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: J. Foti
Vice-Chair: J. Barrera
Committee Members:
J. Carroll
K. Cotter
A. Pappastergion
B. Swett
J. Walsh

to be held on

Wednesday, April 10, 2013

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

Time: 10:00 a.m.

AGENDA

A. Information

1. Delegated Authority Report – March 2013
2. FY13 Financial Update and Summary as of March 2013
3. Update on Electronic Procurement

B. Contract Awards

1. Integrated Financial, Procurement and Human Resources/Payroll Management System Maintenance and Support: Infor Global Solutions (formerly Lawson Associates)
2. Information Security Program Design and Implementation: JANUS Associates, Inc., State Blanket Contract ITS43 – Solution Providers

C. Contract Amendments/Change Orders

1. Purchase and Supply of Electric Energy to Deer Island Treatment Plant: Hess Corporation, Contract S493, Amendment 1

MASSACHUSETTS WATER RESOURCES AUTHORITY

Meeting of the
Administration, Finance and Audit Committee

March 13, 2013

A meeting of the Administration, Finance and Audit Committee was held on March 13, 2013 at the Authority headquarters in Charlestown. Chairman Foti presided. Present from the Board were Messrs. Barrera, Flanagan, Pappastergion, Vitale and Walsh; Board member-elect Ms. Wolowicz joined the meeting in progress. Among those present from the Authority staff were Fred Laskey, Steve Remsberg, Michael Hornbrook, Rachel Madden, Steve Estes-Smargiassi, Pam Heidell, Kathy Soni, Tom Durkin, John Vetere, Kristen Patneaude, Marcis Kempe, and Bonnie Hale. The meeting was called to order at 10:25 a.m.

Information

Delegated Authority Report – January and February 2013

There was brief discussion.

Watershed Land Acquisition Program

DCR staff gave a presentation on the above program.

(Board member-elect Ms. Wolowicz joined the meeting.)

Staff summarized the remaining two information items, and there was general discussion and question and answer:

- 2012 Annual Update on New Connections to the MWRA System
- FY13 Financial Update and Summary as of February 2013.

Contract Awards

*Energy Advisory Services: LaCapra Associates, Inc., Contract OP-207

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

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* Approved as recommended at March 13, 2013 Board of Directors meeting.

*Purchase of Motorola Radios to Complete Update of MWRA's Radio System from Analog to Digital: Motorola, Inc.

At the Committee's request, staff described the need for this large radio purchase and the distribution and usage of the mobile (vehicle) units as well as the handheld units. There was general discussion and question and answer. The Committee recommended approval of the contract award (ref. agenda item B.2).

The meeting adjourned at 11:35 a.m.

* Approved as recommended at March 13, 2013 Board of Directors meeting.

STAFF SUMMARY

TO: Board of Directors
FROM: Frederick A. Laskey, Executive Director
DATE: April 10, 2013
SUBJECT: Delegated Authority Report – March 2013

COMMITTEE: Administration, Finance & Audit

__X__ INFORMATION
___ VOTE

Rachel C. Madden
Director, Administration & Finance

Barbie Aylward, Administrator
Frank Renda, Data & Information Coordinator
Preparer/Title

Michele Gillen
Deputy Director, Administration & Finance

RECOMMENDATION:

For information only. Attached is a listing of actions taken by the Executive Director under delegated authority for the period March 1, 2013 through March 31, 2013.

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.

PURCHASING DELEGATED AUTHORITY ITEMS - MARCH 1 - 31, 2013

DATE OF AWARD	TITLE AND EXPLANATION	CONTRACT #	AMENDMENT	COMPANY	FINANCIAL IMPACT
03/05/13	**GENERATOR** AWARD OF A PURCHASE ORDER, TO THE LOWEST RESPONSIVE BIDDER, FOR ONE TRAILER-MOUNTED GENERATOR FOR WESTERN OPERATIONS AND MAINTENANCE, REPLACING AN EXISTING GENERATOR THAT NO LONGER MEETS EPA SPILL REGULATIONS	WRA-3569Q		SOUTH SHORE GENERATOR SERVICE, INC	$26,051.00
03/05/13	**SCREENINGS PRESS** AWARD OF A PURCHASE ORDER, TO THE LOWEST RESPONSIVE BIDDER, FOR ONE SCREENINGS PRESS FOR THE BRAINTREE-WEYMOUTH INTERMEDIATE PUMP STATION, AS A SPARE TO SUBSTANTIALLY LIMIT PUMP STATION DOWN TIME	WRA-3584Q		HUBER TECHNOLOGY, INC	$46,916.00
03/05/13	**RECYCLED COPIER PAPER** AWARD OF A TWELVE MONTH PURCHASE ORDER CONTRACT, TO THE LOWEST RESPONSIVE BIDDER, FOR RECYLED COPIER PAPER FOR THE PERIOD MARCH 15, 2013 THROUGH MARCH 14, 2014	WRA-3574Q		W.B. MASON	$51,023.55
03/05/13	**COMPRESSOR RENTAL** AWARD OF A CRITICAL NEED PURCHASE ORDER FOR RENTAL OF A COMPRESSOR FOR THE THERMAL/POWER PLANT AT THE DEER ISLAND TREATMENT PLANT, TO PROVIDE RELIABLE INSTRUMENTATION CONTROL REDUNDANCY DURING THE REPAIR OF THE PERMANENT COMPRESSOR			AGGREKO, LLC	$52,019.64
03/05/13	**ROLLER GATES** AWARD OF A PURCHASE ORDER, TO THE LOWEST RESPONSIVE BIDDER, FOR FIVE NEW ROLLER GATES TO REPLACE ROLLER GATES THAT WERE TOO RUSTED AND CORRODED TO BE REPAIRED, UNDER THE ONGOING ROLLER GATE REFURBISHMENT PROGRAM	WRA-3523		RODNEY HUNT COMPANY	$115,253.00
03/05/13	**CATCH BASIN CLEANING VEHICLE** AWARD OF A PURCHASE ORDER, TO THE LOWEST RESPONSIVE BIDDER, FOR ONE DIESEL-POWERED SIX-YARD CATCH BASIN CLEANING VEHICLE, REPLACING AN EXISTING 22 YEAR OLD VEHICLE WHICH IS NO LONGER COST EFFECTIVE TO REPAIR	WRA-3572		BOSTON FREIGHTLINER, INC	$180,318.00
03/12/13	**GENERATOR RADIATOR** AWARD OF A PURCHASE ORDER, TO THE LOWEST RESPONSIVE BIDDER, FOR A REPLACEMENT RADIATOR FOR THE EMERGENCY GENERATOR AT THE FRAMINGHAM PUMP STATION, REPLACING THE EXISTING 15 YEAR OLD RADIATOR THAT HAS BECOME UNRELIABLE	WRA-3573Q		F.W. WEBB COMPANY	$27,383.00
03/12/13	**VEHICLES** AWARD OF A PURCHASE ORDER, TO THE LOWEST RESPONSIVE BIDDER, FOR TWO GM CAB AND CHASSIS UTILITY BODY TRUCKS OUTFITTED WITH A SIDE CRANE AND INVERTER AND COMPARTMENTS TO ACCOMMODATE A GATE VALVE OPERATOR, REPLACING TWO EXISTING VEHICLES THAT HAVE REACHED THE END OF THEIR USEFUL LIFE AND INCREASING WESTERN OPERATIONS VALVE MAINTENANCE CAPABILITIES	WRA-3566		MOORE GMC TRUCK, INC	$138,674.00
03/12/13	**SUPPLY AND DELIVERY OF SODA ASH - CLINTON** AWARD OF A THREE-YEAR PURCHASE ORDER CONTRACT, TO THE LOWEST RESPONSIVE BIDDER, FOR THE SUPPLY AND DELIVERY OF SODA ASH TO THE CLINTON WASTEWATER TREATMENT PLANT	WRA-3586		ASTRO CHEMICALS, INC	$447,000.00
03/12/13	**MWRA CONSUMER CONFIDENCE REPORT** AWARD OF A TWO-YEAR PURCHASE ORDER, PLUS AN OPTION FOR A THIRD YEAR, TO THE LOWEST RESPONSIVE BIDDER, FOR THE PRINTING OF THE ANNUAL MWRA CONSUMER CONFIDENCE REPORT, IN ACCORDANCE WITH FEDERAL REGULATIONS	WRA-3563		SHAWMUT PRINTING	$523,391.22
03/22/13	**FIREWALLS, IPS AND RELATED MAINTENANCE AND MONITORING SERVICES** AWARD OF AMENDMENT #1 TO CONTRACT WRA-3224, TO INCLUDE 24X7 MONITORING OF A BLUE COAT SECURITY APPLIANCE TO THE EXISTING CONTRACT	WRA-3224	AMEND # 1	INTEGRALIS, INC	$33,750.00
03/22/13	**FLAT PANEL MONITORS** AWARD OF A PURCHASE ORDER, UNDER STATE BLANKET AGREEMENT #ICT47, FOR 400 FLAT PANEL MONITORS TO REPLACE EXISTING MONITORS OVER 6 YEARS OLD WITH MORE ENERGY EFFICIENT AND BETTER PERFORMING MODELS	WRA-3593Q		HIQ COMPUTERS	$59,250.00

CONSTRUCTION/PROFESSIONAL SERVICES DELEGATED AUTHORITY ITEMS MARCH 1 - 31, 2013

DATE OF AWARD	TITLE AND EXPLANATION	CONTRACT	AMENDMENT/CO	COMPANY	FINANCIAL IMP/
03/04/13	**COLUMBUS PARK HEADWORKS ENERGY-EFFICIENT INTERIOR LIGHTING UPGRADE** AWARD OF A CONTRACT FOR THE REPLACEMENT OF 109 EXISTING LIGHT FIXTURES AND BALLASTS INSIDE THE COLUMBUS PARK HEADWORKS FACILITY WITH ENERGY-EFFICIENT, VAPOR-TIGHT, INDUCTION-FLUORESCENT LAMPS AND LED LIGHTS, SAVING MONEY AND TIME ON MAINTENANCE, AS WELL AS ENERGY USE	**OP-191**		**RISE ENGINEERING**	$66,080.00
03/08/13	**ELECTRICAL EQUIPMENT MAINTENANCE - DEER ISLAND TREATMENT PLANT** DECREASE THE FOLLOWING BID ITEM QUANTITIES AND ALLOWANCE TO REFLECT ACTUAL QUANTITIES USED: ELECTRICAL EQUIPMENT TESTING SERVICES, EMERGENCY SERVICE HOURS AND REPLACEMENT PARTS	**S474**	**3**	**AMERICAN ELECTRICAL TESTING COMPANY**	($297,798.06)
03/20/13	**LABORATORY INFORMATION MANAGEMENT SYSTEM** ENHANCEMENTS THAT WILL INCREASE EFFICIENCY BY STREAMLINING WORKFLOWS, IMPROVING COMPLIANCE WITH DEP LABORATORY CERTIFICATION REQUIREMENTS, FACILITATING THE INTERFACING OF NEW INSTRUMENTS TO LIMS, AND PROVIDING LIMS CLIENTS MORE COMPLETE INFORMATION ON LABORATORY RESULTS; IMPLEMENTING A NEW PROGRAM, ELECTRONIC LABORATORY NOTEBOOK WHICH WILL ELIMINATE PAPER LOG BOOKS AND STREAMLINE THE PROCESSING OF SAMPLES INTO LIMS BY MEANS OF A WIRELESS DEVICE; UPGRADE OF THE SYSTEM TO VERSION 6 WITH IMPROVED FUNCTIONALITY; 5 ADDITIONAL CORE LICENSES TO ACCOMMODATE EXPANDED LIMS USAGE	**6509A**	**1**	**LABWARE INC.**	$249,398.00

POSITION CONTROL REGISTER (PCR) LOCATION CHANGES March 2013

DATE OF CHANGE	POSITION TITLE	CURRENT PCR#	CURRENT COST CENTER	NEW PCR #	NEW COST CENTER	REASON FOR CHANGE
3/2/2013	Financial Planner	4510048	Treasury	5210074	Operations Administration	To meet Operations Administration staffing needs
3/9/2013	Metal Fabricator/Welder	3396008	Equipment Maint	2910017	Clinton	To meet Clinton staffing needs

STAFF SUMMARY

TO: Board of Directors
FROM: Frederick A. Laskey, Executive Director
DATE: April 10, 2013
SUBJECT: FY13 Preliminary Financial Update and Summary

COMMITTEE: Administration, Finance & Audit

_X_ INFORMATION
___ VOTE

Kathy Soni, Budget Director
David Whelan, Budget Manager
Preparer/Title

Rachel C. Madden
Director, Administration and Finance

RECOMMENDATION:

For information only. This staff summary provides the financial update and variance highlights through March 2013, comparing actual spending to the FY13 budget, and an updated year-end projection.

DISCUSSION:

As part of MWRA's multi-year rates management strategy, the Authority is continuing the practice of setting aside favorable Capital Finance variances into the Defeasance Account with the intention of using these funds to defease debt and provide rate relief in future years. As such, in March $1.0 million was transferred to the Defeasance Account which brought the year-to-date balance to $9.5 million. This variance is the result of the continued low variable rate environment. Should these favorable trends continue, staff projects the balance to reach $16.7 million by year-end. It is important to note that while these funds are allocated for defeasance, the money is available for other budgetary purposes until the defeasance is executed.

Without the transfer of the $9.5 million in debt service savings to the Defeasance Account, the total year-to-date budgetary variance through March would have been $16.4 million.

Total year-to-date expenses are lower than budget by $5.9 million or 1.3% mainly due to lower direct expenses of $5.6 million, indirect expenses of $554,000, and higher total non-rate revenues of $1.0 million for a net variance of $6.9 million.

Beyond debt service savings pertaining to short-term rates, staff projects a surplus of approximately $7.5 million at year-end of which $4.3 million would be for lower direct expenses, $678,000 for lower indirect expenses, $2.0 million for other than variable rate debt savings, and $501,000 for greater than budgeted revenues. Staff will continue to refine the year-end projections each month as more actual spending information becomes available and update the Board accordingly.

Please refer to Attachment 4 for a more detailed comparison by line item.

Total Expenses were lower than budget by $5.9 million or 1.3%.

	FY13 Budget (March)	FY13 Actual (March)	$ Variance	% Variance
Direct Expenses	$155.1	$149.5	-$5.6	-3.6%
Indirect Expenses	$36.8	$36.2	-$0.6	-1.5%
Debt Service	$277.2	$277.4	$0.3	0.1%
Total	**$469.0**	**$463.1**	**-$5.9**	**-1.3%**

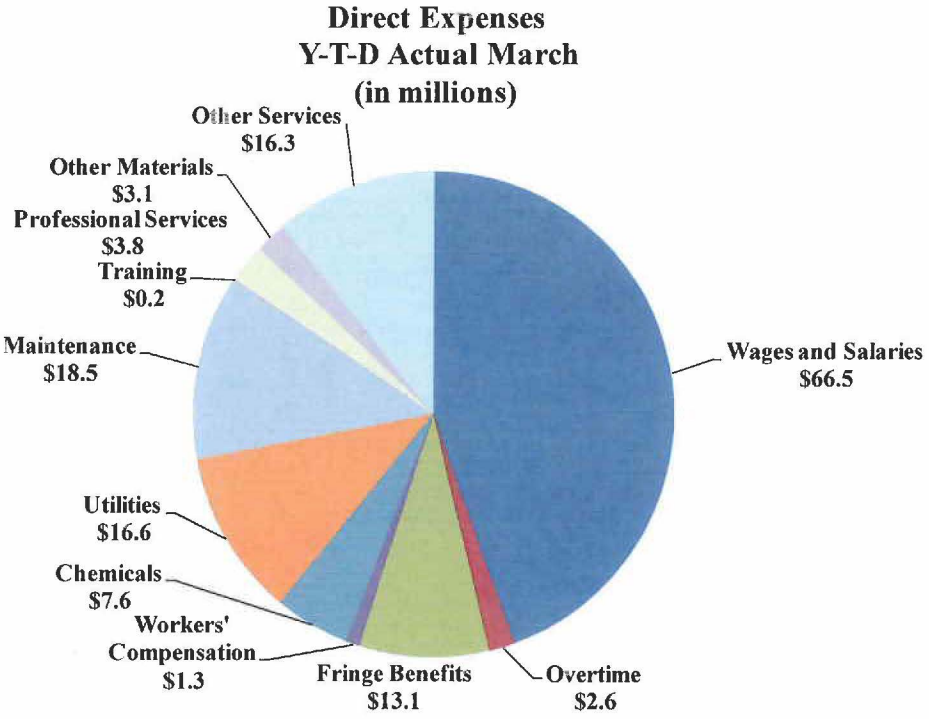
The largest variances year-to-date are driven by:

- Direct Expenses being lower than budget by $5.6 million for wages and salaries, other services, utilities, fringe benefits, maintenance, professional services, and overtime.
- Indirect Expenses being lower than budget by $554,000 for Watershed expenses due to a FY12 overaccrual and lower insurance expenses.

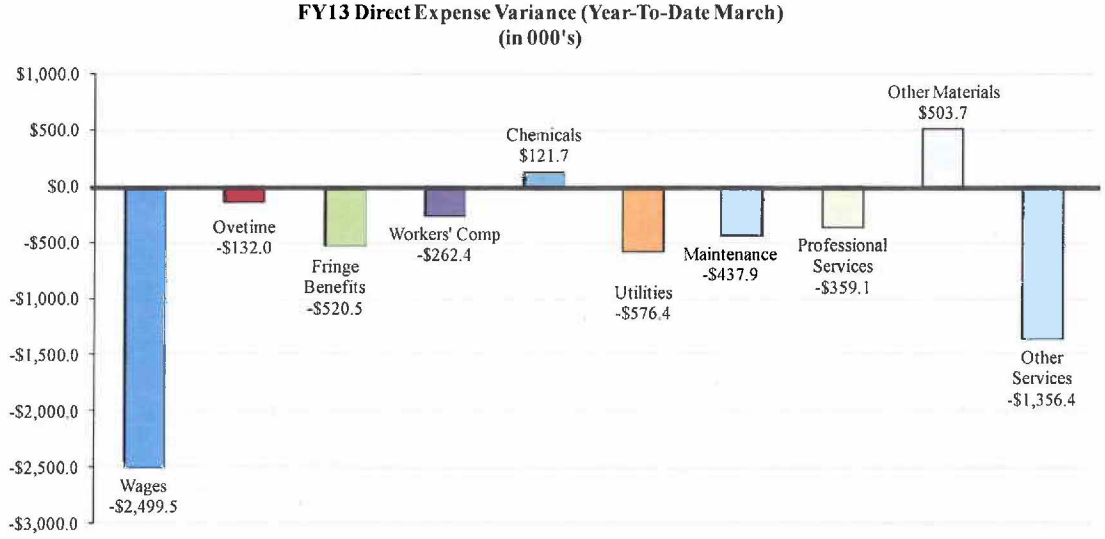
Staff also recognized the year-to-date loss of $263,000 for Debt Service Assistance (DSA) as a result of the Governor's 9C budget cuts.

Direct Expenses

Direct expenses total $149.5 million, $5.6 million or 3.6% less than budget.

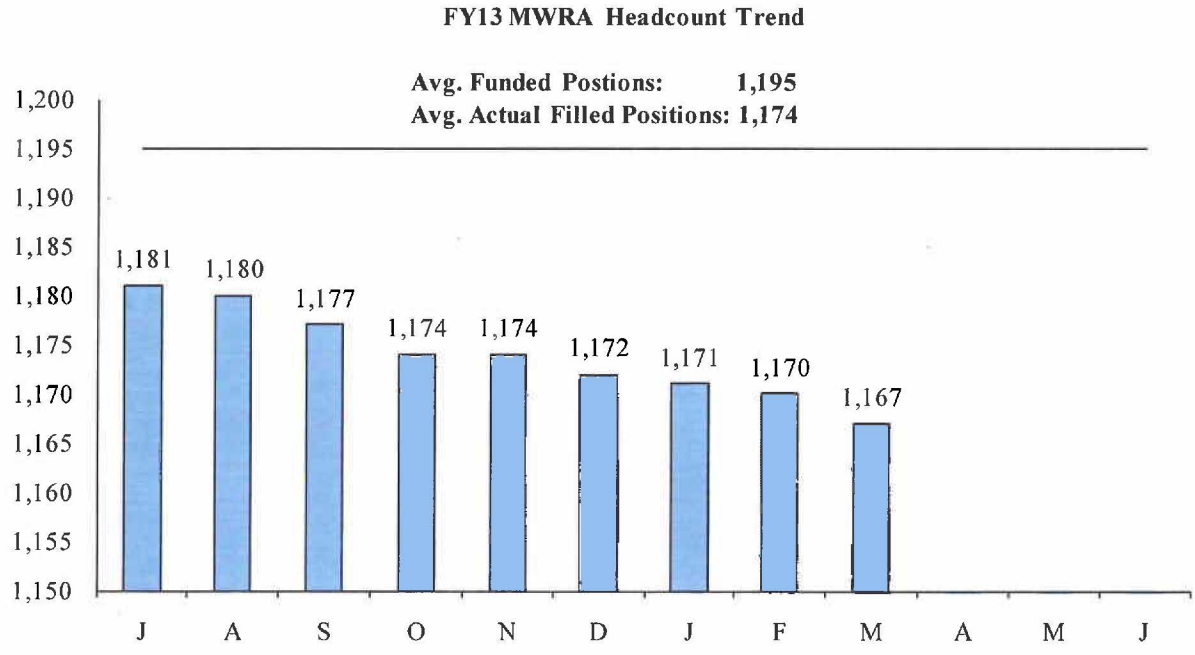


The primary reason for underspending on direct expenses is lower spending for: wages and salaries, other services, utilities, fringe benefits, maintenance, professional services, workers' compensation, and overtime offset by higher other materials and chemicals.



Wages and Salaries

Wages and Salaries are underspent by $2.5 million or 3.6% mainly as a result of lower than budgeted filled positions, employees on unpaid leave, and the salary mix differential between staff retiring and new hires coming on board at lower rates. The average actual filled positions were 1,174 which is 21 positions lower than the 1,195 positions funded. Additionally, MWRA currently has 7 temporary employees.



Other Services

Other Services are lower than budget by $1.4 million or 7.7% mainly due to lower than budgeted sludge quantities. Sludge quantities year-to-date are approximately 10% lower than budget mostly due to operational changes related to maintenance projects. The Other Services category is also underspent due to the timing of contaminant monitoring and remediation activities, as well as lower than budgeted spending for the Historic Photo Digitization initiative.

Utilities

Utilities are underspent by $576,000 or 3.4% due to lower diesel fuel of $981,000 at Deer Island due to timing of purchase and in Field Operations due to favorable pricing and lower use and natural gas of $49,000 offset by higher electricity of $412,000 mainly due to higher commodity pricing during the winter months at Deer Island.

Fringe Benefits

Fringe Benefits are underspent by $521,000 or 3.8% year-to-date in FY13 mainly due to lower than budgeted health insurance costs resulting from lower headcount and because new employees contribute at a higher percentage (25% versus 20%) than employees hired before July 2003.

Maintenance

Maintenance is underspent by $438,000 or 2.3% year-to-date. Services are lower than budget by $938,000 while materials are overspent by $500,000 mainly due to the timing of purchases.

Professional Services

Professional Services are underspent by $359,000 or 8.7% mainly due to timing of IT Strategic Plan initiatives of $162,000, lower than budgeted need for outside legal services of $77,000, and lower than budgeted report preparation and as-needed services for the Harbor Monitoring program of $44,000.

Workers' Compensation

Workers' Compensation expenses are lower than budget by $262,000 or 16.7%. To date, actual reserves are trending below budget by $382,000 while actual payments are higher than budget by $120,000. It should be noted that more than $100,000 of the underspending is due to two cases for which we expect reimbursements from the secondary insurer.

Overtime

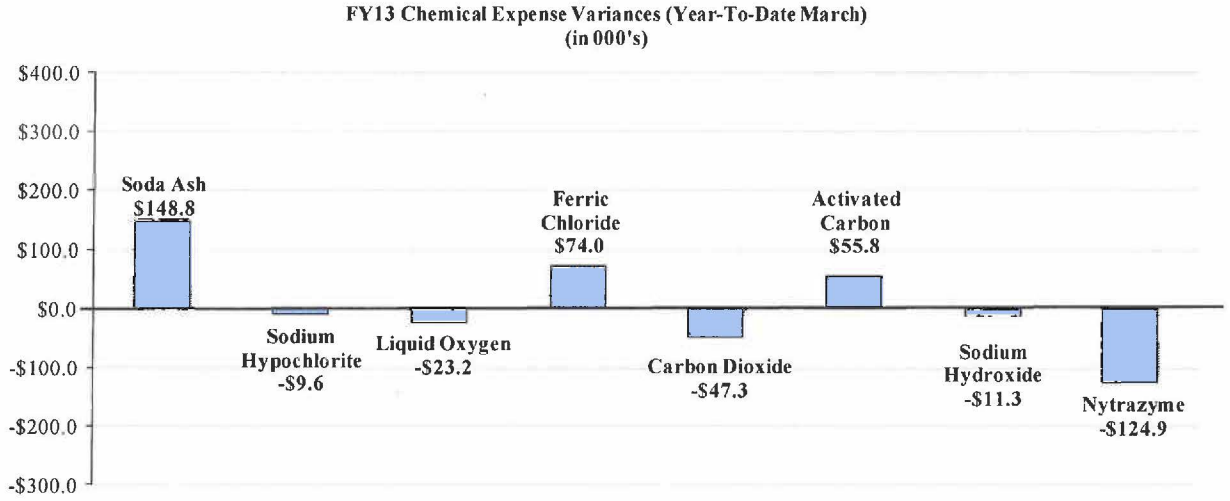
Overtime is underspent by $132,000 or 4.9% mainly at Deer Island.

Other Materials

Other Materials are higher than budget by $504,000 or 19.5% due to the timing of vehicle purchases offset by lower than projected gravel purchases at Clinton.

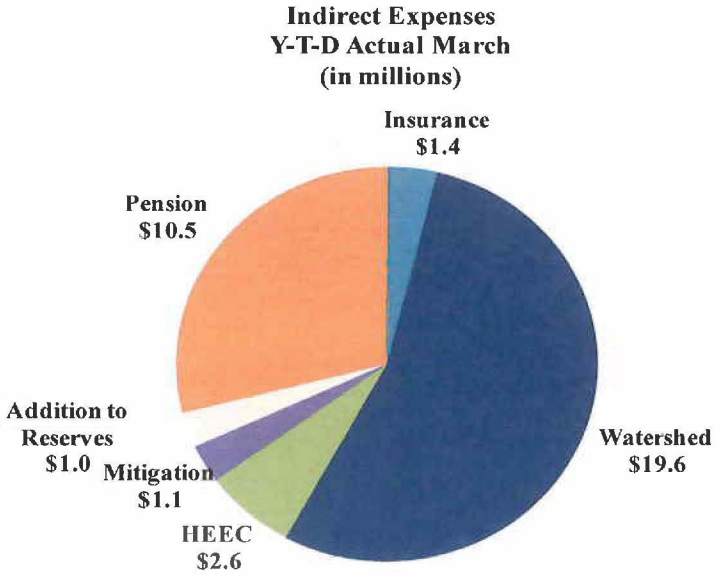
Chemicals

Chemicals are overspent by $122,000 or 1.6% year-to-date. The majority of the variance is attributable to higher spending on Soda Ash due to price increases offset by lower than budgeted spending for Nitrazyme for corrosion control.



Indirect Expenses

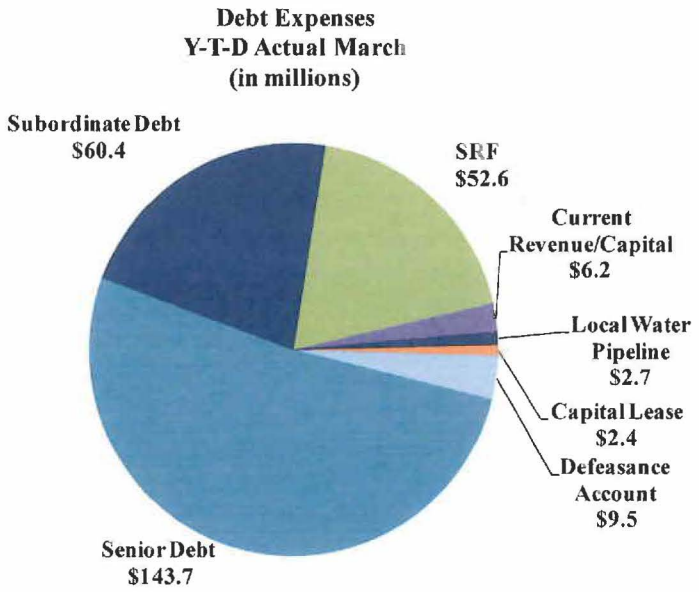
Indirect Expenses year-to-date total $36.2 million, $554,000 or 1.5% less than budget.



The majority of the year-to-date underspending on Indirect Expenses is for lower Watershed expenses of $217,000 due to a FY12 overaccrual and lower insurance expenses of $198,000 mainly for lower claims.

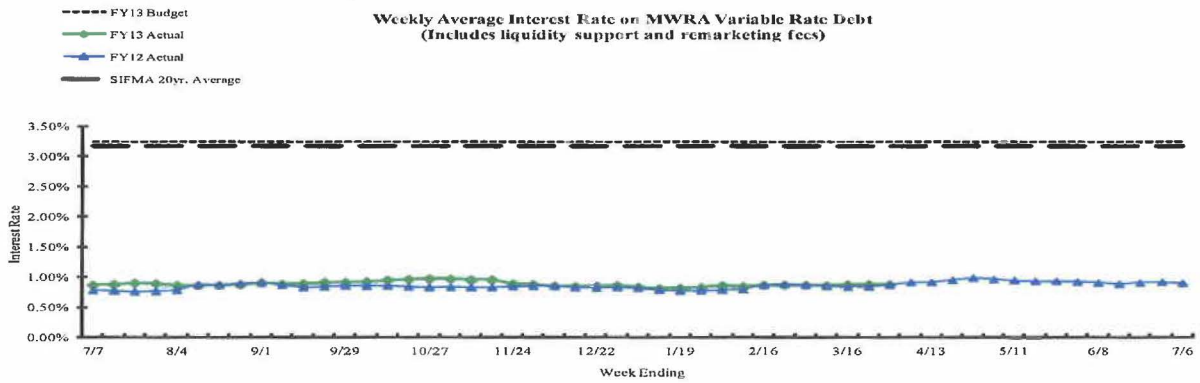
Debt Service Expenses

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



Debt Service expenses through March totaled $277.4 million which is higher than budget by $263,000 after the transfer of $9.5 million of a favorable year-to-date variance to the Defeasance Account and recognition of the loss of Debt Service Assistance (DSA) per the Governor's recent 9C budget cuts.

The graph below reflects the variable rate trend by month over the past year in comparison with FY12 Actuals and the FY13 Budget for the same period.



Revenue

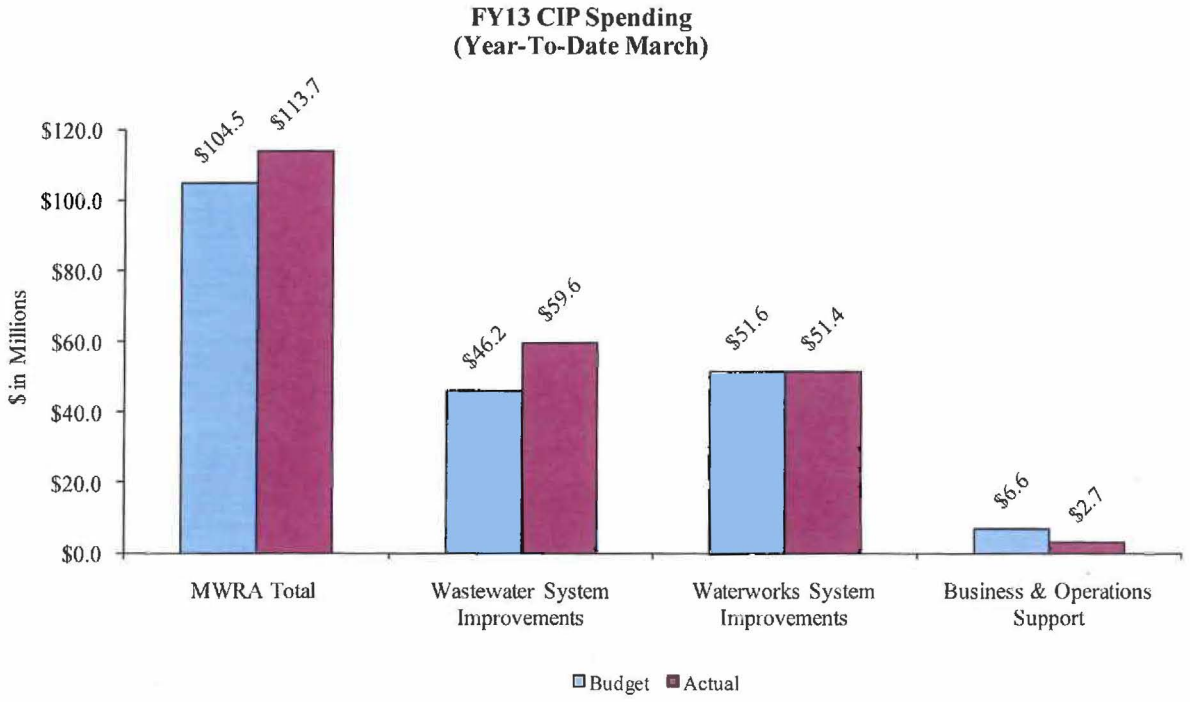
Year-to-date revenue for FY13 totals $478.0 million which is $1.0 million or 0.2% higher than budget due to higher non-rate revenue of $1.7 million mainly for Equipment Disposal of $660,000, Miscellaneous Revenue of $637,000, and for the Federal Emergency Management Agency (FEMA) reimbursement for last year's storm costs of $433,000, offset by lower investment income of $714,000 due to lower than budgeted short-term rates. The higher miscellaneous revenue relates to NSTAR energy rebates for past work performed at Authority facilities and a variety of smaller items such as Verizon and NSTAR credits for prior period adjustments and revenue from the auctioning off of surplus equipment.

FY13 Capital Improvement Program

Spending year-to-date in FY13 totals $113.7 million, $9.2 million or 8.9% higher 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 (CSO's) projects, the underspending is $18.7 million or 17.9%.

Overspending was reported in the Wastewater program of $13.4 million offset by underspending in Business and Operations Support of $3.9 million and Waterworks of $236,000.

Spending By Program:



$ in Millions	Budget	Actuals	$ Var.	% Var.
Wastewater System Improvements				
Interception & Pumping	2.8	1.9	-0.9	-33.1%
Treatment	17.9	12.0	-6.0	-33.3%
Residuals	0.4	0.3	-0.1	-17.6%
CSO	22.1	24.9	2.8	12.6%
Other	2.9	20.5	17.6	600.8%
Total Wastewater System Improvements	**$46.2**	**$59.6**	**$13.4**	**28.9%**
Waterworks System Improvements				
Drinking Water Quality Improvements	30.7	25.2	-5.5	-17.8%
Transmission	13.3	13.6	0.3	2.4%
Distribution & Pumping	5.7	3.2	-2.5	-43.2%
Other	2.0	9.4	7.4	368.9%
Total Waterworks System Improvements	**$51.6**	**$51.4**	**-$0.2**	**-0.5%**
Business & Operations Support	**$6.6**	**$2.7**	**-$3.9**	**-59.1%**
Total MWRA	**$104.5**	**$113.7**	**$9.2**	**8.9%**

The main reasons for FY13 year-to-date overspending are:

1. **Wastewater Other** of $13.4 million – primarily due to Inflow and Infiltration (I/I) community requests for grants and loans being greater than budgeted.

2. **Water Other** of $7.4 million – primarily due to community requests for Local Water Pipeline Improvement Loans being greater than budgeted.

3. **Combined Sewer Overflow (CSOs)** of $2.8 million – primarily for Cambridge Sewer Separation of $2.8 million for award greater than anticipated and progress and Reserved Channel Sewer Separation of $1.2 million due to greater progress offset by some nominal underspending on other projects for a cumulative effect of $1.2 million.

The overspending was offset by underspending for:

1. **Wastewater Treatment** of $6.0 million – mainly for delays for Digester Modifications 1 & 2 Pipe Replacement of $842,000, Electrical Equipment Upgrade Construction of $541,000, Clarifier Tip Tube Replacement Construction of $500,000, Power System Improvements of $493,000, Fuel Pipe Abandonment of $437,000, Gravity Thickener Center Column Construction of $417,000, Expansion Joint repair – Construction 2 of $382,000, and net underspending on a variety of other projects totaling approximately $2.4 million.

2. **Drinking Water Quality Improvements** of $5.5 million – mainly for lower than budgeted spending for Spot Pond of $4.3 million due to project delays, Quabbin Water Treatment Plant of $703,000 due to schedule change on Ultraviolet Disinfection Construction, Blue Hills Covered Storage of $230,000, and Carroll Water Treatment Plant of $207,000.

3. **Business and Operations Support** of $3.9 million – mainly for lower spending on MIS projects of $2.4 million due to timing of IT Strategic Plan implementation, Alternative Energy of $937,000 due to delay of Deer Island Phase 2 Wind Construction (CSB) and lower than projected need for technical assistance, and lower Centralized Equipment Purchase of $566,000 mainly due to timing of larger vehicle purchases.

4. **Water Distribution and Pumping** of $2.5 million – mainly for lower spending on Northern Intermediate High of $1.4 million primarily due to delays on Gillis Pump Station Improvements, Southern Spine Distribution Mains of $576,000 due to Section 21, 43, & 22 Design CA/RI work and due to the credit change order on Section 107 Phase 2 Construction, Valve Replacement of $381,000 due to less than anticipated change orders, and Southern Extra High Redundancy and Storage of $140,000.

5. **Wastewater Interception & Pumping** of $938,000 – mainly due to Melrose Sewer repayment of $654,000 for past work budgeted in FY12, received in FY13, Prison Point

Pump and Gear Boxes of $496,000 due to timing, and other project underspending of $101,000 offset by overspending on Upper Neponset Valley Sewer System of $313,000.

Construction Fund Balance

The construction fund balance was at $127 million as of March 2013. Commercial Paper availability was at $206 million to fund construction projects.

Attachment 1 – Variance Summary March 2013
Attachment 2 – Current Expense Variance Explanations
Attachment 3 – Capital Improvement Program Variance Explanations
Attachment 4 – FY13 Final versus FY13 Year-End Projection

ATTACHMENT 1

	March 2013 Year-to-Date					
	Period 9 YTD Budget	Period 9 YTD Actual	Period 9 YTD Variance	%	FY13 Approved	% Expended
EXPENSES						
WAGES AND SALARIES	$ 68,983,560	$ 66,484,078	$ (2,499,482)	-3.6%	$ 94,059,400	70.7%
OVERTIME	2,699,465	2,567,506	(131,959)	-4.9%	3,573,495	71.8%
FRINGE BENEFITS	13,591,183	13,070,644	(520,539)	-3.8%	18,241,926	71.7%
WORKERS' COMPENSATION	1,575,000	1,312,637	(262,363)	-16.7%	2,100,000	62.5%
CHEMICALS	7,459,964	7,581,695	121,731	1.6%	9,963,496	76.1%
ENERGY AND UTILITIES	17,183,415	16,607,039	(576,376)	-3.4%	23,127,198	71.8%
MAINTENANCE	18,900,849	18,462,951	(437,898)	-2.3%	28,229,070	65.4%
TRAINING AND MEETINGS	285,064	182,322	(102,742)	-36.0%	385,617	47.3%
PROFESSIONAL SERVICES	4,149,033	3,789,890	(359,143)	-8.7%	5,900,785	64.2%
OTHER MATERIALS	2,589,350	3,093,067	503,717	19.5%	5,591,291	55.3%
OTHER SERVICES	17,665,302	16,308,857	(1,356,445)	-7.7%	23,743,608	68.7%
TOTAL DIRECT EXPENSES	**$ 155,082,185**	**$ 149,460,686**	**$ (5,621,502)**	**-3.6%**	**$ 214,915,886**	**69.5%**
INSURANCE	$ 1,573,406	$ 1,375,416	$ (197,990)	-12.6%	$ 2,097,875	65.6%
WATERSHED/PILOT	19,809,881	19,592,942	(216,939)	-1.1%	26,413,175	74.2%
BECo PAYMENT	2,692,783	2,578,760	(114,023)	-4.2%	3,741,915	68.9%
MITIGATION	1,175,192	1,134,033	(41,159)	-3.5%	1,566,923	72.4%
ADDITIONS TO RESERVES	1,048,747	1,048,747	-	0.0%	1,398,329	75.0%
RETIREMENT FUND	10,474,376	10,490,247	15,871	0.2%	10,474,376	100.2%
TOTAL INDIRECT EXPENSES	**$ 36,774,385**	**$ 36,220,145**	**$ (554,240)**	**-1.5%**	**$ 45,692,593**	**79.3%**
STATE REVOLVING FUND	$ 52,566,537	$ 52,566,537	$ -	0.0%	$ 73,804,552	71.2%
SENIOR DEBT	143,699,097	143,668,991	(30,106)	0.0%	193,432,134	74.3%
DEBT SERVICE ASSISTANCE	(262,500)	-	262,500	-100.0%	(350,000)	0.0%
CURRENT REVENUE/CAPITAL	6,150,000	6,150,000	-	0.0%	8,200,000	75.0%
SUBORDINATE MWRA DEBT	69,864,165	69,864,165	-	0.0%	93,303,807	74.9%
LOCAL WATER PIPELINE CP	2,730,388	2,730,388	-	0.0%	3,640,517	75.0%
CAPITAL LEASE	2,412,795	2,412,795	-	0.0%	3,217,060	75.0%
VARIABLE DEBT	-	(9,490,387)	(9,490,387)	---	-	0.0%
DEFEASANCE ACCOUNT	-	9,520,494	9,520,494	---	-	0.0%
TOTAL DEBT SERVICE	**$ 277,160,482**	**$ 277,422,983**	**$ 262,501**	**0.1%**	**$ 375,248,070**	**73.9%**
TOTAL EXPENSES	**$ 469,017,052**	**$ 463,103,814**	**$ (5,913,242)**	**-1.3%**	**$ 635,856,549**	**72.8%**
REVENUE & INCOME						
RATE REVENUE	$ 455,634,000	$ 455,634,000	$ -	0.0%	$ 607,512,000	75.0%
OTHER USER CHARGES	5,427,436	5,404,685	(22,751)	-0.4%	7,766,692	69.6%
OTHER REVENUE	4,810,020	6,566,248	1,756,228	36.5%	6,116,845	107.3%
INVESTMENT INCOME	11,107,640	10,393,874	(713,766)	-6.4%	14,461,012	71.9%
TOTAL REVENUE & INCOME	**$ 476,979,096**	**$ 477,998,807**	**$ 1,019,711**	**0.2%**	**$ 635,856,549**	**75.2%**

ATTACHMENT 2
Current Expense Variance Explanations

Total MWRA	FY13 Budget YTD March	FY13 Actuals YTD March	FY13 YTD Actual vs. FY13 Budget		Explanations
			$	%	
Direct Expenses					
Wages & Salaries	68,983,560	66,484,078	(2,499,482)	-3.6%	Underspending is due to lower headcount, employees on unpaid leave status, and the salary mix differential between retirees and new hires. As of March the average filled positions were 1,174 which is 21 positions less than the 1,195 funded positions.
Overtime	2,699,465	2,567,506	(131,959)	-4.9%	Underspending mainly at Deer Island.
Fringe Benefits	13,591,183	13,070,644	(520,539)	-3.8%	Underspending for Health Insurance of $386k, Medicare of $65k, Unemployment Insurance $29k, and Dental Insurance of $21k mainly due to lower headcount.
Worker's Compensation	1,575,000	1,312,637	(262,363)	-16.7%	Underspending due to lower reserves of $382k offset by higher payments of $120k.
Chemicals	7,459,964	7,581,695	121,731	1.6%	Overspending for Soda Ash of $149k due to pricing, Ferric Chloride of $74k, and Activated Carbon of $56k, offset by lower spending for Nitrazyme of $125k due to timing and Carbon Dioxide of $47k.
Utilities	17,183,415	16,607,039	(576,376)	-3.4%	Underspending for Diesel Fuel of $981k at Deer Island due to timing of purchase and in Field Operations due to favorable pricing and lower use. Lower Natural Gas of $49k, offset by higher spending for Electricity of $412k mainly due to higher commodity charges at Deer Island during the winter months.
Maintenance	18,900,849	18,462,951	(437,898)	-2.3%	Maintenance Services are lower than budget by $938k while materials are overspent by $500k mainly due to the timing of purchases.
Training & Meetings	285,064	182,322	(102,742)	-36.0%	Underspending related to lower use and timing.

ATTACHMENT 2
Current Expense Variance Explanations

Total MWRA	FY13 Budget YTD March	FY13 Actuals YTD March	FY13 YTD Actual vs. FY13 Budget		Explanations
			$	%	
Professional Services	4,149,033	3,789,890	(359,143)	-8.7%	Underspending for Other of $129k mainly due to timing of IT Strategic Plan initiatives of $162k, lower need for outside legal services of $77k, and lower Lab and Testing of $73k due to lower than budgeted report preparation and as-needed services for the Harbor Monitoring program of $44k.
Other Materials	2,589,350	3,093,067	503,717	19.5%	Overspending for Vehicle Purchases of $608k, Equipment/Furniture of $41k, and Lab & Testing Supplies of $35k, offset by lower Other Materials of $104k mainly for gravel purchases at Clinton.
Other Services	17,665,302	16,308,857	(1,356,445)	-7.7%	Underspending for Sludge Pelletization of $768k due to lower quantities and Other Services of $446k mainly due to the timing of contaminant monitoring and remediation activities, as well as lower than budgeted spending for the Historic Photo Digitization initiative.
Total Direct Expenses	**155,082,185**	**149,460,686**	**(5,621,502)**	**-3.6%**	
Indirect Expenses					
Insurance	1,573,406	1,375,416	(197,990)	-12.6%	Underspending due to lower payments for claims of $219k offset by higher premiums of $21k.
Watershed/PILOT	19,809,881	19,592,942	(216,939)	-1.1%	Underspending for lower Watershed Reimbursement due to a FY12 overaccrual.
HEEC Payment	2,692,783	2,578,760	(114,023)	-4.2%	Underspending due to lower O&M charges of $109k.
Mitigation	1,175,192	1,134,033	(41,159)	-3.5%	Underspending due to lower mitigation charges.
Addition to Reserves	1,048,747	1,048,747	-	0.0%	
Pension Expense	10,474,376	10,490,247	15,871	0.2%	
Post Employee Benefits	-	-	-		
Total Indirect Expenses	**36,774,385**	**36,220,145**	**(554,240)**	**-1.5%**	

ATTACHMENT 2
Current Expense Variance Explanations

Total MWRA	FY13 Budget YTD March	FY13 Actuals YTD March	FY13 YTD Actual vs. FY13 Budget		Explanations
			$	%	
Debt Service					
Debt Service	277,422,982	277,422,982	-	0.0%	Debt Service expenses are higher than budget by $263k after the transfer of $9.5 million favorable short-term rate year-to-date variance to the Defeasance Account.
Debt Service Assistance	(262,500)	-	262,500	-100.0%	Reflects the loss of Debt Service Assistance (DSA) per the Governor's 9C budget cuts.
Total Debt Service Expenses	**277,160,482**	**277,422,983**	**262,500**	**0.1%**	
Total Expenses	**469,017,052**	**463,103,814**	**(5,913,242)**	**-1.3%**	
Revenue & Income					
Rate Revenue	455,634,000	455,634,000	-	0.0%	
Other User Charges	5,427,436	5,404,685	(22,751)	-0.4%	
Other Revenue	4,810,020	6,566,249	1,756,229	36.5%	Higher than budgeted non-rate revenue of $1.7 million mainly for Equipment Disposal of $660k, Miscellaneous Revenue of $637k, and for the Federal Emergency Management Agency (FEMA) reimbursement for last year's storm costs of $433k. The higher miscellaneous revenue relates to NSTAR energy rebates and a variety of smaller items such as Verizon and NSTAR credits for prior period adjustments and revenue from the auctioning off of surplus equipment.
Rate Stabilization	-	-	-		
Investment Income	11,107,641	10,393,874	(713,766)	-6.4%	Lower investment income mainly due to lower than budgeted short-term interest rates.
Total Revenue	**476,979,096**	**477,998,807**	**1,019,711**	**0.2%**	
Net Revenue in Excess of Expenses	**7,962,044**	**14,894,993**	**6,932,953**		

ATTACHMENT 3
Capital Improvement Program Variance Explanations

	FY13 Budget YTD March	FY13 Actuals YTD March	YTD Actuals vs. Budget		Explanations
			$	%	
Interception & Pumping (I&P)	$2,839	$1,900	($938)	-33.1%	Underspending for Melrose Sewer reimbursement of $654,000 for prior year's contractual obligations, Prison Point Pump & Gearbox Rebuilds of $496,000 due to schedule shift, North System Hydraulic Study of $244,000 due to time extension, and other underspending of $317,000. Offset by higher spending for Upper Neponset Valley Sewer System Land Acquisition of $313,000 due to timing, Chelsea Creek Upgrades - Design/Construction Administration of $287,000, and Cottage Farm Fuel System Upgrade of $192,000 due to contractor progress.
Treatment	$17,940	$11,965	($5,976)	-33.3%	Underspending due to Digester Modules 1 & 2 Pipe Replacement of $842,000 due to time required to empty digester, Electrical Equipment Upgrades - Construction 4 of $541,000, Clarifier Tip Tube Replacement of $500,000, and Power System Improvements - Construction of $493,000 due to schedule shifts; Fuel Pipe Abandonment project of $437,000 due to lower award and schedule shift; Gravity Thickener Center Columns Replacement of $417,000 and Expansion Joint Repair - Construction 2 of $382,000 due to delayed notice-to-proceed. Additional net underspending on a number of other projects totaling $2.4M.
Residuals	$417	$343	($73)	-17.6%	
CSO	$22,123	$24,910	$2,788	12.6%	Overspending on Cambridge Sewer Separation of $2.8M for award greater than budgeted and progress and Reserved Channel Sewer Separation of $1.3M due to greater contractor progress. Offset by underspending on North Dorchester Bay of $624,000 primarily due to less than anticipated Construction Management Services on the Tunnel & Facilities, South Dorchester Bay Sewer Separation (Commercial Point) of $352,000, and Morrissey Boulevard Drain of $308,000 for less than anticipated design services.
Other Wastewater	$2,927	$20,513	$17,586	600.8%	Overspending on Infiltration and Inflow (I/I) due to community requests for grants and loans being greater than budgeted.
Total Wastewater	**$46,246**	**$59,632**	**$13,386**	**28.9%**	

ATTACHMENT 3
Capital Improvement Program Variance Explanations

	FY13 Budget YTD March	FY13 Actuals YTD March	YTD Actuals vs. Budget		Explanations
			$	%	
Drinking Water Quality Improvements	$30,687	$25,212	($5,475)	-17.8%	Underspending for Spot Pond Storage Facility of $4.3M primarily due to delayed start of concrete work, Quabbin Water Treatment Plant of $703,000 mainly for Ultraviolet Disinfection - Design/CA/RI and Construction due to schedule shifts, Blue Hills Covered Storage of $230,000, and Carroll Water Treatment Plant of $207,000 for CP7 Existing Facility Modifications and Fitout Construction due to schedule shifts and Ancillary Modifications - Construction 2 due to longer than anticipated lead time for specialized equipment and lower award offset by overspending for Carroll Water Treatment Plant Ultraviolet Disinfection Construction due to contractor progress.
Transmission	$13,254	$13,576	$322	2.4%	Overspending for Quabbin Transmission System of $1.2M due to contractor progress on Oakdale Phase I Electrical Design and Construction contract and MetroWest Supply Tunnel of $901,000 mainly due to contractor progress on Upper Hultman. Offset by lower spending on Long Term Redundancy Sudbury Aqueduct - MEPA Review of $1.0M due to lower award and schedule change, Quabbin Aqueduct & Winsor Pump Station Upgrades - Design of $331,000 due to schedule shifts, and Watershed Land Acquisition of $312,000 due to timing.
Distribution & Pumping	$5,698	$3,237	($2,460)	-43.2%	Underspending on Northern Intermediate High Redundancy & Storage of $1.4M mainly due to schedule shift on Gillis Pump Station Improvements, Southern Spine Distribution Mains of $576,000 mainly due to less than anticipated resident engineering and inspection services on Sections 21, 43 & 22 and a credit change order on Section 107 Phase 2 Construction, and Valve Replacement of $381,000 mainly due to expected change orders being less than anticipated on Construction 7.
Other Waterworks	$2,000	$9,377	$7,377	368.9%	Overspending on Local Water Pipeline Assistance Program due to community requests for loans being greater than budgeted by $6.4M and repayments being less than anticipated by $1.0M.
Total Waterworks	**$51,639**	**$51,403**	**($236)**	**-0.5%**	

ATTACHMENT 3
Capital Improvement Program Variance Explanations

	FY13 Budget YTD March	FY13 Actuals YTD March	YTD Actuals vs. Budget		Explanations
			$	%	
Business & Operations Support	$6,605	$2,702	($3,902)	-59.1%	Underspending due to MIS-related projects of $2.4M due to timing of IT Strategic Plan implementation, Alternative Energy Initiatives of $937,000 mainly due delay of Deer Island Phase II Wind Construction (CSB) and lower than projected as-needed technical assistance, and Centralized Equipment Purchases of $566,000 due to timing.
Total MWRA	**$104,489**	**$113,737**	**$9,248**	**8.9%**	

ATTACHMENT 4

FY13 Projection vs FY13 Approved Budget

TOTAL MWRA	FY13 Approved Budget	FY13 Projection	Change FY13 Approved Budget vs FY13 Projection	
			$	%
EXPENSES				
WAGES AND SALARIES	$ 94,059,400	$ 90,845,948	$ (3,213,452)	-3.4%
OVERTIME	3,573,496	3,569,699	(3,797)	-0.1%
FRINGE BENEFITS	18,241,926	17,544,064	(697,862)	-3.8%
WORKERS' COMPENSATION	2,100,000	1,975,000	(125,000)	-6.0%
CHEMICALS	9,963,496	10,091,441	127,945	1.3%
ENERGY AND UTILITIES	23,127,198	22,644,960	(482,238)	-2.1%
MAINTENANCE	28,229,070	28,328,814	99,744	0.4%
TRAINING AND MEETINGS	385,617	364,564	(21,053)	-5.5%
PROFESSIONAL SERVICES	5,900,785	5,661,377	(239,408)	-4.1%
OTHER MATERIALS	5,591,291	7,174,347	1,583,056	28.3%
OTHER SERVICES	23,743,608	22,442,058	(1,301,550)	-5.5%
TOTAL DIRECT EXPENSES	**$ 214,915,886**	**$ 210,642,272**	**$ (4,273,615)**	**-2.0%**
INSURANCE	$ 2,097,875	$ 1,917,875	$ (180,000)	-8.6%
WATERSHED/PILOT	26,413,175	26,281,614	(131,561)	-0.5%
HEEC PAYMENT	3,741,915	3,379,550	(362,365)	-9.7%
MITIGATION	1,566,923	1,546,923	(20,000)	-1.3%
ADDITIONS TO RESERVES	1,398,329	1,398,329	-	0.0%
RETIREMENT FUND	5,750,085	5,765,956	15,871	0.3%
POSTEMPLOYMENT BENEFITS/ ADDITIONAL PENSION DEPOSIT	4,724,291	4,724,291	-	0.0%
TOTAL INDIRECT EXPENSES	**$ 45,692,593**	**$ 45,014,538**	**$ (678,055)**	**-1.5%**
DEBT SERVICE (before offsets)	$ 375,598,070	$ 373,229,973	$ (2,368,097)	-0.6%
VARIABLE RATE DEBT/OTHER	-	(16,717,288)	(16,717,288)	
DEFEASANCE ACCOUNT		16,717,288	16,717,288	
BOND REDEMPTION			-	
DEBT SERVICE ASSISTANCE	(350,000)	-	350,000	-100.0%
TOTAL DEBT SERVICE	**$ 375,248,070**	**$ 373,229,973**	**$ (2,018,097)**	**-0.5%**
TOTAL EXPENSES	**$ 635,856,549**	**$ 628,886,783**	**$ (6,969,767)**	**-1.1%**
REVENUE & INCOME				
RATE REVENUE	$ 607,512,000	$ 607,512,000	$ 0	0.0%
OTHER USER CHARGES	7,766,693	7,766,693	-	0.0%
OTHER REVENUE	6,116,844	7,617,844	1,501,000	24.5%
RATE STABILIZATION			-	
INVESTMENT INCOME	14,461,012	13,461,012	(1,000,000)	-6.9%
TOTAL REVENUE & INCOME	**$ 635,856,549**	**$ 636,357,549**	**$ 501,000**	**0.1%**
VARIANCE	$ -	$ (7,470,767)	$ (7,470,767)	

STAFF SUMMARY

TO: Board of Directors
FROM: Frederick A. Laskey, Executive Director
DATE: April 10, 2013
SUBJECT: Update on Electronic Procurement

COMMITTEE: Administration, Finance & Audit

X INFORMATION
VOTE

Russell J. Murray, Director, MIS
Janice Brady, Materials Handler
Joseph S. Barrett, Custom Support Manager
Preparer/Title

Michele S. Gillen, Deputy Director
Administration and Finance

Rachel C. Madden, Director
Administration and Finance

RECOMMENDATION:

For Information Only

DISCUSSION:

MWRA has begun a phased transition from its current "hybrid" system of mostly manual with some limited electronic purchasing and contracting to a fully electronic procurement process utilizing the Infor Global Solutions (formerly Lawson) *e*Procurement modules. Staff anticipates full implementation by summer 2013. Staff will accompany this Staff Summary with a detailed PowerPoint presentation to the Board that will provide an update on the implementation efforts to date, anticipated schedule, outreach to MWRA contractors and vendors as well as some of the benefits of electronic procurement.

STAFF SUMMARY

TO: Board of Directors
FROM: Frederick A. Laskey, Executive Director
DATE: April 10, 2013
SUBJECT: Integrated Financial, Procurement and Human Resources/Payroll Management System Maintenance and Support
Infor Global Solutions (formerly Lawson Associates, Inc.)

COMMITTEE: Administration, Finance, & Audit

___ INFORMATION
_X_ VOTE

Janice B. Watts, Buyer
Russell J. Murray, MIS Director
Joseph S. Barrett, Custom Support Manager
Preparer/Title

Rachel C. Madden
Director, Administration & Finance

Michele S. Gillen
Deputy Director, Administration & Finance

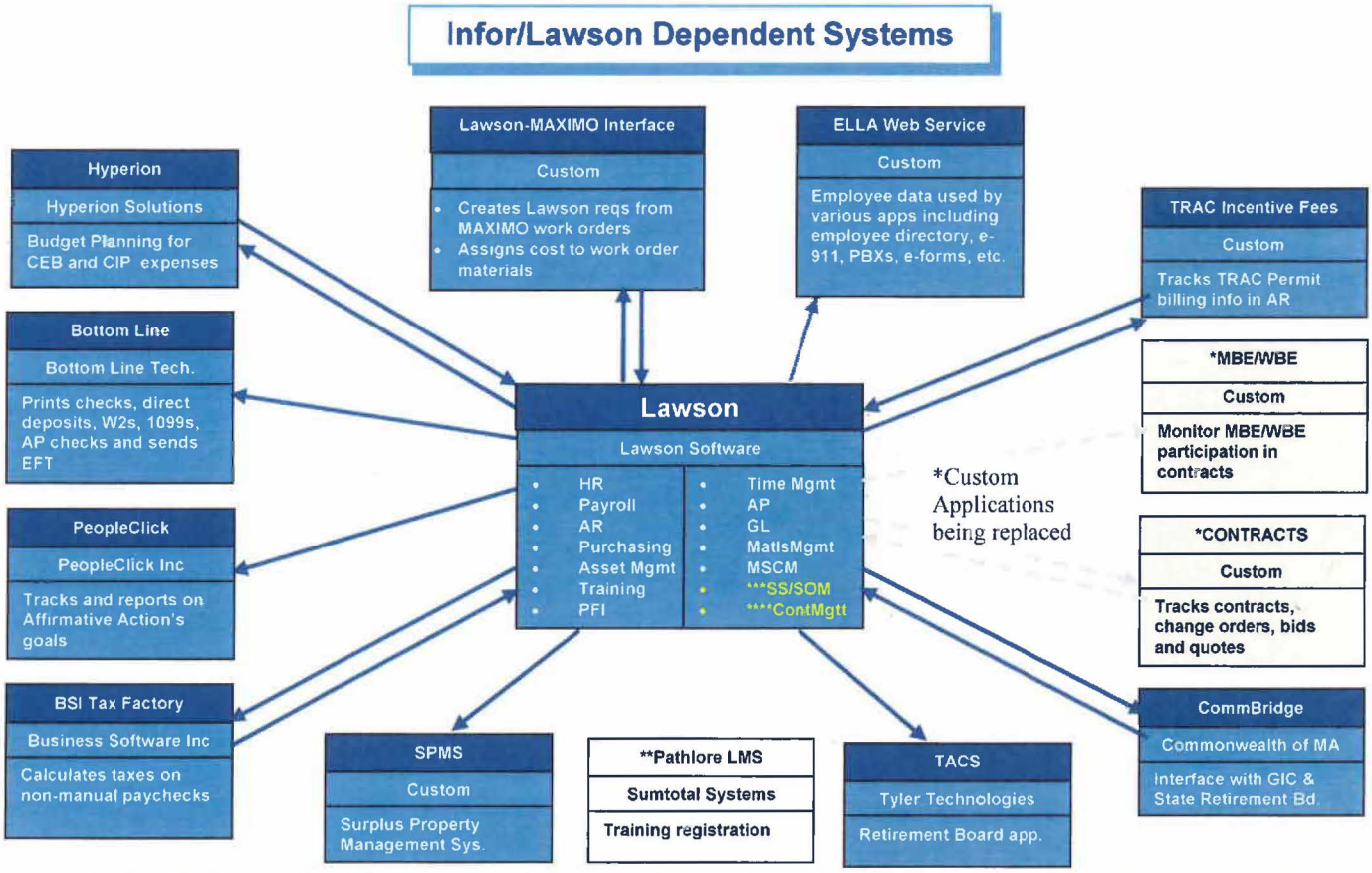
RECOMMENDATION:

To approve the award of a sole source purchase order contract for the annual maintenance and support of the integrated financial, procurement and human resources/payroll management system to Infor Global Solutions (formerly Lawson Associates, Inc.), and to authorize the Executive Director to execute said purchase order contract in an amount not to exceed $388,690.50 for a period of one year, from June 1, 2013 through May 31, 2014.

DISCUSSION:

On March 24, 1999, the Board of Directors approved Contract 6362 with Lawson Associates to implement an integrated financial and procurement management system. In May 2000, the implementation of a Human Resources/Payroll module was included as part of the Lawson System. Today this set of application modules represents the core administrative and financial management functionality for the MWRA (Human Resources, Payroll, Finance, Procurement, and Materials Management). In addition, the Commonwealth of Massachusetts Records Conservation Board has approved this system as the "system-of-record" for the associated electronic information thus reducing the need for paper records.

In October 2012, as part of an effort to reduce the use of customized applications, use more off-the-shelf products, respond to the MIS 5-Year Strategic Plan recommendations (including enhancing e-Procurement functionality and reducing paper), the Board of Directors approved the implementation of the Strategic Sourcing, Supplier Order Management and Contracts Management modules.



**Previously retired as a result of enhancements to the Lawson training module made available through ongoing maintenance upgrades.
***Supplier registration went live in March and Purchasing Electronic Bidding go-live in April 2013
**** Contract Management go-live Target Q1 FY14

The illustration above details the Lawson modules being used and other MWRA programs which interface and are dependent on them.

This maintenance and support agreement is an essential tool to protect the MWRA's Lawson software investment. The Lawson support agreement ensures that the MWRA receives vendor support including:

- Access to product patches, version releases, software upgrades and documentation; "How To" assistance, remote diagnosis, priority case queuing, e-mail notifications, hot topics web discussion groups and electronic self-service case logging, tracking and management.
- Access to support engineers twelve hours a day, five days a week and twenty-four hour, seven day a week support for critical issues.

Staff have thoroughly reviewed the sole source nature of this procurement. Infor Global Solutions is the manufacturer of this software and while there are third party vendors who provide support for various applications, they do not have the ability to change standard code or

provide upgrades or fixes to the application. This ability is important to the MWRA to ensure that it is able to maximize its use of Lawson.

Non-renewal of the maintenance and support agreement would place the MWRA at risk since no further support will be provided on the existing applications. Therefore, staff recommend that MWRA renew the annual maintenance agreement to provide ongoing support for the Lawson System.

BUDGET/FISCAL IMPACT:

There are sufficient funds available in the FY13 CEB for this renewal.

MBE/WBE PARTICIPATION:

Infor Global Solutions is not a certified Minority- or Woman-Owned business.

STAFF SUMMARY

TO: Board of Directors
FROM: Frederick A. Laskey, Executive Director
DATE: April 10, 2013
SUBJECT: Information Security Plan Design and Development
JANUS Associates, Inc.
State Blanket Contract ITS43, WRA-3593Q

COMMITTEE: Administration, Finance & Audit

____ INFORMATION
_X_ VOTE

Russell J. Murray, Jr.
MIS Director

Michele S. Gillen
Deputy Director Administration & Finance

David Stokes
Sr. Program Manager/Information Security

Rachel C. Madden
Director, Administration & Finance

RECOMMENDATION:

That the Executive Director, on behalf of the Authority, approves the award of purchase order WRA-3593Q for professional services for the design and development of an Information Security Plan with JANUS Associates, Inc., in the amount of $245,950.10 under State Blanket contract ITS43.

BACKGROUND:

In June of 2010, the U.S. Department of Homeland Security (DHS) National Cyber Security Division (NCSD) conducted a Resiliency Assessment of the MWRA's Cyber Security Program. The final assessment report was provided in a meeting with staff in October of 2011 making recommendations to improve the cyber security posture of the MWRA. DHS, through the MA Executive Office of Public Safety and Security, offered grant funding under the Federal FY 2010 Buffer Zone Protection Program which the MWRA applied for and was awarded funding to assist with the implementation of these recommendations.

On March 14, 2012, staff presented the MIS Five-Year Strategic Plan to the Board of Directors. The purpose of the Strategic Plan is to ensure alignment of business goals, objectives, processes and technology across the agency. One of the projects included in the Strategic Plan, which confirmed and expanded on the recommendations from the DHS NCSD, is the design and development of an Information Security Program to improve the resiliency, sustainability and strength of MWRA's electronic data security practices. This Information Security Program consists of two projects, the design and development of an Information Security Plan and the implementation of an Electronic Security Plan. This contract will provide the services associated with the Information Security Plan.

As noted in the MIS Five-Year Strategic Plan, the MWRA, in its role as regional drinking water wholesaler, is categorized by the United States Department of Homeland Security as "Critical Infrastructure/Key Resource" ("CI/KR") and therefore, security is a top priority. IT (or "cyber") security receives considerable attention at the MWRA but there are areas requiring improvements including defining and implementing a more formal information security plan, and an electronic security plan including policies, standards, controls, and practices. This program will be designed to replace ad hoc responses to cyber situations with a formal cyber response plan.

DISCUSSION:

In accordance with the MIS Five-Year Strategic Plan, MWRA has committed to improving its information security posture through the establishment of a formal Information Security Program. The projects associated with this program will establish an Information Security Plan and an Electronic Security Plan. The Information Security Plan (the scope of this contract) will develop policies, procedures, controls and an information security awareness program for all MWRA staff associated with the appropriate handling of all MWRA data. The Electronic Security Plan (not included in the scope of this contract) provides the necessary application of the controls established in the Information Security Plan to each MWRA computer system (or class of systems) in order to provide a more formal, comprehensive IT security framework that is more compliant with Federal Standards than the Authority's existing de facto standards.

In order to comply with CI/KR guidance from the Department of Homeland Security and related federal agencies, the final design of the Information Security Plan for MWRA will be based upon all appropriate controls from the most recent versions of the International Standard Organization (ISO) 27001 & 27002 standards and supplemented by the most recent versions of both National Institute of Standards and Technology (NIST) Special Publication 800-53 and the SANS Institute's "20 Critical Security Controls." The ISO 27001 code of practice for information security management recommends 133 different controls in 11 categories which are aimed at reducing risks to the confidentiality, integrity, and availability of the subject information.

Additionally, the final MWRA Information Security Plan will include the design, devellopment, and delivery of an Information Security Awareness training program for employees that can be tracked, audited, and modified annually.

Procurement Process:

Staff requested quotes from twelve vendors under State Blanket Contract ITS43 Solution Providers. One quote was received and opened on February 25, 2013. The Purchasing Department contacted the remainder of the vendors requesting an explanation on why they did not bid. Five vendors responded to the inquiry with the following explanations: Three vendors were too busy; one had limited resources; and one was not interested.

The results are as follows:

Vendor Name	**Amount**
JANUS Associates, Inc.	$245,950.10

Staff have reviewed the bid from JANUS Associates, Inc. and have determined that it meets all of the requirements of the specifications. Therefore, staff recommend the award of this purchase order to JANUS Associates, Inc. as the lowest responsive bidder.

BUDGET/FISCAL IMPACT:

Sufficient funds for this procurement are included in the FY13 Capital Improvement Program under the Information Security Program Project #7446. Furthermore, the Executive Office of Public Safety and Security had awarded the MWRA funding under the Federal FY 2010 Buffer Zone Protection Program grant of $115,150.38 to assist in this implementation. The award was granted in September of 2012 and the deadline for execution is April 2013. The MWRA has requested an extension of the dead line to September 2013 in order to maximize the benefit of this grant.

MBE/WBE PARTICIPATION:

JANUS Associates, Inc. is both a certified Minority- and Woman-Owned business.

STAFF SUMMARY

TO: Board of Directors
FROM: Frederick A. Laskey, Executive Director
DATE: April 10, 2013
SUBJECT: Purchase and Supply of Electric Energy to Deer Island Treatment Plant
Hess Corporation
Contract S493, Amendment 1

COMMITTEE: Administration, Finance & Audit

____ INFORMATION
__X__ VOTE

Rachel C. Madden, Director
Administration and Finance

Daniel K. O'Brien, P.E., Director, Deer Island Treatment Plant
Kristen Patneaude, Program Manager, Energy Management
Preparer/Title

Michael J. Hornbrook
Chief Operating Officer

MWRA's Energy Consultant, LaCapra Associates, has indicated that future commodity prices for June through October 2013 are currently attractive and MWRA should obtain lower block pricing from Hess for this period than it is paying under its current contract, which will expire on May 31, 2013. LaCapra is also recommending that prior to seeking a replacement contract, MWRA conduct a comprehensive assessment of its energy portfolio and develop a policy to guide future power procurement purchases, with consideration of MWRA's risk tolerance and market conditions. Staff estimate that MWRA will spend an additional $2.3 million over the five-month extension.

Staff will receive block pricing from Hess on the morning of the Board Meeting (April 10, 2013) and may recommend that MWRA lock-in this price or, if market conditions indicate that lower pricing may be available beyond the day of the Board meeting and prior to the end of the current contract, ask for a re-fresh price. Staff recommend that the Board authorize the Executive Director to lock in at the most optimal pricing if pricing is not locked in at this meeting. Staff will report to the Board the final block price accepted.

RECOMMENDATION:

To authorize the Executive Director, on behalf of the Authority, to approve Amendment 1 to Contract S493, Purchase and Supply of Electric Energy to Deer Island Treatment Plant, with Hess Corporation, extending the contract term by 153 days, from June 1, 2013 to October 31, 2013.

Further, to authorize the Executive Director to accept an optimal fixed-price per kWh for the purchase of a 10-MW peak and 5-MW off-peak block of electric power, prior to the current contract expiration date of May 31, 2013.

BACKGROUND:

MWRA has been competitively procuring electricity for the Deer Island Treatment Plant since 2001. Staff traditionally take electricity bids in spring and fall because the energy market historically takes a downward trend during these seasons.

On March 16, 2011, the Board authorized the Executive Director to execute a contract for the purchase and supply of electricity to Deer Island to the lowest responsible and eligible bidder. This delegation of authority was required because MWRA is required to lock in the bid pricing within hours after bids are received in a volatile, ever changing market. The Executive Director subsequently executed Contract S493 with Hess Corporation, which established specific unit prices for a term of two years. The current contract for Deer Island's electricity expires on May 31, 2013. Actual energy expenses over the first 21 months of the Hess contract were $9.9 million.

Based on MWRA account load profiles and working in consultation with energy advisors, MWRA has established three distinct electricity supply contracts. The largest contract is for the Deer Island Treatment Plant, which represents 67% of MWRA's total purchased electricity demand. The next largest contract is for the larger "Interval" accounts, which include the Carroll Water Treatment Plant, the Nut Island Headworks, and the Clinton Treatment Plant, representing 29% of MWRA's total purchased load[1]. The third contract is for the smaller, non-time-of-use accounts, known as "Profile" accounts, (e.g., CSOs, pump stations, and the Charlestown Navy Yard), representing the remaining 4% of MWRA's total purchased load[2].

The existing supply contract for the Deer Island Treatment Plant is for the purchase of a 10-MW (peak hours)/5-MW (off-peak hours) fixed-price block, with the balance of the load purchased from the variable-rate spot market. The base block of power is at a fixed-price per kWh, and there is a fixed-fee adder to purchase and supply a variable amount of electricity above the base block that is purchased on the open market at market clearing prices. The supply contract also includes a provision to supply 25% of Deer Island's load from renewable ("green") power (National Green-e), at a fixed-price per kWh. All ancillary charges and any congestion charges are passed through to MWRA at cost. Under the current contract, Hess serves as MWRA's Demand Response Provider (Enrolling Participant) and has enrolled MWRA in the ISO-NE Forward Capacity Market Demand Response Program. Net revenues from MWRA's enrollment in a Demand Response Program are shared with 95% to MWRA and 5% to Hess.

Contract S493 supplies 71% of Deer Island's total plant demand because Deer Island generates approximately 29% of its total plant demand – utilizing digester gas, wind turbines, solar panels, hydroelectricity, and back-up diesel generators – to produce electricity.

DISCUSSION:

This Amendment

As mentioned above, staff usually take electricity bids in spring and fall because the energy market historically takes a downward trend during these seasons – severe weather and

[1] The Interval Accounts are under a contract that will expire in November 2013.
[2] The Profile Accounts are under a contract that will expire in March 2015.

geopolitical issues notwithstanding – as compared to the more volatile summer and winter months, which typically have higher energy demand. Although Contract S493 is set to expire at the end of May 2013, staff have been in discussions with MWRA's Energy Consultant, LaCapra Associates, who has been following the energy market closely. LaCapra had indicated that the future commodity prices for June through October 2013 are currently attractive and MWRA should be able to obtain lower block pricing from Hess for this period than it is paying under the current contract. LaCapra is also indicating that now is a good time for MWRA to review past strategies in electricity procurements, and current market developments, as MWRA moves forward with future energy management assessments and decisions. Therefore, staff recommend that Contract S493 be extended for an additional five months, from June 1, 2013 to October 31, 2013.

This extension will keep the current contract structure for purchasing the energy commodity at a fixed 10-MW peak block and a 5-MW off-peak block. While Hess will provide a new price for the block pricing, it has agreed to keep the variable adder and green power energy price at its current attractive rates. The contract will continue to include the supply of renewable power, equivalent to serving 17% of MWRA's entire purchased electricity load from green power. Hess will continue to keep MWRA enrolled in the ISO-NE Demand Response Program throughout the Capacity Commitment Period commencing June 1, 2013.

Staff will receive block pricing from Hess on the morning of the Board Meeting (April 10, 2013) and may recommend that MWRA lock-in this price or, if market conditions indicate that lower pricing may be available beyond the day of the Board meeting and prior to the end of the current contract, ask for a re-fresh price. Staff recommend that the Board authorize the Executive Director to lock in at the most optimal pricing if pricing is not locked in at this meeting. Staff will report to the Board the final block price accepted.

This extension will provide staff and LaCapra Associates with an opportunity, prior to seeking a replacement contract, to conduct a comprehensive assessment of MWRA's energy portfolio, and develop a policy to guide future power procurement purchases, with consideration of MWRA's risk tolerance and market conditions.

BUDGET/FISCAL IMPACT:

Deer Island's Proposed FY14 CEB includes $9.6 million for electricity supply. The electricity price has two major components: the cost of energy from the energy supplier (currently Hess Corporation) and the transmission and distribution costs charged by NSTAR, the local distribution company. Of the $9.6 million total electricity cost, approximately $5.6 million is for the energy and $4.0 million is for the transmission and distribution costs. Staff estimate that MWRA will spend an additional $2.3 million during the five-month contract extension.

MBE/WBE PARTICIPATION:

There will be no MBE or WBE participation requirements established for this procurement due to the lack of subcontracting opportunities.

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: J. Walsh
Vice-Chair: P. Flanagan
Committee Members:
J. Carroll
A. Pappastergion
B. Swett

to be held on

Wednesday, April 10, 2013

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

Time: Immediately following AF&A Comm.

AGENDA

A. Information

1. Residuals Processing Facilities – Technology Options Assessment and Deer Island Co-Digestion Update

B. Contract Awards

1. Electrical Equipment Upgrade 4, Deer Island Treatment Plant: Dagle Electrical Construction Corporation, Contract 6901

C. Contract Amendments/Change Orders

1. Cottage Farm Fuel System Upgrade: MECO Environmental Services, Inc., Contract 7281, Change Order 7

2. Prison Point CSO Facility HVAC and Odor Control System Upgrade: Arden Engineering Constructors, LLC, Contract 6795, Change Order 11

MASSACHUSETTS WATER RESOURCES AUTHORITY

Meeting of the
Wastewater Policy and Oversight Committee

March 13, 2013

A meeting of the Wastewater Policy and Oversight Committee was held on March 13, 2013 at the Authority headquarters in Charlestown. Chairman Walsh presided. Present from the Board were Messrs. Barrera, Carroll, Flanagan, Foti, Pappastergion and Vitale, as well as Board member-elect Ms. Wolowicz. Among those present from the Authority staff were Fred Laskey, Steve Remsberg, Mike Hornbrook, Carl Leone, John Vetere, Carolyn Fiore, Dan O'Brien, Rick Adams, and Bonnie Hale. The meeting was called to order at 11:35 a.m.

Information

Infiltration and Inflow Local Financial Assistance Program Update

Staff provided a program update, and there was general discussion and question and answer.

Update on Mystic River Projects and Water Quality

This item was referred to the full Board for consideration.

Braintree-Weymouth Replacement Pump Station – Operational Issues

Staff gave a presentation on problems which had occurred due to a large influx of rags into the pump station and discussed r plans to try to locate the source as well as figure out how to prevent similar problems in the future.

Approvals

*Final CSO Annual Progress Report for 2012

The Committee recommended approval of submittal of the report to the Federal District Court (ref. agenda item B.1).

*Memorandum of Understanding and Financial Assistance Agreement with the City of Cambridge for Implementation of CSO Control Projects, Amendment 9, and MWRA Financial Assistance through September 2013

The Committee recommended approval of Amendment 9 to the MOU and FAA (ref. agenda item B.2).

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* Approved as recommended at March 13, 2013 Board of Directors meeting.

Contract Awards

*Replacement of Actuators for the Primary Effluent and Return Sludge Valves at the Deer Island Treatment Plant: Rotork Controls, Inc., Bid WRA-3582

There was general discussion and question and answer; the Committee recommended approval of the contract award (ref. agenda item C.1).

*Preferred Service Agreement for the Combustion Turbine Generators, Deer Island Treatment Plant: Pratt & Whitney Power Systems, Inc.

Staff described the terms of the agreement, and the Committee recommended its approval (ref. agenda item C.2).

Contract Amendments/Change Orders

*Digester Sludge Overflow Piping and Plug Valve Replacement, Deer Island Treatment Plant: Walsh Construction Co., Contract 7055, Change Order 5

The Committee recommended approval of Change Order 5 (ref. agenda item D.1).

The meeting adjourned at 12:10 p.m.

* Approved as recommended at December 12, 2012 Board of Directors meeting.

STAFF SUMMARY

TO: Board of Directors
FROM: Frederick A. Laskey, Executive Director
DATE: April 10, 2013
SUBJECT: Residuals Processing Facilities - Technology Options Assessment and Deer Island Co-Digestion Update

---

COMMITTEE: Wastewater Policy & Oversight

_X_ INFORMATION
____ VOTE

John P. Vetere, Deputy Chief Operating Officer
Daniel O'Brien, PE, Director, Deer Island WWTP
David Duest, Manager, Process Control, Deer Island WWTP
Preparer/Title

Michael J. Hornbrook
Chief Operating Officer

On June 27, 2012, the Board approved the award of Contract 7147A to CDM Smith, Inc. to conduct a technology screening study for the purposes of recommending the next generation of residuals processing technologies on Deer Island and at the Pelletizing Plant and/or the next steps towards optimization of existing assets. On October 17, 2012, staff provided the Board with an update on the Co-Digestion element of the study only. The overall study has developed some preliminary findings and this staff summary provides the Board with an update on those findings and the progress made to date, as well as additional discussion about co-digestion.

RECOMMENDATION:

For information only.

SUMMARY:

Over the past 9 months, staff have been working with CDM Smith, as well as an outside expert peer review panel, in assessing MWRA's existing residuals operation and reviewing the viability of newer emerging residuals technologies that have the potential to both optimize and enhance MWRA's operation. A major impetus for this study is the age of the facilities at Deer Island and the Pelletizing Plant, future capital spending and the approaching end of the long-term residuals operations and disposal contract at the Pelletizing Plant with New England Fertilizer Company (NEFCO). As a result of the CDM Smith and peer review, the following preliminary findings and recommendations have been identified:

- The operation of MWRA's Pelletizing Plant at the Fore River Staging Area in Quincy has been extremely reliable and rotary drum dryers still represent the technology of choice for many large utilities. Based upon performance, reliability, cost, and projected continued compliance with environmental regulations, pelletizing is the draft long-term

recommendation process for post-digester operation and beneficial re-use for MWRA's residuals operation;

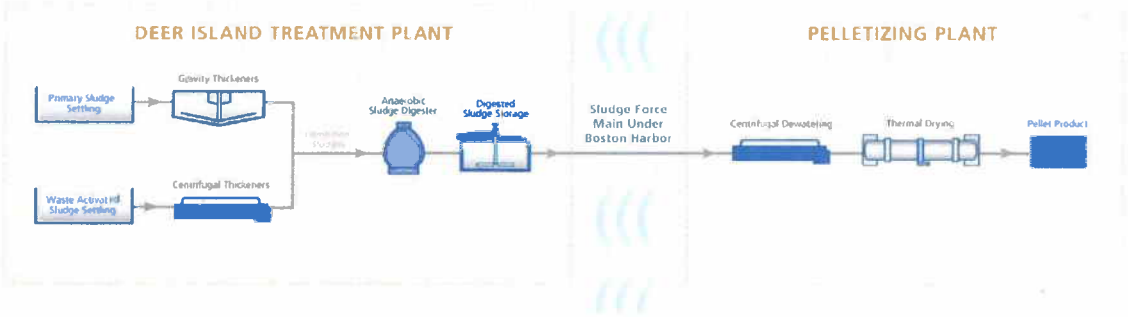
- With the NEFCO operations contract expiring in 32 months, staff are evaluating options including contract extension, contract re-bid, or other viable procurement options.
- The operational metrics (such as volatile solids destruction and gas production rates) for MWRA's existing Deer Island Residuals Complex are amongst the best in the country and the current form of digestion should remain the selected technology for the long-range planning;
- Gas production and solids reduction in the Deer Island digesters could possibly be enhanced by use of cell lysis (a sludge pre-treatment technology that uses high-voltage electrical pulses to make sludge from secondary treatment more digestible) and sludge screening technologies – and will be piloted as part of this study;
- In addition, the co-digestion of food wastes has similar potential benefits – and as such staff are moving forward with a pilot study;
- The formation of struvite within the digester complex is a serious and costly problem and technologies to remediate this problem – focusing on phosphorus recovery – should be piloted;
- With the potential for the production of increased volumes of digester gas from the above technologies, the feasibility of a second combined heat and power plant or smaller, peaking-only combined heat and power plant will be examined; and
- The field of emerging residuals technology is very dynamic and MWRA should continue to monitor developments that may have application here.

Results of the CDM Smith technology screening will be completed by fall 2013, including a series of pilot initiatives and supplemental letter reports.

BACKGROUND:

MWRA's existing residuals processing operations takes place in a split fashion at two sites – Deer Island and the Pelletizing Plant in Quincy (as depicted in the following diagram). At Deer Island, residuals are generated in separate process streams from treatment operations, with primary sludges sent to gravity thickening and secondary sludges sent to centrifuge thickening.

Existing Solids Process Flow Diagram



These thickened combined sludges – which total 246 dry tons per day – are then pumped to the digester complex for additional processing. The digestion process takes approximately 18 days and provides a significant reduction is sludge quantities – down to 106 dry tons per day. Digestion also produces as a byproduct, methane, which is used in the Thermal/Power Plant to power the boilers, which meet close to 98% of the plants' heating demand. The methane has the equivalent fuel value of approximately $15-$20 million annually. In addition, the resultant steam from the boilers generates another $2.5-$3.0 million in renewable power annually through the steam turbine generators, thus avoiding that amount of purchased power.

Figure 2: Deer Island Residuals Process Area

The digested sludge is then pumped to MWRA's Pelletizing Plant at the Fore River Staging Area in Quincy for additional processing. Although this facility is owned by MWRA, it is operated and maintained under contract by NEFCO. At this location, the sludges are dewatered using centrifuges and dried in large rotary drum dryers to produce pellets that are suitable for use in a variety of agricultural and landscaping markets as a "Class A" product[1].

Figure 3: MWRA Pelletizing Plant at FRSA

The Pelletizing Plant was constructed in 1991 and expanded in 2001; approximately two-thirds of the equipment has been in service for 20+ years. The current NEFCO contract was awarded in March 2001 and expires in December 2015 – 32 months from now. The contract terms require NEFCO to maintain the facility such that it is in an operational-ready mode 24/7 and, at the end of the contract term, NEFCO must leave the facility in "a condition capable of meeting the contract Performance Standards."

DISCUSSION:

Technology Options Assessment – Study Format

The study scope was structured to develop a screening approach for available technologies utilizing four key tasks: technology options assessment, regulatory trends assessment, peer utilities case study comparison, and co-digestion analysis. The primary objective of this step was

[1] EPA classifies sludge-derived products as Class A and Class B, with Class A being of the superior quality and thus requiring fewer restrictions on distribution, recordkeeping, and post-application monitoring.

to develop a short list of viable alternatives to optimize energy efficiency, increase gas production, and reduce sludge volumes while extending the useful life of the existing process equipment and obtaining the benefit of useful emerging technologies – for both the Pelletizing Plant and Deer Island, or another new disposal option.

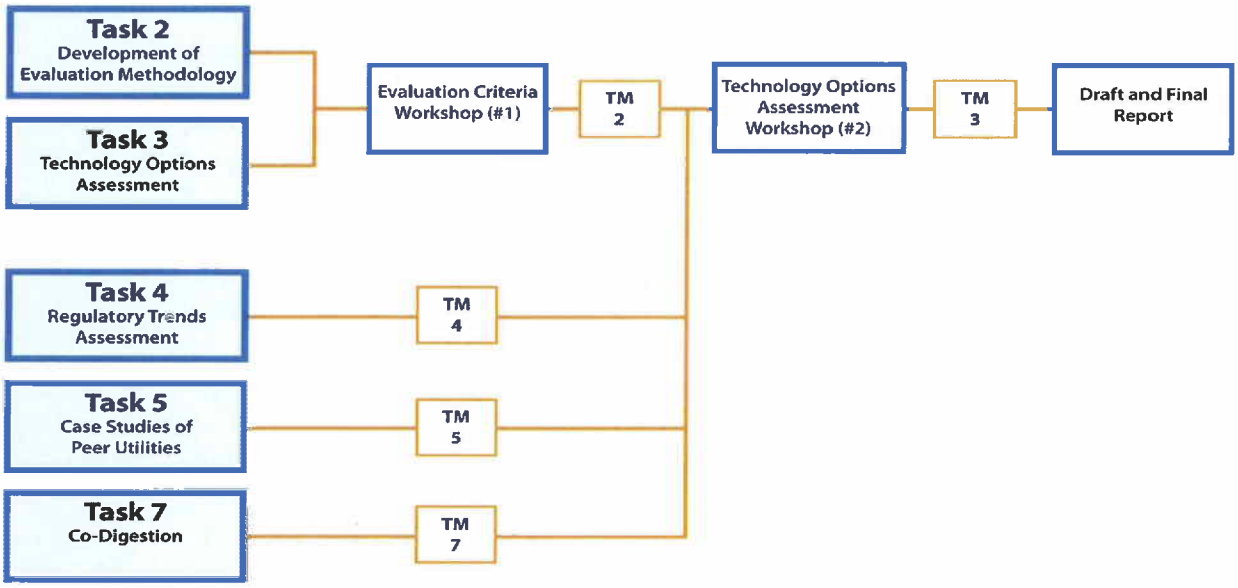


Figure 4: Technology Options Assessment Approach

The study is assessing various technologies – for both Deer Island and the Pelletizing Plant, and for both treatment and disposal – to determine which ones are emerging and/or gaining favor and which ones are waning in terms of use among similar large wastewater utilities and what has been their cost experience. In particular, the study examines emerging technologies that may provide more efficient and cost-effective operation and opportunities for energy recovery or generation. A series of Technical Memoranda are being developed for each of the major subtasks. The primary study deliverable was a recommendation of the four most viable process train options and/or most promising areas for further consideration/examination by MWRA.

Technology Options Assessment – Regulatory Trends Assessment

One of the first Technical Memoranda completed addressed the topic of regulatory trends and their possible impacts on decision-making. Trends in the industry were assessed at the federal, state, and local levels. This assessment was conducted to examine which technologies have more or less potential to be impacted. For example, there is a growing nation-wide concern regarding the potential adverse impacts of land application of various forms of residuals products. That concern could translate to serious impediments to project implementation for technologies that only produced a Class B product. However, in general, the assessment noted that there is a very little recent "movement" in this regulatory area and identified only a handful of areas for monitoring.

At the federal level, there are newer regulations being promulgated in the area of air emissions. These regulations would primarily target incinerator projects – both existing and proposed – as

well as other technologies that may be classified as "combustion" technologies. Since MWRA decided in the original 1988 residuals planning effort not to consider incineration as an option – and has continued that policy decision into this study, these regulations will not have any bearing on the final decision-making process.

At the state level, the primary regulatory issue of concern is the strict limits on molybdenum in any pellet or other land-applied product – Massachusetts has a limit three times stricter than the EPA National limit. MWRA has being dealing with this issue for more than 20 years and has procedures in place to monitor/restrict distribution of pellets that occasionally exceed MA DEP limits. (Molybdenum levels are very seasonal in nature and tend only to be an issue in late summer or early fall. Cooling tower usage typically causes seasonal spikes in molybdenum concentrations due to the blowdown on large air conditioning systems that use corrosion inhibitors containing molybdenum.) These limits effectively reduce the available outlets and marketability in-state for pellet distribution. Since NEFCO is responsible for this distribution, NEFCO focuses its marketing efforts outside of Massachusetts for portions of the year.

A second state-level issue is the more recent regulatory changes in the area of food waste diversion from landfills. The Commonwealth of Massachusetts is on track to ban the disposal of food wastes – generated from larger generators – in landfills. The goal is to divert these wastes to anaerobic digestion facilities or composting in order to take advantage of the organic/fuel value of these wastes. This ban is slated to go into effect in summer 2014. While the ban has no regulatory impact on MWRA, there is interest in the possibility of using MWRA's excess digester capacity to reduce MWRA's own purchased power demand – and this regulatory change may create a market looking for disposal outlets. (An update on the review of this concept is presented later in this document.)

Lastly, regulatory impacts at the local level are typically very site-specific and frequently target the disposal of "Class B" products. These restrictions typically come in the form of local ordinances that either limit or actually prohibit the distribution of sludge products. Since MWRA currently produces a Class A product, staff do not expect to encounter regulatory issues at the local level if pelletizing remains the selected option. Staff will continue to work with local government agencies on any operating restrictions such as designated truck routes, hours of operation, etc.

Technology Options Assessment – Case Studies of Peer Utilities

Another Technical Memorandum deliverable from this contract is a series of case studies of peer utilities throughout the country and overseas. A total of 18 other utilities were examined with a focus on their residuals operations. The study group focused on utilities with operations of similar scale and complexity as MWRA's (for example, New York, Chicago, LA, Philadelphia, etc).

The preliminary findings identified a number of common goals amongst MWRA's peers. Utilities are striving to: reduce their sludge volumes; increase their gas production or energy self-generation; increase their reliability/efficiency; and consider newer emerging technologies in their operations.

This comprehensive review actually found MWRA's residuals operations in the top tier in the country. MWRA's key performance metrics for solids reduction, gas production and gas utilization all exceeded industry averages. For example, referring to Figure 5 below, MWRA produces the lowest amount of residual product per million gallons per day – a reflection of its strong digestion operation.

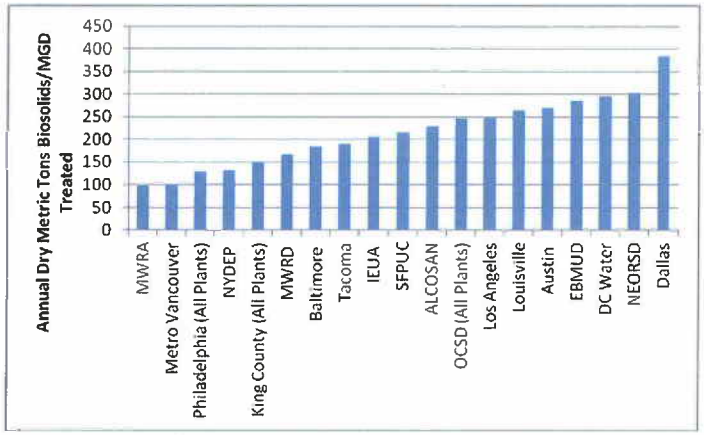


Figure 5: Peer Utility Comparison

Staff also found that larger utilities have made many similar choices in their selection of technologies. The use of gravity thickening and centrifuges utilized by MWRA is quite common. There is extensive and increasing use of both digestion for volume reduction and gas generation – and drying technology for stabilization. In other parts of the country, land application of Class B products is still very prevalent, but many utilities are planning to phase out of these operations due to increasing opposition at both the state and local levels.

The use of "emerging" technologies is fairly minimal in the utility market that was reviewed because of the lack of these technologies being demonstrated on a large scale. The only exception to this finding is the Washington, DC (DC Water) Blue Plains Plant, which has decided to implement the first US installation of a pre-digestion technology called "CAMBI." This technology is a patented, fairly complex, high-pressure, high-temperature process intended to convert sludges to a more digestible state. DC Water does not currently digest the sludge – so this CAMBI step, in theory, will allow DC Water to construct fewer digesters. The technology will not be on-line for approximately another three years. DC Water currently land-applies approximately three times the volume of sludge as MWRA, so the scale of this operation and the potential success of this technology warrants further watching.

Another area worth noting relates to the diversification within the residuals disposal program – maybe one area of weakness in MWRA's case. Many larger utilities use a variety of technologies to produce or distribute different end products. For example, New York City, which operates 14 treatment plants, uses a combination of landfilling, land application, and composting, while Chicago uses both land application and rotary drying. While these dual technology approaches can provide some redundancy, they tend to be inefficient. Although MWRA employs a single technology, it does achieve flexibility with a diverse range of market

uses, including agricultural, landscaping, and alternative fuel. The option of landfilling dewatered sludge is also available on an emergency basis.

Technology Options Assessment – Screening Methodology

The first step in the screening methodology was to identify the full universe of technologies available to support the various sub-systems typically found in a residuals process train, such as thickening, dewatering, pre-digestion, etc. This approach allowed individual assessments within each sub-system, which then could be mixed-and-matched with other sub-systems. Close to 100 individual technologies were identified for consideration at this first step and then subjected to initial screening.

It should be noted that there were only two pre-specified constraints in terms of options to be assessed: 1.) no sites other than Deer Island and the Pelletizing Plant in Quincy were to be considered for processing and treatment facilities because it would not be practical or feasible to assess other sites considering the investment that has been made in the existing infrastructure; and 2.) as a matter of MWRA policy, incineration was not considered.

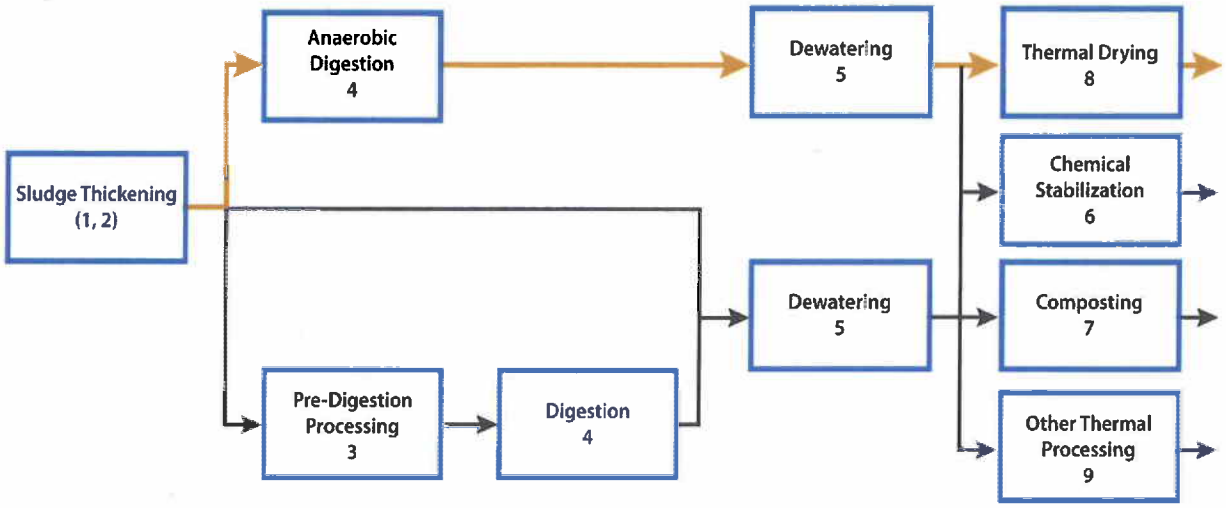


Figure 6: Residuals Sub-system Screening

In Figure 6 above, boxes 1-5 represent the subsystems for consideration at Deer Island, while boxes 6-9 represent the sub-systems at the Pelletizing Plant. Although the two sites operate in conjunction with one another, separate decisions on technology choices can still be assessed/pursued.

Staff believe the evaluation of newer technologies must be balanced against proven operating track records at a comparable scale. For this reason, the first round of screening was more or less a "fatal flaw" exercise that impacted many "emerging" technologies. A technology development status guide was created with three status tiers – embryonic, innovative, and established. Technologies in the embryonic category were dropped for further consideration in this study. A large capital investment in an early-stage technology is not prudent and is too risky for the scale of MWRA's operation. In addition, there was scale guide developed with tiers of small (<5 mgd), medium (5-50 mgd) and large (>50 mgd) facilities. Technologies in use at only the small

scale – even established technologies – were also screened out. Again, lack of demonstration of a technology at a reasonable scale was a key screening criterion.

The screening methodology then continued with input from staff and the Consultant using weighted criteria to rank various options. Criteria, which included but were not limited to, order of magnitude capital and O&M costs, feasibility and reliability, regulatory issues and beneficial re-use, safety, odor potential, volume reduction, complexity, and land area requirements were all components of the next round of the modeling tool to help assess the sensitivity of various options. This screening narrowed the review list from approximately 100 to 25 technologies.

The first round of screening carried the following technologies forward by sub-system:

DEER ISLAND PROCESSES:
Primary Sludge Thickening
- **Gravity Thickening**
- Co-Gravity Thickening with Secondary

Secondary Sludge Thickening
- **Centrifuge Thickening**
- Gravity Belt Thickening

Pre-Digestion
- Thermal Hydrolysis
- Cell Lysis

Digestion and Co-Digestion
- **Mesophilic Digestion**
- Thermophilic Digestion
- Temperature-Phased Digestion
- Acid/Gas Digestion
- Dual Digestion

Other Processes
- Sludge Screening
- Struvite Reduction

PELLETIZING PLANT PROCESSES:
Dewatering
- **Centrifuges**

Thermal Drying
- **Rotary Drum**
- Belt
- Paddle

Other Processes
- High Phosphorus Fertilizer
- High Nutrient Fertilizer

(**Bold** indicates processes currently being used by MWRA)

The results of this round of screening were then subjected to additional research by the Consultant team and an outside expert peer review panel. Their review results formed the basis for another round of screening. An all-day workshop included approximately 24 team members

from the Consultant, MWRA, and outside experts to discuss the pros/cons of the remaining technologies. The summary results are described below.

Technology Options Assessment – Preliminary Findings

As a result of the assessment performed to date, the review team recommended the following technologies be carried forward:

DEER ISLAND PROCESSES:

- Primary Sludge Thickening
  - **Gravity Thickening**
- Secondary Sludge Thickening
  - **Centrifuge Thickening**
  - Gravity Belt Thickening
- Pre-Digestion
  - Cell Lysis
- Digestion and Co-Digestion
  - **Mesophilic Digestion**
- Other Processes
  - Sludge Screening
  - Struvite Reduction

PELLETIZING PLANT PROCESSES:

- Dewatering
  - **Centrifuges**
- Thermal Drying
  - **Rotary Drum**

(**Bold** indicates processes currently being used by MWRA)

Deer Island recommendations:

- Gravity thickening is currently employed at Deer Island and should continue to be the technology of choice for the Primary Thickening Process;
- Secondary sludge thickening is currently performed using Centrifuge Thickening. Centrifuges are routinely used in large scale plants around the country and have been a reliable operation for Deer Island. There have been significant strides in improving centrifuge thickening energy efficiency in recent years and the existing centrifuges could be replaced to take advantage of the enhancements. Gravity Belt thickeners also offer huge gains in energy efficiency. As part of this study additional evaluation is on-going to evaluate cost impacts to changes to this process operation;
- The operational metrics (such as volatile solids destruction and gas production rates) for MWRA's existing Deer Island Residuals Complex are amongst the best in the country and **mesophilic** digestion should continue to remain the technology of choice for the long-range plan;
- Gas production and solids reduction in the Deer Island digesters could possibly be enhanced by use of cell lysis (a sludge pre-treatment technology that uses high-voltage electrical pulses to make sludge from secondary treatment more digestible) and sludge screening technologies – and will be piloted as part of this study;

- In addition, the co-digestion of food wastes has similar potential benefits – and as such staff are moving forward with a pilot study;
- The formation of struvite within the digester complex is a serious and costly problem and technologies to remediate this problem – focusing on phosphorus recovery – should be piloted;
- With the potential for the production of increased volumes of digester gas from the above technologies, the feasibility of a second combined heat and power plant or smaller, peaking-only combined heat and power plant will be examined; and
- The field of emerging residuals technology is very dynamic and MWRA should continue to monitor developments that may have application here.

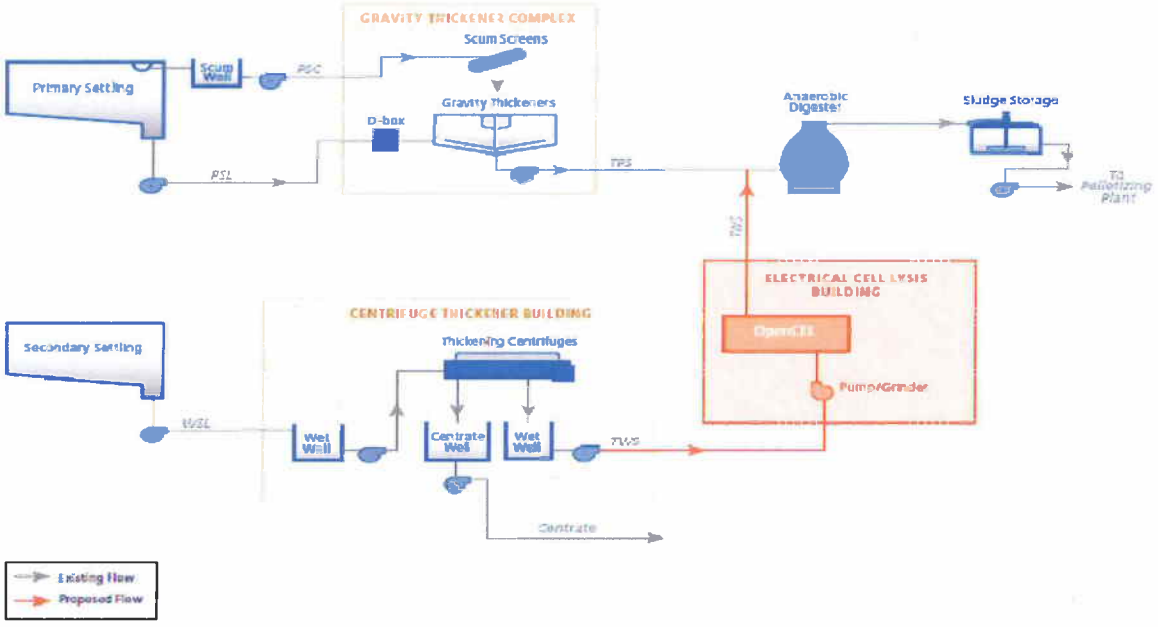


Figure 7: Residuals Pre-Treatment Option for Additional Study: OpenCel (Representative Only)

Pelletizing Plant recommendations:

- The operation of MWRA's Pelletizing Plant at the Fore River Staging Area in Quincy has been extremely reliable and rotary drum dryers still represent the technology of choice for many large utilities. Based upon performance, reliability, cost, and projected continued compliance with environmental regulations, pelletizing is the draft long-term recommendation process for post-digester operation and beneficial re-use for MWRA's residuals operation;
- The dewatering operation should continue with Centrifuges although newer more energy-efficient centrifuge models exist. MWRA will evaluate the possibility of upgrading the current centrifuges to gain these energy savings and improve overall efficiency in this process;
- Rotary drum dryers still represent the technology of choice for many large utilities and should remain the technology utilized by MWRA's pelletizing operation. The new generation of rotary drum dryers are more energy efficient and will be evaluated for potential energy efficiency gains in this process area; and

- With the NEFCO operations contract expiring in 32 months, staff are evaluating options including contract extension, contract re-bid, or other viable procurement options.

Next Steps

The next steps in this assessment study would be to focus on the preliminary findings outlined above – to further refine details about these options and their potential benefits and impacts to MWRA's operation. This effort is expected to take approximately an additional six months, at which time staff would return to the Board with final recommendations. These results are still under review by staff and the Consultant and are being presented today for the purposes of soliciting input/reaction/feedback from the Board. Staff plan to develop these findings further through additional Technical Memoranda, letter reports and pilot work – either under this contract or other technical assistance contracts. The proposed timeline for accomplishing these goals are included in Attachment A.

The output from this exercise reflects the current state of the industry in terms of technology development as compared to MWRA's current processing operation. As mentioned earlier, with performance metrics that are currently on the high end of industry averages, many technologies simply do not fit into long-range planning, i.e. the capital expense of upgrades are not warranted.

Co-Digestion (Update)

Co-Digestion involves the introduction of additional organic waste (e.g., food waste) material into the wastewater anaerobic digestion process with the intent of increasing digester gas and green energy production. As reported at the October 17, 2012 Board Meeting, staff have been examining the feasibility of co-digestion through a series of on-going efforts outlined below:

Digas System Capacity Analysis (In progress – to be complete in summer 2013)

This work consists of a preliminary assessment of possible bottlenecks in MWRA's digester gas transmission system, which prevents the plant from using all of the gas when it is at the upper ranges of system capacity. Some field tests of equipment capacity have been performed and the bottlenecks indentified are being studied further. Staff, working with consultants, have determined that there is sufficient capacity in the existing system to handle a pilot-level co-digestion study but MWRA would need to make a series of physical changes to the plant to expand to a full-scale co-digestion operation or if enhanced digestion were implemented (cell lysis), the installation of a possible new peaking combined heat and power facility may be needed.

Co-Digestion Feasibility Study (Draft Report issued)

A feasibility study to: assess the practice of co-digestion in the United States; determine how co-digestion would be incorporated into the Deer Island Plant; and identify operational and logistical concerns that may be expected was performed. The study found that while co-digestion is currently not frequently practiced in the industry, it is expanding at an increasing rate for treatment plants with anaerobic digestion and gas recovery/utilization. The study indicated facilities would need to be constructed to support this new operation (food waste receiving, storage and pumping facilities, digester gas handling/end-use upgrades). A benefit/cost model

was developed. Design, construction and operation of such facilities should be financed in part through tipping fees for any material taken in as part of this new operation. Overall, the conclusion indicated that co-digestion is viable and is generally beneficial to digestion and gas production, but should be piloted to refine the facility planning and benefit/cost model.

Co-Digestion Bench Scale Study (in progress – to be complete in fall 2013)

This is a two-phase bench-scale test being conducted at UMass-Amherst to determine the digestibility and potential gas production for varying mixtures of sludge/food waste. The first phase of the testing has been completed and demonstrated encouraging results; the second phase of the study is now underway. The results of the second phase of the study will assist the agency in developing a more refined benefit/cost analysis of the co-digestion concept.

Figure 8: Typical Food Waste Truck Off-Loading Station

Co-Digestion Pilot (in development)

Due to the encouraging results of the feasibility study and first phase of the bench scale study, staff are about to proceed to the next phase of the investigation, which includes a one- to three-year one-digester pilot program. The pilot will involve taking pre-processed, source-separated organic material (food waste) from industrial/commercial/residential sources and feeding it directly into one digester on Deer Island to measure the performance benefits. The material would be pre-processed off-island by a waste hauler before use on Deer Island. Pre-processing would include steps to remove potential contaminants, screen, slurry, and blend multiple materials together to provide a consistent feedstock for Deer Island's test digester. Deer Island will repurpose existing facilities for material receiving and storage. A small amount of new piping (approximately 500 linear feet) and two new low volume pumps/grinders would be needed to feed the food waste to the test digester. Performance would be monitored as staff varies the feed levels with normal sludge feed over time. The results of this pilot level effort would refine the benefit/cost model developed in the feasibility study and provide "real life" operating experience prior to making any significant capital or operational decisions that may be needed for a long-term co-digestion operation.

This initiative would be a truck-based operation involving a small number of deliveries on weekdays only. Staff currently estimate this effort will result in three to four truck deliveries per weekday (approximately 12,000-17,000 gallons per day or seven dry tons per day, which translates to 20% of the normal sludge feed to the digester) to support this test. Implementation details are still being worked out and staff will report back to the Board when finalized. The goal will be to start the pilot in the second quarter of 2014.

NEFCO Contract

Staff believe that it is an appropriate time for an analysis of not only MWRA's long-range technology options, but also its long-range contracting options. Understandably, that process will require significant analysis, discussion, and planning. Staff are reviewing the options of: 1.) negotiating a short-term contract extension directly with NEFCO for the 2018-2021 timeframe; 2.) re-bidding a full 15- or 20-year contract operation with and without MWRA performing capital improvements/equipment replacement; and 3.) exploring the viability of pursuing Design/Build/Operate (DBO) legislation. For both Options 2 and 3, the ability for a project to enhance the existing pelletizing plant in the areas of energy efficiency and possibly air emissions using more current dryer technologies will be included. A combination of two options, (i.e., short-term operations contract extension while MWRA designs capital rehabilitation/replacement with a rebidding of a long-term operations contract) will also be evaluated.

BUDGET/FISCAL IMPACT:

The FY14 Proposed Current Expense Budget (CEB) includes $14.8 million for the current NEFCO contract. The FY14 Proposed CIP contains $103.9 million for the next phase of the Pellet Plant operation. In the next several months, staff will be assessing the financial impacts of the various short-term and long-term options and will present the findings to the Board for consideration.

STAFF SUMMARY

TO: Board of Directors
FROM: Frederick A. Laskey, Executive Director
DATE: April 10, 2013
SUBJECT: Electrical Equipment Upgrade Construction 4
Deer Island Treatment Plant
Dagle Electrical Construction Corporation
Contract 6901

COMMITTEE: Wastewater Policy & Oversight

____ INFORMATION
__X__ VOTE

Rachel C. Madden, Director
Administration and Finance

Daniel K. O'Brien, P.E., Director, Deer Island WWTP
Richard J. Adams, Manager, Engineering Services
Preparer/Title

Michael J. Hornbrook
Chief Operating Officer

RECOMMENDATION:

To approve the award of Contract 6901, Electrical Equipment Upgrade Construction 4, Deer Island Treatment Plant, to the lowest responsible and eligible bidder, Dagle Electrical Construction Corporation, and to authorize the Executive Director, on behalf of the Authority, to execute said contract in the bid amount of $10,861,700, with a contract term of 1,095 calendar days from the Notice to Proceed.

DISCUSSION:

As part of MWRA's on-going Facilities Asset Management Program, staff continually assess the condition and performance of equipment on a routine basis. A critical element of the overall facility infrastructure on Deer Island is the electrical distribution equipment. Within the electrical distribution system, there are many sub-systems and individual components which distribute power throughout all of the facilities and systems on the island. These components include transformers, load-break switches, bus ducts, cables, conduit, motor control centers, and protective relaying systems.

During routine maintenance, the condition of these components is monitored for typical industry criteria, such as insulation resistance, contact resistance, and performance. Staff utilize several industry-wide standards, including the Institute of Electrical/Electronic Engineers, and the International Electrical Testing Association, to measure the performance of the equipment, and to determine appropriate baselines so that proactive measures can be taken before the equipment fails in service. When degradation of the equipment begins to show, or the frequency or degree of required maintenance increases, staff monitor the equipment more closely and, if warranted, schedule the equipment for possible replacement.

Contract 6901 includes the replacement of various substation transformers, busducts, and load break switches. The replacement of some of the transformers, bus ducts, and load break switches included in this contract are required under a Massachusetts Department of Environmental Protection Consent Order that was issued as a result of a power loss to Deer Island that occurred in 2004.

In addition, this contract is providing improvements with to the switchgear protective relaying systems for the electrical distribution equipment and Deer Island's existing lighting control system also will be replaced.

The protective relaying system performs the critical role of protecting the electrical distribution system from atypical electrical events such as transients and faults that can damage equipment. The relaying systems isolate the equipment to minimize damage and process equipment down time.

The existing relays are electro-mechanical (disc and plunger type), which require calibration and testing on an annual basis. In addition, the existing relay units do not provide information other than a "red flag," which is an indication of possible failure. The relay will detect a fault and open a breaker to safely extinguish the fault before damage to the electrical equipment can occur. Staff must determine the location and cause of the fault before the equipment can be placed back into service. Tracing back and identifying the location of the problem can sometimes take as long as several days under the present protective relaying system.

The recommended new relaying system is a digital, solid-state, self-calibrating system that contains no moving parts and offers extensive fault protection and circuit breaker operation. The new relaying system also provides detailed information about the type and location of the fault when it occurs. This information will enable staff to begin corrective action sooner and will ensure minimal down time of critical process equipment after a fault event. The new relays will be tied into Deer Island's recently replaced central control and monitoring system, which was installed under an earlier phase of replacement work. This will allow staff to quickly identity and restore power after an outage.

The new lighting control system will replace the existing system that controls the lighting in the Maintenance/Warehouse, Administration/Laboratory and Reception Training buildings. In addition, this lighting control system will include the Primary/Secondary clarifiers and cross-gallery lighting. Staff will apply for applicable rebates for the lighting control system through NSTAR's Energy Incentive Program (amounts to be determined).

The following pictures represent some of the equipment that is to be replaced under Contract 6901.

Unit Substation 14D – Load Break Switch, Transformer and Bus Ducts

Main Switchgear Building – Medium Voltage Switchgear

Unit Substation 14A Transformer

Unit Substation 7 Bus Ducts

Procurement Process

Contract 6901 was advertised and bid in accordance with Massachusetts General Laws, Chapter 149. Three bids were opened on February 14, 2013 with the following results:

Engineer's Estimate	*$7,863,000*
Dagle Electrical Construction Corporation	$10,861,700
J.F. White Contracting Co.	$11,165,000
Fischbach & Moore Electric Group, LLC.	$11,500,000

Staff have determined that the Design Consultant's (AECOM) construction estimate was incorrect as the firm did not adequately account for the supervision and manpower requirements to perform the switchgear relay work.

MWRA staff conducted a comprehensive review of Dagle Electrical Construction Corporation's bid, which is $303,3000 lower than the second lowest bidder, and conducted several follow-up interviews and meetings with the principles and managers of the company. In addition to being $300,000 lower, MWRA has had no previous experience working with this Contractor, although it should be noted that all references that were verified by MWRA were found to be favorable. In all instances, the Contractor has assured MWRA that it fully understands the nature and complexity of the work required under this contract and can complete the project for the bid price. Dagle Electrical Construction Corporation indicated that it customarily performs work similar in nature and scope as this project.

References were checked and found to be favorable. Upon completion of their review, staff have determined that Dagle Electrical Construction Corporation's bid price is reasonable, complete, and includes the payment of all applicable prevailing wage rates as required. Staff are of the opinion that Dagle Electrical Construction Corporation possesses the skill, ability, and integrity necessary to perform the work under this contract and is qualified to do so. Therefore, staff recommend the award of this contract to Dagle Electrical Construction Corporation as the lowest responsible and eligible bidder.

BUDGET/FISCAL IMPACT:

The FY13 CIP includes a budget of $5 million for Contract 6901, which was updated to $6.5 million in the Proposed FY14 budget. The Final FY14 CIP budget will reflect the awarded amount.

MBE/WBE PARTICIPATION:

Because Contract 6901 is SRF funded, the D/MBE and D/WBE participation requirements are 3.40% and 3.80%, respectively. The Contractor's bid meets these requirements.

STAFF SUMMARY

TO: Board of Directors
FROM: Frederick A. Laskey, Executive Director
DATE: April 10, 2013
SUBJECT: Cottage Farm Fuel System Upgrade
MECO Environmental Services, Inc.
Contract 7281, Change Order 7

COMMITTEE: Wastewater Policy & Oversight

____ INFORMATION
__X__ VOTE

Eleanor Duffy, P.E., Construction Coordinator
A. Navanandan, P.E., Director, Construction
Preparer/Title

Michael J. Hornbrook
Chief Operating Officer

RECOMMENDATION:

To authorize the Executive Director, on behalf of the Authority, to approve Change Order 7 to Contract 7281, Cottage Farm Fuel System Upgrade, with MECO Environmental Services, Inc., for a lump sum amount of $46,397.88, increasing the contract amount from $435,707.57 to $482,105.45, with no increase in contract term.

Further, to authorize the Executive Director to approve additional change orders as may be needed to Contract 7281 in an amount not to exceed the aggregate of $25,000, in accordance with the Management Policies and Procedures of the Board of Directors.

DISCUSSION:

Under Contract 7281, the Contractor is replacing portions of the fuel supply system in the Cottage Farm CSO Facility, which is located on Memorial Drive in Cambridge near the BU Bridge (photo on right and map attached). It is an un-staffed facility because it operates only a few times each year during wet weather. During large storm events it provides screening, disinfection and dechlorination treatment of up to 230 million gallons per day of combined sewage and discharges to the Charles River.

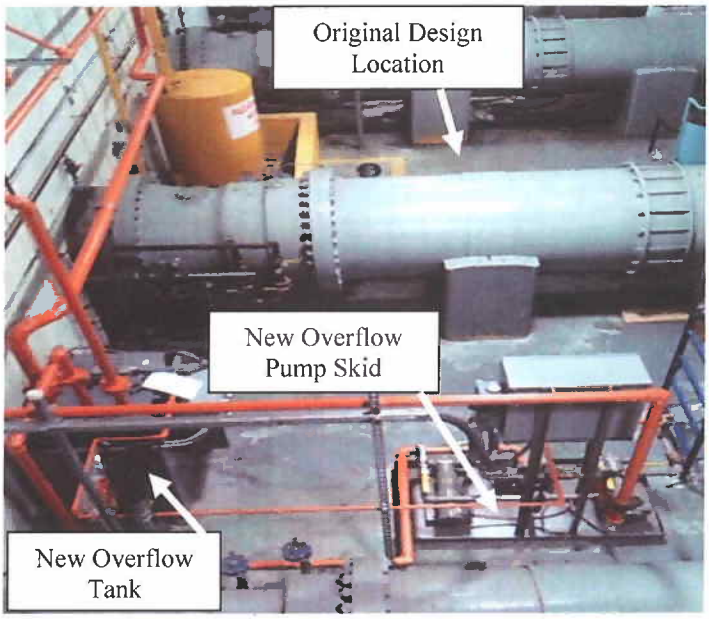
The work under this contract includes replacement of the existing day tanks inside the building that store fuel for the diesel engines, the emergency generator, and the Chemical Building boilers; these day tanks will be replaced with double-walled tanks. A new double-walled day tank also will be installed to supply the boilers in the main building. A new overflow tank will be installed and connected to the new day tanks in the facility's lower level.

This Change Order

Change Order 7 consists of the following four items:

Relocate the Overflow Pump Skid and Overflow Tank $15,438.70

The contract requires the Contractor to furnish and install an overflow tank and an overflow pump skid in the Pump Room of the main building. The Pump Room is a fairly congested area and both pieces of equipment have code-required clearances due to the associated electrical control panels mounted on each. The National Electrical Code requires a 36-inch clearance in front of all electrical controls and a 36-inch-wide walkway around the equipment to allow for safe passage.



The overflow tank and overflow pump skid were shown on the contract drawings in the middle bay of the Pump Room adjacent to the existing drain oil storage tank (see arrow indicating original design location between the two large gray suction pipes in the picture above). The drawings do not reflect the concrete containment wall that was built around this tank in the event of a leak. The designer erred by not considering the actual size of the new equipment and the code-required clearances. The containment wall was in direct conflict with the designed new equipment location. Therefore, the Contractor was required to relocate the overflow tank and overflow pump skid to southern bay of the Pump Room.

The insufficient clearance was not identified until after the Contractor had begun the pre-staging work, including coring and rigging to lower the equipment in the originally designed location. The new location required the Contractor to perform additional rigging, and to furnish and install additional lengths of piping and electrical conduit.

The approved Proposed Change Order (PCO) for this item has been identified by MWRA staff as a design error. MWRA staff and the Contractor have agreed to a lump sum amount of $15,438.70 for this additional work with no increase in contract term.

Relocate Two Vent Pipes $13,123.32

The Cottage Farm Facility has two existing 2-inch vent pipes through the roof in the Engine Room. The contract requires these openings to be enlarged to 4 inches in diameter, caulked, sealed, and flashed. However, a 4-inch pipe actually requires a 6-inch hole with a link seal and there is insufficient room to enlarge the openings to 6 inches due to existing turbine exhaust piping and structural beams/walls. Therefore, the Contractor was required to install the new vent piping through the reinforced-concrete wall just below the existing louvers and the run the vent piping vertically on the exterior wall. The new location required the Contractor to furnish and install a membrane roof patch after demolition of the existing vent piping in lieu of the contract specified flashing. The designer erred by not verifying the existing conditions to ensure that there was sufficient space to install the new vent piping as designed.

The approved PCO for this item has been identified by MWRA staff as a design error. MWRA staff and the Contractor have agreed to a lump sum amount of $13,123.32 for this work with no increase in contract term.

Install By-pass Valves and Piping $12,662.16

The contract work requires the Contractor to furnish and install a fuel oil selector valve in the Engine Room that allows for the selection of either one of two underground fuel oil storage tanks, and isolates the fuel oil supply and return lines to the selected tank. One week after Operational Readiness Testing, the existing fuel oil supply pumps became air bound. In investigating the problem, staff have determined that the probable cause of the pump failure was air leakage through the new fuel oil selector valve. The Contractor was able to re-start the pumps using temporary valves installed on the fuel oil system as part of a work-around. The pumps became air-bound again four days later and the Contractor was required to re-start the system again.

Because of the critical nature of the fuel oil system at the Cottage Farm CSO Facility, MWRA directed the Contractor to expedite the installation of a new replacement valve and to remove the existing valve for inspection immediately. The Contractor was directed to remove and replace the valve instead of repairing it due to the immediate need to have the facility operational because of the forecast of wet weather, which resulted in additional work for the Contractor.

Since Cottage Farm CSO Facility is a critical facility during severe wet weather, MWRA further directed the Contractor to install by-pass piping around the fuel oil selector valve. This by-pass consists of four 2-inch tees with a 2-inch ball valve and 2-inch quick disconnects on the fuel oil supply line, upstream and downstream of the selector valve and also on the fuel oil return line. In the event that the replacement valve failed and the facility was required to operate, staff could by-pass the valve and still supply fuel to the engines and emergency generator.

The approved PCO for this item has been identified by MWRA staff as an unforeseen condition. MWRA staff and the Contractor have agreed to a lump sum amount of $12,662.16 for this additional work with no increase in contract term.

Remove and Replace Float Level Control Switches $5,173.70

The contract requires the Contractor to furnish and install a 130-gallon day tank in the Boiler Room of the Main Building with two dual-float, level control switches set to turn the fuel oil supply pumps on at "Low Level" and off at "High Level," as well as activate alarms. National Fire Protection Code, NFPA 31 limits the maximum capacity of an oil tank to 60 gallons on a floor that is located above a lower level floor. The size of the Boiler Room day tank (shown on the right) had to be reduced from the contract-specified 130 gallons to the code-required maximum of 60 gallons.

During start-up, staff noticed a small amount of flow in the overflow tank. It was determined that there is a slight "sloshing" effect within the smaller dimensional 60-gallon day tank each time the tank is filled that results in an incidental amount of flow to the overflow piping/tank. Therefore, the Contractor will be required to remove the float level control switches and will ultimately install two new dual-float level control switches with revised set points (to be determined and currently under review by MWRA staff).

The approved PCO for this item has been identified by MWRA staff as an unforeseen condition. MWRA staff and the Contractor have agreed to a lump sum amount of $5,173.70 for this additional work with no increase in contract term.

The Contractor has proceeded with the work of these change order items at its own risk.

Elements of design for this contract were provided by two consulting firms, CDM Smith and Dewberry. Staff have compiled lists of all change order items in this contract that have resulted from an error or omission on the part of these firms, and have notified CDM Smith and Dewberry, in writing, of the current status of these findings and of MWRA's intention to seek appropriate cost recovery.

CONTRACT SUMMARY:

	Amount	**Time**	**Dated**
Original Contract:	$349,638.00	180 Days	06/20/12
Change Order 1*:	$23,000.00	7 Days	11/26/12
Change Order 2*:	$9,894.91	7 Days	12/18/12
Change Order 3*:	($774.95)	0 Days	12/18/12
Change Order 4*:	$25,000.00	31 Days	01/15/13
Change Order 5*:	$12,928.76	0 Days	03/19/13

Change Order 6*:	$16,020.85	78 Days	Pending
Change Order 7:	$46,397.88	0 Days	Pending
Total Change Orders:	$132,467.45	123 Days	
Adjusted Contract:	$482,105.45	303 Days	

*Approved under delegated authority

If Change Order 7 is approved, the cumulative value of all change orders to this contract will be $132,467.45 or 37.89% of the original contract amount. Work on this contract is approximately 93% complete.

BUDGET/FISCAL IMPACT:

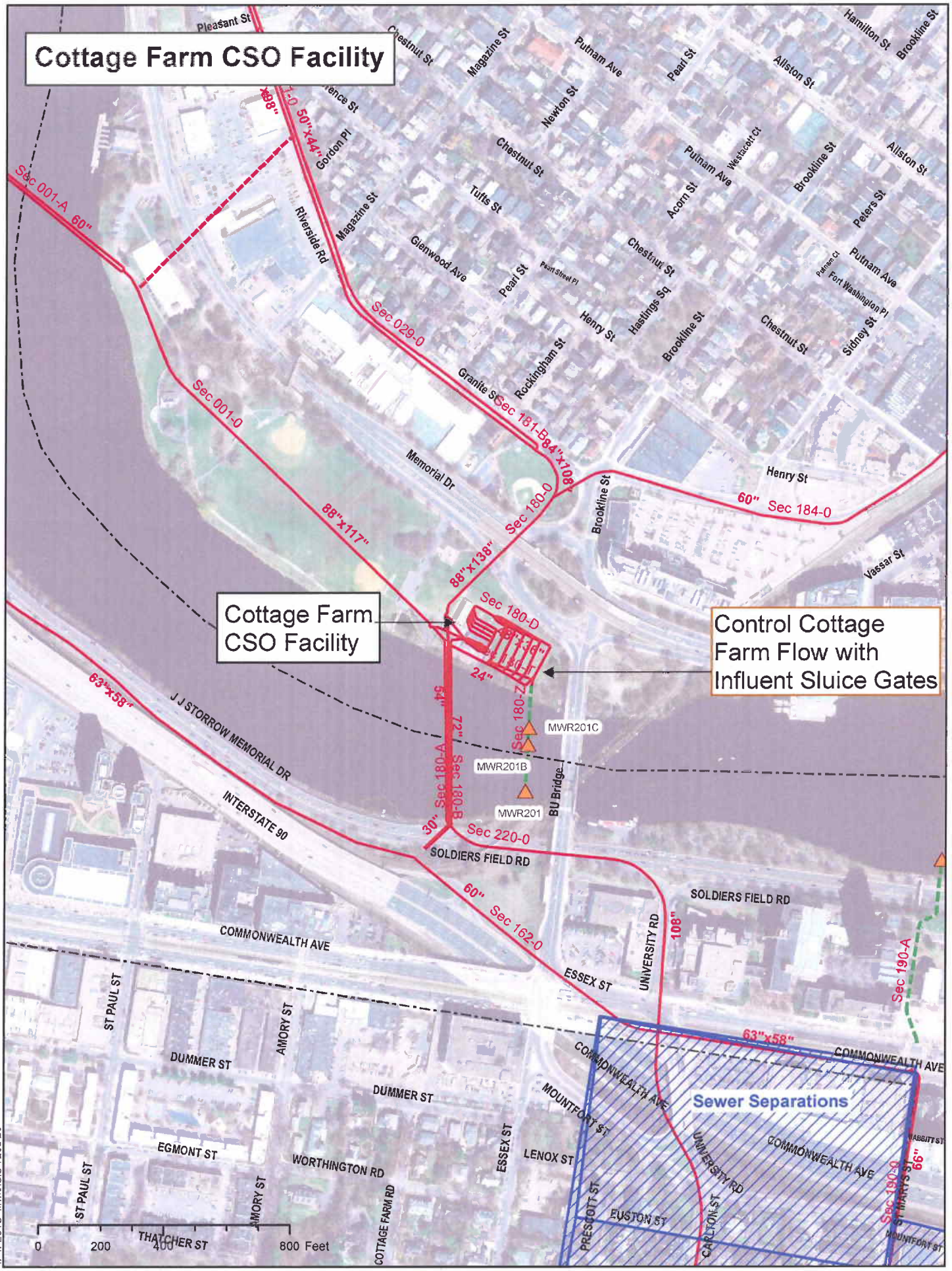
The FY13 CIP includes a budget of $356,141 for Contract 7281. Including this change order for $46,397.88, the adjusted subphase total is $482,105.45 or $125,964.45 over budget. This amount will be covered within the five-year CIP spending cap.

MBE/WBE PARTICIPATION:

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

ATTACHMENT:

Map of Cottage Farm CSO Facility


Cottage Farm CSO Facility
Cottage Farm CSO Facility
Control Cottage Farm Flow with Influent Sluice Gates
Sewer Separations
Sec 001-A 60"
Sec 001-0
Sec 029-0
Sec 181-B 84"x108"
Sec 180-0
88"x138"
88"x117"
Sec 180-D
Sec 180-Z
Sec 180-A
Sec 180-B
Sec 220-0
Sec 162-0
Sec 184-0
Sec 190-A
Sec 190-0
MWR201C
MWR201B
MWR201
BU Bridge
Pleasant St
Chestnut St
Magazine St
Putnam Ave
Pearl St
Allston St
Hamilton St
Brookline St
Newton St
Gordon Pl
Riverside Rd
Tufts St
Glenwood Ave
Acorn St
Westcott Ct
Peters St
Pearl Street Pl
Putnam Ct
Fort Washington Pl
Sidney St
Hastings Sq
Henry St
Rockingham St
Granite St
Memorial Dr
Vassar St
J J STORROW MEMORIAL DR
INTERSTATE 90
SOLDIERS FIELD RD
COMMONWEALTH AVE
ESSEX ST
UNIVERSITY RD
ST PAUL ST
AMORY ST
DUMMER ST
EGMONT ST
WORTHINGTON RD
THATCHER ST
COTTAGE FARM RD
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200
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4/4/2013 MWRAGIS 1209-20

STAFF SUMMARY

TO: Board of Directors
FROM: Frederick A. Laskey, Executive Director
DATE: April 10, 2013
SUBJECT: Prison Point CSO Facility HVAC and Odor Control Systems Upgrade
Arden Engineering Constructors, LLC
Contract 6795, Change Order 11

COMMITTEE: Wastewater Policy & Oversight

____ INFORMATION
_X_ VOTE

Kenneth Chin, Sr. Construction Manager
A. Navanandan, P.E., Director, Construction
Preparer/Title

Michael J. Hornbrook
Chief Operating Officer

RECOMMENDATION:

To authorize the Executive Director, on behalf of the Authority, to approve Change Order 11 to Contract 6795, Prison Point CSO Facility HVAC and Odor Control Systems Upgrade, with Arden Engineering Constructors, LLC, for a lump sum amount of $457,870, increasing the contract amount from $2,445,817.52 to $2,903,687.52, with no increase in contract term.

DISCUSSION:

The Prison Point CSO Facility, located off of Monsignor O'Brien Highway in Cambridge (photo on right and map attached), began operation in 1981 and provides both dry- and wet-weather flow handling capabilities. During dry weather, flows of up to five million gallons per day collected in the Cambridge Marginal and Boston Marginal Conduits are screened and pumped into the Charlestown Branch Sewer. During wet weather, flows from the Cambridge Marginal and Boston Marginal Conduits exceed the dry-weather capacity and treatment for peak flows is required. The facility provides screening, sedimentation, and disinfection treatment of CSO flows, as well as overflow from a regulator on the Charlestown Branch Sewer. The treated flow is then discharged to Boston Harbor.

With the exception of the boiler, temperature controls, and some SCADA instrumentation, most of the HVAC and odor control equipment at the Prison Point CSO Facility is original, has exceeded its design life, and is in need of replacement. The HVAC system improvements under Contract 6795 include replacement of components for the ductwork, air handling equipment, dampers, louvers, and odor control.

The contract was declared substantially complete on March 9, 2012. To date, there have been 10 previous change orders. The cumulative value of all change orders, including Change Order 11, totals 37% of the original contract amount, of which $566,738.54 or 27% resulted from design errors, $20,913.57 or 1% resulted from design omissions, and $191,135.41 or 9% were related to unforeseen conditions. Change Order 11 will be the final change order to this contract before contract close-out.

Staff have compiled a list of all change order items in this contract that have resulted from an error or omission on the part of the Design Consultant, AECOM, and have notified AECOM, in writing, of the current status of these findings and of MWRA's intention to seek appropriate cost recovery.

MWRA staff have determined that AECOM's design was flawed. AECOM should have realized that the existing exhaust ductwork required modification/replacement due to the new, larger exhaust fans and should have included such modification/replacement in the final design and bid documents. AECOM does not dispute staff's position and has agreed in principle to reimburse MWRA for the value of any of the demolition or re-work included in this change order, and to reimburse MWRA for a premium cost involved with any of the new work in this change order. Staff are negotiating the value of this portion of Change Order 11 with AECOM. In addition, AECOM will provide any re-design work and associated engineering services during construction for this change order at no additional cost to MWRA.

This Change Order

Change Order 11 consists of the following single item:

Re-design Odor Control Fans System	$457,870

During construction, the facility experienced off-gassing of chlorine fumes inside the Sample Room during activation for a rain event. Under Change Order 6, the Contractor installed an additional exhaust hood with a fan over the second sample sink and increased the duct size to accommodate the additional exhaust air from the Sample Room. The Change Order 6 work was completed while the original odor control units were still in operation and this appeared to eliminate the off-gassing.

After the Contractor installed the new odor control fans, off-gassing of chlorine fumes again were detected in the Sample Room, the Odor Control Room and in the adjoining hallway on the lower level of the facility. It was determined that the total exhaust air volume from the new odor control units (72,500 cubic feet per minute or "CFM") was more than 50% greater than the exhaust air volume of the original odor control units (44,000 CFM) and was blocking the exhaust

air coming from the Sample Room and the Odor Control Room. Under Change Order 9, the Contractor re-routed the exhaust ducts for these rooms to provide the maximum allowed exhaust air for those fans.

After the completion of the Change Order 6 and Change Order 9 work, off-gassing chlorine fumes continued to occur in the facility in all the same areas. Further investigation determined that the odor control system could not be balanced because the total combined exhaust of the three new odor control units (72,500 CFM) exceeded the capacity of air that could be exhausted through the existing single exhaust duct (44,000 CFM). Therefore, in order to complete and balance the odor control system, and completely eliminate the chlorine fumes, it was necessary to re-design the system to provide a separate exhaust duct for each of the new odor control fans.

The re-design work under Change Order 11 is extensive and includes, but is not limited to, the replacement of two existing five-horsepower and one existing 50-horepower odor control motors with a 10-horsepower motor, a 15-horsepower motor, and 60-horsepower motor; replacement of the existing 84-inch by 52-inch vertical exhaust duct with a new exhaust duct to Odor Control Unit 2; the removal and replacement of the vertical ductwork for each of Odor Control Units 1 and 3; and the replacement of two existing fan hoods inside the Sampling Room with larger fan hoods.

The approved Proposed Change Order for this item of work has been identified by MWRA staff as a design error. MWRA staff, AECOM, and the Contractor have agreed to a lump sum amount of $457,870 for this additional work with no extension in contract term. The Contractor has not begun any of the work under this change order.

CONTRACT SUMMARY:

	AMOUNT	TIME	DATED
Original Contract:	$2,124,900.00	450 Days	12/06/10
CHANGE ORDERS			
Change Order 1*:	$22,452.40	0 Days	06/08/11
Change Order 2*:	$99,292.51	0 Days	11/16/11
Change Order 3*:	$22,162.07	0 Days	01/05/12
Change Order 4*:	$5,197.00	0 Days	01/17/12
Change Order 5*:	($34,555.05)	0 Days	02/14/12
Change Order 6*:	$42,731.33	0 Days	04/05/12
Change Order 7*:	$24,599.58	0 Days	04/10/12
Change Order 8*:	$22,087.81	0 Days	05/11/12
Change Order 9:	$114,151.64	0 Days	06/18/12
Change Order 10*:	$2,798.23	0 Days	11/13/12
Change Order 11:	$457,870.00	0 Days	Pending
Total Change Orders:	$778,787.52	0 Days	
Adjusted Contract:	$2,903,687.52	450 Days	

*Approved under delegated authority

If Change Order 11 is approved, the cumulative value of all change orders to this contract will total $778,787.52 or 37% of the original contract amount.

BUDGET/FISCAL IMPACT:

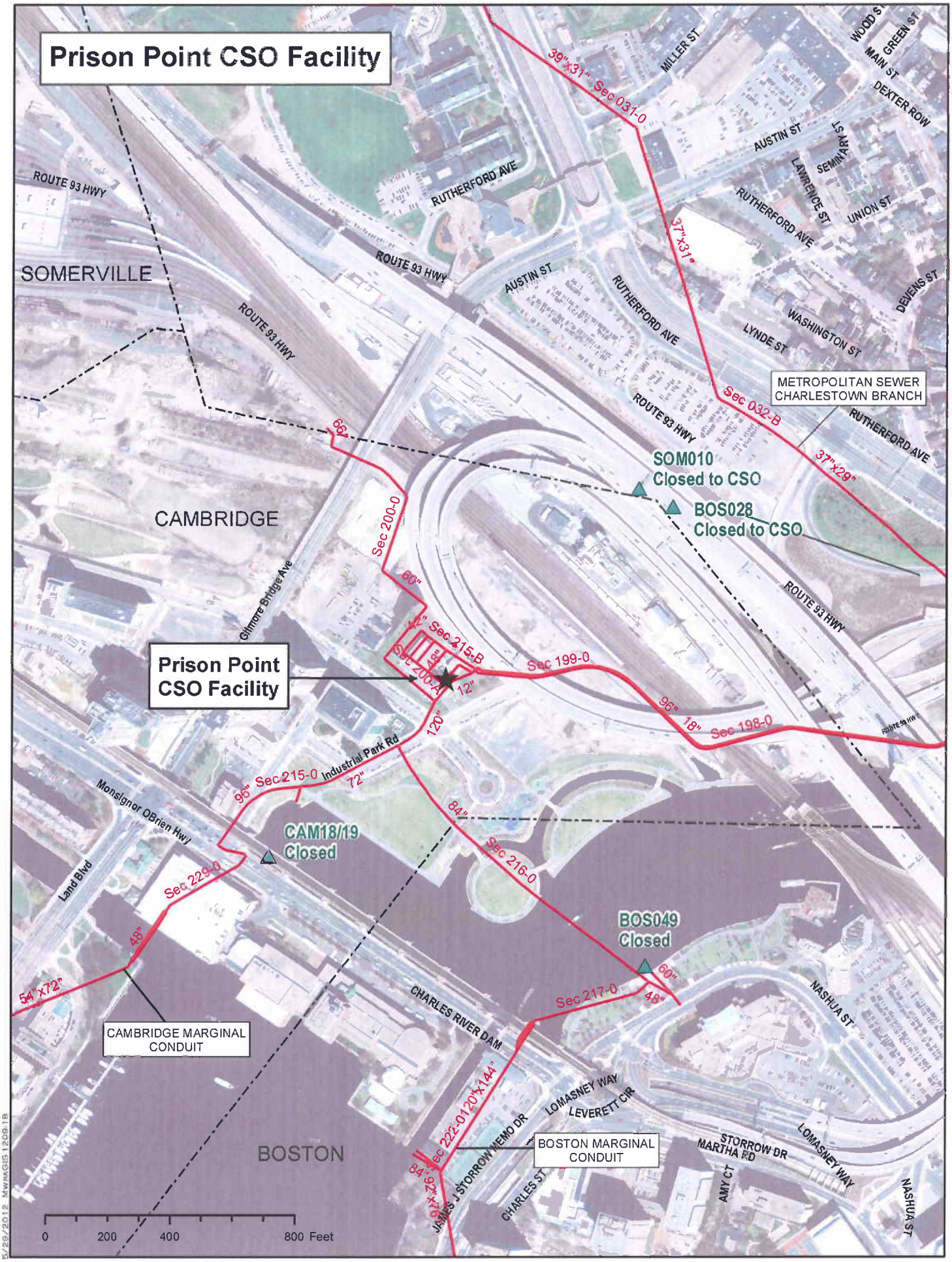
The FY13 Capital Improvement Program budget includes $2,410,556 for Contract 6795. Including this change order for $457,870, the adjusted subphase total will be $2,903,687.52 or $493,131.52 over budget. This amount will be covered within the five-year CIP spending cap.

MBE/WBE PARTICIPATION:

The MBE/WBE participation requirements for this project are 5.3% and 4.4%, respectively. The Contractor will be notified that these requirements are still expected to be met.

ATTACHMENT:

Map of Prison Point CSO Facility



5/29/2012 MwraGIS 1209.1B

MASSACHUSETTS WATER RESOURCES AUTHORITY

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

Frederick A. Laskey
Executive Director

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

WATER POLICY AND OVERSIGHT COMMITTEE MEETING

Chair: A. Pappastergion
Vice-Chair: B. Swett
Committee Members:
J. Carroll
J. Foti
J. Walsh

to be held on

Wednesday, April 10, 2013

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

Time: Immediately following Wastewater Comm.

AGENDA

A. Information

1. Update on Drinking Water Regulatory Issues

B. Contract Awards

1. Watertown Section Pipeline Rehabilitation, Waltham and Watertown: J. D'Amico, Inc., Contract 7222

C. Contract Amendments/Change Orders

1. Ultraviolet Disinfection Facilities, John J. Carroll Water Treatment Plant: Daniel O'Connell's Sons, Inc., Contract 6924, Change Order 12

MASSACHUSETTS WATER RESOURCES AUTHORITY

Meeting of the
Water Policy and Oversight Committee

March 13, 2013

A meeting of the Water Policy and Oversight Committee was held on March 13, 2013 at the Authority headquarters in Charlestown. Chairman Pappastergion presided. Present from the Board were Messrs. Barrera, Carroll, Flanagan, Foti, Swett, Vitale and Walsh, as well as Board member-elect Ms. Wolowicz. Among those present from the Authority staff were Fred Laskey, Steve Remsberg, Mike Hornbrook, Carl Leone, Dave Coppes, and Bonnie Hale. The meeting was called to order at 12:10 p.m.

Information

Local Pipeline and Water System Assistance Program Update

Staff described the program's purpose and history and provided an update.

Contract Awards

*Control of Invasive Aquatic Plants at Stillwater Basin, Wachusett Reservoir: Aqualogic, Inc., WRA-3590

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

Contract Amendments/Change Orders

*Hultman Interconnections - Final Design, Construction Administration and Tunnel Inspection Services: Jacobs Engineering Group, Inc., Contract 6911, Amendment 4

The Committee recommended approval of Amendment 4 (ref. agenda item C.1).

The meeting adjourned at 12:20 p.m.

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* Approved as recommended at March 13, 2013 Board of Directors meeting.

STAFF SUMMARY

TO: Board of Directors
FROM: Frederick A. Laskey, Executive Director
DATE: April 10, 2013
SUBJECT: Update on Drinking Water Regulatory Issues

COMMITTEE: Water Policy & Oversight

__X__ INFORMATION
____ VOTE

Richard Trubiano, Deputy Chief Operating Officer
Stephen Estes-Smargiassi, Director, Planning
Preparer/Title

Michael J. Hornbrook
Chief Operating Officer

Two important drinking water regulatory changes will come into effect over the next nine months. EPA recently issued revisions to the Total Coliform Rule which substantially improve the rule, eliminating the violation and confusing public notice requirement when a community has more than five percent total coliform positives, replacing it with a simple evaluation and requirement to fix any identified problems. Also, changes in the Safe Drinking Water Act will require that communities purchase and install only brass fittings (such as taps, curb stops and meters) which meet new lower lead requirements after January 2014.

Results from testing under two other new regulations are now available. Despite increasing the number of samples and changing how compliance is calculated, testing under the new disinfection byproducts rule continues to show excellent compliance with the limits. Results from the first quarter of EPA required testing for unregulated contaminants found only a few detections at very low levels, none unexpected.

Staff are also continuing to closely track and work to influence potential changes to the Lead and Copper Rule, as well as new federal or state limits on other chemical contaminants. Changes to the Lead and Copper Rule could include more stringent testing requirements which would likely increase the reported lead levels, potentially onerous requirements around lead service line replacements and changes to corrosion control requirements.

RECOMMENDATION:

For information only. Staff have been tracking or implementing a number of important drinking water regulatory changes.

DISCUSSION:

Revised Total Coliform Rule

The Total Coliform Rule (TCR), issued in 1989, is the one rule which affects every water supply, and has created some of the most significant consumer confusion about water safety. Total coliform bacteria are an indicator organism used to provide an early warning of potential water quality issues; they are not pathogens and do not, in and of themselves, represent a health risk.

The existing TCR requires sampling for total coliform bacteria within the distribution system, typically weekly at representative sites; if more than 5 percent of the samples in a month are positive, the system is in violation of the rule and public notification via newspaper ads or direct mailing is required. In most cases, no action other than the public notice is required. The public notice frequently creates anger and confusion as it can be issued as much as 30 days later, and includes a very mixed message about the potential health effects of total coliform. Consumers are told that an important violation occurred, that it might make them sick, but that they should take no precautionary action. The notice does not make sense, and is factually incorrect on the health risk. Only if *E. coli* are found in samples is there an acute health risk, and frequently a boil order would be required.

Due to the cost and confusion of the TCR, EPA has been working for over a decade to improve it and issued the final revised TCR in February. MWRA staff have been actively involved in influencing its development, participating in EPA work groups, working with the American Water Works Association and Association of Metropolitan Water Agencies to craft their positions and draft comment letters, and commenting directly on EPA position papers and draft regulations. The revised TCR is a substantial improvement over the existing rule.

With the revised TCR there will be a shift in focus from total coliform positives requiring public notification to triggering investigations and corrective actions. This will provide a more proactive approach to public health protection and a reduction in customer confusion.

Under the revised TCR, sampling for total coliform and *E. coli* are still required, but the five percent Maximum Contaminant Level (MCL) for total coliform has been eliminated. In its place, EPA will be requiring that systems with over five percent total coliform positives conduct an evaluation of the possible distribution system problems which may have contributed to the elevated levels, and to respond to any identified problems. No public notice is required for exceeding the five percent trigger.

Exceeding the five percent trigger will not result in a violation; only if the system does not conduct the evaluation or respond to identified problems would there be a violation. In most cases the evaluation will be a simple one page checklist, and EPA has explicitly acknowledged that in most cases no clear cause of the exceedance will be identified and no other actions required. If problems are identified, water systems will need to resolve them. These could range from inadequacies in sampling protocols to excessive water age in storage tanks or poor source water treatment[1].

The detection of *E. coli* will continue to be regarded as a potential health concern[2]. Detection of *E. coli* in repeated samples (or followed by total coliform positives) will still be a violation and

---

[1] Repeated exceedances of the five percent trigger will require a more in-depth evaluation. How these will be conducted and by whom are still to be determined as part of the DEP regulatory revision described below. EPA has indicated that the state can determine who is qualified to conduct the evaluations, which can include utility staff, outside parties or DEP staff. MWRA staff will work to make sure that these more detailed evaluations are useful and cost-effective.

[2] The current rule actually has a MCL for fecal coliform rather than the more specific *E. coli*. The so-called fecal coliform bacteria have a variety of sources other than the feces of warm blooded animals, and thus can present "false positives" when a situation does not represent an actual health risk. The revised rule eliminates the fecal coliform

will require immediate public notice and possibly a boil order. Water systems will therefore only be alerting the public with a public notice when there is actually a possible health issue, substantially reducing confusion.

There are a variety of other smaller changes to the TCR, and EPA will be issuing guidance manuals over the next year. MWRA staff have been providing updates to our community water system staff during training classes over the past several years, and will continue to assist communities in implementing the rule changes. MWRA staff have routinely assisted communities with any total coliform positives to evaluate potential causes and will continue to do so under the revised rule.

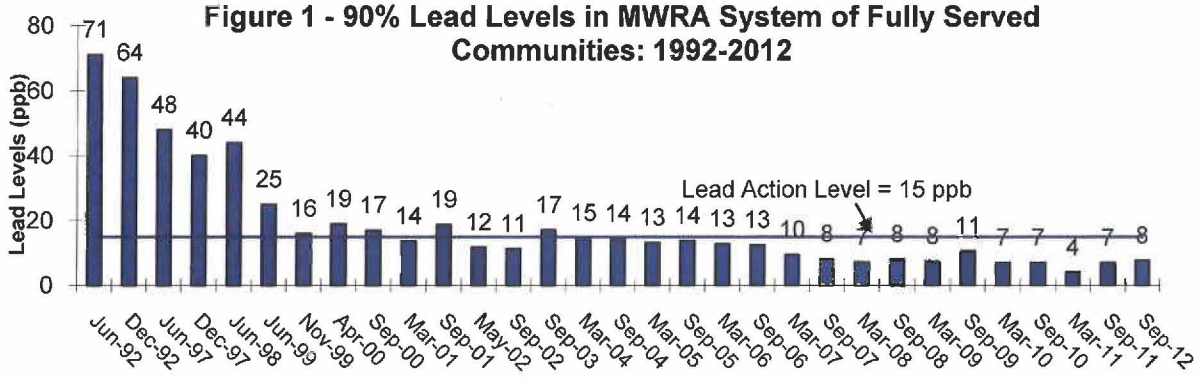
Under the Safe Drinking Water Act (SDWA), the revised TCR must be implemented within 3 years - by March of 2016. As Massachusetts has delegated authority under the SDWA, the Massachusetts Department of Environmental Protection (DEP) would have to revise its own drinking water regulations to implement the rule no later than that date. Typically DEP has required most of the three-year window to draft and promulgate rule changes. Because it is such a substantial improvement, MWRA staff and the members of the DEP SDWA Advisory Committee have been strongly urging DEP to accelerate its schedule for the revised TCR, and in February DEP indicated that it intended to complete its process by the end of 2013, more than two years faster than required.

Lead in Brass Requirements

One of the troubling situations in public health related to drinking water has been the fact that brass fixtures and fittings have been allowed to contain up to eight percent lead, and still be called "lead free" under the Safe Drinking Water Act. Thus while the SDWA requires that water system test for lead and provide corrosion control treatment, consumers could still be purchasing new fixtures and faucets which could leach lead into water in their homes.

The introduction of modern corrosion control treatment in the MWRA system in 1996 has been one of the MWRA's most significant successes, with lead levels at the tap dropping almost 90 percent as shown in the chart below. However, individual sample results in some homes continue to occasionally be above the lead action level, even in homes without a lead service line. This is likely due in part to the presence of lead in brass fixtures.

Figure 1 - 90% Lead Levels in MWRA System of Fully Served Communities: 1992-2012



standard and replaces it with a more appropriate *E. coli* MCL of zero. MWRA had anticipated this change and has already switched to *E. coli* analysis.

Many in the public health and water industry communities have urged Congressional action to revise the SDWA to provide a true "lead free" requirement. MWRA staff have participated in EPA workshops and stakeholder meetings on this topic, and have provided Congressional testimony on its importance on two occasions. Over the past several years, several states including California and Vermont, enacted legislation mandating that new brass fixtures contain no more than 0.25 percent lead. Faced with prospect of varying standards across the country, manufacturers became more amenable to a national solution, and finally in January 2011 Congress passed revisions to the SDWA mandating that all new brass for potable purposes contain no more than 0.25 percent lead. The law will come into effect in January 2014.

The law will affect both consumer fixtures such as faucets, plumbing fittings and shut off valves, and appurtenances in the public water supply such as curb stops, taps, and meters. MWRA staff have been providing advance notice to our customer community staff on the changes as they will affect local water systems, and have reviewed our own design and procurement standards to ensure that MWRA will comply. Inventories of existing non-complying supplies will need to be depleted before January, and all new purchases will need to be compliant with the new requirements. Plumbing manufacturers have indicated that they do not anticipate any difficulty meeting the new requirements.

Unregulated Contaminant Monitoring Rule (UCMR) Update

EPA periodically requires water systems to conduct monitoring for as-of-yet unregulated contaminants in drinking water to assist it in understanding their national occurrence as part of the process of deciding whether to regulate the contaminants. Staff reported to the Board on the UCMR3 in May 2012 and indicated that MWRA would collect and analyze the required samples on behalf of all fully supplied communities.

The UCMR3 testing involves analyzing for 21 substances, including a number of metals, byproducts of disinfection, volatile organic compounds, and perfluorinated compounds in each community for four quarters as well as 7 hormones in a few communities. MWRA has arranged the testing to be staggered, with some communities each year for three years, and with the required hormone sampling in only the second year. The first quarterly results were received in early March. Only three substances were present above the required very sensitive detection limits: total chromium, strontium, and chlorate.

Total chromium is already regulated by EPA with a Maximum Contaminant Level (MCL) of 100 parts per billion (ppb). It was included in the UCMR3 testing with a sensitive detection level as part of the information that would be useful in evaluating the results for hexavalent chromium. Results for total chromium ranged from 0.21 to 0.62 ppb, all below the normal detection limit MWRA uses for regulatory testing (1 ppb), and very far below the MCL of 100 ppb. Hexavalent chromium was NOT detected in this quarter, but previous testing results indicate that it is likely to be detected in other quarters.

Strontium is not regulated at this time. It is metal, common in nature, and small amounts weather from rock and are transported by water. EPA has a non-regulatory health advisory on its web site of 25 mg/L (or 25,000 parts per billion) for acute exposures and 17 mg/L (17,000 ppb) for chronic exposures. Strontium detections ranged from 26 to 32 ppb, approximately 1000 times lower than the acute health advisory.

Chlorate is a degradation product of the sodium hypochlorite which MWRA uses for disinfection. It is not regulated at this time. The World Health Organization (WHO) has a provisional guideline value of 0.7 mg/L (700 ppb), Health Canada has a guideline value of 1 mg/l (1,000 ppb), and a number of years ago California proposed a standard (which was never finalized) for chlorate of 0.5 mg/L (500 ppb). Chlorate detections ranged from 44 to 57 ppb, about 10 to 20 times lower than the guideline values cited above.

UCMR results must be included in the Annual Water Quality Report beginning in June 2014, even though the contaminants are not regulated.

Stage 2 Disinfectants/Disinfection Byproducts Rule Update

The Stage 2 Disinfectants/Disinfection Byproducts Rule, promulgated in 2006, required that sampling and compliance calculation methods for disinfection byproducts be changed as of 2012. MWRA staff have provided several updates to the Board on the changes to the rule, and provided substantial assistance to our customer communities in complying with the changes.

For the MWRA system, the principle impact of the new regulation ended up being the need to add additional sampling sites. Previously, the sampling program had 16 sites monitored quarterly; the new program requires quarterly samples at one site in each fully supplied community for a total of 32 sites in the metroBoston system[3]. As required, sampling began in the second quarter of 2012, and results of the first four quarters of data have now been received.

The new rule also requires that the method of assessing compliance with the Maximum Contaminant Levels be changed once four quarters of data are available. Under the old rule, compliance was based on averaging all sites over four quarters – a running annual average (RAA). The new rule requires a separate calculation for each of the 32 sites over four quarters – a locational running annual average (LRAA). The highest LRAA will be the one that determines if the system is in compliance with the rule.

With the first four quarters of data now in, MWRA's highest LRAA for total trihalomethanes was 8.4 ug/L compared to the MCL of 80 ug/L. The LRAA for haloacetic acids was 8.8 ug/L compared to the MCL of 60 ug/L. As expected, neither LRAA was substantially different than the old RAA. The presentation of disinfection byproducts data in various MWRA publications including the Orange Notebook and the Monthly Water Quality Update will be changed over the next few months to accommodate the new rule requirements, and the new compliance calculation will be included in the June 2014 Annual Water Quality Report.

Long-Term Revisions to the Lead and Copper Rule

Lead continues to be an important national health issue, and continues to be one of the issues which generates the most concern among our customers. The CDC recently revised its level of concern for children's blood lead levels from 10 ug/dl (micrograms per deciliter) to 5, and indicated that they believed that the science now supports a goal of zero as even low levels appear to have some impact on children's development. While lead levels in drinking water

[3] Because they provide their own treatment, partially supplied and CVA communities each have their own separate monitoring programs. As smaller systems, their compliance schedule is six months behind the metro system. MWRA staff provided all communities with assistance in reviewing and setting up the new sampling programs.

have declined nation-wide over the past 20 years, there are still some systems which occasionally are above the lead action level, and many systems do detect lead in at least some samples. EPA has indicated that reducing lead exposures is one of their national priorities.

In addition to the lead in brass legislation discussed above, EPA has been working on revisions to the Lead and Copper Rule (LCR) since 2004. MWRA staff have been very actively involved over that time period, serving on EPA sponsored work groups and negotiating committees, participating with AWWA and AMWA in reviewing and commenting on EPA proposals, and providing data and research support to help resolve technical questions. EPA did issue some short-term revisions to the LCR in 2007 which focused on outreach requirements for all systems and on required lead education for systems above the lead action level. Staff have provided several updates on EPA's progress.

It had been anticipated that EPA would be issuing a draft LCR proposal later in 2013. Just recently EPA has indicated that it will not do so, and plans to re-open the stakeholder process to attempt to resolve several of the thornier aspects of the existing rule. How these are resolved could have substantial impacts on MWRA and our communities, and so staff will continue to monitor them closely.

One important issue has to do with how the required sampling is to be conducted. The current rule requires that samples be taken in stagnant (first flush) water from homes which have a higher likelihood of having lead present in their plumbing – a lead service line, lead plumbing or old lead solder. If a system has any lead services (the small pipe connecting the house to the water main in the street), at least half their sample sites should be in those homes. EPA is considering possibly requiring that all samples be in homes with lead service lines (if they are present) and also that the sample be of the water from the service line itself. There is some indication that such changes would have the effect of increasing the 90^{th} percentile results, potentially increasing the number of systems which exceed the lead action level.

EPA is also considering changes to the requirements that systems which exceed the lead action level annually replace 7 percent of their lead service lines. Typically the service line is partially owned by the water system (from the water main to the property line) and partially by the homeowner (from the property line to the house). The current requirement is that the system replace what it owns, and encourage the homeowner to replace their portion. Often, only the publicly owned portion is replaced as the homeowner does not want to spend the several thousand dollars to replace their portion. When originally conceived in 1991, this approach seemed to provide some public health benefit – removing a portion of the lead line was assumed to proportionally reduce the lead exposure. Unfortunately, data collected over the past several years does not support that assumption, and in fact a partial lead service line replacement appears to often result in a short term increases in lead levels, and little or no long term reduction. Given the institutional ownership issues, the financial implications and the lead exposure risks of both removing and not removing the lead service line, EPA does not yet have a clear path to a useful and workable requirement. EPA is apparently considering one approach which would mandate full replacement at the water systems cost – whether this would withstand a legal challenge is unclear. Allowing no partial replacements, even for repairs or related to construction projects

has also been raised as a possibility. Given that many MWRA communities still have lead service lines, how this is resolved may have important implications to our communities[4].

The third significant issue is how EPA evaluates "optimum corrosion control". While there is a regulatory action level of 15 ppb, the LCR actually requires that systems optimize their corrosion control, that is, to attempt to minimize lead. In addition, when a community exceeds the action level, it may be required to re-evaluate its corrosion control practices. Some of the options EPA is considering could cause many systems, including the MWRA to completely rethink how they do corrosion control, potentially at significant cost. Given the considerable scientific uncertainty about how corrosion control actually (vs. theoretically) works and the frequent need for very high-level expert assistance to evaluate changes, it is not clear how EPA will be able to craft a workable national rule affecting all water systems.

EPA is also considering requiring a separate sampling program for copper levels, focused on homes with new plumbing. Copper is most often elevated in new plumbing systems, but normally reduces quickly and naturally over time as the copper plumbing becomes passivated. The current required sampling under the LCR focused on older homes with lead misses these situations, but finding new homes for each sampling round could present a substantial burden on water suppliers, with relatively limited benefit.

Other Potentially Regulated Contaminants

Staff are also tracking several other regulatory development efforts at EPA and DEP which have some potential to affect MWRA or our member communities, and will continue to provide updates to the Board of Directors on significant developments.

EPA is actively working on potential regulations for perchlorate, hexavalent chromium and NDMA. Perchlorate is a degradation byproduct of the sodium hypochlorite which MWRA uses for disinfection and is already regulated by Massachusetts. MWRA detects trace amounts of it, well below the DEP limits and these are reported in the Annual Water Quality Report. Hexavalent chromium is a particular form of a naturally occurring element. It is noteworthy as the contaminant made famous in the movie ***Erin Brockovich*** starring Julia Roberts. As noted above, MWRA has detected very low levels of this in voluntary testing. These results were reported in the Annual Water Quality Report as well as on the MWRA web page. Significantly higher levels are widespread in parts of California. EPA has committed to an accelerated regulatory development process. NDMA (*N*-Nitrosodimethylamine) is a byproduct of chloramination (it can also be an industrial pollutant). More interestingly, certain foods contain significantly more than water, and the body makes even higher levels of NDMA in the digestive tract. DEP has an advisory level of 10 parts per trillion, and EPA is actively considering whether and how to regulate it. MWRA has detected very low levels of NDMA in some high residence time samples. These have been reported in the Annual Water Quality Report.

[4] It is worth noting that the approach that the Boston Water and Sewer Commission has taken to this issue is often cited as one of the more effective and progressive approaches short of a mandatory full replacement program. The BWSC program provides for a $1000 subsidy for replacement of the private portion of the lead service line, and allows the homeowner to pay off the remainder of the cost on their water bill over 24 months at no interest. Lead service line replacement is also an eligible expense under MWRA's zero interest Local Water System Improvement Program.

Although EPA currently has no intention of regulating manganese, DEP is actively working on a health advisory for formula-fed infants which may affect some ground water supplies. Based on the information available at this time, no MWRA communities seem likely to be affected, but the publicity when the advisory comes into effect in 2014 may cause consumer concern.

In January 2011, the Department of Health and Human Services and the Centers for Disease Control and Prevention (CDC) issued draft guidance which would have lowered the recommended fluoride dose from 1 to 0.7 mg/L. At the time, CDC indicated that the change would be finalized in the spring of 2011, and staff briefed the Board that when it occurred MWRA would follow the recommendation and change MWRA's fluoride dose. CDC has not yet finalized the change, but has recently indicated that it anticipates releasing a final recommendation later this year. The reduced dose will represent about a $300,000 annual savings.

STAFF SUMMARY

TO: Board of Directors
FROM: Fredrick A. Laskey, Executive Director
DATE: April 10, 2013
SUBJECT: Watertown Section Pipeline Rehabilitation, Waltham and Watertown
J. D'Amico, Inc.
Contract 7222

COMMITTEE: Water Policy & Oversight

____ INFORMATION
__X__ VOTE

Rachel C. Madden, Director
Administration and Finance

Ester N. Lwebuga, Project Manager
Jae R. Kim, P.E., Chief Engineer
Preparer/Title

Michael J. Hornbrook
Chief Operating Officer

RECOMMENDATION:

To approve the award of Contract 7222, Watertown Section Pipeline Rehabilitation, Waltham and Watertown, to the lowest responsible and eligible bidder, J. D'Amico, Inc., and to authorize the Executive Director, on behalf of the Authority, to execute said contract in the bid amount of $2,580,900, with a contract term of 214 calendar days from the Notice to Proceed.

DISCUSSION:

The Watertown Section pipeline is a 30-inch-diameter, unlined steel pipe, approximately 5,800 feet in length that was constructed in 1920; it supplies MWRA Meter 148 (Waltham) and MWRA Meter 92 (Watertown). In 2004, a small portion of the main was replaced as part of Contract 6910, Waltham Pipe Bridge Replacement. MWRA staff replaced another small section of the main, including Meter 92 in 2005, leaving approximately 5,700 feet that still needs to be rehabilitated.

The decision to rehabilitate the remaining portion of the Watertown Section pipeline is based on conclusions from testing and analysis of the sections of this pipeline that were removed during the earlier construction projects. The analysis showed that the pipe has extensive internal pitting and approximately 95% of the coal tar coating on sections of the pipe was found to be missing. The Watertown Section pipeline is more than 90 years old and has experienced previous leaks.

Contract 7222 (See Attachment A – Locus Map) includes slip-lining of 5,400 feet of the main with 24-inch high-density polyethylene (HDPE) pipe and the installation of 300 feet of 24-inch-diameter and 30-inch- diameter HDPE pipe by open-cut construction. Contract 7222 also

includes replacement of approximately 65 feet of the City of Cambridge's 30-inch, 36-inch and 48-inch raw water main at the intersection of Clark Street and River Street where the Watertown Section pipeline is located directly underneath it. During the time period necessary to replace Cambridge's raw water main, Cambridge's water treatment plant must be shut down and Cambridge will receive water from MWRA's system.

The City of Waltham will be paving River Street in spring 2014 so MWRA's work in this area must be complete before then; Contract 7222 is scheduled to be substantially completed in late fall 2013.

Procurement Process

Contract 7222 was advertised and bid in accordance with Massachusetts General Laws, Chapter 30. Bids were received and opened on April 2, 2013 with the following results:

Contractor	Bid Amount
Engineer's Estimate	*$2,250,000*
J. D'Amico, Inc.	$2,580,900
R. Zoppo Corp	$2,657,200
P. Caliacco Corp.	$3,156,500
Albanese D&S, Inc.	$3,378,000
Revoli Construction Co. Inc.	$5,265,550

J. D'Amico's bid is the lowest at $2,580,900, which is $330,900 more than the Engineer's Estimate. The two lowest bids were within 3% of each other.

MWRA staff and the Design Engineer, Green International Affiliates, Inc., have reviewed J. D'Amico's bid in detail and discussed the major bid items with the company. Based on the bid review and subsequent discussions with J. D'Amico, staff are satisfied that J. D'Amico understands the full scope of work and can perform the work for the bid price, which includes the payment of prevailing wages.

References were checked and found to be favorable. J. D'Amico has successfully completed many past MWRA projects since 1989, including projects of similar size and complexity to the Watertown Section Pipeline Rehabilitation project.

Staff are of the opinion that J. D'Amico possesses the skill, ability, and integrity necessary to perform the work under this contract and is qualified to do so. Therefore, staff recommend the award of this contract to J. D'Amico, Inc. as the lowest responsible and eligible bidder.

BUDGET/FISCAL IMPACT:

The FY13 CIP includes a budget of $21,063,298 for Contract 7222. Contract 7222 has subsequently been broken up into three contracts. The contract award amount is $2,580,900. There are sufficient funds available for this contract.

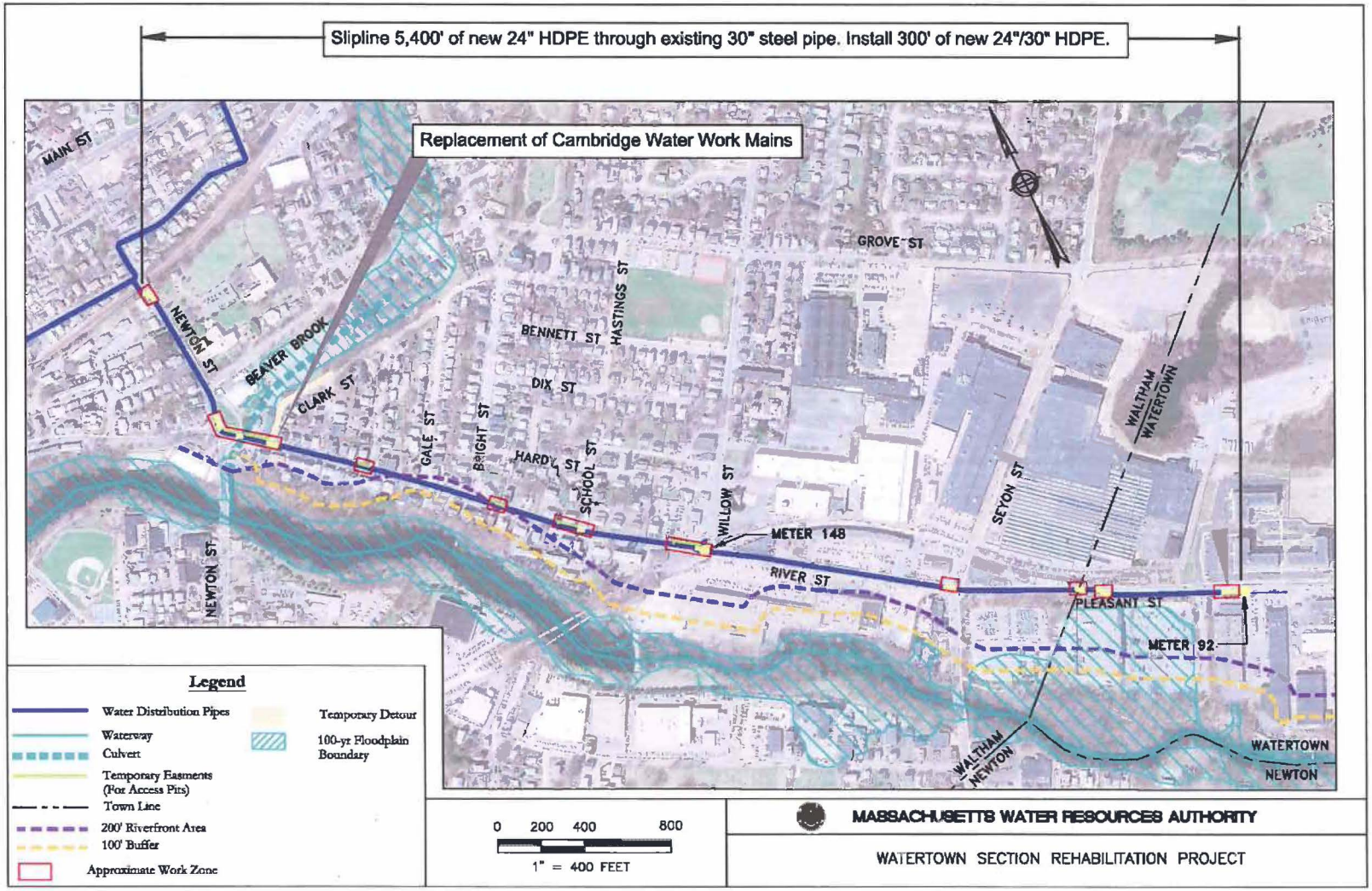
MBE/WBE PARTICIPATION:

The Affirmative Action and Compliance Unit has determined that there are no MBE or WBE subcontracting requirements for this project as there are limited subcontracting opportunities.

ATTACHMENT:

Attachment A – Contract 7222 Watertown Section Rehabilitation Location Map

Attachment A – Contract 7222 – Watertown Section Pipeline Rehabilitation



STAFF SUMMARY

TO: Board of Directors
FROM: Frederick A. Laskey, Executive Director
DATE: April 10, 2013
SUBJECT: Ultraviolet Disinfection Facilities
John J. Carroll Water Treatment Plant
Daniel O'Connell's Sons, Inc.
Contract 6924, Change Order 12

COMMITTEE: Water Policy & Oversight

____ INFORMATION
__X__ VOTE

Charles Scott, Construction Coordinator
A. Navanandan, P.E., Director, Construction
Preparer/Title

Michael J. Hornbrook
Chief Operating Officer

RECOMMENDATION:

To authorize the Executive Director, on behalf of the Authority, to approve Change Order 12 to Contract 6924, Ultraviolet Disinfection Facilities, with Daniel O'Connell's Sons, Inc., for a lump sum amount of $939,975.20, increasing the contract amount from $30,616,148.21 to $31,556,123.41, with no increase in contract term.

Further, to authorize the Executive Director to approve additional change orders as may be needed to Contract 6924 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:

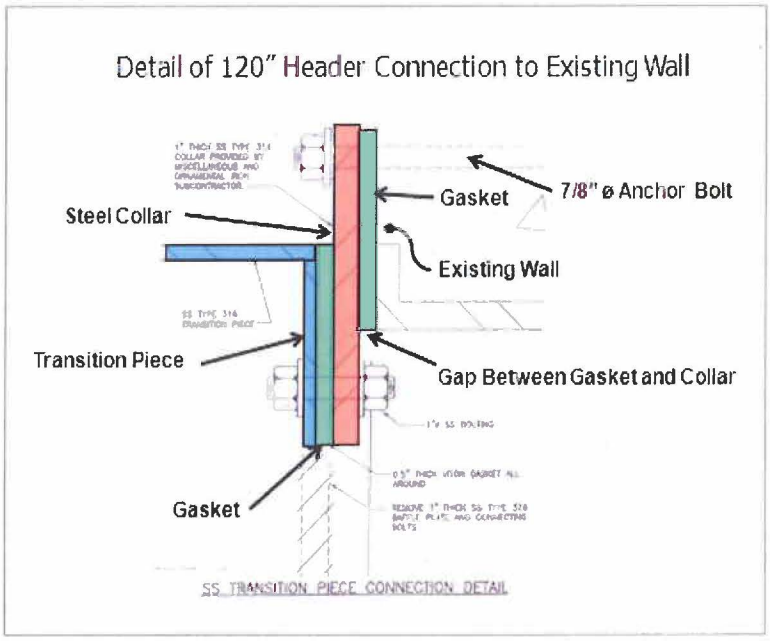
On April 13, 2011, the Board approved the award of Contract 6924 to Daniel O'Connell's Sons, Inc. to construct an ultraviolet (UV) disinfection system at the Carroll Water Treatment Plant (CWTP) to bring the plant into compliance with the new Long-Term 2 Enhanced Surface Water Treatment Rule. The contract includes a milestone of February 14, 2014, by which time the UV system must be in service; this is six weeks prior to the April 1, 2014 compliance date in the Long-Term 2 Enhanced Surface Water Treatment Rule.

This Change Order

Change Order 12 consists of the following three items:

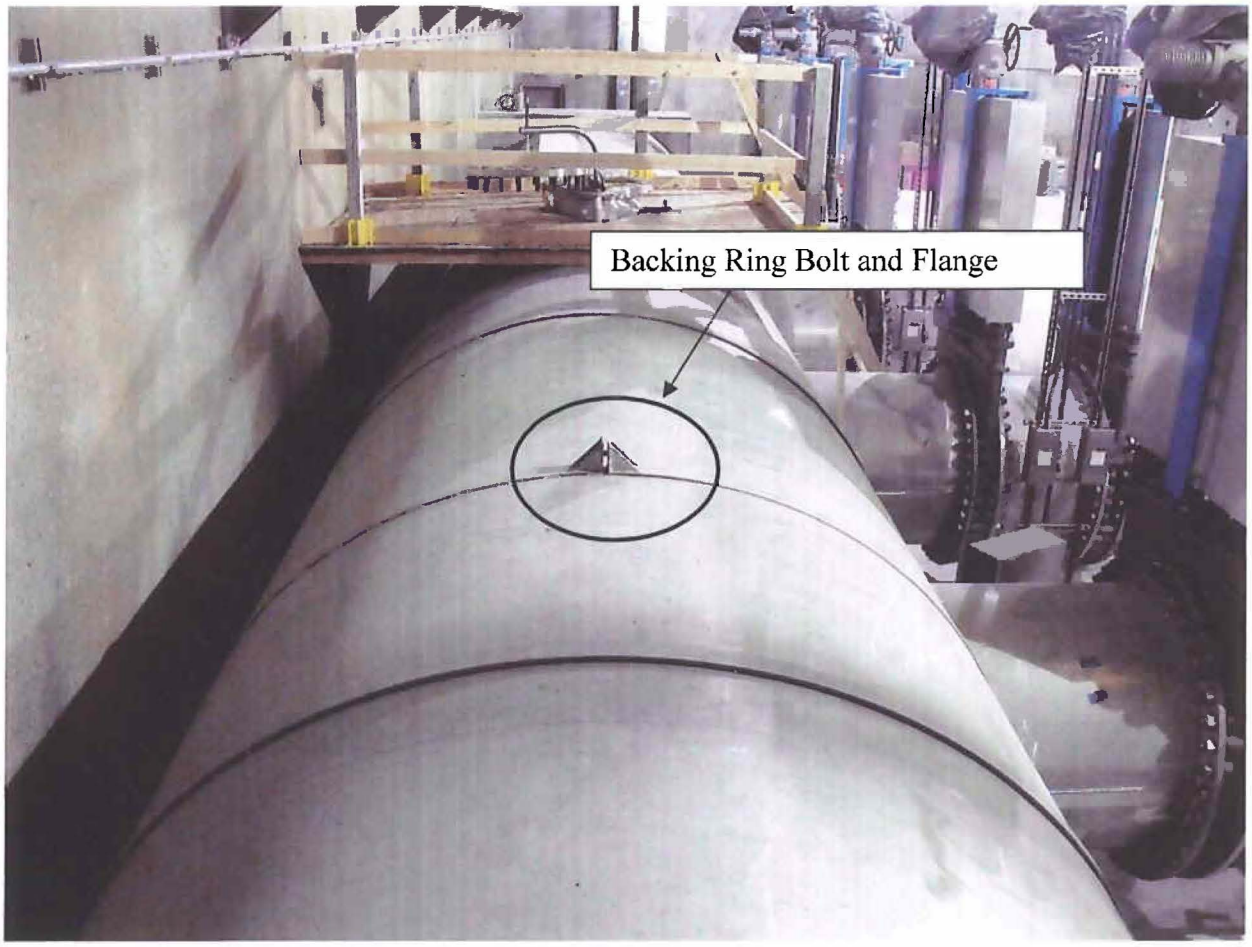
Replacement of Two Stainless Steel Transition Pieces $896,828

The Design Consultant, AECOM, designed 120-inch header pipes on both the A-Side and B-Side UV Rooms to carry water to the six UV Reactors in each UV room. Each header pipe included a stainless steel transition piece connecting the round header pipe to the square opening in the existing concrete wall (see detail drawing on the right). As reported to the Board at the February meeting, when the A-side header pipe was tested, the connection between the transition piece and the concrete wall leaked. It was discovered that the transition joints had separated from the concrete wall on both the A-side and the B-side.



Pipe and structural analysis indicated that the design of the connection was not adequate to resist the forces imposed on this joint due to thermal contraction. Therefore, the transition pieces and associated concrete cradles have to be removed and replaced with stainless steel spool pieces and cast-in-place concrete transition structures in accordance with a revised design prepared by AECOM. It is necessary to cut openings in the roof on each side to perform the work, install temporary walls to protect the UV equipment from concrete dust and debris, and replace the roof and remove the wall when the change order work is completed

Since it presently appears that the failure of the connections is due to a design error, MWRA has notified AECOM of a potential claim against the firm and has requested that AECOM immediately notify its professional liability insurer of the potential claim. Staff also have informed the Contractor, Daniel O'Connell's Sons, Inc., that although MWRA is processing a change order for this work, it is reserving its rights in the event that further testing indicates that the failure was caused in whole or in part by the Contractor. The Contractor utilized an external bracket (or backing ring) to hold the two pieces of the 102-feet long stainless steel header pipe segments together while welding them on site. The use of a backing ring was allowed in the contract specifications. The backing ring is held together by bolts located 180 degrees apart (see picture on the following page), one at the top of the pipe and one at the bottom of the pipe, embedded in concrete. MWRA is investigating whether this contributed to the transition connection failure.



MWRA hired an independent Engineering Consultant, CDM Smith, to review the technical feasibility and adequacy of the re-design for the repair work and to provide a fair cost estimate, which assisted MWRA in the negotiations for the cost of this repair work.

The approved Proposed Change Order (PCO) for this item has been identified by MWRA staff as a design error. AECOM, MWRA staff, and the Contractor have agreed to a lump sum amount of $896,828 for this work with no increase in contract term.

Furnish and Install an Additional Pipe
Support Under Each 48-inch Stainless Steel Lateral $77,344.82

AECOM designed pipe supports for the 48-inch stainless steel laterals in UV Rooms A and B and confirmed that these supports will support all pipe loads when the pipe is connected. However, if it is necessary to replace a valve, the lateral will have to be drained and the joint disconnected, which would require additional support to prevent damage to the pipe. Therefore, the Contractor must furnish and install additional pipe supports under each of the 48-inch laterals.

The approved PCO for this item has been identified by MWRA staff as an unforeseen condition. AECOM, MWRA staff, and the Contractor have agreed to a lump sum amount of $77,344.82 for this additional work with no increase in contract term.

Eliminate Portions of the Catwalk in UV Rooms A and B ($34,197.62)

The contract includes catwalks over the top of the six parallel 48-inch laterals to provide access to the UV reactors, valves and monitoring equipment. Each catwalk includes an extension of the landing at the top of the access stairs (east side) and access ladders (west side) to provide access to the knife gate valve operators by ladder. MWRA staff are concerned that accessing the knife gate valve operators by ladder from the catwalk extension could create potential safety issues. Since access to the operators can be made by ladder from the floor, staff recommend that the extensions be eliminated and the resulting gaps in the railings should be filled in.

The approved PCO for this item has been identified by MWRA staff as an unforeseen condition. AECOM, MWRA staff, and the Contractor have agreed to a lump sum credit amount of ($34,197.62) for the deletion of this work with no increase in contract term.

The Contractor has proceeded with the work of these items at its own risk.

CONTRACT SUMMARY:

	Amount	Time	Dated
Original Contract:	$29,413,382.00	1,420 Days	04/21/11
Change Orders:			
Change Order 1*	$18,742.37	0 Days	12/16/11
Change Order 2*	$13,791.51	0 Days	12/27/11
Change Order 3*	$200,113.56	0 Days	03/08/12
Change Order 4	$91,782.93	0 Days	03/19/12
Change Order 5*	$188,180.70	0 Days	05/30/12
Change Order 6*	($9,859.73)	0 Days	06/21/12
Change Order 7*	$56,904.91	0 Days	08/21/12
Change Order 8	$396,061.52	0 Days	10/22/12
Change Order 9*	$15,541.51	0 Days	02/26/13
Change Order 10*	$11,705.04	0 Days	03/19/13
Change Order 11*	$219,801.89	0 Days	Pending
Change Order 12	$939,975.20	0 Days	Pending
Total of Change Orders:	$2,142,741.41	0 Days	
Adjusted Contract:	$31,556,123.41	1,420 Days	

*Approved under delegated authority

If Change Order 12 is approved, the cumulative value of all change orders to this contract will be $2,142,741.41 or 7.3% of the original contract amount. Work on this contract is approximately 86% complete.

BUDGET/FISCAL IMPACT:

The FY13 CIP contains a budget of $30,745,144 for Contract 6924. Including this change order for $939,975.20 the adjusted subphase total is $31,556,123.41 or $810,979.40 over budget. This amount will be covered within the five-year CIP spending cap.

MBE/WBE PARTICIPATION:

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

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:
Vice-Chair: K. Cotter
Committee Members:
J. Barrera
J. Carroll
J. Foti
A. Pappastergion
J. Walsh

to be held on

Wednesday, April 10, 2013

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

Time: Immediately following Water Comm.

A. Approvals

1. PCR Amendments - April 2013
2. Appointment of Deputy Payroll Manager, Administration & Finance
3. Appointment of Director of Environmental Quality and Related Organizational Changes, Operations Division

MASSACHUSETTS WATER RESOURCES AUTHORITY

Meeting of the
Personnel and Compensation Committee

March 13, 2013

A meeting of the Personnel and Compensation Committee was held on March 13, 2013 at the Authority headquarters in Charlestown. Member Barrera presided. Present from the Board were Messrs. Carroll, Flanagan, Foti, Pappastergion, Swett, Vitale and Walsh, as well as Board member-elect Ms. Wolowicz. Among those present from the Authority staff were Fred Laskey, Steve Remsberg, Rachel Madden, Bob Donnelly, and Bonnie Hale. The meeting was called to order at 12:20 p.m.

Approvals

*PCR Amendments – March 2013

Staff summarized the nature of the PCR amendments and there was general discussion and question and answer. Mr. Barrera suggested that new Board members be given copies of the Staffing Study report. The Committee recommended approval of the amendments to the Position Control Register (ref. agenda item A.1).

*Renewal of Two Employment Contracts, Senior Laboratory Technicians, Department of Laboratory Services

The Committee recommended approval of renewal of the employment contracts for Ms. Yuan Jiao Chen and Ms. Roxann Phelan (ref. agenda item B.2).

The meeting adjourned at 12:25 p.m.

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* Approved as recommended at March 13, 2013 Board of Directors meeting.

STAFF SUMMARY

TO: Board of Directors
FROM: Frederick A. Laskey, Executive Director
DATE: April 10, 2013
SUBJECT: April PCR Amendments

COMMITTEE: Personnel and Compensation

____ INFORMATION
__X__ VOTE

Robert Donnelly, Director of Human Resources
Joan C. Carroll, Manager Compensation
Preparer/Title

Rachel C. Madden
Director, Administration & Finance

RECOMMENDATION:

To approve the amendments to the Position Control Register (PCR) included in the attached chart[1].

DISCUSSION:

The PCR amendments included in this package reflect organizational changes aimed at improving the cost-effectiveness, structural soundness and staffing patterns as well as addressing union settlements within the Operations and Administration and Finance Divisions.

These amendments include:

1. Title and grade changes to 2 vacant positions (Assistant Civil Engineer to Staff Engineer) in Engineering and Construction, Operations Division to meet current staffing needs of the department.

2. Title change to a filled position (Payroll Administrator, Operations, to Deputy Payroll Manager) in the Controller Department, Administration and Finance Division to better reflect the organizational structure in Payroll.

3. Title change to a vacant position (Programmer Analyst II to Systems Analyst/Programmer I) in MIS, Administration and Finance Division to reflect current information technology needs

4. Title and grade change to a filled position (Project Engineer to Sr. Survey Engineer) in Engineering and Construction, Operations Division as a result of a union settlement.

[1] The Position Control Register lists all regular positions in this fiscal year's Current Expense Budget. Any changes to positions during the year are proposed as amendments to the PCR. The Personnel and Compensation Committee of the Board of Directors must approve all PCR amendments. In addition, any amendments resulting in an upgrade of a position by more than one grade level or increasing a position's annual cost by $10,000 or more must be approved by the Board of Directors after review by the Personnel and Compensation Committee.

Four amendments require approval by the Personnel and Compensation Committee and one amendment requires Board approval after Personnel and Compensation Committee review.

BUDGET/FISCAL IMPACT:

The annualized budget impact of these PCR amendments will be savings ranging from $6,380 to $41,406. The actual budget impact will be dependent on the salary placement of the future hires for the position of Staff Engineer.

ATTACHMENTS:

New/Old Job Descriptions

MASSACHUSETTS WATER RESOURCES AUTHORITY
POSITION CONTROL REGISTER AMENDMENTS
FISCAL YEAR 2013

PCR AMENDMENTS REQUIRING PERSONNEL & COMPENSATION COMMITTEE APPROVAL - April 10, 2013

Number	Current PCR #	V/F	Type	Current Title	UN	GR	Amended Title	UN	GR	Current/Budget Salary	Estimated New Salary	Estimated Annual $ Impact	Reason For Amendment
P23	Operations Engineering 5525074	V	T,G	Assistant Civil Engineer	9	21	Staff Engineer	9	19	$75,658	$51,254 - $68,767	-$24,404 - -$6,891	To meet departmental staffing needs
P24	Operations Engineering 5525097	V	T,G	Assistant Civil Engineer	9	21	Staff Engineer	9	19	$75,658	$51,254 - $68,767	-$24,404 - -$6,891	To meet departmental staffing needs
P25	Admin & Finance Controller 4310017	F	T	Payroll Administrator, Operations	6	11	Deputy Payroll Manager	6	11	N/A	N/A - N/A	$0 - $0	To better reflect organizational structure
P26	Admin & Finance MIS 8610038	V	T	Programmer Analyst II	6	9	Systems Analyst / Programmer I	6	9	N/A	N/A - N/A	$0 - $0	To meet the information technology needs of the department
	PERSONNEL & COMP COMMITTEE TOTAL=				4						**TOTAL**	-$48,808 - -$13,782	

Legend:
V = Vacant position, F = Filled position
T = Title change, L = Location change; transfer to another Cost Center, G = Grade Change, SA= Salary Adjustment, E = Elimination

MASSACHUSETTS WATER RESOURCES AUTHORITY
POSITION CONTROL REGISTER AMENDMENTS
FISCAL YEAR 2013

PCR AMENDMENTS REQUIRING BOARD APPROVAL - April 2013

Number	Current PCR #	V/F	Type	Current Title	UN	GR	Amended Title	UN	GR	Current/Budget Salary	Estimated New Salary	Estimated Annual $ Impact	Reason For Amendment
B24	Operations E&C 55250104	F	T/G	Project Engineer	9	21	Senior Survey Engineer	9	23	$75,658	$83,060 - $83,060	$7,402 - $7,402	Union Settlement
				BOARD TOTAL =	1						**SUBTOTAL:**	$7,402 - $7,402	
				GRAND TOTAL =	5						**TOTAL ESTIMATED COSTS:**	-$41,406 - -$6,380	

Legend:
V = Vacant position, F = Filled position
T = Title change, L = Location change; transfer to another Cost Center, G = Grade Change, SA= Salary Adjustment, E = Elimination

OLD

MWRA

POSITION DESCRIPTION

POSITION: Assistant Civil Engineer

PCR#:

DIVISION: Operations

DEPARTMENT: Engineering and Construction/Field Operations

BASIC PURPOSE:

Provides direction to a small staff of construction inspection personnel in inspecting and administering construction projects of moderate complexity.

SUPERVISION RECEIVED:

Works under the general supervision of the Senior Civil Engineer or Construction Coordinator.

SUPERVISION EXERCISED:

Exercises close supervision of a small staff of construction inspection personnel in inspecting and administering construction projects of moderate complexity.

ESSENTIAL DUTIES AND RESPONSIBILITIES:

- Acts as a Resident Engineer of construction projects of moderate complexity insuring conformance to plans and specifications. Makes revisions to meet local conditions encountered in the field and plans sequence of work with contractors on jobs and submits progress reports.

- Maintains documentation of work performed by construction contractors in conformance with established department procedures. Recommends approval of variations made necessary by contingencies arising after construction work has begun.

- Assists the Resident Engineer on major projects; performs inspection and maintains documentation of work performed by construction contractors.

- Computes quantities for completed construction, reviews and calculates project cost estimates and computes data for periodic reports and records.

- Coordinates construction with pertinent Authority departments and concerned public agencies.

- Prepares and maintains red line drawings and sketches, documenting actual construction work.

SECONDARY DUTIES:

- Reviews plans of small projects for bidability and constructability.

- Performs computations or checks computations and plans made by others for accuracy: estimates materials quantities and project costs, reviews contractors' payment requests and makes recommendation for payment.

- Performs related duties as required.

MINIMUM QUALIFICATIONS:

Education and Experience:

(A) A (4) four year degree in Civil Engineering, Civil Engineering Technology or related field; and

(B) Two (2) years technical or professional experience in civil engineering work such as construction, survey, design, hydraulics, structural, highway architecture, soils and materials; or

(C) Any equivalent combination of education and experience.

Necessary Knowledge, Skills and Abilities:

(A) A thorough knowledge of the heavy construction industry. Technical skills and knowledge of construction methods.

(B) Skill in the operation of listed tools and equipment.

(C) Ability to effectively manage construction contract involving complex and varying technical problems.

(D) Excellent interpersonal, oral and written communication skills.

SPECIAL REQUIREMENTS:

A valid Massachusetts Class D Motor Vehicle Operators License.

Registration as a Professional Engineer in Massachusetts is preferred.

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.

January, 2001

NEW

MWRA

POSITION DESCRIPTION

POSITION: Staff Engineer

PCR#:

DIVISION: Operations

DEPARTMENT: Engineering & Construction

BASIC PURPOSE:

Assists engineering staff with the development, execution, and management of various engineering projects. Provides engineering expertise for the planning and design of projects for wastewater and waterworks facilities.

SUPERVISION RECEIVED:

Works under the general supervision of the senior staff in the Engineering Unit.

SUPERVISION EXERCISED:

None.

ESSENTIAL DUTIES AND RESPONSIBILITIES:

- Assists department personnel with tasks related to the evaluation, planning, or design of facilities or equipment for wastewater treatment plants, pumping stations, CSO facilities, collection system components, waterworks pump stations, distribution and transmission lines, and support buildings.

- Assists in the preparation of concept and preliminary design reports, design facilities, cost estimates, construction and maintenance contracts, shop drawing reviews and permit applications.

- Assists in overseeing the work of professional engineering consultants for quality and responsiveness of work products, budgets and schedules, and conformance to contract terms.

- Assists with preparation and reporting of project budgets and schedules.
- Assists with contract administration tasks.
- Drafts internal or external memoranda, correspondence, reports, and specifications

SECONDARY DUTIES:

- Performs related duties as required.

MINIMUM QUALIFICATIONS:

Education and Experience:

(A) A bachelors degree in civil or environmental engineering or related engineering field required; and

(B) One (1) to two (2) years of wastewater or waterworks facilities planning and design experience preferred; or

(C) Any equivalent combination of education or experience.

Necessary Knowledge, Skills and Abilities:

(A) Familiarity with computer software packages such as MS Word and Excel.

(B) Demonstrated written and oral communication skills.

SPECIAL REQUIREMENTS:

None.

TOOLS AND EQUIPMENT USED:

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

PHYSICAL DEMANDS:

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

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

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

WORK ENVIRONMENT:

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

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

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

May, 2001

OLD

MWRA

POSITION DESCRIPTION

POSITION: Payroll Administrator, Operations

PCR#:

DIVISION: Finance

DEPARTMENT: Controller

BASIC PURPOSE:

Responsible for providing accurate and timely payroll processing for all MWRA employees. Oversees payroll issues at field sites. Oversees maintenance of all payroll records, tax and other regulatory reports and related payroll reports at field sites. Oversees data, information and systems coordination for field sites. Assists with the prioritization and implementation of decisions regarding timesheet processing, data management and field staff training.

SUPERVISION RECEIVED:

Works under the general supervision of the Payroll Manager.

SUPERVISION EXERCISED:

Exercises close supervision over five (5) administrative staff and general supervision over timekeepers involved in personnel and payroll activities.

ESSENTIAL DUTIES AND RESPONSIBILITIES:

- Oversees the procedures and control of the weekly payroll processing and maintains the payroll records for approximately 1200 employees. Monitors the preparation, verification and reconciliation of all payroll data input and output.

- Reviews the accuracy of the weekly time sheets and all related payroll changes at various field locations. Oversees the preparation of the payroll-related changes.

- Reconciles all payroll data input and output generated at field sites.

- Assists in all Management Information Systems (MIS) development projects and serves

as a field liaison in planning the implementation of the new Human Resources/Payroll system.

- Coordinates all activities to establish and implement new or revised systems and procedures for the consolidated payroll function. Manages quality assurance and data control functions at division level to ensure adherence to Authority-wide standards. Analyzes timesheet and payroll procedures to identify ways to increase organizational efficiency and/or reduce costs. Oversees implementation of recommendations.

- Monitors and recommends improvements for personnel data collection and maintenance programs.

- Tests and evaluates changes in payroll system practices including participation in the implementation of revisions in the in-house systems.

- Supervises and conducts the payroll control and reconciliation of all weekly/monthly mandatory and voluntary deductions.

- Reviews, controls and reconciles employee data changes and ensures consistency with supporting documentation.

- Reviews and controls weekly payroll activities for interns, co-ops and contract employees, including enforcement of the weekly and lifetime maximum hours and maximum dollar caps as applicable.

- Advises employees in payroll issues.

- Acts as liaison with divisions involving human resource and payroll processing issues.

- Responds to payroll inquires from various internal and external sources, and provides timely assistance as required.

- Supervises the review and control over the authorized and unauthorized leaves of absence, including coordination with Human Resources and Divisional staff as necessary.

- Provides guidance and necessary training to timekeepers.

SECONDARY DUTIES:

- Performs related duties as required.

MINIMUM QUALIFICATIONS:

Education and Experience:

(A) A four- (4) year degree in accounting, business or a related field is required. An additional four (4) years experience in related work may be considered as a substitute for the four (4) year degree if the candidate otherwise possesses all positions requirements; and

(B) Seven (7) to nine (9) years personnel and payroll experience, of which a minimum of two (2) years must be in a supervisory or managerial capacity; or

(C) Any equivalent combination of education or experience.

Necessary Knowledge, Skills and Abilities:

(A) Understanding of MWRA payroll policies, procedures and practices.

(B) Knowledge of automated payroll systems and various personal computer software, including MS Word, Excel and Access.

(C) Excellent interpersonal, written and oral communication skills are required.

SPECIAL REQUIREMENTS:

None.

TOOLS AND EQUIPMENT USED:

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

PHYSICAL DEMANDS:

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

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

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

WORK ENVIRONMENT:

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

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

March 2010

NEW

MWRA

POSITION DESCRIPTION

POSITION: Deputy Payroll Manager

PCR#:

DIVISION: Finance

DEPARTMENT: Controller

BASIC PURPOSE:

Responsible for providing accurate and timely payroll processing for all MWRA employees. Oversees payroll issues at field sites. Oversees maintenance of all payroll records, tax and other regulatory reports and related payroll reports at field sites. Oversees data, information and systems coordination for field sites. Assists with the prioritization and implementation of decisions regarding timesheet processing, data management and field staff training.

SUPERVISION RECEIVED:

Works under the general supervision of the Payroll Manager.

SUPERVISION EXERCISED:

Exercises close supervision over five (5) administrative staff and general supervision over timekeepers involved in personnel and payroll activities.

ESSENTIAL DUTIES AND RESPONSIBILITIES:

- Oversees the procedures and control of the weekly payroll processing and maintains the payroll records for approximately 1200 employees. Monitors the preparation, verification and reconciliation of all payroll data input and output.

- Reviews the accuracy of the weekly time sheets and all related payroll changes at various field locations. Oversees the preparation of the payroll-related changes.

- Reconciles all payroll data input and output generated at field sites.

- Assists in all Management Information Systems (MIS) development projects and serves

as a field liaison in planning the implementation of the new Human Resources/Payroll system.

- Coordinates all activities to establish and implement new or revised systems and procedures for the consolidated payroll function. Manages quality assurance and data control functions at division level to ensure adherence to Authority-wide standards. Analyzes timesheet and payroll procedures to identify ways to increase organizational efficiency and/or reduce costs. Oversees implementation of recommendations.

- Monitors and recommends improvements for personnel data collection and maintenance programs.

- Tests and evaluates changes in payroll system practices including participation in the implementation of revisions in the in-house systems.

- Supervises and conducts the payroll control and reconciliation of all weekly/monthly mandatory and voluntary deductions.

- Reviews, controls and reconciles employee data changes and ensures consistency with supporting documentation.

- Reviews and controls weekly payroll activities for interns, co-ops and contract employees, including enforcement of the weekly and lifetime maximum hours and maximum dollar caps as applicable.

- Advises employees in payroll issues.

- Acts as liaison with divisions involving human resource and payroll processing issues.

- Responds to payroll inquires from various internal and external sources, and provides timely assistance as required.

- Supervises the review and control over the authorized and unauthorized leaves of absence, including coordination with Human Resources and Divisional staff as necessary.

- Provides guidance and necessary training to timekeepers.

SECONDARY DUTIES:

- Performs related duties as required.

MINIMUM QUALIFICATIONS:

Education and Experience:

(A) A four- (4) year degree in accounting, business or a related field is required. An additional four (4) years experience in related work may be considered as a substitute for the four (4) year degree if the candidate otherwise possesses all positions requirements; and

(B) Seven (7) to nine (9) years personnel and payroll experience, of which a minimum of two (2) years must be in a supervisory or managerial capacity; or

(C) Any equivalent combination of education or experience.

Necessary Knowledge, Skills and Abilities:

(A) Understanding of MWRA payroll policies, procedures and practices.

(B) Knowledge of automated payroll systems and various personal computer software, including MS Word, Excel and Access.

(C) Excellent interpersonal, written and oral communication skills are required.

SPECIAL REQUIREMENTS:

None.

TOOLS AND EQUIPMENT USED:

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

PHYSICAL DEMANDS:

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

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

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

WORK ENVIRONMENT:

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

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

April 2013

MWRA

POSITION DESCRIPTION

OLD

POSITION: Programmer Analyst II

DIVISION: Administration & Finance

DEPARTMENT: Management Information Systems (MIS)

BASIC PURPOSE:

Designs, develops and implements PC and client-server applications for a variety of MWRA users, as appropriate. Provides day-to-day user support, troubleshooting, and special projects assistance.

SUPERVISION RECEIVED:

Works under the general supervision of the Application Development and Support Manager.

SUPERVISION EXERCISED:

None.

ESSENTIAL DUTIES AND RESPONSIBILITIES:

- Manages the design and development of functional and program specifications, in compliance with SDM and Change Control Procedures.
- Develops the application system programming code necessary to generate an application, module and/or report which addresses user needs, maintenance and enhancement opportunities, in compliance with SDM and Change Control Procedures.
- Manages the technical system testing process and the associated debugging activities of both in-house developed code and vendor supplied fixes and enhancements, in compliance with SDM and Change Control Procedures.
- Manages assigned technical staff resources and provides project leadership with combined user and MIS implementation task forces, as appropriate.
- Supports new release and maintenance support activities provided by vendors, in compliance with SDM and Change Control Procedures.

- Audits code structure and logic of application systems.
- Develops the bridge programming code to interface with other systems, and incorporate vendor-supplied modules, as appropriate.
- Utilizes application productivity tools and metrics to optimize the programming code generation.
- Utilizes the output of computer aided software engineering (CASE) tools as a base level shell for the programming code structure.

SECONDARY DUTIES:

- Performs related duties as assigned.

MINIMUM QUALIFICATIONS:

Education and Experience:

(A) A four (4) year college program in computer science or related field; and

(B) Four (4) to seven (7) years of experience on a varied application portfolio, or

(C) Any equivalent combination of education or experience.

Necessary Knowledge, Skills and Abilities:

(A) Knowledge of systems development life cycle, application productivity tools and techniques and general business concepts.

(B) Proven track record of accomplishment with programming and support of PC and/or client-server applications

(C) Proficiency with the following required: Microsoft Fox-based products or Oracle products; MS-Access; Lotus 123 or Excel; Windows-95 or Windows NT; and WordPerfect or MS-Word macro writing.

(D) Proficiency with the following preferred: User Training; User Documentation & Materials; Internet/Intranet development; Visual Basic; browser tools; HTML; and MAC OS.

(E) Excellent technical project management, interpersonal, oral and written communication

skills are required.

SPECIAL REQUIREMENTS:

None.

TOOLS AND EQUIPMENT USED:

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

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 essential functions.

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

The employee must frequently lift and/or move up to 25 pounds and occasionally lift and/or move up to 50 pounds. Specific vision abilities required by this job include close vision and color vision, and the ability to adjust focus.

WORK ENVIRONMENT:

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

While performing the duties of this job, the employee occasionally works in various field settings and in an office environment. The employee is occasionally exposed to risk of electrical shock.

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

August, 1999

NEW

MWRA

POSITION DESCRIPTION

POSITION: Systems Analyst/Programmer I

PCR#:

DIVISION: Administration & Finance

DEPARTMENT: Management Information System (MIS)

BASIC PURPOSE:

The Systems Analyst/Programmer I is responsible for analyzing, designing, developing, testing, implementing and maintaining, software applications. This position is responsible for the support, and interaction with the user community to improve daily processing and user development in the understanding of the applications software. The Systems Analyst/Programmer I will prepare, maintain, and publish system documentation to support Information Services staff and user community.

SUPERVISION RECEIVED:

Works under the general supervision of the group supervisor.

SUPERVISION EXERCISED:

None

ESSENTIAL DUTIES AND RESPONSIBILITIES:

- Identifies, analyzes, designs, maintains, supports, and upgrades software applications (in-house and third party software) to ensure processes and functionality of the applications comply with the organization's processes and regulations.

- Maintains system application guidelines, schedules, and data structures as needed by application processing such as GIS, MIS Help Desk, Computerized Maintenance Management Systems, Enterprise Resource Planning and other tier two systems.

- Researches, plans, develops, tests, and implements external interfaces between existing and new system applications and platforms to produce seamless integration that complies with processing and business requirements.

- Analyzes, plans, tests, and implements system application upgrades and new releases as required by the software vendor and company requirements to maintain software compliance and company regulations.

- Supports the user community in the resolution of problems with the software applications functionality.

- Develops and maintains documentation of applications that describes the processing and maintains the support of the applications.

- Assists trains and educates the IT community in the research for new approaches to improve processing and the use of the software as well as assisting with update and development of applications reports.

- Maintains professional interaction with the applications staff and user community to ensure adequate system functionality, promote team participation and encourage user confidence in the applications staff quality service.

- Researches and corrects problems with the system applications during production processing in an efficient and timely manner ensuring system recovery and integrity.

SECONDARY DUTIES:

- Performs related duties as required.

MINIMUM QUALIFICATIONS:

Education and Experience:

(A) A four (4) year college program in management science, engineering management, computer science or related fields; and

(B) Zero (0) to three (3) years experience supporting enterprise wide applications as well as tier two applications.

(C) Any equivalent combination of education or experience.

Necessary Knowledge, Skills and Abilities:

(A) Knowledge of business and systems analysis techniques within the information technology discipline.

(B) Knowledge of the following is desirable: MS .Net, J2EE, Crystal Reporting, ORACLE's PL/SQL, and SQL Server.

SPECIAL REQUIREMENTS:

None.

TOOLS AND EQUIPMENT USED:

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

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 essential functions.

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

The employee must frequently lift and/or move up to 25 pounds and occasionally lift and/or move up to 50 pounds. Specific vision abilities required by this job include close vision and color vision, and the ability to adjust focus.

WORK ENVIRONMENT:

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

While performing the duties of this job, the employee occasionally works in various field settings and in an office environment. The employee regularly works near moving mechanical parts, and is occasionally exposed to risk of vibration.

The noise level in the work environment is very loud in field settings, moderately loud at other work locations and moderately quiet at office settings.

April 2013

STAFF SUMMARY

TO: Board of Directors
FROM: Frederick A. Laskey, Executive Director
DATE: April 10, 2013
SUBJECT: Appointment of Deputy Payroll Manager

COMMITTEE: Personnel and Compensation

___ INFORMATION
_X_ VOTE

Robert Belkin, Controller
Preparer/Title

Rachel C. Madden
Director, Administration and Finance

In light of an increasing number of actual and expected staff retirements, MWRA has been evaluating and implementing efforts to properly address succession planning needs. These efforts have included expanded use of interns, consideration of an apprenticeship program, review of organizational efficiencies, and advance selection of staff into key positions with known incumbent retirement dates.

RECOMMENDATION:

To approve the appointment of Sothea Chhung to the position of Deputy Payroll Manager (Unit 6, Grade 11) at the recommended salary of $87,932, to be effective May 4, 2013.

DISCUSSION:

The Deputy Payroll Manager will become vacant on May 3, 2013 upon the retirement of the incumbent. This position is responsible for providing accurate and timely payroll processing for all MWRA employees and reports directly to the Payroll Manager. Please note that today's Position Control Register (PCR) Staff Summary included an amendment to change the current title of the Payroll Administrator, Operations, to Deputy Payroll Manager to more accurately reflect the current organizational structure of the Payroll Unit. The grade and salary remain the same.

The Deputy Payroll Manager oversees the procedures and control of weekly payroll processing and maintains the payroll records for approximately 1185 employees, as well as:

- Monitors the preparation, verification and reconciliation of all payroll data input and output;
- Reviews the accuracy of weekly time sheets and all related payroll changes;
- Assists Management Information Systems (MIS) payroll system development projects;
- Monitors and recommends improvements for personnel data collection and maintenance programs;

- Supervises and conducts the payroll control and reconciliation of all weekly or monthly mandatory and voluntary deductions;
- Responds to payroll inquiries from various internal and external sources and provides timely assistance as required;
- Supervises staff of five.

Selection Process

This position was posted internally. Ms. Chhung was the only applicant and was interviewed by the Director of Administration and Finance, the Controller and the Director of Affirmative Action. Ms. Chhung demonstrated the experience and qualifications necessary to succeed in this position.

Ms. Chhung has been employed by the MWRA for more than twenty-one years, and has held the position of Payroll Specialist since 2002, when field payroll operations were centralized. Ms. Chhung started her career with the MWRA as a Payroll Assistant in 1992, and was promoted to the position of Assistant Payroll Manager in 1998.

During her tenure in the Authority's Payroll Unit, Ms. Chhung has demonstrated a thorough understanding of the payroll accounting software, as well as policies and procedures and key controls.

Ms. Chhung earned a Bachelor's degree in Business Administration from the University of Massachusetts in 1991. Ms. Chhung has also completed the MWRA Supervisor Development Program, in 2013.

BUDGET/FISCAL IMPACT:

There are sufficient funds in the Controller Department FY13 Current Expense Budget to fund this position. The recommended salary is in accordance with guidelines established in Unit 6's current collective bargaining agreement.

ATTACHMENTS:

Resume of Sothea Chhung
Position Description
Organization Chart

SOTHEA P. CHHUNG

OBJECTIVE: Apply my knowledge, analytical, problem solving, organizational and communication skills in a position of increased responsibility in the financial services environment.

PROFESSIONAL EXPERIENCE:

MASSACHUSETTS WATER RESOURCES AUTHORITY, MA: PAYROLL DEPARTMENT, 1990--Present

Payroll Specialist (9/2002-Present):

- Maintain procedures and controls of the weekly payroll processing and maintain the payroll records for approximately 1,200 employees.
- Assist with the implementation and prioritization of decisions regarding timesheet processing and data management.
- Reconcile, distribute and transmit all payroll weekly and monthly reports such as payroll tax deduction, deferred compensation (457 plan) and state retirement file.
- Coordinate controls and reconcile the weekly and lifetime maximum hours allowance for mutual aid/salary continuation payment with the Human Resource Department.
- Supervise and conduct the payroll control and reconciliation of all weekly/monthly mandatory and voluntary deductions.
- Supervise the preparation of the industrial accident wage schedule, verification of employment, Department of Training, Department of Revenue and wage information for retirement board.
- Establish and maintain internal payroll controls and ensure compliance with all MWRA policies, procedure and union contracts.
- Process and oversee all different types of adjustments such as current week timesheet adjustment, previous week timesheets adjustments and grievance settlement.
- Ensure that payroll operations reflect the current federal, state tax and other regulatory requirements.
- Assist Management Information Systems (MIS) with development projects and serve as a liaison in planning the implementation of the new Human Resources/Payroll system.
- Monitor and recommend improvements for personnel data collection and maintenance programs.
- Review the accuracy of the weekly time sheets and all related payroll changes. Supervise the preparation of the payroll of employees' personnel changes.
- Maintain all payroll system transaction logs. Assists in maintenance of all payroll system table changes and monitoring of the system controls.
- Coordinate, control and reconcile the weekly payroll, Account Payable Unit interface with the Treasury and MWRA Retirement Department.
- Process retroactive payment on collective bargaining contracts settlements based on the information furnished by the Labor Relations Department.
- Prepare payment to send to the Account Payable Unit for all payroll deduction such as union dues, charity, MBTA, parking, manual checks and etc.
- Oversee and coordinate with the insurance representative regarding employee's personal short-term and accidental insurance.
- Process employees benefit payout, military benefits payment and military payment deferential.
- Supervise the workers compensation benefit analysis between payroll and workers compensation administration.
- Respond to payroll inquires from various internal/external sources and provide timely assistance.
- Prepare, verify and reconcile all payroll data input and output.

Assistant Payroll Manager (9/1998-9/2002):

- Assisted in the timely payroll processing and payment for all MWRA employees.
- Maintained all payroll records, tax and other regulatory reports, and other related payroll reports.
- Reviewed the accuracy of weekly time sheets and all related payroll changes.
- Assisted in maintenance of all payroll system table changes and monitoring of the system controls.
- Reconciled and distributed all payroll weekly and monthly reports such as payroll taxes, deduction registers, and other payroll management reports.
- Assisted in the training and supervision of payroll staff. Supervised the preparation of the industrial accident wage schedule, wage information for retirement boards and verification of employment.
- Assisted in monitoring internal payroll controls and compliance of all Authority policies and procedures and collective bargaining agreements.
- Served as Deputy Payroll Manager during manager's absence.

Payroll Assistant (9/1992-9/1998):

- Processed payroll changes to ensure the accurate processing of payroll in compliance with the department policies and procedures.
- Prepared direct deposit procedures, calculated percentage increase of employees' salaries for retroactive payment. Maintained and monitored closely all union and non-union salary records.
- Prepared and reconciled the verification of employment for employees and provided wage schedule for Workers Compensation's Manager.
- Reviewed and monitored closely all interns, co-ops, contracts and all types of absent employees to ensure the weekly and lifetime maximum hours/dollar caps as applicable.
- Reviewed, controlled and prepared annual sick buy back for all employees to ensure the accurate processing of union and non-union employees in compliance with the MWRA policies and unions contracts.
- Managed all aspects of payroll; including deductions, advance payment requisitions, and special personnel acquisitions for over 1,800 employees.
- Assisted both Payroll Manager and Deputy Payroll Manager whenever needed for urgent assignments and special projects.

EDUCATION

University of Massachusetts-Amherst, MA
Degree: Bachelor of Business Administration, December 1991
Major: Finance GPA: 3.45

Academic Achievements & Awards

- Massachusetts Women in Public Higher Education's Annual Outstanding Student Achievement Award in 1991.

ACTIVITIES

- Elected - Financial Secretary of Local 9360 at MWRA (2012- Present)
- MWRA's Supervisor Development Program (anticipated completion March 2013)

SPECIAL SKILLS

- Proficient on Microsoft Word, Excel, Access, Lawson Payroll System, Previous Highline System
- Bilingual

REFERENCES: Available upon request

MWRA
POSITION DESCRIPTION

POSITION: Deputy Payroll Manager

PCR#:

DIVISION: Finance

DEPARTMENT: Controller

BASIC PURPOSE:

Responsible for providing accurate and timely payroll processing for all MWRA employees. Oversees payroll issues at field sites. Oversees maintenance of all payroll records, tax and other regulatory reports and related payroll reports at field sites. Oversees data, information and systems coordination for field sites. Assists with the prioritization and implementation of decisions regarding timesheet processing, data management and field staff training.

SUPERVISION RECEIVED:

Works under the general supervision of the Payroll Manager.

SUPERVISION EXERCISED:

Exercises close supervision over five (5) administrative staff and general supervision over timekeepers involved in personnel and payroll activities.

ESSENTIAL DUTIES AND RESPONSIBILITIES:

- Oversees the procedures and control of the weekly payroll processing and maintains the payroll records for approximately 1200 employees. Monitors the preparation, verification and reconciliation of all payroll data input and output.

- Reviews the accuracy of the weekly time sheets and all related payroll changes at various field locations. Oversees the preparation of the payroll-related changes.

- Reconciles all payroll data input and output generated at field sites.

- Assists in all Management Information Systems (MIS) development projects and serves as a field liaison in planning the implementation of the new Human Resources/Payroll system.

- Coordinates all activities to establish and implement new or revised systems and procedures for the consolidated payroll function. Manages quality assurance and data

control functions at division level to ensure adherence to Authority-wide standards. Analyzes timesheet and payroll procedures to identify ways to increase organizational efficiency and/or reduce costs. Oversees implementation of recommendations.

- Monitors and recommends improvements for personnel data collection and maintenance programs.

- Tests and evaluates changes in payroll system practices including participation in the implementation of revisions in the in-house systems.

- Supervises and conducts the payroll control and reconciliation of all weekly/monthly mandatory and voluntary deductions.

- Reviews, controls and reconciles employee data changes and ensures consistency with supporting documentation.

- Reviews and controls weekly payroll activities for interns, co-ops and contract employees, including enforcement of the weekly and lifetime maximum hours and maximum dollar caps as applicable.

- Advises employees in payroll issues.

- Acts as liaison with divisions involving human resource and payroll processing issues.

- Responds to payroll inquires from various internal and external sources, and provides timely assistance as required.

- Supervises the review and control over the authorized and unauthorized leaves of absence, including coordination with Human Resources and Divisional staff as necessary.

- Provides guidance and necessary training to timekeepers.

SECONDARY DUTIES:

- Performs related duties as required.

MINIMUM QUALIFICATIONS:

Education and Experience:

(A) A four- (4) year degree in accounting, business or a related field is required. An additional four (4) years experience in related work may be considered as a substitute for the four (4) year degree if the candidate otherwise possesses all positions requirements; and

(B) Seven (7) to nine (9) years personnel and payroll experience, of which a minimum of two (2) years must be in a supervisory or managerial capacity; or

(C) Any equivalent combination of education or experience.

Necessary Knowledge, Skills and Abilities:

(A) Understanding of MWRA payroll policies, procedures and practices.

(B) Knowledge of automated payroll systems and various personal computer software, including MS Word, Excel and Access.

(C) Excellent interpersonal, written and oral communication skills are required.

SPECIAL REQUIREMENTS:

None.

TOOLS AND EQUIPMENT USED:

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

PHYSICAL DEMANDS:

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

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

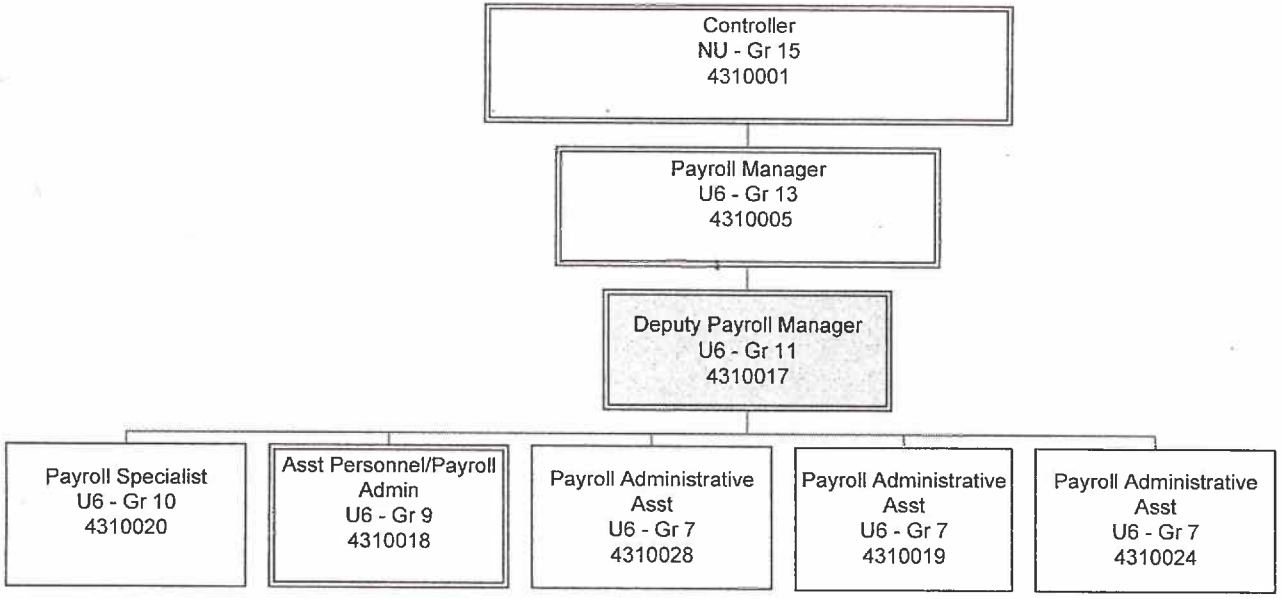
There are no requirements that weight is lifted or force is exerted in the performance of this job. Specific vision abilities required by this job include close vision, and the ability to adjust focus.

WORK ENVIRONMENT:

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

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

Payroll Unit



STAFF SUMMARY

TO: Board of Directors
FROM: Frederick A. Laskey, Executive Director
DATE: April 10, 2013
SUBJECT: Appointment of Director of Environmental Quality, Operations Division, and Related Organizational Changes

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COMMITTEE: Personnel & Compensation

____ INFORMATION
__X__ VOTE

Robert Donnelly, Director, Human Resources
Richard P. Trubiano, Deputy Chief Operating Officer
Preparer/Title

Michael J. Hornbrook
Chief Operating Officer

In light of an increasing number of actual and expected staff retirements, MWRA has been evaluating and implementing efforts to properly address succession planning needs. These efforts have included expanded use of interns, consideration of an apprenticeship program, review of organizational efficiencies, and advance selection of staff into key positions with known incumbent retirement dates.

The Director of the Environmental Quality Department (ENQUAD) will be retiring in the next few months. In order to ensure a seamless management transition for this key position and to take advantage of available in-house expertise, staff recommend that the Environmental Quality Department (wastewater) and the Water Quality Assurance Unit (drinking water) be combined, and that an advance selection be made for the new ENQUAD department head. This staff summary describes needed organizational changes and recommends the advance approval of the appointment of the new ENQUAD director position.

RECOMMENDATION:

To approve the appointment of Elizabeth Reilley, Ph.D., to the position of Director of Environmental Quality (Non-Union/Grade 15), at an annual salary of $118,554, commencing on a date to be determined by the Executive Director following the retirement of the incumbent ENQUAD Director (expected in June 2013).

DISCUSSION:

The Environmental Quality Department currently has 17 staff positions and is responsible for managing and reporting on federal and state environmental and regulatory issues (primarily wastewater) related to MWRA operations and projects. The department's main activities are monitoring sewage influent and effluent quality, monitoring the quality of Boston Harbor (and its rivers, tributaries and Mass Bay), managing quality and operations data, and complying with the reporting requirements of MWRA's National Pollutant Discharge Elimination System (NPDES) permits.

The Water Quality Assurance Unit (located in Southborough) also has 17 staff positions and fills a similar role as ENQUAD in drinking water monitoring and reporting. The Water Quality Unit is responsible for developing and directing the extensive annual raw and finished water sampling program, guides reservoir operations as relates to algae concerns and water transfer needs and analyses – and reports on all data, operates the water contamination monitoring system, assures compliance with various NPDES permits, and provides technical assistance to service area communities.

Given the similar roles of ENQUAD and Water Quality Assurance, the opportunities for future work load sharing and efficiencies, and the availability of a senior manager with the needed credentials, experience, and abilities, staff recommend that the two units be combined under the direction of Ms. Elizabeth "Betsy" Reilley, the current Senior Program Manager of Water Quality Assurance (see proposed organization chart attached). This new department would continue to report to Richard Trubiano, Deputy Chief Operating Officer, Programs, Policy & Planning. The new department will be responsible for managing and maintaining all existing workloads, as well as implementation of the new Deer Island NPDES permit (long overdue from EPA), reporting on the results from the new Carroll Water Treatment Plant UV system, addressing community bacteria and nitrate water quality concerns, and handling significant expected staff attrition over the next several years.

Ms. Reilley is being recommended for this key position because she has more than 17 years of progressively responsible technical, operations, and management experience in the water quality field at MWRA, as well as nearly 10 additional years of experience in the consulting and regulatory fields. For the past nine years, she has held the position of Senior Program Manager, Water Quality Assurance, and has been responsible for the management and oversight of a wide range of water operations, sampling, permitting, regulatory compliance, and trouble-shooting efforts. Ms. Reilley played an important role in the start-up of the Carroll Water Treatment Plant and is one of MWRA's main and most respected liaisons with EPA, DEP, and MWRA's member communities.

Ms. Reilley earned her PhD in Biology from Clark University and she holds Grade 4T and 4D water treatment and distribution licenses, as well as a Grade 5C wastewater treatment license. She has published a number of technical articles on water treatment, distribution, and quality issues.

Ms. Reilley's current salary as Senior Program Manager, Water Quality Assurance (Unit 9/Grade 30) is $110,334; the recommended salary is $118,554, which is about the same as that of the current ENQUAD Director. Senior Management believes the recommended salary represents an appropriate increase in compensation commensurate with the level and responsibilities of this new position.

BUDGET/FISCAL IMPACT:

There are sufficient funds in the FY13 and Proposed FY14 CEB for this position.

ATTACHMENTS:

Resume of Betsy Reilley
Position Description
Proposed Organization Chart

Betsy Reilley, Ph.D.

EXPERIENCE

MASSACHUSETTS WATER RESOURCES AUTHORITY — Southborough, MA
Program Manager/Sr. Program Manager, Water Quality Assurance — **1996 – present**

Manage group of seventeen staff. Develop and oversee water quality monitoring program, analyze water quality data, troubleshoot water quality problems and identify research needs. Develop water quality trigger levels and emergency response plans. Develop and conduct training programs for treatment operators and sampling staff. Monitor compliance with drinking water regulations. Liaison with community, regulatory and other officials for Field Operations Department. Routinely meet with and present reports and updates to EPA, DEP, service community officials, media and others. Assist in start-up of new facilities including: development of facility handbooks and standard operating procedures, management of training programs and oversight of water quality issues.

CONGRESSMAN ED MARKEY'S OFFICE — Washington, DC
Congressional Science Fellow — **1994 – 1995**

Legislative assistant to Congressman Ed Markey. Areas of specialization include; environment and natural resources, water and wastewater, science and technology, education and agriculture. Staffed hearings, researched and monitored upcoming legislation, drafted amendments and issued press releases. Competitively selected and fully supported by the American Society for Microbiology (ASM) and participating in the American Association for the Advancement of Science (AAAS) program.

CLARK UNIVERSITY — Worcester, MA
Research Assistant/Teaching Assistant — **1991 – 1994**

While working towards my doctoral degree, developed and taught introductory biology laboratory course. Obtained funding from a pharmaceutical development firm to conduct research on the microbiological treatment of process wastewater. Delivered regular presentations of research progress and results to senior staff at the pharmaceutical firm, members of the Biology Department at Clark and at national meetings.

NEW ENGLAND RESEARCH, INC. (NER, Inc) — Worcester, MA
Research Assistant — **1990-1991**
Assistant Laboratory Director — **1985 – 1987**

Environmental consulting in the management of chemical materials and wastes for industrial compliance with federal, state and local regulations (HMTA, RCRA, OSHA, CWA, SDWA). Responsible for the development of regulatory programs and reports under the various regulations. Developed computerized database of chemical hazards. Responsible for all in-house water testing (SDWA and NPDES samples) utilizing wet chemistry and bacteriological methods.

U.S. PEACE CORPS Kitale, Kenya, East Africa
Community Water Development Technician **1987 – 1990**

Assisted and supervised self-help community groups with a variety of projects including water development, animal husbandry and small business. Designed, procured funding and implemented gravity-feed water systems. Introduced water tank construction methods to the area. Prepared grant proposals and successfully obtained funding from the Rotary Club, Small Projects Assistance Fund and the Canadian High Commission.

EDUCATION

CLARK UNIVERSITY Worcester, MA

Ph.D., Biology **1994**

"Microbiological Pretreatment of Industrial Wastewaters"; researched biodegradability of an industrial wastestream using enriched microbial populations. Laboratory testing included UV/Vis spectrophotometry, fluorimetry, respirometry, HPLC, use of radiolabelled compounds and bacteriological techniques.

CLARK UNIVERSITY Worcester, MA
B.A., with High Honors in Science, Technology and Society **1984**

PUBLICATIONS AND PRESENTATIONS

- Planning and Practice Applied: When the Event Becomes Reality. B. Reilley. AWWA ACE12 Conference. Dallas, TX. June 10, 2012.
- The Key Role of Water Age in Distribution Systems. B. Reilley. NEWWA 14th Annual WQ Symposium. May 2012.
- Optimizing Treatment Processes and Distribution Systems. B. Reilley. NEWWA 13th Annual WQ Symposium. May 2011.
- Advanced Disinfection of Pipelines and Storage Facilities. B. Reilley. AWWA Webcast Presenter. February 11, 2009.
- Disinfection of Pipelines and Storage Facilities. B. Reilley. AWWA Webcast presenter. March 5, 2008.
- Monitoring and Control on Nuisance Algae. B. Reilley. AWWA ACE07 Conference. Toronto, Canada. June 27, 2007.
- Responding to Coliforms in the Distribution System. B. Reilley. NEWWA. March 6, 2007.
- DNA Fingerprinting of Total Coliform. B. Reilley and S. Estes-Smargiassi. NEWWA 12th Annual Conference. Bretton Woods, NH. September 2001.
- Waterborne Gastrointestinal Disease Outbreak Detection. K. Emde, L. Gammie, J. Mainiero, E. Geldreich, A. Barry, N. Fok, B. Reilley. AWWA Research Foundation. 2001.
- Modeling DBP Formation. W. Sung, B. Reilley, D. K. O'Day, K. Horrigan. Journal of the American Water Works Association, vol. 92. May 2000.
- Taste and Odor Management. D. K. O'Day and B. Reilley. New England Water Works Association Meeting, Auburn, Ma. March 2000.

- MWRA's DBP Experience. B. Reilley. NEWWA, Spring 1999 Joint Regional Operations Conference and Exhibition, Worcester, MA. April 1999.
- Comparison of MF and Colilert. B. Reilley and D. K. O'Day. NEWWA, Taunton, MA November 1998.
- Biological Removal of Selected Compounds from a Pharmaceutical Wastestream Using Pure and Mixed Cultures, E. S. Reilley and J. T. Reynolds. Water Environment Federation 67th Annual Meeting, Chicago, IL. 1994.
- Removal of Dopamine from a Pharmaceutical Wastestream Using Pure and Mixed Cultures. E. S. Reilley and J. T. Reynolds. Abstracts of the 28th Regional Meeting of the Northeast American Society for Microbiology, Cambridge, MA. 1994.
- Biological Removal of Components of a Mixed Pharmaceutical Wastestream in an Immobilized Cell Reactor, E. S. Reilley and J. T. Reynolds. Abstracts of the 93rd General Meeting of the American Society for Microbiology, Atlanta, GA. 1993.

MEMBERSHIPS AND CERTIFICATIONS

Grade 4T Water Treatment License * Grade 4D Distribution License *Grade 5C Wastewater Treatment License *Cross Connection Control Surveyor Certification * ASM Congressional Science Fellow (1994-1995) * Chair, AWWA Disinfection Standards Committee *Tyngsborough Sewer Commissioner (1999-2000) *Toastmasters, CTM *NEWWA *AWWA *ASM

MWRA
POSITION DESCRIPTION

POSITION: Director of Environmental Quality

PCR#: **2250001**

DIVISION: Operations

DEPARTMENT: Environmental Quality

BASIC PURPOSE:

Directs the collection and analysis of wastewater, drinking water, and environmental quality data to provide direction to Water and Wastewater Operations, TRAC, and Residuals. Reviews wastewater and drinking water treatment processes and targets, and directs monitoring for compliance with SDWA, NPDES, and other water and wastewater regulations. Makes recommendations for treatment changes and adjustments. Defines the responsibilities and scope of technical and environmental studies related to river and oceanographic monitoring. Provides broad technical assistance in environmental, technical and scientific assessments, testing and monitoring. Oversees the implementation of the requirements within NPDES permits for MWRA's water and wastewater facilities.

SUPERVISION RECEIVED:

Works under the general supervision of the Deputy Chief Operating Officer, Programs, Policy, & Planning for the Operations Division.

SUPERVISION EXERCISED:

Exercises close supervision and management of over 30 wastewater, environmental, and drinking water quality assurance staff. Directly controls an operating budget of over $4 million annually.

ESSENTIAL DUTIES AND RESPONSIBILITIES:

- Provides intra-divisional coordination with users of drinking water and wastewater treatment performance and harbor and outfall monitoring data and laboratory services so that data analysis and recommendations for division operation and capital project

decisions are available to the division managers and the Executive Director.

- Oversees the management of the database of harbor and outfall monitoring. Reviews wastewater data quality.

- Chairs the NPDES steering committee - an interdepartmental MWRA committee that coordinates MWRA NPDES activities.

- Reviews and comments on state and federal environmental regulations, such as water quality standards.

- Analyzes monitoring data and prepares and presents results to Authority staff, the Board of Directors, state and federal regulatory agencies, the academic community, environmental advocacy groups, and the general public.

- Oversees the harbor and outfall monitoring program as required in MWRA's NPDES permits and CSO variances and measures the effectiveness of MWRA programs including the long-term CSO control program and wastewater treatment.

- Negotiates NPDES permit requirements and monitoring plans with state and federal agencies.

- Directs the preparation and submission of required reports to regulatory agencies and related special projects.

- Coordinates consultant selection process for harbor and outfall monitoring services.

- Seeks funding for studies, such as cooperative research projects, which will complement MWRA goals.

- Directs the timely monitoring of and reporting on drinking water quality, including sampling, testing, data analysis and interpretation of results.

- Reviews drinking water treatment processes and targets, and the monitoring of compliance with SDWA and other drinking water regulations. Makes recommendations for treatment changes and adjustments.

- Provides guidance on reservoir operations relating to algae control.

- Participates in the start-up of new facilities, including assistance with development of facility handbooks, SOPs, O&M manuals and training programs.

- Directs the resolution of community or public drinking water quality complaints. Oversees timely notification and participates in emergency response for drinking water quality incidents.

- Informs various groups regarding departmental activities. Provides regulatory agencies and the public with requested information in a professional and timely manner.

- Provides assistance to other departments as directed for the review or development of environmental research and monitoring programs.

- Coordinates special project requests with existing water and wastewater department programs.

- Reviews drinking water and water pollution abatement programs in other regions of the country for applicability to Authority goals.

- Administers personnel policies, provides direction and coordinates the selection, supervision, training and evaluation of department personnel.

- Coordinates preparation of departmental staffing plan, budget and schedule and monitors the implementation of departmental objectives in keeping with budget parameters.

SECONDARY DUTIES:

- Performs related duties as required.

MINIMUM QUALIFICATIONS:

Education and Experience:

(A) Analytical and research skills through a graduate degree in chemistry, biology, environmental sciences or related field. Doctoral degree is required; and

(B) Eight (8) to ten (10) years experience in: understanding of environmental research principles and practices; development and evaluation of research programs and budgets; and applying technical information to drinking water quality monitoring and/or wastewater treatment and pollution control; five (5) must be in a supervisory capacity.

(C) Any equivalent combination of education or experience.

Necessary Knowledge, Skills and Abilities:

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

SPECIAL REQUIREMENTS:

A valid Massachusetts Class D Motor Vehicle Operators License.

A valid Massachusetts Grade II Water Treatment-Operator-in-training or Water Distribution Operator-in-training license or a Massachusetts Grade 4 Wastewater Treatment Plant Operator-in –training license preferred.

TOOLS AND EQUIPMENT USED:

Laboratory equipment and instruments, telephone, mobile radio, 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 stand and talk or hear. The employee is occasionally required to walk; sit; climb or balance; stop, kneel, crouch, or crawl.

The employee must frequently lift and/or move up to 10 pounds and occasionally lift and/or move up to 25 pounds. Specific vision abilities required by this job include close vision, distance, color vision, peripheral vision, depth perception, and the ability to adjust focus.

WORK ENVIRONMENT:

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

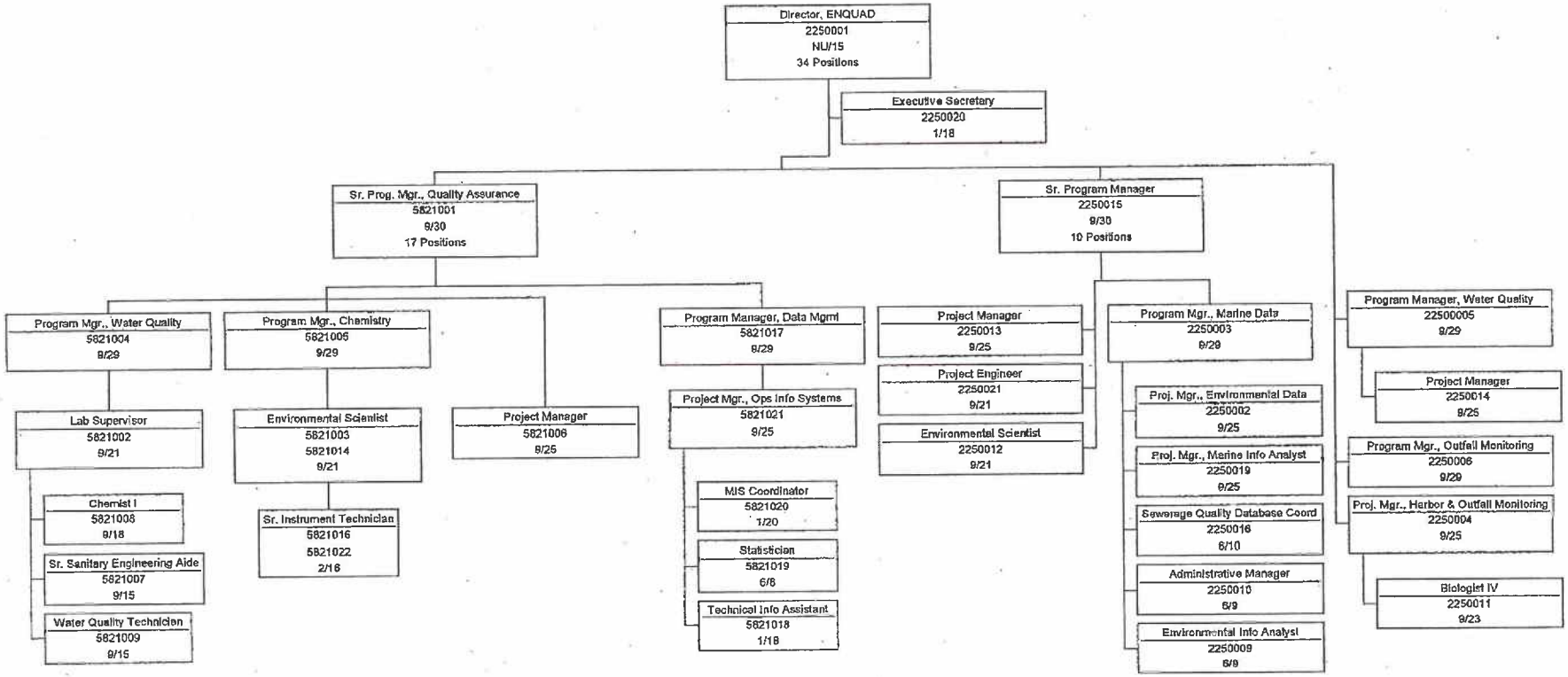
While performing the duties of this job, the employee usually works in an office environment.

The employee occasionally works in water and wastewater treatment facilities near moving mechanical parts and is occasionally exposed to wet and/or humid conditions and vibration. The employee is occasionally exposed to fumes or airborne particles, toxic or caustic chemicals, infectious organisms, and risk of electric shock. The employee occasionally works in high, precarious places and is exposed to outside weather conditions. The employee occasionally works on board boats, both within Boston Harbor and its tributary rivers and on the open ocean.

The noise level in the work environment is usually loud in field settings, and moderately quiet in a laboratory environment.

April 2, 2013

Operations Division
ENQUAD
April 2013



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
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BOARD OF DIRECTORS' MEETING

to be held on

Wednesday, April 10, 2013

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. PCR Amendments - April 2013 (ref. P&C A.1)
2. Appointment of Deputy Payroll Manager, Administration & Finance (ref. P&C A.2)
3. Appointment of Director of Environmental Quality and Related Organizational Changes, Operations Division (ref. P&C A.3)

B. Contract Awards

1. Integrated Financial, Procurement and Human Resources/Payroll Management System Maintenance and Support: Infor Global Solutions (formerly Lawson Associates) (ref. AF&A B.1)
2. Information Security Program Design and Implementation: JANUS Associates, Inc., State Blanket Contract ITS43 – Solution Providers (ref. AF&A B.2)

B. **Contract Awards** (cont'd.)

3. Electrical Equipment Upgrade 4, Deer Island Treatment Plant: Dagle Electrical Construction Corporation, Contract 6901 (ref. WW B.1)

4. Watertown Section Pipeline Rehabilitation, Waltham and Watertown: J. D'Amico, Inc., Contract 7222 (ref. W B.1)

C. **Contract Amendments/Change Orders**

1. Purchase and Supply of Electric Energy to Deer Island Treatment Plant: Hess Corporation, Contract S493, Amendment 1 (ref. AF&A C.1)

2. Cottage Farm Fuel System Upgrade: MECO Environmental Services, Inc., Contract 7281, Change Order 7 (ref. WW C.1)

3. Prison Point CSO Facility HVAC and Odor Control System Upgrade: Arden Engineering Constructors, LLC, Contract 6795, Change Order 11 (ref. WW C.2)

4. Ultraviolet Disinfection Facilities, John J. Carroll Water Treatment Plant: Daniel O'Connell's Sons, Inc., Contract 6924, Change Order 12 (ref. W C.1)

V. CORRESPONDENCE TO THE BOARD

VI. OTHER BUSINESS

VII. EXECUTIVE SESSION

A. Real Estate:

1. Authorization to Negotiate an Agreement with the Town of Reading

B. Litigation

1. Cost Recovery Claim: Deer Island Wind Turbine 2

VIII. ADJOURNMENT

MASSACHUSETTS WATER RESOURCES AUTHORITY

Meeting of the Board of Directors

March 13, 2013

A meeting of the Board of Directors of the Massachusetts Water Resources Authority was held on March 13, 2013 at the Authority headquarters in Charlestown. Chairman Sullivan presided. Present from the Board were Messrs. Barrera, Carroll, Flanagan, Foti, Gove, Pappastergion, Swett, Vitale and Walsh. Board member-elect Ms. Wolowicz participated in the meeting as a non-voting member pending her swearing in by the Governor. Mr. Cotter was absent. Among those present from the Authority staff were Frederick Laskey, Executive Director, Steven Remsberg, General Counsel, Michael Hornbrook, Chief Operating Officer, Rachel Madden, Director of Administration and Finance, Andrea Rex, Director of Environmental Quality Department, 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 Board of Directors' meeting of February 13, 2013, as presented and filed with the records of the meeting.

REPORT OF THE CHAIR AND REPORT OF THE EXECUTIVE DIRECTOR

The Chairman, the Board of Directors, the Executive Director and staff of MWRA and the Advisory Board thanked departing Board member Michael Gove for his dedicated service and wished him well in his future endeavors.

BOARD ACTIONS

APPROVALS

Final CSO Annual Progress Report for 2012

Upon a motion duly made and seconded, it was

Voted to authorize staff to submit the *Combined Sewer Overflow Annual Progress Report 2012* to the Federal District Court by March 15, 2013, in compliance with Schedule Seven of the Boston Harbor case, as presented and filed with the records of the meeting.

Memorandum of Understanding and Financial Assistance Agreement with the City of Cambridge for Implementation of CSO Control Projects, Amendment 9, and MWRA Financial Assistance through September 2013

Upon a motion duly made and seconded, it was

Voted to authorize the Executive Director, on behalf of the Authority, to execute Amendment 9 to the *Memorandum of Understanding and Financial Assistance Agreement with the City of Cambridge for the Implementation of CSO Control Projects*, increasing the total award amount by $17,281,963, from $60,021,000 to $77,302,963, and revising the language of the agreement in regard to the use of interest to fund eligible costs.

PCR Amendments – March 2013

Upon a motion duly made and seconded, it was

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

Renewal of Two Employment Contracts, Senior Laboratory Technicians, Department of Laboratory Services

Upon a motion duly made and seconded, it was

Voted to approve the renewal of the following two employment contracts for Senior Laboratory Technicians in the Department of Laboratory Services at Deer

Island for a period of one year: (1) Ms. Yuan Jiao Chen, from May 1, 2013 to April 30, 2014, with an increase in hourly rate from $18.36 to $18.73, for an annual compensation not to exceed $38,958.00; and (2) Ms. Roxann Phelan, from June 25, 2013 to June 24, 2014, with an increase in hourly rate from $18.00 to $18.36, for an annual compensation not to exceed $38,189.00.

CONTRACT AWARDS

Energy Advisory Services: LaCapra Associates, Inc., Contract OP-207

Upon a motion duly made and seconded, it was

Voted to approve the recommendation of the Consultant Selection Committee to select LaCapra Associates, Inc. to provide Energy Advisory Services and to authorize the Executive Director, on behalf of the Authority, to execute a Contract OP-207 with LaCapra Associates, Inc. in an amount not to exceed $90,000.00 for a term of three years from the Notice to Proceed.

Purchase of Motorola Radios to Complete Update of MWRA's Radio System from Analog to Digital: Motorola, Inc.

Upon a motion duly made and seconded, it was

Voted to approve the award of a purchase order for 470 mobile and handheld radios under State Contract #ITT40 with Motorola, Inc. to complete the conversion of MWRA's radio inventory to digital transmission, and to authorize the Executive Director, on behalf of the Authority, to execute said purchase order in the amount of $1,658,393.00.

Replacement of Actuators for the Primary Effluent and Return Sludge Valves at the Deer Island Treatment Plant: Rotork Controls, Inc., Bid WRA-3582

Upon a motion duly made and seconded, it was

Voted to approve the award of a purchase order for the replacement of actuators for the primary effluent and return sludge valves at the Deer Island

Treatment Plant to the lowest eligible and responsible bidder under Bid WRA-3582, Rotork Controls, Inc., and to authorize the Executive Director, on behalf of the Authority, to execute said purchase order in the bid amount of $673,113.00.

Preferred Service Agreement for the Combustion Turbine Generators, Deer Island Treatment Plant: Pratt & Whitney Power Systems, Inc.

Upon a motion duly made and seconded, it was

Voted to approve the award of a Preferred Service Agreement to provide technical support, emergency repair services and spare parts for the combustion turbine generators at the Deer Island Treatment Plant to the original equipment manufacturer, Pratt & Whitney Power Systems, Inc., and to authorize the Executive Director, on behalf of the Authority, to execute and deliver said contract in an amount not to exceed $427,000.00 for a period of three years.

Control of Invasive Aquatic Plants at Stillwater Basin, Wachusett Reservoir: Aqualogic, Inc., WRA-3590

Upon a motion duly made and seconded, it was

Voted to approve the award of a purchase order contract for the control of invasive plants at Stillwater Basin in the Wachusett Reservoir to the lowest eligible and responsible bidder under Bid WRA-3590, Aqualogic, Inc., and to authorize the Executive Director, on behalf of the Authority, to execute said purchase order contract in the bid amount of $397,560.00.

CONTRACT AMENDMENTS/CHANGE ORDERS

Digester Sludge Overflow Piping and Plug Valve Replacement, Deer Island Treatment Plant: Walsh Construction Co., Contract 7055, Change Order 5

Upon a motion duly made and seconded, it was

Voted to authorize the Executive Director, on behalf of the Authority, to approve Change Order No. 5 to increase the amount of Contract No. 7055 with Walsh Construction Company, Digester Sludge Overflow Piping and Plug Valve

Replacement, Deer Island Treatment Plant, in a lump sum amount of $142,518.85, with no increase in contract term; and to authorize the Executive Director to approve additional change orders as may be needed to Contract No. 7055 in amounts not to exceed the aggregate of $250,000.00, in accordance with the Management Policies of the Board of Directors.

Hultman Interconnections - Final Design, Construction Administration and Tunnel Inspection Services: Jacobs Engineering Group, Inc., Contract 6911, Amendment 4

Upon a motion duly made and seconded, it was

Voted to authorize the Executive Director, on behalf of the Authority, to approve Amendment No. 4 to extend the term of Contract No. 6911 with Jacobs Engineering Group, Inc., Hultman Interconnections - Final Design, Construction Administration and Tunnel Inspection Services, by 15 months to July 2, 2014, with no increase in contract amount.

REPORT OF THE EXECUTIVE DIRECTOR (continued)

Memorandum of Understanding with City of Quincy

Mr. Laskey noted that the Board-authorized two-year extension to the Quincy MOU expires in June and that meetings with Quincy were taking place.

Update on Mystic River Projects and Water Quality

Staff made a presentation on this information item which had been referred to the Board by the Wastewater Policy and Oversight Committee, and there was general discussion.

EXECUTIVE SESSION

It was moved to enter executive session to discuss litigation.

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

(Mr. Foti was not present for the roll call vote, but was present for the executive session.)

Yes	No	Abstain
Barrera		
Carroll		
Flanagan		
Gove		
Pappastergion		
Swett		
Vitale		
Walsh		
Sullivan		

Voted to enter executive session for the purpose of discussing strategy with respect to litigation, in that such discussion in open session may have a detrimental effect on the litigating position of the Authority.

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

* * * *

EXECUTIVE SESSION

* * * *

The meeting returned to open session at 2:05 p.m. and adjourned.