



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: J. Foti
Committee Members:
A. Blackmon
J. Carroll
K. Cotter
A. Pappastergion
B. Peña
J. Walsh

to be held on

Wednesday, June 28, 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 – May 2017
2. FY2017 Financial Update and Summary as of May 2017

B. Approvals

1. Final FY2018 Capital Improvement Program
2. Final FY2018 Current Expense Budget
3. Final FY2018 Water and Sewer Assessments

C. Contract Awards

1. Janitorial Services at MWRA Western Facilities: S.J. Services, Inc., Contract WRA-3848Q
2. Task Order Appraisal Services: Colliers International Holdings, Inc., Contract 603TA and Fosters Appraisal & Consulting Co., Inc., Contract 604TA

MASSACHUSETTS WATER RESOURCES AUTHORITY

Meeting of the
Administration, Finance and Audit Committee

June 7, 2017

A meeting of the Administration, Finance and Audit Committee was held on June 7, 2017 at the Authority headquarters in Charlestown. Chairman Vitale presided. Present from the Board were Ms Wolowicz and Messrs. Blackmon, Cotter, Foti, Pappastergion and Walsh. Among those present from the Authority staff were Fred Laskey, Steve Remsberg, Mike Hornbrook, Tom Durkin, Matt Horan, Paul Whelan, and Bonnie Hale. The meeting was called to order at 11:35 a.m.

Information

Third Quarter FY17 Orange Notebook

Staff reviewed various portions of the report, and there was question and answer.

Contract Awards

*Revenue Bond Consulting Engineer Services: CDM Smith Inc.

The Committee recommended approval of the contract award (ref. agenda item B.1).

*MWRA FY2018 Insurance Program Renewal

The Committee recommended approval of the contract awards for the Insurance Program Renewal (ref. agenda item B.2).

The meeting adjourned at 11:50 a.m.

* Approved as recommended at June 7, 2017 Board of Directors meeting.

STAFF SUMMARY


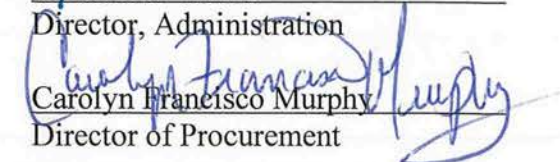
TO: Board of Directors
FROM: Frederick A. Laskey, Executive Director
DATE: June 28, 2017
SUBJECT: Delegated Authority Report – May 2017



COMMITTEE: Administration, Finance & Audit

INFORMATION
 VOTE

Barbara Aylward, Administrator A & F
Preparer/Title


Michele S. Gillen
Director, Administration

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 May 1 – 31, 2017.

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 MAY 1 - 31, 2017

NO.	DATE OF AWARD	TITLE AND EXPLANATION	CONTRACT	AMEND/CO	COMPANY	FINANCIAL IMPACT
C-1.	05/11/17	LEAD PIPE DETECTION FEASIBILITY PROJECT AWARD OF A SOLE SOURCE CONTRACT TO RESEARCH AND EVALUATE THE POTENTIAL FEASIBILITY OF DETECTING THE PRESENCE OF A LEAD SERVICE LINE THROUGH NON-INVASIVE TESTING FOR A TERM OF ONE YEAR.	OP-351	AWARD	WATER RESEARCH FOUNDATION	\$40,588.00
C-2.	05/11/17	COMMUNITY LEAK DETECTION SERVICES INCREASE IN UPSET LIMIT IN ORDER TO PROVIDE MEMBER COMMUNITIES THE FLEXIBILITY TO SELECT THE CONTRACTOR TO PERFORM THEIR COMMUNITY LEAK DETECTION SERVICES.	W298	1	LISTON UTILITY SERVICES	\$75,000.00
C-3.	05/11/17	QUINCY AND HINGHAM PUMPING STATIONS FUEL STORAGE UPGRADE AWARD OF A CONTRACT TO THE LOWEST RESPONSIVE BIDDER FOR THE QUINCY AND HINGHAM PUMPING STATIONS FUEL STORAGE UPGRADE FOR A TERM OF 240 CALENDAR DAYS.	7534	AWARD	MECO ENVIRONMENTAL SERVICES, INC.	\$528,888.00
C-4.	05/16/17	CRANE MAINTENANCE SERVICE FINAL BALANCING CHANGE ORDER TO DECREASE THE FOLLOWING BID ITEMS TO REFLECT ACTUAL QUANTITIES USED: CRANE LOAD TESTING OF INDIVIDUAL CRANES; NON-EMERGENCY AND EMERGENCY ON-CALL MAINTENANCE SERVICE; REPLACEMENT PARTS.	OP-257	1	SAFEWAY OVERHEAD CRANE SERVICE, INC.	(\$27,461.85)
C-5.	05/17/16	KEY PROJECT WORK CREW SERVICES AT DEER ISLAND AND NUT ISLAND AWARD OF CONTRACT TO A NON-PROFIT, DEPARTMENT OF CHILDREN AND FAMILIES APPROVED, ORGANIZATION TO PERFORM ADDITIONAL LANDSCAPING AND PUBLIC ACCESS AREA CLEANING SERVICES AT DEER ISLAND AND NUT ISLAND FOR A TERM OF SEVEN MONTHS.	OP-353	AWARD	ROCA, INC.	\$50,000.00
C-6.	05/24/17	THERMAL/POWER PLANT FUEL OIL SYSTEM UPGRADE, DEER ISLAND TREATMENT PLANT DELETE CONDUIT AND WIRE FOR PANEL RELOCATION OF POWER AND CONTROL WIRES IN LIEU OF THROUGH THE DIGESTER GAS SUPPORT ROOM.	7061A	3	J.F. WHITE CONTRACTING CO.	(\$62,900.53)
C-7.	05/24/17	HEADWORKS DUCT CLEANING AND REPAIR AWARD OF A CONTRACT TO THE LOWEST RESPONSIVE BIDDER FOR DUCT CLEANING AND REPAIRS AT VARIOUS HEADWORKS LOCATIONS FOR A TERM OF 180 CALENDAR DAYS.	OP-336	AWARD	MERRIMACK VALLEY CONTRACTORS, INC.	\$773,000.00
C-8.	05/30/17	WESTERN OPERATIONS FACILITIES GROUNDSKEEPING SERVICES AWARD OF A CONTRACT TO THE LOWEST RESPONSIVE BIDDER FOR THE WESTERN OPERATIONS FACILITIES GROUNDSKEEPING SERVICES FOR A TERM OF 610 CALENDAR DAYS.	OP-350	AWARD	M. NEVES, INC.	\$90,000.00
C-9.	05/30/17	VALVE AND PIPING REPLACEMENTS VARIOUS FACILITIES DEER ISLAND TREATMENT PLANT FURNISH AND INSTALL A TEMPORARY BY-PASS PIPING SECTION; DEMOLISH, FURNISH AND INSTALL ONE 42-INCH BUTTERFLY VALVE ON THE RETURN SLUDGE LINE PIPING SYSTEM IN THE PRIMARY CLARIFIER CROSS GALLERY; INCREASE THE FIRE DETAIL WATCH ALLOWANCE; DEMOLISH AND INSTALL THREE 16-INCH ELBOWS ON THE WSL PIPING SYSTEM.	7275	7	CARLIN CONTRACTING COMPANY, INC.	\$146,898.84

PURCHASING DELEGATED AUTHORITY ITEMS MAY 1 - 31, 2017

NO.	DATE OF AWARD	TITLE AND EXPLANATION	CONTRACT	AMENDMENT	COMPANY	FINANCIAL IMPACT
P-1.	05/03/17	PURCHASE OF 288 UNINTERRUPTIBLE POWER SUPPLY BATTERIES AWARD OF A PURCHASE ORDER TO THE LOWEST RESPONSIVE BIDDER FOR THE PURCHASE OF 288 UNINTERRUPTIBLE POWER SUPPLY BATTERIES FOR THE DEER ISLAND TREATMENT PLANT.	WRA-4860		ENERGY CONTROL SYSTEMS, INC.	\$35,611.20
P-2.	05/03/17	MAINTENANCE AND SUPPORT OF SYMANTEC ENTERPRISE VAULT FILE SYSTEM ARCHIVING AND CLEARWELL IDENTIFICATION AND COLLECTION LICENSES AWARD OF A PURCHASE ORDER UNDER STATE BLANKET CONTRACT TO THE LOWEST RESPONSIVE BIDDER FOR THE MAINTENANCE AND SUPPORT OF THE SYMANTEC ENTERPRISE VAULT FILE SYSTEM ARCHIVING AND CLEARWELL IDENTIFICATION AND COLLECTION LICENSES FOR THE TIME PERIOD OF MAY 22, 2017 THROUGH MAY 21, 2018.	WRA-4372Q		SHI INTERNATIONAL CORP.	\$50,726.00
P-3.	05/05/17	ONE INSTRUMENTATION CONTROL PANEL AWARD OF A PURCHASE ORDER TO THE LOWEST RESPONSIVE BIDDER FOR THE PURCHASE OF ONE INSTRUMENTATION CONTROL PANEL FOR THE WILLIAM A. BRUTSCH WATER TREATMENT FACILITY.	WRA-4354		AARON ASSOCIATES OF CT, INC.	\$95,600.00
P-4.	05/09/17	LANDESK MANAGEMENT SUITE MAINTENANCE AND TECHNICAL SUPPORT AWARD OF A PURCHASE ORDER UNDER STATE BLANKET CONTRACT TO THE LOWEST RESPONSIVE BIDDER FOR LANDESK ENTERPRISE MANAGEMENT SUITE MAINTENANCE AND TECHNICAL SUPPORT FOR THE TIME PERIOD OF MAY 21, 2017 THROUGH MAY 20, 2018.	WRA-4365Q		PCMG, INC.	\$56,050.46
P-5.	05/09/17	HEWLETT PACKARD ENTERPRISE SERVERS AND STORAGE AWARD OF A PURCHASE ORDER TO THE LOWEST RESPONSIVE BIDDER FOR HEWLETT PACKARD ENTERPRISE SERVERS AND STORAGE FOR THE COMMVAULT CENTRALIZED BACKUP AND RECOVERY SYSTEM PROJECT.	WRA-4344		PEACOCK ENTERPRISES, INC.	\$101,258.00
P-6.	05/16/17	PURCHASE OF 60 BOLTED MANHOLE FRAME AND COVER ASSEMBLIES AWARD OF A SOLE SOURCE PURCHASE ORDER FOR THE PURCHASE OF 60 BOLTED MANHOLE FRAME AND COVER ASSEMBLIES.			E.J. USA, INC.	\$26,073.00
P-7.	05/16/17	MAINTENANCE AND SUPPORT FOR PROCESS INFORMATION SOFTWARE AWARD OF A SOLE SOURCE PURCHASE ORDER FOR THE MAINTENANCE AND SUPPORT OF PROCESS INFORMATION SOFTWARE FOR THE TIME PERIOD OF JULY 1, 2017 THROUGH JUNE 30, 2018			OSI SOFTWARE, INC.	\$81,247.50
P-8.	05/16/17	MICROSOFT OFFICE PROFESSIONAL PLUS 2016 LICENSES AND SUPPORT AWARD OF A PURCHASE ORDER UNDER STATE BLANKET CONTRACT TO THE LOWEST RESPONSIVE BIDDER FOR MICROSOFT OFFICE PROFESSIONAL PLUS 2016 LICENSES AND SUPPORT	WRA-4356Q		CDW-G, LLC	\$451,784.40
P-9.	05/22/17	PURCHASE OF ONE NEW 5TH WHEEL TRACTOR CAB AWARD OF A PURCHASE ORDER TO THE LOWEST RESPONSIVE BIDDER FOR THE PURCHASE OF ONE NEW 5TH WHEEL TRACTOR CAB.	WRA-4371		BOSTON FREIGHTLINER, INC.	\$123,768.00
P-10.	05/22/17	SUPPLY AND DELIVERY OF SODIUM HYPOCHLORITE AMENDMENT NO. 1 TO PURCHASE ORDER FOR THE SUPPLY AND DELIVERY OF SODIUM HYPOCHLORITE TO THE JOHN J. CARROLL WATER TREATMENT PLANT FOR THE TIME PERIOD OF JUNE 7, 2017 THROUGH JULY 16, 2017.	WRA-4226	AMEND #1	BORDEN & REMINGTON CORP.	\$155,870.00
P-11.	05/22/17	COMMVAULT LICENSES AND IMPLEMENTATION SERVICES AWARD OF A PURCHASE ORDER TO THE LOWEST RESPONSIVE BIDDER FOR COMMVAULT LICENSES AND IMPLEMENTATION SERVICES.	WRA-4342		ePLUS TECHNOLOGY, INC.	\$174,843.00
P-12.	05/22/17	UPGRADE OF THREE VARIABLE FREQUENCY DRIVE INVERTERS AWARD OF A PURCHASE ORDER TO THE LOWEST RESPONSIVE FOR THE UPGRADE OF THREE VARIABLE FREQUENCY DRIVE INVERTERS FOR THE BRAINTREE WEYMOUTH INTERMEDIATE PUMP STATION.	WRA-4374		U.S. ELECTRICAL SERVICES, INC.	\$299,835.00
P-13.	05/23/17	CONTINUOUS MONITORING OF CHLOROPHYLL AWARD OF A SOLE SOURCE PURCHASE ORDER TO CONTINUE PERMIT-REQUIRED CONTINUOUS CHLOROPHYLL (ONLY) MONITORING AT THE BUOY OFF OF CAPE ANN FOR THE TIME PERIOD OF JULY 1, 2017 TO JUNE 30, 2018.			BOWDOIN COLLEGE	\$35,000.00
P-14.	05/23/17	CONTINUOUS MONITORING (NOT INCLUDING CHLOROPHYLL) AWARD OF A SOLE SOURCE PURCHASE ORDER TO CONTINUE PERMIT-REQUIRED CONTINUOUS OCEANOGRAPHIC MONITORING (NOT INCLUDING CHLOROPHYLL) AT THE BUOY OFF OF CAPE ANN FOR THE TIME PERIOD JULY 1, 2017 TO JUNE 30, 2018.			UNIVERSITY OF MAINE	\$70,000.00
P-15.	05/25/17	UPGRADE OF 4G ROUTERS AWARD OF A SOLE SOURCE PURCHASE ORDER UNDER STATE BLANKET CONTRACT FOR THE UPGRADE TO 4G ROUTERS FOR MWRA CONTAMINANT WARNING SYSTEM LOCATIONS, INSTALLATION SERVICES AND ONE YEAR MAINTENANCE AND SUPPORT.			VERIZON BUSINESS NETWORK SERVICES, INC.	\$44,167.86
P-16.	05/25/17	SUPPLY AND DELIVERY OF ULTRA-LOW-SULFUR #2 DIESEL FUEL AWARD OF A PURCHASE ORDER TO THE LOWEST RESPONSIVE BIDDER FOR THE SUPPLY AND DELIVERY OF 468,000 GALLONS OF ULTRA-LOW-SULFUR #2 DIESEL FUEL FOR THE DEER ISLAND TREATMENT PLANT.	WRA-4385		GLOBAL MONTELLO GROUP	\$789,076.40


STAFF SUMMARY

TO: Board of Directors
FROM: Frederick A. Laskey, Executive Director
DATE: June 28, 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 May 2017, comparing actual spending and revenue to the FY17 budget.

DISCUSSION:

Total year-to-date variance is \$11.9 million lower than budget mainly due to lower direct expenses of \$5.5 million, lower indirect expenses of \$436,000, and higher revenues of \$5.9 million.

In May, \$5.8 million was transferred to the Defeasance Account as result of continued low variable rate environment, the favorable impact of the August 2016 defeasance, lower SRF funding than planned, and borrowing senior debt in May scheduled for January 2017. The defeasance account balance as of May is \$20.1 million. The continued use of defeasances as part of our multi-year rates management strategy is critically important for us to meet the Advisory Board's goal of keeping annual rate increases under 4% in the out years.

Without the transfer of the \$20.1 million in debt service savings to the Defeasance Account, the total year-to-date budget variance through May would have been \$32.0 million.

The year-end favorable variance is projected at \$37.3 million, of which \$26.0 million is related to debt service. Beyond debt service savings, staff project a surplus of approximately \$11.3 million at year-end of which \$4.2 million would be from lower direct expenses, \$501,000 from lower indirect expenses, \$392,000 from Debt Service Assistance and \$6.2 million from greater than budgeted revenues, mostly related to additional unbudgeted water revenue due to the drought.

Based on Board approval on May 16, a \$25.0 million defeasance was executed on June 15, 2017, which will provide rate relieve in FY22. The effect of the defeasance is built into the FY18 planning estimates. As every year, staff will come to the Board after the year-end close with a recommendation as to the use of the remaining surplus.

FY17 Current Expense Budget

The expense variances through May 2017 by major budget category were:

- Net Lower Direct Expenses of \$5.5 million or 2.7%. Spending is lower primarily for Wages and Salaries, Utilities, Other Services, Fringe Benefits, Other Materials, and Training & Meetings. This is offset by higher spending for Overtime, Professional Services, Worker's Compensation, Maintenance, and Chemicals.
- Lower Indirect Expenses of \$436,000 or 0.9% for lower Insurance costs and Watershed reimbursements.

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

	FY17 Budget YTD	FY17 Actual YTD	\$ Variance	% Variance
Direct Expenses	\$202.6	\$197.1	-\$5.5	-2.7%
Indirect Expenses	\$30.9	\$30.5	-\$0.4	-1.4%
Debt Service	\$408.1	\$408.1	\$0.0	0.0%
Total	\$641.6	\$635.6	-\$6.0	-0.9%

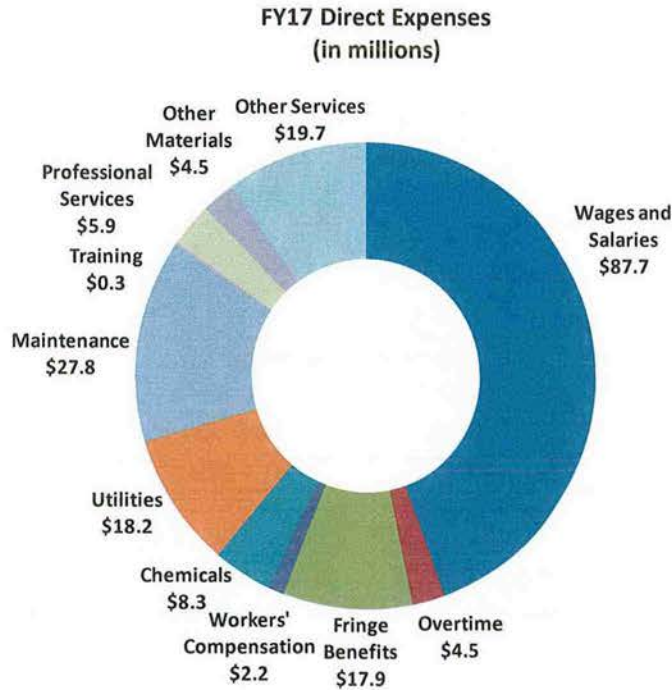
Totals may not add due to rounding

Total Revenues of \$669.8 million were \$5.9 million over budget reflecting \$4.8 million receipt for water usage related to the drought, \$366,000 for disposal of surplus material, \$299,000 for a class action lawsuit settlement for derivative agreements, and \$168,000 for energy efficiency incentives from the utility companies. This is offset by lower Investment Income of \$60,000 for unanticipated calls re-invested at lower rates.

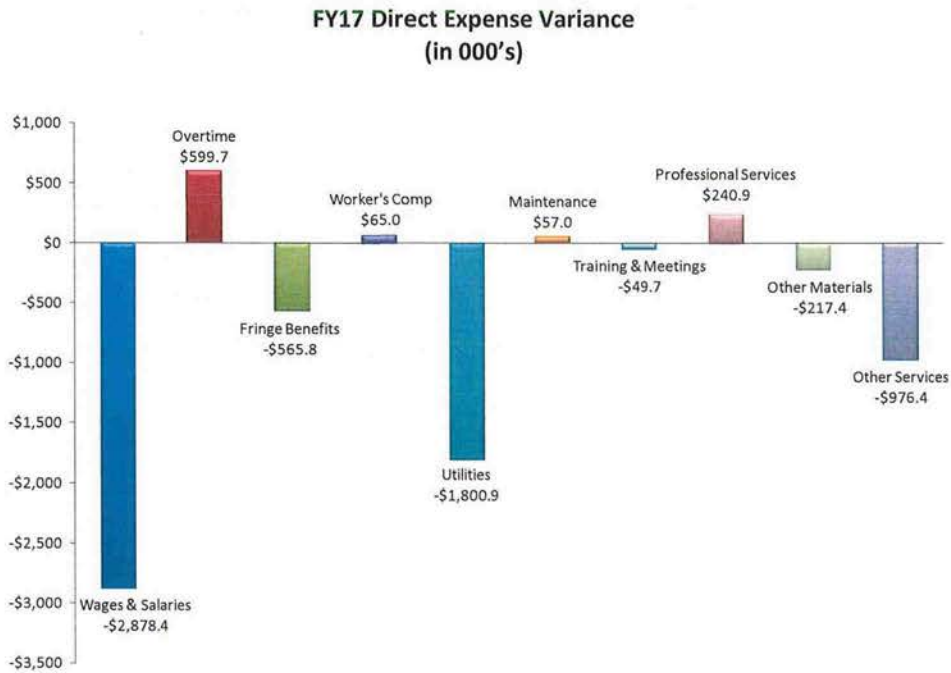
Please refer to Attachment 1 for a more detailed comparison by line item of the budget variances for the year to date.

Direct Expenses

Year-to-date direct expenses totaled \$197.1 million, \$5.5 million or 2.7% less than budgeted.



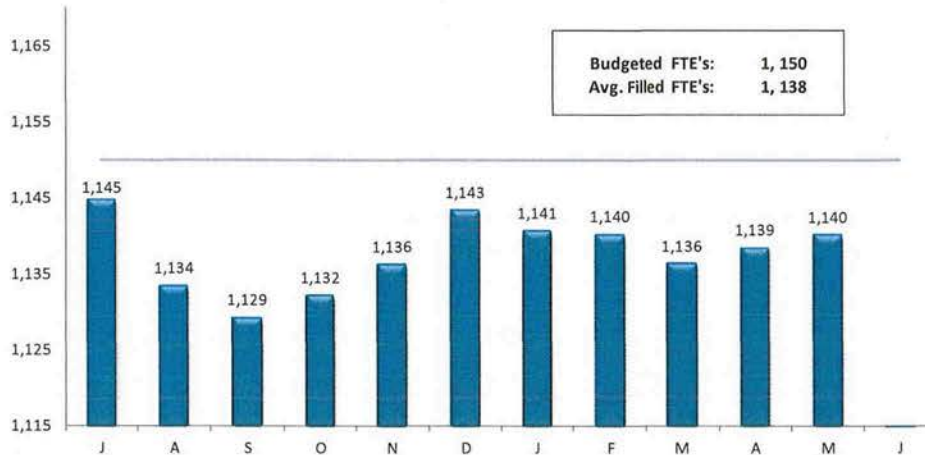
Lower than budgeted spending in Wages and Salaries, Utilities, Other Services, Fringe Benefits, Other Materials, and Training & Meetings, was offset by higher spending for Overtime, Professional Services, Worker's Compensation, and Maintenance.



Wages and Salaries

Wages and Salaries were under budget by \$2.9 million or 3.2% 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 May were 1,138, which was 12 positions lower than the 1,150 FTEs budgeted.

FY17 MWRA Full Time Equivalent (FTE) Position Trend



Utilities

Utilities were under budget by \$1.8 million or 9.0%. The major driver of the underspending is \$1.3 million in electricity cost due to lower than budgeted pricing and the Deer Island Treatment Plant higher self generation during the HECC cable location work. As of the end of April (Year to Date through May is not yet available), the lower volume variance at Deer Island was approximately \$777,000, and the lower unit pricing from Direct Energy and Eversource have yielded a favorable price variance of \$487,000. In addition, Diesel Fuel is under spent by \$411,000 primarily due to lower pricing in Wastewater Operations, and timing of deliveries at Deer Island. As of the end of April (Year to Date through May is not yet available), the lower price variance for Wastewater Operations facilities was \$212,000 and the lower volume variance was \$177,000.

Other Services

Other Services spending was lower than budget by \$976,000 or 4.7% due to lower spending of \$424,000 for sludge pelletization services because of lower year to date quantities, and \$115,000 for Grit and Screenings disposal services also primarily due to lower quantities; \$226,000 for Space/Lease Rentals due to lower escrow payments at the Chelsea Facility for taxes and insurance, and lower than budget pass-through maintenance cost at the Charlestown Navy Yard Facility; and \$185,000 for Other Services primarily for timing of community lead service assistance.

Fringe Benefits

Fringe Benefit spending was lower than budgeted by \$566,000 or 3.1% primarily for lower Health Insurance costs of \$499,000 due to fewer employees and retirees than budgeted participating in health insurance plans, and the shift from family to individual plans.

Other Materials

Other Materials were lower than budget by \$217,000 or 4.6% mainly due to Vehicle Expenses of \$256,000 due to lower than budgeted fuel prices; Computer Hardware of \$60,000; Postage of \$58,000 due to timing of refilling postage meters in the mail room, and Computer Software of \$41,000. This is offset by higher spending for Lab & Testing Supplies of \$110,000; Other Materials of \$41,000 primarily for gravel at the Clinton Landfill; and Health & Safety of \$35,000.

Training & Meetings

Training & Meetings was underspent by \$50,000 or 13.8%, primarily in Fleet Services due to timing of training.

Overtime

Overtime expenses were higher than budgeted by \$600,000 or 15.5%, mainly due to Deer Island related to the HEEC cable relocation project and wet weather events, Metro Maintenance due to off-hour maintenance work and wet weather events, Metro Water Operations for coverage, Water Valve maintenance, and Wastewater Operations for wet weather events. Some examples of off-hour maintenance work have been replacing cable trays and wiring for pumps at Chestnut Hill Underground Pump Station, Reservoir Road electrical switchgear replacement, carpet replacement at the Chelsea Administration building, and rollout of the MAXIMO upgrade.

Professional Services

Professional Services were overspent by \$241,000 or 4.2%. Within Professional Services, Legal Services was overspent primarily in the Law Division. This was offset by underspending in Other Services was primarily in Finance for finance/investment services; and Lab and Testing Analysis in EnQual – Wastewater for harbor monitoring.

Worker's Compensation

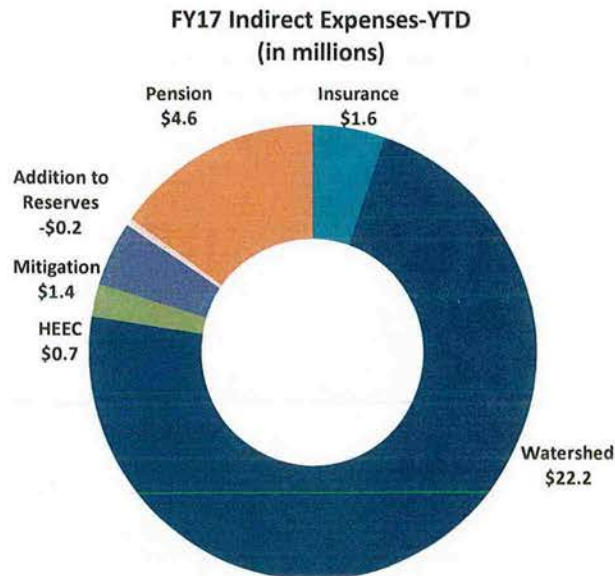
Year-to-Date Worker's Compensation expenses were higher than budget by \$65,000 or 3.0%. For the month of May, actuals costs were \$85,000 lower than budgeted. Medical reserves decreased \$47,000 and expense reserves decreased \$22,000 in May.

Maintenance

Maintenance was overspent by \$57,000 or 0.2%. Within maintenance, the Nut Island fire incident which was not budgeted this year, accounts for a \$410,000 overspending. Excluding the Nut Island fire incident, maintenance was underspent by approximately \$350,000 or 1.2%. While there are a number of variances within maintenance, the underspending is primarily due to timing of contracts for electrical services and timing of instrumentation services.

Indirect Expenses

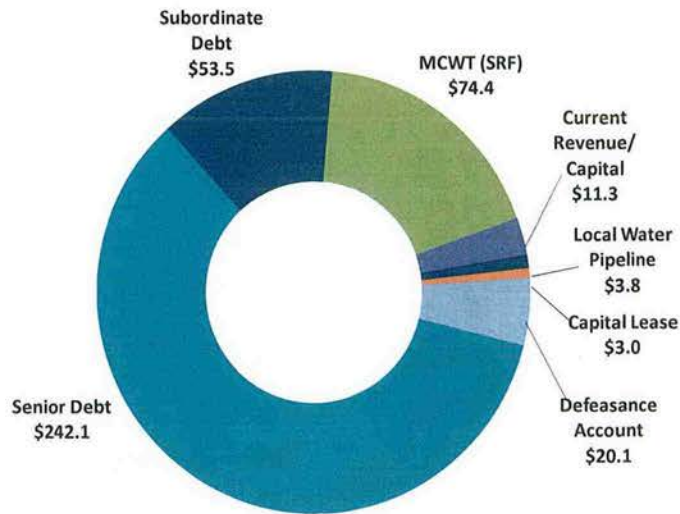
For the fiscal year to date, Indirect Expenses totaled \$30.5 million, \$436,000 or 1.4% lower than budget, related to lower than budgeted insurance costs of \$227,000; an over-accrual in FY16 of \$55,000 for Watershed management operating expenses; and lower PILOT payments of \$148,000.



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.

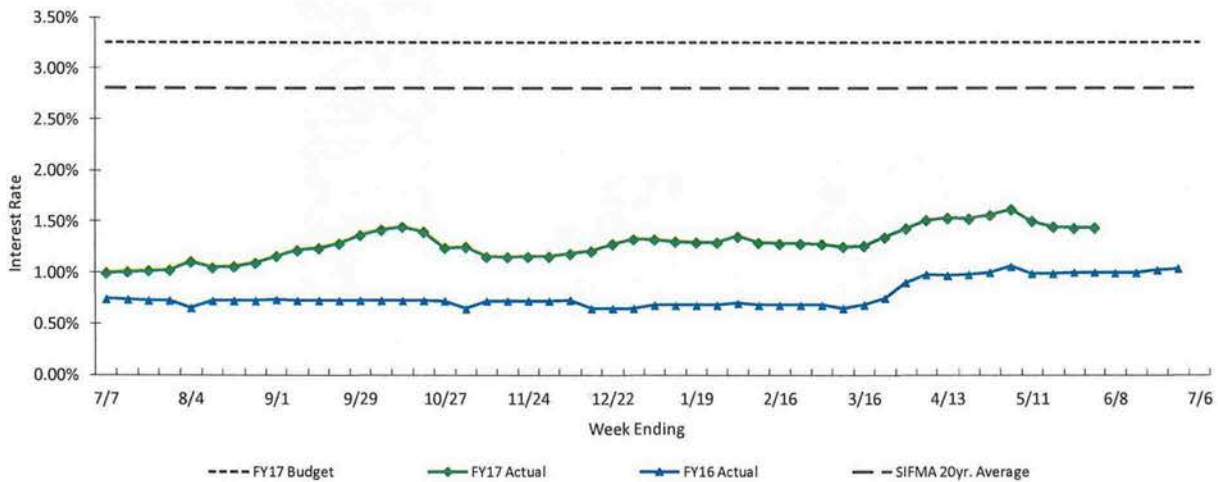
**FY17 Debt Expenses-YTD
(in millions)**



Debt Service expenses for the fiscal year totaled \$408.1 million, which is at the budgeted level after the transfer of \$20.1 million of a favorable year-to-date variance to the Defeasance Account. The short-term rates related variance is \$10.0 million year-to-date. Additionally, the Authority recognized \$5.4 million in year-to-date underspending that is the result of the favorable impact of the August 2016 defeasance, lower SRF funding than planned, and delaying the borrowing senior debt to May versus January.

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

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



Revenue & Income

Total Revenue for the fiscal year totaled \$669.8 million, \$5.9 million or 0.9% higher than budget.

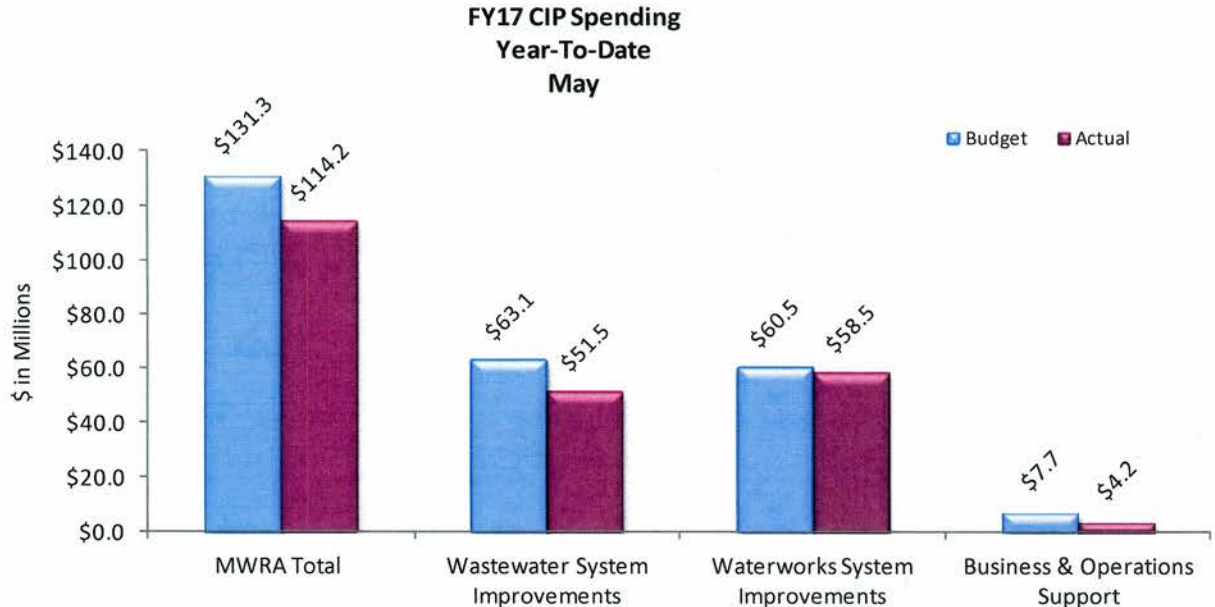
The higher than budgeted non-rate Revenue was driven by the receipt \$4.8 million for water usage related to the summer drought; \$366,000 for the disposal of surplus materials; \$299,000 for a class action lawsuit settlement for derivative agreements; and \$168,000 for energy efficiency incentives from the utility companies. Investment Income is over budget by \$60,000 as result of higher short-term rates offset by losses on unanticipated bond calls.

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

FY17 Capital Improvement Program

Capital expenditures in FY17 total \$114.2 million through the end of May, \$17.1 million or 13.0% 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 \$96.8 million, \$6.2 million or 6.0% under budget.



Overall underspending reflects the underspending of \$11.7 million in Wastewater Improvements, \$2.0 million in Waterworks Improvements, and \$3.5 million in Business and Operations Support.

FY17 Year-to-date spending By Program:

\$ in Millions	Budget	Actuals	\$ Var.	% Var.
Wastewater System Improvements				
Interception & Pumping	21.3	17.4	(3.9)	-18.3%
Treatment	15.6	23.4	7.8	49.8%
Residuals	0.3	0.0	(0.3)	N/A
CSO	7.1	7.6	0.5	6.5%
Other	18.8	3.1	(15.7)	-83.5%
Total Wastewater System Improvements	\$63.1	\$51.5	-\$11.7	-18.5%
Waterworks System Improvements				
Drinking Water Quality Improvements	2.6	0.9	(1.7)	-65.3%
Transmission	24.5	25.1	0.6	2.6%
Distribution & Pumping	26.3	21.1	(5.2)	-19.7%
Other	7.0	11.3	4.3	N/A
Total Waterworks System Improvements	\$60.5	\$58.5	-\$2.0	-3.3%
Business & Operations Support	\$7.7	\$4.2	(\$3.5)	-45.1%
Total MWRA	\$131.3	\$114.2	(\$17.1)	-13.0%

Totals may not add due to rounding

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

Other Wastewater: Net underspending of \$15.7 million

- \$15.7 million for Community Infiltration/Inflow (I/I) due to less than anticipated requests for grants and loans.

Wastewater Treatment: Net overspending of \$7.8 million

- \$1.8 million for Deer Island Primary/Secondary Clarifier Rehabilitation legal settlement.
- \$2.3 million for North Main Pump Station and Winthrop Terminal Facility Butterfly Valve Replacements, \$1.8 million for Deer Island Power System Improvements, \$1.1 million for Clinton Phosphorus Reduction Construction, and \$0.8 million for Digester Sludge Pump Phase 2 due to contractor progress.
- \$0.7 million for Electrical Upgrades Construction 4 and Secondary Reactor VFDs due to timing of final work in FY17 that had been budgeted in FY16.
- The overspending was partially offset by \$0.6 million for Clinton Roof Rehabilitation due to updated schedule.

Water Distribution and Pumping: Net underspending of \$5.2 million

- \$7.2 million for Section 89/29 Redundancy Phase 1C and 2 Construction and \$2.3 million for SEH Section 111 Construction Phase 1 and 2 for changes in schedules.
- \$0.8 million for Chestnut Hill Gatehouse No. 1 Repairs Construction due to schedule change.
- The underspending was partially offset by overspending of \$4.4 million for Section 89/29 Redundancy Phase 1B due to contractor progress and \$1.2 million

for Spot Pond Supply Mains due to additional work for Webster Avenue Bridge Pipe Rehabilitation.

Waterworks Other: Net overspending of \$4.3 million

- \$4.4 million for Local Water Community Assistance due to greater than budgeted community requests for loans.
- This overspending was partially offset by \$0.2 million for updated schedule for Carroll WTP SCADA/PLC Upgrades.

Interception & Pumping: Net underspending of \$3.9 million

- \$3.5 million for Chelsea Creek Headworks Upgrades Construction and Engineering Services due to a later than budgeted Notice-to-Proceed date.
- \$0.4 million on Caruso Pump Station Improvements Construction.

Drinking Water Quality Improvements: Net underspending of \$1.7 million

- \$1.2 million for updated schedule for Marlborough Maintenance Facility and final balancing change order for Southborough Water Quality Upgrades, and Spot Pond Covered Storage Facility Design/Build of \$0.2 million due to construction delays, and other smaller projects totaling \$0.4 million

Waterworks Transmission: Net overspending of \$0.6 million

- \$1.3 million for Wachusett Aqueduct Pump Station Construction and \$0.6 million for the Hatchery Pipeline Construction and ESDC/REI due to contractor progress.
- The overspending was partially offset by \$0.4 million caused by less than anticipated progress for the Rosemary Brook Siphon Building Repairs due to delays in obtaining specialty items for work, and \$0.7 million for reduced scope of work for Sudbury Aqueduct MEPA review.

Combined Sewer Overflow: Net Overspending of \$0.5 million

- \$0.6 million primarily for Cambridge Sewer Separation Project due to updated costs of final work.

Construction Fund Balance

The construction fund balance was at \$126.4 million as of the end of May. Commercial Paper availability was at \$222.0 million to fund construction projects.

Attachment 1 – Variance Summary May 2017

Attachment 2 – Current Expense Variance Explanations

Attachment 3 – Capital Improvement Program Variance Explanations

Attachment 4 – FY17 Budget vs. FY17 Projections

ATTACHMENT 1

	May 2017 Year-to-Date					
	Period 11 YTD Budget	Period 11 YTD Actual	Period 11 YTD Variance	%	FY17 Approved	% Expended
	EXPENSES					
WAGES AND SALARIES	\$ 90,534,457	\$ 87,656,096	\$ (2,878,361)	-3.2%	\$ 101,858,897	86.1%
OVERTIME	3,872,820	4,472,481	599,661	15.5%	4,192,676	106.7%
FRINGE BENEFITS	18,477,312	17,911,496	(565,816)	-3.1%	20,242,323	88.5%
WORKERS' COMPENSATION	2,148,841	2,213,843	65,002	3.0%	2,344,190	94.4%
CHEMICALS	8,273,520	8,272,780	(740)	0.0%	9,110,407	90.8%
ENERGY AND UTILITIES	20,037,002	18,236,136	(1,800,866)	-9.0%	21,541,077	84.7%
MAINTENANCE	27,779,441	27,836,435	56,994	0.2%	31,080,642	89.6%
TRAINING AND MEETINGS	360,834	311,128	(49,706)	-13.8%	435,481	71.4%
PROFESSIONAL SERVICES	5,692,744	5,933,628	240,884	4.2%	6,531,939	90.8%
OTHER MATERIALS	4,741,308	4,523,898	(217,410)	-4.6%	6,219,630	72.7%
OTHER SERVICES	20,685,185	19,708,747	(976,438)	-4.7%	22,974,855	85.8%
TOTAL DIRECT EXPENSES	\$ 202,603,464	\$ 197,076,668	\$ (5,526,797)	-2.7%	\$ 226,532,117	87.0%
INDIRECT EXPENSES						
INSURANCE	\$ 1,844,213	\$ 1,617,211	\$ (227,002)	-12.3%	\$ 1,997,898	80.9%
WATERSHED/PILOT	22,422,709	22,219,287	(203,422)	-0.9%	24,291,268	91.5%
BECo PAYMENT	714,331	722,934	8,603	1.2%	773,859	93.4%
MITIGATION	1,438,154	1,424,123	(14,031)	-1.0%	1,558,000	91.4%
ADDITIONS TO RESERVES	(154,839)	(154,839)	-	0.0%	(167,742)	92.3%
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	\$ 30,897,192	\$ 30,461,340	\$ (435,852)	-1.4%	\$ 37,961,957	80.2%
DEBT SERVICE						
STATE REVOLVING FUND	\$ 79,145,589	\$ 74,352,586	\$ (4,793,003)	-6.1%	\$ 86,971,915	85.5%
SENIOR DEBT	247,388,171	242,099,663	(5,288,508)	-2.1%	268,472,556	90.2%
CORD FUND	-	-	-	---	-	---
DEBT SERVICE ASSISTANCE	-	-	-	---	(873,804)	---
CURRENT REVENUE/CAPITAL	11,261,538	11,261,538	-	0.0%	12,200,000	92.3%
SUBORDINATE MWRA DEBT	63,496,956	63,496,956	-	0.0%	69,997,992	90.7%
LOCAL WATER PIPELINE CP	3,830,070	3,830,070	-	0.0%	4,149,242	92.3%
CAPITAL LEASE	2,969,593	2,969,593	-	0.0%	3,217,060	92.3%
DEBT PREPAYMENT	-	-	-	---	10,994,960	0.0%
VARIABLE DEBT	-	(10,029,069)	(10,029,069)	---	-	0.0%
DEFESANCE ACCOUNT	-	20,110,581	20,110,581	---	-	0.0%
TOTAL DEBT SERVICE	\$ 408,091,917	\$ 408,091,917	\$ -	0.0%	\$ 455,129,921	89.7%
TOTAL EXPENSES	\$ 641,592,573	\$ 635,629,925	\$ (5,962,649)	-0.9%	\$ 719,623,995	88.3%
REVENUE & INCOME						
RATE REVENUE	\$ 641,426,307	\$ 641,426,307	\$ -	0.0%	\$ 694,878,500	92.3%
OTHER USER CHARGES	8,123,306	8,169,144	45,838	0.6%	8,752,834	93.3%
OTHER REVENUE	5,757,511	11,600,886	5,843,375	101.5%	6,519,171	178.0%
RATE STABILIZATION	-	-	-	---	-	---
INVESTMENT INCOME	8,520,471	8,580,926	60,455	0.7%	9,473,490	90.6%
TOTAL REVENUE & INCOME	\$ 663,827,595	\$ 669,777,263	\$ 5,949,667	0.9%	\$ 719,623,995	93.1%

ATTACHMENT 2
Current Expense Variance Explanations

Total MWRA	FY17 Budget YTD May	FY17 Actuals YTD May	FY17 YTD Actual vs. FY17 Budget		Explanations
			\$	%	
Direct Expenses					
Wages & Salaries	90,534,457	87,656,096	(2,878,361)	-3.2%	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 1,138, which was 12 positions lower than the 1,150 FTEs budgeted.
Overtime	3,872,820	4,472,481	599,661	15.5%	Higher spending at DITP related to the HEEC cable relocation project and wet weather, Metro Maintenance due to off-hour maintenance work and wet weather, Metro Water Ops for coverage, and Water Valve Maintenance. This is offset by lower spending in Wastewater Operations due to lower than anticipated OT associated with the NMPS work at DITP, offset by higher spending for wet weather.
Fringe Benefits	18,477,312	17,911,496	(565,816)	-3.1%	Lower than budget mainly in Health Insurance of \$499,000, due to fewer than budgeted participation and the changes between family and individual plans. Unemployment Insurance, Medicare, and Dental insurance also underspent due to fewer than budgeted positions.
Worker's Compensation	2,148,841	2,213,843	65,002	3.0%	Overspending due to higher compensation payments of \$482,000 and management costs of \$20,000. This is offset by lower medical payments of \$436,000. In May actual spending was \$85,000 under budget. Medical reserves decreased \$47,000 and expense reserves decreased \$22,000. It is important to note that spending on this line item can change significantly depending on future claims and severity of cases.
Chemicals	8,273,520	8,272,780	(740)	0.0%	Underspending on Soda Ash of \$89,000; Liquid Oxygen of \$67,000; Hydrofluosilic Acid of \$38,000; and Aqua Ammonia of \$30,000. This is offset by higher spending on Sodium Hypochlorite of \$113,000 (higher than budgeted cost for new contracts); Carbon Dioxide of \$40,000; Polymer of \$35,000; Other Oxidizers of \$22,000; Ferric Chloride of \$22,000; Sodium Bisulfite of \$20,000.
Utilities	20,037,002	18,236,136	(1,800,866)	-9.0%	Underspending in Electricity of \$1.3 million primarily at DITP due to lower prices and being off grid during the HEEC cable location work; 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 \$411,000 primarily related to Wastewater Operations due to lower pricing and timing of deliveries and Water Operations due to one tank being offline at Gillis PS. Natural Gas is underspent \$114,000 primarily at the Carroll Plant and the Chelsea Facility, offset by overspending at B/W IPS.

ATTACHMENT 2
Current Expense Variance Explanations

Total MWRA	FY17 Budget YTD May	FY17 Actuals YTD May	FY17 YTD Actual vs. FY17 Budget		Explanations
			\$	%	
Maintenance	27,779,441	27,836,435	56,994	0.2%	Services were overspent by \$496,000 and Materials were underspent by \$441,000. Nut Island fire remediation efforts have costs \$410,000 in FY17 for both materials and services; primarily in Building & Grounds Services, Pipeline Services and Plant & Machinery Materials. Overspending in Plant & Machinery Services of \$406,000 at DITP; Pipeline Services of \$241,000 primarily for sewer manhole rehabilitation project and timing of paving of in-house work in the roadways; HVAC Services of \$202,000 primarily at the Carroll Plant; Computer Software/Licenses Upgrade of \$159,000 in MIS; offset by underspending in Specialized Equipment Services of \$212,000 in FOD Metro Maint. Underspending in Plant & Machinery Materials of \$430,000 at DI offset by overspending in FOD due to timing of a spare rotating assembly at DeLauri, carbon replacement at Hough's Neck, and unbudgeted parts for the South Boston CSO pumps and Clinton; HVAC Materials of \$349,000 at Deer Island for timing on the purchase of HVAC material like heat exchanger, chiller & condensing unit, heating coils, etc.; Electrical Services of \$251,000 at Deer Island and FOD Metro Maint for timing of new testing contract; and Pipeline Materials of \$143,000 in Water Pipeline Maint for the purchase of valves, pipe and fittings.
Training & Meetings	360,834	311,128	(49,706)	-13.8%	Underspending primarily in Fleet Services due to timing.
Professional Services	5,692,744	5,933,628	240,884	4.2%	Higher spending for Legal Services of \$253,000 in the Law Division. This is offset by lower spending on Other Services of \$44,000 primarily in Treasury and HR, offset by higher spending in MIS; and Lab & Testing Analysis of \$24,000 in EnQual - Wastewater.
Other Materials	4,741,308	4,523,898	(217,410)	-4.6%	Lower than budget spending for Vehicle Expenses of \$256,000 primarily due to lower fuel prices; Computer Hardware in MIS due to timing; Postage of \$42,000 due to timing of replenishing the postage meters; and Computer Software of \$39,000 in Operations - SCADA Maintenance group. This is offset by overspending in Lab & Testing of \$110,000 in Operations; Other Materials of \$64,000 primarily for gravel for Clinton landfill; and Health/Safety of \$35,000.
Other Services	20,685,185	19,708,747	(976,438)	-4.7%	Lower than budgeted Sludge Pelletization of \$424,000 due to lower year to date quantities; Space Lease/Rentals of \$226,000 due to lower escrow for Chelsea taxes and insurance, and pass through maintenance cost at CNY; Other Services of \$185,000 primarily for timing of community lead testing assistance; Grit and Screenings of \$115,000 due to lower quantities; and Telephone of \$76,000 in Operations associated with the increases in costs for the SCADA data lines to occur later than anticipated.
Total Direct Expenses	202,603,464	197,076,668	(5,526,796)	-2.7%	

ATTACHMENT 2
Current Expense Variance Explanations

Total MWRA	FY17 Budget YTD May	FY17 Actuals YTD May	FY17 YTD Actual vs. FY17 Budget		Explanations
			\$	%	
Indirect Expenses					
Insurance	1,844,213	1,617,211	(227,002)	-12.3%	Lower Claims than budgeted of \$222,000 and lower premiums of \$5,000.
Watershed/PILOT	22,422,709	22,219,287	(203,422)	-0.9%	Lower Watershed Reimbursement of \$55,000 due to over accrual at the end of FY16 as compared to actual invoiced paid and a lower PILOT payment due of \$148,000.
HEEC Payment	714,331	722,934	8,603	1.2%	
Mitigation	1,438,154	1,424,123	(14,031)	-1.0%	Actual inflation rate was 1.5% vs. 2.5% used for the budget.
Addition to Reserves	(154,839)	(154,839)	-	0.0%	
Pension Expense	4,632,624	4,632,624	-	0.0%	
Post Employee Benefits	-	-	-		
Total Indirect Expenses	30,897,192	30,461,340	(435,852)	-1.4%	
Debt Service					
Debt Service	408,091,917	408,091,917	-	0.0%	Through May staff have transferred \$20.1 million of a favorable YTD variance to the Defeasance Account. The short-term rates related variance is \$10.0 million YTD.
Debt Service Assistance	-	-	-		
Total Debt Service Expenses	408,091,917	408,091,917	-	0.0%	
Total Expenses	641,592,573	635,629,925	(5,962,648)	-0.9%	
Revenue & Income					
Rate Revenue	641,426,307	641,426,307	-	0.0%	
Other User Charges	8,123,306	8,169,144	45,838	0.6%	
Other Revenue	5,757,511	11,600,886	5,843,375	101.5%	\$4.8 M for sale of water due to the drought; \$366k from sale of surplus equipment; \$299k for settlement of class action lawsuit for derivative agreements; and \$168,000 for energy efficiency incentives from the utility companies
Rate Stabilization	-	-	-		
Investment Income	8,520,471	8,580,926	60,455	0.7%	Investment Income is over budget as result of higher short term rates offset by for unanticipated calls re-invested at lower rates.
Total Revenue	663,827,595	669,777,263	5,949,668	0.9%	
Net Revenue in Excess of Expenses	22,235,022	34,147,338	11,912,316		

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

	FY17 Budget YTD May	FY17 Actuals YTD May	YTD Actuals vs. Budget		Explanations
			\$	%	
Wastewater					
Interception & Pumping (I&P)	\$21,329	\$17,423	(\$3,906)	-18.3%	<u>Underspending</u> Chelsea Creek Headworks Upgrades Construction and Resident Engineering and Inspection: \$3.5M (NTP shifted 3 months; delayed start to resolve permitting issues) Caruso Pump Station Improvements Construction: \$0.4M (delayed installation of HVAC equipment due to unforeseen roof replacement) Other smaller projects totaling \$0.7M. <u>Offset Overspending</u> Chelsea Screenhouse Upgrades Construction and ESDC/REI: \$0.7M (work scheduled for FY16 performed in FY17)
Treatment	\$15,602	\$23,370	\$7,768	49.8%	<u>Overspending</u> NMPS & WTF Butterfly Valve Replacement: \$2.3M (project progress) Primary & Secondary Clarifier Rehab - Construction: \$1.8M (Portion of \$2.65M settlement with contractor. Remainder was retainage payment.) Power System Improvements - Construction: \$1.8M (project progress) Clinton Wastewater Treatment Plant Phosphorus Reduction - Construction: \$1.1M (project progress) Digested Sludge Pump Replacement - Phase 2: \$0.8M (project progress) Electrical Equipment Upgrades Construction 4: \$0.7M (work scheduled and budgeted for FY16 performed in FY17) Scum Skimmer Replacement: \$0.3M (payment of punch list items) WTF VFD Replacement - Construction: \$0.3M <u>Offset Underspending</u> Clinton Roofing Rehabilitation: \$0.6M and Gravity Thickener Center Column Replacement: \$0.3M (schedule changes) NMPS & WTF Butterfly Valve Replacement ESDC/REI: \$0.2M (less than anticipated need for services) Other smaller projects totaling \$0.2M.
Residuals	\$267	\$0	(\$267)	-	

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

	FY17 Budget YTD May	FY17 Actuals YTD May	YTD Actuals vs. Budget		Explanations
			\$	%	
CSO	\$7,116	\$7,578	\$463	6.5%	<u>Overspending</u> Cambridge Sewer Separation: \$0.6M (updated final costs and rescheduling of work by City of Cambridge) Other smaller projects totaling \$0.3M. <u>Offset Underspending</u> Reserved Channel Sewer Separation Design and Construction: \$0.4M (pending reconciliation of final costs; expected in June 2017)
Other Wastewater	\$18,817	\$3,104	(\$15,714)	-83.5%	<u>Underspending</u> I/I Local Financial Assistance: \$15.7M (less than anticipated requests for grants and loans). The annual CIP budget is based on prior average annual disbursements. Communities' requests for grants and loans are based on their own individual planned schedule of infiltration and inflow work and can vary greatly beyond the Authority's control.
Total Wastewater	\$63,131	\$51,475	(\$11,656)	-18.5%	
Waterworks					
Drinking Water Quality Improvements	\$2,617	\$907	(\$1,710)	-65.3%	<u>Underspending</u> CP7 Existing Facilities: \$1.2M (updated schedule for Marlborough Maintenance Facility and balancing change order for Southborough Lab) Spot Pond Covered Storage Facility: \$0.2M (Microwave tower installed. Installation of communication shelter ongoing.) Other smaller projects totaling \$0.4M.
Transmission	\$24,505	\$25,139	\$633	2.6%	<u>Overspending</u> Wachusett Aqueduct Pump Station: \$1.3M (project progress) Hatchery Pipeline Construction and ESDC/REI: \$0.6M (project progress) <u>Offset Underspending</u> Sudbury Aqueduct - MEPA Review: \$0.7M (reduced scope of work) Rosemary Brook Siphon Building Repair: \$0.4M (anticipated time extension due to additional restoration work)

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

	FY17 Budget YTD May	FY17 Actuals YTD May	YTD Actuals vs. Budget		Explanations
			\$	%	
Distribution & Pumping	\$26,328	\$21,144	(\$5,184)	-19.7%	<u>Underspending</u> NIH Section 89/29 Redundancy Phase 1C and Phase 2 Construction: \$7.2M SEH Redundancy Pipeline Section 111 Phase 1 and Phase 2 - Construction: \$2.3M (schedule changes) Chestnut Hill Gatehouse No. 1 Repairs - Construction: \$0.8M (schedule change) Weston Aqueduct Supply Mains Section 36/C/S9 - A11 Valve: \$0.2M (anticipated credit change order for less than estimated quantities of rock and contaminated soil, and timing of valve installation work) <u>Offset Overspending</u> NIH Section 89/29 Redundancy Phase 1B Construction and Design/ESDC: \$4.4M (project progress) Section 4 Webster Ave Bridge Pipe Rehab - Construction: \$1.2M (additional change order work based on redesign)
Other Waterworks	\$7,027	\$11,306	\$4,279	60.9%	<u>Overspending</u> Local Water System Assistance Program: \$4.4M (more than anticipated community requests for loans. The annual CIP budget is based on prior average annual disbursements. Communities' requests for loans are based on their own individual planned pipeline lining and/or replacement work and can vary greatly beyond the Authority's control.) <u>Offset Underspending</u> Waterworks SCADA/PLC Upgrades: \$0.2M schedule change)
Total Waterworks	\$60,476	\$58,494	(\$1,982)	-3.3%	
Business & Operations Support					
Total Business & Operations Support	\$7,693	\$4,222	(\$3,471)	-45.1%	<u>Underspending</u> MIS Projects: \$1.9M (timing of IT Strategic Plan implementation) As-Needed Design: \$1.1M (less than budgeted use of these contracts) Security Equipment: \$.6M (schedule change) <u>Offset Overspending</u> Equipment Purchase: \$0.4M (timing of vehicle purchases)
Total MWRA	\$131,301	\$114,192	(\$17,109)	-13.0%	

ATTACHMENT 4

TOTAL MWRA	FY17 Budget	FY17 Projection	Change FY17 Budget vs FY17 Projection	
			\$	%
EXPENSES				
WAGES AND SALARIES	\$ 101,858,897	\$ 98,876,200	\$ (2,982,697)	-2.9%
OVERTIME	4,192,676	4,693,199	500,523	11.9%
FRINGE BENEFITS	20,242,324	19,588,233	(654,091)	-3.2%
WORKERS' COMPENSATION	2,344,190	2,643,780	299,590	12.8%
CHEMICALS	9,110,407	9,259,739	149,332	1.6%
ENERGY AND UTILITIES	21,541,078	20,652,675	(888,403)	-4.1%
MAINTENANCE	31,080,642	31,237,369	156,727	0.5%
TRAINING AND MEETINGS	435,481	409,086	(26,395)	-6.1%
PROFESSIONAL SERVICES	6,531,939	6,784,941	253,002	3.9%
OTHER MATERIALS	6,219,630	6,204,993	(14,637)	-0.2%
OTHER SERVICES	22,974,855	21,954,208	(1,020,647)	-4.4%
TOTAL DIRECT EXPENSES	\$ 226,532,117	\$ 222,304,423	\$ (4,227,694)	-1.9%
INSURANCE	\$ 1,997,898	\$ 1,803,072	(194,826)	-9.8%
WATERSHED/PILOT	24,291,268	24,000,159	(291,109)	-1.2%
HEEC PAYMENT	773,859	773,859	-	0.0%
MITIGATION	1,558,000	1,542,800	(15,200)	-1.0%
ADDITIONS TO RESERVES	(167,742)	(167,742)	-	0.0%
RETIREMENT FUND	3,132,624	3,132,624	-	0.0%
ADDITIONAL PENSION DEPOSIT	1,500,000	1,500,000	-	0.0%
POSTEMPLOYMENT BENEFITS	4,876,050	4,876,050	-	0.0%
TOTAL INDIRECT EXPENSES	\$ 37,961,957	\$ 37,460,822	\$ (501,135)	-1.3%
STATE REVOLVING FUND	\$ 86,971,915	\$ 80,459,847	(6,512,068)	-7.5%
SENIOR DEBT	268,472,557	262,966,712	(5,505,845)	-2.1%
SUBORDINATE DEBT	69,997,992	69,997,992	-	0.0%
LOCAL WATER PIPELINE CP	4,149,242	858,685	(3,290,557)	-79.3%
CURRENT REVENUE/CAPITAL	12,200,000	12,200,000	-	0.0%
CAPITAL LEASE	3,217,060	3,217,060	-	0.0%
DEBT PREPAYMENT	10,994,960	10,994,960	-	
VARIABLE RATE SAVINGS	-	(10,729,069)	(10,729,069)	
DEFEASANCE ACCOUNT	-	26,037,537	26,037,537	
DEBT SERVICE ASSISTANCE	(873,804)	(1,265,384)	(391,580)	44.8%
TOTAL DEBT SERVICE	\$ 455,129,920	\$ 454,738,340	\$ (391,580)	-0.1%
TOTAL EXPENSES	\$ 719,623,994	\$ 714,503,585	\$ (5,120,409)	-0.7%
REVENUE & INCOME				
RATE REVENUE	\$ 694,878,500	\$ 694,878,500	-	0.0%
OTHER USER CHARGES	8,752,834	8,752,834	-	0.0%
OTHER REVENUE	6,519,171	12,819,171	6,300,000	96.6%
RATE STABILIZATION	-	-	-	
INVESTMENT INCOME	9,473,490	9,309,490	(164,000)	-1.7%
TOTAL REVENUE & INCOME	\$ 719,623,996	\$ 725,759,995	\$ 6,136,000	0.9%
VARIANCE:		\$ (11,256,410)	\$ (11,256,410)	



STAFF SUMMARY

TO: Board of Directors
FROM: Frederick A. Laskey, Executive Director
DATE: June 28, 2017
SUBJECT: Final FY18 Capital Improvement Program



COMMITTEE: Administration, Finance & Audit

 INFORMATION
 X VOTE


Kathy Soni, Budget Director

Louise Miller, Budget Manager
Preparer/Title


Thomas J. Durkin
Director, Finance

The Final FY18 Capital Improvement Program represents an update to the Proposed FY18 program presented to the Board in December 2016. The Final FY18 Capital Improvement Program proposes \$174.9 million in spending for FY18, of which \$82.7 million funds Waterworks System Improvements, \$84.3 million funds Wastewater System Improvements, and \$7.9 million funds Business and Operations Support.

With the completion of the court-ordered Combined Sewer Overflow project last year, the MWRA is shifting its capital expenditures to Asset Protection and Water Redundancy projects. Some of the larger Asset Protection projects with spending in FY18 include the Chelsea Creek Headworks Upgrades and Alewife Brook Pump Station Rehabilitation. The larger Water Redundancy projects, with spending in FY18, include the Wachusett Aqueduct Pump Station, Northern Intermediate High Pipeline Section 89&29 and Southern Extra High Pipeline Section 111.

The FY18 Capital Program includes \$1.4 billion for the tunnel option for the Metropolitan Tunnels long-term redundancy project, approved in concept by the Board of Directors in February 2017.

The FY18 Capital Program reaffirms MWRA's commitment to the community financing assistance programs on both the water and wastewater side. Local Water System Assistance Program Phase 3 Loans in the amount of \$292 million were added for FY18.

FY18 is the fifth and final year of the FY14-18 Cap which set baseline expenditures at \$718.0 million. Based on the Final FY18 Budget, baseline expenditures for FY14-18 are estimated at \$617.0 million, which is \$101.0 million or 14.1% lower than the Base-Line Cap.

RECOMMENDATION:

To approve the Final FY18 Capital Improvement Program with total budget of \$184.7 million for FY18 including \$174.9 million in project spending and community assistance and \$9.8 million in contingency.

DISCUSSION:

The Final FY18 Capital Improvement Program (CIP) represents an update to the Proposed FY18 program presented to the Board of Directors in December 2016.

Spending projections are the result of prioritizing projects, establishing updated cashflows, striking a balance between maintenance and infrastructure improvements, and ensuring there is adequate support for core operations while meeting all regulatory operating permit requirements.

In comparison with the Proposed FY18 CIP, the Final FY18 CIP increased at the overall program level by \$87.1 million, with a net \$3.7 million increase in the FY14-18 Cap period.

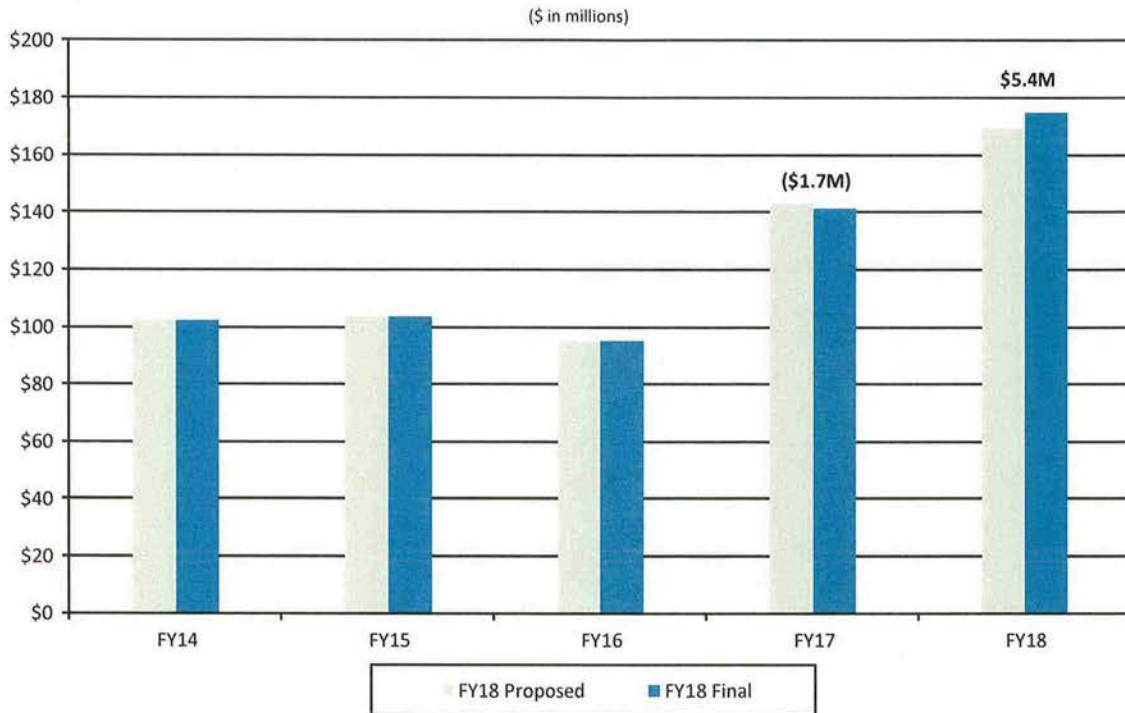
	FY18 Proposed Remaining Balance	FY18 Final Remaining Balance	\$ Change	% Change	FY18 Proposed FY14-18	FY18 Final FY14-18	FY14-18 \$ Change	FY14-18 % Change
Total Wastewater	\$ 1,241.2	\$ 1,310.4	\$ 69.2	5.6%	\$ 351.5	\$ 351.3	\$ (0.2)	-0.1%
Total Waterworks	\$ 2,027.5	\$ 2,045.9	\$ 18.4	0.9%	\$ 227.5	\$ 236.4	\$ 8.9	3.9%
Business & Operations Support	\$ 38.8	\$ 38.3	\$ (0.5)	-1.2%	\$ 34.2	\$ 29.3	\$ (5.0)	-14.6%
Total MWRA	\$ 3,307.5	\$ 3,394.6	\$ 87.1	2.6%	\$ 613.3	\$ 617.0	\$ 3.7	0.6%

Of the \$87.1 million added to the CIP, a net of \$70.6 million is due to revised cost estimates. Some of the larger increases in the CIP were: \$20.4 million for the upgrades at Nut Island Headworks based on the latest evaluation from January 2017, \$20 million for the Clarifier Rehabilitation project – phase 2, based on updated cost estimates from \$80 million to \$100 million, and \$9.3 million for the HVAC Replacement for updated cost estimates from \$29.4 million to \$38.7 million. The latest estimates at the Nut Island Headworks include upgrades to the odor control system for both the wet scrubbers and carbon absorbers and a series of electrical and mechanical upgrades. The largest decrease in the CIP was \$32.9 million for the construction of the WASM 3 pipeline rehabilitation with a scope change that includes more rehabilitation and less replacement, and a smaller diameter pipe than originally envisioned.

There were \$16.5 million in new projects added in Final FY18 CIP. \$12.9 million was added for the Peabody Pipeline project, \$2.3 million for the Quabbin Maintenance Garage and Washbay, and \$1.3 million for the Section 14 Water Pipeline relocation in Malden.

The following graph illustrates the incremental change by fiscal year between the Final FY18 and Proposed FY18 CIP for the Cap period.

Incremental Change FY18 Final and FY18 Proposed



The top 15 programs below account for nearly 90% or \$156.8 million of projected FY18 spending. Of the top 15 programs, \$84.5 million is classified as Asset Protection and \$34.2 million is classified as Water Redundancy.

Project	FY18 Expenditures
Facility Asset Protection	\$42.9
NIH Redundancy & Storage	\$20.7
I/I Local Financial Assistance	\$19.1
Cosgrove/Wachusett Redundancy	\$18.5
Southern Extra High Redundancy & Storage	\$13.5
Local Water Pipeline Improvement Loan Program	\$11.7
DI Treatment Plant Asset Protection	\$11.1
Carroll Water Treatment Plant	\$3.7
Residuals Asset Protection	\$2.9
Equipment Purchase	\$2.8
Clinton Wastewater Treatment Plant	\$2.6
Corrosion & Odor Control	\$2.5
NHS - Revere & Malden Pipeline Improvement	\$1.8
Section 80 Rehabilitation	\$1.7
Application Improvement Program	\$1.5
Top 15 Projects	\$156.8
Total FY18 Projected Spending	\$174.9

Major spending at the contract level is listed in the table below. The top 10 contracts account for nearly 68% or \$118.4 million of projected FY18 spending and include upgrades at Chelsea

Creek Headworks (\$27.0 million), construction of the new Wachusett Aqueduct Pump Station (\$17.9 million), and Section 89&29 Redundancy Phase 1C (\$12.8 million). Water Pipeline loans and I/I Local Financial Assistance are also major contributors to FY18 spending at \$18.0 million and \$11.3 million, respectively. Of the largest 10 contracts, \$34.7 million is classified as Asset Protection and \$41.4 million is classified as Water Redundancy.

Project	Contract	FY18 Expenditures
Facility Asset Protection	Chelsea Creek Upgrades - Constr	\$27.0
Local Water Pipeline Improvement	Local Water System Assistance Loans	\$18.0
Cosgrove Tunnel Redundancy	Wachusett Aqueduct Pump Station - Constr	\$17.9
NIH Redundancy & Storage	Section 89&29 Redundancy Phase 1C Constr	\$12.8
I/I Local Financial Assistance	Phase IX Grants	\$11.3
Local Water Pipeline Improvement	LWSAP Phase 3 Distributions	\$8.0
Facility Asset Protection	Alewife Brook Pump Stn Rehab - Constr	\$7.7
SEH Redundancy & Storage	Redundancy Pipeline Section III Ph 1-Constr	\$6.0
Local Water Pipeline Improvement	Lead Service Line Replace Loans	\$5.0
NIH Redundancy & Storage	Section 89 & 29 Redun Constr Phase 2	\$4.8
Top 10 Projects		\$118.4
Total FY18 Projected Spending		\$174.9

Major Planned Contract Awards for Fiscal Year 2018:

Contract awards are the principal driver of future cashflows. Through May FY17, 26 contracts totaling \$132.0 million were awarded. In FY18, 54 contracts totaling \$287.5 million are projected to be awarded. The largest fifteen projected contract awards are listed below and account for nearly 80% of the value of the expected awards:

Project	Contract #	Contract	NTP	Total Contract
DI Treatment Plant Asset Protection	7395	Clarifier Rehab Phase 2 - Constr	Jun-18	\$100.0
DI Treatment Plant Asset Protection	7110	HVAC Equipment Replacement - Constr	Jan-18	\$38.8
DI Treatment Plant Asset Protection	7428	Gravity Thickener Rehab	Apr-18	\$16.9
SEH Redundancy & Storage	7504	Redundancy Pipeline Sect 111 - Constr 2	Jul-17	\$15.2
SEH Redundancy & Storage	7505	Redundancy Pipeline Sect 111 - Constr 3	Oct-17	\$10.0
Metro Tunnel Redundancy	7159	Conceptual Design EIR	Mar-18	\$7.6
Nor Low Service Rehab Section 8	7540	Sec 57 Water & 21/20/19 Sew Des/ESDC/REI	Jul-17	\$5.8
DI Treatment Plant Asset Protection	7131	Misc. VFD Replace Constr	Jul-17	\$5.3
NHS - Revere & Malden Pipeline Impr.	7485	Sect 53 and 99 Conn-Des CA/RI	Nov-17	\$5.2
DI Treatment Plant Asset Protection	7449	Sodium Hypochlorite&Bisulfite Tanks Rehab	Oct-17	\$5.0
DI Treatment Plant Asset Protection	7126	South System PS VFD Replacement Des/ESDC	Jan-18	\$4.8
Winsor Station Pipeline	7460	Winsor Power Station Final Design/CA/RI	Jan-18	\$4.4
Applications Impr. Program	7438	Enterprise Content Mgmt	Sep-17	\$4.0
Wastewater Central Monitoring	7578	Design & Programming Services	Jan-18	\$3.5
Facility Asset Protection	7162	Pump Stns & CSOs Condition Assessment	Dec-17	\$3.3
Top 15 Awards				\$229.6
Remaining 39 Awards				\$57.8

The FY14-18 Base-Line Cap

The Final FY14 CIP established the FY14-18 Base-Line Cap budget at \$791.7 million, with projected capital expenditures of \$718.0 over five years. This is the third five-year Cap established by the Authority since FY04 and is significantly lower than the prior two five-year Cap periods which each exceeded \$1.1 billion. The following is a breakdown of the FY14-18 Cap components:

FY14-18 Base-Line Cap		FY14	FY15	FY16	FY17	FY18	Total FY14-18
	Projected Expenditures	\$142.5	\$147.6	\$149.3	\$141.8	\$136.8	\$718.0
Contingency	7.6	9.5	10.1	9.8	9.3	46.1	
Inflation on Unawarded Construction	0.8	4.2	8.4	11.1	13.5	37.9	
Less: Chicopee Valley Aqueduct Projects	(5.0)	(2.2)	(1.4)	(1.3)	(0.4)	(10.3)	
FY14-18 Base-Line Cap	\$145.8	\$159.1	\$166.4	\$161.3	\$159.1	\$791.7	

FY18 is the final year of the Base-Line Cap and the FY18 budget anticipates five-year Cap period expenditures of \$617.0, or 14.1% less than the five-year Base-Line Cap expenditures.

FY14-18 Base- Line FY14 Final		FY14	FY15	FY16	FY17	FY18	Total FY14-18
Projected Expenditures	\$142.5	\$147.6	\$149.3	\$141.8	\$136.8	\$718.0	

FY18 Draft Final		FY14	FY15	FY16	FY17	FY18	Total FY14-18
Projected Expenditures	\$102.2	\$103.6	\$95.1	\$141.2	\$174.9	\$617.0	

FY18 Final vs. FY14-18 Base- Line		FY14	FY15	FY16	FY17	FY18	Total FY14-18
Difference	(\$40.3)	(\$43.9)	(\$54.2)	(\$0.6)	\$38.1	(\$101.0)	
	-28.3%	-29.8%	-36.3%	-0.4%	27.9%	-14.1%	

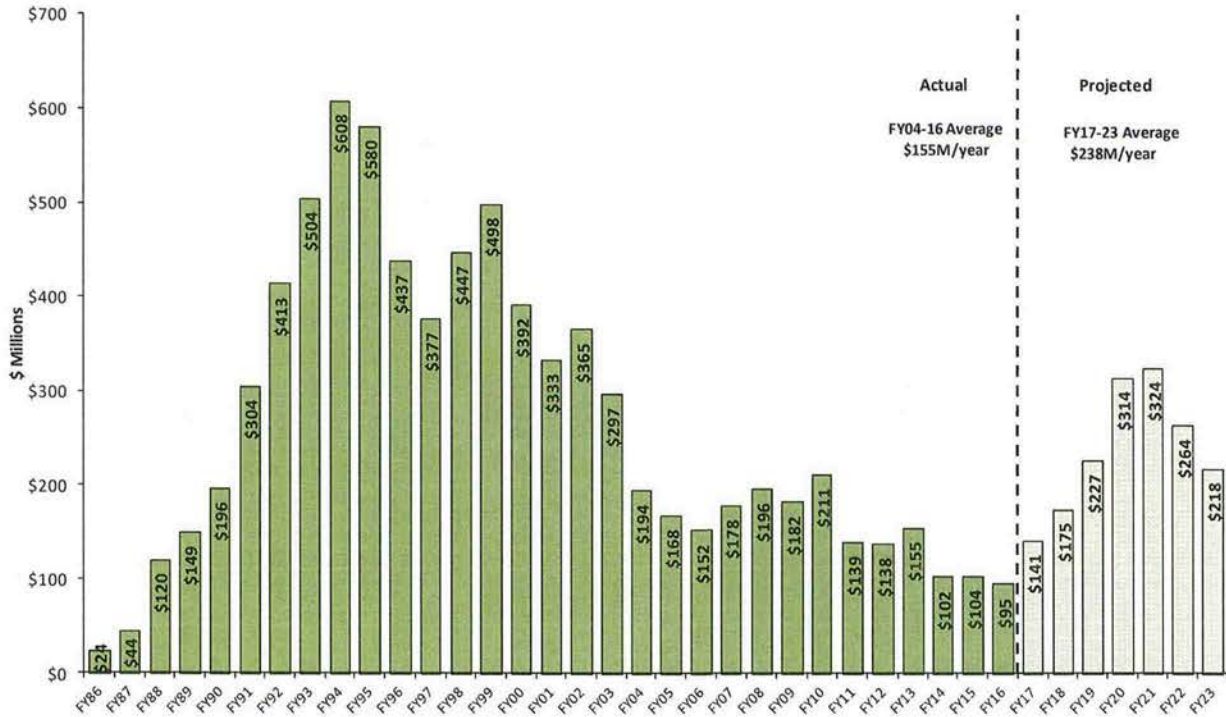
The Final FY18 CIP budget includes in addition to FY14-18 capital expenditures of \$617.0 million, contingency of \$17.1million offset by \$82.3 million in Community Loan Program Support and \$7.9 million in Chicopee Valley Aqueduct adjustments. The total Final FY18 projected FY 14-18 Cap spending of \$543.9 million is \$173.0 million or 21.9% less than the Base-Line Cap. \$82.3 million of the underspending is due to redefining the Cap in FY15 at the recommendation of the Advisory Board by excluding the Community Financial Assistance programs.

FY18 Final		FY14	FY15	FY16	FY17	FY18	Total FY14-18
	Projected Expenditures	\$102.2	\$103.6	\$95.1	\$141.2	\$174.9	\$617.0
Contingency	0.0	0.0	0.0	7.3	9.8	17.1	
Inflation on Unawarded Construction	0.0	0.0	0.0	0.0	0.0	0.0	
Less: I/I Program	0.0	(17.5)	(13.6)	(18.4)	(19.1)	(68.6)	
Less: Water Loan Program	0.0	1.4	5.3	(8.7)	(11.7)	(13.7)	
Less: Chicopee Valley Aqueduct Projects	(5.6)	(1.2)	(0.4)	(0.1)	(0.6)	(7.9)	
FY18 Proposed FY14-18 Spending	\$96.6	\$86.3	\$86.4	\$121.3	\$153.4	\$543.9	

The FY18 Final CIP budget complies with the overall Base-Line Cap requirement.

Historical Capital Spending

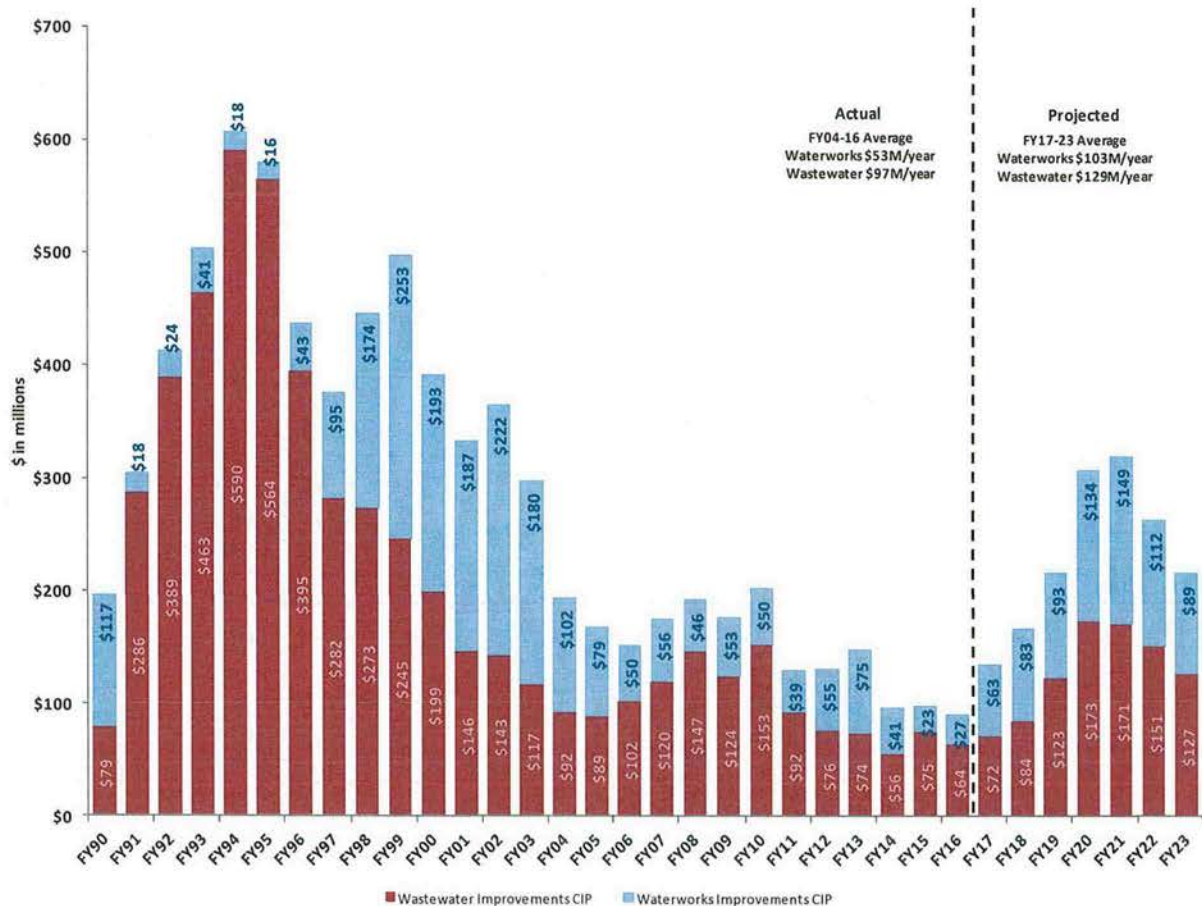
The chart below captures the historical Capital Improvement Program spending through FY16 and projected spending to FY23 based on the Final FY18 CIP.



The average spending for FY04-16 timeframe was \$155 million per year. The FY18 Final CIP projects that average spending during the FY17-23 period is projected to be \$238 million per year.

Historical Capital Spending by Utility

The chart on the next page captures the historical Capital Improvement Program spending through FY16 and projected spending to FY23 by Waterworks and Wastewater utility based on the Final FY18 CIP.



The average spending for FY04-16 timeframe by utility was \$53 million and \$97 million per year for Waterworks and Wastewater respectively. Similarly, the FY18 Final CIP projects that average spending by utility over the FY17-23 period is budgeted at \$103 million and \$129 million per year for Waterworks and Wastewater respectively.

MWRA Capital Improvement Spending versus Debt Service

As of June 30th, MWRA's outstanding debt will be \$5.2 billion, \$173 million less than last year. However, debt service obligations are projected to increase in coming years peaking in 2022. The Authority's capital financing costs as a percent of total expenses has increased from 36% in 1990 to 63.5% in the Final FY18 Current Expense Budget. Peak debt service is currently projected to be 64.7% of total expenses in FY22. Through FY22, the Rate Revenue Requirement is projected to increase an average of \$29.2 million per year, mostly driven by Debt Service related expenses.

Changing Nature of the Capital Program

Since 1985, nearly 80% of the Authority's spending had been on court mandated and regulatory required projects. Based on the Final FY18 CIP, mandated or regulatory related projects account

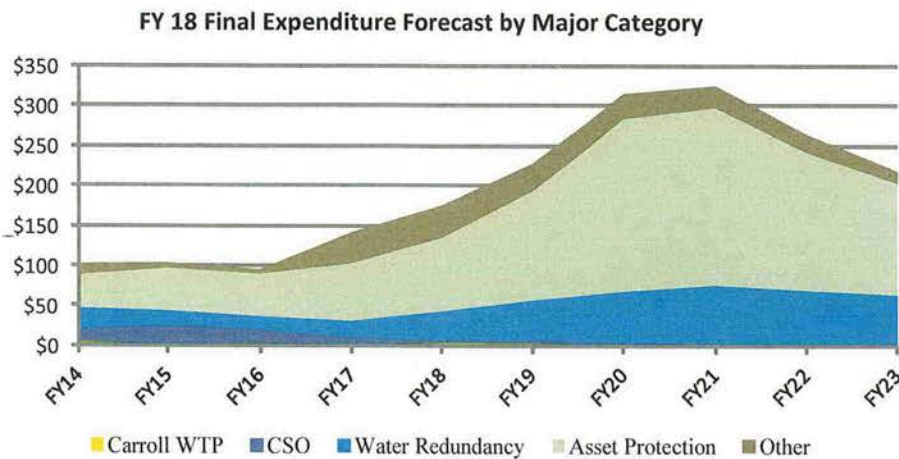
for approximately 25% of contract spending with the majority of expenditures supporting Asset Protection, Water System Redundancy, and continued Community Assistance programs.

The table below highlights the changing nature of the Capital Improvement Program; the transition from mandated projects most recently the Carroll Water Treatment Plant and Combined Sewer Overflow to Asset Protection and Water System Redundancy initiatives.

	FY09-13	FY14-18	FY19-23
Asset Protection	\$248.0	\$312.6	\$883.3
Carroll WTP	38.5	12.0	6.2
Water Redundancy	134.7	122.7	320.6
CSO	315.5	66.3	6.6
Other	88.4	103.4	130.0
Total	\$825.1	\$617.0	\$1,346.8
<hr/>			
Asset Protection	30.1%	50.7%	65.6%
Carroll WTP	4.7%	1.9%	0.5%
Water Redundancy	16.3%	19.9%	23.8%
CSO	38.2%	10.7%	0.5%
Other	10.7%	16.8%	9.7%
Total	100.0%	100.0%	100.0%

Asset Protection and Water Redundancy initiatives accounted for 30.1% and 16.3% of FY09-13 spending, respectively. Asset Protection and Water System Redundancy spending is projected to rise and accounts for 50.7% and 19.9% of FY14-18 capital expenditures respectively, a total of \$435.3 million of the \$617.0 million, or nearly 71% projected to be spent over the 5-year period.

The graph below displays the projected trend of expenditures by major category for the FY14-23 time period.



Actual/Projected Spending By Major Categories for the FY14-18 Cap Period

The Final FY18 CIP contains future spending estimated at \$3.4 billion. The Final FY18 CIP (without contingency) includes planned expenditures of \$174.9 million for FY18 and total projected expenditures of \$617.0 million for the FY 14-18 Cap timeframe.

The table below represents the projected spending by major categories:

	Projected Spending After FY16	FY14	FY15	FY16	FY17	FY18	Total FY14-18
Wastewater System Improvements	\$1,310.4	\$55.7	\$75.4	\$64.2	\$71.8	\$84.3	\$351.3
Interception & Pumping	460.8	6.9	8.6	6.6	19.3	46.8	88.2
Treatment	650.3	29.1	25.7	27.3	25.5	13.7	121.2
Residuals	103.0	0.1	-	-	-	2.9	3.0
CSO	17.1	15.6	23.6	16.7	8.6	1.9	66.3
Other Wastewater	79.2	4.0	17.5	13.6	18.4	19.1	72.7
Waterworks System Improvements	\$2,045.9	\$41.0	\$22.7	\$26.7	\$63.3	\$82.7	\$236.4
Drinking Water Quality Improvements	21.8	30.2	12.4	7.1	1.4	3.9	55.0
Transmission	1,455.4	4.5	2.5	8.1	26.2	22.0	63.2
Distribution & Pumping	636.2	4.8	8.9	15.0	22.6	43.4	94.8
Other Waterworks	(67.5)	1.5	(1.1)	(3.4)	13.1	13.5	23.5
Business & Operations Support	38.3	5.5	5.5	4.2	6.1	7.9	29.3
Total MWRA	\$3,394.6	\$102.2	\$103.6	\$95.1	\$141.2	\$174.9	\$617.0

Please refer to Attachment B for a more detailed project listing and projected cash flows.

Top 5 Wastewater and Waterworks Projects – FY 14-18 Period

It is important to emphasize that the majority of spending within the Wastewater and Water Capital programs is concentrated in five large projects. These projects are either currently under construction or soon to be awarded.

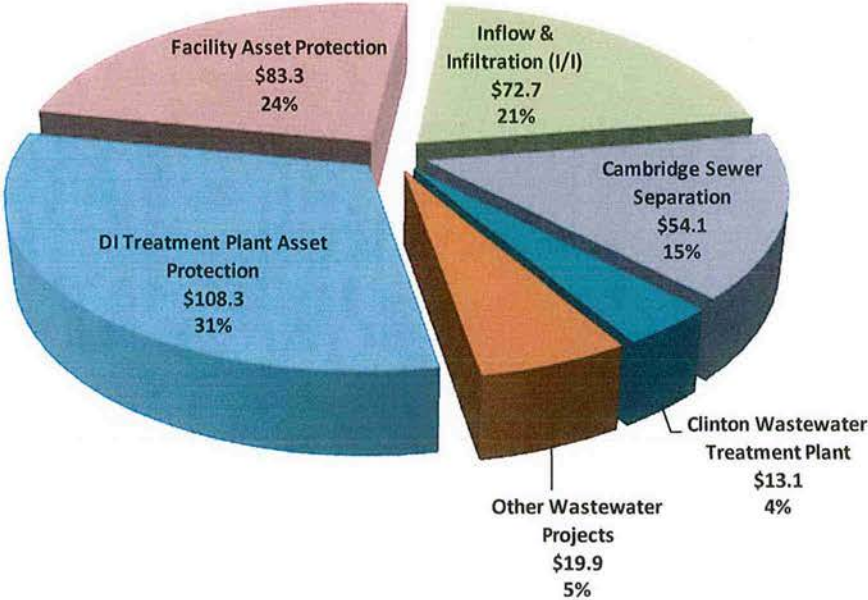
Top 5 Wastewater Projects for the FY 14-18 Cap Period:

Project	FY14-18 Spending	% of Program
DI Treatment Plant Asset Protection	\$108.3	30.8%
Facility Asset Protection	\$83.3	23.7%
Inflow & Infiltration (I/I)	\$72.7	20.7%
Cambridge Sewer Separation	\$54.1	15.4%
Clinton Wastewater Treatment Plant	\$13.1	3.7%
Total Top 5 Wastewater Projects	\$331.4	94.3%
Other Wastewater Projects	\$19.9	5.7%
Total Wastewater	\$351.3	100.0%

The top five projects for the Wastewater program total \$331.4 million for the FY14-18 Cap period and represent 94.3% of the \$351.3 million total program.

The breakdown of the \$351.3 million program by the major projects is illustrated below:

**Top 5 Wastewater Projects
FY14-18 Spending (\$ in millions)**



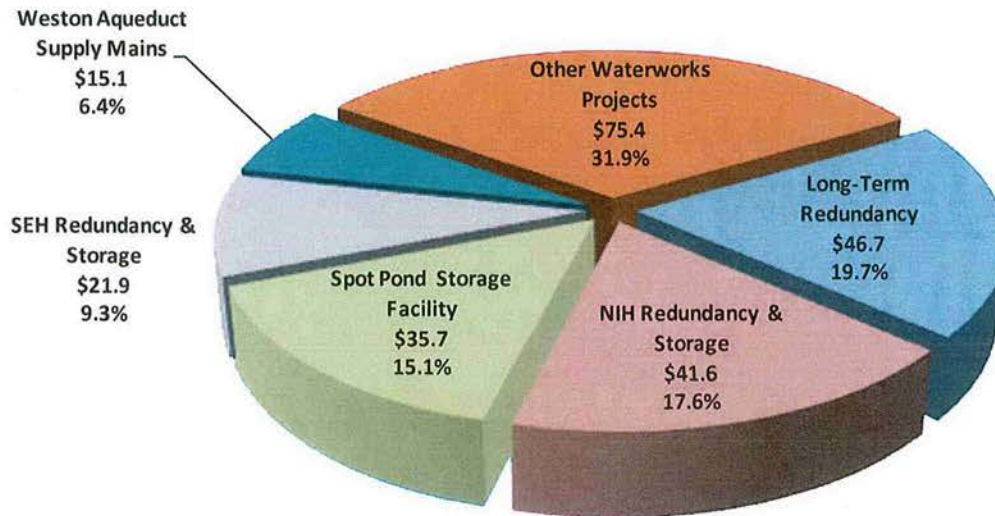
Similarly, the top five projects for the Waterworks program total \$161.0 million for the FY 14-18 Cap period and represent 68.1% of the \$236.4 million total program.

Top 5 Waterworks Projects for FY 14-18 Cap Period:

Project	FY14-18 Spending	% of Program
Cosgrove/Wachusett Redundancy	\$46.7	19.7%
NIH Redundancy & Storage	\$41.6	17.6%
Spot Pond Storage Facility	\$35.7	15.1%
SEH Redundancy & Storage	\$21.9	9.3%
Local Water Pipeline Improvement	\$15.1	6.4%
Total Top 5 Waterworks Projects	\$161.0	68.1%
Other Waterworks Projects	\$75.4	31.9%
Total Waterworks	\$236.4	100.0%

The breakdown of the \$236.4 million program by the major projects is illustrated below:

**Top 5 Waterworks Projects
FY14-18 Spending (\$ in millions)**



Contingency

Contingency for each fiscal year is incorporated into the CIP to fund the uncertainties inherent to construction. The contingency budget is calculated as a percentage of budgeted expenditure outlays. Specifically, contingency is 7% for non-tunnel projects and 15% for tunnel projects. The contingency budget is \$9.8 million for FY18 and \$17.1 million for the FY14-18 timeframe.

Looking Ahead

The next five-year spending cap for FY19-23 will be developed during the FY19 proposed budget. MWRA's Master Plan is currently being updated and will continue to be a roadmap for prioritizing projects to be included in the Capital Improvement Program going forward.

CIP Review and Adoption Process

In December, the MWRA transmitted the FY18 Proposed Capital Improvement Program to the Advisory Board for its review and comment. The Advisory Board issued their Integrated Comments and Recommendations in June. MWRA responses to the Advisory Board Comments and Recommendations are included in the FY18 CEB Staff Summary as Attachment F.

ATTACHMENTS:

- A. New Capital Projects Added to the FY18 CIP
- B. Final FY18 Expenditure Forecast at Project Level
- C. Comparison of the Final FY18 CIP and the Final FY17 CIP

ATTACHMENT A
New Capital Projects Added to the FY18 CIP

Program	Project	Subphase	Contract Number	Total Contract Amount	FY18	FY14-18	FY19-23	Beyond FY23	Total Expenditures
Wastewater									
Interception & Pumping	Corrosion & Odor Control	Nut Island Headworks Odor Control and HVAC Improvements Construction	7548	\$ 27,500,000		\$ -	\$ 27,500,000	\$ -	\$ 27,500,000
Interception & Pumping	Facility Asset Protection	Fuel Oil Tank Replacements at Various Facilities Design CA/RI	7553	\$ 1,528,605	\$ 100,000	\$ 100,000	\$ 1,428,605		\$ 1,528,605
Interception & Pumping	Facility Asset Protection	Fuel Oil Tank Replacements at Various Facilities Construction Phase 1	7554	\$ 3,566,745		\$ -	\$ 3,566,745		\$ 3,566,745
Interception & Pumping	Facility Asset Protection	Fuel Oil Tank Replacements at Various Facilities Construction Phase 2	7555	\$ 2,547,675		\$ -	\$ 2,547,676		\$ 2,547,676
Interception & Pumping	Facility Asset Protection	Headworks Effluent Shaft Rehabilitation Design CA/RI	7549	\$ 1,019,070		\$ -	\$ 1,019,070		\$ 1,019,070
Interception & Pumping	Facility Asset Protection	Headworks Effluent Shaft Rehabilitation Construction	7550	\$ 5,095,350		\$ -	\$ 5,095,350		\$ 5,095,350
Interception & Pumping	Facility Asset Protection	Wiggins Terminal Pump Station Replacement Design CA/RI	7551	\$ 508,855	\$ 80,955	\$ 80,955	\$ 427,900		\$ 508,855
Interception & Pumping	Facility Asset Protection	Wiggins Terminal Pump Station Replacement Construction	7552	\$ 2,035,420		\$ -	\$ 2,035,420		\$ 2,035,420
Treatment	DITP Asset Protection	Fixed Gas Protection Systems Replacement	7167	\$ 2,000,000	\$ 166,667	\$ 166,667	\$ 1,833,333		\$ 2,000,000
Residuals	Residuals Asset Protection	Residuals Pellet Conveyance Piping	7173	\$ 3,000,000	\$ 166,667	\$ 166,667	\$ 2,833,333		\$ 3,000,000
Waterworks									
Distribution and Pumping	Northern Low Service - Section 8	Section 57 Water Pipeline and Sect. 21/20/19 Sewer Rehab Design/ESDC/REI	7540	\$ 5,783,000	1,000,000	\$ 1,000,000	\$ 4,783,000		\$ 5,783,000
Distribution and Pumping	Northern Low Service - Section 8	Section 57 Water Pipeline and Sect. 21/20/19 Sewer Rehab Construction	7541	\$ 25,500,000		\$ -	\$ 25,500,000		\$ 25,500,000
Distribution and Pumping	Peabody Pipeline Project	Peabody Pipeline Design/ESDC/REI	6895	\$ 3,500,000	1,000,000	\$ 1,000,000	\$ 2,500,000		\$ 3,500,000
Distribution and Pumping	Peabody Pipeline Project	Peabody Pipeline Construction	6893	\$ 9,400,000		\$ -	\$ 9,400,000		\$ 9,400,000
Distribution and Pumping	NHS Revere & Malden Pipeline Improvements	Section 14 Water Pipeline Relocate (Malden)	6957	\$ 1,270,000	1,270,000	\$ 1,270,000	\$ -		\$ 1,270,000
Transmission	Metropolitan Redundancy Interim Improvements	Tops of Shafts Design CA/RI	7560	\$ 1,600,000		\$ -	\$ 1,600,000		\$ 1,600,000

ATTACHMENT A
New Capital Projects Added to the FY18 CIP

Program	Project	Subphase	Contract Number	Total Contract Amount	FY18	FY14-18	FY19-23	Beyond FY23	Total Expenditures
Transmission	Metropolitan Redundancy Interim Improvements	Tops of Shafts Interim Improvements Construction	7561	\$ 6,114,420		\$ -	\$ 6,114,420		\$ 6,114,420
Transmission	Metropolitan Redundancy Interim Improvements	Chestnut Hill Emergency Pump Station Improvements Construction	7574	\$ 6,700,000		\$ -	\$ 6,695,000	\$ 5,000	\$ 6,700,000
Transmission	Metropolitan Redundancy Interim Improvements	Chestnut Hill Emergency Pump Station Improvements Construction	7562	\$ 18,343,260		\$ -	\$ 18,343,260		\$ 18,343,260
Transmission	Metropolitan Redundancy Interim Improvements	WASM/Spot Pond Supply Mains West PRV Improvements Design/CA/RI	7575	\$ 2,100,000		\$ -	\$ 2,100,000		\$ 2,100,000
Transmission	Metropolitan Redundancy Interim Improvements	WASM/Spot Pond Supply Mains West PRV Improvements Construction	7563	\$ 8,152,560		\$ -	\$ 8,152,560		\$ 8,152,560
Transmission	Watershed Improvements	Quabbin Admin Building Conceptual Design Report	7569	\$ 200,000	50,000	\$ 50,000	\$ 150,000		\$ 200,000
Transmission	Watershed Improvements	Quabbin Admin Building Rehabilitation Design CA/RI	7564	\$ 2,800,000		\$ -	\$ 2,750,000	\$ 50,000	\$ 2,800,000
Transmission	Watershed Improvements	Quabbin Admin Building Rehabilitation Construction	7565	\$ 12,000,000		\$ -	\$ 11,800,000	\$ 200,000	\$ 12,000,000
Transmission	Watershed Improvements	Maintenance Garage/Wash Bay/Storage Building Construction	7577	\$ 2,300,000	460,000	\$ 460,000	\$ 1,840,000		\$ 2,300,000
SUMMARY:									
Total Wastewater Projects				\$ 48,801,720	\$ 514,289	\$ 514,289	\$ 48,287,432	\$ -	\$ 48,801,721
Total Waterworks Projects				\$ 105,763,240	\$ 3,780,000	\$ 3,780,000	\$ 101,728,240	\$ 255,000	\$ 105,763,240
Total Projects				\$ 154,564,960	\$ 4,294,289	\$ 4,294,289	\$ 150,015,672	\$ 255,000	\$ 154,564,961

ATTACHMENT B
FY18 Final CIP
Expenditure Forecast at Project Level

Program / Project	Total Contract Amount	Payments through FY16	Remaining Balance	FY17	FY18	FY14 - FY18 Expenditures	FY19-FY23 Expenditures	Beyond FY23
Total MWRA	7,383,672,380	3,989,048,193	3,394,624,188	141,159,777	174,921,982	617,005,017	1,346,791,133	1,731,751,281
Wastewater	3,241,685,585	1,931,262,185	1,310,423,400	71,780,374	84,285,544	351,327,437	745,939,815	408,417,673
Interception & Pumping	1,003,456,570	542,626,109	460,830,460	19,335,919	46,798,942	88,220,906	281,760,288	112,935,312
102 Quincy Pump Facilities	25,907,202	25,907,202	-					
104 Braintree-Weymouth Relief Facilities	234,492,623	227,704,621	6,788,002	-	200,000	200,689	6,588,000	-
105 New Neponset Valley Relief Sewer	30,300,304	30,300,304	-					
106 Wellesley Extension Replacement Sewer	64,358,543	64,358,543	-					
107 Framingham Extension Relief Sewer	47,855,986	47,855,986	-					
127 Cummingsville Replacement Sewer	8,998,768	8,998,768	-					
130 Siphon Structure Rehabilitation	6,880,793	939,770	5,941,023	-	-	-	5,941,023	-
131 Upper Neponset Valley Sewer System	54,174,077	54,174,077	-					
132 Corrosion & Odor Control	48,322,893	3,372,834	44,950,059	350,303	2,497,962	3,219,695	42,101,794	-
136 West Roxbury Tunnel	11,313,573	10,313,573	1,000,000	-	-	-	1,000,000	-
137 Wastewater Central Monitoring	27,482,036	19,782,036	7,700,000	-	200,000	199,835	2,400,000	5,100,000
139 South System Relief Project	4,939,244	3,439,244	1,500,000	-	-	-	1,500,000	
141 Wastewater Process Optimization	10,416,274	1,501,767	8,914,507	-	-	296,589	5,195,484	3,719,023

ATTACHMENT B
FY18 Final CIP
Expenditure Forecast at Project Level

Program / Project	Total Contract Amount	Payments through FY16	Remaining Balance	FY17	FY18	FY14 - FY18 Expenditures	FY19-FY23 Expenditures	Beyond FY23
142 Wastewater Meter System - Equipment Replacement	28,437,912	5,137,912	23,300,000	-	1,000,000	1,000,000	14,625,361	7,674,639
143 Regional I/I Management Planning	168,987	168,987	-	-	-			
145 Facility Asset Protection	393,657,355	38,670,485	354,986,870	18,985,616	42,900,980	83,304,098	196,658,627	96,441,650
146 D.I. Cross Harbor Tunnel	5,000,000	-	5,000,000	-	-	-	5,000,000	
147 Randolph Trunk Sewer Relief	750,000	-	750,000	-	-	-	750,000	
Treatment	917,147,004	266,822,002	650,325,002	25,462,684	13,659,992	121,221,904	391,894,095	219,308,232
182 DI Primary and Secondary Treatment	(957,878)	(957,878)	-	-	-			
200 DI Plant Optimization	33,278,598	33,278,598	-	-	-	(148,080)		
206 DI Treatment Plant Asset Protection	859,104,592	224,644,166	634,460,426	20,078,159	11,082,920	108,304,666	383,991,117	219,308,232
210 Clinton Wastewater Treat Plant	23,494,018	7,629,442	15,864,576	5,384,525	2,577,072	13,065,318	7,902,978	
211 Laboratory Services	2,227,674	2,227,674	-	-	-			
Residuals	167,642,623	64,642,623	103,000,000	-	2,851,355	2,958,162	13,565,312	86,583,333
261 Residuals	63,810,848	63,810,848	-	-	-			
271 Residuals Asset Protection	103,831,775	831,775	103,000,000	-	2,851,355	2,958,162	13,565,312	86,583,333

ATTACHMENT B
FY18 Final CIP
Expenditure Forecast at Project Level

Program / Project	Total Contract Amount	Payments through FY16	Remaining Balance	FY17	FY18	FY14 - FY18 Expenditures	FY19-FY23 Expenditures	Beyond FY23
CSO	910,573,527	893,499,651	17,073,876	8,589,925	1,878,209	66,261,453	6,605,742	
MWRA Managed	433,535,018	433,388,868	146,150	146,151	-	3,656,538		
339 North Dorchester Bay	221,509,794	221,509,793	-	-	-	(110,813)		
347 East Boston Branch Sewer Relief	85,637,164	85,637,164	-	-	-	(8,831)		
348 BOS019 Storage Conduit	14,287,581	14,287,581	-	-	-			
349 Chelsea Trunk Sewer	29,779,319	29,779,320	-	-	-			
350 Union Park Detention Treatment Facility	49,583,407	49,583,407	-	-	-			
353 Upgrade Existing CSO Facilities	22,385,200	22,385,200	-	-	-			
354 Hydraulic Relief Projects	2,294,549	2,294,549	-	-	-			
355 MWR003 Gate & Siphon	4,424,927	4,278,777	146,150	146,150	-	3,776,181		
357 Charles River CSO Controls	3,633,077	3,633,077	-	-	-			
Community Managed	424,152,891	411,907,558	12,245,334	7,034,615	1,452,959	61,931,694	3,757,757	
340 Dorchester Bay Sewer Separation (Fox Point)	54,625,590	54,625,590	-	-	-	473,295		
341 Dorchester Bay Sewer Separation (Commercial Point)	64,009,206	60,542,452	3,466,754	(291,003)	-	(895,701)	3,757,757	
342 Neponset River Sewer Separation	2,549,087	2,549,087	-	-	-	104,692		
343 Constitution Beach Sewer Separation	3,731,315	3,731,315	-	-	-	(37,573)		

ATTACHMENT B
FY18 Final CIP
Expenditure Forecast at Project Level

Program / Project	Total Contract Amount	Payments through FY16	Remaining Balance	FY17	FY18	FY14 - FY18 Expenditures	FY19-FY23 Expenditures	Beyond FY23
344 Stony Brook Sewer Separation	44,268,098	44,246,463	21,635	21,635	-	69,714		
346 Cambridge Sewer Separation	104,552,056	95,869,484	8,682,572	7,229,613	1,452,959	54,067,852		
351 BWSC Floatables Controls	945,936	945,936	-	-	-	12,957		
352 Cambridge Floatables Controls	1,126,708	1,126,708	-	-	-	39,783		
356 Fort Point Channel Sewer Separation	11,872,406	11,917,089	(44,683)	(44,683)	-	(134,301)		
358 Morrissey Boulevard Drain	32,185,790	32,188,262	(2,472)	(2,473)	-	(160,999)		
359 Reserved Channel Sewer Separation	70,517,003	70,395,477	121,526	121,526	-	10,477,101		
360 Brookline Sewer Separation	24,715,291	24,715,291	-	-	-	(1,282,073)		
361 Bulfinch Triangle Sewer Separation	9,054,405	9,054,404	-	-	-	(803,053)		
CSO Planning & Support	52,885,618	48,203,225	4,682,394	1,409,159	425,250	673,221	2,847,985	
324 CSO Support	52,885,618	48,203,225	4,682,394	1,409,159	425,250	673,221	2,847,985	
Other Wastewater	242,865,861	163,671,800	79,194,060	18,391,846	19,097,046	72,665,011	52,114,377	(10,409,204)
128 I/I Local Financial Assistance	242,584,985	163,390,924	79,194,061	18,391,846	19,097,046	72,665,012	52,114,377	(10,409,204)
138 Sewerage System Mapping Upgrades	280,876	280,876	-	-	-			

ATTACHMENT B
FY18 Final CIP
Expenditure Forecast at Project Level

Program / Project	Total Contract Amount	Payments through FY16	Remaining Balance	FY17	FY18	FY14 - FY18 Expenditures	FY19-FY23 Expenditures	Beyond FY23
Waterworks	4,010,950,592	1,965,078,166	2,045,872,426	63,298,790	82,730,816	236,425,368	576,509,193	1,323,333,608
Drinking Water Quality Improvements	666,791,121	644,945,565	21,845,554	1,353,065	3,880,671	54,971,751	6,194,807	10,417,007
542 Carroll Water Treatment Plant	439,799,004	418,815,184	20,983,820	711,201	3,660,804	11,978,664	6,194,807	10,417,007
543 Quabbin Water Treatment Plant	19,972,883	19,972,879	-	-	-	7,204,639		
544 Norumbega Covered Storage	106,674,147	106,674,146	-	-	-			
545 Blue Hills Covered Storage	40,082,837	40,082,837	-	-	-	120,000		
550 Spot Pond Storage Facility	60,262,250	59,400,519	861,731	641,864	219,867	35,668,449		
Transmission	2,423,539,901	770,602,306	1,652,937,595	26,510,617	23,593,841	65,668,609	276,128,463	1,326,704,671
597 Winsor Station Pipeline	34,242,988	2,578,137	31,664,851	2,400,806	1,253,174	4,836,528	24,949,551	3,061,320
601 Sluice Gate Rehabilitation	9,158,411	9,158,411	-	-	-			
604 MetroWest Tunnel	701,189,153	697,046,552	4,142,601	142,598	-	1,790,641	4,000,000	
615 Chicopee Valley Aqueduct Redundancy	8,666,292	8,666,291	-	-	-			
616 Quabbin Transmission System	16,418,914	7,456,913	8,962,001	509,621	552,379	1,316,449	7,900,000	
617 Sudbury/Weston Aqueduct Repairs	6,476,880	1,371,948	5,104,932	1,238,531	158,389	2,108,920	3,248,000	460,012
620 Wachusett Reservoir Spillway Improvements	9,287,460	9,287,460	-	-	-			
621 Watershed Land	24,000,000	19,277,400	4,722,600	1,297,000	1,500,000	4,732,000	1,925,600	

ATTACHMENT B
FY18 Final CIP
Expenditure Forecast at Project Level

Program / Project	Total Contract Amount	Payments through FY16	Remaining Balance	FY17	FY18	FY14 - FY18 Expenditures	FY19-FY23 Expenditures	Beyond FY23
622 Cosgrove Tunnel Redundancy	54,316,250	9,131,536	45,184,714	20,234,812	18,467,899	46,658,805	6,482,003	
623 Dam Projects	4,066,316	3,115,745	950,571	5	-	30,568	950,566	
625 Metropolitan Tunnel Redundancy	1,357,685,868	3,008,809	1,354,677,059	387,015	20,000	1,749,367	95,972,200	1,258,297,845
628 Metropolitan Redundancy Interim Improvements	180,731,369	503,104	180,228,265	300,229	1,132,000	1,935,333	114,160,543	64,635,494
630 Watershed Division Capital Improvements	17,300,000	-	17,300,000	-	510,000	510,000	16,540,000	250,000
Distribution And Pumping	839,543,663	400,906,748	438,636,915	22,335,738	41,766,889	92,305,792	208,132,120	166,402,160
618 Peabody Pipeline Project	12,910,000	-	12,910,000	1,000	1,005,000	1,006,000	11,904,000	
677 Valve Replacement	20,114,541	12,016,378	8,098,163	-	-	-	3,558,280	4,539,878
678 Boston Low Service - Pipe & Valve Rehabilitation	23,690,863	23,690,863	-	-	-			
683 Heath Hill Road Pipe Replacement	19,358,036	19,358,036	-	-	-			
689 James L. Gillis Pump Station	33,419,007	33,419,008	-	-	-			
692 Northern High Service - Section 27 Improvement	1,133,702	123,646	1,010,056	-	-	-	1,010,055	
693 NHS - Revere & Malden Pipeline Improvements	65,372,524	26,954,957	38,417,567	127,336	1,814,584	2,064,137	36,408,981	66,666
702 New Connecting Mains - Shaft 7 to WASM 3	38,840,699	11,315,807	27,524,892	1,102,515	843,000	2,300,515	21,690,517	3,888,859
704 Rehab of Other Pump Stations	50,257,852	30,057,852	20,200,000	-	-	-	1,320,834	18,879,166
706 NHS-New Connecting Mains from Section 91	2,360,194	2,360,194	-	-	-			

ATTACHMENT B
FY18 Final CIP
Expenditure Forecast at Project Level

Program / Project	Total Contract Amount	Payments through FY16	Remaining Balance	FY17	FY18	FY14 - FY18 Expenditures	FY19-FY23 Expenditures	Beyond FY23
708 Northern Extra High Service - New Pipelines	8,045,232	3,632,119	4,413,113	15,194	40,753	55,947	3,600,166	756,999
712 Cathodic Protection of Distribution Mains	1,703,947	208,121	1,495,826	92,924	57,618	217,750	1,345,284	
713 Spot Pond Supply Mains Rehabilitation	66,858,454	63,601,327	3,257,127	1,931,477	-	4,550,802	1,325,650	
714 Southern Extra High - Sections 41 & 42	3,657,244	3,657,244	-	-	-			
719 Chestnut Hill Connecting Mains	33,094,496	17,486,675	15,607,821	-	1,000,000	1,000,000	14,602,301	5,520
720 Warren Cottage Line Rehabilitation	1,204,821	1,204,821	-	-	-			
721 Southern Spine Distribution Mains	76,280,691	36,683,102	39,597,589	317	76,799	68,569	4,341,713	35,178,761
722 NIH Redundancy & Storage	113,120,785	15,344,942	97,775,843	11,569,462	20,708,257	41,648,297	42,516,372	22,981,752
723 Northern Low Service Rehabilitation - Section 8	56,888,936	2,320,986	54,567,950	6,934	1,020,800	1,027,734	31,826,500	21,713,716
725 Hydraulic Model Update	598,358	598,358	-	-	-			
727 SEH Redundancy & Storage	109,409,706	8,943,573	100,466,133	6,287,730	13,454,000	21,928,333	24,050,967	56,673,437
730 Weston Aqueduct Supply Mains	80,695,920	79,585,770	1,110,150	986,829	43,319	14,572,622	80,000	
731 Lynnfield Pipeline	5,625,829	5,625,828	-	-	-	(51,694)		
732 Walnut St. & Fisher Hill Pipeline Rehabilitation	2,717,141	2,717,141	-	-	-			
735 Section 80 Rehabilitation	12,184,685	-	12,184,685	214,020	1,702,759	1,916,779	8,550,500	1,717,406

ATTACHMENT B
FY18 Final CIP
Expenditure Forecast at Project Level

Program / Project	Total Contract Amount	Payments through FY16	Remaining Balance	FY17	FY18	FY14 - FY18 Expenditures	FY19-FY23 Expenditures	Beyond FY23
Other Waterworks	81,075,907	148,623,547	(67,547,639)	13,099,370	13,489,415	23,479,214	86,053,805	(180,190,230)
753 Central Monitoring System	39,040,066	17,804,950	21,235,116	2,758,647	782,117	5,541,987	5,457,328	12,237,023
763 Distribution Systems Facilities Mapping	2,298,919	1,036,368	1,262,551	-	-	-	1,262,551	
764 Local Water Infrastructure Rehabilitation	7,487,762	7,487,762	-	-	-			
765 Local Water Pipeline Assistance Program	-	121,568,086	(121,568,086)	8,682,831	11,714,185	15,105,860	51,224,150	(193,189,253)
766 Waterworks Facilities Asset Protection	32,249,160	726,381	31,522,779	1,657,892	993,113	2,831,367	28,109,774	762,000
Business & Operations Support	131,036,203	92,707,842	38,328,363	6,080,613	7,905,622	29,252,215	24,342,124	
881 Equipment Purchase	29,407,884	18,488,576	10,919,308	2,189,009	2,784,000	11,354,257	5,946,299	
925 Technical Assistance	1,150,000	-	1,150,000	-	383,333	383,333	766,667	
930 MWRA Facility - Chelsea	9,812,071	9,813,635	(1,564)	(1,564)	-	(1,564)		
931 Business Systems Plan	24,562,604	24,527,709	34,895	34,895	-	111,374		
932 Environmental Remediation	1,478,602	1,478,602	-	-	-	(200)		
933 Capital Maintenance Planning & Development	15,208,251	12,543,838	2,664,413	714,686	1,370,804	4,505,085	578,924	
934 MWRA Facilities Management	2,150,535	370,533	1,780,002	-	-	-	1,780,002	
935 Alternative Energy Initiatives	23,270,519	17,454,074	5,816,445	768,166	165,324	1,190,760	4,882,950	
940 Application Improvement Program	9,980,394	1,476,397	8,503,997	1,426,343	1,517,396	4,347,012	5,560,259	

ATTACHMENT B
FY18 Final CIP
Expenditure Forecast at Project Level

Program / Project	Total Contract Amount	Payments through FY16	Remaining Balance	FY17	FY18	FY14 - FY18 Expenditures	FY19-FY23 Expenditures	Beyond FY23
942 Information Security Program (ISP)	2,821,703	1,180,838	1,640,865	477,489	617,790	1,740,927	545,586	
944 Information Technology Management Program	922,640	-	922,640	-	-	-	922,640	
946 IT Infrastructure Program	10,271,000	5,373,640	4,897,360	471,588	1,066,975	5,621,232	3,358,797	

Attachment C
Comparison of the Final FY18 CIP and the Proposed FY18 CIP

Program and Project	FY18 Proposed			
	Total Budget Amount	FY14-18	FY19-23	Beyond 23
Total MWRA	7,296,487	613,299	1,406,314	1,588,753
Wastewater	3,172,495	351,519	775,726	309,246
Interception & Pumping	980,615	80,334	301,065	78,677
102 Quincy Pump Facilities	25,907	-	-	-
104 Braintree-Weymouth Relief Facilities	234,493	242	6,547	-
105 New Neponset Valley Relief Sewer	30,300	-	-	-
106 Wellesley Extension Replacement Sewer	64,359	-	-	-
107 Framingham Extension Relief Sewer	47,856	-	-	-
127 Cummingsville Replacement Sewer	8,999	-	-	-
130 Siphon Structure Rehabilitation	6,881	-	5,941	-
131 Upper Neponset Valley Sewer	54,174	-	-	-
132 Corrosion & Odor Control	27,879	1,999	22,879	-
136 West Roxbury Tunnel	11,314	-	1,000	-
137 Wastewater Central Monitoring	27,482	360	3,050	4,290
139 South System Relief Project	4,939	-	1,500	-
141 Wastewater Process Optimization	10,416	297	5,195	3,719
142 Wastewater Meter System-Equipment	28,438	513	8,188	14,600
143 Regional I/I Management Planning	169	-	-	-
145 Facility Asset Protection	391,259	76,923	241,015	56,068
146 D.I. Cross Harbor Tunnel Inspection	5,000	-	5,000	-
147 Randolph Trunk Sewer Relief	750	-	750	-
Treatment	871,836	128,937	399,026	159,148
182 DI Primary and Secondary	(958)	-	-	-
200 DI Plant Optimization	33,279	(148)	-	-
206 DI Treatment Plant Asset Protection	814,868	115,616	393,199	158,552
210 Clinton Wastewater Treat Plant	22,419	13,469	5,827	597
211 Laboratory Services	2,228	-	-	-
Residuals	167,643	2,942	17,873	82,291
261 Residuals	63,811	-	-	-
271 Residuals Asset Protection	103,832	2,942	17,873	82,291

FY18 Final			
Total Budget Amount	FY14-18	FY19-23	Beyond 23
7,383,674	617,006	1,346,792	1,731,752
3,241,687	351,327	745,938	408,417
1,003,457	88,222	281,760	112,936
25,907	-	-	-
234,493	201	6,588	-
30,300	-	-	-
64,359	-	-	-
47,856	-	-	-
8,999	-	-	-
6,881	-	5,941	-
54,174	-	-	-
48,323	3,220	42,102	-
11,314	-	1,000	-
27,482	200	2,400	5,100
4,939	-	1,500	-
10,416	297	5,195	3,719
28,438	1,000	14,625	7,675
169	-	-	-
393,657	83,304	196,659	96,442
5,000	-	5,000	-
750	-	750	-
917,148	121,222	391,894	219,307
(958)	-	-	-
33,279	(148)	-	-
859,105	108,305	383,991	219,308
23,494	13,065	7,903	-
2,228	-	-	-
167,643	2,958	13,565	86,583
63,811	-	-	-
103,832	2,958	13,565	86,583

Change from FY18 Proposed			
Total Budget Amount	FY14-18	FY19-23	Beyond 23
87,187	3,707	(59,522)	142,999
69,192	(192)	(29,788)	99,171
22,842	7,888	(19,305)	34,259
-	-	-	-
-	(41)	41	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
20,444	1,221	19,223	-
-	-	-	-
-	(160)	(650)	810
-	-	-	-
-	-	-	-
-	487	6,437	(6,925)
-	-	-	-
2,398	6,381	(44,356)	40,374
-	-	-	-
-	-	-	-
45,312	(7,715)	(7,132)	60,159
-	-	-	-
-	-	-	-
44,237	(7,311)	(9,208)	60,756
1,075	(404)	2,076	(597)
-	-	-	-
-	16	(4,308)	4,292
-	-	-	-
-	16	(4,308)	4,292

Attachment C
Comparison of the Final FY18 CIP and the Proposed FY18 CIP

Program and Project	FY18 Proposed				FY18 Final				Change from FY18 Proposed			
	Total Budget Amount	FY14-18	FY19-23	Beyond 23	Total Budget Amount	FY14-18	FY19-23	Beyond 23	Total Budget Amount	FY14-18	FY19-23	Beyond 23
CSO	909,535	66,245	5,582	-	910,573	66,260	6,605	-	1,038	15	1,023	-
340 Dorchester Bay Sewer Separation (Fox Point)	54,626	473	-	-	54,626	473	-	-	-	-	-	-
341 Dorchester Bay Sewer Separation (Commercial Point)	64,174	(731)	3,758	-	64,009	(896)	3,758	-	(165)	(165)	-	-
342 Neponset River Sewer Separation	2,549	105	-	-	2,549	105	-	-	-	-	-	-
343 Constitution Beach Sewer Separation	3,731	(38)	-	-	3,731	(38)	-	-	-	-	-	-
344 Stony Brook Sewer Separation	44,246	48	-	-	44,268	70	-	-	22	22	-	-
346 Cambridge Sewer Separation	104,448	53,964	-	-	104,552	54,068	-	-	104	104	-	-
351 BWSC Floatables Controls	946	13	-	-	946	13	-	-	-	-	-	-
352 Cambridge Floatables Control	1,127	40	-	-	1,127	40	-	-	-	-	-	-
356 Fort Point Channel Sewer Separation	11,917	(90)	-	-	11,872	(134)	-	-	(45)	(44)	-	-
358 Morrissey Boulevard Drain	32,186	(161)	-	-	32,186	(161)	-	-	-	-	-	-
359 Reserved Channel Sewer Separation	70,613	10,573	-	-	70,517	10,477	-	-	(96)	(96)	-	-
360 Brookline Sewer Separation	24,715	(1,282)	-	-	24,715	(1,282)	-	-	-	-	-	-
361 Bulfinch Triangle Sewer Separation	9,054	(803)	-	-	9,054	(803)	-	-	-	-	-	-
339 North Dorchester Bay	221,510	(111)	-	-	221,510	(111)	-	-	-	-	-	-
347 East Boston Branch Sewer Relief	85,637	(9)	-	-	85,637	(9)	-	-	-	-	-	-
348 BOS019 Storage Conduit	14,288	-	-	-	14,288	-	-	-	-	-	-	-
349 Chelsea Trunk Sewer	29,779	-	-	-	29,779	-	-	-	-	-	-	-
350 Union Park Detention Treatment Facility	49,583	-	-	-	49,583	-	-	-	-	-	-	-
353 Upgrade Existing CSO Facilities	22,385	-	-	-	22,385	-	-	-	-	-	-	-
354 Hydraulic Relief Projects	2,295	-	-	-	2,295	-	-	-	-	-	-	-
355 MWR003 Gate & Siphon	4,445	3,796	-	-	4,425	3,776	-	-	(20)	(20)	-	-
357 Charles River CSO Controls	3,633	-	-	-	3,633	-	-	-	-	-	-	-
324 CSO Support	51,648	459	1,825	-	52,886	673	2,848	-	1,238	214	1,023	-
Other Wastewater	242,866	73,061	52,180	(10,870)	242,866	72,665	52,114	(10,409)	-	(396)	(66)	461
128 I/I Local Financial Assistance	242,585	73,061	52,180	(10,870)	242,585	72,665	52,114	(10,409)	-	(396)	(66)	461
138 Sewerage System Mapping Upgrade	281	-	-	-	281	-	-	-	-	-	-	-
Total Waterworks	3,992,531	227,533	610,818	1,279,510	4,010,951	236,427	576,515	1,323,338	18,420	8,894	(34,303)	43,828
Drinking Water Quality	665,999	55,279	5,097	10,417	666,791	54,972	6,195	10,417	792	(307)	1,098	-
542 Carroll Water Treatment Plant	438,984	12,262	5,097	10,417	439,799	11,979	6,195	10,417	815	(283)	1,098	-
543 Quabbin Water Treatment Plant	19,973	7,205	-	-	19,973	7,205	-	-	-	-	-	-
544 Norumbega Covered Storage	106,674	-	-	-	106,674	-	-	-	-	-	-	-
545 Blue Hills Covered Storage	40,083	120	-	-	40,083	120	-	-	-	-	-	-
550 Spot Pond Storage Facility	60,285	35,692	-	-	60,262	35,668	-	-	(23)	(24)	-	-

Attachment C
Comparison of the Final FY18 CIP and the Proposed FY18 CIP

Program and Project	FY18 Proposed				FY18 Final				Change from FY18 Proposed			
	Total Budget Amount	FY14-18	FY19-23	Beyond 23	Total Budget Amount	FY14-18	FY19-23	Beyond 23	Total Budget Amount	FY14-18	FY19-23	Beyond 23
Transmission	2,451,654	68,261	352,983	1,275,377	2,423,540	65,671	276,132	1,326,706	(28,114)	(2,590)	(76,851)	51,329
597 Winsor Station Pipeline	32,878	4,583	23,838	3,061	34,243	4,837	24,950	3,061	1,365	254	1,112	-
601 Sluice Gate Rehabilitation	9,158	-	-	-	9,158	-	-	-	-	-	-	-
604 MetroWest Tunnel	701,178	1,869	3,910	-	701,189	1,791	4,000	-	11	(78)	90	-
615 Chicopee Valley Aqueduct Redundancy	8,666	-	-	-	8,666	-	-	-	-	-	-	-
616 Quabbin Transmission System	16,406	1,303	7,900	-	16,419	1,316	7,900	-	13	13	-	-
617 Sudbury/Weston Aqueduct Repairs	6,453	2,430	3,363	-	6,477	2,109	3,248	460	24	(321)	(115)	460
620 Wachusett Reservoir Spillway Improvement	9,287	-	-	-	9,287	-	-	-	-	-	-	-
621 Watershed Land	24,000	5,015	1,643	-	24,000	4,732	1,926	-	-	(283)	283	-
622 Cosgrove/Wachusett Redundancy	53,030	46,232	5,621	1	54,316	46,659	6,482	-	1,286	427	861	(1)
623 Dam Projects	4,538	546	907	-	4,066	31	951	-	(472)	(515)	44	-
625 Metro Tunnel Redundancy	1,357,686	3,591	151,111	1,201,319	1,357,686	1,749	95,972	1,258,298	-	(1,842)	(55,139)	56,979
628 Metro Redundancy Interim Improvements	213,372	2,076	140,302	70,994	180,731	1,935	114,161	64,635	(32,641)	(141)	(26,141)	(6,359)
630 Watershed Division Capital Improvements	15,000	614	14,386	-	17,300	510	16,540	250	2,300	(104)	2,154	250
Distribution & Pumping	805,462	89,327	179,168	164,268	839,544	92,306	208,134	166,403	34,082	2,979	28,966	2,135
618 Northern High NW Tran Sections 70 & 71	-	-	-	-	12,910	1,006	11,904	-	12,910	1,006	11,904	-
677 Valve Replacement	20,115	-	3,558	4,540	20,115	-	3,558	4,540	-	-	-	-
678 Boston Low Service-Pipe & Valve Rehabilitation	23,691	-	-	-	23,691	-	-	-	-	-	-	-
683 Heath Hill Road Pipe Replacement	19,358	-	-	-	19,358	-	-	-	-	-	-	-
689 James L. Gillis Pump Station Rehabilitation	33,419	-	-	-	33,419	-	-	-	-	-	-	-
692 NHS - Section 27 Improvements	1,134	28	983	-	1,134	-	1,010	-	-	(28)	27	-
693 NHS - Revere & Malden Pipeline Improvement	57,527	1,409	29,285	-	65,373	2,064	36,409	67	7,846	655	7,124	67
702 New Connect Mains-Shaft 7 to WASM 3	37,861	2,404	21,907	2,589	38,841	2,301	21,691	3,889	980	(103)	(216)	1,300
704 Rehabilitation of Other Pump Stations	50,258	-	1,321	18,879	50,258	-	1,321	18,879	-	-	-	-
706 NHS-Connecting Mains from Section 91	2,360	-	-	-	2,360	-	-	-	-	-	-	-
708 Northern Extra High Service New Pipelines	8,045	57	3,599	757	8,045	56	3,600	757	-	(1)	1	-
712 Cathodic Protection Of Distribution Mains	1,704	218	1,345	-	1,704	218	1,345	-	-	-	-	-
713 Spot Pond Supply Mains Rehabilitation	66,928	4,670	1,276	-	66,858	4,551	1,326	-	(70)	(119)	50	-
714 Southern Extra High Sections 41 & 42	3,657	-	-	-	3,657	-	-	-	-	-	-	-
719 Chestnut Hill Connecting Mains	33,094	1,000	14,602	6	33,094	1,000	14,602	6	-	-	-	-
720 Warren Cottage Line Rehabilitation	1,205	-	-	-	1,205	-	-	-	-	-	-	-
721 South Spine Distribution Mains	76,281	369	4,042	35,179	76,281	69	4,342	35,179	-	(300)	300	-
722 NIH Redundancy & Storage	105,655	39,246	37,453	22,982	113,121	41,648	42,516	22,982	7,466	2,402	5,063	-
723 Northern Low Service Rehabilitation Section 8	52,678	914	27,730	21,715	56,889	1,028	31,827	21,714	4,211	114	4,097	(1)
724 Northern High Service - Pipeline Rehabilitation	-	-	-	-	-	-	-	-	-	-	-	-
725 Hydraulic Model Update	598	-	-	-	598	-	-	-	-	-	-	-
727 Southern Extra High Redundancy & Storage	107,885	22,016	22,459	56,653	109,410	21,928	24,051	56,673	1,525	(88)	1,592	20
730 Weston Aqueduct Supply Mains	81,564	15,164	357	-	80,696	14,573	80	-	(868)	(591)	(277)	-
731 Lynnfield Pipeline	5,626	(52)	-	-	5,626	(52)	-	-	-	-	-	-
732 Walnut St. & Fisher Hill Pipeline Rehabilitation	2,717	-	-	-	2,717	-	-	-	-	-	-	-

Attachment C
Comparison of the Final FY18 CIP and the Proposed FY18 CIP

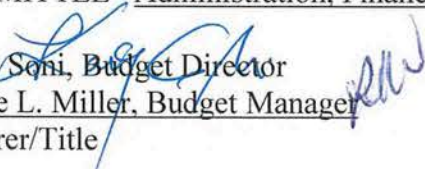
Program and Project	FY18 Proposed				FY18 Final				Change from FY18 Proposed			
	Total Budget Amount	FY14-18	FY19-23	Beyond 23	Total Budget Amount	FY14-18	FY19-23	Beyond 23	Total Budget Amount	FY14-18	FY19-23	Beyond 23
733 NHS Pipeline Rehabilitation 13-18 & 48	-	-	-	-	-	-	-	-	-	-	-	-
734 Southern Extra High Pipelines-Sections 30, 39,40, & 44	-	-	-	-	-	-	-	-	-	-	-	-
735 Section 80 Rehabilitation	12,103	1,885	9,250	968	12,185	1,917	8,551	1,717	82	32	(699)	749
Other	69,416	14,666	73,570	(170,554)	81,076	23,478	86,054	(180,190)	11,660	8,812	12,484	(9,636)
753 Central Monitoring System	39,040	6,192	6,277	10,767	39,040	5,542	5,457	12,237	-	(650)	(820)	1,470
763 Distribution Systems Facilities Mapping	2,299	-	1,263	-	2,299	-	1,263	-	-	-	-	-
764 Local Water Infrastructure Rehabilitation Assistance	7,488	-	-	-	7,488	-	-	-	-	-	-	-
765 Local Water Pipeline Improvement Loan Program	-	5,454	49,770	(182,083)	-	15,106	51,224	(193,189)	-	9,652	1,454	(11,106)
766 Waterworks Facility Asset Protection	20,589	3,021	16,260	762	32,249	2,831	28,110	762	11,660	(190)	11,850	-
Business & Operations Support	131,461	34,245	19,775	-	131,036	29,250	24,344	-	(425)	(4,995)	4,569	-
881 Equipment Purchase	29,188	11,314	5,766	-	29,408	11,354	5,946	-	220	40	180	-
925 Technical Assistance	1,150	383	767	-	1,150	383	767	-	-	-	-	-
930 MWRA Facility - Chelsea	9,814	-	-	-	9,812	(2)	-	-	(2)	(2)	-	-
931 Business Systems Plan	24,528	76	-	-	24,563	111	-	-	35	35	-	-
932 Environmental Remediation	1,479	-	-	-	1,479	-	-	-	-	-	-	-
933 Capital Maintenance Planning	15,886	5,474	288	-	15,208	4,505	579	-	(678)	(969)	291	-
934 MWRA Facilities Management	2,151	-	1,780	-	2,151	-	1,780	-	-	-	-	-
935 Alternative Energy Initiatives	23,271	1,191	4,883	-	23,271	1,191	4,883	-	-	-	-	-
940 Applicat Improv Program	9,980	5,568	4,340	-	9,980	4,347	5,560	-	-	(1,221)	1,220	-
942 Info Security Program ISP	2,822	1,585	702	-	2,822	1,741	546	-	-	156	(156)	-
944 Info Tech Mgmt Program	923	893	30	-	923	-	923	-	-	(893)	893	-
946 IT Infrastructure Program	10,271	7,762	1,218	-	10,271	5,621	3,359	-	-	(2,141)	2,141	-

STAFF SUMMARY

TO: Board of Directors
FROM: Frederick A. Laskey, Executive Director
DATE: June 28, 2017
SUBJECT: Final FY18 Current Expense Budget




COMMITTEE Administration, Finance & Audit


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

INFORMATION

VOTE


Thomas J. Durkin
Director, Finance

The Proposed FY18 Current Expense Budget (CEB) submitted to the Advisory Board at the February 2017 Board meeting included a 3.79% combined assessment increase.

MWRA received the Advisory Board comments and recommendations in May 2017, which recommended a combined assessment increase of 3.19% representing a \$4.2 million reduction to the Proposed FY18 Rate Revenue Requirement.

At the same time, the Authority after updating the Proposed Budget with the latest information and incorporating the majority of the Advisory Board recommendations, presented the Board with a Draft Final Assessment increase of 3.31%, or a reduction of \$3.4 million.

Based on the Board discussion during the June 7th budget hearings, staff are now proposing a 3.19% combined assessment increase, which matches the Advisory Board's recommendation.

The additional changes to achieve the Advisory Board's recommendation are listed below:

- *Increased the Investment Income \$551,000 by increasing the short-term variable rate from approximately 0.92% imbedded in the Draft Final Budget to 1.05%;*
- *Decreased Health Insurance by \$103,000 to recognize the lower than anticipated GIC rates; and*
- *Decreased Legal Services by \$100,000 as funds will no longer be needed due to the recent agreement with Eversource regarding a new cross-harbor electric cable.*

As every year, the main focus is on next year's budget, but always with the goal of continuing to utilize MWRA's multi-year rate management strategy to provide sustainable, and predictable assessment increases to its member communities. To achieve this goal again this year, MWRA has continued to employ conservative budgeting and fiscal discipline which includes controlled spending and use of historical variable rate assumptions. The combination of these measures resulted in assessments increase projections of 3.8% for the next four years.

RECOMMENDATION:

1. To adopt the Final FY18 Current Expense Budget (CEB) set forth in Attachment A, B and C with current revenue and expense of \$743,629,929.
2. To adopt the Final FY18 Operating Budget (Trustee's Budget) set forth in Attachment D.

DISCUSSION:

This staff summary presents the Final FY18 CEB. On June 7th, the Board of Directors held a hearing on the Draft Final FY18 CEB. Discussions and material provided at the hearing outlined changes to the budget since the transmittal of the FY18 Proposed CEB in February 2017. The additional changes made to the Final FY18 CEB vs. the Proposed Draft Final Budget are highlighted on the first page of this staff summary.

For a line item comparison between the FY18 Proposed CEB and the Final FY18 CEB, please refer to Attachment B.

Summary

The Final FY18 Budget recommends a combined increase in rates and charges of 3.19%. Capital financing costs remain the largest component of the CEB and account for 63.5% of total expenses. Total expenses are \$743.6 million, an increase of \$24.0 million or 3.3% over the FY17 Budget. The Final FY18 Budget assumes an offset of \$391,580 for the Debt Service Assistance (DSA) received in May 2017.

Total expenses include \$472.2 million for Capital Financing costs and \$271.4 million for operating expenses, of which \$232.6 million is for Direct Expenses and \$38.9 million is for Indirect Expenses. The \$24.0 million increase in total expenses is mainly due to a higher debt service requirement of \$9.0 million, inclusion of a HEEC Cable Capacity Reserve Fund to offset the anticipated increases of capacity charges in FY21 and FY22 resulting from the construction of a new cross harbor electrical cable to serve Deer Island, higher Direct Expenses of \$6.0 million due Cost of Living Adjustments (COLA) for staff, higher chemical costs, higher healthcare costs, and higher projected maintenance expenses.

The Final FY18 Budget revenues, excluding rate revenue, total \$26.6 million, an increase of \$1.8 million or 7.4% from the FY17 Budget. The Final FY18 Budget non-rate revenue budget includes \$16.4 million in Other User Charges and Other Revenue and \$10.2 million for Investment Income.

The Final FY18 Rate Revenue Requirement is \$717.1 million, an increase of \$22.2 million or 3.19% over the FY17 Budget.

Table 1 on the following page provides a comparison of the Final FY18 CEB and FY17 Budget by major categories. Additional detail by line item and by Division is provided in Attachments A and B.

Table 1

**MWRA Current Expense Budget
FY18 Final Budget versus FY17 Approved Budget**

(\$ in Millions)	FY17 Approved Budget	Proposed FY18 Budget	\$ Change	% Change
Directs	\$ 226.5	\$ 232.6	\$ 6.0	2.7%
Indirects	38.0	38.9	0.9	2.4%
Sub-Total Operating Expenses	\$ 264.5	\$ 271.4	\$ 6.9	2.6%
Capital Financing (before Offsets)	455.1	472.6	17.4	3.8%
Offsets: Bond Redemption ¹	-	-	-	
Variable Debt Savings	-	-	-	
Debt Service Assistance	-	(0.4)	(0.4)	0.0%
Sub-Total Capital Financing	\$ 455.1	\$ 472.2	\$ 17.1	3.7%
Total Expenses	\$ 719.6	\$ 743.6	\$ 24.0	3.3%
Investment Income	\$ 9.5	\$ 10.2	\$ 0.7	7.7%
Non-Rate Revenue	15.3	16.4	1.1	7.2%
Rate Stabilization ¹	-	-	-	
Sub-Total Non-Rate Revenue	\$ 24.7	\$ 26.6	\$ 1.8	7.4%
Rate Revenue	694.9	717.1	22.2	3.2%
Total Revenue & Income	\$ 719.6	\$ 743.6	\$ 24.0	3.3%
FY18 Rate Revenue Increase		3.19%		
Combined Use of Reserves	\$ -	\$ -		

¹ MWRA has two reserve funds (Bond Redemption and Rate Stabilization) which can be used at the discretion of the Authority to manage the rate revenue requirement. Use of the Bond Redemption Fund reduces total expenses and Rate Stabilization Fund increases total revenue. Under the terms of the General Bond Resolution the annual use of Rate Stabilization funds cannot exceed 10% of the year's senior debt service. Bond Redemption funds can be used only to retire or prepay outstanding debt. There is no annual limit on the amount of Bond Redemption funds used in a year, however the use is tied to the bonds' maturity dates and it is utility specific.

EXPENSES:

Direct Expenses

Since the development of the Proposed FY18 Budget, MWRA has agreed with Eversource to construct a new long-term submarine electric cable to replace the existing cable instead of protecting the existing cable with an expensive short-term fix. Constructing a new cable will enable MWRA to avoid the operational risks associated with running backup turbines for electric power for a prolonged period of time as well as avoiding the substantial financial risks to the Authority. As a result of the significant change with regard to the plan for the HEEC cable, the FY18 Final Budget no longer includes the \$4.4 million of direct costs for protecting the old cable. Based on current estimates of costs and timing for commissioning of the new cable,

MWRA anticipates that payments for the capacity charges for the new HEEC cable will begin in FY20. By agreement with the Advisory Board, the \$4.4 million of avoided expenses in FY18 are being added to a new HEEC cable capacity reserve fund totaling \$6.5 million to use in FY21 and FY22 to absorb and level the increase in costs beginning that year.

FY18 Direct Expenses total \$232.6 million, an increase of \$6.0 million, or 2.7%, from the FY17 Budget.

- *Wages and Salaries* – The budget includes \$104.3 million for Wages and Salaries as compared to \$101.9 million in the FY17 Budget, an increase of \$2.4 million or 2.4%, primarily for COLA increases. Regular Pay is 98.3% of total Wages and Salaries. The FY18 Budget funds 1,150 positions, the same as FY17. As always, new hires and backfilling of vacant positions will be managed at the agency level and addressed on a case-by-case basis by senior management.
- *Overtime* – The budget includes \$4.1 million for Overtime, a decrease of \$82,000 or 2.0% as compared to the FY17 Budget mainly for the removal of overtime in FY18 associated with the North Main Pump Station and Winthrop Terminal Facility Butterfly Valve Replacement project which will be completed in FY17.
- *Fringe Benefits* – The budget includes \$21.0 million for Fringe Benefits, an increase of \$756,000 or 3.7% from the FY17 Budget. Health Insurance premiums total \$18.1 million, an increase of \$640,000 or 3.7% from the FY17 Budget largely due to an increase in the rates for the health plans.
- *Workers' Compensation* – The budget includes \$2.3 million for Workers' Compensation, a decrease of \$21,000 or 0.9% from the FY17 Budget and is based on a three-year average of actual spending.
- *Chemicals* – The budget includes \$9.8 million for Chemicals, an increase of \$727,000 or 8.0% from the FY17 Budget mainly due to increased pricing primarily for Sodium Hypochlorite and to increased quantities primarily for Soda Ash. The FY18 Budget does not include any funding for the new Deer Island National Pollutant Discharge Elimination System (NPDES) permit which is projected to have more stringent requirements for enterococcus treatment compliance.
- *Utilities* – The budget includes \$21.7 million for Utilities, which is an increase of \$194,000 million or 0.9% from the FY17 Budget. The budget funds \$16.5 million for Electricity, \$2.4 million for Diesel Fuel, \$2.1 million for Water, and \$590,000 for Natural Gas.
- *Maintenance* – The budget includes \$32.2 million for Maintenance projects, an increase of \$1.1 million or 3.6% from the FY17 budget. The increase is for additional major projects, such as cleaning the Nut Island, Columbus, and Ward Headworks street ducts. The FY18 Maintenance request is \$1.2 million above FY16 actuals.

- *Training and Meetings* – The budget includes \$406,000 for Training and Meetings, a decrease of \$29,000 or 6.7% from the FY17 Budget. This reflects the actual costs of programs scheduled for FY18.
- *Professional Services* – The budget includes \$7.2 million for Professional Services, an increase of \$690,000 or 10.6% from the FY17 Budget. The budget reflects funding of \$1.9 million for Other Professional Services to support items such as professional staff development, MWRA MIS system support, and Financial and Human Resources support. \$200,000 was added to Legal Services for as-needed services related to the Co-Permittee concerns with the anticipated new Deer Island NPDES permit.
- *Other Materials* – The budget includes \$6.7 million for Other Materials, an increase of \$473,000 or 7.6% from the FY17 Budget. \$289,000 of the increase is for hardware replacement; and \$190,000 is for water quality testing equipment. The budget includes funding of \$1.9 million for Vehicle Purchases, \$908,000 for Lab and Testing Supplies, \$833,000 for Computer Hardware needs, \$771,000 for Vehicle Expenses mostly for fuel purchases for the MWRA fleet, \$599,000 for Equipment/Furniture, \$451,000 for Health and Safety, and \$448,000 for Work Clothes.
- *Other Services* – The budget includes \$22.8 million for Other Services, a decrease of \$210,000 or 0.9% from the FY17 Budget. The budget includes funding of \$12.8 million for Sludge Pelletization, \$3.7 million for Space/Lease Rentals and related expenses for the Charlestown Navy Yard, and Chelsea facilities, \$2.0 million for Voice and Data costs, \$1.4 million for Other Services, and \$1.1 million for Grit & Screenings removal. The largest decrease is for Sludge Pelletization of \$298,000 due to deflation and Grit and Screening of \$137,000 due to lower quantities. This is offset by increases in Membership/Dues/Subscriptions, Printing & Duplicating, Space/Lease Rentals, and Other Services.

Indirect Expenses

Indirect Expenses for FY18 total \$38.9 million, an increase of 904,000 or 2.4% from the FY17 Budget. Below are the highlights of major changes:

- The budget includes \$2.0 million for Insurance, an increase of \$16,000 or 0.8% from the FY17 Budget. The FY18 Budget was based on actual average spending for claims for the past five years, FY12-16, and favorable bids received for the premiums. It should be noted that at the June 7th meeting, the Board of Directors approved the MWRA FY18 Insurance program with a not to exceed estimate of \$255,000 for the excess liability coverage line item. Since then, staff obtained the actual amount for the excess liability coverage which is \$237,250, for a savings of \$17,750.
- The budget includes \$25.2 million for the Watershed Management budget, an increase of \$873,000 or 3.6% over the FY17 Budget. The budget includes \$16.7 million for reimbursement of operating expenses net of revenues, and \$8.4 million for Payment in Lieu of Taxes (PILOT). The largest increases are for operating expenses

net of revenues of \$805,000 mainly for healthcare costs and contractual increases. In addition there is an increase of \$68,000 for PILOT payments. The FY18 operating capital budget includes the Clinton crew headquarters construction, purchase of large equipment and an expansion of the Wachusett maintenance garage.

- The budget includes \$957,000 for the Harbor Energy Electric Company (HEEC), an increase of \$184,000 or 23.7% from the FY17 Budget to reflect updated calculations for the Operations and Maintenance component of the HEEC payment obligations for the existing cross-harbor cable.
- The budget includes \$1.6 million for Mitigation payments to the cities of Quincy and Winthrop in accordance with mitigation agreements which expire in FY25.
- Funding for the Operating Reserve for FY18 is \$821,000. The Operating Reserve balance is in compliance with MWRA General Bond Resolution which requires a balance of one-sixth of annual operating expenses. Based on the FY18 Proposed Budget the required balance is \$40.1 million versus the \$39.2 million required in FY17.
- The budget includes \$3.3 million for the Retirement Fund, the minimum required contribution for FY18 based on the January 1, 2015 actuarial report. The FY18 required contribution is an increase of \$145,000 or 4.6% over the FY17 budget. The Proposed FY18 Budget also included a \$1.8 million additional optional pension payment to address the lower than anticipated return on investment as of December 2016. The Advisory Board recommended the elimination of the \$1.8 million additional payment as one of the options of lowering the Rate Revenue Requirement in the Final FY18 Budget, and MWRA agreed. However, on June 12, the Authority received a new actuarial valuation and as expected, the actuarial losses were significant. Staff briefed the Advisory Board on the newest development and we are planning a summit during the summer with the participation of the Advisory Board to look into a variety of options to address the growing budgetary impact on both the Pension and *Other Postemployment Benefits (OPEB)* obligations.
- The Authority has complied with the GASB 45, *Accounting and Financial Reporting by Employers for Other Postemployment Benefits (OPEB)*, by disclosing this liability in the year-end Financial Statements. As part of the multi-year strategy to address its unfunded liabilities for OPEB and pension holistically, the Board approved a plan to pay down our pension liability and upon reaching full funding, move to address the OPEB obligation. The FY18 Budget includes \$5.0 million of OPEB funding. The \$5.0 million contribution is 50% of the Annual Required Contribution (ARC) after the reduction of the pay-as-you-go portion budgeted under the Fringe line item, based on the January 1, 2014 actuarial report.

To maximize the benefits in terms of returns and accounting treatment, an irrevocable OPEB Trust was established after Board approval and funding started on April 23rd,

2015. The current Trust balance is \$17.5 million, which represents approximately 12% funding level.

Capital Financing

As a result of the Authority's Capital Improvement Program, capital financing as a percent of total expenses (before offsets) has increased steadily from 36% in 1990 to 63.5% in the FY18 Current Expense Budget. Much of this debt service is for completed projects, primarily the Boston Harbor Project and the Integrated Water Supply Improvement Program. The MWRA's capital spending, from its inception, had been dominated by projects mandated by court ordered or regulatory requirements, which in total have accounted for ~80% of capital spending to date. Going forward, and as the Combined Sewer Overflow (CSO) projects reached substantial completion in December 2015, the majority of spending will be focused on asset protection and water redundancy initiatives. The projected capital spending scheduled for fiscal year 2018 is less than scheduled principal payments which will contribute to decrease MWRA's outstanding indebtedness.

The Authority has actively managed its debt structure to take advantage of favorable interest rates. Tools used by the MWRA to lower borrowing costs and manage rates include current and advanced refunding of outstanding debt, maximizing the use of the subsidized State Revolving Fund (SRF) debt, issuance of variable rate debt, swap agreements, and the use of surplus revenues to defease debt. The MWRA also uses tax exempt commercial paper to minimize the financing cost of construction in process.

The FY18 Proposed Budget capital financing costs total \$472.2 million and remain the largest portion of the MWRA's budget, accounting for 63.5% of total expenses.

The FY18 Budget includes a defeasance of \$36.2 million which will reduce debt service by \$15.9 million in FY21, \$23.4 million in FY22 and \$1,847,500 in years FY18-20.

The FY18 Budget assumes a 3.25% interest rate for variable rate debt which equal to the rate in FY17. The Authority's variable rate debt assumption is comprised of three separate elements: the interest rate for the daily and weekly series; liquidity fees for the Standby Bond Purchase Agreement, Letter of Credit, and Direct Purchase providers; and remarketing fees. While MWRA continues to experience unusually low interest rates, they are not reflective of historical averages and there are anticipated increases in the future.

The FY18 Proposed Budget capital financing costs increased by \$17.0 million or 3.7% compared to the FY17 Budget. This increase in the MWRA's debt service is the result of projected FY18 borrowings and the structure of the existing debt, the addition of the HEEC cable capacity reserve fund, and increased current revenue for capital partially offset by the impact of the defeasance. The FY18 capital financing budget includes:

- \$264.6 million in principal and interest payments on MWRA's senior fixed rate bonds. This amount includes \$3.5 million to support issuance of \$100 million in May 2018 and a reduction of \$1,847,500 for the effect of the FY17 defeasance;

- \$85.4 million in principal and interest payments on subordinate bonds;
- \$84.9 million in principal and interest payments on SRF loans. This amount includes \$4.3 million to support issuances of \$50.0 million of replacement loans during 2018;
- \$13.2 million to fund ongoing capital projects with current revenue;
- \$6.5 million for the new HEEC cable capacity reserve fund. As stated earlier, MWRA has agreed with Eversource to construct a new long-term submarine electric cable to replace the existing cable instead of protecting the existing cable with an expensive short-term fix. Based on current estimates of costs and timing for commissioning of the new cable, MWRA anticipates that payments for the capacity charges for the new HEEC cable will begin in FY20. By agreement with the Advisory Board, the \$4.4 million of avoided expenses in FY18, as a result of building a new cable instead of protecting the existing cable, are being added to a new HEEC cable capacity reserve fund totaling \$6.5 million to use in FY21 and FY22 to absorb and level the increase in costs beginning that year.
- \$3.8 million to fund the interest expense related to the Local Water Pipeline Assistance Program; and
- \$3.2 million for the Chelsea Lease.

The budget also includes \$391,580 offset to Debt Service for the Debt Service Assistance received in FY17.

Revenue

FY18 non-rate revenue totals \$26.6 million, which is an increase of \$1.8 million or 7.4% versus the FY17 Budget. The FY18 non-rate revenue budget includes:

- \$7.4 million in Other Revenue including, \$4.1 million from the sale of the Authority's Renewable Portfolio Credits, revenue from participating in load response program and sale of generated power to the grid, as well as \$2.2 million in permit fees and penalties. Other Revenue increased \$840,000 from the FY17 Budget due to an increase in the load response program payments.
- \$10.2 million in Investment Income, an increase of \$732,000 or 7.7% from the FY17 Budget, reflecting higher interest rate assumptions. The short-term interest rate assumption is at 1.05% which is at the 45 basis points above the FY17 Budget level.
- \$9.0 million in Other User Charges, including \$4.9 million for Chicopee Valley Aqueduct (CVA) communities, \$1.6 million for Deer Island water usage, \$727,000 for entrance fees from member communities, and \$500,000 for the Commonwealth's partial reimbursement for Clinton Wastewater Treatment Plant expenses. Other User Charges are \$235,000 or 2.7% more than the FY17 Budget which is mainly due to assessment

increases related to increases for Lancaster and Water Treatment Plants Residuals assessments.

The Rate Revenue Requirement for FY18 is \$717.1 million, an increase \$22.2 million or 3.19% over the FY17 Budget. The Rate Revenue Requirement is the difference between total expenses of \$743.6 million, less non-rate revenue of \$26.6 million.

Planning Estimates and Future Rate Projections

MWRA's planning estimates are projections based on a series of assumptions about future spending (operating and capital), interest rates, inflation, and other factors. MWRA uses the planning estimates to model and project what future rate increases might be based upon these assumptions, as well as to test the impact of changes to assumptions on future rate increases. The planning estimates are not predictions of what rate increases will be but rather they provide the context and framework for guiding MWRA financial policy and management decision making that ultimately determine the level of actual rate increases on an annual basis. Historically, the planning estimates were based on conservative financial assumptions. Conservative projections of future rate increases benefit the MWRA by providing assurance to the rating agencies that MWRA anticipates to raise revenues sufficient to pay for its operations and outstanding debt obligations now and over the long-term. Additionally, conservative forecasts of rate revenue increases enable member communities to adequately plan and budget for future payments to MWRA. In FY14 the Authority tightened certain planning estimate assumptions such as inflation on direct expenses and limiting the annual capital improvement spending.

Table 3 below presents the combined estimated future rate increases and household charges based on the Proposed FY18 Budget. The planning estimates shown below assume no Debt Service Assistance from the Commonwealth and use of Rate Stabilization and Bond Redemption reserves through FY27.

Table 3

Rates & Budget Projections											
Draft Final FY18 CEB	FY2017	FY2018	FY2019	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027
Total Rate Revenue (\$000)	\$ 694,879	\$ 717,054	\$ 744,621	\$ 773,254	\$ 802,986	\$ 833,780	\$ 859,234	\$ 854,454	\$ 864,779	\$ 878,266	\$ 892,982
Rate Revenue Change from Prior Year (\$000)	\$ 22,438	\$ 22,175	\$ 27,567	\$ 28,633	\$ 29,731	\$ 30,794	\$ 25,454	\$ (4,780)	\$ 10,325	\$ 13,487	\$ 14,716
Rate Revenue Increase	3.4%	3.19%	3.8%	3.8%	3.8%	3.8%	3.1%	-0.6%	1.2%	1.6%	1.7%
Use of Reserves (\$000)	\$ -	\$ -	\$ -	\$ 500	\$ 250	\$ 4,383	\$ -	\$ -	\$ -	\$ 37,235	\$ 20,252

Estimated Household Bill											
Based on annual water usage of 61,000 gallons	\$1,093	\$1,140	\$1,191	\$1,245	\$1,301	\$1,360	\$1,418	\$1,460	\$1,514	\$1,572	\$1,632
Based on annual water usage of 90,000 gallons	\$1,613	\$1,682	\$1,757	\$1,837	\$1,920	\$2,007	\$2,092	\$2,155	\$2,234	\$2,319	\$2,409

CEB Review and Adoption Process

In February, the MWRA transmitted the Proposed FY18 Budget to the Advisory Board for its review and comment. In June the Advisory Board submitted their *Integrated Comments and Recommendations*. Responses to the Advisory Board's review and comments are attached as Attachment F.

Attachments

Attachment A	FY18 Final Budget vs. FY18 Proposed Budget
Attachment B	FY18 Final Budget vs. FY17 Approved Budget
Attachment C	FY18 Final Direct Expense Budget by Division
Attachment D	FY18 Final Operating Budget (Trustee's Budget)
Attachment E	FY18 Final Budget vs. FY17 Projections
Attachment F	MWRA Responses to Advisory Board's FY18 Integrated CIP and CEB Comments and Recommendations

ATTACHMENT A
FY18
Final Budget vs FY17 Approved Budget

TOTAL MWRA	FY16 Actuals	FY17 Approved Budget	FY18 Final Budget	Change FY18 Final Budget vs FY17 Approved Budget	
				\$	%
EXPENSES					
WAGES AND SALARIES	\$ 96,118,427	\$ 101,858,897	\$ 104,286,370	\$ 2,427,473	2.4%
OVERTIME	4,355,586	4,192,676	4,110,637	(82,039)	-2.0%
FRINGE BENEFITS	19,131,139	20,242,324	20,997,975	755,651	3.7%
WORKERS' COMPENSATION	2,350,369	2,344,190	2,322,980	(21,210)	-0.9%
CHEMICALS	9,297,550	9,110,407	9,836,933	726,526	8.0%
ENERGY AND UTILITIES	18,744,867	21,541,078	21,735,222	194,144	0.9%
MAINTENANCE	30,978,045	31,080,642	32,200,786	1,120,144	3.6%
TRAINING AND MEETINGS	370,752	435,481	406,269	(29,212)	-6.7%
PROFESSIONAL SERVICES	5,886,717	6,531,939	7,221,622	689,683	10.6%
OTHER MATERIALS	6,186,216	6,219,630	6,692,659	473,029	7.6%
OTHER SERVICES	22,628,385	22,974,855	22,764,526	(210,329)	-0.9%
TOTAL DIRECT EXPENSES	\$ 216,048,053	\$ 226,532,117	\$ 232,575,979	\$ 6,043,862	2.7%
INSURANCE	\$ 1,953,053	\$ 1,997,898	\$ 2,013,452	15,554	0.8%
WATERSHED/PILOT/DEBT	27,469,847	24,291,268	25,164,006	872,738	3.6%
COMMONWEALTH DEBT PREPAYMENT	32,000,000	-	-	-	
HEEC PAYMENT	1,342,141	773,859	957,445	183,586	23.7%
MITIGATION	1,520,000	1,558,000	1,596,950	38,950	2.5%
ADDITIONS TO RESERVES	(34,927)	(167,742)	821,116	988,858	N/A
RETIREMENT FUND	8,159,521	3,132,624	3,277,369	144,745	4.6%
ADDITIONAL PENSION DEPOSIT	-	1,500,000	-	(1,500,000)	-100.0%
POSTEMPLOYMENT BENEFITS	5,224,848	4,876,050	5,035,422	159,372	3.3%
TOTAL INDIRECT EXPENSES	\$ 77,634,483	\$ 37,961,956	\$ 38,865,760	\$ 903,803	2.4%
STATE REVOLVING FUND	\$ 78,131,559	\$ 86,971,915	\$ 84,931,906	(2,040,009)	-2.3%
SENIOR DEBT	275,085,817	268,472,557	264,560,267	(3,912,290)	-1.5%
SUBORDINATE DEBT	49,222,442	69,997,992	85,443,447	15,445,455	22.1%
LOCAL WATER PIPELINE CP	262,498	4,149,242	3,794,944	(354,298)	-8.5%
CURRENT REVENUE/CAPITAL	11,200,000	12,200,000	13,200,000	1,000,000	8.2%
CAPITAL LEASE	3,217,060	3,217,060	3,217,060	-	0.0%
DEBT PREPAYMENT	-	10,994,960	10,900,000	(94,960)	-0.9%
VARIABLE RATE SAVINGS	(12,873,173)	-	-	-	
DEFEASANCE ACCOUNT	-	-	-	-	
DEBT SERVICE ASSISTANCE	(873,804)	(873,804)	(391,580)	482,224	-55.2%
HEEC CABLE CAPACITY RESERVE FUND	-	-	6,532,146	6,532,146	
TOTAL DEBT SERVICE	\$ 403,372,399	\$ 455,129,922	\$ 472,188,190	\$ 17,058,268	3.7%
TOTAL EXPENSES	\$ 697,054,934	\$ 719,623,995	\$ 743,629,929	\$ 24,005,933	3.3%
REVENUE & INCOME					
RATE REVENUE	\$ 672,440,000	\$ 694,878,500	\$ 717,054,000	22,175,500	3.19%
OTHER USER CHARGES	8,783,469	8,752,834	9,011,070	258,236	3.0%
OTHER REVENUE	15,749,464	6,519,171	7,359,078	839,907	12.9%
RATE STABILIZATION	-	-	-	-	
INVESTMENT INCOME	10,303,841	9,473,490	10,205,781	732,291	7.7%
TOTAL REVENUE & INCOME	\$ 707,276,774	\$ 719,623,995	\$ 743,629,929	\$ 24,005,934	3.3%

ATTACHMENT B

FY18 Final Budget vs FY18 Proposed Budget

TOTAL MWRA	FY18 Proposed Budget	FY18 Final Budget	Change FY18 Final Budget vs FY18 Proposed Budget	
			\$	%
EXPENSES				
WAGES AND SALARIES	\$ 104,781,848	\$ 104,286,370	\$ (495,478)	-0.5%
OVERTIME	4,507,278	4,110,637	(396,641)	-8.8%
FRINGE BENEFITS	21,515,134	20,997,975	(517,159)	-2.4%
WORKERS' COMPENSATION	2,322,980	2,322,980	-	0.0%
CHEMICALS	10,414,788	9,836,933	(577,855)	-5.5%
ENERGY AND UTILITIES	25,750,207	21,735,222	(4,014,985)	-15.6%
MAINTENANCE	32,496,381	32,200,786	(295,595)	-0.9%
TRAINING AND MEETINGS	406,181	406,269	88	0.0%
PROFESSIONAL SERVICES	6,685,715	7,221,622	535,907	8.0%
OTHER MATERIALS	6,697,290	6,692,659	(4,631)	-0.1%
OTHER SERVICES	22,833,106	22,764,526	(68,580)	-0.3%
TOTAL DIRECT EXPENSES	\$ 238,410,908	\$ 232,575,979	\$ (5,834,929)	-2.4%
INSURANCE	\$ 2,113,452	\$ 2,013,452	(100,000)	-4.7%
WATERSHED/PILOT/DEBT	25,024,006	25,164,006	140,000	0.6%
COMMONWEALTH DEBT PREPAYMENT	-	-	-	
HEEC PAYMENT	670,978	957,445	286,467	42.7%
MITIGATION	1,596,950	1,596,950	-	0.0%
ADDITIONS TO RESERVES	2,062,526	821,116	(1,241,410)	N/A
RETIREMENT FUND	3,277,369	3,277,369	-	0.0%
ADDITIONAL PENSION DEPOSIT	1,800,000	-	(1,800,000)	-100.0%
POSTEMPLOYMENT BENEFITS	5,035,422	5,035,422	-	0.0%
TOTAL INDIRECT EXPENSES	\$ 41,580,703	\$ 38,865,760	\$ (2,714,943)	-6.5%
STATE REVOLVING FUND	\$ 87,044,610	\$ 84,931,906	(2,112,704)	-2.4%
SENIOR DEBT	263,121,111	264,560,267	1,439,156	0.5%
SUBORDINATE DEBT	87,554,667	85,443,447	(2,111,220)	-2.4%
LOCAL WATER PIPELINE CP	4,086,863	3,794,944	(291,919)	-7.1%
CURRENT REVENUE/CAPITAL	13,200,000	13,200,000	-	0.0%
CAPITAL LEASE	3,217,060	3,217,060	-	0.0%
DEBT PREPAYMENT	10,900,000	10,900,000	-	0.0%
VARIABLE RATE SAVINGS	-	-	-	
DEFEASANCE ACCOUNT	-	-	-	
DEBT SERVICE ASSISTANCE	-	(391,580)	(391,580)	
HEEC CABLE CAPACITY RESERVE FUND	-	6,532,146	6,532,146	
TOTAL DEBT SERVICE	\$ 469,124,311	\$ 472,188,190	\$ 3,063,879	0.7%
TOTAL EXPENSES	\$ 749,115,922	\$ 743,629,929	\$ (5,485,993)	-0.7%
REVENUE & INCOME				
RATE REVENUE	\$ 721,238,000	\$ 717,054,000	(4,184,000)	-0.58%
OTHER USER CHARGES	8,964,366	9,011,070	46,704	0.5%
OTHER REVENUE	7,658,774	7,359,078	(299,696)	-3.9%
RATE STABILIZATION	-	-	-	
INVESTMENT INCOME	11,254,782	10,205,781	(1,049,001)	-9.3%
TOTAL REVENUE & INCOME	\$ 749,115,922	\$ 743,629,929	\$ (5,485,994)	-0.7%

ATTACHMENT C

FY18 Final Direct Expense Budget by Division

Division	FY17 Final Budget	FY18 Final Budget	Change FY18 Final Budget vs. FY17 Final Budget	
			\$	%
Executive	\$1,315,196	\$1,343,491	\$28,295	2.2%
Emergency Preparedness	3,180,579	3,645,328	\$464,749	14.6%
Administration	46,636,917	48,424,016	\$1,787,099	3.8%
Finance	4,267,780	4,126,525	-\$141,255	-3.3%
Law	1,967,409	2,309,385	\$341,976	17.4%
Affirmative Action	555,259	555,038	-\$221	0.0%
Internal Audit	654,825	682,917	\$28,092	4.3%
Public Affairs	1,220,789	1,252,855	\$32,066	2.6%
Operations/Planning	166,733,363	170,236,426	\$3,503,063	2.1%
Total Authority	\$226,532,117	\$232,575,979	\$6,043,863	2.7%

ATTACHMENT D

**Massachusetts Water Resources Authority
Fiscal Year 2018 Operating Budget for Filing with the Trustee
Pursuant to Section 712 of General Bond Resolution Adopted January 24, 1990**

(\$000s)

Projected Monthly Deposits:

Fund	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Total
Operating	\$18,881	\$23,602	\$18,881	\$18,881	\$23,602	\$18,881	\$18,881	\$23,602	\$18,881	\$18,881	\$23,602	\$18,881	\$245,457
Debt Service & Coverage	36,322	45,403	36,322	36,322	45,403	36,322	36,322	45,403	36,322	36,322	45,403	36,322	472,188
Debt Service Reserve	---	---	---	---	---	---	---	---	---	---	---	---	0
CORE	---	---	---	---	---	---	---	---	---	---	---	---	0
Commonwealth Obligations	---	---	4,181	---	---	4,181	---	---	12,621	---	---	4,181	25,164
Operating Reserve	63	79	63	63	79	63	63	79	63	63	79	63	821
Insurance Reserve	---	---	---	---	---	---	---	---	---	---	---	---	0
Renewal & Replacement Reserve	---	---	---	---	---	---	---	---	---	---	---	---	0
Rate Stabilization Reserve	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	<u>\$55,267</u>	<u>\$69,083</u>	<u>\$59,448</u>	<u>\$55,267</u>	<u>\$69,083</u>	<u>\$59,448</u>	<u>\$55,267</u>	<u>\$69,083</u>	<u>\$67,888</u>	<u>\$55,267</u>	<u>\$69,083</u>	<u>\$59,448</u>	<u>\$743,630</u>

ATTACHMENT E
FY18
Final Budget vs FY17 Projection

TOTAL MWRA	FY17 Projection	FY18 Final Budget	Change FY18 Final Budget vs FY17 Projection	
			\$	%
EXPENSES				
WAGES AND SALARIES	\$ 98,876,200	\$ 104,286,370	\$ 5,410,170	5.5%
OVERTIME	4,693,199	4,110,637	(582,562)	-12.4%
FRINGE BENEFITS	19,588,233	21,100,975	1,512,742	7.7%
WORKERS' COMPENSATION	2,643,780	2,322,980	(320,800)	-12.1%
CHEMICALS	9,259,739	9,836,933	577,194	6.2%
ENERGY AND UTILITIES	20,652,675	21,741,728	1,089,053	5.3%
MAINTENANCE	31,237,369	32,200,786	963,417	3.1%
TRAINING AND MEETINGS	409,086	406,269	(2,817)	-0.7%
PROFESSIONAL SERVICES	6,784,941	7,321,622	536,681	7.9%
OTHER MATERIALS	6,204,993	6,692,659	487,666	7.9%
OTHER SERVICES	21,954,208	22,764,526	810,318	3.7%
TOTAL DIRECT EXPENSES	\$ 222,304,423	\$ 232,785,484	\$ 10,481,062	4.5%
INSURANCE	\$ 1,803,072	\$ 2,013,452	\$ 210,380	11.7%
WATERSHED/PILOT	24,000,159	25,164,006	1,163,847	4.8%
HEEC PAYMENT	773,859	957,445	183,586	23.7%
MITIGATION	1,542,800	1,596,950	54,150	3.5%
ADDITIONS TO RESERVES	(167,742)	856,034	1,023,776	-610.3%
RETIREMENT FUND	3,132,624	3,277,369	144,745	4.6%
ADDITIONAL PENSION DEPOSIT	1,500,000		(1,500,000)	N/A
POSTEMPLOYMENT BENEFITS	4,876,050	5,035,422	159,372	3.3%
TOTAL INDIRECT EXPENSES	\$ 37,460,822	\$ 38,900,678	\$ 1,439,856	3.8%
STATE REVOLVING FUND	\$ 80,459,847	\$ 84,931,906	\$ 4,472,059	5.6%
SENIOR DEBT	262,966,712	264,560,267	1,593,555	0.6%
SUBORDINATE DEBT	69,997,992	85,443,447	15,445,455	22.1%
LOCAL WATER PIPELINE CP	858,685	3,794,944	2,936,259	341.9%
CURRENT REVENUE/CAPITAL	12,200,000	13,200,000	1,000,000	8.2%
CAPITAL LEASE	3,217,060	3,217,060	-	0.0%
DEBT PREPAYMENT	10,994,960	10,900,000	(94,960)	-0.9%
VARIABLE DEBT SAVINGS	(10,729,069)		10,729,069	-100.0%
DEFEASANCE ACCOUNT	26,037,537		(26,037,537)	N/A
DEBT SERVICE ASSISTANCE	(1,265,384)	(391,580)	873,804	-69.1%
HEEC CABLE CAPACITY RESERVE FUND		6,532,146	6,532,146	N/A
TOTAL DEBT SERVICE	\$ 454,738,339	\$ 472,188,189	\$ 17,449,850	3.8%
TOTAL EXPENSES	\$ 714,503,584	\$ 743,874,351	\$ 29,370,768	4.1%
REVENUE & INCOME				
RATE REVENUE	\$ 694,878,500	\$ 717,873,000	\$ 22,994,500	3.31%
OTHER USER CHARGES	8,752,834	8,987,491	234,657	2.7%
OTHER REVENUE	12,819,171	7,359,078	(5,460,093)	-42.6%
RATE STABILIZATION	-		-	N/A
INVESTMENT INCOME	9,309,490	9,654,782	345,292	3.7%
TOTAL REVENUE & INCOME	\$ 725,759,995	\$ 743,874,351	\$ 18,114,357	2.5%
VARIANCE	\$ 11,256,410		\$ (11,256,410)	

ATTACHMENT F

MWRA's Responses to the Advisory Board's FY2018 Integrated CIP and CEB Recommendations and Comments

Advisory Board Recommendations	MWRA Responses
<p>1. The Advisory Board reaffirms its recommendation that the Authority use the Program Management Division, similar to the model used for the Boston Harbor Project, when implementing the Metropolitan Tunnel. (Page 36)</p>	<p>Agree. MWRA plans to implement an organizational structure similar to that used for the Boston Harbor and MetroWest Water Supply Tunnel projects.</p>
<p>2. The Advisory Board recommends that the \$4.8 million non-typical water revenue from FY 2017 be segregated and reserved to fund the Metropolitan Tunnel Redundancy. (Page 36)</p>	<p>Agree. MWRA commits that the drought related, unbudgeted water revenue will be applied against the long-term water redundancy project.</p>
<p>3. The Advisory Board expects that the Authority will be prepared to solicit any available new federal infrastructure funding for Metropolitan Tunnel Redundancy. The Advisory Board recommends that the Authority organize as many projects associated with Metropolitan Tunnel Redundancy into one large project, demonstrating the size and need of such asset protection. (Page 36)</p>	<p>Agree. The projects related to the long-term water redundancy are already categorized into large projects covering three major areas: Cosgrove tunnel, Metropolitan tunnels, and Metropolitan Interim improvements. These three projects can be bundled for the purposes of potential funding.</p>
<p>4. The Advisory Board recommends reducing the FY18 Rate Revenue Requirement by \$4,163,934 resulting in a combined wholesale assessment increase of 3.19%, the lowest rate increase in five years. (Page 50)</p>	<p>Agree. MWRA reduced the Proposed Rate Revenue Requirement by \$4,184,000 in the Final FY18 budget.</p>
<p>5. Therefore, the Advisory Board recommends reducing the variable rate debt interest rate assumption to 3.25%, and the variable rate debt line item by \$1.2 million to reflect this change. (Page 55)</p>	<p>Agree. MWRA reduced the variable rate from 3.5% to 3.25% resulting in \$1,104,445 lower Debt Service.</p>
<p>6. The Advisory Board recommends Pay-Go funding levels are not increased beyond those currently in the MWRA's planning projections. The Advisory Board reserves its right to recommend reduced Pay-Go levels in future. (Page 58, Page 106)</p>	<p>Agree. However, MWRA also reserves the right to recommend Pay-As-You Go capital levels based on the specific budgetary conditions in any given year.</p>
<p>7. In keeping with the policy regarding Debt Service Assistance advocated by the Advisory Board to "Pay It Forward" to the next budget year, the Advisory Board recommends that \$391,580 be used to directly reduce the rate revenue requirement for FY18. (Page 59, Page 98)</p>	<p>Agree. MWRA included the \$391,580 DSA received in FY17 in the FY18 budget as an offset to Debt.</p>

ATTACHMENT F

MWRA's Responses to the Advisory Board's FY2018 Integrated CIP and CEB Recommendations and Comments

Advisory Board Recommendations	MWRA Responses
<p>8. The Advisory Board recommends that the Authority adjusts its attrition/vacancy rate assumptions upward by \$1,000,000 (includes associated fringe benefits). (Page 62)</p>	<p>Partially Agree. Reduced the regular pay budget by \$500,000. MWRA was able to accept this reduction due to the late development of Union negotiations which provide more certainty in years FY18-20. The new three year contracts were approved by the Board on June 8th.</p>
<p>9. The Advisory Board recommends eliminating the \$1.8 million additional pension payment. The Advisory Board leaves it to the MWRA's discretion whether or not to redirect \$1.8 million of the OPEB contribution to address recent losses to the retirement fund. (Page 68)</p>	<p>Agree. MWRA eliminated the \$1.8 million additional pension payment from the Final FY18 budget, however based on the latest actuarial valuation received on June 12, the pension liability and projected full funding year will need to be revisited in the FY19 budget. The Authority plans to have a more detailed discussion on this issue with the Advisory Board during the summer.</p>
<p>10. The Advisory Board recommends reducing the "additions to reserves" line item for FY18 by \$1,259,061 to correspond to the recommended reductions in eligible line items. (Page 69)</p>	<p>Agree. Reduced the Additions to Reserves line by \$1,206,492 based on applicable expense line changes.</p>

ATTACHMENT F

MWRA's Responses to the Advisory Board's FY2018 Integrated CIP and CEB Recommendations and Comments

Advisory Board Recommendations	MWRA Responses
<p>11. The Advisory Board reiterates its recommendation from last year on the capital budget for the Watershed Division with the following conditions:</p> <ul style="list-style-type: none"> • The Watershed Division must implement a formal capitalization policy to clearly identify whether projects should be funded through the Watershed Operating Budget or the new capital budget. • The MWRA and Watershed Division should work together to develop criteria on the agency's working relationship on managing capital projects using a tiered approach where some projects are managed by MWRA and some by the Watershed Division. The MOU should be revisited and modified in any way needed to implement this approach. • Any projects that meet this capitalization threshold should be removed from the DCR operating budget. • MWRA must receive a detailed and realistic five-year capital spending plan. • DCR must implement a five-year capital spending cap for the Watershed Division similar to the MWRA's spending cap. If DCR's capital spending is funded through MWRA's CIP, these projects will count toward the MWRA's capital spending cap. (Page 70-71) 	<p>Agree.</p> <ul style="list-style-type: none"> • The Watershed Division will establish a capitalization policy which will propose a threshold of \$500,000 per project and extension of the asset value of a minimum 5 years. • This proposal has to be vetted and approved by the Watershed Trust and MWRA Board. • MWRA and the Watershed Division will develop criteria to establish a mechanism which will serve the decision making for determining the funding source and management responsibilities for "capital" nature projects. The decision will be made based on common understanding of both MWRA and the Watershed Division, and will be project specific. • MWRA already received a five-year capital spending plan from the Watershed Division, however when MWRA will establish the next Cap for FY19-23, the capital plan and Cap for the Watershed Division will be determined as well.
<p>12. The Advisory Board recommends that the Authority decrease the "other services" category of expense by \$1,722 consistent with the Advisory Board's final FY18 operating budget. (Page 78)</p>	<p>Agree.</p>
<p>13. The Advisory Board recommends removing treatment of enterococcus from the FY18 budget and reducing the FY18 chemicals budget by \$600,000. (Page 85, Page 102)</p>	<p>Agree. Reduced the chemical line item by \$577,855 for the use of sodium hypochlorite and sodium bisulfate.</p>

ATTACHMENT F

MWRA's Responses to the Advisory Board's FY2018 Integrated CIP and CEB Recommendations and Comments

Advisory Board Recommendations	MWRA Responses
<p>14. As such, the Advisory Board is even more strident in its position on this issue and instead recommends that MWRA insist that the final Deer Island permit does not contain any language naming member communities as co-permittees. (Page 89)</p>	<p>When EPA issues a draft permit, staff will confer with MWRA's Board of Directors on decisions regarding items that may be appealed.</p>
<p>15. The Advisory Board further recommends that the MWRA increase its legal services line item by \$750,000 to fund any outside counsel required to challenge the final Deer Island NPDES permit to remove co-permittee language. (Page 89)</p>	<p>Partially agree. MWRA included \$200,000 for outside counsel to challenge the co-permittee language in the final Deer Island NPDES permit.</p>
<p>16. The Advisory Board recommends that the MWRA staff work with Advisory Board staff to determine the best "target" level for cost-recovery of the TRAC program. Additionally, the Advisory Board recommends identifying and implementing an automatic escalator to make fee increases sustainable and predictable for the permittees. (Page 97)</p>	<p>Agree. In the coming months Operations will develop options to address this recommendation, both in terms of an "escalator" and timing of possible implementation.</p>
<p>17. The Advisory Board recommends reducing interest income revenue by \$1.6 million. (Page 98)</p>	<p>Partially agree. MWRA reduced the Investment Income by \$1,049,001 as result of lowering the short-term variable rate assumption from 1.25% to 1.05%. Given the recent and projected increases in short-term interest rates, not to take the variable rate below 1.05% seems to be a realistic assumption.</p>

ATTACHMENT F

MWRA's Responses to the Advisory Board's FY2018 Integrated CIP and CEB Recommendations and Comments

Advisory Board Recommendations	MWRA Responses
<p>The Advisory Board recommends establishing a HEEC Capacity Reserve fund to be used specifically for the first payments due to Eversource related to the new cross-harbor cable annual charges, mitigating a spike in community assessments as currently projected in FY21 and to:</p> <p>18.</p> <ul style="list-style-type: none"> • Transfer the \$4,419,124 originally budgeted for the cross-harbor cable protection project to this fund • To redirect \$2,113,022 of our identified reductions to this fund (Page 114) 	<p>Agree. MWRA, in agreement with the Advisory Board established a HEEC Cable Capacity Reserve Fund for a total of \$6,532,146, which will be used to offset the new capacity charges after the new cable is constructed in FY21 and FY22.</p>
<p>The Advisory Board recommends that the Authority continue reviewing its procurement procedures for Professional Services contracts, particularly with regard to capital projects considering the following options:</p> <p>19.</p> <ul style="list-style-type: none"> • Identify some capital project design contracts at different levels of estimated cost and complexity and conduct pilot tests of a qualifications-based selection process, and report back to the Board of Directors on the results and observations of such a pilot, its potential applications at the Authority on a limited basis, and modifications to a “pure” QBS process that might better suit the MWRA’s needs • Consider case-by-case waivers on the requirement that no other factor be weighed higher than cost • Consider using qualifications based selections on certain projects (e.g. highly complex ones such as the Metropolitan Tunnel Redundancy) or on certain types of procurements that might increase the competition and viability of smaller design firms to participate without the onerous upfront costs of putting together a bid proposal (Page 114) 	<p>Partially agree. Staff greatly appreciate the Advisory Board’s interest and work on this issue. Staff share the Advisory Board’s concern that for some recent professional services procurements competition was less than robust. Staff have spent time studying the issues and researching alternatives and have made modifications to the procurements process, all in an effort to increase competition. Staff will continue to review the Authority's policies, procedures and process for the procurement of professional services, and will continue to seek ways to expedite and improve the process. While a formal pilot program may not be feasible, staff will review whether consideration should be given to utilizing a more qualifications based selection process and/or waiving the requirement that no factor can be weighted higher than cost for certain projects given their size, complexity and other unique aspects. Staff agree that the procurement of certain professional services for the Metropolitan Tunnel Redundancy project may be suited for a more qualifications based process. Further evaluation of the issue will be conducted by staff.</p>
<p>20. The Advisory Board recommends that energy efficient decorative LED lighting be installed on Deer Island, to improve the aesthetics and recognition of the Deer Island digesters as part of the Boston Harbor skyline. (Page 115)</p>	<p>Staff will identify the cost of implementing this recommendation.</p>

ATTACHMENT F

MWRA's Responses to the Advisory Board's FY2018 Integrated CIP and CEB Recommendations and Comments

Advisory Board Comments	MWRA Responses
<p>1. The Advisory Board supports the continued use of the defeasance account strategy, which clearly identifies a use of variable rate debt service savings that is consistent with the original intended use of the funds that were raised. (Page 56)</p>	<p>Agree. This strategy proved to be a powerful tool in managing the Assessment increases to Communities by targeting the highest Debt Service liabilities in future years.</p>
<p>2. The Advisory Board expects the Authority to reduce capital financing by an additional \$2,190,769 to reflect the benefits of the spring 2018 defeasance transaction along with other new changes to capital financing. (Page 57)</p>	<p>Agree. Excluding the HEEC Cable Capacity Reserve Fund and the DSA receipt, MWRA Reduced Capital Financing by \$3,076,687 due to a variety of factors. This includes \$1,104,445 for reducing the variable rate. See recommendation #5. Also, the lower SRF borrowings, the favorable new money deal and the additional defeasance contributed to the favorable variance.</p>
<p>3. The Advisory Board supports the MWRA's plan to use Pay-Go to fund its share of the new cross-harbor cable construction currently estimated at \$48.25. (Page 58, Page 106)</p>	<p>Agree.</p>
<p>4. The Advisory Board expects the MWRA to propose an increase of \$4,522 in the "wages and salaries" category of expenses in its final FY18 CEB. (Page 62)</p>	<p>Agree.</p>
<p>5. The Advisory Board supports continued funding for proposed temporary staffing related to the lead program to assist communities. (Page 63)</p>	<p>Agree. MWRA has two temporary positions budgeted for this effort in FY18.</p>
<p>6. Based on new data released this spring from the GIC, MWRA projects a decrease of \$414,159 from the proposed FY18 CEB. The Advisory Board expects this reduction to be included in the final FY18 CEB. (Page 63)</p>	<p>Agree. MWRA reduced the Fringe Benefits by \$517,159 related to lower than expected health insurance related costs. The GIC published rates were lower than the assumed 8% in the Proposed Budget.</p>
<p>7. The Advisory Board expects the MWRA to reduce its overtime budget by \$396,641. (Page 62)</p>	<p>Agree. The majority of this reduction is pertaining to the HEEC Cable.</p>

ATTACHMENT F

MWRA's Responses to the Advisory Board's FY2018 Integrated CIP and CEB Recommendations and Comments

Advisory Board Comments	MWRA Responses
8. The Advisory Board expects the MWRA to reduce the Watershed Reimbursement line item by \$160,000. (Page 69)	Partially Agree. The PILOT budget decreased by \$160,000. However, the Watershed Reimbursement line was increased \$300,000 for additional specialized equipment purchases; for a net increase of \$140,000.
9. The Advisory Board expects the MWRA to decrease its "maintenance" category of expense by \$295,595 in the final FY18 CEB. (Page 75)	Agree. The majority of this reduction is for the HEEC cable relocation project related cost estimates which are no longer required.
10. The Advisory Board expects the Authority will decrease the "other services" category of expense by \$66,858. (Page 78)	Agree.
11. The Advisory Board expects the Authority to decrease its FY18 CEB "utilities" expenses by an estimated \$4,008,480. (Page 82)	Agree. MWRA decreased the Utilities budget by \$4,008,480 primarily due to changes in plans for the HEEC cable relocation project.
12. The Advisory Board expects that the MWRA will increase the "chemicals" category of expense by \$3,203 to reflect updated pricing and usage assumptions. (Page 85)	Agree.
13. The Advisory Board expects the MWRA to request an increase of the "professional services" category of expense by \$435,907 in its final budget. (Page 88)	Agree. Increased primarily for legal and MIS services based on anticipated needs. (this does not include \$200k for co-permittees)
14. The Advisory Board supports a comprehensive review of the MWRA's fleet as a good practice periodically. (Page 92)	Agree. This is an on-going effort. Plans for FY18 include a comprehensive review of the mobile equipment fleet to ensure MWRA has the optimal mix of equipment for routine and emergency work.
15. The Advisory Board expects the Authority to decrease the "other materials" category of expense by \$4,631. (Page 92)	Agree.

ATTACHMENT F

MWRA's Responses to the Advisory Board's FY2018 Integrated CIP and CEB Recommendations and Comments

Advisory Board Comments	MWRA Responses
16. The Advisory Board expects the Authority to increase “training and meetings” category of expense by \$88. (Page 93)	Agree.
17. The Advisory Board expects the MWRA to reduce the “other revenue” category of revenue by \$299,696 to reflect updated assumptions. (Page 96)	Other Revenue decreased by \$299,696 due to the energy related programs, specifically demand response of \$259,760 and Renewable Portfolio Credits of \$39,936.
18. The Advisory Board expects to work closely with the MWRA and all stakeholders to help MassDEP assume NPDES delegation. (Page 109)	MWRA appreciates the Advisory Board's support.

STAFF SUMMARY

TO: Board of Directors
FROM: Frederick A. Laskey, Executive Director
DATE: June 28, 2017
SUBJECT: Final FY18 Water and Sewer Assessments




COMMITTEE: Administration, Finance & Audit

 INFORMATION

 X VOTE



Kathy Soni, Budget Director
Leo Norton, Assistant Manager, Rates, Revenue
and Finance
Preparer/Title


Thomas J. Durkin
Director, Finance

The FY18 Proposed Current Expense Budget (CEB) submitted to the Advisory Board at the February 2017 Board meeting included a 3.8% combined assessment increase.

Based on the Board discussions during the June 7th budget hearings and the Advisory Board recommendation, the Authority is putting forth a Rate Revenue Requirement (RRR) of \$717,054,000, resulting in a 3.19% combined assessment increase.

MWRA continues to utilize a multi-year rates management strategy to provide sustainable and predictable assessment increases to its member communities. To achieve this goal again this year, MWRA has continued to employ conservative budgeting and fiscal discipline which includes controlled spending and use of historical variable rate assumptions. The combination of these measures results in annual combined utility assessment increase projections of 3.8% through FY22.

RECOMMENDATION:

To adopt the following effective July 1, 2017:

- 1) Water system assessments of \$242,415,557 and sewer system assessments of \$474,638,443 for Fiscal Year 2018.
- 2) FY18 sewer assessments of \$500,000 for the Town of Clinton and \$411,128 for the Lancaster Sewer District.
- 3) FY18 charge to the City of Worcester of \$164,159 representing approximately 7.9% of the direct operating expenses for the Clinton Wastewater Treatment Plant.
- 4) FY18 water assessments of \$3,400,313 for the City of Chicopee, \$721,256 for South Hadley Fire District #1, and \$792,374 for the Town of Wilbraham.
- 5) A wholesale water rate of \$3,582.09 per million gallons.
- 6) A retail sewer rate of \$7,573.52 per million gallons.

DISCUSSION:

The Draft Final FY18 Current Expense Budget includes a Rate Revenue Requirement of \$717,054,000, an increase of 3.19% over the FY17 requirement.

	FY18 Draft Final	FY17 Approved	Change from FY17	
			Dollars	Percent
Water	\$242,415,557	\$234,262,737	\$ 8,152,820	3.48%
Sewer	474,638,443	460,615,763	\$14,022,680	3.04%
Total	\$717,054,000	\$694,878,500	\$22,175,500	3.19%

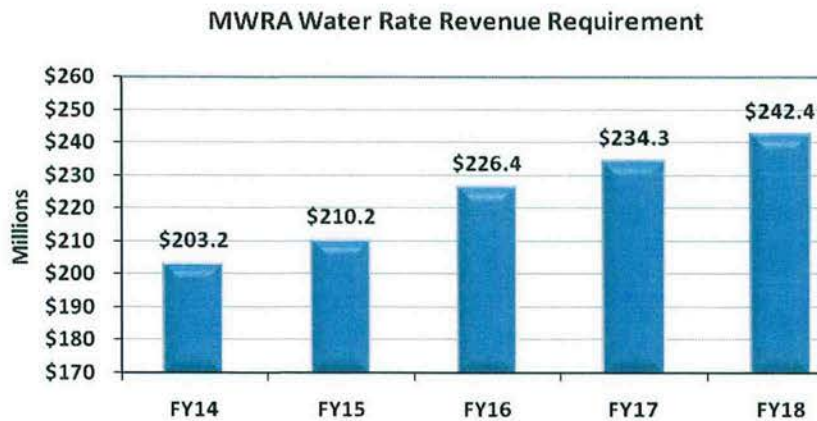
Attachment 1 summarizes FY18 wholesale water and sewer charges for each MWRA community.

The estimated impact of the FY18 assessment increase on the MWRA portion of the average household bill for water and sewer service in a fully served MWRA community that uses close to the system average of 61,000 gallons of water per year is less than \$19.

Water Assessments

MWRA calculates water assessments for customer communities by apportioning the water rate revenue requirement according to each community’s share of total water use for the most recent calendar year. FY18 assessments are based on each community's share of CY16 water use of 67.674 billion gallons, a 0.3% increase compared to CY15 water use of 67.479 billion gallons. Changes in FY18 water assessments for customer communities compared to FY17 vary considerably, depending on each community's use of water and how that use factors into their share of the water system in CY16 compared to CY15. This is particularly true for communities that receive only part of their water from MWRA.

The graph below illustrates the water Rate Revenue Requirement for the past 5 years. The changes from FY17 to FY18 are primarily the result of increased debt service related to water utility rehabilitation and improvements.

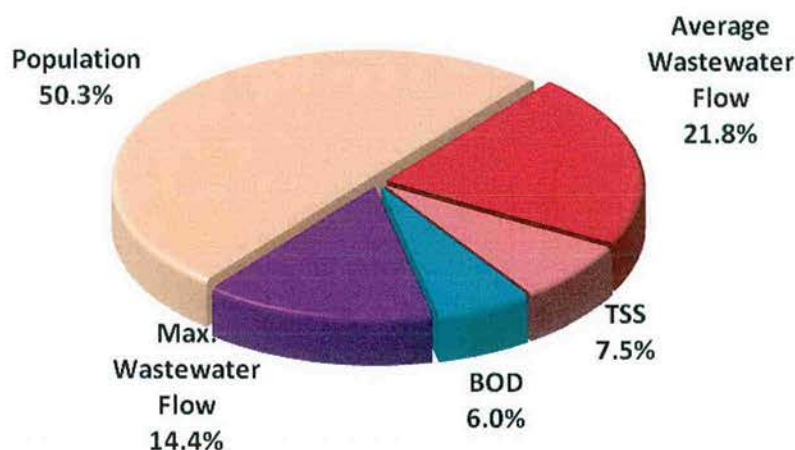


Sewer Assessments

MWRA allocates sewer assessments based on each community's share of the following allocation parameters: annual wastewater flow, maximum month flow, strength of flow, census population, and sewer population.

On average, approximately 50% of a community's FY18 sewer assessment is based on each community's share of wastewater flow and strength of flow (total suspended solids-TSS and biochemical oxygen demand-BOD), and approximately 50% is based on population as illustrated in the next graph.

Allocation of Total MWRA Sewer Utility Assessment



Both the preliminary and final FY18 assessments were calculated using the most recent (July 2015) community population estimates from the U.S. Census Bureau, as well as the percentage of total population receiving municipal sewer service as reported by each MWRA community.

Preliminary FY18 assessments were calculated using the average of CY14, CY15 and CY16 wastewater flows and strength of flows. As a result of ongoing quality assurance and review, staff has revised CY16 wastewater flows for the City of Woburn. Based on the preliminary FY18 sewer system RRR, this flow adjustment would increase Woburn's assessment by \$112,000. This assessment increase is partially offset by a decrease in the final FY18 sewer system RRR, resulting in a FY18 sewer assessment for Woburn that is \$21,755 higher than the preliminary assessment.

The following graph illustrates the Sewer Rate Revenue Requirement for the past 5 years. As with the water utility, the annual changes continue to be primarily the result of increased debt service related to sewer utility rehabilitation and improvements.

MWRA Sewer Rate Revenue Requirement



Clinton Sewer Service Area Assessments

Draft Final FY18 operating and maintenance (O&M) and capital expenses attributable to the Clinton Wastewater Treatment Plant are \$3,769,282, an increase of 14.4% over FY17 expenses. This includes a 9.0% increase in operating costs, and a 28.5% increase in capital expenses related primarily to the phosphorous removal, and roofing rehabilitation projects.

In accordance with the agreement that allows the City of Worcester to take water from the Wachusett watershed, Worcester is charged approximately 7.9% of the direct operating expenses for the Clinton Wastewater Treatment Plant. Draft Final FY18 direct operating expenses for the plant total \$2,075,072, resulting in an FY18 charge of \$164,159 for the City of Worcester. Worcester has been paying this annual charge to MWRA or its predecessors since 1914.

The Town of Clinton and the Lancaster Sewer District are allocated proportional shares of the remaining expenses based on annual metered wastewater flow to the Clinton Plant. Based on Draft Final FY18 expenses and CY16 wastewater flows, FY18 charges are \$411,128 for the Lancaster Sewer District and \$3,137,702 for the Town of Clinton. However, pursuant to Chapter 307, Section 8 of the Acts of 1987, Clinton is only liable for the first \$500,000 of its share of O&M and capital costs.

Attachment 2 details the expenses and corresponding charges for the Clinton Sewer Service Area.

CVA Water Assessments

Based on the Draft Final FY18 CIP and CEB for the Chicopee Valley Aqueduct (CVA) water system, the FY18 system assessment is \$4,913,944, representing no change from FY17 assessments.

MWRA's CVA water assessment methodology allocates CVA assessments to the three communities served by the CVA system based on their share of prior calendar year water use. Based on CY16 water use, FY18 assessments are as follows:

- City of Chicopee: \$3,400,313 (- 0.7%)
- South Hadley Fire District #1: \$ 721,256 (+1.9%)
- Town of Wilbraham: \$ 792,374 (+1.4%)

As with the metropolitan water system, changes in FY18 water assessments for each CVA community compared to FY17 assessments vary depending on their water use and how that use factors into their share of the CVA water system in CY16 compared to CY15.

Attachment 3 details the expenses and corresponding assessments for the CVA Water Service Area.

Wholesale Water Rate

MWRA's wholesale water rate per million gallons is applied to customers purchasing MWRA water on a pay-as-you-go basis (including customers with emergency agreements). Examples include the Department of Conservation and Recreation and the Department of Youth Services. The draft final wholesale water rate for FY18 is \$3,582.09 per million gallons. The Draft Final FY18 CEB includes revenue of \$107,508 from these customers.

Retail Sewer Rate

MWRA provides direct retail sewer service to Regis College in Weston and the New England Center for Children in Southborough. In accordance with MWRA Policy #OP.11, "Admission of New Community to MWRA Sewer System and Other Requests for Sewer Service to Locations Outside MWRA Sewer Service Area", both entities are charged a modified per million gallon "retail" rate that captures both sanitary and non-sanitary flows. Based on draft final FY18 sewer assessments, the FY18 retail sewer rate will be \$7,573.52 per million gallons. The Draft Final FY18 CEB includes revenue of \$92,823 from these customers.

ATTACHMENTS:

1. Final FY18 Water and Sewer Assessments
2. Clinton Wastewater Treatment Plant: FY18 Sewer User Charge Determination
3. Chicopee Valley Aqueduct System Assessment: Fiscal Year 2018

MWRA Fully Served Water and Sewer Customers	Final FY17 Water Assessment	DRAFT Final FY18 Water Assessment	Percent Change from FY17	Final FY17 Sewer Assessment	Draft Final FY18 Sewer Assessment	Percent Change from FY17	Final FY17 Combined Assessment	Draft Final FY18 Combined Assessment	Dollar Change from FY17	Percent Change from FY17
ARLINGTON	\$4,976,564	\$5,218,727	4.9%	\$7,993,120	\$8,338,483	4.3%	\$12,969,684	\$13,557,210	\$587,526	4.5%
BELMONT	2,828,456	2,906,748	2.8%	4,825,479	4,923,065	2.0%	7,653,935	7,829,813	175,878	2.3%
BOSTON (BWSC)	82,771,709	85,905,357	3.8%	132,271,845	135,974,820	2.8%	215,043,554	221,880,177	6,836,623	3.2%
BROOKLINE	7,046,691	6,806,844	-3.4%	12,894,419	12,978,537	0.7%	19,941,110	19,785,381	(155,729)	-0.8%
CHELSEA	4,215,080	4,277,382	1.5%	7,663,315	7,717,861	0.7%	11,878,395	11,995,243	116,848	1.0%
EVERETT	4,948,191	5,182,465	4.7%	8,124,101	8,378,885	3.1%	13,072,292	13,561,350	489,058	3.7%
FRAMINGHAM	8,159,808	8,003,044	-1.9%	12,824,962	13,063,056	1.9%	20,984,770	21,066,100	81,330	0.4%
LEXINGTON	7,349,661	7,246,531	-1.4%	7,265,870	7,402,979	1.9%	14,615,531	14,649,510	33,979	0.2%
MALDEN	6,950,768	6,762,968	-2.7%	12,941,073	13,307,655	2.8%	19,891,841	20,070,623	178,782	0.9%
MEDFORD	6,432,219	6,383,291	-0.8%	11,878,789	12,118,702	2.0%	18,311,008	18,501,993	190,985	1.0%
MELROSE	2,915,635	2,854,570	-2.1%	6,251,952	6,387,893	2.2%	9,167,587	9,242,463	74,876	0.8%
MILTON	3,360,396	3,495,641	4.0%	5,362,055	5,450,348	1.6%	8,722,451	8,945,989	223,538	2.6%
NEWTON	12,950,552	12,891,560	-0.5%	20,518,241	21,760,724	6.1%	33,468,793	34,652,284	1,183,491	3.5%
NORWOOD	3,652,867	3,703,392	1.4%	7,023,166	7,436,847	5.9%	10,676,033	11,140,239	464,206	4.3%
QUINCY	11,776,311	12,199,555	3.6%	19,971,978	20,574,282	3.0%	31,748,289	32,773,837	1,025,548	3.2%
READING	2,109,549	2,211,234	4.8%	4,769,928	4,939,434	3.6%	6,879,477	7,150,668	271,191	3.9%
REVERE	4,943,964	4,896,715	-1.0%	10,611,549	10,775,969	1.6%	15,555,513	15,672,684	117,171	0.8%
SOMERVILLE	7,658,290	7,928,695	3.5%	15,918,035	16,508,256	3.7%	23,576,325	24,436,951	860,626	3.7%
STONEHAM	3,174,690	3,027,480	-4.6%	4,542,049	4,600,334	1.3%	7,716,739	7,627,814	(88,925)	-1.2%
WALTHAM	9,384,159	9,038,537	-3.7%	13,122,122	13,521,664	3.0%	22,506,281	22,560,201	53,920	0.2%
WATERTOWN	3,290,986	3,388,389	3.0%	5,971,377	6,103,914	2.2%	9,262,363	9,492,303	229,940	2.5%
WINTHROP	1,643,615	1,615,822	-1.7%	3,320,069	3,395,228	2.3%	4,963,684	5,011,050	47,366	1.0%
TOTAL	\$202,540,161	\$205,944,947	1.7%	\$336,065,494	\$345,658,936	2.9%	\$538,605,655	\$551,603,883	\$12,998,228	2.4%

MWRA Sewer and Partial Water Customers	Final FY17 Water Assessment	DRAFT Final FY18 Water Assessment	Percent Change from FY17	Final FY17 Sewer Assessment	Draft Final FY18 Sewer Assessment	Percent Change from FY17	Final FY17 Combined Assessment	Draft Final FY18 Combined Assessment	Dollar Change from FY17	Percent Change from FY17
CANTON	\$1,673,754	\$2,538,303	51.7%	\$4,137,162	\$4,210,854	1.8%	\$5,810,916	\$6,749,157	\$938,241	16.1%
NEEDHAM	1,039,372	1,109,794	6.8%	5,683,915	5,889,796	3.6%	6,723,287	6,999,590	276,303	4.1%
STOUGHTON	1,144,245	253,810	-77.8%	4,747,341	5,031,822	6.0%	5,891,586	5,285,632	(605,954)	-10.3%
WAKEFIELD	1,852,218	2,169,915	17.2%	5,813,697	6,075,836	4.5%	7,665,915	8,245,751	579,836	7.6%
WELLESLEY	1,056,294	1,742,278	64.9%	5,459,750	5,601,602	2.6%	6,516,044	7,343,880	827,836	12.7%
WILMINGTON	703,075	776,226	10.4%	2,595,601	2,804,912	8.1%	3,298,676	3,581,138	282,462	8.6%
WINCHESTER	1,544,349	2,121,826	37.4%	4,033,770	4,144,555	2.7%	5,578,119	6,266,381	688,262	12.3%
WOBBURN	3,355,306	3,636,173	8.4%	9,324,662	9,449,446	1.3%	12,679,968	13,085,619	405,651	3.2%
TOTAL	\$12,368,613	\$14,348,325	16.0%	\$41,795,898	\$43,208,823	3.4%	\$54,164,511	\$57,557,148	\$3,392,637	6.3%

MWRA Sewer-only Customers	Final FY17 Water Assessment	DRAFT Final FY18 Water Assessment	Percent Change from FY17	Final FY17 Sewer Assessment	Draft Final FY18 Sewer Assessment	Percent Change from FY17	Final FY17 Combined Assessment	Draft Final FY18 Combined Assessment	Dollar Change from FY17	Percent Change from FY17
ASHLAND				\$2,485,174	\$2,592,423	4.3%	\$2,485,174	\$2,592,423	\$107,249	4.3%
BEDFORD				3,368,331	3,546,882	5.3%	3,368,331	3,546,882	178,551	5.3%
BRAINTREE				9,100,270	9,599,185	5.5%	9,100,270	9,599,185	498,915	5.5%
BURLINGTON				5,078,461	5,286,375	4.1%	5,078,461	5,286,375	207,914	4.1%
CAMBRIDGE				23,745,695	24,713,139	4.1%	23,745,695	24,713,139	967,444	4.1%
DEDHAM				5,311,572	5,482,446	3.2%	5,311,572	5,482,446	170,874	3.2%
HINGHAM SEWER DISTRICT				1,798,028	1,846,255	2.7%	1,798,028	1,846,255	48,227	2.7%
HOLBROOK				1,759,996	1,804,666	2.5%	1,759,996	1,804,666	44,670	2.5%
NATICK				5,756,705	5,924,062	2.9%	5,756,705	5,924,062	167,357	2.9%
RANDOLPH				6,272,186	6,339,800	1.1%	6,272,186	6,339,800	67,614	1.1%
WALPOLE				3,713,877	3,821,880	2.9%	3,713,877	3,821,880	108,003	2.9%
WESTWOOD				2,598,265	2,777,442	6.9%	2,598,265	2,777,442	179,177	6.9%
WEYMOUTH				11,765,811	12,036,129	2.3%	11,765,811	12,036,129	270,318	2.3%
TOTAL				\$82,754,371	\$85,770,684	3.6%	\$82,754,371	\$85,770,684	\$3,016,313	3.6%

MWRA Water-only Customers	Final FY17 Water Assessment	DRAFT Final FY18 Water Assessment	Percent Change from FY17	Final FY17 Sewer Assessment	Draft Final FY18 Sewer Assessment	Percent Change from FY17	Final FY17 Combined Assessment	Draft Final FY18 Combined Assessment	Dollar Change from FY17	Percent Change from FY17
LYNNFIELD WATER DISTRICT	\$643,348	\$748,610	16.4%				\$643,348	\$748,610	\$105,262	16.4%
MARBLEHEAD	2,341,415	2,469,760	5.5%				2,341,415	2,469,760	128,345	5.5%
NAHANT	476,532	537,696	12.8%				476,532	537,696	61,164	12.8%
SAUGUS	3,692,889	3,953,935	7.1%				3,692,889	3,953,935	261,046	7.1%
SOUTHBOROUGH	948,422	997,207	5.1%				948,422	997,207	48,785	5.1%
SWAMPSCOTT	1,834,151	1,892,557	3.2%				1,834,151	1,892,557	58,406	3.2%
WESTON	2,445,970	2,818,905	15.2%				2,445,970	2,818,905	372,935	15.2%
TOTAL	\$12,382,727	\$13,418,670	8.4%				\$12,382,727	\$13,418,670	\$1,035,943	8.4%

MWRA Partial Water-only Customers	Final FY17 Water Assessment	DRAFT Final FY18 Water Assessment	Percent Change from FY17	Final FY17 Sewer Assessment	Draft Final FY18 Sewer Assessment	Percent Change from FY17	Final FY17 Combined Assessment	Draft Final FY18 Combined Assessment	Dollar Change from FY17	Percent Change from FY17
DEDHAM-WESTWOOD WATER DISTRICT	\$196,381	\$295,794	50.6%				\$196,381	\$295,794	\$99,413	50.6%
LYNN (LWSC)	243,938	326,368	33.8%				243,938	326,368	82,430	33.8%
MARLBOROUGH	3,887,876	4,902,062	26.1%				3,887,876	4,902,062	1,014,186	26.1%
NORTHBOROUGH	1,135,772	1,240,294	9.2%				1,135,772	1,240,294	104,522	9.2%
PEABODY	1,507,269	1,939,097	28.6%				1,507,269	1,939,097	431,828	28.6%
TOTAL	\$6,971,236	\$8,703,615	24.9%				\$6,971,236	\$8,703,615	\$1,732,379	24.9%
SYSTEMS TOTAL	\$234,262,737	\$242,415,557	3.48%	\$460,615,763	\$474,638,443	3.04%	\$694,878,500	\$717,054,000	\$22,175,500	3.19%

Massachusetts Water Resources Authority
Clinton Wastewater Treatment Plant
Sewer User Charge Determination

BUDGETED EXPENSES: BOD Final FY2018	
Clinton Direct Operating Expenses:	\$2,075,072
MWRA Support Allocation:	525,974
Subtotal O&M Expenses:	\$2,601,047
Total Debt Service Expenses:	\$1,168,235
Total Clinton Service Area Expenses	\$3,769,282
Less Revenue (City of Worcester Payment)	-164,159
Clinton WWTP Rate Revenue Requirement:	\$3,605,123

WASTEWATER FLOW and FLOW SHARES:	CY2016		
	Town of Clinton Flow	Lancaster Sewer District Flow	Total Wastewater Flow
Average Daily Flow (MGD)	2.048	0.305	2.353
Average Flow (MG/YR)	747.369	111.335	858.704
Proportional Share of Flow	87.03%	12.97%	100.0%

Sewer User Charge Determination

TOWN OF CLINTON	
O&M Expenses	\$2,601,047
Less Revenue (City of Worcester Payment)	-164,159
O&M Expenses to be Recovered	\$2,436,888
Clinton's Share of Flow	87.03%
Clinton's Share of O&M Costs	\$2,120,934
Total Clinton O&M Charge	\$2,120,934
Debt Service Costs to be Recovered	\$1,168,235
Clinton's Share of Wastewater Flow	87.03%
Total Clinton Debt Service Charge	\$1,016,768
Total Clinton O&M and Debt Service Charge	\$3,137,702
Less MWRA Water Ratepayer Subsidy	-2,637,702
Billable Charge to the Town of Clinton as per CH. 307, Section 8 The Acts of 1987	\$500,000

LANCASTER SEWER DISTRICT	
O&M Expenses	\$2,601,047
Less Revenue (City of Worcester Payment)	-164,159
O&M Expenses to be Recovered	\$2,436,888
Lancaster's Share of Flow	12.97%
Lancaster's Share of O&M Costs	\$315,954
Total Lancaster Sewer District O&M Charge	\$315,954
Debt Service Costs to be Recovered	\$1,168,235
Lancaster's Share of Wastewater Flow	12.97%
Total Lancaster Sewer District Debt Service Charge	\$151,467
Total Lancaster O&M and Debt Service Charge	\$467,421
Billable Charge to Lancaster Sewer District	\$467,421

Billable Sewer User Charges and Payment Schedule

Sewer Customer	Billable Charges
Town of Clinton (billable)	\$500,000
Lancaster Sewer District (before adj.)	\$467,421
Lancaster Sewer District (prior period adj.)	-\$56,293
Lancaster Sewer District (billable)	\$411,128
Total Billable Sewer Charges	\$911,128

Payment 1 on or before Sept 15, 2017	Payment 2 on or before Nov 15, 2017	Payment 3 on or before Feb 15, 2018	Payment 4 on or before May 15, 2018
\$125,000	\$125,000	\$125,000	\$125,000
\$116,855	\$116,855	\$116,855	\$116,855
\$241,855	\$241,855	\$241,855	\$241,855

Massachusetts Water Resources Authority
Chicopee Valley Aqueduct Water System Assessment
FY2018

CVA Operating Budget	FY17	FY18
CVA Cost Center Expenses	\$882,479	\$865,568
Allocated Waterworks Expenses	141,678	141,017
Allocated Watershed/PILOT	1,070,505	460,439
Allocated Watershed Land Acquisition	24,348	23,879
Allocated MWRA Indirect Expenses	564,148	552,885
SUBTOTAL OPERATING BUDGET	\$2,683,158	\$2,043,789

Change from Prior Year	
Dollars	Percent
-\$16,911	-1.9%
-661	-0.5%
-610,066	-57.0%
-469	-1.9%
-11,263	-2.0%
-\$639,369	-23.8%

CVA Capital Budget	FY17	FY18
Capital Expenses	\$2,879,705	\$2,947,534
TOTAL CVA BUDGET	\$5,562,863	\$4,991,324

Change from Prior Year	
Dollars	Percent
\$67,830	2.4%
-\$571,540	-10.3%

BASE COMMUNITY ASSESSMENT	FY17¹	FY18²
Chicopee	\$3,880,051	\$3,456,846
South Hadley Fire District #1	802,229	732,988
Wilbraham	880,583	801,490
CVA BASE SYSTEM ASSESSMENT	\$5,562,863	\$4,991,324

Change from Prior Year	
Dollars	Percent
-\$423,205	-10.9%
-69,241	-8.6%
-79,094	-9.0%
-\$571,540	-10.3%

PRIOR PERIOD ADJUSTMENTS	FY17³	FY18³
Chicopee	-\$455,231	-\$56,533
South Hadley Fire District #1	-94,393	-11,732
Wilbraham	-99,295	-9,115
TOTAL ADJUSTMENTS	-\$648,920	-\$77,380

Change from Prior Year	
Dollars	Percent
\$398,698	-87.6%
82,661	-87.6%
90,180	-90.8%
\$571,540	-88.1%

ADJUSTED ASSESSMENT	FY17	FY18
Chicopee	\$3,424,820	\$3,400,313
South Hadley Fire District #1	707,836	721,256
Wilbraham	781,288	792,374
ADJUSTED ASSESSMENT	\$4,913,944	\$4,913,944

Change from Prior Year	
Dollars	Percent
-\$24,507	-0.7%
13,421	1.9%
11,087	1.4%
\$0	0.00%

¹ Based on CY2015 water use and before prior period adjustments.
² Based on CY2016 water use and before prior period adjustments.
³ Prior period adjustment to account for budget to actual expenses.

STAFF SUMMARY


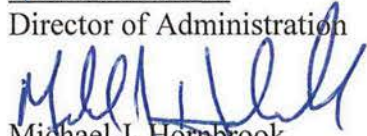
TO: Board of Directors
FROM: Frederick A. Laskey, Executive Director
DATE: June 28, 2017
SUBJECT: Janitorial Services at MWRA Western Facilities
S.J. Services, Inc.
Bid WRA-4388Q
State Blanket Contract #FAC81



COMMITTEE: Administration, Finance & Audit

INFORMATION
 VOTE

Edward Boyajian, Project Manager, Facilities
David W. Coppes, P.E., Director of Waterworks
Carolyn Francisco Murphy, Director of Procurement
Preparer/Title


Michele S. Gillen
Director of Administration

Michael J. Hornbrook
Chief Operating Officer

RECOMMENDATION:

To approve the award of Contract WRA-4388Q, Janitorial Services at the John J. Carroll Water Treatment Plant, the Southborough Complex, the Records Center, and the Marlborough Maintenance 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 \$286,296, for a contract term of three years from August 1, 2017 through July 31, 2020, in accordance with State Blanket Contract #FAC81.

DISCUS SION:

The Carroll Water Treatment Plant is a continuously operating facility that supplies potable water to MWRA's service area and is staffed 24-hours, 7-days per week. The Southborough Complex houses a major portion of Western Operations' management, maintenance and laboratory functions for the Carroll Plant and other sites and is normally staffed weekdays from 7:00 A.M. to 3:30 P.M. The MWRA's Records Center is staffed weekdays from 7:00 A.M. to 3:00 P.M., and includes the Carroll Plant Warehouse, which is

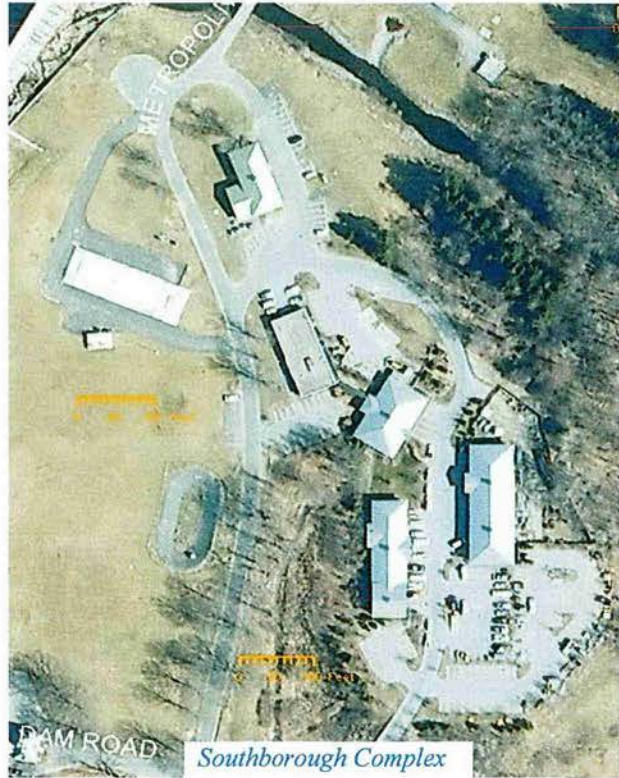


John J Carroll Water Treatment Plant

generally unoccupied and accessed only periodically when supplies are needed. In addition, this contract includes the Marlborough Maintenance Facility which is currently being renovated and is expected to be reoccupied in May 2018. These facilities require regularly scheduled janitorial services to ensure their safe, clean, and efficient management.

The scope of services under this contract includes the following:

- At the Carroll Plant - Daily cleaning of the Operations Building, which contains office areas, the control room, a lunchroom, restrooms, locker rooms, etc. Additionally, periodic cleaning services are required for the Security Gatehouse, the stairwells and corridors of the Ozone Building, the stairwells, restrooms, and skylights of the Chemical Building, the entries and stairwells of the Post Treatment Building, the entries to the Generator Building, and the entries and stairwells of the UV Buildings;
- At the Southborough Complex - Daily cleaning in the Administration, Laboratory, Quality Assurance, Warehouse, and Tradeshop Buildings, which contain office areas, lunchrooms, restrooms, locker rooms, laboratory rooms, and other spaces. Additional periodic cleaning services, such as vacuuming upholstered chairs, deep cleaning floors, washing windows, and cleaning carpets are also required for these buildings;
- At the Records Center - Routine cleaning of the office areas three times per week and more intensive tasks including cleaning the storage area floors on a quarterly and annual basis; and Carroll Plant Warehouse quarterly cleaning of the warehouse floor; and
- At the Marlborough Maintenance Facility – Once the facility is reoccupied, daily cleaning of the office areas, SCADA engineering room, vestibule and corridors. Additional periodic deep cleaning of ceramic tiles and resinous floor, vacuuming upholstered chairs, and vacuuming and dusting of vertical services including walls, partition doors, ducts, blinds, lighting fixtures, and air conditioning ventilating louvers.



Procurement Process

Purchasing staff solicited bids from seven firms listed as approved contractors on the Commonwealth of Massachusetts' janitorial contract (Massachusetts State Contract #FAC81).

Pre-bid site visits were held on May 19, 2017 and May 31, 2017 and were attended by a total of six potential bidders.

The contract requires payment of prevailing wage rates established by the Department of Labor Standards for the Marlborough area. Bidders were required to submit annual prices for all three years with award based on the lowest total bid price for the entire three-year contract term.

On June 7, 2017, Event 3002 closed with the following results:

Vendor	Three-Year Bid Total
S.J. Services, Inc.	\$286,296.00
FM & M Inc.	\$315,550.00

S.J. Services, Inc. submitted the lowest cost of the two responsive bids received. For purposes of comparison, under the current contract also with S.J Services, Inc., which is set to expire on July 31, 2017, MWRA is currently paying a yearly rate of \$86,052 for janitorial services. S.J. Services, Inc's bid price for the first year of this contract is \$84,984, a decrease of \$1,068. The firm's contract price will be \$99,384 for year two and \$101,928 for year three. (The second and third years include the reoccupied Marlborough Maintenance Facility.)

Staff spoke with the S.J. Services, Inc's president to discuss the bid proposal. As a result of that discussion, staff have concluded that the bid price is reasonable, complete, and includes the payment of prevailing wage rates, as required. S.J. Services, Inc. has extensive experience in providing janitorial services for other large public agencies; and also currently holds the janitorial services contracts for MWRA Chelsea and Southborough facilities. MWRA staff have been satisfied with this firm's performance on these existing contracts.

Staff are of the opinion that S.J. Services, Inc. possesses the skill, ability, and experience necessary to perform the work under this contract and is qualified to do so. Therefore, staff recommend the award of this contract to S.J. Services, Inc. as the lowest responsive bidder.

BUDGET/FISCAL IMPACT:

There are sufficient funds for this contract in the proposed FY18 Current Expense Budget, which contains sufficient funding for the first year of the contract. Appropriate funding for the remaining term of the contract will be included in the subsequent Proposed CEB requests.

MBE/WBE PARTICIPATION:

S.J. Services, Inc. is not a certified Minority- or Women-owned Business.

STAFF SUMMARY

TO: Board of Directors
FROM: Frederick A. Laskey, Executive Director 
DATE: June 28, 2017
SUBJECT: Task Order Appraisal Services:
Colliers International Holdings, Inc., Contract 603TA
Foster Appraisal & Consulting Co, Inc., Contract 604TA

COMMITTEE: Administration, Finance & Audit

 INFORMATION
 X VOTE

Lisa Grollman, Project Manager
Preparer/Title


Michele S. Gillen
Director, Administration

RECOMMENDATION:

To approve the recommendation of the Consultant Selection Committee to award Contract 603TA to Colliers International Holdings, Inc. ("Colliers") and Contract 604TA to Foster Appraisal & Consulting Co, Inc. ("Foster") to provide task order appraisal services and to authorize the Executive Director, on behalf of the Authority, to execute contracts with Colliers and Foster each in an amount not to exceed \$50,000 and for a term of three years from the Notice to Proceed.

DISCUSSION:

The purpose of this task order contract is to make available, on a continuing as-needed basis, the services of a qualified professional appraiser to assist MWRA on projects as they arise. Property appraisals are used by MWRA staff to acquire property in support of Board-approved capital construction projects, to dispose of surplus MWRA property, and to negotiate lease and permit fees. Examples of recent appraisal tasks include:

- Southern Extra High Service Pipeline, Dedham (permanent and temporary easements)
- Section 4 Webster Ave, Somerville (permanent easement and license)
- Carroll Treatment Plant vicinity (temporary easement for guard shack)
- WASM Shaft 9A, Medford (temporary easements on two commercial properties)
- 8m permit valuations on aqueducts, Framingham (car wash, landscaping firm)
- Property appraisals in Chelsea and Malden (satellite space for Chelsea Operations)
- Property appraisals in Winthrop (additional space for Deer Island)
- Market studies as needed (e.g. research for Stoneham rental valuations for laydown areas)

The two recommended appraisal contracts would replace the two existing task order contracts which expire on August 19, 2017.

Procurement Process:

The procurement process to select two appraisers utilized a one-step Request for Qualification Statements and Proposals (RFQ/P), which was issued on April 22, 2017. The RFQ/P was publically advertized in the Central Register, Boston Herald, Banner Publication, and El Mundo. In an effort to encourage competition, staff developed a list of firms which routinely provide appraisal services to other public entities in Massachusetts. A copy of the advertisement for this work was sent to 20 firms, of which 10 firms requested a copy of the RFQ/P. Two proposals were received on May 19, 2017 from Colliers and Foster, the latter holding one of the current task order appraisal contracts. Seven firms identified on the planholder's list were contacted. Three firms, including Evergreen Appraisal one of MWRA's current task order appraisers, indicated that they had too much ongoing appraisal work and did not have the resources to propose. Two others did not bid, as one forgot the proposal deadline and one had internal network computer problems.

The Selection Committee evaluated and ranked the proposals based on the criteria contained in the RFQ/P (Cost 30 points; Qualifications and Key Personnel 25 points; Experience and Past Performance 20 points; Technical Approach 15 points; and Capacity, Organization, and Management Approach 10 points).

For the cost criterion, Proposers submitted Single Hourly Rates by job classification for each year of the contract. Both Proposers' hourly rates remained constant over the three-year term. The hourly rates are as follows:

Firm	Principal/Senior Appraiser	Staff Appraiser	Support
Colliers	\$250	\$150	\$75
Foster	\$175	NA	NA

In terms of cost, Colliers proposes using a range of staff from a low of \$75/hour for support staff to \$250/hour for senior appraisers/principals. Foster proposes using only senior appraisers and principals at a rate of \$175/hour.

Additionally, as part of the cost analysis, the RFQ/P required that Proposers submitted a cost estimate for three sample appraisal scenarios representing residential, commercial, and industrial valuation problems. The summary by firm for total hours and costs for all three samples as well as average number of hours and costs per appraisal are as follows:

Firm	Total Hours (3 samples)	Total Cost (3 samples)	Average Hours Per Appraisal	Average Cost Per Appraisal
Colliers	102	\$14,100	34	\$4700
Foster	80	\$14,000	27	\$4667

Colliers' and Foster's estimated costs for the sample problems demonstrates that the firms are price competitive. The total cost of the samples and average costs of samples for both firms are comparable.

The proposals for Task Order Appraisal Services were ranked as follows:

<u>Firm</u>	<u>Total Points</u>	<u>Total Order of Preference</u>	<u>Final Rank</u>
Foster	275	3	1
Colliers	215	6	2

Foster was ranked first as a result of its varied experience, depth of staff, strong recommendations, comprehensive technical approach to the sample appraisals, and clear management approach. The firm has strong previous performance on a variety of public and private appraisal projects, from simple to complex. Foster's clients include Massport, Commonwealth of Massachusetts, CSX Railroad, as well as many cities and towns. Foster's work for MWRA has included easements for water and sewer projects, railroad valuation, permit fee analysis, fee acquisitions, consulting, market studies, and litigation support. Foster submitted a thorough, detailed proposal.

Colliers is a full service international real estate firm with a sizable staff experienced in a range of complex real estate assignments, easement valuation, market studies, consulting, litigation support, and brokerage. Colliers has not worked for MWRA in the past, but has worked for other public entities and the private sector. The firm received strong recommendations for comparable work in Massachusetts, such as from MBTA and City of Boston. References indicated that Colliers was responsive, reliable, timely, on budget, and produced quality work. Based upon Colliers' experience, comparable work assignments, and recommendations the Selection Committee determined that the firm could satisfactorily undertake the appraisal work.

The Selection Committee recommends that both Colliers International Holdings, Inc. and Foster Appraisal & Consulting Co, Inc. be awarded a task order appraisal contract.

BUDGET/FISCAL IMPACT:

The FY17 CIP includes \$150,000 for a three-year Appraisal Services Technical Assistance Contract. Sufficient funds are included in the draft FY18 CIP for these contracts.

MBE/WBE PARTICIPATION:

Due to the specialized nature of these services, there were no MBE/WBE requirements for this project.



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

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, June 28, 2017

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

Time: Immediately following AF&A Comm.

AGENDA

A. Contract Awards

1. Wastewater Metering System Replacement - Evaluation, Planning, Design, Resident Engineering/Inspection Services for Installation of Metering Equipment: RJN Group, Contract 6739

B. Contract Amendments/Change Orders

1. Chelsea Creek Headworks Upgrade, BHD/BEC JV 2015, A Joint Venture: Contract 7161, Change Order 1
2. Thermal and Hydro Power Plant Maintenance – Deer Island Treatment Plant: IPC Lydon, LLC, Contract S551, Change Order 2

MASSACHUSETTS WATER RESOURCES AUTHORITY

Meeting of the
Wastewater Policy and Oversight Committee

June 7, 2017

A meeting of the Wastewater Policy and Oversight Committee was held on June 7, 2017 at the Authority headquarters in Charlestown. Vice-Chairman Walsh presided. Present from the Board were Ms. Wolowicz and Messrs. Blackmon, Cotter, Foti, Pappastergion and Vitale. Among those present from the Authority staff were Fred Laskey, Steve Remsberg, Wendy Leo and Bonnie Hale. The meeting was called to order at 11:50 a.m.

Approvals

***Wastewater Advisory Committee Contract**

Staff reviewed the responsibilities of the Wastewater Advisory Committee. The Committee recommended approval of renewal of the contract (ref. agenda item A.1).

The meeting adjourned at 11:55 a.m.

* Approved as recommended at June 7, 2017 Board of Directors meeting.

STAFF SUMMARY


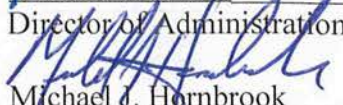
TO: Board of Directors
FROM: Frederick A. Laskey, Executive Director 
DATE: June 28, 2017
SUBJECT: Wastewater Metering System Replacement Evaluation, Planning Design
Resident Engineering/ Inspection Services for Installation of Metering Equipment
RJN Group, Inc.
Contract 6739

COMMITTEE: Wastewater Policy & Oversight

Stephen Estes-Smargiassi, Director Planning & Sustainability
Rodrigo Pinos, E.I.T, Project Manager
Carolyn Fiore, Deputy Chief Operating Officer
Preparer/Title

 INFORMATION

 X VOTE


Michele S. Gillen
Director of Administration

Michael J. Hornbrook
Chief Operating Officer

RECOMMENDATION:

To approve the recommendation of the Consultant Selection Committee to award Contract 6739, Wastewater Metering System Replacement Evaluation, Planning, Design, and Resident Engineering/Inspection Services for Installation of Metering Equipment to RJN Group, Inc., and to authorize the Executive Director, on behalf of the Authority, to execute said contract in an amount not to exceed \$3,858,154.15 for a contract term of 53 months from the Notice to Proceed.

BACKGROUND:

MWRA's permanent wastewater metering system was initially constructed in 1994. The primary purpose has been to quantify wastewater flow from each of the 43 MWRA wastewater member communities for use in the formulation of sewer charges, which includes a flow-based component. Other uses of the data include collection and treatment system analysis and planning, infiltration and inflow quantification in member communities, use in hydraulic models and operations support.

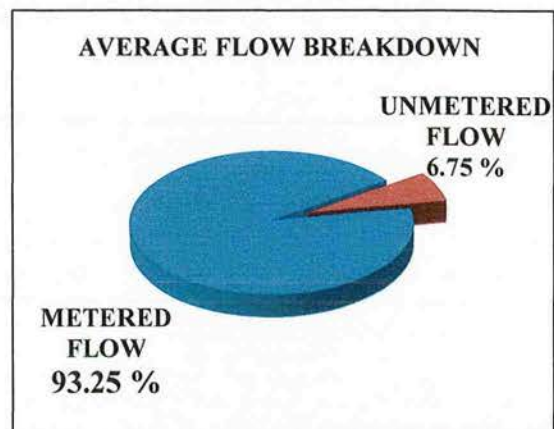
In 2005, the original wastewater metering system was replaced with new wastewater meters with a wireless phone communication and data collection system. Currently, the wastewater metering system consists of 212 metering sites located throughout the 43 wastewater member communities. The majority of the meters are installed in gravity sewer lines, owned and operated by MWRA or its member communities. These sewer lines have various pipe shapes, ranging in size from 8 inches to 150 x 138 inches, with manhole depths ranging from 5 feet to

over 40 feet deep. The metering sites are located in residential, commercial and industrial areas. See Attachment 1 which shows the locations of existing wastewater meters.

The existing system was designed with a life expectancy of 10 years; it is still operating reasonably well and MWRA staff has taken great care to ensure that the metering data is based upon sound engineering and business practices for assessment purposes. Meter Maintenance staff spend considerable time and effort maintaining the meters to ensure the accuracy and reliability of meter data, and Meter Engineering/Data Management staff carefully review all data, conduct periodic calibration checks and Quality Assurance/Quality Control reviews.

Community Flow Metering Methodologies

The existing metering system was designed to measure a minimum of 85% (actual performance is 93.25%) of community flows with the remaining percentage of community flow being extrapolated based on the metered portion and verified by temporary metering. As shown in the graph to the right, overall only 6.75% of the wastewater average flow is extrapolated from nearby similar metered areas.



Two community metering methodologies have been used to develop flow totals for communities. The direct methodology consists of adding flow measured by direct meters. The subtraction methodology consists of subtracting flow measured by upstream meters from the flow measured by downstream meters. Of the 43 MWRA wastewater member communities, only nine are 100 percent direct metered with the remaining communities utilizing direct measured meters and some subtraction meters.

MWRA adopted a flow-based sewer assessment methodology, recommended by the MWRA Advisory Board, beginning in FY96 in which wastewater community charges are based on average flow (22.7% for FY18) and maximum month wastewater flow (14.2% for FY18). The other three components of the calculation are population (49.2% for FY18), and high strength flow components of biological oxygen demand (6.3% for FY18) and total suspended solids (7.6% for FY18)¹.

1. Both are measures of wastewater strength and have the effect of increasing the costs of treatment.

DISCUSSION:

Contract 6739 is comprised of two phases. Phase One includes the evaluation, planning and design of the wastewater metering system of approximately 225 permanent meter sites, (current and some planned new sites). Phase Two consists of the metering system replacement installation which includes Resident Engineering and Resident Inspection Services to oversee meter equipment installation and acceptance.

Under Phase One of this project, the Consultant will update the flows from all unmetered areas, using temporary meters, weirs and instantaneous depth of flow and velocity measurements, to account for any changes in flow from those areas over time. The firm will evaluate the metered areas and meter locations and make recommendations to improve the percentage of metered flow above the 85% threshold where reasonably feasible considering the benefits of adding meters versus associated capital and operational/maintenance cost. They will also evaluate all existing and any proposed new metering sites and recommend the most suitable meter type to provide flow data with a high degree of accuracy and reliability at each meter location.

Phase One also includes the evaluation of the most current and emerging wastewater metering, wireless communication, data collection and analysis software technologies, including reviews of similar systems currently in use elsewhere in the country. The Consultant will prepare the metering system replacement design documents (plans and specifications) for public bidding, and assist MWRA staff in the procurement process for the replacement and new permanent meters and their installation.

Phase Two will include Resident Engineering and Resident Inspection Services to oversee meter equipment installation and acceptance plus the one-year warranty period.

The wastewater metering system evaluation (including field evaluation and measurement of currently unmetered areas), planning, design and bidding services for purchasing a replacement meter system and equipment is estimated to take 26 months from Notice to Proceed. The meter installation and acceptance is estimated to take 15 months, followed by a 12-month warranty period.

MWRA staff have agreed with the Advisory Board recommendation to use the prior three-year average and peak flows during the meter installation period to avoid any possibility of bias due to any community flow changes with the replacement meters.

Procurement Process

On August 24, 2016, MWRA first issued a one-step Request for Qualifications Statements/Proposals (RFQ/P) that was publically advertised in the Central Register, Boston Herald, Banner Publication and EL Mundo. In addition, notice was sent directly to thirteen firms. Nine firms requested the RFQ/P documents; five of which were potential prime consultants.

A pre-proposal conference was held on September 7, 2016 and was attended by representatives from six firms. On September 30, 2016, MWRA received a single proposal from Arcadis U.S., Inc., which was substantially higher in cost than the Engineer's Estimate. Given that only a single proposal was received and that there was a substantial difference between the Engineer's Estimate and the price proposed by the single proposer, staff choose to revise and reissue the RFQ/P.

The project team thoroughly reviewed and revised the project scope of services, eliminating tasks which were peripheral to the core mission of updating the wastewater meter system and emphasizing that the existing system was to be evaluated, rather than a new system designed from scratch. Moreover, additional existing background information and data was made available to proposers to assist firms in better understanding the work to be performed. The Engineer's Estimate was then revised to reflect the revised final scope of services.

On March 8, 2017, MWRA re-issued a one-step RFQ/P; which was again publically advertised in the Central Register, Boston Herald, Banner Publication and EL Mundo, and notice was sent directly to eighteen firms. To encourage participation, staff conducted additional outreach to a number of firms to ensure that they were aware that the project was being re-advertized. Five firms requested the RFQ/P documents; two of which were potential prime consultants.

A pre-proposal conference was held on March 28, 2017, with additional outreach effort by staff to encourage participation. The conference was attended by representatives from four firms. Subsequent to the conference, staff continued to encourage competition in responding to questions and reaching out to firms which had not yet requested the RFQ/P documents.

The RFQ/P included the following evaluation criteria which had been voted upon by the Selection Committee prior to the issuance of the RFQ/P: Cost - 25 points; Qualifications and Key Personnel - 20 points; Experience/Past Performance on Similar Non-Authority Projects - 15 points; Technical Approach - 15 points; Capacity/Organization and Management Approach - 10 points; Past Performance on Authority Projects - 10 points; and MBE/WBE participation - 5 points.

On April 28, 2017, MWRA received proposals from two firms: Arcadis U.S., Inc. (Arcadis) and RJN Group, Inc (RJN). The proposed cost and level of effort by Arcadis and RJN are as follows:

PROPOSER	PROPOSED CONTRACT COST	LEVEL OF EFFORT (LOE)
RJN Group, Inc.	\$3,870,189.15 *	19,062 hours
Arcadis U.S., Inc.	\$4,494,654.03	19,084 hours
<i>Engineer's Estimate</i>	<i>\$5,125,361.00</i>	<i>23,748 hours</i>

*Reflects corrections made due to mathematical errors.

Both proposers' level of effort and cost were lower than the Engineer's Estimate. Given that the

Engineer's Estimate was revised between the first and second solicitation, staff believe that the second estimate overestimated certain tasks' hours.

The five voting members on the Selection Committee reviewed, scored, and ranked the proposals as follows:

PROPOSER	TOTAL POINTS	*ORDER OF PREFERENCE/ TOTAL SCORE	FINAL RANKING
RJN Group, Inc.	410	5	1
Arcadis U.S., Inc.	332.5	10	2

*Order of Preference represents the sum of the individual Selection Committee members' rankings where the firm receiving the highest number of points is assigned a "1;" the firm receiving the next highest number of points is assigned a "2," and so on.

RJN was unanimously ranked first by members of the Selection Committee, and received the most points for all of the evaluation criteria. Selection Committee members were in agreement that RJN's proposal, with the lowest overall cost, lowest average hourly rate, and lower unit prices for temporary metering work was the best value. The Committee judged that RJN's proposed staffing and project team had excellent qualifications, metering design experience, and team capacity. The firm also presented an effective organizational structure and management plan indicating the team member's roles and responsibilities. The RJN team will be led by a Project Manager and Project Engineer with significant, and highly relevant, recent experience working on projects of similar magnitude and complexity as the wastewater metering system replacement project. RJN's technical approach was considered excellent, demonstrating a clear understanding of the project scope and of field work issues related to wet weather. The proposal detailed the work required to evaluate each community's flow metering, and identified the importance of lessons learned to be incorporated into the new standard operating procedures (SOPs). RJN's unit prices for temporary metering services using subcontractor, EST Associates, were substantially lower than Arcadis' while still demonstrating an understanding of the scope of work to be accomplished. Overall, RJN had an excellent technical approach with well thought out and more substantive detail about the selection of the new meter technology. While it was not formally considered by the Selection Committee, given the length of time, it was noted that RJN and some of its key staff had been involved in the 2004 wastewater meter replacement project, and had performed well.

Arcadis' proposal had a higher overall cost, higher average hourly rate, and higher unit pricing cost for the temporary metering work to be done by its subcontractor, ADS Environmental. Arcadis's proposed staffing roles/responsibilities were not clearly defined, with key duties apparently to be provided by the Deputy Project Manager, whom Selection Committee members concluded did not have the appropriate qualifications for this assignment. Arcadis' proposed Resident Engineer and Resident Inspection staff did not have the experience overseeing installation of wastewater meters requested in the RFQ/P. Arcadis' technical approach lacked in

detail, including how issues related to wet weather during temporary metering would be handled. The approach to standard operating procedures development was not clear and did not appear to follow the scope of services requirement of interviewing MWRA staff, including the Meter Engineering/Data and Meter Maintenance groups, to understand their roles and responsibilities. Arcadis' meter selection experience was considered weak, although the firm did demonstrate data management experience. Although its external references were generally good, the projects listed were not similar or as relevant to the wastewater metering system replacement project, neither were the degree of complexity, size and magnitude. Arcadis MWRA references were mixed, with some on-going projects receiving less favorable reviews.

RJN Group's references for similar projects were checked and found to be good. In accordance with MWRA's procurement procedures, staff entered into discussions with RJN to confirm costs, level of effort and project management. Based on those discussions, the proposed price was reduced further to \$3,858,154.15 to correct certain assumptions made by RJN. Staff are of the opinion that RJN can complete the project for this amount and the Selection Committee recommends award of this contract to the RJN Group, Inc. in an amount not to exceed \$3,858,154.15.

BUDGET/FISCAL IMPACT:

The FY18 CIP includes a budget of \$5,125,361.00 for Contract 6739. The contract award amount is \$3,858,154.15 or \$1,267,206.85 under budget.

MBE/WBE PARTICIPATION:

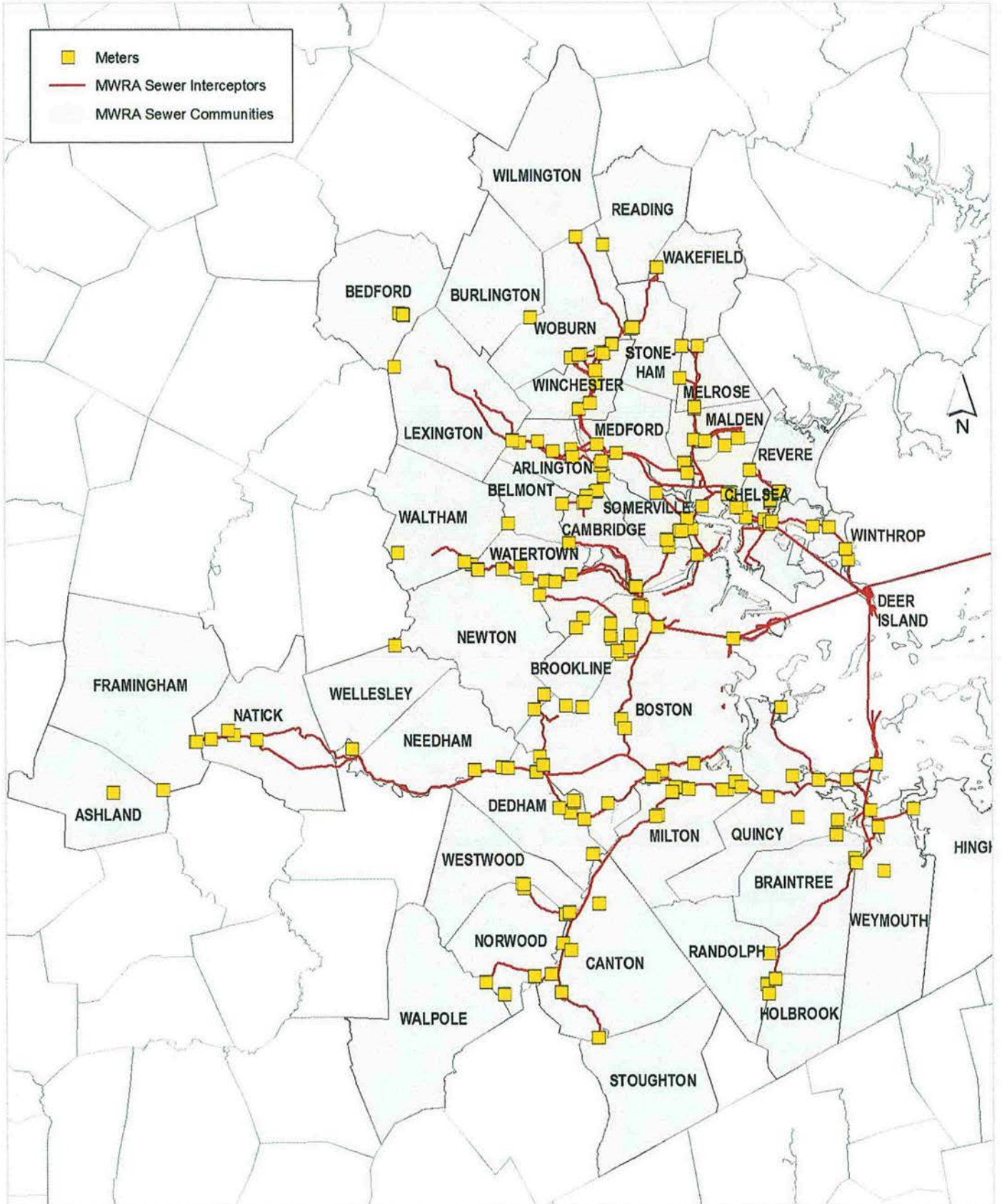
There was no minimum MBE and WBE participation requirement established for this project, however, RJN committed to 5 percent WBE participation.

ATTACHMENTS:

Attachment A – Locations of existing wastewater meters.

Attachment A

Existing Wastewater Meter Sites



STAFF SUMMARY


TO: Board of Directors
FROM: Frederick A. Laskey, Executive Director
DATE: June 28, 2017
SUBJECT: Chelsea Creek Headworks Upgrade
BHD/BEC 2015, A Joint Venture
Contract 7161, Change Order 1



COMMITTEE: Wastewater Policy & Oversight

INFORMATION
 VOTE

Martin E. McGowan, Construction Coordinator
Corinne M. Barrett, Director, Construction
Preparer/Title


Michael J. Hornbrook
Chief Operating Officer

This is the first change order, in a series of change orders, staff will be presenting to the Board regarding this difficult rehabilitation project. The rehabilitation contains numerous challenges associated with PCB paint removal; addressing years of previous layers of electrical/plumbing and instrumentation modifications that were not documented on record drawings; and the largest challenge of temporarily maintaining systems during demolition, removal and replacement so that staff can continuously operate the facility without any reduction in the facility capacity. This is the first of three remote headworks facility to be rehabilitated and staff intend to utilize lessons learned from this challenging contract for the rehabilitation of the remaining two headworks.

RECOMMENDATION:

To authorize the Executive Director, on behalf of the Authority, to approve Change Order 1 to Contract 7161, Chelsea Creek Headworks Upgrade, with BHD/BEC 2015, A Joint Venture, for a lump sum amount of \$252,512, increasing the contract amount from \$72,859,000 to \$73,111,512, with no increase in contract term.

Further, to authorize the Executive Director to approve additional change orders as may be needed to Contract 7161 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:

The Chelsea Creek Headworks is one of three remote headworks facilities that provides preliminary treatment and flow control of the wastewater from MWRA's Northern Service Area before reaching the Deer Island Treatment Plant. Preliminary treatment at the headworks facilities includes grit and screenings removal, which prevents excessive wear and maintenance of

equipment at the North Main Pump Station, and protects the cross harbor tunnels from filling with debris. The Chelsea Creek Headworks was constructed in the 1960s and received its last significant upgrade in 1987. This project is a major upgrade of the entire facility and includes automation of the screenings collection and solids conveyance system, allowing the facility to be unstaffed during dry weather flow. The grit collector systems will be replaced, and existing climber screens will be replaced with catenary screens. Influent and effluent sluice gates will be replaced, and the gates hydraulic operating system will be replaced with electric gate actuators. Carbon adsorbers will be installed for odor control, HVAC systems will be upgraded, and redundancy will be added to both systems. Ancillary systems including the emergency generator, fuel oil tank, and transformer will be replaced. Instrumentation and control systems will be upgraded, the communications tower will be replaced and a communications building will be added. Abatement of hazardous building materials including paint containing PCBs, flood protection measures to protect the facility to the 100-year flood elevation plus 2.5 feet, and upgrades to meet current code requirements for egress, electrical, plumbing and fire suppression are also included.

This Change Order

Change Order 1 consists of the following two items:

Relocate the Existing Grit and Screenings Piping,
Control Valves and Discharge Bins

\$198,944

The contract documents require the construction of a new electric room on the second floor of the facility for the new 480-volt motor control centers (MCCs) and a mechanical room on the third floor for the new heating and ventilation equipment. These motor control centers will supply power to all of the new equipment being furnished under this contract and the heating and ventilation (HV) equipment will provide heating and ventilation throughout the building, including this new electric room. The existing grit and screenings piping runs through the new electric room in direct conflict with the MCCs and continues up to the third floor where the piping and control valves are in conflict with the new HV equipment and ductwork. Finally, the piping exits on the third floor and runs along the exterior of the building where it terminates at the existing grit and screenings grit discharge bins. This exterior piping is in conflict with a new stair tower (Stair A) that will be constructed to replace an interior stairwell that does not meet the Building Code. To complete the new electrical room on the second floor, the existing stairwell needs to be closed in where a new control cabinet will be installed. Therefore, this existing stairwell cannot be closed off until the new stair tower is built to maintain



Grit & Screenings piping in new second floor electric room



Grit & Screenings piping in new third floor mechanical room

access to the upper levels of the facility.

The contract documents identify the demolition of the existing piping, control valves and discharge bins, but did not include the interim piping configuration that will allow these new systems to be built, while the existing systems remain operational. To correct this mistake, the Contractor will disassemble and relocate the existing piping, fittings and control valves in a multi-stage sequence to minimize downtime of the grit and screenings conveying systems. Since this will be a temporary installation, existing valves and fittings will be re-used wherever possible. The grit and screenings bins will be relocated approximately 60 feet away from the building to a spot that will not impact future construction or plant operations. The Contractor will construct new concrete pads for the bins with a rail system to accommodate the waste hauling vendor. Jersey barriers will be installed to protect the exterior piping system during this interim phase.

The approved PCO for this item has been identified by MWRA staff as a design error. MWRA staff, the Consultant, and the Contractor have agreed to a lump sum amount of \$198,944 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.

Relocate the Electrical Gear Associated with the Existing Odor Control Scrubber Fans and Air Compressor

\$53,568

The Contractor is required to upgrade the outdated 208-volt electrical system at the Chelsea Creek Headworks with a new 480-volt service. This requires construction of a new electrical switchboard room on the first floor of the facility. The electrical gear, including transformers, disconnect switches, VFDs, conduits, wires and supports, for two existing odor control scrubber fans and an air compressor are in conflict with this new switchboard room. This gear is critical to plant operations since it provides power to both odor control fans and one of three air compressors as part of the pneumatic ejection system that conveys the grit and screenings. The two existing fans and air compressor must remain in service until the new 480-volt fans and compressors are installed and operational. Therefore, the electrical gear in conflict must be temporarily relocated. The contract documents show this electrical gear being demolished, but do not show it being relocated. This omission prevents the completion of the new 480-volt electrical system necessary for the new fans and compressor. The



Electrical gear that is in conflict with the new switchgear room

Electrical Filed Subcontractor must prepare an area in the existing boiler room and relocate the transformers, disconnect switches and VFDs, and re-route the conduit, wire and supports to this new location. This area was selected by MWRA because this space will not be impacted by ongoing construction activities until after the new odor control system and air compressor systems are operational. In order to limit the downtime of the odor control system during this relocation, the Contractor will purchase a new disconnect switch and transformer to install prior to the first shutdown. The disconnect switch and transformer from the first fan will then be used for the installation of the second fan. This change will not include the demolition costs which are already part of the contract.

The approved PCO for this item has been identified by MWRA staff as a design omission. MWRA staff, the Consultant, and the Contractor have agreed to a lump sum amount of \$53,568 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.

CONTRACT SUMMARY:

	<u>Amount</u>	<u>Time</u>	<u>Dated</u>
Original Contract:	\$72,859,000.00	1,460 Days	11/22/16
Change Orders:			
Change Order 1	\$252,512.00	<u>0 Days</u>	Pending
Total of Change Orders:	\$252,512.00	0 Days	
Adjusted Contract:	\$73,111,512.00	1,460 Days	

*Approved under delegated authority

If Change Order 1 is approved, the cumulative value of all change orders to this contract will be \$252,512 or 0.35% of the original contract amount. Work on this contract is approximately 7.5% complete.


BUDGET/FISCAL IMPACT:

The FY18 Draft Final Budget includes \$76,059,000.00 for Contract 7161. Including this change order for \$252,512.00, the adjusted subphase total is \$73,111,512.00.

MBE/WBE PARTICIPATION:

The MBE/WBE participation requirements for this project were established at 3.4% and 3.8%, respectively. The Contractor has been notified that these requirements are still expected to be met.

STAFF SUMMARY

TO: Board of Directors
FROM: Frederick A. Laskey, Executive Director 
DATE: June 28, 2017
SUBJECT: Thermal and Hydro Power Plant Maintenance, Deer Island Treatment Plant
IPC Lydon, LLC
Contract S551, Change Order 2

COMMITTEE: Wastewater Policy & Oversight

 INFORMATION
 X VOTE

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


Michael J. Hornbrook
Chief Operating Officer

RECOMMENDATION:

To authorize the Executive Director, on behalf of the Authority, to approve Change Order 2 to Contract S551, Thermal and Hydro Power Plant Maintenance, Deer Island Treatment Plant, with IPC Lydon, LLC, for an amount not to exceed \$200,000, increasing the contract amount from \$4,447,464 to \$4,647,464 with no increase in contract term.

Further, to authorize the Executive Director to approve additional change orders as may be needed to Contract S551 in an amount not to exceed the aggregate of \$250,000, in accordance with the Management Policies and Procedures of the Board of Directors.

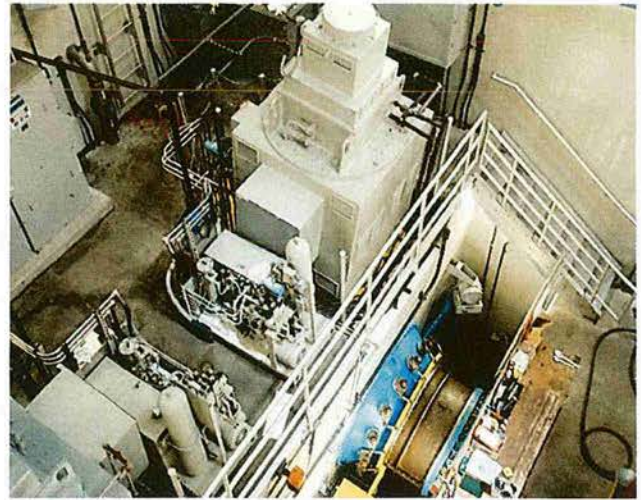
DISCUSSION:

Contract S551 was awarded in May 2016 and provides scheduled annual inspection and maintenance services, as well as emergency and non-emergency repair services, replacement parts and factory authorized vendor services, for all equipment associated with the steam generation (two boilers and two steam generators) and heating systems in the Thermal/Power Plant, and the hydroelectric turbine generators in the Hydro Power Plant, for a two-year period.

The scope of work under this contract includes two annual maintenance services for the high pressure steam generation equipment at the Thermal/Power Plant. Each annual maintenance service on the high-pressure steam turbines is a labor-intensive, complex, and comprehensive exercise that must be performed by specially trained technicians. The contract also includes two scheduled annual maintenance services for the specified equipment at the Hydro Power Plant, and a quarterly operational surveillance program for both steam turbine generators and hydro turbine generators.



Two High-Pressure Steam Boilers



Hydroelectric Turbine Generator

This Change Order

Change Order 2 consists of the following three items:

Replacement Parts Allowance \$125,600

The original contract included an allowance for replacement parts in the amount of \$450,000. Change Order 1 increased this allowance by \$215,000, to \$665,000. To date, \$556,290.74 has been spent. Staff anticipate that the remaining amount will be expended due to the repairs of critical plant components which have led to both accelerated and unplanned overhauls within the Thermal/Power Plant that need to be corrected. This work includes, newly engineered replacement expansion joints for the Hot Temperature Water Pumps, and two Cooling Circulation Water pumps that provide cooling for the process equipment for the boilers. Staff have noted a large reduction in the Cooling Circulation Water pump performance warranting this repair. In addition, the Hydro Power Plant continues to require intermittent critical unplanned repairs with the facility inlet gates and wicket arm coupling shearpins.

Therefore, staff estimate that an additional \$125,600 will be needed for the remaining 12 months of the contract. The approved PCO for this work has been identified by MWRA staff as an unforeseen condition. MWRA staff and the Contractor have agreed to a not to exceed amount of \$125,600.

Non-Emergency Maintenance and Repair Services (7:00 AM – 3:00 PM) \$59,400

The contract includes 2,250 service person hours to perform non-emergency maintenance and repair service on the Thermal and Hydro Power Plants during normal business hours at an hourly rate of \$99 for a not to exceed amount of \$222,750. To date, 2,092 hours have been used.

Therefore, staff estimate that an additional 600 hours will be needed due to corrective repairs during the next planned Thermal Plant outage work and for the remaining 12 months of the contract. The approved PCO for this work has been identified by MWRA staff as an unforeseen

condition. MWRA staff and the Contractor have agreed to a not to exceed amount of \$59,400.

Factory Services Representative \$15,000

The original contract included an allowance for a Factory Representative in the amount of \$150,000. Change Order 1 increased this allowance by \$25,000, to \$175,000. To date, the full amount has been expended.

Therefore, staff estimate that there will be additional Factory Representative Services required and that an additional \$15,000 will be needed for the remaining 12 months of the contract. The approved PCO for this work has been identified by MWRA staff as an unforeseen condition. MWRA staff and the Contractor have agreed to a not to exceed amount of \$15,000.

CONTRACT SUMMARY:

	<u>Amount</u>	<u>Time</u>	<u>Dated</u>
Original Contract:	\$4,207,464.00	730 Days	05/16/16
Change Orders:			
Change Order 1*:	\$240,000.00	0 Days	12/21/16
Change Order 2:	<u>\$200,000.00</u>	<u>0 Days</u>	Pending
Total of Change Orders:	\$440,000.00	0 Days	
Adjusted Contract:	\$4,647,464.00	730 Days	

*Approved under delegated authority

If Change Order 2 is approved, the cumulative total value of all change orders to this contract will be \$440,000 or 10.5% of the original contract amount. Work on this contract is approximately 56% complete.

BUDGET/FISCAL IMPACT:

Funding of \$1,000,000 is included in Deer Island's FY17 Current Expense Budget for this contract. Appropriate funding has been included in the FY18 Current Expense Budget.

MBE/WBE PARTICIPATION:

Due to the limited opportunities for subcontracting, there were no MBE or WBE participation requirements established for this contract.



MASSACHUSETTS WATER RESOURCES AUTHORITY

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

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, June 28, 2017

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

Time: Immediately following Wastewater Comm.

AGENDA

A. Approvals

1. Water Supply Continuation Agreement with Town of Bedford

B. Contract Awards

1. Northern Intermediate High Section 110 – Stoneham: Albanese D&S, Contract 7067

MASSACHUSETTS WATER RESOURCES AUTHORITY

Meeting of the Water Policy and Oversight Committee

June 7, 2017

A meeting of the Water Policy and Oversight Committee was held on June 7, 2017 at the Authority headquarters in Charlestown. Chairman Blackmon presided. Present from the Board were Ms. Wolowicz and Messrs. Cotter, Foti, Pappastergion, Vitale and Walsh. Among those present from the Authority staff were Fred Laskey, Steve Remsberg, Josh Das, Steve Estes-Smargiassi, Dave Coppes, Nava Navanandan, Pat Smith, Fred Brandon, Mike Hornbrook and Bonnie Hale. The meeting was called to order at 11:55 a.m.

Information

2016 Annual Water Quality Report (Consumer Confidence Report)

Staff reviewed the report.

Approvals

*Water Supply Citizen's Advisory Committee Contract

The Committee recommended approval of renewal of the contract for WSCAC (ref. agenda item B.1).

Contract Awards

*Supply and Delivery of Sodium Hypochlorite for the John J. Carroll Water Treatment Plant and the William A. Brutsch Treatment Facility: Univar USA, Inc., and H. Krevit & Co., Inc., Bid WRA-4380

The Committee recommended approval of the contract award (ref. agenda item C.1).

*Water Section 57 & 50 and Sewer Section 19, 20 & 21 Rehabilitation – Medford, Design, Construction Administration and Resident Engineering/Inspection Services: Weston & Sampson Engineers, Inc., Contract 7540

Staff gave a presentation on the contract and reviewed the selection process. There was general discussion and question and answer. The Committee recommended approval of the contract award (ref. agenda item C.2)

* Approved as recommended at June 7, 2017 Board of Directors meeting.

*Section 14 Water Pipeline Relocation – Malden: Albanese Brothers Inc., Contract 6957

The Committee recommended approval of the contract award (ref. agenda item C.3).

Contract Amendments/Change Orders


*Wachusett Aqueduct Pumping Station: BHD/BEC JV 2015, A Joint Venture: Contract 7157, Change Order 15

The Committee recommended approval of Change Order 15 (ref. agenda item D.1).

The meeting adjourned at 12:15 p.m.

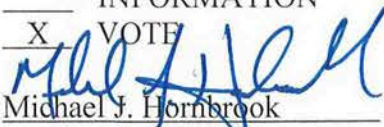
* Approved as recommended at June 7, 2017 Board of Directors meeting.

STAFF SUMMARY

TO: Board of Directors
FROM: Frederick A. Laskey, Executive Director 
DATE: June 28, 2017
SUBJECT: Water Supply Continuation Agreement for Bedford

COMMITTEE: Water Policy & Oversight

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

____ INFORMATION
X VOTE

Michael J. Hornbrook
Chief Operating Officer

RECOMMENDATION:

To authorize the Executive Director, on behalf of the Authority, to execute the attached ten-year Water Supply Continuation Agreement with Bedford substantially in the form filed as Attachment 1 to this Staff Summary.

DISCUSSION:

Background

Twenty-five of the fifty-one MWRA water served communities are “contract communities” that receive MWRA water pursuant to Water Supply Continuation Agreements.¹ Bedford became an MWRA contract community upon its admission to the MWRA in 1993, after the Town lost 80% of its local sources due to contamination. Bedford receives MWRA water via three interconnections with Lexington, a fully served MWRA community.

Bedford’s Water Supply Continuation Agreement with MWRA will expire on June 30, 2017. In the past months, MWRA has worked with Bedford in a cooperative fashion to develop a new Agreement and to identify opportunities and obligations for the next contract term. The new Agreement was predicated upon Bedford’s satisfaction of certain criteria set forth in the MWRA Enabling Act and the completion of a process outlined in MWRA regulation (360 C.M.R. 11.00) entitled “Regulations for the Continuation of Contract Water Supply.” The Regulation requires the preparation of a Supplementary Report that includes supply and demand analyses,

¹ The differentiation between contract and non-contract communities dates back to prior to the Enabling Act. In addition, all communities admitted to the Waterworks system after MWRA’s creation are contract communities. Contract communities that are now partially served by MWRA and that regularly use local sources to meet some portion of demand include: Bedford, Canton, Dedham-Westwood W.D., Lynn Water & Sewer Commission, Marlborough, Needham, Peabody, Stoughton, Wakefield, Wellesley, Wilmington, Winchester, and Woburn. Currently fully served contract communities include: Chicopee, Framingham, Northborough, Reading, Southborough, South Hadley Fire District 1, Weston, and Wilbraham. Contract communities that rely on MWRA only in unusual or emergency situations include: Cambridge, Leominster, and Worcester.

documentation of conservation and demand management efforts, documentation of local source protection efforts, and a description of various facets of the community's water supply system. Highlights of Bedford's demand management efforts include the following:

- 100% of the Bedford system is metered and Bedford has a metering by-law that requires testing and replacement of large meters;
- Bedford has ongoing leak detection and repair programs;
- Bedford's Unaccounted for Water (UAW) averaged 6.12% over the last five years, below the 10% standard of the Massachusetts Water Conservation Standards and below the median UAW of MWRA communities;
- Bedford's Residential Gallons Per Capita Per Day has varied from 57 to 65 over the last five years, which meets the State's Water Conservation Standard of 65 RGPCD; and
- Bedford has adopted a local drought restriction enforcement ordinance and the adoption of an updated Drought Management Plan is pending before the Board of Selectmen.

The Proposed Agreement

The proposed Water Supply Agreement specifies that over the next ten fiscal years, MWRA will provide Bedford up to 550 million gallons a year and up to 3.33 million gallons per day (mgd) on a maximum daily water volume basis. The annual withdrawal volume specified in this new ten-year agreement are slightly higher than the expiring Agreement given that modest population and employment growth is projected in Bedford, and the Town is also constructing additional playing fields which will increase irrigation needs.

The MWRA-Bedford Water Continuation Agreement specifies that MWRA shall bill Lexington for the total volume of water used by both Lexington and Bedford, and that Lexington shall bill Bedford for water used in accordance with the Lexington-Bedford Inter-municipal Agreement (IMA)². MWRA does not have a revenue meter for Bedford: instead, as is specified in the Lexington-Bedford IMA, flow to Bedford is measured by Lexington at the metered interconnections via equipment owned by Bedford and inspected and calibrated annually by an independent technician.

The MWRA-Bedford Water Supply Agreement also contains a number of other terms that relate to the fact that Bedford does not have a direct connection to MWRA (see Figure 1). It specifies that if the Town desires a direct connection to MWRA that would be dedicated to the Town's use exclusively, rather than continuing to receive MWRA water via Lexington's distribution system,

the Town agrees to pay for and construct the direct connection in accordance with #OP.10, *Admission of New Community to the MWRA Water System*. Further, that MWRA shall not be

² The current Lexington-Bedford IMA specifies a yearly demand charge plus a commodity rate set at MWRA's wholesale water rate times the monthly metered Bedford water consumption times 1.01. The Bedford-Lexington IMA expires on June 30, 2018. Bedford anticipates that discussions for a successor IMA will begin shortly.

liable for either disruption of water delivery due to the water distribution systems of Bedford or Lexington, or compliance of water delivered with state and federal drinking water standards once the water has entered the water distribution system of the Town of Lexington. In regards to water quality, MWRA works with its communities to diagnose problems in their distribution systems should they arise, and both flow and pressure data is helpful in the diagnosis. Because the meters at the Lexington-Bedford interconnections now measure flow only, the proposed MWRA Water Supply Continuation Agreement includes a new provision that Bedford consider adding expanded metering capabilities at the Lexington-Bedford interconnections so that both flow and pressure data are captured.

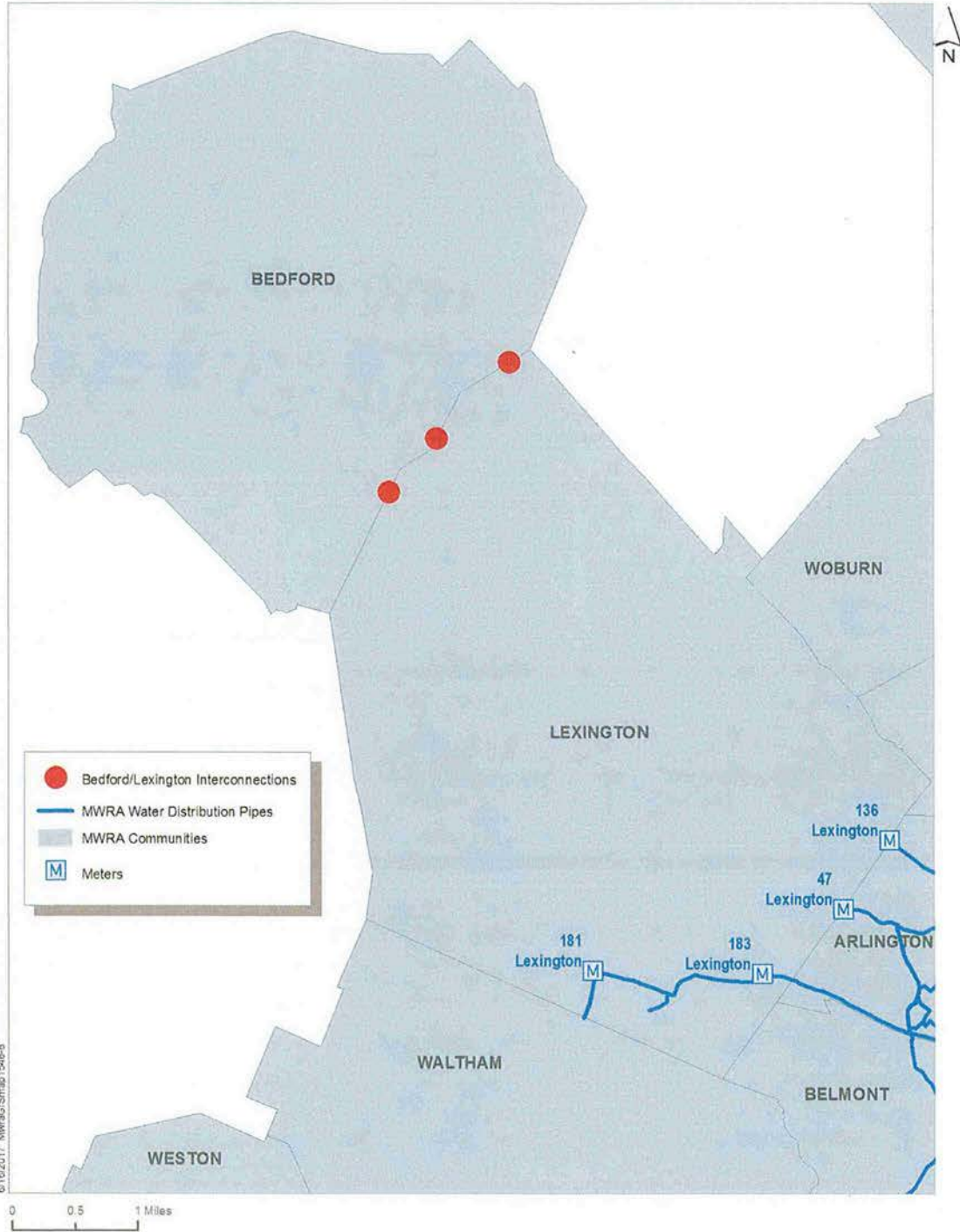
BUDGET/FISCAL IMPACTS:

Lexington is assessed by MWRA for the total volume of water used by Lexington and Bedford together. Bedford is then assessed by Lexington for water that Lexington delivers to Bedford. MWRA's Community Charge Determination Policy computes charges for water services on the basis of a community's metered water flows, and water assessments are calculated by allocating the total annual water rate revenue requirement based on a community's share of flow for the last full calendar year.

ATTACHMENTS:

1. Figure 1 Bedford Interconnections with Lexington
2. Water Supply Agreement between MWRA and the Town of Bedford

Figure 1
Bedford and Interconnections with Lexington



WATER SUPPLY CONTINUATION AGREEMENT

BETWEEN

THE MASSACHUSETTS WATER RESOURCES AUTHORITY

AND

THE TOWN OF BEDFORD

This Water Supply Continuation Agreement ("Agreement") by and between the Massachusetts Water Resources Authority (the "MWRA") and the Town of Bedford (the "Town") (hereinafter jointly referred to as the "Parties"), memorializes the agreement and understanding of the Parties regarding the arrangement whereby the MWRA will continue to supply water to the Town and the Town will purchase its water supply or a portion of its water supply from the MWRA water supply system.

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 service districts (the "Communities") within its service area.
- R.2. The MWRA desires to continue to provide safe and sufficient water supplies to the Town and to provide system-wide assistance to help protect and conserve water supplies.
- R.3. Section 8 (d) of the Act permits the MWRA to extend its waterworks system to a community and to provide the continued delivery of water to the new community under reasonable terms as determined by MWRA provided that specified requirements are met.
- R.4. The Town, having met the conditions of Section 8 (d) and the conditions of O.P.#10, Admission of a New Community to the Waterworks System, was duly admitted to the MWRA Waterworks System on June 9, 1993 thereby acquiring certain rights and obligations conferred by that admission.
- R.5. The Town is not directly connected to the MWRA water distribution system and has three interconnections to the Town of Lexington. Lexington is a fully supplied MWRA community. The Town receives MWRA water pursuant to an Intermunicipal Water

Agreement between the Town and Lexington, which among other things, specifies that Lexington shall provide up to 3.33 MGD of water as required by the Town of Bedford. The Intermunicipal Agreement is binding upon Bedford and Lexington for twenty-five years or as may be extended with legislative approval from the effective date.

- R.6. The Town has no current plans to construct a direct connection to the MWRA system.
- R.7. MWRA desires to continue to provide assistance to the Town in the diagnosis of water quality and water distribution issues should they arise. Monitoring of flow and pressure often provides useful information for such diagnosis by MWRA. Current monitoring at the Lexington and Town connection points consists of single channel devices measuring only flow. MWRA suggests that as part of SCADA upgrades that the Town is undertaking, the Town should consider the installation of new Telog devices that are utility powered and that have four channels to capture both flow and pressure.
- R.8. A regulation entitled "Continuation of Contract Water Supply," promulgated by the MWRA at 360 C.M.R. 11.00 and most recently revised on November 18, 1994, (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 the Communities which purchase water in accordance with contracts.
- R.9. The Town executed a contract dated July 1, 1998 for the purchase of water from the MWRA, which contract expired on June 30, 2007.
- R.10. The Town and the MWRA subsequently executed a new contract for the purchase of water from the MWRA in 2007, which will expire on June 30, 2017.
- R.11. The Town, pursuant to the Regulation, has requested that the MWRA continue to supply water to it and has submitted a continuation request, a Supply Analysis Report, a Demand Analysis Report, a plan for water conservation and demand management, and ordinance for the protection of local sources, pursuant to section 11.08 of the Regulation.
- R.12. The Town has submitted a detailed description of local user charge systems and accounting systems which meet the Regulation's requirement for conservation based rates.
- R.13. The MWRA and the Town wish to formalize their rights and obligations regarding the supply of water to the Town and therefore enter into this Agreement.

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

1. The term ("Term") of this Agreement shall be ten (10) fiscal years beginning on July 1, 2017 and ending at midnight on June 30, 2027.

2. The MWRA shall during the Term provide the Town with water on a maximum annual water volume basis, stated in millions of gallons, as follows:

<u>FY18</u> 550	<u>FY19</u> 550	<u>FY20</u> 550	<u>FY21</u> 550	<u>FY22</u> 550
<u>FY23</u> 550	<u>FY24</u> 550	<u>FY25</u> 550	<u>FY26</u> 550	<u>FY27</u> 550

and up to 3.33 million gallons per day (mgd) on a maximum daily water volume basis. In any year in which the Town's usage exceeds the maximum annual volume or maximum daily volume stated above, the Town will provide MWRA with a written explanation of the increased demand and a plan to reduce the water volume below the contract limits. The Parties shall reassess the maximum daily water volume to be provided by MWRA and will amend this Agreement accordingly if the applicable terms of the Bedford/Lexington Inter-Municipal Agreement on water supply change.

3. In the event that revised circumstances regarding local demand and/or supply should occur and the Town determines that the volume designated in this Agreement to be supplied from the MWRA system is insufficient to meet the Town's projected demand, the Town may petition the MWRA to amend this Agreement pursuant to 360 C.M.R. 11.11.
4. MWRA does not have a revenue meter for the Town. MWRA shall bill Lexington for the total volume of water used by Lexington and the Town together. Lexington shall bill the Town for water used in accordance with the then-current Lexington/Bedford Inter-municipal Water Supply Agreement, which expires on June 20, 2018 and which is planned to be renewed. The MWRA shall bill Lexington at the MWRA's applicable prevailing rate(s). All billing procedures, due dates, and interest charges for late payments shall be in accordance with the MWRA's standard policies and procedures.
5. MWRA provides potable water in compliance with federal and state drinking water standards at the interface between its distribution system and the distribution systems of its waterworks communities. The parties agree that MWRA assumes no liability for the compliance of water delivered pursuant to this Agreement with those State and Federal drinking water standards once the water has entered the water distribution system of the Town of Lexington.
6. The Town agrees to consider the installation of four-channel Telog devices at the Lexington and Town connection points to measure both flow and pressure data, recognizing that such data may be helpful in the diagnosis of water quality and water distribution issues should they arise.

7. The Town agrees that MWRA shall not be responsible for reinforcing existing Town of Lexington pipelines or constructing new Town of Lexington pipelines for provision of water to the Town.
8. The Town agrees that the MWRA shall not be liable to the Town for any disruption of water delivery to the Town including any disruption attributable to the water distribution systems of the Town or the Town of Lexington. The parties agree that in the event of a catastrophic event and disruption of water delivery to the Town, MWRA will work in concert with Lexington and the Town to help respond to the event and to restore water delivery as soon as reasonably possible.
9. If the Town desires to make a direct connection to the MWRA distribution system that would be dedicated to the Town's use exclusively, rather than receive MWRA water via the Town of Lexington's distribution system, the Town agrees to pay for and construct the direct connection, consistent with the Connection Cost section of O.P. #10., which requires applicant communities to the MWRA to pay for construction of new connections.
10. The Town agrees to continue in effect during the Term a user charge system and accounting system which meets the Regulation's requirement for conservation-based rates.
11. The Town shall develop and implement a full cost pricing system within twelve (12) months from the date that all communities listed in section 8(d) of the Act, other than those subject to 360 CMR 11.00, have implemented a full cost pricing system.
12. The Town agrees that during the Term it shall continue the implementation of its current and proposed local demand management programs, including participation in MWRA conservation programs, and distribution of MWRA-provided materials to all water users.
13. 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.
14. The Town agrees to use its best efforts to either continue in full force and effect during the Term the bylaw for the protection of local water sources, or, at the Town's discretion, to adopt a bylaw with more stringent measures.
15. Any dispute arising between the MWRA and the Town under the terms of this Agreement shall be resolved exclusively in accordance with 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 on this ___ day of _____, 2017 by their duly authorized representatives.

MASSACHUSETTS WATER RESOURCES AUTHORITY

By:

Frederick A. Laskey
Executive Director

By:

TOWN OF BEDFORD
SELECTMEN

Margot R. Fleischman

William S. Moonan

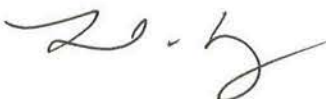
Caroline Fedele

Michael Rosenberg

Edward Pierce

STAFF SUMMARY

TO: Board of Directors
FROM: Frederick A. Laskey, Executive Director
DATE: June 28, 2017
SUBJECT: Northern Intermediate High Section 110 – Stoneham
Albanese D&S Inc.
Contract 7067



COMMITTEE: Water Policy & Oversight

 INFORMATION

 X VOTE



Michele S. Gillen

Director of Administration



Michael J. Hombrook

Chief Operating Officer

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

RECOMMENDATION:

To approve the award of Contract 7067, Northern Intermediate High Section 110 Stoneham to the lowest responsible and eligible bidder, Albanese D&S Inc. and to authorize the Executive Director, on behalf of the Authority, to execute said contract in the bid amount of \$22,737,300.00, for a contract term of 1,000 calendar days from the Notice to Proceed.

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 or the Spot Pond Pump Stations 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 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. In addition the new transmission main will enhance MWRA's ability to supply flow to future connections with North Reading.

On March 16, 2011, the Board approved the award of Contract 6906 to Fay, Spofford & Thorndike, LLC, now Stantec Consulting Inc. (Stantec), for Design, Construction Administration and Resident Inspection Services. This original design route, based on geotechnical investigations and community input has been revised. The new 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. The total estimated cost of the new pipeline is \$56.2 million as included in the FY18 CIP.

Contract Components and Schedule

The project includes four construction contracts as follows: (See Attachment A)

- The first construction contract, Contract 7066, consists of 2,400 linear feet of 36-inch water transmission main in the Town of Reading 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 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 an anticipated substantial completion date of December 2017;
- The third construction contract, Contract 7478, consists 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 is currently under construction, with an anticipated substantial completion date of September 2018; and
- The fourth construction contract, Contract 7067, the subject of this award, consists of 14,000 linear feet of 48-inch diameter transmission main in the Town of Stoneham. (See Attachment B)

Procurement Process

Contract 7067 was advertised in the Central Register, Boston Herald, Banner Publications, El Mundo and COMMBUYS, and bid utilizing MWRA's e-procurement system (Event 2793) in accordance with Massachusetts General Laws, Chapter 30. Five bids were received and opened on June 8, 2017. The bid results are as follows:

<u>Bidders</u>	<u>Bid Amount</u>
Albanese D&S, Inc.	\$22,737,300.00
P. Gioioso & Sons, Inc.	\$23,471,000.00
<i>Engineers Estimate</i>	<i>\$24,500,000.00</i>
Baltazar Contractors, Inc.	\$24,899,999.00
RJV Construction Corp.	\$25,385,000.00
Revoli Construction Co., Inc.	\$29,956,917.89

The Engineer's Estimate is \$24,500,000. The three lowest bids are within 8.8% of each other, an indication of the reasonableness of the low bid, which is 7.2% below the Engineer's Estimate.

MWRA staff met with Albanese D&S, Inc. and confirmed that the bid price reflects all work as described in the contract documents. References for Albanese were checked and found to be favorable. Albanese is currently working under MWRA Contract 7471, Section 110 Reading and Woburn (\$9,888,000) and Contract 7478 Section 110 and 112 Stoneham and Wakefield (\$17,817,999). Staff report that the Contractor's performance of these projects has been good. Contract 7471 is on schedule. Contract 7478 has been delayed pending coordination issues with the Town of Stoneham and NGrid. Coordination issues have been resolved and it is anticipated that Albanese will take action necessary to recover the project schedule. Staff also inquired as to the company's capacity to complete this contract with other contract commitments. Staff discussed with Albanese its approach to the project, crew size, crew and equipment availability, subcontracting and extent of concurrent work. Based upon these discussions staff are satisfied that Albanese has the capacity to complete this contract along with other ongoing work.

Albanese projects completed for the MWRA within the past seven years, include Northern High Service Pipeline Improvements-Section 53, Contract 5177 (\$2,938,026), and the Northern Intermediate High Stoneham-Reading Connection Contract 7216 (\$3,481,6281). Staff report that the Contractor's performance of these project was very good and the projects were completed on schedule.

MWRA staff and Stantec have concluded that Albanese possesses the skill, ability, and integrity necessary to perform the work under this contract, and is qualified to do so. Staff have determined that the bid price is reasonable, complete and includes the payment of prevailing wage rates, as required. Therefore, staff recommends that Contract 7067 be awarded to Albanese D&S Inc. as the lowest responsible and eligible bidder.

BUDGET/FISCAL IMPACT:

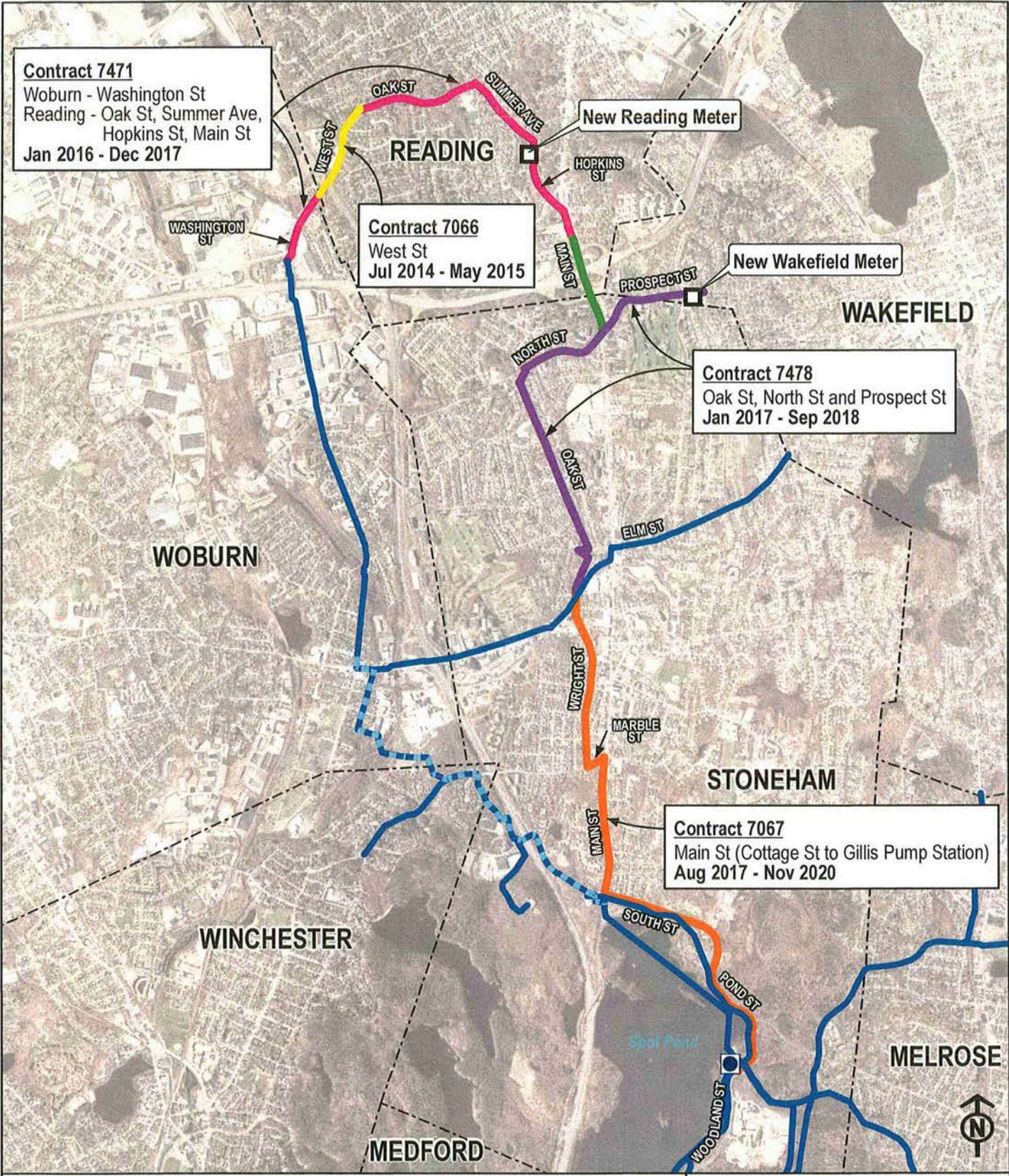
The FY17 CIP includes a budget of \$18,230,000.00 for Contract 7067. The contract award is \$22,737,300.00, or \$4,507,300.00 over budget. The FY18 Draft Final Budget includes \$24,500,000.00 for this contract.

MBE/WBE PARTICIPATION:

The MBE/WBE participation requirements for this project were established at 7.24% and 3.6%, respectively. The Affirmative Action & Compliance Unit has reviewed the bids and has determined that Albanese D&S Inc's bid is responsive to these requirements.

ATTACHMENTS:

Attachment A - Northern Intermediate High Redundant Pipeline Project
Attachment B - NIH Section 110 Stoneham, Contract 7067



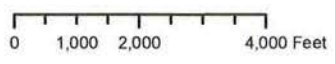
Contract 7471
 Woburn - Washington St
 Reading - Oak St, Summer Ave,
 Hopkins St, Main St
 Jan 2016 - Dec 2017

Contract 7066
 West St
 Jul 2014 - May 2015

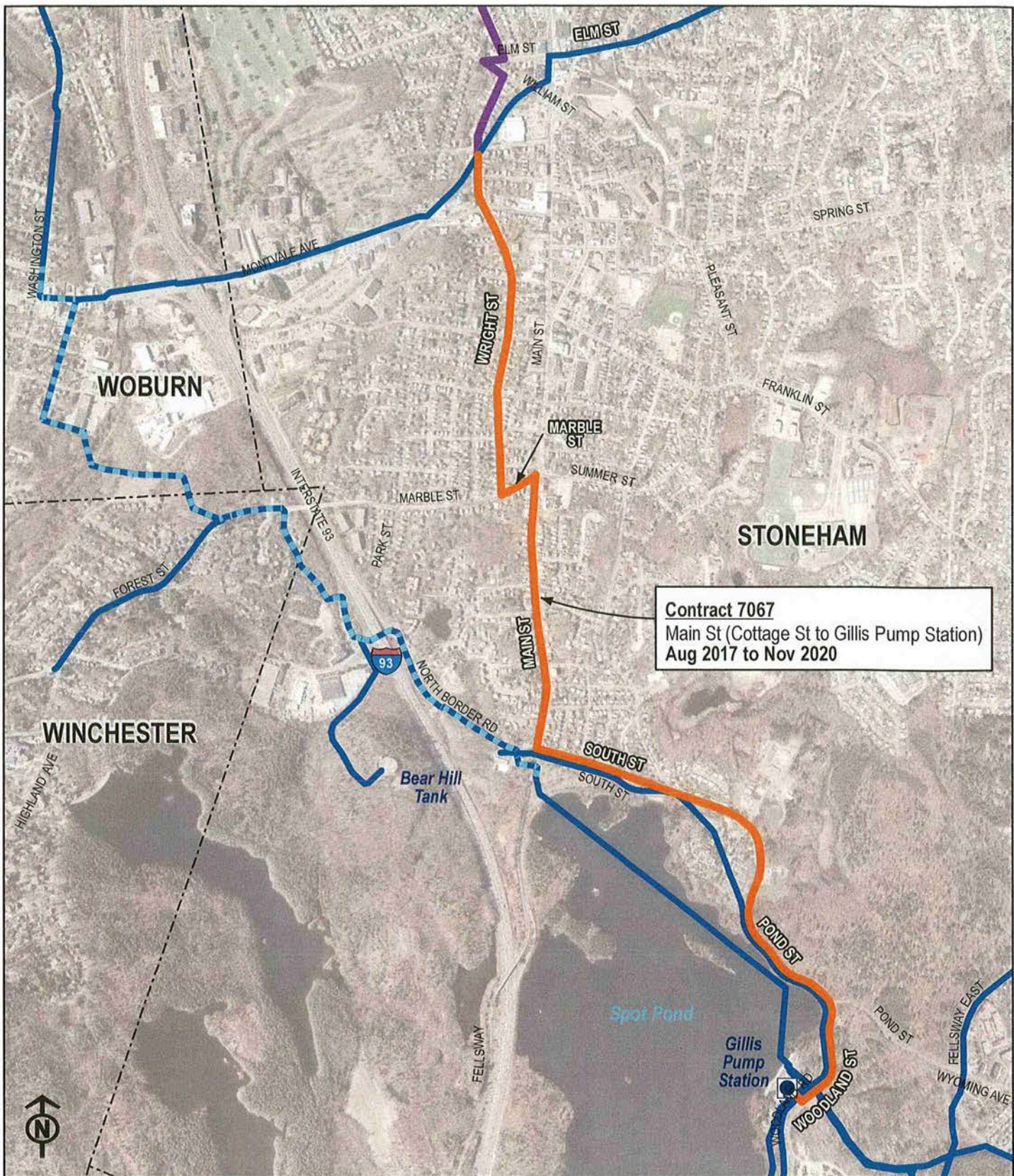
Contract 7478
 Oak St, North St and Prospect St
 Jan 2017 - Sep 2018

Contract 7067
 Main St (Cottage St to Gillis Pump Station)
 Aug 2017 - Nov 2020

MASSACHUSETTS WATER RESOURCES AUTHORITY
Attachment A
Northern Intermediate High
Redundant Pipeline Project, Route Overview



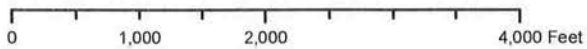
- Contract 7471
- Contract 7478
- Contract 7067
- Contract 7066
- Short-Term Improvements
- MWRA Mains
- - - Class IV PCCP
- New Meter Locations



Contract 7067
 Main St (Cottage St to Gillis Pump Station)
 Aug 2017 to Nov 2020

MASSACHUSETTS WATER RESOURCES AUTHORITY
Attachment B
Northern Intermediate High Redundant Pipeline Project
Route Overview with MWRA Facilities

- Contract 7478
- Contract 7067
- MWRA Mains
- - - Class IV PCCP





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, June 28, 2017

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

Time: Immediately following Water Comm.

AGENDA

A. Approvals

1. Appointment of Principal Civil Engineer

MASSACHUSETTS WATER RESOURCES AUTHORITY

Meeting of the
Personnel and Compensation Committee

June 7, 2017

A meeting of the Personnel and Compensation Committee was held on June 7, 2017 at the Authority headquarters in Charlestown. Chair Wolowicz presided. Present from the Board were Messrs. Blackmon, Cotter, Foti, Pappastergion, Vitale and Walsh. Among those present from the Authority staff were Fred Laskey, Steve Remsberg, Karen Gay-Valente and Bonnie Hale. The meeting was called to order at 12:15 p.m.

*PCR Amendments – June 2017

The Committee recommended approval of amendments to the Position Control Register (ref. agenda item A.1).

*Appointment of Associate General Counsel, Law

The Committee recommended approval of the appointment of Mr. Michael J. Altieri (ref. agenda item A.2).

Appointment of Assistant Director, Engineering & Construction

This item was withdrawn from consideration (ref. agenda item A.3).

*Appointment of Project Manager, Process Control and Project Support

The Committee recommended approval of the appointment of Mr. George Bacon (ref. agenda item A.4).

*Appointment of Senior Sampling Associate, TRAC

The Committee recommended approval of the appointment of Ms. Diane Rossi (ref. agenda item A.5).

*FY2018 Non-Union Compensation

The Committee recommended approval of the FY18 non-union compensation program (ref. agenda item A.6).

The meeting adjourned at 12:20 p.m.

* Approved as recommended at June 7, 2017 Board of Directors meeting.

STAFF SUMMARY

TO: Board of Directors
FROM: Frederick A. Laskey, Executive Director
DATE: June 28, 2017
SUBJECT: Appointment of Principal Civil Engineer
Engineering & Construction Department
Operations Division



COMMITTEE: Personnel & Compensation

INFORMATION
 VOTE

Karen Gay-Valente, Director, Human Resources
John P. Vetere, Deputy Chief Operating Officer
Corinne M. Barrett, Director of Construction
Preparer/Title



Michael J. Hornbrook
Chief Operating Officer

RECOMMENDATION:

To approve the appointment of Mr. James Bird to the position of Principal Civil Engineer in the Engineering & Construction Department (Unit 9, Grade 25) at an annual salary of \$104,221.76, commencing on a date to be determined by the Executive Director.

DISCUSSION:

The position of Principal Civil Engineer in the Engineering & Construction Department became vacant upon the promotion of the incumbent. The primary responsibility of this position is to supervise construction projects and ensure construction contracts are built in compliance with the contract plans and specifications. The Principal Civil Engineer supervises and manages project construction, reviews and develops schedules, monitors quality of construction progress and approves project acceptance. Additional duties include review of payment requests, requests for information, and change orders as well as producing daily, weekly and monthly reports. This position also supervises in-house and consultant resident inspection staff, and manages all work performed at assigned field offices. The Principal Civil Engineer also assists the construction coordinators by reviewing project design work and contract documents for bidability and constructability in preparation for final project design drawings and specifications.

Organizationally, the Principal Civil Engineer reports to a Construction Coordinator in the Construction Unit (see attached Organization Chart).

Selection Process

This position was posted internally. A total of nine candidates applied for this position. Five candidates were determined to be qualified and were interviewed for the position. The Director and Assistant Director of Construction and a representative from the Affirmative Action and

compliance Unit interviewed the five candidates. Upon completion of the interviews, Mr. James Bird was identified as the most qualified candidate based on his education, experience, and knowledge of the requirements of the position.

Mr. Bird has thirty years of experience in engineering and construction including 28 years at the MWRA serving in progressively responsible positions and currently holds the position of Senior Civil Engineer. As a Resident Engineer, he is responsible for overseeing multiple complex rehabilitation and construction projects, including managing the work of contractors and consultants, attendance at contractor progress meetings, supervision of field inspectors, and ensuring work performed meets contract specifications. His combination of work and supervisory experience, along with his extensive knowledge of supporting large-scale construction and engineering projects make him an excellent candidate for this position.

Mr. Bird holds a Bachelor of Science degree in Engineering Technology from the Wentworth Institute of Technology. He also has certification and training in a number of construction related fields, including: 40-hour Hazwopper (Clean Harbors); 40-hour Tunnel Rescue and Safety (Boston FD), 40-hour Confined Space Entry Safety, Trench Excavation Safety/Competent Person, 40-hour Managing Design Contracts, and numerous 1 and 2-day technical seminars on topics such as Industrial Coatings and Cement Mortar Lining.

BUDGET/FISCAL IMPACT:

There are sufficient funds in the Operations Divisions FY18 Current Expense Budget for this position.

ATTACHMENTS:

Resume of James Bird
Position Description
Organizational Chart

James P. Bird

Objective:

To attain a position that utilizes my education, training and experience, with the goal of establishing professional status in the construction field.

Experience:

Massachusetts Water Resources Authority (MWRA) Chelsea, MA - 1989 to Present

Senior Civil Engineer (2007-Present)

Construction Projects included:

Alewife Brook Pump Station Rehabilitation (Contract 6797) - Process documentation and reports of contractor's progress; provide construction schedule review and coordination of project goals relating to MWRA Operations; and inspect progress of contractor's work to insure compliance with contract documents.

Nut Island Headworks Electrical and Conveyor Improvements (Contract 7313) - Served as MWRA Resident Engineer; responsible for all aspects of construction contracts; provided documentation and progress reporting, ensured compliance with contract requirements; oversaw construction schedule and change order cost reviews; and made recommendations of periodic payment to the General Contractor.

East Boston Branch Sewer Interceptor Relief Projects Contracts (6257 & 6841) - Acting Senior Civil Engineer and MWRA site representative responsible for coordination with City of Boston to obtain and manage street opening and occupancy permits through Public Works and Transportation Department; monitored contractor's construction progress and compliance with contract documents; attended bi-weekly progress meetings; and assisted with utility relocation efforts.

Assistant Civil Engineer (1991-2007)

Blue Hills Covered Storage Facility (Contract 6216) - Served as Construction Inspector responsible for monitoring and documentation of contractor's construction activities and progress; assured compliance with contract documents; maintained field project files; recorded daily diary; and assisted preparation of accurate set of redline record drawings.

General Construction Inspector (1989-1991)

Commercial Point CSO - Under the supervision of Resident Engineer worked on several smaller construction projects.

John Mahoney Construction Co. Inc. (1987-1989)

Project Engineer

Boston Water and Sewer Commission Contracts SD-7 & SD-8 (South End, Boston MA) - Managed construction of new pile supported sewer and drain; responsible for establishing and maintaining line and grade for support of excavation, wood piles, concrete pile caps, concrete pipe.

Certification/Training:

Confined Space/Hazwopper

Tunnel Rescue and Safety 40 Hr: Boston Fire Department Training Facility
American Society of Civil Engineers (ASCE): Managing the Design Process
Excavation Safety/Competent Person
Concrete Field Testing PSI

Education:

Wentworth Institute of Technology, Boston, MA

Bachelor of Science, Engineering Technology Degree in Building Construction (1987)

Associates Degree, Applied Science: Building Construction Technology (1985)

**MWRA
POSITION DESCRIPTION**

POSITION: Principal Civil Engineer
DIVISION: Operations
DEPARTMENT: Engineering and Construction

BASIC PURPOSE:

Provides supervision of inspection and administration for construction projects as Resident Engineer.

SUPERVISION RECEIVED:

Works under the general supervision of the Construction Coordinator.

SUPERVISION EXERCISED:

None.

ESSENTIAL DUTIES AND RESPONSIBILITIES:

- Obtains field data for design and construction projects and assists the construction coordinator by reviewing and approving project design work and contract documents.
- Assists the construction coordinator by reviewing and recommending acceptance of final project design drawings, specifications, proposals and bidding documents.
- Supervises project construction, authorizes initial operations, develops schedules, monitors quality and approves project acceptance. Reviews payment requests, change orders, work evaluations and recommends administrative processing.
- Supervises the initial operation, maintenance and repair of water/sewerage systems, treatment plants, and hydroelectric generating systems.
- Manages remote installations and field offices, assigns and supervises engineering and inspection personnel as required.

SECONDARY DUTIES:

- Performs related duties as required.

MINIMUM QUALIFICATIONS:

Education and Experience:

- (A) Knowledge of civil engineering principles and practices as normally attained through a four (4) year college program in engineering or a related field; and
- (B) General understanding of civil engineering principles, practices and priorities as acquired through a minimum of six (6) years of experience, including two (2) to three (3) years of supervisory experience; or
- (C) Any equivalent combination of education and experience.

Necessary Knowledge, Skills and Abilities:

- (A) Excellent interpersonal, oral and written communication skills required.

SPECIAL REQUIREMENTS:

A valid Massachusetts motor vehicle operators license.

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 10 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 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.

Engineering & Construction
Construction
 June 2017

Director, Construction
 55250137
 NU/16
 28 Positions

Assistant Director, Construction
 55250139
 NU/14

Administrative Coordinator
 55250111
 1/18





MASSACHUSETTS WATER RESOURCES AUTHORITY

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

Frederick A. Laskey
Executive Director

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

BOARD OF DIRECTORS' MEETING

to be held on

Wednesday, June 28, 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**
- III. **REPORT OF THE EXECUTIVE DIRECTOR**
- IV. **BOARD ACTIONS**
 - A. **Approvals**
 1. Final FY2018 Capital Improvement Program (ref. AF&A B.2)
 2. Final FY2018 Current Expense Budget (ref. AF&A B.3)
 3. Final FY2018 Water and Sewer Assessments (ref. AF&A B.4)
 4. Water Supply Continuation Agreement with Town of Bedford (ref. W A.1)
 5. Appointment of Principal Civil Engineer (ref. P&C A.1)

B. Contract Awards

1. Janitorial Services at MWRA Western Facilities: S.J. Services, Inc., Contract WRA-3848Q (ref. AF&A C.1)
2. Task Order Appraisal Services: Colliers International Holdings, Inc., Contract 603TA and Fosters Appraisal & Consulting Co., Inc., Contract 604TA (ref. AF&A C.2)
3. Wastewater Metering System Replacement - Evaluation, Planning, Design, Resident Engineering/Inspection Services for Installation of Metering Equipment: RJN Group, Contract 6739 (ref: WW A.1)
4. Northern Intermediate High Section 110 – Stoneham: Albanese D&S, Contract 7067 (ref. W B.1)

C. Contract Amendments/Change Orders

1. Chelsea Creek Headworks Upgrade, BHD/BEC JV 2015, A Joint Venture: Contract 7161, Change Order 1 (ref. WW B.1)
2. Thermal and Hydro Power Plant Maintenance – Deer Island Treatment Plant: IPC Lydon, LLC, Contract S551, Change Order 2 (ref. WW B.2)

V. CORRESPONDENCE TO THE BOARD

VI. OTHER BUSINESS

VII. EXECUTIVE SESSION

VIII. ADJOURNMENT

MASSACHUSETTS WATER RESOURCES AUTHORITY

Meeting of the Board of Directors

June 7, 2017

A meeting of the Board of Directors of the Massachusetts Water Resources Authority was held on June 7, 2017 at the Authority headquarters in Charlestown. Chairman Beaton presided. Present from the Board were Ms. Wolowicz and Messrs. Blackmon, Carroll, Cotter, Foti, Pappastergion, Vitale and Walsh; Messrs. Flanagan and Peña 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, and Bonnie Hale, Assistant Secretary. The meeting was called to order at 1:05 p.m.

APPROVAL OF MINUTES

Upon a motion duly made and seconded, it was

Voted to approve the minutes of the May 8, 2017 Board of Directors' meeting, as presented and filed with the records of the meeting.

OTHER BUSINESS

Performance Review and Extension of Contract for Executive Director

Upon a motion duly made and seconded, it was

Voted to: (1) rate the performance of Frederick A. Laskey, Executive Director, for Fiscal Year 2017 as Excellent; (2) extend the term of the Executive Director's employment agreement and his appointment as the Executive Director

by one year through June 30, 2020; and (3) increase his current salary by 1.5% effective July 1, 2017.

Extension of Contract for Chief Operating Officer

Upon a motion duly made and seconded, it was

Voted to: (1) adopt the Executive Director's performance rating of Excellent for Michael J. Hornbrook, Chief Operating Officer, for Fiscal Year 2017; (2) extend the term of the Chief Operating Officer's employment agreement and his appointment as Chief Operating Officer by one year through May 31, 2020; and (3) authorize the Executive Director to increase the Chief Operating Officer's current salary by 1.5% effective July 1, 2017.

BOARD ACTIONS

APPROVALS

Wastewater Advisory Committee Contract

Upon a motion duly made and seconded, it was

Voted to authorize the Executive Director, on behalf of the Authority, to execute a contract, substantially in the form presented and filed with the records of the meeting, with the Wastewater Advisory Committee for a term of one year from July 1, 2017 to June 30, 2018, for a total contract cost of \$70,685.44.

Water Supply Citizen's Advisory Committee Contract

Upon a motion duly made and seconded, it was

Voted to authorize the Executive Director, on behalf of the Authority, to execute a contract, substantially in the form presented and filed with the records of the meeting, with the Water Supply Citizens Advisory Committee for a term of one year from July 1, 2017 to June 30, 2018, with a total contract cost of \$104,376.77.

PCR Amendments – June 2017

Upon a motion duly made and seconded, it was

Voted to approve amendments to the Position Control Register (PCR) as presented and filed with the records of the meeting

Appointment of Associate General Counsel, Law

Upon a motion duly made and seconded, it was

Voted to approve the Executive Director's recommendation to appoint Mr. Michael J. Altieri to the position of Associate General Counsel, Operations, Law Division (Non-union, Grade 15) at an annual salary of \$130,000 to be effective on the date designated by the Executive Director.

Appointment of Assistant Director, Engineering & Construction

This item was withdrawn from consideration.

Appointment of Project Manager, Process Control and Project Support

Upon a motion duly made and seconded, it was

Voted to approve the Executive Director's recommendation to appoint Mr. George Bacon to the position of Project Manager, Process Control & Project Support (Unit 9, Grade 25) in the Operations Division, at an annual salary of \$89,433.09 to be effective on the date designated by the Executive Director.

Appointment of Senior Sampling Associate, Toxic Reduction and Control

Upon a motion duly made and seconded, it was

Voted to approve the Executive Director's recommendation to appoint Ms. Dianne Rossi to the position of Senior Sampling Associate, Toxic Reduction and Control (Unit 9, Grade 25) at an annual salary of \$89,433.09 to be effective on the date designated by the Executive Director.

FY18 Non-Union Compensation

Upon a motion duly made and seconded, it was

Voted to take the following actions for MWRA' s FY 18 non-union compensation review: (1) Authorize the Executive Director to implement a 1.5% across-the-board compensation adjustment for non-union managers effective with the first FY18 payroll; and (2) Approve a revision to the non-union salary ranges for FY18 presented in Attachment A and filed with the records of the meeting.

CONTRACT AWARDS

Revenue Bond Consulting Engineer Services: CDM Smith Inc.

Upon a motion duly made and seconded, it was

Voted to approve the recommendation of the Consultant Selection Committee to select CDM Smith Inc. to provide revenue bond consulting engineer services in connection with the issuance of revenue bonds and to authorize the Executive Director, on behalf of the Authority, to execute a contract with CDM Smith Inc. in an amount not to exceed \$270,122 for a term of 36 months from the Notice to Proceed.

MWRA FY18 Insurance Program Renewal

Upon a motion duly made and seconded, it was

Voted to approve awards to the lowest eligible and responsive proposers for insurance policies, bonds and related broker services for MWRA's FY18 Insurance Program, and to authorize the Executive Director, on behalf of the Authority, to execute contracts for broker services, for the terms, premiums and fees described below, and incorporated by reference for the record, resulting in a total program amount not to exceed \$1,562,827 for FY18:

1) Workers' Compensation Excess Policy with New York Marine Insurance Co., submitted by broker Willis of Massachusetts, Inc. (Willis Towers Watson), for the period beginning July 1, 2017 through June 30, 2018, with a \$25 Million limit and a \$500,000 self-insured retention, for a premium of \$183,739;

2) Property Policy (including Boiler & Machinery coverage) with FM Global Insurance Co., for the period beginning July 1, 2017 through June 30, 2019, with various limits of coverage, a \$2.5 Million self-insured retention, and a fixed rate two year term, resulting in a FY18 premium of \$745,219, and an amount to be determined for FY19, based upon the established fixed rate;

3) General Liability Policies (including Automobile Liability, Marine Liability, Wharfingers, Limited Pollution and Employment Practice Liability) with Lexington Insurance Company submitted by broker Richards Robinson Sheppard Insurance, LLC (Richards Robinson Sheppard), for the period beginning July 1, 2017 through June 30, 2018, with a \$25 Million limit and a \$2.5 Million self-insured retention, for a premium of \$258,552;

4) Excess Liability Policies with insurance companies to be determined and submitted by broker Richards Robinson Sheppard, for the period beginning July 1, 2017 through June 30, 2018, providing a combined total of \$75 Million of excess liability coverage for a total combined premium not to exceed \$255,000;

5) Public Official's Liability Policy with Chubb/ACE USA Insurance Co., submitted by broker Arthur J. Gallagher Risk Management Services Inc. (Arthur J. Gallagher & Co.), for the period beginning July 1, 2017 through June 30, 2018 with a \$5 Million limit and a \$1 Million self-insured retention, for a premium of \$46,463, including \$6,969 broker commission;

6) Fiduciary Liability Policy with Chubb/ACE USA Insurance Co., submitted by broker Arthur J. Gallagher & Co., for the period beginning July 1, 2017, through June 30, 2018, with a \$5 Million limit and a \$1 Million retention, for a premium of \$6,604, including \$1,320 broker commission;

7) Public Official's/Crime Bond with Great American Insurance Co., submitted by broker Richards Robinson Sheppard, for the period beginning July 1, 2017 through June 30, 2018, with a \$1 Million limit and a \$25,000 deductible for a premium of \$4,500;

8) Treasurer's Bond with a \$1 Million limit with an insurance company to be determined in an amount not to exceed \$2,500, with a one-year term beginning January 2018; and

9) Broker contracts with Richards Robinson Sheppard Insurance, LLC for an amount of \$40,000, Willis of Massachusetts, Inc. for an amount of \$20,250, and Arthur J. Gallagher Risk Management Services Inc. for commissions included within the policy premium, from notice of award through June 30, 2018.

Supply and Delivery of Sodium Hypochlorite for the John J. Carroll Water Treatment Plant and the William A. Brutsch Treatment Facility: Univar USA, Inc., and H. Krevit & Co., Inc., Bid WRA-4380

Upon a motion duly made and seconded, it was

Voted to approve the award of Purchase Order Contract WRA-4380 for the supply and delivery of sodium hypochlorite to the lowest responsive bidders, Univar USA, Inc., and H. Krevit & Company, Inc., and to authorize the Executive Director, on behalf of the Authority, to execute said purchase order contracts in amounts not to exceed \$1,141,896 with Univar USA, Inc. for the John J. Carroll Water Treatment Plant, and \$72,480 with H. Krevit & Company, Inc. for the William A. Brutsch Treatment Facility, for a period of one year from July 17, 2017 through July 16, 2018.

Medford Water Section 57/50 and Sewer Section 19, 20 & 21 Rehabilitation: Weston & Sampson Engineers, Inc., Contract 7540

Upon a motion duly made and seconded, it was

Voted to approve the recommendation of the Consultant Selection Committee to select Weston & Sampson Engineers, Inc. to provide Design, Construction Administration and Resident Engineering/Inspection Services for Water Sections 50 & 57 and Sewer Sections 19, 20 & 21 Rehabilitation - Medford, and to authorize the Executive Director, on behalf of the Authority, to execute and deliver Contract 7540 with Weston & Sampson Engineers, Inc. in an amount not to exceed \$5,980,403, for a term of 58 months from the Notice to Proceed.

Section 14 Water Pipeline Relocation – Malden: Albanese Brothers Inc., Contract 6957

Upon a motion duly made and seconded, it was

Voted to approve the award of Contract 6957, Section 14 Water Pipeline Relocation - Malden, to the lowest responsible and eligible bidder, Albanese Brothers, Inc., and to authorize the Executive Director, on behalf of the Authority,

to execute said contract in the bid amount of \$1,404,500 for a term of 161 calendar days from the Notice to Proceed.

CONTRACT AMENDMENTS/CHANGE ORDERS

Wachusett Aqueduct Pumping Station, BHD/BEC JC 2015, A Joint Venture: Contract 7157, Change Order 15

Upon a motion duly made and seconded, it was

Voted to authorize the Executive Director, on behalf of the Authority, to approve Change Order 15 to increase the amount of Contract 7157 with BHD/BEC JV 2015, A Joint Venture, Wachusett Aqueduct Pumping Station, for a lump sum amount of \$306,664.00, with no increase in contract term; and 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.

DRAFT

EXECUTIVE SESSION

It was moved to enter executive session to discuss real estate and collective bargaining.

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		
Carroll		
Cotter		
Foti		
Pappastergion		
Vitale		
Walsh		
Wolowicz		
Beaton		

Voted to enter executive session for the purpose of discussing strategy with respect to collective bargaining and to consider the purchase, exchange, lease or value of real property, in that such discussions may have a detrimental effect on the negotiating and bargaining positions of the Authority.

It was stated that the meeting might return to open session to report on any actions taken regarding collective bargaining.

* * * *

EXECUTIVE SESSION

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The meeting returned to open session at 1:55 p.m.

OTHER BUSINESS (cont'd.)

Approval and Ratification of Collective Bargaining Agreements for Units 1, 2, 3 and 9

It was reported that the Board had voted in Executive Session to approve and ratify collective bargaining agreements with Units 1, 2, 3 and 9.

The meeting adjourned at 2:00 p.m.