Collect large amounts of data from multiple data sources and produce user friendly presentations with the data.
- Assist in the achievement of division goals and objectives.
- Work independently on special projects and deliverables as required by department.
- Assist with and conduct new employee orientation as needed.
- Provide analysis and assistance with labor relations issues. Produce and analyze discipline reports to assist with discipline recommendations.
- Field requests from employees and managers concerning assistance in resolving employee relations issues. Collect information from involved parties and work with human resources managers to resolve issues.
- Contribute to special projects and deliverables as required by department necessity (examples include but are not limited to coordinating service recognition program implementation, planning and coordinating special events and other employee relations activities).
- Perform other duties as assigned or required to fulfill the functions of the position.

SECONDARY DUTIES:

Other duties as assigned.

MINIMUM QUALIFICATIONS:

Education and Experience:

- (A) Associates degree in business administration or a related field.
- (B) Three (3) years of experience in personnel or related field is required.
- (C) Any combination of education and experience.

Necessary Knowledge, Skills and Abilities:

- (A) Knowledge of word processing, spreadsheet and presentation software applications required.
- (B) Prior experience with Human Resource Information Systems is preferred.
- (C) Must have considerable knowledge of federal and state laws governing employment practices, compensation, labor relations, wage and hours.
- (D) Excellent oral and written communication skills required.
- (E) Strong organizational skills required.
- (F) Ability to analyze and interpret voluminous data is required.
- (G) Demonstrated ability to professionally treat confidential matters.

SPECIAL REQUIREMENTS:

None

TOOLS AND EQUIPMENT USED:

Office equipment as normally associated with the use of telephone, personal computer including word processing and other software, copy and fax machine.

PHYSICAL DEMANDS:

The physical demands described here are representative of those that must be met by an employee to successfully perform the essential functions of this job. Reasonable accommodations may be made to enable individuals with disabilities to perform the essential functions.

While performing the duties of this job, the employee is regularly required to use hands to finger, handle, feel or operate objects, including office equipment or controls and reach with hands and arms. The employee is occasionally required stand and walk. The employee is regularly required to sit and talk or hear.

The employee must occasionally lift and/or move up to 10 pounds. Specific vision abilities required by this job include close vision, distance and peripheral vision, depth perception and the ability to adjust focus.

WORK ENVIRONMENT:

The work environment characteristics described here are representative of those an employee

encounters while performing the essential functions of this job.

While performing the duties of this job, the employee regularly work in an office environment. The noise level in the work environment is moderately quiet.

May 2006

NEW

**MWRA
POSITION DESCRIPTION**

POSITION: Senior Human Resources Analyst

PCR#:

DIVISION: Administration & Finance

DEPARTMENT: Human Resources

BASIC PURPOSE:

Provides analytical support to the Compensation, Benefits and HRIS sections. Maintains data and updates HRIS and other systems used in department. Performs job analysis, recommends position classification, provides survey analysis, and prepares cost proposals related to collective bargaining. Communicates and administers benefit and compensation programs. Regularly handles highly confidential and/or collective bargaining related information.

SUPERVISION RECEIVED:

Works under the general supervision of the Manager, Compensation and Manager, Benefits & HRIS.

SUPERVISION EXERCISED:

None.

ESSENTIAL DUTIES AND RESPONSIBILITIES:

- Researches, compiles and summarizes data and information from a variety of sources; interprets data, states conclusions and offers recommendations.
- Maintains the automated personnel database for the MWRA ensuring the quality and timeliness of all salary and position changes per established standards and procedures. Reviews all HRIS database changes for accuracy and compliance prior to processing. Provides database maintenance and analysis as required.

- Reviews information received from the Divisions on organizational and position changes. Verifies, clarifies and researches requests for possible inclusion in the position control amendment packages presented to the Board of Directors.
- Assists in all Management Information Systems (MIS) development projects and serves as a liaison in the development of specifications and in planning the implementation of system upgrades.
- Assists in preparing recommendations for collective bargaining and in costing management and union proposals on economic items and in making presentations during the collective bargaining process.
- Monitors electronic ECS system and works with MIS to resolve problems making recommendations for changes as necessary.
- Maintains, prints and distributes reports as required including but not limited to HR statistical, overtime, step, license renewal, personal actions, mutual aide, benefit time and ad-hoc reports.
- Manages projects/processes such as survey participation and analysis, acting assignments, license administration, orientation, data collection and maintenance and recommends improvements to processes.
- Assists with the preparation of external salary surveys to ensure accurate market information for MWRA positions and participates in survey assignments and analysis.
- Coordinates license verification/renewal process for MWRA staff ensuring all staff hold appropriate valid licenses as documented in job description. Notifies appropriate Division staff of pending license renewals and notifies Labor Relations of noncompliance.
- Assists with the management of acting assignments, including review of acting documentation, start and end dates and, calculating salary rates and retroactive payments.
- Conducts orientation of all MWRA new hires, providing information on health insurance and other welfare plans, safety information, and leave and administrative procedures as back up. Responds to employee requests for information in the areas of compensation and benefits. Coordinates employee ID process.

- Assists with the development of job descriptions for MWRA positions based on information gathered from incumbents, supervisors and unit managers. Reviews the accuracy of information and conformity with Americans with Disabilities Act guidelines with management staff. Maintains electronic job description file.
- Assists with the administration of salary programs for union and non-union employees, ensuring conformance with union guidelines and MWRA policy.
- Assists with the review of position vacancy requisitions to determine accuracy of salary and grade information and of job descriptions. Coordinates changes to job descriptions with the appropriate Division staff.
- Calculates retroactive payments for collective bargaining settlements based on information provided by Labor Relations.
- Develops and documents procedures to streamline processes and ensure compliance with regulatory and contractual requirements.
- Reviews all compensation driven outputs for accuracy as requested.
- Serves as the data and information coordinator for the department, providing responses to requests for information.
- Assists department staff in the development and use of databases and spreadsheets for use in planning and management reports.
- Assists with research on new benefit initiatives, makes recommendations on feasibility and possible implementation, and coordinates marketing and roll-out of new benefit programs.
- Assists staff in the development of Human Resources web site and Intranet page improvements and enhancements.

SECONDARY DUTIES:

Performs related duties as required.

MINIMUM QUALIFICATIONS:

Education and Experience:

Page 3 of 5

Senior Human Resources Analyst - New

- (A) A four (4) year college program in Human Resources, Business Administration, Public Administration, Finance or related field; and
- (B) Four (4) to six (6) years of compensation, benefits, and /or HRIS experience; and
- (C) Knowledge of personal computers and database administration as acquired through a minimum of three (3) to five (5) years experience, Lawson experience preferred; or
- (D) Any equivalent combination of education or experience.

Necessary Knowledge, Skills and Abilities:

- (A) Proficiencies in the use of personal computers and software applications packages such as Word, Excel, Access and Outlook. Familiarity with Human Resources/Payroll Information Systems is also required.
- (B) Knowledge of position evaluation techniques such as point-factor evaluation, whole job ranking and/or factor comparison is preferred.
- (C) Experience in a union environment is strongly preferred.
- (D) Excellent interpersonal, analytical, oral and written communication skills.
- (E) Familiarity with data processing and Quality Assurance/Quality Control (QA/QC) concepts and techniques

SPECIAL REQUIREMENTS:

None.

TOOLS AND EQUIPMENT USED:

Office equipment as normally associated with the use of telephone, personal computer including word processing and other software, copy and fax machine.

PHYSICAL DEMANDS:

The physical demands described here are representative of those that must be met by an employee to successfully perform the essential functions of this job. Reasonable accommodations may be made to enable individuals with disabilities to perform the essential functions.

While performing the duties of this job, the employee is regularly required to use hands to finger, handle, feel or operate objects, including office equipment or controls and reach with hands and arms. The employee is occasionally required stand and walk. The employee is regularly required to sit and talk or hear.

The employee must occasionally lift and/or move up to 10 pounds. Specific vision abilities required by this job include close vision, distance and peripheral vision, depth perception and the ability to adjust focus.

WORK ENVIRONMENT:

The work environment characteristics described here are representative of those an employee encounters while performing the essential functions of this job.

While performing the duties of this job, the employee regularly works in an office environment. The noise level in the work environment is moderately quiet.

March 2013



MWRA
POSITION DESCRIPTION

POSITION: Secretary I

PCR#:

DIVISION: Executive, Administration & Finance, Operations, Law, Support Services

DEPARTMENT: Deer Island, Engineering & Construction, Operations Administration, FOD Administration, Finance Director's Office, Treasury, Operations Planning, Laboratory Services, Law, Public Affairs, Human Resources, MIS, Procurement

BASIC PURPOSE:

Provides secretarial and administrative support within their department. This description provides a range of possible duties but the incumbent will not necessarily perform all the duties listed below.

SUPERVISION RECEIVED:

Works under the general supervision of the departmental Director, Manager, Supervisor, or Administrative Assistant.

SUPERVISION EXERCISED:

None.

ESSENTIAL DUTIES AND RESPONSIBILITIES:

- Composes and edits correspondence, reports and other materials on word processor; assists the management in the preparation of reports, logbooks, agendas and special projects.
- Attends department meetings, including meetings covering grievance resolution and collective bargaining strategy, takes notes and transcribes materials as needed.
- Maintains log of invoices and prepares requisitions for various equipment and supplies; maintains files including invoices, attendance records and performance appraisals.

- Greets and welcomes visitors/job applicants. Answers telephone, processes information requests, records messages and routes calls, opens and distributes mail.
- Enters Request for Material, Invoice Vouchers and Receiving entries in the accounting system. Researches and logs vendor inquiries to ensure prompt replies to vendor.
- Schedules appointments, meetings, conferences, and workshops and makes travel arrangements; prepares travel and expense reports.
- Records, updates, and tracks files using databases management system or spreadsheets as required.
- Coordinates mass mailings.
- Maintains a log of all personnel paperwork and tracks its progress through final approval. Processes timesheets, personnel actions, and performance reviews as necessary. Supports timesheet collection and entry of information into the time system. May distribute checks.
- Serves as a backup for the Executive Secretary as needed.

SECONDARY DUTIES:

- Performs other related duties as required.

MINIMUM QUALIFICATIONS:

Education and Experience:

- (A) Knowledge of administrative and secretarial procedures as normally attained through a two (2) year secretarial or business school program; and
- (B) Understanding of administrative and office procedures as acquired through a three (3) to five (5) years secretarial/administrative experience; or
- (C) Any equivalent combination of education and experience.

Necessary Knowledge, Skills and Abilities:

- (A) Demonstrated proficiency in Microsoft Office products including Outlook, Word and Excel. Some knowledge of PowerPoint is preferred.
- (B) Excellent communication and interpersonal skills.

SPECIAL REQUIREMENTS:

Must have successfully completed the MIS and professional development-related ACP requirements for this position. If no qualified ACP certified applicant applies for the position, the selected candidate will have 6 months to complete the ACP program.

TOOLS AND EQUIPMENT USED:

Office machines as normally associated with the use of telephone, personal computer, including word processing and other software, copy and fax machine.

PHYSICAL DEMANDS:

The physical demands described here are representative of those that must be met by an employee to successfully perform the essential functions of this job. Reasonable accommodations may be made to enable individuals with disabilities to perform the essential functions.

While performing the duties of this job, the employee is regularly required to use hands to finger, handle, feel or operate objects, including office equipment or controls and reach with hands and arms. The employee frequently is required to sit and talk or hear. The employee is occasionally required to stand and walk.

The employee must frequently lift and/or move up to 10 pounds and occasionally lift and/or move up to 50 pounds. Specific vision abilities required by this job include close vision, and the ability to adjust.

WORK ENVIRONMENT:

The work environment characteristics described here are representative of those an employee encounters while performing the essential functions of this job. The employee regularly works in an office environment.

The noise level in the work environment is usually a moderately quiet office setting.

December 2014

MWRA
POSITION DESCRIPTION

NEW

POSITION: Administrative Coordinator

PCR#:

DIVISION: Operations, Law, Administration & Finance

DEPARTMENT: Deer Island, Law, Support Services, Public Affairs, Human Resources, MIS, Internal Audit, E&C

BASIC PURPOSE:

Provides administrative support and assistance to the Director, Manager, and/or departmental staff. This provides a range of possible duties, but will not necessarily perform all the duties listed below.

SUPERVISION RECEIVED:

Works under the general supervision of the Department Director or Manager.

SUPERVISION EXERCISED:

May exercise supervision over temporary or assigned entry-level and clerical personnel.

ESSENTIAL DUTIES AND RESPONSIBILITIES:

- Assists the Manager of the department in dissemination and implementation of administrative policies and procedures relative to personnel, budget, finance, payroll, purchasing and other administrative matters.
- Updates and implements changes of all departmental personnel records as needed including the completion, submittal and follow-up of necessary MWRA forms. Supervises, inputs and maintains timekeeping and payroll for the department.
- Schedules and prepares personnel hiring, benefits, salary increases and/or promotion documents. Refers managers and employees to union contract provisions Human Resources policies and Procedures. Directs complex issues to HR Labor Relations.
- Assists with the planning and implementation of MWRA outreach efforts, including meetings, conferences, facility tours and related workshops.

- Develops and maintains department database management, spreadsheet filing systems, all and all-departmental files as required.
- Purchase departmental supplies and monitor's expenses. Compiles and reviews spending reports.
- Maintains Director's/Manager's schedule and appointments and is responsible for any administrative support needed.
- Responds to public information requests.
- Reviews and prepares monthly accrual information and inputs into computer systems.
- Receives and distributes mail. Composes routine correspondence.

SECONDARY DUTIES:

- Performs related duties as required.

MINIMUM QUALIFICATIONS:

Education and Experience:

- (A) A two (2) year college program in business administration, business management, finance, public administration or a related field; and
- (B) Understanding of personnel, payroll and procurement and administrative policies as acquired by three (3) to five (5) years of related experience; or
- (C) Any equivalent combination of education and experience.

Necessary Knowledge, Skills and Abilities:

- (A) Demonstrated skills in Microsoft Word, Excel, Access, PowerPoint, and Outlook are required. Knowledge of financial software programs is highly desirable.
- (B) Knowledge of MWRA Administrative Policies and Procedures including hands-on experience with payroll and personnel processing.
- (C) Ability to work with minimal supervision in a fast-paced environment.
- (D) Demonstrated strong organizational, verbal, and written communications skills required.

SPECIAL REQUIREMENTS:

Must have successfully completed the MIS and professional development-related ACP requirements for this position. If no qualified ACP certified applicant applies for the position, the selected candidate will have 6 months to complete the ACP program.

TOOLS AND EQUIPMENT USED:

Office equipment as normally associated with the use of telephone, personal computer including word processing and other software, copy and fax machine.

PHYSICAL DEMANDS:

The physical demands described here are representative of those that must be met by an employee to successfully perform the essential functions of this job.

Reasonable accommodations may be made to enable individuals with disabilities to perform the essential functions. While performing the duties of this job, the employee is regularly required to use hands to finger, handle, feel or operate objects, tools or controls and reach with hands and arms. The employee frequently is required to sit and talk or hear. The employee is occasionally required to walk; stand; climb or balance; stoop, kneel, crouch, or crawl; taste or smell.

The employee must frequently lift and/or move up to 10 pounds and occasionally lift and/or move up to 50 pounds. Specific vision abilities required by this job include close vision, distance vision, depth perception, peripheral vision and the ability to adjust focus.

WORK ENVIRONMENT:

The work environment characteristics described here are representative of those an employee encounters while performing the essential functions of this job.

While performing the duties of this job, the employee frequently works in outside weather conditions. The employee occasionally works near moving mechanical parts, and is occasionally exposed to wet and/or humid conditions and vibration. The employee occasionally works in high precarious places and is occasionally exposed to fumes or airborne particles, toxic or caustic chemicals and risk of electrical shock.

The noise level in the work environment is usually loud in field settings and moderately quiet in an office setting.

July 2002

MWRA



POSITION DESCRIPTION

POSITION: Executive Secretary

PCR#:

DIVISION: Executive, Finance, Operations, Law, Administration

DEPARTMENT: Central Support, Environmental Quality, Executive Office, Treasury, Operations Administration, Operations Planning, FOD Administration, Human Resources, Law, Procurement, Program Management, Affirmative Action

BASIC PURPOSE:

Provides complete administrative and secretarial support. This description provides a range of possible duties but the incumbent will not necessarily perform all the duties listed below.

SUPERVISION RECEIVED:

Works under the general supervision of the departmental Director or Manager.

SUPERVISION EXERCISED:

May exercise supervision of secretaries or other entry-level staff.

ESSENTIAL DUTIES AND RESPONSIBILITIES:

- Takes dictation, prepares meeting minutes; coordinates preparation of and/or composes and edits correspondence, reports, agendas, special projects and other materials on word processor.
- Attends division, department and unit meetings that includes meetings covering grievance resolution and collective bargaining strategy; takes notes and transcribes materials as needed.

- Answers phones, processes internal and external official information requests tactfully, records messages and routes calls. Greets and welcomes visitors/job applicants. Processes mail.
- Schedules appointments, meetings, and conferences, and makes travel arrangements; prepares expense reports.
- Develops and maintains a number of types of filing systems, including departmental and personal. Records, updates and tracks files using database management system or spreadsheets as required.
- Orders and distributes office supplies, coordinate purchasing and invoicing, prepare personnel actions, monitor the budget, and records payroll and attendance information.

SECONDARY DUTIES:

- Performs related duties as assigned.

MINIMUM QUALIFICATIONS:

Education and Experience:

- (A) Knowledge of administrative and secretarial procedures as normally attained through a two (2) year college, secretarial or business school program; and
- (B) Understanding of administrative and office procedures as acquired through five (5) to seven (7) years executive secretarial/administrative experience; or
- (C) Any equivalent combination of education and experience.

Necessary Knowledge, Skills and Abilities:

- (A) Demonstrated proficiency in Microsoft Office products including Outlook, Word, Excel, Access and PowerPoint.
- (B) Excellent organizational, communication and interpersonal skills, including ability to handle confidential information.

SPECIAL REQUIREMENTS:

Must have successfully completed the MIS and professional development-related ACP requirements for this position. If no qualified ACP certified applicant applies for the position, the selected candidate will have 6 months to complete the ACP program.

TOOLS AND EQUIPMENT USED:

Office machines as normally associated, with the use of telephone, personal computer including word processing and other software, copy and fax machine.

PHYSICAL DEMANDS:

The physical demands described here are representative of those that must be met by an employee to successfully perform the essential functions of this job. Reasonable accommodations may be made to enable individuals with disabilities to perform the essential functions.

While performing the duties of this job, the employee is regularly required to sit, talk or hear. The employee is regularly required to use hands to finger, handle, feel or operate objects, including office equipment, or controls and reach with hands and arms. The employee frequently is required to stand and walk.

There are no requirements that weight be lifted or force be exerted in the performance of this job. Specific vision abilities required by this job include close vision, and the ability to adjust focus.

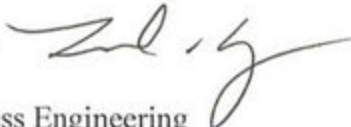
WORK ENVIRONMENT:

The work environment characteristics described here are representative of those an employee encounters while performing the essential functions of this job. While performing the duties of this job, the employee regularly works in an office environment.

The noise level in the work environment is usually a moderately quiet.

July 2002

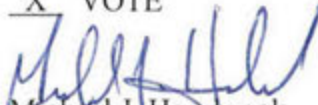
STAFF SUMMARY

TO: Board of Directors
FROM: Frederick A. Laskey, Executive Director 
DATE: January 18, 2017
SUBJECT: Appointment of Program Manager, Process Engineering
Operations Division

COMMITTEE: Personnel & Compensation

 INFORMATION
 X VOTE

Karen Gay-Valente, Director, Human Resources
David F. Duest, Director, Deer Island WWTP
Preparer/Title


Michael J. Hornbrook
Chief Operating Officer

RECOMMENDATION:

To approve the appointment of Mr. Timothy Beaulieu, Project Manager, Process Control (Unit 9, Grade 25) to the position of Program Manager, Process Engineering (Unit 9, Grade 29), at an annual salary of \$108,599.56, commencing on a date to be determined by the Executive Director.

DISCUSSION:

The position of Program Manager, Process Engineering recently became vacant upon the retirement of the incumbent.

The position reports to the Manager, Process Control, and will manage all aspects of Process Optimization including direct supervision of four staff. This position has overall program management responsibility for conducting process control studies to identify process and/or equipment modifications, coordinating process control activities with staff in all departments at Deer Island and with contractors or vendors, managing several contracts, and providing technical support for operations staff as-needed. The position is also responsible for maintaining the Deer Island Integrated Contingency Plan as well as ensuring Deer Island's compliance with the Multi-Sector General Permit (MSGP) for Stormwater Discharges Associated with Industrial Activity portion of the U.S. EPA's National Pollutant Discharge Elimination System (NPDES) permit.

Selection Process

The position of Program Manager, Process Engineering was posted internally and a total of four candidates applied for this position. Two candidates were determined to be qualified and were referred for an interview. The Deputy Director, Deer Island WWTP, the Manager of Process Control, and a representative from MWRA's Human Resources Department conducted the interviews. Upon completion of the interviews, Mr. Timothy Beaulieu was selected as the best

candidate for the position based on his qualifications and experience.

Mr. Beaulieu currently holds the position of Project Manager, Process Control and has over twenty years of wastewater experience at the MWRA including positions in progressively responsible positions in MWRA's laboratory, metering, and process control disciplines. Mr. Beaulieu has worked as a Project Manager in the Process Control Department for more than two years, where he has actively contributed to numerous projects and has increased the effectiveness of several processes, such as the waste sludge process. Mr. Beaulieu is a very effective communicator and has increased the collaboration between Process Control and other Deer Island departments. Prior to his work at MWRA, Mr. Beaulieu worked as a Chemist/Lab Tech for a private company for 3 years.

Mr. Beaulieu possesses a unique combination of education and experience that has afforded him an excellent understanding of NPDES permit compliance issues, wastewater plant process operation and analysis, fluid dynamics, instrumentation, data management, laboratory knowledge, and project management. This combination of skills and experience will serve Mr. Beaulieu well in this roll.

Mr. Beaulieu earned a Bachelor of Science Degree in Biology-Biochemistry from Brown University, where he graduated Magna Cum Laude. He also holds a Massachusetts Grade 6 Full-Active Wastewater Operator's License from the Commonwealth of Massachusetts' Department of Environmental Protection.

BUDGET/FISCAL IMPACT:

There are sufficient funds in the Operations Division's FY17 Current Expense Budget for this position.

ATTACHMENTS:

Resume of Timothy Beaulieu
Position Description
Organization Chart

Timothy Beaulieu

Professional History

Massachusetts Water Resources Authority

Project Manager, Process Control, DITP

Sept 14-Present

- Project Manager for the polymer chemical contract (approximately \$400,000/year)
- Project Manager for the grit and screenings disposal contract (approximately \$1,200,000/year)
- Provides technical support for other chemical contracts throughout plant (ferrous chloride, hypochlorite, etc)
- Conducting survey of process control instrumentation throughout plant. Purpose of survey is to insure completeness of documentation in Maximo and technical records, and to verify that preventative maintenance is being scheduled as needed in various instrument categories
- Performs field and data studies of various process areas, with the goal of improving performance and identifying opportunities for savings (energy, chemicals) without compromising permit compliance. Reports findings to management.
- Consults with operations staff and prepares SOP documents of their activities as indicated
- Prepares checklists, with Operations, of valves and equipment to be locked/tagged out during operational shutdowns of process areas. Assists during shutdowns to ensure checklist is followed effectively.
- Studying long term trends of ferrous chloride dosage effectiveness in controlling soluble phosphorous and struvite formation
- Evaluates new technologies for applicability at DITP, and works with vendor representatives for optimizing currently installed equipment and currently used chemicals. For example, has hosted representatives of Ostara and CNP, two companies marketing nutrient recovery technology, during 2016.
- Leads technical tours of DITP for guests ranging from university engineering students to concerned citizens' groups and interested professional peers.
- Participated in the Maximo Calibration Module definition of functional requirements and functional testing prior to rollout of the Module.
- Assists maintenance staff with tracking of large-scale, long-term maintenance activities (e.g. secondary mixer rebuilds); reconciles Maximo records with vendor work statements and in-house ad hoc tracking systems
- Studied potable water metering for DITP operations' use and adjusted data tracking to more closely account for water use compared to the distribution system meter
- Assists Program Manager, Process Engineering with Interim Contingency Plan duties, such as storm water sampling, safety compliance, etc
- Assists Program Manager, Process Monitoring with some aspects of the lab sampling program as needed, such as deployment of replacement samplers.

Massachusetts Water Resources Authority

Project Manager, Meter Data

Sept 03-Sept 14

Acting Meter Maintenance Supervisor

Feb 01-Sept 03

Statistical Supervisor, Water Metering

Jan 99-Feb 01

- Primary responsibility is to manage and maintain databases for Water Revenue, Transport pumping stations, ENS and Odor/Corrosion Control project Telog systems. Includes running maintenance routines in MS-Access, backing up data from server to other media, adding and appending records for new meter locations, and analyzing the database to ensure data completeness.
- Works closely with MIS to ensure adequate IT resources for Telog Enterprise software
- Supports clients who use Telog software, by providing training, updating software versions, and troubleshooting performance issues; provides 24 hour support to Water and Wastewater OCC's.
- Prepares and analyzes reports for Water Revenue on weekly, monthly and yearly basis
- Analyzes wastewater flow data for completeness and data integrity, and performs necessary corrections/edits to data when meter performance is not acceptable
- Assists with analysis of rain gauge data and storm response
- Develops and implements tools in MS-Access and other utilities to facilitate report generation and data analysis.
- Guides the scheduling of field maintenance activities in response to data anomalies.
- Maintains all database change records
- Prepares and tracks meter calibration scaling sheets.
- Reviews records of preventative maintenance to meters and assesses data quality pre- and post-maintenance. Directs re-calibration of meters when required.
- Recommends improvements to Telog software and performs testing of software revisions in development environment
- Tracks software bugs and desired features as the software undergoes frequent revisions. Assists software vendor in prioritizing requests for changes to software.
- Supervises Statistical Supervisor and Data Analyst.
- Provides technical support, training and SOP writing assistance to meter maintenance crews; analyzes real time data to determine success of corrective maintenance activity.
- While in the position of Meter Maintenance Supervisor, closely supervised all activities of 7 meter technicians, in addition to duties detailed above.

Massachusetts Water Resources Authority

Quality Assurance Specialist, Central Lab-Deer Island

Jan 97-Dec 98

- Assisted the Lab Manager: Quality Assurance in all aspects of following the Quality Assurance Management Plan.
- Prepared reports to EPA on lab performance during semi-annual performance review studies.

- Performed spot lab audits to ensure compliance with state and federal regulations for sample analysis.
- Tracked monthly statistics for lab QA efforts and prepared reports for Orange and Yellow notebooks.
- Initiated, tracked and investigated Data Anomaly Reports and recommended actions.
- Guided lab chemists and technicians in preparation for outside audits (MADEP, NELAP, etc)
- Provided "train the trainer" sessions for lab staff who in turn taught classes in QA, safety and GLP, as well as acting as trainer for some modules.
- Supported Client Services and the individual lab departments as needed.
- Analyzed data and prepared reports from LIMS using available tools including ad hoc report generator.
- Weekend/holiday rotations on sample collection and analysis

Massachusetts Water Resources Authority

Senior Lab Technician, Central Lab-Deer Island

Mar 96-Dec 96

Collected samples throughout Deer Island Treatment Plant while ensuring proper handling, preservation and chain of custody of said samples
 Worked with the Sample Management Team on all aspects of sample handling

Inchcape Testing Services/Aquatec

Chemist/Lab Technician

Jan 93-Feb 96

Performed a variety of chemical and biological analyses of water, wastewater and solids samples.
 Performed sample collection and preservation at various sites including wastewater treatment plants, industries, landfills and excavations.

Education

Brown University

Bachelor's of Science, Biology-Biochemistry, 1990 (Magna Cum Laude)

Certification

MA Grade 6C Wastewater TP Operator

NEWEA Grade 4 Collection System Operator

**MWRA
POSITION DESCRIPTION**

POSITION: Program Manager, Process Engineering

DIVISION: Operations

DEPARTMENT: Process Control

BASIC PURPOSE:

Provides technical support to Plant Operations and has overall project management responsibility for a variety of wastewater treatment process control/optimization initiatives.

SUPERVISION RECEIVED:

Works under the general supervision of the Manager, Process Control.

SUPERVISION EXERCISED:

Exercises close supervision of assigned project managers, project engineers, and junior sanitary engineers

ESSENTIAL DUTIES AND RESPONSIBILITIES:

- Conducts process control studies with the objective of identifying process and/or equipment modifications which would improve process performance to include chemical and/or energy use optimization initiatives. Manages the implementation of modifications as directed.
- Manages the design, implementation, modification, and application of control strategies and physical process modifications for assigned plant processes.
- Assists with the checkout and startup of new process equipment and systems. Performs field investigations and develops corrective action plans for process control problems that arise during plant operation.
- Coordinates with operations personnel the requirements for the collection and analysis of operational data related to the development of process control strategies.
- Assists in the determination of operating capabilities, reliability and associated performance criteria for existing and proposed wastewater treatment processes.
- Coordinates control system development and implementation with Engineering,

Operations and Maintenance staff as required.

- Provides process related, site specific technical training to applicable operations and maintenance personnel as required.
- Conducts evaluations of existing and proposed process equipment and instruments. Prepares cost/benefits analysis for the use of equipment or instruments in improving process performance.
- Provides process control and operations reviews of reports and designs prepared by engineering consultants as well as Authority engineering staff.

SECONDARY DUTIES:

- Evaluates assigned employees' performance in accordance with MWRA policies.
- Provides on-call emergency and routine assistance to support the group's objectives.
- Performs related duties as required.

MINIMUM QUALIFICATIONS:

Education and Experience:

- (A) Four (4) year BS degree in chemical, environmental or other related engineering field; and
- (B) Six (6) to eight (8) years of experience in water/wastewater process design, control and troubleshooting to include major equipment/process startups; or
- (C) Any equivalent combination of education and experience.

Necessary Knowledge, Skills and Abilities:

- (A) Demonstrated understanding of the types of mechanical equipment (pumps, compressors, etc.) typically found in a wastewater, power or process environment to include applications theory, operational characteristics, and performance evaluation.
- (B) Experience with automated (computer and/or PLC based) control systems to include logic development, tuning and troubleshooting.
- (C) Knowledge of wastewater process control theory, practices and principles.
- (D) Computer fluency to include the use of MSWord , Excel, Access and related PC based

software

(E) Demonstrated written and verbal communication skills.

SPECIAL REQUIREMENTS:

A valid Massachusetts Motor Vehicle Operators License.

Massachusetts Wastewater Treatment Plant Operations Grade V certification, or ability to obtain within one (1) year.

TOOLS AND EQUIPMENT USED:

Office equipment as normally associated with the use of telephone, personal computer including word processing and other software, copy and fax machine.

PHYSICAL DEMANDS:

The physical demands described here are representative of those that must be met by an employee to successfully perform the essential functions of this job. Reasonable accommodations may be made to enable individuals with disabilities to perform the essential functions.

While performing the duties of this job, the employee is regularly required to use hands to finger, handle, feel or operate objects, tools or controls and reach with hands and arms. The employee frequently is required to sit and talk or hear. The employee is occasionally required to stand, walk, climb or balance, stoop, kneel, crouch, or crawl, taste or smell.

The employee must frequently lift and/or move up to 25 pounds. Specific vision abilities required by this job include close vision, distance vision, color vision, depth perception, peripheral vision and the ability to adjust focus.

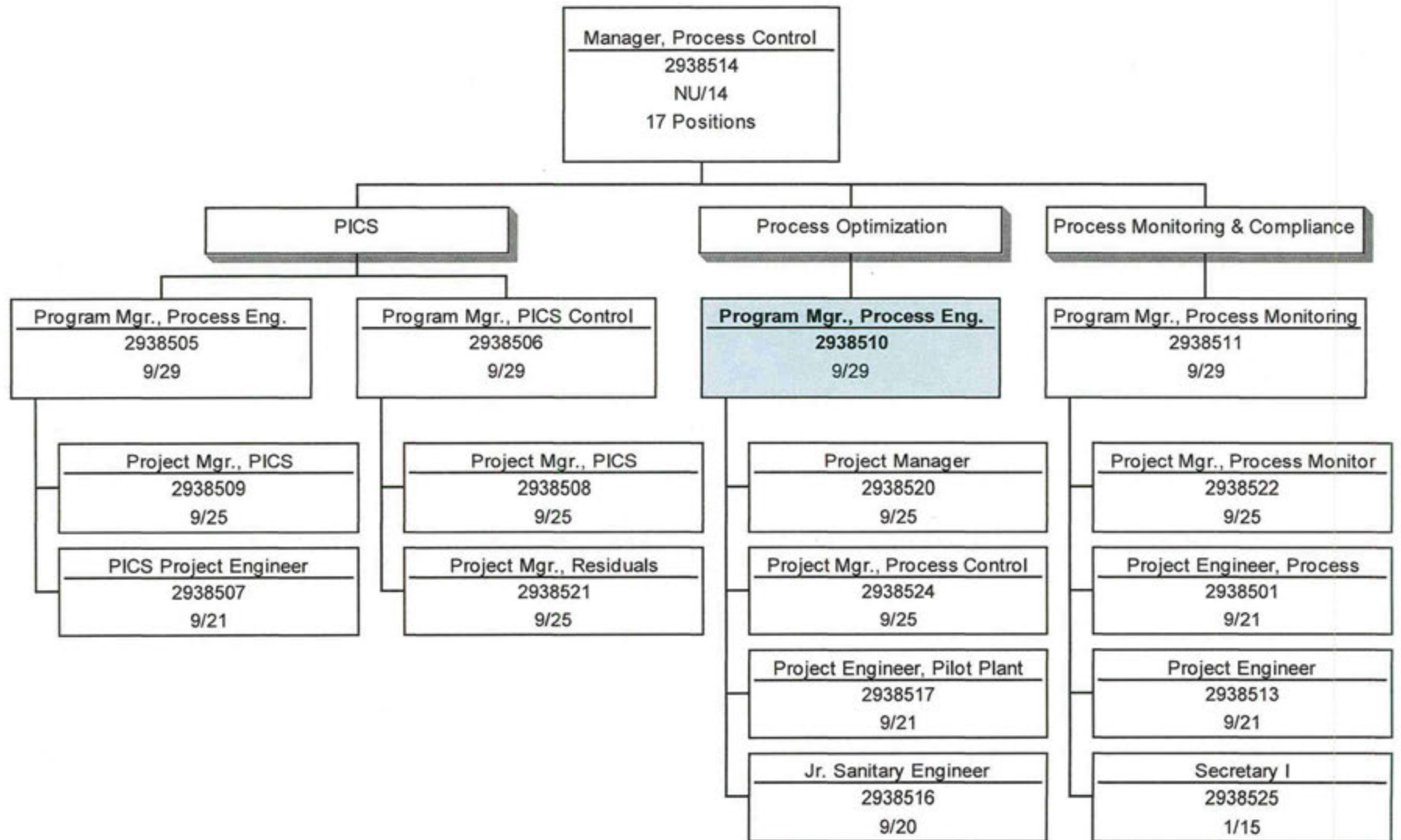
WORK ENVIRONMENT:

The work environment characteristics described here are representative of those an employee encounters while performing the essential functions of this job.

While performing the duties of this job, the employee occasionally works in outside weather conditions. The employee occasionally works near moving mechanical parts, and is occasionally exposed to wet and/or humid conditions and vibration. The employee occasionally works in high precarious places and is occasionally exposed to fumes or airborne particles, toxic or caustic chemicals and risk of electrical shock.

The noise level in the work environment is usually loud in field settings and moderately quiet in an office setting.

Operations - Wastewater Treatment
Deer Island - Process Control
 January 2017





MASSACHUSETTS WATER RESOURCES AUTHORITY

Charlestown Navy Yard
100 First Avenue, Building 39
Boston, MA 02129

Frederick A. Laskey
Executive Director

Telephone: (617) 242-6000
Fax: (617) 788-4899
TTY: (617) 788-4971

Chair: M. Beaton
Vice-Chair: J. Carroll
Secretary: J. Foti
Board Members:
A. Blackmon
K. Cotter
P. Flanagan
A. Pappastergion
B. Peña
H. Vitale
J. Walsh
J. Wolowicz

BOARD OF DIRECTORS' MEETING

to be held on

Wednesday, January 18, 2017

Location: 100 First Avenue, 2nd Floor
Charlestown Navy Yard
Boston, MA 02129

Time: 1:00 p.m.

AGENDA

I. APPROVAL OF MINUTES

II. REPORT OF THE CHAIR

- A. Annual Meeting: Election and Appointment of MWRA Officers and Committee Assignments

III. REPORT OF THE EXECUTIVE DIRECTOR

IV. BOARD ACTIONS

A. Approvals

1. First Amended and Restated Water Supply Continuation Agreement with Town of Wilmington (ref. W B.1)
2. PCR Amendments – January 2017 (ref. P&C A.1)
3. Appointment of Program Manager, Process Engineering, Deer Island (ref. P&C A.2)

B. Contract Awards

1. Audit Services: CliftonLarsonAllen LLP, Contract F242 (ref. AF&A B.1)
2. Drug and Alcohol Testing Program: Advantage Drug Testing, Contract A610 (ref. AF&A B.2)
3. Electrical Equipment Testing, Deer Island Treatment Plant: American Electrical Testing Company, Contract S561 (ref. WW B.1)

C. Contract Amendments/Change Orders

1. Settlement Agreement for Various Design Contracts and Hatchery Pipeline and Hydroelectric Project Design, Construction Administration and Resident Inspection Services: Stantec Consulting Services, Inc., Contract 7017A, Amendment 2 (ref. W C.1)
2. Northern Intermediate High Redundant Pipeline Design, Construction Administration and Resident Inspection Services: Stantec Consulting Services, Inc., Contract 6906, Amendment 2 (ref. W C.2)
3. Northern Intermediate High Section 110 – Reading and Woburn: Albanese D&S, Inc., Contract 7471, Change Order 7 (ref. W C.3)

V. CORRESPONDENCE TO THE BOARD

- A. Letter from Utility Contractors of New England, Inc.

VI. OTHER BUSINESS

VII. EXECUTIVE SESSION

A. Security

1. Update on Wachusett Reservoir Railroad

B. Collective Bargaining

VIII. ADJOURNMENT

Meeting of the Board of Directors

December 14, 2016

A meeting of the Board of Directors of the Massachusetts Water Resources Authority was held on December 14, 2016 at the Authority headquarters in Charlestown. Vice-Chairman Carroll presided. Present from the Board were Messrs. Blackmon, Cotter, Vitale, Walsh, Flanagan and Foti; Messrs. Beaton, Pappastergion, Pena and Ms. Wolowicz were absent. Among those present from the Authority staff were Frederick Laskey, Executive Director, Steven Remsberg, General Counsel, Michael Hornbrook, Chief Operating Officer, Thomas Durkin, Director of Finance, Michele Gillen, Director of Administration, John Vetere, Deputy Chief Operating Officer, Ria Convery, Assistant Secretary and Linda D'Addario, Acting Assistant to the Board. The meeting was called to order at 1:00 p.m.

APPROVAL OF MINUTES

Upon a motion duly made and seconded, it was

Voted to approve the minutes of the Board of Directors' meeting of November 16, 2016, as presented and filed with the records of the meeting.

REPORT OF THE CHAIRMAN

Vice-Chairman Carroll recognized Linda D'Addario for filling in for Bonnie Hale and preparing the Proposed Votes and Fred Laskey also recognized Kathleen Garcia for helping out with the preparation of the Board meeting materials.

REPORT OF THE EXECUTIVE DIRECTOR

Mr. Laskey reported on various matters, including: Bonnie Hale, Assistant to the Board, is recovering well; Newton and Quincy are taking advantage of the zero-interest Lead Service Line Removal Load Program and other communities have expressed interest;

MWRA is on track to meet new Public Records Law Requirements by January 1, 2017; the MWRA Advisory Board held a successful forum on Metropolitan Tunnel Redundancy; the Deer Island Treatment Plant will be running on CTGs while NStar investigates the location of the cross-harbor cable; and the January Board of Directors' meeting has been rescheduled to January 18, 2017, and will be designated as the Annual Meeting of the Board of Directors.

APPROVALS

Approval of the Transmittal of the FY18 Proposed Capital Improvement Program to the MWRA Advisory Board

Upon a motion duly made and seconded, it was

Voted to approve the transmittal of the FY18 Proposed Capital Improvement Program to the MWRA Advisory Board for its 60 day review and comment period.

Memorandum of Understanding and Financial Assistance Agreement with the City of Cambridge for the Implementation of CSO Control Projects, Amendment 13 and Progress of Cambridge Implemented CSO Projects and Financial Assistance through March 2017

Upon a motion duly made and seconded, it was

Voted to authorize the Executive Director, on behalf of the Authority, to execute Amendment 13 to the Memorandum of Understanding and Financial Assistance Agreement with the City of Cambridge for the Implementation of CSO Control Projects, increasing the award amount by \$1,509,899 from \$98,668,856 to \$100,178,755 and extending the term of the agreement by six months from December 31, 2017 to June 30, 2018.

Financial Assistance Agreement with BWSC for Implementation of CSO Projects, Amendment 16

Upon a motion duly made and seconded, it was

Voted to authorize the Executive Director, on behalf of the Authority, to execute Amendment 16 to the Financial Assistance Agreement with Boston Water

and Sewer Commission for Implementation of CSO Control Projects, extending the term of the agreement of six months from December 31, 2016, to June 30, 2017, with no increase to the award amount.

Water Supply Continuation Agreements – Southborough, Stoughton, Wakefield and Worcester

Upon a motion duly made and seconded, it was

Voted to authorize the Executive Director, on behalf of the Authority, to execute ten-year Water Supply Continuation Agreements with Southborough, Stoughton, Wakefield and Worcester substantially in the form presented and filed with the records of the meeting.

PCR Amendment – December 2016

Upon a motion duly made and seconded, it was

Voted to approve an amendment to the Position Control Register, as presented and filed with the records of the meeting.

Appointment of Program Manager Security/Safety

Upon a motion duly made and seconded, it was

Voted to approve the Executive Director's recommendation to appoint Mr. Joseph Bibbo to the position of Program Manager, Security/Safety (Unit 9, Grade 29), at an annual salary of \$106,994.68 to be effective on the date designated by the Executive Director.

Janitorial Services at the Chelsea Facility: S.J. Services, Inc., Contract WRA-4302Q

Upon a motion duly made and seconded, it was

Voted to authorize the Executive Director, on behalf of the Authority, to approve the award of Contract WRA-4302Q, Janitorial Services at the Chelsea Facility, to S.J. Services, Inc., and to authorize the Executive Director, on behalf of

the Authority, to execute said contract in an amount not to exceed \$381,324 for a term of three years.

Management, Operation and Maintenance of the Union Park Pump Station/CSO Facility and Unmanned Stations: Woodard & Curran, Inc., Contract S559

Upon a motion duly made and seconded, it was

Voted to approve the award of Contract S559 for Management, Operation and Maintenance of the Union Park Pump Station/CSO Facility and the Unmanned Stations, to the lowest responsible and eligible bidder Woodard & Curran, Inc., and to authorize the Executive Director, on behalf of the Authority, to jointly execute said contract, along with the Boston Water and Sewer Commission (BWSC), for a contract service fee amount of \$3,919,812 (of which MWRA will pay \$1,058,349.24 (27%) and BWSC will pay \$2,861,462.76 (73%), plus a funding allowance amount of \$780,000 for corrective maintenance and minor repairs to process equipment (which includes \$180,000 for MWRA and \$600,000 for BWSC), for a total contract amount not to exceed \$4,699,812, and a term of three years, from March 1, 2017 through March 2, 2020, with options, subject to future Board approval, to extend the term for up to two additional years.

Sewer Sections 4, 5, 6 and 186 Study: Hazen and Sawyer, P.C., Contract 7423

Upon a motion duly made and seconded, it was

Voted to approve the recommendation of the Consultant Selection Committee to select Hazen and Sawyer, P.C. to provide consulting services to the Authority for the Sewer Sections 4, 5, 6, and 186 Study, and to and to authorize the Executive Director, on behalf of the Authority, to execute Contract 7423 in the amount of \$1,213,973.97, for a term of 15-months from the Notice to Proceed.

Janitorial Services at the Deer Island Treatment Plant: Star Building Services, Inc., Contract WRA-4303Q

Upon a motion duly made and seconded, it was

Voted to approve the award of Contract WRA-4303Q, Janitorial Services at the Deer Island Treatment Plant, to Star Building Services, Inc., and to authorize the Executive Director, on behalf of the Authority, to execute said contract in an amount not to exceed \$1,479,655.10, for a term of three years.

Deer Island Treatment Plant Motor Control Center and Switchgear Replacement Design, Engineering Services During Construction, and Resident Engineering/Inspection Services: AECOM, Contract 7419

Upon a motion duly made and seconded, it was

Voted to approve the recommendation of the Consultant Selection Committee to select AECOM to provide preliminary design, final design, engineering services during construction and resident engineering/inspection services, for the Deer Island Treatment Plant Motor Control Center and Switchgear Replacement project, and to authorize the Executive Director, on behalf of the Authority, to execute said contract with AECOM in an amount not to exceed \$2,479,672 for a term of 65 months from the Notice to Proceed.

Personnel Dock Rehabilitation - Deer Island Treatment Plant: Coastal Marine Construction, Contract 7168

Upon a motion duly made and seconded, it was

Voted to approve the award of Contract 7168, Personnel Dock Rehabilitation at the Deer Island Treatment Plant to the lowest eligible and responsible bidder, Coastal Marine Construction LLC, and to authorize the Executive Director, on behalf of the Authority, to execute and deliver said contract in the bid amount of \$1,294,524, for a term of 238 calendar days from the Notice to Proceed.

Assignment and Assumption of Contract EXE-033, Security Guard Services for Various MWRA Facilities, from AlliedBarton Security Services, Inc. to Universal Protection Service, LLC d/b/a Allied Universal Security; and Contract EXE-033, Amendment 1

Upon a motion duly made and seconded, it was

Voted to authorize the Executive Director on behalf of the Authority to approve the assignment of Contract EXE-033 entitled "Security Guard Services for Various MWRA Facilities" from AlliedBarton Security Services, Inc. to Universal Protection Service, LLC d/b/a Allied Universal Security Services, and to authorize the Executive Director, on behalf of the Authority to execute an Assignment and Assumption Agreement to effectuate such assignment; and further, to authorize the Executive Director, on behalf of the Authority, to execute Amendment 1 to Contract EXE-033, extending the term by 365 calendar days from February 6, 2017 to February 5, 2018 and increasing the contract price by an amount not to exceed \$1,727,852.95,

Wachusett Aqueduct Pumping Station Design, Construction Administration and Resident Inspection Services; Stantec Consulting Services, Inc. Contract 7156, Amendment 3

Upon a motion duly made and seconded, it was

Voted to authorize the Executive Director, on behalf of the Authority, to approve Amendment 3 to increase the amount of Contract 7156 with Stantec Consulting Services Inc., Wachusett Aqueduct Pumping Station Design, Construction Administration and Resident Inspection Services, in the amount of \$349,742.76, with no increase in the contract term.

Wachusett Aqueduct Pumping Station: BHD/BEC JV 2015, Joint Venture, Contract 7157, Change Order 5

Upon a motion duly made and seconded, it was

Voted to authorize the Executive Director, on behalf of the Authority, to approve Change Order 5 to Contract 7157, Wachusett Aqueduct Pumping Station, with BHD/BEC JV 2015, A Joint Venture, for a lump sum amount of \$328,039, with no increase in contract term. Further, to authorize the Executive Director to approve additional change orders as may be needed to Contract 7157 in amounts not to exceed the aggregate of \$250,000, in accordance with the Management Policies and Procedures of the Board of Directors.

OTHER BUSINESS – MWRA's Climate Change Strategy

This item was referred to the full Board by the Administration, Finance and Audit Committee. Staff gave a presentation describing MWRA's efforts and progress in adapting to the impacts of climate change and sea level rise, including the hardening of coastal facilities and measures taken to reduce greenhouse gas emissions.

EXECUTIVE SESSION

It was moved to enter executive session to discuss litigation and security.

Upon a motion duly made and seconded, it was, upon a roll call vote in which the members were recorded as follows:

<u>Yes</u>	<u>No</u>	<u>Abstain</u>
Blackmon		
Cotter		
Flanagan		
Foti		
Vitale		
Walsh		
Carroll		

Voted to enter executive session for the purpose of discussing strategy with respect to litigation, in that such discussion may have a detrimental effect on the litigating position of the Authority, and to consider the deployment of security personnel or devices, or strategies with respect to security.

It was stated that the meeting would return to open session solely for the consideration of adjournment.

EXECUTIVE SESSION

The meeting returned to open session at 2:12 p.m. and adjourned.

DRAFT

STAFF SUMMARY

TO: Board of Directors

FROM: Matthew A. Beaton, Chairman



DATE: January 18, 2017

SUBJECT: Annual Meeting: Election and Appointment of MWRA Officers and Committee Assignments

RECOMMENDATION:

That the Board of Directors (1) designate this January 18, 2017 meeting as the Annual Meeting which, as provided in the Authority's by-laws, will be deemed a special meeting of the Board for the purpose of election of officers; (2) elect a Vice-Chairman of the Board; and (3) appoint a Secretary of the Board, an MWRA Treasurer, and such Assistant Secretaries and Assistant Treasurers of the Board as the Board deems appropriate. New Committee Chairs will be appointed approximately every two years.

To ratify the following appointments of Board members to standing Committees:

Administration, Finance and Audit	Wastewater Policy and Oversight	Water Policy and Oversight	Personnel and Compensation
Chair: H. Vitale Vice Chair: J. Foti	Chair: P. Flanagan Vice Chair: J. Walsh	Chair: A. Blackmon Vice Chair: B. Pena	Chair: J. Wolowicz Vice Chair: K. Cotter
A. Blackmon J. Carroll K. Cotter A. Pappastergion B. Pena J. Walsh	A. Blackmon J. Carroll J. Foti A. Pappastergion B. Pena H. Vitale	J. Carroll J. Foti A. Pappastergion H. Vitale J. Walsh J. Wolowicz	J. Carroll P. Flanagan J. Foti A. Pappastergion H. Vitale J. Walsh

DISCUSSION:

Article IV, Section 1, of the by-laws, which specifies the officers to be elected, provides that:

“The Board of Directors shall annually elect one of its members as Vice-Chairman and shall annually appoint a Secretary and a Treasurer, who need not be members of the Board of Directors.”

The by-laws also provide that:

“Upon the recommendation of the Executive Director, the Board of Directors may also elect one or more Assistant Secretaries and Assistant Treasurers.”

Nomination of Officers

Currently, the following individuals serve as the MWRA's officers:

Vice-Chairman:	John J. Carroll
Secretary:	Joseph C. Foti
Treasurer:	Matthew Horan
Assistant Secretaries:	Bonnie Hale Rose Marie Convery
Assistant Treasurer:	Robert Belkin Kathy Soni

The Chairman wishes to request that a motion be made to nominate the following as officers, inclusive of appointments of certain MWRA staff as Treasurer, Assistant Secretaries and Assistant Treasurers, as follows:

Vice-Chairman:	John J. Carroll
Secretary:	Andrew M. Pappastergion
Treasurer:	Matthew Horan
Assistant Secretaries:	Bonnie Hale Rose Marie Convery
Assistant Treasurers:	Robert Belkin Kathy Soni

There are no special procedures for election of officers, except as governed by Robert's Rules of Order. Thus, any Board member may make a nomination to elect an officer, and the nomination will carry upon a majority vote of the quorum.



Years of Excellence
1954-2017

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Email: aklayman@ucane.com • Website: www.ucane.com

V A
1/18/17

January 11, 2017

OFFICERS

President

PAUL SCENNA

Albanese D&S, Inc.

President-Elect

RICHARD PACELLA, JR.

R. M. Pacella, Inc.

Treasurer

MARCELLA ALBANESE

Albanese Brothers, Inc.

Secretary

RYAN McCOURT

McCourt Construction Company

BOARD OF DIRECTORS

VINCENT BARLETTA

Barletta Heavy Division

JOHN BERKSZA

Eastern Insurance Group, LLC

NICK BIELLO

J. D'Amico, Inc.

TONY BORRELLI

Celco Construction Corp.

GERRY CARNEY, JR.

C. N. Wood Company, Inc.

KEVIN COLE

J. F. White Contracting Co.

BRIAN COONEY

C. C. Construction, Inc.

GREG FEENEY

Feeney Bros. Excavation, LLC

JERRY GAGLIARDUCCI

Gagliarducci Construction, Inc.

MARCO GIOIOSO

P. Gioioso & Sons, Inc.

A. J. LORUSSO

Lorusso Heavy Equipment, LLC

AL MORTEO

FED. CORP.

JOHN OUR

Robert B. Our Co., Inc.

JOSEPH PACELLA

RJV Construction Corp.

BRIAN RAWSTON

Jay Cashman, Inc.

CHRIS VALENTI

GVC Construction, Inc.

KEN VOGEL

WES Construction Corp.

PETER WILLIAMSON

LM Heavy Civil Const., LLC

DAVID ZOPPO

R. Zoppo Corp.

ANNE KLAYMAN

Executive Director

Mr. Matthew Beaton, Chairman

MWRA Executive Committee

Executive Office of Energy and Environmental Affairs

100 Cambridge Street

Boston, MA 02114

Dear Chairman Beaton:

This letter is written to convey concerns from the Utility Contractors' Association of New England, Inc. (UCANE) on the recent MWRA Staff recommendation to utilize deep tunnels vs. surface piping, to create redundancy for the existing Metropolitan Tunnels.

On December 8, 2016 the MWRA Staff made a presentation to the Advisory Board (and other interested parties) explaining the reasons why they recommend abandoning the remainder of the Surface Piping Redundancy Plan (approved in 2011) in favor of a Deep Rock Tunnel alternative. A Summary Document (dated October 6, 2016), containing supporting information was provided.

At the December 8th meeting UCANE representatives expressed several concerns to the Board about this change of direction by the MWRA and which we would like to reaffirm in this letter:

1. The Surface Piping Alternate is a "buildable" solution to creating Redundancy.

The MWRA staff explained the difficulty of installing large diameter pipes along urban streets, the potential impacts to traffic and abutters, and other obstacles that are making local approval of these surface piping projects difficult to obtain. All infrastructure projects cause temporary impact and disruption during the construction phase. MWRA should not allow a minority number of communities to dictate terms (and rates) to the 61 MWRA member communities. The 2011 Redundancy Plan called for only 15 miles of Surface Piping (impacting 5 communities). Construction experts within UCANE membership believe that the Surface Piping alternative (multiple smaller projects) is a more manageable option during the construction phases, will create a more accessible system for long term maintenance, and is a buildable solution to creating the needed redundancy.

2. The Tunnel Option costs \$800M more than the Surface Piping Option.

The Tunnel Option nearly doubles the cost of the project and seems to be an enormous and unnecessary expense to burden all the ratepayers with. A suggestion by one of the member communities was...“the Surface Alternate – plus providing some impact payments to the several communities affected by the surface piping could still save hundreds of millions of dollars.” This prudent suggestion should be further explored and monetized by MWRA Staff prior to asking for Advisory Board Endorsement for the \$1.7B Tunnel Option.

3. The Tunnel Option limits the Statewide and Local Economic Benefit

The Surface Piping Alternate would be divided into multiple contracts, all of which could be performed by Massachusetts based contractors hiring Massachusetts taxpayers. This Alternate is a more conventional infrastructure project spinning off dollars with a multiplier effect in excess of 2.0 within the local communities and throughout the State in general. It would also be more consistent with the economic policies endorsed by the Baker/Polito Administration.

Conversely, the Tunnel Option would be performed in one or two “Mega-Projects”. This Option requires specialty equipment and specialty contractors, neither of which are available in Massachusetts. The Tunnel Boring Machines and the bidders for this work will come from National and likely International sources. Although a few local contractors might collect some limited subcontracts, or may co-venture to a small degree, a large amount of the funds expended by the MWRA in the Tunnel Option will end up out of State or out of the USA, and will not circulate within the local economy like conventional infrastructure projects would.

The current MWRA Staff recommendation to use a Deep Tunnel to achieve the Metropolitan Tunnel Redundancy is opposite of the way the MWRA accomplished the CSO Program. In 1990 the original recommendation for handling CSO’s was a 16 mile X 25ft Diameter deep storage tunnel under the City. Based on some similar concerns expressed at that time on the CSO Options, the end result for CSO success was multiple surface piping separation projects and a very limited storage tunnel portion at Dorchester Bay. The MWRA ratepayers saved a substantial sum of money, while at the same time receiving upgraded utilities and newly paved streets. By actually seeing the separation work being performed, and receiving those ancillary benefits, it made rate increases and temporary traffic impacts palatable for many MWRA customers.

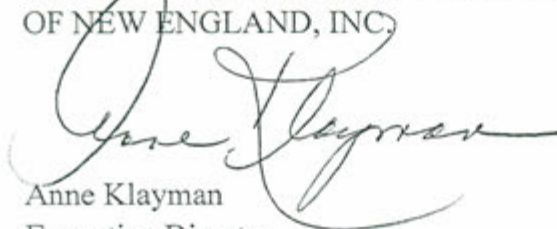
UCANE commends the MWRA Administration and staff for their forward thinking and for their ongoing efforts and successes in creating water system backup for Boston and its

surrounding communities. The Deep Tunnel Alternate will be the MWRA's largest water project and one of the largest infrastructure investments in our State's history. From that perspective, it is important that the projects created by this investment maximize economic impacts to the Commonwealth by providing opportunities for local businesses and local labor.

Utility Contractors Association of New England (UCANE) represents over 250 companies in Massachusetts that not only perform infrastructure work, but also supply the materials, the equipment, and the insurance and bonding for the vast majority of water and sewer projects in Massachusetts. UCANE was founded in 1954 and has promoted investment in infrastructure on both the State and the National levels for over 62 years. Our Association has been proud to work alongside the MWRA (and the former MDC) in informing legislators, City and Town administrators, and the public in general about the economic, environmental, health and safety, and quality of life benefits that come with investments in water and sewer programs throughout the Commonwealth. UCANE contractor members have performed approximately 80% of all the projects put out to bid by the Authority since their inception in 1985.

UCANE respectfully asks that the MWRA Executive Board and members of the Advisory Board consider the points raised in this letter along with ratepayer impacts as you decide which option to use in order to create redundancy for the old Metropolitan Tunnels. Thank you.

Sincerely,
UTILITY CONTRACTORS' ASSOCIATION
OF NEW ENGLAND, INC.



Anne Klayman
Executive Director

CC: All Members of the MWRA Executive Board
Mr. Fred Laskey, MWRA Executive Director
Mr. Michael Hornbrook, MWRA COO
Mr. Joseph Favaloro, Director MWRA Advisory Board
All Members of the MWRA Advisory Board
Governor Charlie Baker
Lt. Governor Karyn Polito
Mr. Jay Ash, Secretary of Economic Development