MASSACHUSETTS WATER RESOURCES AUTHORITY

Charlestown Navy Yard
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Boston, MA 02129

Frederick A. Laskey
Executive Director

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REVISED

BOARD OF DIRECTORS' MEETING

to be held on

Wednesday, July 19, 2017

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

Time: 1:00 p.m.

AGENDA

I. APPROVAL OF MINUTES

II. REPORT OF THE CHAIR

III. REPORT OF THE EXECUTIVE DIRECTOR

IV. ADMINISTRATION, FINANCE & AUDIT COMMITTEE

A. Information

1. Delegated Authority Report – June 2017

V. WASTEWATER POLICY & OVERSIGHT COMMITTEE

A. Information

1. Clinton Local Discharge Limits Evaluation for Submittal to the U.S. Environmental Protection Agency under NPDES Permit #MA010040

2. Revised Enforcement Response Plan for the Toxic Reduction and Control Program

B. Contract Amendments/Change Orders

1. Chelsea Creek Headworks Upgrade, BHD/BEC JV 2015, A Joint Venture: Contract 7161, Change Order 3

VI. WATER POLICY & OVERSIGHT COMMITTEE

A. Contract Awards

1. Strategies to Minimize the Adverse Impacts of an Oil/Contaminant Spill in Wachusett Reservoir on MWRA's Finished Water: University of Massachusetts-Amherst, Contract W320

2. Southern Extra High Pipeline - Section 111 (Dedham North): P. Gioioso and Sons, Inc., Contract 7504

B. Contract Amendments/Change Orders

1. Southern Extra High Pipeline – Section 111 (Boston): P. Gioioso and Sons, Inc., Contract 6454, Change Order 1

2. Wachusett Aqueduct Pumping Station, BHD/BEC JV 2015, A Joint Venture: Contract 7157, Change Order 18

C. Approvals

1. Local Water System Assistance Program – Approval of Water Loan Program Guidelines Revision for Town of Winthrop

VII. PERSONNEL & COMPENSATION COMMITTEE

A. Approvals

1. PCR Amendment – July 2017

2. Appointment of Lab Supervisor III

3. Appointment of Assistant Director, Engineering

4. Appointment of Materials Manager

VIII. CORRESPONDENCE TO THE BOARD

IX. OTHER BUSINESS

X. EXECUTIVE SESSION

A. Real Estate: Watershed Land Acquisition Approval

B. Litigation: Authorization to Commence Cost Recovery Suit

XI. ADJOURNMENT

MASSACHUSETTS WATER RESOURCES AUTHORITY

Meeting of the Board of Directors

June 28, 2017

A meeting of the Board of Directors of the Massachusetts Water Resources Authority was held on June 28, 2017 at the Authority headquarters in Charlestown. Vice-Chair Carroll presided. Present from the Board were Messrs. Flanagan, Pappastergion, Peña, Vitale and Walsh. Ms. Wolowicz and Messrs. Beaton, Blackmon, Cotter and Foti were absent. Among those present from the Authority staff were Frederick Laskey, Executive Director, Steven Remsberg, General Counsel, Michael Hornbrook, Chief Operating Officer, Thomas Durkin, Director of Finance, Michele Gillen, Director of Administration, and Bonnie Hale, Assistant Secretary. The meeting was called to order at 1:00 p.m.

APPROVAL OF MINUTES

Upon a motion duly made and seconded, it was

Voted to approve the minutes of the June 7, 2017 Board of Directors' meeting, as presented and filed with the records of the meeting.

REPORT OF THE EXECUTIVE DIRECTOR

Mr. Laskey reported on various matters, including compliments to staff who helped make the Sail Boston Tall Ships public viewing event on Deer Island run so smoothly, the receipt of another NACWA Platinum Peak Performance Award for the Deer Island Treatment Plant and a Gold Award for the Clinton Wastewater Treatment Plant for outstanding compliance of their National Pollutant Discharge Elimination System (NPDES) permit limits, the annual Advisory Board tour to be held on August 17, and the cancellation of Board of Directors' meeting scheduled for August 16. He also noted that

the possibility of having one instead of two June Board meetings in the future was being considered.

APPROVALS

Final FY2018 Capital Improvement Program

Upon a motion duly made and seconded, it was

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

Final FY2018 Current Expense Budget

Upon a motion duly made and seconded, it was

Voted to adopt: (1) the Final FYI8 Current Expense Budget set forth in Attachment A, B and C with current revenue and expense of $743,629,929; and (2) the Final FY18 Operating Budget (Trustee's Budget) set forth in Attachment D, all as presented and filed with the records of the meeting.

Final FY2018 Water and Sewer Assessments

Upon a motion duly made and seconded, it was

Voted to adopt the following effective July 1, 2017: (1) Water system assessments of $242,415,557 and sewer system assessments of $474,638,443 for Fiscal Year 2018; (2) FY18 sewer assessments of $500,000 for the Town of Clinton and $411,128 for the Lancaster Sewer District; (3) FY18 charge to the City of Worcester of $164,159 representing approximately 7.9% of the direct operating expenses for the Clinton Wastewater Treatment Plant; (4) FY18 water assessments of $3,400,313 for the City of Chicopee, $721,256 for South Hadley Fire District #1, and $792,374 for the Town of Wilbraham; (5) A wholesale water rate of $3,582.09 per million gallons; and (6) A retail sewer rate of $7,573.52 per million gallons.

Water Supply Continuation Agreement with the Town of Bedford

Upon a motion duly made and seconded, it was

Voted to authorize the Executive Director, on behalf of the Authority, to execute a ten-year Water Supply Continuation Agreement with the Town of Bedford substantially in the form presented and filed with the records of the meeting.

Appointment of Principal Civil Engineer

Upon a motion duly made and seconded, it was

Voted to approve the Executive Director's recommendation to appoint Mr. James Bird to the position of Principal Civil Engineer in the Engineering & Construction Department (Unit 9, Grade 25) at an annual salary of $104,221.76, to be effective on the date designated by the Executive Director.

CONTRACT AWARDS

Janitorial Services at MWRA Western Facilities: S.J. Services, Inc., Contract 4388Q

Upon a motion duly made and seconded, it was

Voted to approve the award of Contract WRA-4388Q for Janitorial Services at the John J. Carroll Water Treatment Plant, the Southborough Complex, the Records Center, and the Marlborough Maintenance Facility to the lowest eligible and responsible bidder, S. J. Services, Inc., and to authorize the Executive Director, on behalf of the Authority, to execute said contract in an amount not to exceed $286,296, for a term of three years from August 1, 2017 through July 31, 2020, in accordance with State Blanket Contract #FAC81.

Task Order Appraisal Services: Colliers International Holdings, Inc., Contract 603TA and Fosters Appraisal & Consulting Co., Inc., Contract 604TA

Upon a motion duly made and seconded, it was

Voted to approve the recommendation of the Consultant Selection Committee to select Colliers International Holdings, Inc. ("Colliers") and Foster

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

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

Upon a motion duly made and seconded, it was

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

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

Upon a motion duly made and seconded, it was

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

CONTRACT AMENDMENTS/CHANGE ORDERS

Chelsea Creek Headworks Upgrade, BHD/BEC JV 2015, A Joint Venture: Contract 7161, Change Order 1

Upon a motion duly made and seconded, it was

Voted to authorize the Executive Director, on behalf of the Authority, to approve Change Order 1 to increase the amount of Contract 7161 with BHD/BEC 2015, A Joint Venture, Chelsea Creek Headworks Upgrade, in a lump sum amount of $252,512, with no increase in contract term; further, to authorize the Executive Director to approve additional change orders as may be needed to Contract 7161 in amounts not to exceed the aggregate of $250,000, in accordance with the Management Policies and Procedures of the Board of Directors.

Thermal and Hydro Power Plant Maintenance – Deer Island Treatment Plant: IPC Lydon, LLC, Contract S551, Change Order 2

Upon a motion duly made and seconded, it was

Voted to authorize the Executive Director, on behalf of the Authority, to approve Change Order 2 to increase the amount of Contract S551 with IPC Lydon, LLC, Thermal and Hydro Power Plant Maintenance, Deer Island Treatment Plant, in an amount not to exceed $200,000, with no increase in contract term; further, to authorize the Executive Director to approve additional change orders as may be needed to Contract S551 in amounts not to exceed the aggregate of $250,000, in accordance with the Management Policies and Procedures of the Board of Directors.

The meeting adjourned at 1:10 p.m.

MASSACHUSETTS WATER RESOURCES AUTHORITY

Meeting of the
Administration, Finance and Audit Committee

June 28, 2017

A meeting of the Administration, Finance and Audit Committee was held on June 28, 2017 at the Authority headquarters in Charlestown. Chairman Vitale presided. Present from the Board were Messrs. Carroll, Cotter, Flanagan, Peña, and Walsh; Mr. Pappastergion joined the meeting in progress. Among those present from the Authority staff were Fred Laskey, Steve Remsberg, Michele Gillen, Tom Durkin, Mike Hornbrook, Leo Norton, Dave Coppes, Carolyn Francisco Murphy, Lisa Grollman, and Bonnie Hale. The meeting was called to order at 10:05 a.m.

Information

Delegated Authority Report – May 2017

There was question and answer on a few items in the report.

FY2017 Financial Update and Summary as of May 2017

Staff summarized the monthly financials, and there was general discussion and question and answer.

(Mr. Pappastergion joined the meeting.)

Approvals

*Final FY2018 Capital Improvement Program

Mr. Foti raised the issue of increased costs for the construction of dual odor control technologies for the Nut Island headworks facility – carbon and wet scrubbers - and the precedent that might set for other headworks. There was detailed discussion, with staff explaining the long history of odor issues at Nut Island and the decision made after the fire to move forward with using both technologies simultaneously. Mr. Pappastergion requested that staff perform a cost/benefit analysis of additional odor control for the Board. The Committee recommended approval of the Final FY2018 CIP (ref. agenda item B.1).

* Approved as recommended at June 28, 2017 Board of Directors meeting.

*Final FY2018 Current Expense Budget

Mr. Pappastergion praised the Advisory Board for coming up with a workable budget recommendation and Mr. Laskey and staff for their thoroughness in considering the recommendations. The Committee recommended approval of the Final FY2018 CEB (ref. agenda item B.2).

*Final FY2018 Water and Sewer Assessments

The Committee recommended approval of the Final FY2018 water and sewer assessments (ref. agenda item B.3).

Contract Awards

*Janitorial Services at MWRA Western Facilities: S.J. Services, Inc., Contract WRA-3848Q

Staff summarized the proposed contract and there was general discussion. The Committee recommended approval of the contract award (ref. agenda item C.1).

*Task Order Appraisal Services: Colliers International Holdings, Inc., Contract 603TA and Fosters Appraisal & Consulting Co., Inc., Contract 604TA

The Committee recommended approval of the two task order appraisal services contracts (ref. agenda item C.2).

The meeting adjourned at 10:45 a.m.

Information (cont'd.)

MWRA In-House Maintenance Work

After the early conclusion of the morning Committee meetings, staff gave a presentation on the various types of maintenance work performed by MWRA staff. (Presentation on file with the records of the meeting.)

* Approved as recommended at June 28, 2017 Board of Directors meeting.

STAFF SUMMARY

TO: Board of Directors
FROM: Frederick A. Laskey, Executive Director
DATE: July 19, 2017
SUBJECT: Delegated Authority Report – June 2017

COMMITTEE: Administration, Finance & Audit

X INFORMATION
___ VOTE

Michele S. Gillen
Director, Administration

Barbara Aylward, Administrator A & F
Preparer/Title

Carolyn Francisco Murphy
Director of Procurement

RECOMMENDATION:

For information only. Attached is a listing of actions taken by the Executive Director under delegated authority for the period June 1 – 30, 2017.

This report is broken down into three sections:

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

BACKGROUND:

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

Construction Contract Awards:

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

Change Orders:

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

Professional Service Contract Awards:

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

Non-Professional Service Contract Awards:

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

Purchase or Lease of Equipment, Materials or Supplies:

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

Amendments:

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

Amendments to the Position Control Register:

Amendments which result only in a change in cost center.

BUDGET/FISCAL IMPACT:

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

CONSTRUCTION/PROFESSIONAL SERVICES DELEGATED AUTHORITY ITEMS JUNE 1 - 30, 2017

NO.	DATE OF AWARD	TITLE AND EXPLANATION	CONTRACT	AMEND/CO	COMPANY	FINANCIAL IMPACT
C-1.	06/07/17	**NOTHERN INTERMEDIATE HIGH SECTION 110-112 - STONEHAM AND WAKEFIELD** CHANGE ORDER TO INCREASE THE CONTRACT AMOUNT TO REMOVE EXISTING 6-INCH CAST IRON MAIN AND FURNISH AND INSTALL 8-INCH MAIN, HYDRANTS AND VALVES; AND FURNISH NEW MANHOLE FRAMES AND COVERS.	7478	1	ALBANESE D&S, INC.	$48,394
C-2.	06/08/17	**INDUSTRIAL NOISE MEASUREMENT AND MONITORING** AWARD OF CONTRACT FOR INDUSTRIAL NOISE MEASUREMENT AND MONITORING SERVICES FOR A TERM OF NINE MONTHS.	OP-331	AWARD	HYDRO-ENVIRONMENTAL TECHNOLOGIES, INC.	$28,151.00
C-3.	06/19/17	**BEACON STREET LINE WATER PIPELINE REPAIR** FINAL BALANCING CHANGE ORDER TO DECREASE THE FOLLOWING BID ITEMS TO REFLECT ACTUAL QUANTITIES USED: TRAFFIC CONTROL; UTILITITY WORK; AND MBTA SERVICES.	7458	3	R. ZOPPO CORP.	($93,725.73)
C-4.	06/20/17	**SECURITY EQUIPMENT MAINTENANCE AND REPAIR SERVICES** FINAL BALANCING CHANGE ORDER TO DECREASE THE FOLLOWING BID TIEMS TO REFLECT ACTUAL QUANTITIES USED: SPARE AND REPLACEMENT PARTS; MARK-UP ON PARTS; SCHEDULED PREVENTATIVE MAINTENANCE; NON-EMERGENCY ON-CALL MAINTENANCE AND REPAIR; EMERGENCY ON-CALL MAINTENANCE AND REPAIR; INTEGRATION AND PROGRAMMING SERVICES; INTEGRATION AND PROGRAMMING; SCHEDULED IT SYSTEM OPERATION AND MAINTENANCE SERVICES; NON-EMERGENCY ON-CALL TECHNOLOGY SYSTEM OPERATIONS AND MAINTENANCE SERVICES; AND EMERGENCY ON-CALL TECHNOLOGY SYSTEM OPERATIONS AND MAINTENANCE SERVICES.	EXE-034	3	VISCOM SYSTEMS, INC.	($119,210.60)

PURCHASING DELEGATED AUTHORITY ITEMS JUNE 1 - 30, 2017

NO.	DATE OF AWARD	TITLE AND EXPLANATION	CONTRACT	AMENDMENT	COMPANY	FINANCIAL IMPACT
P-1.	06/07/17	**PURCHASE OF SECURITY ROOM CONSOLES** AWARD OF A PURCHASE ORDER TO THE LOWEST RESPONSIVE BIDDER FOR THE PURCHASE OF SECURITY ROOM CONSOLES FOR THE CHELSEA FACILITY.	WRA-4363Q		ALL-COMM TECHNOLOGIES, INC	$33,411.81
P-2.	06/07/17	**PURCHASE OF TWO S::CAN SPECTRO::LYSERS** AWARD OF A SOLE SOURCE PURCHASE ORDER FOR TWO SPARE S::CAN SPECTRO::LYSERS FOR CONTAMINANT WARNING SYSTEM.			MEASUREMENT SYSTEMS, LLC	$42,487.00
P-3.	06/07/17	**EDISCOVERY, ENTERPRISE VAULT AND CLEARWATER TECHNICAL CONSULTING SERVICES** AWARD OF A PURCHASE ORDER UNDER STATE BLANKET CONTRACT TO THE LOWEST RESPONSIVE BIDDER FOR CONSULTING SERVICES FOR FINAL PHASE OF IMPLEMENTATION OF EDISCOVERY, ENTERPRISE VAULT AND CLEARWATER.	WRA-4355Q		OVERTURE PARTNERS, LLC	$83,550.92
P-4.	06/08/17	**REBUILD OF ONE MUFFIN MONSTER GRINDER** AWARD OF A SOLE SOURCE PURCHASE ORDER TO REBUILD ONE MUFFIN MONSTER GRINDER FOR BRAINTREE WEYMOUTH PUMP STATION.			JWC ENVIRONMENTAL	$43,377.00
P-5.	06/15/17	**IMPLEMENTATION SERVICES FOR PI BASED BUOY** AWARD OF CONTRACT UNDER STATE BLANKET CONTRACT TO THE LOWEST RESPONSIVE BIDDER FOR IMPLEMENTATION SERVICES FOR PI BASED BUOY SYSTEM.	WRA-4378		OVERTURE PARTNERS, LLC	$43,016.75
P-6.	06/15/17	**PEST CONTROL SERVICES** AWARD OF A PURCHASE ORDER UNDER STATE BLANKET CONTRACT TO THE LOWEST RESPONSIVE BIDDER FOR PEST CONTROL SERVICES AT VARIOUS FIELD OPERATIONS SITES.	WRA-4832		A-1 EXTERMINATORS, INC.	$74,020.00
P-7.	06/15/17	**ORACLE PROCESSOR LICENSES MAINTENANCE AND SUPPORT** AWARD OF A PURCHASE ORDER UNDER STATE BLANKET CONTRACT TO THE LOWEST RESPONSIVE BIDDER FOR ORACLE PROCESSOR LICENSES MAINTENANCE AND SUPPORT FOR THE TIME PERIOD JULY 1, 2017 THROUGH JUNE 30, 2018.			ORACLE AMERICA, INC.	$179,740.85
P-8.	06/19/17	**PURCHASE OF CHN ELEMENTAL ANALYZER** AWARD OF A PURCHASE ORDER TO THE LOWEST RESPONSIVE BIDDER FOR THE PURCHASE FOR ONE CHN ELEMENTAL ANALYZER FOR THE DEPARTMENT OF LABORATORY SERVICES.	WRA-4391Q		PERKIN ELMER HEALTH SERVICES, INC.	$33,487.51
P-9.	06/19/17	**PURCHASE OF TWO PRIMARY SLUDGE PUMPS** AWARD OF A PURCHASE ORDER TO THE LOWEST RESPONSIVE BIDDER FOR THE PURCHASE FOR TWO PRIMARY SLUDGE PUMPS FOR DEER ISLAND TREATMENT PLANT.	WRA-4373Q		PROCESS DISTRIBUTORS, INC	$38,930.00
P-10.	06/19/17	**SUPPLY AND DELIVERY OF SODIUM BISULFITE** AWARD OF A PURCHASE ORDER TO THE LOWEST RESPONSIVE BIDDER FOR THE SUPPLY AND DELIVERY OF SODIUM BISULFITE TO VARIOUS WASTEWATER FACILITIES.	WRA-4387Q		UNIVAR USA, INC	$39,763.00
P-11.	06/19/17	**SUPPLY AND DELIVERY OF SODIUM BISULFITE** AWARD OF A PURCHASE ORDER TO THE LOWEST RESONSIVE BIDDER FOR THE SUPPLY AND DELIVERY OF SODIUM BISULFITE TO THE JOHN J CARROLL WATER TREATMENT PLANT AND THE CLINTON WASTEWATER TREATMENT PLANT.	WRA-4389		SOUTHERN IONICS, INC.	$113,690.00
P-12.	06/19/17	**SUPPLY AND DELIVERY OF SODIUM HYPOCHLORITE** AWARD OF A PURCHASER ORDER TO THE LOWEST RESONSIVE BIDDER FOR THE SUPPLY AND DELIVERY OF SODIUM HYPOCHLORITE TO VARIOUS WATSTEWATER FACILITIES.	WRA-4390		UNIVAR USA, INC.	$154,539.10
P-13.	06/29/17	**MAINTENANCE AND SUPPORT FOR VMWARE VSPHERE LICENSES** AWARD OF A PURCHASE ORDER UNDER STATE BLANKET CONTRACT TO THE LOWEST RESPONSIVE BIDDER FOR THE MAINTENANCE AND SUPPORT OF VMWARE VSPHERE LICENSES.	WRA-4394Q		SHI INTERNATIONAL, CORPORATION	$62,053.00
P-14.	06/29/17	**VIBRATION ANALYSIS TRAINING AND SUPPORT SERVICES** AWARD OF A PURCHASE ORDER FOR DEER ISLAND AND A PURCHASE ORDER FOR VARIOUS FIELD OPERATIONS SITES TO THE LOWEST RESPONSIVE BIDDER TO PROVIDE VIBRATION ANALYSIS TRAINING AND SUPPORT SERVICES.	WRA-4384		M&B ENGINEERED SOLUTIONS, INC.	$96,680.00
P-15.	06/29/17	**GARTNER IT EXECUTIVE + DELEGATE SUBSCRIPTION RENEWAL** AWARD OF A PURCHASE ORDER UNDER STATE BLANKET CONTRACT FOR SUBSCRIPTION RENEWAL FOR IT RESEARCH AND CONSULTING SERVICES FOR THE PERIOD OF JULY 1, 2017 THROUGH JUNE 30, 2018.			GARTNER, INC	$97,475.00
P-16.	06/29/17	**MAXIMO TECHNICAL CONSULTANT SERVICES** AWARD OF A PURCHASE ORDER UNDER STATE BLANKET CONTRACT TO THE LOWEST RESPONSIVE BIDDER FOR MAXIMO TECHNICAL CONSULTANT SERVICES.	WRA-4377Q		NTT DATA, INC	$98,175.00
P-17	06/29/17	**LANDESK CONSULTING SERVICES** AWARD OF A PURCHASE ORDER UNDER STATE BLANKET CONTRACT TO THE LOWEST RESPONSIVE BIDDER FOR LANDESK CONSULTING SERVICES FOR OFFICE PROFESSIONAL 2016 DEPLOYMENT.	WRA-4396Q		SHI INTERNATIONAL CORPORATION	$99,663.30

MASSACHUSETTS WATER RESOURCES AUTHORITY

Meeting of the
Wastewater Policy and Oversight Committee

June 28, 2017

A meeting of the Wastewater Policy and Oversight Committee was held on June 28, 2017 at the Authority headquarters in Charlestown. Chairman Flanagan presided. Present from the Board were Messrs. Carroll, Cotter, Pappastergion, Peña, Vitale and Walsh. Among those present from the Authority staff were Fred Laskey, Steve Remsberg, Steve Estes-Smargiassi, Mike Hornbrook, Marty McGowan, Dave Duest, Rick Adams, and Bonnie Hale. The meeting was called to order at 10:45 a.m.

Contract Awards

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

Staff gave a presentation on the above project and there was general discussion and question and answer. The Committee recommended approval of the contract award (ref. agenda item A.1).

Contract Amendments/Change Orders

*Chelsea Creek Headworks Upgrade, BHD/BEC JV 2015, A Joint Venture: Contract 7161, Change Order 1

Staff discussed the difficult rehabilitation project to upgrade this facility built in the 1960s, the reasons for the change order, and additional change orders anticipated. There was detailed discussion. The Committee recommended approval of Change Order 1 (ref. agenda item B.1)

Thermal and Hydro Power Plant Maintenance – Deer Island Treatment Plant: IPC Lydon, LLC, Contract S551, Change Order 2

Staff described the multi-faceted project and the work to be performed under the change order. The Committee recommended approval of Change Order 2 (ref. agenda item C.2).

The meeting adjourned at 11:20 a.m.

* Approved as recommended at June 28, 2017 Board of Directors meeting.

STAFF SUMMARY

TO: Board of Directors
FROM: Frederick A. Laskey, Executive Director
DATE: July 19, 2017
SUBJECT: Clinton Local Discharge Limits Evaluation for Submittal to the US Environmental Protection Agency under NPDES Permit #MA0100404

COMMITTEE: Wastewater Policy and Oversight

X INFORMATION
___ VOTE

Carolyn M. Fiore, Deputy Chief Operating Officer
John Riccio, Director, TRAC
Denise K. Breiteneicher, Program Manager, Energy and Environmental Management
Preparer/Title

Michael J. Hornbrook
Chief Operating Officer

RECOMMENDATION:

For information only. Staff are presenting the results of MWRA's local limits analysis for the Clinton Sewerage Service Area as required under the Clinton Wastewater Treatment Plant's National Pollutant Discharge Elimination System (NPDES) Permit, prior to submission to the U.S. Environmental Protection Agency and the Massachusetts Department of Environmental Protection.

DISCUSSION:

The recently reissued NPDES permit for the Clinton Wastewater Treatment Plant requires that the MWRA conduct an analysis of the industrial discharge limits for permitted industries in the Clinton Sewerage Service Area and submit a written technical evaluation of the results of the analysis within 180 days of the effective date of the permit. Under this requirement, MWRA must review the adequacy of existing discharge limits and establish additional standards, if necessary, to prevent pollutants from entering the treatment system that would interfere with the operation of the treatment plant or pass untreated through the treatment plant to contaminate the receiving water.

MWRA conducted its most recent evaluation of local limits for the Clinton Wastewater Treatment Plant in 2001, pursuant to the prior NPDES permit issued in 2000. EPA approved revisions to the then existing limits in October 2002, and MWRA subsequently adopted the changes through formal amendments to it Sewer Use Regulations (360 CMR 10.000) in 2003. EPA issued an updated guidance document in 2012, the Evaluation of Technically Based Local Limits that describes in detail how to evaluate the need to establish local limits and the data collection necessary to support the evaluation. This guidance document also included a

discussion of how to conduct a re-evaluation of local limits for Publicly Owned Treatment Works that had already adopted technically-based local limits. The NPDES permit issued on December 26, 2016, requires this re-evaluation be submitted to EPA within 180 days of the effective date of the permit. This review involves an evaluation of the performance of the treatment plant, the NPDES Permit requirements, the characteristics of the receiving water, and worker health and safety to enable MWRA to establish standards and control measures that reflect the particular characteristics of the Clinton Sewerage Service Area.

The local limits analysis conducted pursuant to this review indicates that the existing local limits adequately protect the treatment plant, the receiving water, and worker health and safety considerations and do not need to be revised at this time Staff have identified a few changes that would simplify the implementation of the existing local limits, and in its submittal to EPA, will recommend the modifications described in more detail below The proposed changes are also summarized in the table provided in Attachment 1.

Facility Specific Limits

In the local limits approved by EPA in 2002, MWRA recommended that a group of parameters be regulated on a facility-by-facility basis. No specified limits were included for these pollutants, but MWRA committed to evaluating, on a case-by-case basis, a facility's request to discharge any one of these parameters and establish a site-specific local limit. None of these parameters was detected in the influent, effluent, or background data. While one option could be to eliminate these parameters from regulation, staff do not believe that eliminating the limits entirely is appropriate. Instead of the case-by-case analysis, however, staff are recommending that these parameters be added to the currently regulated list of Toxic Organics (with one exception discussed below), each regulated at a limit of 1.0 mg/L. The regulations also limit Total Toxic Organics, the sum of each regulated Toxic Organic, to 5.0 mg/L, to avoid what could otherwise be a slug discharge of toxic organic compounds each in compliance but in total causing a problem. (A Total Toxic Organics limit is included in MWRA's regulations for the Deer Island Wastewater Treatment Plant to be similarly protective.) By being regulated as a Toxic Organic, each parameter will be included in the regulatory definition and limited in sum by the Total Toxic Organics limit. Staff are recommending that one parameter, formaldehyde, now regulated on a case-by-case basis, be regulated individually, not as a Total Toxic Organic. The rationale for this follows.

Formaldehyde

Formaldehyde is currently included on the list of pollutants for which a facility specific limit would be established, if necessary, as discussed above. Formaldehyde is not a water quality issue, nor does it cause problems at the treatment plant, so a limit cannot be based on either of these criteria. However, formaldehyde can pose a fume toxicity risk to sewer workers in large enough quantities. Therefore, fume toxicity was used as the determining factor for establishing a formaldehyde limit, as the MWRA did in its Metropolitan Local Limits completed in 2001. The limit of 9.0 mg/l in the Metropolitan Sewerage Service Area was developed using the American Conference of Governmental Industrial Hygienists' short-term fume toxicity exposure level for formaldehyde in the air and converting that to an undiluted aqueous limit. This is the limit that is being proposed for the Clinton Local Limits also.

Fats, Oil, and Grease

Fats, oil, and grease (FOG) are regulated primarily because of their potential impact on wastewater infrastructure, including pipelines, pumps, wet-wells, and other accoutrements. They are also a contributor to scum in a wastewater treatment plant. The current limit for FOG in the Clinton Sewerage Service Area is 100 mg/L, with an allowance to increase the limit on a case-by-case basis under certain circumstances. The average concentration of FOG in the Clinton Plant's influent is 20.5 mg/l and FOG is not detected in the outfall. The Plant has had no scum or other problems related to FOG. There is no numerical water quality limit for FOG, though there is a narrative standard that states, "These waters shall be free from oil, grease and petrochemicals that produce a visible film on the surface of the water, impart an oily taste to the water or an oily or other undesirable taste to the edible portions of aquatic life, coat the banks or bottom of the water course, or are deleterious or become toxic to aquatic life." Staff are not aware of any FOG issues that have affected the local sewer systems of Clinton or Lancaster, nor has FOG caused any problems for MWRA's infrastructure or in the outfall. Currently, there is one industry in the Clinton Sewerage Service Area that is permitted to discharge FOG. There are no known negative effects on the Plant or on the local or MWRA infrastructure from this discharge. Given the low concentration of FOG in the Plant's influent, the ability of the Plant to remove the FOG, and the lack of any problems related to FOG discharges, MWRA recommends raising the FOG limit from 100 mg/l to 300 mg/l. This is the same limit for FOG that is in the MWRA's Sewer Use Regulations for the Metropolitan Sewerage Service Area.

Next Steps

MWRA must submit the Clinton Local Limits Reassessment to EPA and DEP for review and comment on or before August 25, 2017 per the reissued NPDES Permit. Upon receipt of comments from EPA and DEP on the Local Limits Reassessment, MWRA must then complete and send to the EPA and DEP for review, the draft revisions to the Sewer Use Ordinance within 120 days. Once EPA's and DEP's comments are received on the proposed changes to the Sewer Use Ordinance, staff will return to the Board for approval to put the regulations out for public comment. Final Proposed Sewer Use Regulations will be published after the public comments have been considered and the regulations are finalized.

BUDGET/FISCAL IMPACT:

There are no identified budget impacts to either permitted industries or MWRA as a result of the proposed changes to the Clinton Local Discharge Limits. The changes proposed will not increase sampling or analytical costs, nor will they require any additional expenditures by permitted industries.

ATTACHMENT:

Attachment 1 – Summary of Proposed Revisions to the Local Discharge Limits for the Clinton Sewerage Service area.

ATTACHMENT 1

SUMMARY OF PROPOSED REVISIONS TO THE LOCAL DISCHARGE LIMITS FOR THE CLINTON SEWERAGE SERVICE AREA

Parameter	Existing Limit (mg/l)	Proposed Action	Justification
Acenaphthene	No numerical limit - Facility Specific Limit	Move to Toxic Organics list –limit will be 1.0 mg/l	There is no technical basis for a different limit than the other organics on the Toxic Organics list.
N-Amyl acetate	No numerical limit - Facility Specific Limit	Move to Toxic Organics list –limit will be 1.0 mg/l	There is no technical basis for a different limit than the other organics on the Toxic Organics list.
Bis(2-chloroisopropyl)ether	No numerical limit - Facility Specific Limit	Move to Toxic Organics list –limit will be 1.0 mg/l	There is no technical basis for a different limit than the other organics on the Toxic Organics list.
2- Butanone	No numerical limit - Facility Specific Limit	Move to Toxic Organics list –limit will be 1.0 mg/l	There is no technical basis for a different limit than the other organics on the Toxic Organics list.
N-Butyl acetate	No numerical limit - Facility Specific Limit	Move to Toxic Organics list –limit will be 1.0 mg/l	There is no technical basis for a different limit than the other organics on the Toxic Organics list.
N-Butylamine	No numerical limit - Facility Specific Limit	Move to Toxic Organics list –limit will be 1.0 mg/l	There is no technical basis for a different limit than the other organics on the Toxic Organics list.
Butylbenzylphthalate	No numerical limit - Facility Specific Limit	Move to Toxic Organics list –limit will be 1.0 mg/l	There is no technical basis for a different limit than the other organics on the Toxic Organics list.
Chlorodibromomethane	No numerical limit - Facility Specific Limit	Move to Toxic Organics list –limit will be 1.0 mg/l	There is no technical basis for a different limit than the other organics on the Toxic Organics list.
Diethylphthalate	No numerical limit - Facility Specific Limit	Move to Toxic Organics list –limit will be 1.0 mg/l	There is no technical basis for a different limit than the other organics on the Toxic Organics list.
Dimethylphthalate	No numerical limit - Facility Specific Limit	Move to Toxic Organics list –limit will be 1.0 mg/l	There is no technical basis for a different limit than the other organics on the Toxic Organics list.
Di-n-butylphthalate	No numerical limit - Facility Specific Limit	Move to Toxic Organics list –limit will be 1.0 mg/l	There is no technical basis for a different limit than the other organics on the Toxic Organics list.
4,6-Dinitro-o-cresol	No numerical limit - Facility Specific Limit	Move to Toxic Organics list –limit will be 1.0 mg/l	There is no technical basis for a different limit than the other organics on the Toxic Organics list.
Dinitrophenols	No numerical limit - Facility Specific Limit	Eliminate this group	Individual phenols that make up this group are already on the Total Toxic Organics list.
2,6-Dinitrotoluene	No numerical	Move to Toxic	There is no technical basis for a

Parameter	Existing Limit (mg/l)	Proposed Action	Justification
	limit - Facility Specific Limit	Organics list –limit will be 1.0 mg/l	different limit than the other organics on the Toxic Organics list.
Fats, Oils, and Grease (FOG)	100 mg/l	Raise to 300 mg/l	The FOG concentration in the Plant's influent is significantly below the current local limit, and FOG is not detected at all in the outfall. There have been no problems at the Plant with FOG either. There are no indications that there will be a significant increase in FOG discharges in the future.
Formaldehyde	No numerical limit - Facility Specific Limit	Replace the facility specific limit with a limit of 9 mg/L based on ACGIH data	Facility specific limits are difficult to enforce. Formaldehyde can be a fume toxicity issue for those working in the sewer, therefore establishing a local limit based on conservative fume toxicity requirements is more protective of worker health and safety.
Isophorone	No numerical limit - Facility Specific Limit	Move to Toxic Organics list –limit will be 1.0 mg/l	There is no technical basis for a different limit than the other organics on the Toxic Organics list.
2-Methylphenol	No numerical limit - Facility Specific Limit	Move to Toxic Organics list –limit will be 1.0 mg/l	There is no technical basis for a different limit than the other organics on the Toxic Organics list.
3-Methylphenol	No numerical limit - Facility Specific Limit	Move to Toxic Organics list –limit will be 1.0 mg/l	There is no technical basis for a different limit than the other organics on the Toxic Organics list.
4-Methylphenol	No numerical limit - Facility Specific Limit	Move to Toxic Organics list –limit will be 1.0 mg/l	There is no technical basis for a different limit than the other organics on the Toxic Organics list.
Phenol	No numerical limit - Facility Specific Limit	Move to Toxic Organics list –limit will be 1.0 mg/l	There is no technical basis for a different limit than the other organics on the Toxic Organics list.
Pyrene	No numerical limit - Facility Specific Limit	Move to Toxic Organics list –limit will be 1.0 mg/l	There is no technical basis for a different limit than the other organics on the Toxic Organics list.

REASSESSMENT OF TECHNICALLY BASED LOCAL LIMITS

(TBLLs)

POTW Name and Address: Clinton Wastewater Treatment Plant, 677 High Street, Clinton, MA

NPDES PERMIT# MA0100404

Date EPA approved current TBLLs: October 2002

Date EPA approved current Sewer Use Ordinance: June 20, 2003 (additional revisions to the Sewer Use regulations were approved on August 7, 2009)

INTRODUCTION

The Clinton Wastewater Treatment Plant service area is made up of the Town of Clinton and the Lancaster Sewer District. The Plant discharges into the South Branch of the Nashua River. The Service Area is primarily residential with 12 permitted industries (four of which are Significant Industrial Users at the time of this review). Permitted industrial flow makes up approximately 3% of the flow to the Plant.

A new NPDES permit was issued to the Plant on December 21, 2016, with an effective date of March 1, 2017.

ITEM I

In Column (1) list the conditions that existed when your current TBLLs were calculated. In Column (2), list current conditions or expected conditions at your POTW		
	Column (1) EXISTING TBLLs	Column (2) PRESENT TBLLs
POTW Flow (MGD)	3.01 (permitted flow)	3.01 (permitted flow)
Dilution Ratio or 7Q10 (from NPDES Permit)	1.6	1.6
SIU Flow (MGD)	0.041	0.041
Safety Factor	10%	N/A
Biosolids Disposal Method(s)	Dedicated landfill, lined, leachate collected and sent back to plant.	Dedicated landfill, lined, leachate collected and sent back to plant.

ITEM II

List the existing TBLLs for the Clinton Wastewater Treatment Plant, as they appear in the current Sewer Use Ordinance.

EXISTING TBLLs			
POLLUTANT	NUMERICAL LIMIT (mg/l)	POLLUTANT	NUMERICAL LIMIT (mg/l)
Acenaphthene	**	Endrin	Prohibited
Acenaphthylene	1.0*	Endrin aldehyde	Prohibited
Acetaldehyde	1,0*	Ethion	Prohibited
Acrolein	0.5	EXD	Prohibited
Acrylonitrile	Prohibited	Epichlorohydrin	1.0*
Aldrin	Prohibited	Ethylbenzene	1.0*
Allyl alcohol	1.0*	Ethylene diamine	1.0*
Allyl chloride	1.0*	Ethylene dibromide	1.0*
Aluminium	30	Fats, Oils, and Grease	100
alpha-BHC	Prohibited	Ferbam	Prohibited
alpha-Chlordane	Prohibited	Furfural	Prohibited
N-Amyl acetate	**	Fluoranthene	1.0*
Aniline	1.0*	Fluorene	1.0*
Anthracene	1.0*	Fluorene	1.0*
Arsenic	0.5	Formaldehyde	**
Benzene	0.4	gamma-BHC	Prohibited
Benzidine	Prohibited	gamma-Chlordane	Prohibited
Benzo(a)anthracene	Prohibited	Guthion	Prohibited
Benzo(a)pyrene	Prohibited	Heptachlor	Prohibited
Benzo(b)fluoranthene	Prohibited	Heptachlor epoxide	Prohibited
Benzo(g,h,i)perylene	1.0*	Hexachlorobenzene	Prohibited
Benzo(k)fluoranthene	Prohibited	Hexachlorobutadiene	Prohibited
Benzonitrile	1.0*	Hexachlorocylo-hexane-Technical	Prohibited
Benzyl chloride	1.0*	Hexachlorocyclopentadiene	Prohibited
bis(2-Chloroethoxy)methane	1.0*	Hexachloroethane	0.2
bis(2-Chloroethyl)ether	Prohibited	Indeno(1,2,3-cd)pyrene	Prohibited
Bis(2-chloroisopropyl) ether	1.0*	Isoprene	1.0*
Bis (2-chloroethoxy)methane	1.0*	Isopropanolamine dodecylbenzenesulfonate	1.0*
bis(2-Ethylhexyl)phthalate	0.2	Kelthane	1.0*
Bromodichloromethane	1.0*	Kepone	Prohibited
Bromoform	1.0*	KN Methyl	Prohibited
Bromomethane	0.2	Isophorone	**
4-Bromophenyl phenyl ether	1.0*	Lead	0.2
Busan 40	Prohibited	Malathion	Prohibited
Busan 85	Prohibited	Metham	Prohibited
2- Butanone	**	Mercaptodimethur	1.0*
N-Butyl acetate	**	Mercury	Prohibited
N-Butylamine	**	Methoxychlor	Prohibited

EXISTING TBLLs			
POLLUTANT	NUMERICAL LIMIT (mg/l)	POLLUTANT	NUMERICAL LIMIT (mg/l)
Butylbenzylphthalate	**	2-Methyl-4,6-dinitrophenol	1.0*
Cadmium	0.5	Methylene chloride	1.0*
Captan	Prohibited	Methyl mercaptan	1.0*
Carbaryl	Prohibited	Methyl methacrylate	1.0*
Carbofuran	Prohibited	Methylnapthalene	1.0*
Carbon disulfide	0.6	Methyl parathion	Prohibited
Carbon tetrachloride	0.1	2-Methylphenol	**
Chlordane (Technical)	Prohibited	3-Methylphenol	**
Chlorodibromomethane	**	4-Methylphenol	**
4-Chloroaniline	1.0*	Mevinphos	Prohibited
Chlorobenzene	1.0*	Mexacarbate	Prohibited
Chloroethane	1.0*	Mirex	Prohibited
Chloroethylvinyl ether	1.0*	Monoethylamine	1.0*
Chloroform	1.0*	Monomethylamine	1.0*
Chloromethane	1.0*	Nabam	Prohibited
2-Chloronaphthalene	1.0*	Nabonate	Prohibited
2-Chlorophenol	1.0*	Naled	Prohibited
4-Chloro-3-methylphenol	1.0*	Naphthalene	1.0*
Chlorpyrifos	Prohibited	Naphthenic acid	1.0*
Chromium	1.0	Nickel	2.0
Coumaphos	Prohibited	Nitrobenzene	1.0*
Chromium – hexavalent	5.0	2-Nitrophenol	1.0*
4-Chlorophenyl phenyl ether	1.0*	4-Nitrophenol	1.0*
Chrysene	Prohibited	Nitrosamines	0.1
Copper	1.0	N-Nitrosodibutylamine	0.1
Crotonaldehyde	1.0*	N-Nitrosodiethylamine	0.1
Cyanide	1.0	N-Nitrosodimethylamine (NDMA)	0.2
Cyclohexane	0.6	N-Nitrosodi-N-propylamine (NDPA)	Prohibited
delta-BHC	Prohibited	N-Nitrosopyrrolodine	1.0*
Demeton	Prohibited	Nitrotoluene	1.0*
Diazinon	Prohibited	Pentachlorobenzene	0.2
Dibenzo(a,h)anthracene	Prohibited	Pentachlorophenol	Prohibited
Dibenzofuran	1.0*	Phenanthrene	1.0*
Dicamba	Prohibited	Phenol	**
Dichlorophenoxyacetate	Prohibited	Phosgene	1.0*
Dichlorvos	Prohibited	Polychlorinated biphenols	Prohibited
Dichlorobenil	1.0*	Propargite	Prohibited
1,2-Dichlorobenzene	1.0*	Propylene oxide	Prohibited
1,3-Dichlorobenzene	1.0*	Pyrethrins	Prohibited
1,4-Dichlorobenzene	1.0*	Pyrene	**
3,3'-Dichlorobenzidine	Prohibited	Quinoline	1.0*
Dichlorodifluoromethane	1.0*	Resorcinol	1.0*
1,1-Dichloroethylene	0.2	Selenium	1.0

EXISTING TBLLs			
POLLUTANT	NUMERICAL LIMIT (mg/l)	POLLUTANT	NUMERICAL LIMIT (mg/l)
1,1-Dichloroethane	1.0*	Silver	1.0 (2.0 for Group permit for photoprocessors)
1,2-Dichloroethane	1.0*	Sodium dimethyldithiocarbamate	1.0*
trans-1,2-Dichloroethylene	1.0*	Styrene	1.0*
2,4-Dichlorophenol	1.0*	Strychnine	Prohibited
1,2-Dichloropropane	1.0*	1,2,4,5-Tetracholorbenzene	0.1
cis-1,3-Dichloropropene	0.6	1,1,2,2-Tetrachloroethane	1.0*
trans-1,3-Dichloropropene	0.1	Tetrachloroethylene	1.0*
2,2-Dichloropropionic acid	1.0*	Thiram	Prohibited
Diethyl amine	1.0*	Trichloroethylene	1.0*
4,4'-DDD	Prohibited	Triethanolamine dodecylbenzenesulfonate	1.0*
4,4'-DDE	Prohibited	Triethylamine	1.0*
4,4'-DDT	Prohibited	Trimethylamine	1.0*
Dieldrin	Prohibited	Toluene	1.0*
Dimethylamine	Prohibited	Toxaphene	Prohibited
Diquat	Prohibited	Trans-1,3-Dichloropropene	0.1
Disulfoton	Prohibited	Tributyltin	Prohibited
Diuron	Prohibited	1,1,1 Trichloroethane	1.0*
Diethylphthalate	**	1,1,2-Trochloroethane	1.0*
2,4-Dimethylphenol	1.0*	Trichlorofluoromethane	0.1
Dimethylphthalate	**	Trichlorofon	Prohibited
Di-n-butylphthalate	**	1,2,4-Trichlorobenzene	1.0*
4,6-Dinitro-o-cresol	**	2,4,5-Trichlorophenol	Prohibited
Dinitrophenols	**	2,4,6-Trichlorophenol	Prohibited
2,4-Dinitrophenol	1.0*	Vinyl acetate	1.0*
2,4-Dinitrotoluene	0.2	Vinyl chloride	Prohibited
2,6-Dinitrotoluene	**	Xylene (total)	Prohibited
Di-n-octylphthalate	1.0*	Xylenol	1.0*
1,2-Diphenylhydrazine	Prohibited	Zineb	Prohibited
Endosulfan sulfate	Prohibited	Ziram	Prohibited
		Zinc	5.0

*These parameters are listed in the Sewer Use Regulations in the Total Toxic Organics list and have an individual limit of 1.0 mg/l, and a total combined limit of 5.0 mg/l.

** These are currently regulated on a facility-by-facility basis.

ITEM III

Note how your existing TBLLs, listed in Item II, are allocated to your significant Industrial Users (SIUs), i.e. uniform concentration, contributory flow, mass proportioning, other. **Please specify by circling.**

ITEM IV

Has your POTW experienced any upsets, inhibition, interference, or pass-through from industrial sources since your TBLLs were calculated?

The existing TBLLs were calculated and submitted to the EPA for review in 2001. There were no verified upsets, inhibition, interference, or pass-throughs due to industrial sources since the existing TBLLs were calculated in 2001. However, there were two reported interferences and an upset with the biological treatment processes, occurring in FY03, FY07, and FY08/09, respectively, none of which were traced to any industrial sources.

In FY03 there was a slug load of ammonia that entered the Plant and resulted in a violation of the ammonia limit in the permit. In December 2006, the Plant had a violation of the daily permit limit for fecal coliform due to heavy foaming at the Plant. And in December 2007, there was a process upset. A pipe at the Clinton POTW carrying chlorinated process water used for Plant wash down, cracked and leaked chlorinated process wastewater into the aeration tanks, which killed the beneficial bacteria required for nitrification. A more complete description of these events is listed in Attachment 1.

Is the POTW presently violating any of its current NPDES permit limitations, including toxicity?

The Clinton WWTP is not presently violating any of its existing NPDES permit limits. There have been three toxicity violations, one in December 2013, the second in September 2014, and the most recent in March 2017, though they were isolated incidents and not related to any industrial discharges. Staff believe, after completing a detailed analysis, that it is the copper concentration in the effluent combined with low flow conditions that caused the December 2013 toxicity violation. Low flows can lead to less organic matter being available to bind with the copper reducing its bioavailability. The majority of the copper coming into the Plant is from non-industrial sources.

The September 2014 and March 2017 toxicity violations were of the chronic reproduction part of the test for the Ceriodaphnia dubia. The violations were investigated and the results did not show anything unusual that would have caused the violation. The only pattern that emerged from the analysis was the unusually high reproduction of the Ceriodaphnia in the river water which serves as the control for the test of the Plant's effluent mixed with river water. Normally the reproduction of the Ceriodaphnia in the diluted effluent does not change much from one quarter to the next, and the river water control has average reproduction similar to that of the diluted effluent. In these two cases, however, there was a high rate of reproduction in the river water resulting in a statistically significant difference compared to the diluted effluent. Staff believe this to have been a temporary situation.

The Plant, prior to 2013, also experienced regular exceedances of its permitted flow rate due to excessive inflow and infiltration in the Clinton collection system.

ITEM V

Using current POTW influent sampling data, fill in Column (1). In Column (2), list your Maximum Allowable Headworks Loadings (MAHL) values used to derive your TBLLs listed in Item II. In addition, please note the Environmental Criterion for which each MAHL value was established, i.e. water quality, sludge, NPDES, etc.

Pollutant	Column (1) Influent Data Analyses*		Column (2)	
	Average (lbs/day)	Maximum (lbs/day)	MAHL Values (lbs/day)	Environmental Criterion
Arsenic	0.08	0.12	0.007	Water Quality-Chronic
Cadmium	0.02	0.04	0.12	Water Quality-Chronic
Chromium	0.12	0.33	7.19	Water Quality-Chronic
Copper	1.9	3.3	0.73	Plant NPDES Permit
Cyanide**	0.20	0.20	0.60	Water Quality-Chronic
Lead	0.17	0.35	0.24	Water Quality-Chronic
Mercury	0.001	0.003	0.016	Water Quality-Chronic
Nickel	0.11	0.23	1.98	Water Quality-Chronic
Silver**	0.02	0.02	0.08	Water Quality-Chronic
Zinc	5.0	8.7	7.47	Water Quality-Chronic

*all non-detects were included at ½ the detection limit

**these parameters were not detected in the influent or effluent

MWRA samples quarterly at Clinton for 169 parameters, as well as temperature and pH in the influent, primary effluent, and outfall. The data in Table V reflect two years worth of data collection (calendar years 2015 and 2016). Of the 169 parameters sampled for during this timeframe, only 26 were detected in either the influent, primary effluent, and/or the outfall. The remaining 143 parameters were never detected.

The 10 parameters listed above are the parameters of primary concern because they are so designated by the EPA.

ITEM VI

Using current POTW effluent sampling data, fill in Column (1). In Column (2A) list what the Water Quality Standards (Gold Book Criteria) were at the time your existing TBLLs were developed. List in Column (2B) current Gold Book values multiplied by the dilution ratio used in your new/reissued NPDES permit.

Pollutant	Column (1) Effluent Data Analysis*		Column (2A) (2B) Water Quality Criteria (Gold Book)			
	Maximum (ug/L)	Average (ug/L)	From TBLLs (ug/L) 2A		Today (ug/L) 2B	
			CMC***	CCC****	CMC	CCC
Arsenic	2.1	0.942	340	150	544	240
Cadmium	0.603	0.092	1.49	1.09	1.17	0.56
Chromium**	2	2	258	33.55	415.86	53.68
Copper	13	7.1	5.40	3.92	3.2	2.08
Cyanide**	10	10	22	5.2	35.2	8.32
Lead	0.373	0.226	22.2	0.87	35.52	1.38
Mercury	0.033	0.013	1.4	0.77	2.56	1.46
Nickel	4.4	2.9	207	22.9	330.4	36.64
Silver**	0.0625	0.0625	0.65	-	0.974	-
Zinc	40.7	18.2	51.6	52	82.56	83.2

*all non-detects were included in the calculations at ½ the detection limit
**these parameters were not detected in the effluent (outfall)
***Critical Maximum Concentration
****Critical Chronic Concentration

ITEM VII

In Column (1) identify all pollutants limited in your new/reissued NPDES permit. In Column (2) identify all pollutants that were limited in your old/expired NPDES permit.

Column (1) NEW PERMIT		Column (2) OLD PERMIT	
Pollutants	Limitations (ug/L)	Pollutants	Limitations (ug/L)
Total Phosphorus (Average monthly)	Apr.1-Oct. 31 – 150 (and 3.8 lbs/day) Nov. 1-Mar. 31 – 1,000 (and 25.1 lbs/day)	Total Phosphorus (Average monthly)	1,000 – effective May 1 through October 31
Total Ammonia Avg. monthly Max. daily	Apr.1-Apr.30 - 10,000 May 1-May 31 – 5,000 June 1-Oct. 31 – 2,000 Nov. 1-Mar. 31 – 10,000 Apr.1-Apr.30 – Report May 1-May 31 – Report June 1-Oct. 31 – 3,000 Nov. 1-Mar. 31 – 35,200	Total Ammonia Avg. monthly Max. daily	Apr.1-Apr. 31-10,000 May 1-May 31 – 5,000 June 1-Oct. 31 – 2,000 Nov. 1-Mar. 31 – 10,000 Apr.1-Apr.30 – Report May 1-May 31 – Report June 1-Oct. 31 – 3,000 Nov. 1-Mar. 31 – 35,200
Total Recoverable Copper	11.6 (avg. monthly) 14.0 (max. daily)	Total Recoverable Copper	6.2 (avg. monthly) 8.3 (daily limit)

ITEM VIII

MWRA's biosolids are landfilled at a designated lined landfill. Leachate is collected and piped back to the plant for treatment. Therefore, there are no biosolids criteria for landfilled materials, nor were there for the previous local limits completed in 2001.

Results of Local Limits Analysis

The results of the local limits analysis, including the data presented in Items V and VI, as well as the calculation of the Allowable Headworks Loadings from the EPA Guidance Manual on Local Limits Development (see Attachment 2) suggest few changes to the Clinton industrial discharge limits. Additionally, there have been only three toxicity violations and two instances of interference or pass-through in the past 15 years and none of those was determined to be related to industrial discharges.

Copper is the only parameter in the effluent that exceeds the Water Quality Gold Book standard in Table VI. In the 2001 analysis of local discharge limits for Clinton, copper was also the parameter that exceeded the water quality standards. At that time, MWRA lowered the copper limit from 1.5 mg/l to 1.0 mg/l. This reduction did not have any effect on the copper concentration in the Plant's influent or effluent. Industrial discharges to the Clinton WWTP are responsible for only 3% of the copper in the influent, while a significant concentration comes from Lancaster's water supply. In addition, the few industries in Clinton that discharge copper have consistently met the 1.0 mg/l limit since 2001. The Plant is effective at removing copper from the influent with a 93% average removal rate. Based on this information, MWRA does not recommend lowering the copper limit.

Cyanide and silver were not detected at all in the influent or outfall, and chromium was not detected at all in the outfall. The only other metal discharged by industrial dischargers to the Clinton WWTP is zinc and there have been no problems with the Plant's discharge related to zinc toxicity. Influent concentrations of arsenic and the remaining metals shown in Table VI, cadmium, lead, mercury, and nickel, were all below the Water Quality Gold Book standards. In addition, the measured influent loadings of each of these parameters are in most cases a small percentage of the calculated Allowable Headworks Loadings. Therefore, based on this data, MWRA does not recommend changing the industrial discharge limits for any of these parameters.

Parameters Regulated on a Facility-by-Facility Basis

There is a group of parameters that are regulated on a facility-by-facility basis in the Clinton Sewerage Service Area in the existing Sewer Use Regulations, meaning they have no specified limit (see the list below). None of these parameters are detected in the influent, effluent, or background data. Only one, phenol, was detected in one residential sample. None of them are discharged by any currently permitted industry that is sampled in Clinton or Lancaster. Therefore, there does not appear to be any reason to regulate them separately with the exception of formaldehyde (see below), but rather MWRA believes they should be included in the Total

Toxic Organic list. This is how most of them are regulated in the Metropolitan Sewerage Service Area.

Formaldehyde

There is only one industry in the Clinton Sewer Service Area that is required to sample for formaldehyde and all the samples from this industry over the past two years, with the exception of one, have been below the detection limit. The result for the only sample above the detection limit was 0.1 mg/L. The facility specific limit at this industry is enforced at 1.0 mg/l. Because formaldehyde does not cause plant interference or pass-through, these cannot be used to calculate an MAHL. However, formaldehyde can pose a fume toxicity risk in large enough amounts, so fume toxicity was used as the determining factor for establishing a formaldehyde limit in the MWRA's Metropolitan Local Limits completed in 2001. The limit of 9 mg/l in the Metropolitan Sewerage Service Area was developed using the ACGIH short term fume toxicity exposure level for formaldehyde in the air and converting that to an undiluted aqueous limit. This is the limit that is being proposed for the Clinton Local Limits also.

Table of Parameters Currently Regulated on a Facility-by-Facility Basis

Parameter	Proposed Changes
Acenaphthene	Regulate as a Toxic Organic at 1.0 mg/L
N-Amyl acetate	Regulate as a Toxic Organic at 1.0 mg/L
Bis(2-chloroisopropyl)ether	Regulate as a Toxic Organic at 1.0 mg/L
2- Butanone	Regulate as a Toxic Organic at 1.0 mg/L
N-Butyl acetate	Regulate as a Toxic Organic at 1.0 mg/L
N-Butylamine	Regulate as a Toxic Organic at 1.0 mg/L
Butylbenzylphthalate	Regulate as a Toxic Organic at 1.0 mg/L
Chlorodibromomethane	Regulate as a Toxic Organic at 1.0 mg/L
Diethylphthalate	Regulate as a Toxic Organic at 1.0 mg/L
Dimethylphthalate	Regulate as a Toxic Organic at 1.0 mg/L
Di-n-butylphthalate	Regulate as a Toxic Organic at 1.0 mg/L
4,6-Dinitro-o-cresol	Regulate as a Toxic Organic at 1.0 mg/L
Dinitrophenols	Eliminate; individual phenols that make up this group are already on the TTO list.
2,6-Dinitrotoluene	Regulate as a Toxic Organic at 1.0 mg/L
Formaldehyde	Establish a limit of 9 mg/L based on ACGIH data
Isophorone	Regulate as a Toxic Organic at 1.0 mg/L
2-Methylphenol	Regulate as a Toxic Organic at 1.0 mg/L
3-Methylphenol	Regulate as a Toxic Organic at 1.0 mg/L
4-Methylphenol	Regulate as a Toxic Organic at 1.0 mg/L
Phenol	Regulate as a Toxic Organic at 1.0 mg/L
Pyrene	Regulate as a Toxic Organic at 1.0 mg/L

Fats, Oil, and Grease

Fats, oil and grease (FOG) are regulated by MWRA in the Specific Prohibitions section of MWRA's Sewer Use Regulations. The material is regulated because of its potential negative impact on wastewater infrastructure. Build up of FOG in local and MWRA pipelines and their accoutrements can restrict flow in lines and cause blockages along with resulting sanitary sewer overflows. The current limit for FOG in the Clinton Sewerage Service Area is 100 mg/l. The average concentration of FOG in the Plant's influent is 20.5 mg/l. FOG is not detected at all in the outfall. The Plant has had no scum or other problems related to FOG. There is no numerical water quality limit for FOG, though there is a narrative standard that states, "These waters shall be free from oil, grease and petrochemicals that produce a visible film on the surface of the water, impart an oily taste to the water or an oily or other undesirable taste to the edible portions of aquatic life, coat the banks or bottom of the water course, or are deleterious or become toxic to aquatic life." Currently, there is one industry in the Clinton Sewerage Service Area that is permitted to discharge FOG. This industry has had difficulty complying with the 100 mg/l limit, so this industry was given an increased limit of 300 mg/l for FOG. This increase has not appeared to have any negative effect on the Plant, the river, or on the lines leading to the Plant. Given the low concentration of FOG in the Plant's influent, the ability of the Plant to remove the FOG, and the lack of any problems related to FOG discharges, MWRA recommends raising the FOG limit to 300 mg/l. This is the same limit for FOG that is in the MWRA's Sewer Use Regulations for the Metropolitan Sewerage Service Area. MWRA will continue to monitor for FOG to ensure that there are no negative effects from this action.

Attachment 1 – Back-up Documentation for Item IV

ATTACHMENT 1
Back-up Documentation for Item IV in Appendix X

FY03

In October of 2002, the staff at the Clinton Plant reported interference with the biological treatment processes. The Plant received a slug load of ammonia that affected the nitrifying bacteria in the trickling filters, resulting in a violation of the ammonia limit in the permit. After an extensive investigation, no industrial source was found. However, Toxic Reduction and Control staff found a possible contributor to the problem; significant amounts of bird droppings that had been swept into the sewer from a commercial property. It is unlikely that this was the primary cause of the interference, but the ammonia in the bird waste could have contributed to the problem.

FY07

On December 30, 2006, a violation of the daily permit limit for fecal coliform occurred. On December 30th, Plant staff had observed heavy foaming in the activated sludge tanks and an increase in chlorine demand. The event lasted 24 hours. An investigation yielded no industrial source that had contributed to the interference. All other sampling parameters at the Plant were normal, so the event did not appear to have an effect on the Nashua River.

FY08-FY09

There were no confirmed instances of pass-through or interference at the Clinton Wastewater Treatment Plant in FY09. However, there was a suspicion of pass-through or interference in the spring of 2008, with the investigation continuing into the summer of 2008. TRAC investigated unusually high turbidity levels in the effluent from the Clinton Wastewater Treatment Plant in FY09. No industrial or commercial source for the events was found despite a detailed sampling and inspection effort carried out by MWRA's Toxic Reduction and Control (TRAC) staff in concert with staff from the Clinton Wastewater Treatment Plant and the towns of Clinton and Lancaster. Below is a description of the investigation.

In late December 2007, there was a process upset. A pipe at the Clinton POTW carrying chlorinated process water used for POTW wash down cracked and leaked chlorinated process wastewater into the aeration tanks, which affected the beneficial bacteria required for nitrification. This process upset was reported to EPA and DEP as required by the NPDES Permit. The break of the pipe during cold weather made it more difficult for the Clinton staff to get the process back on line. During the months of March and April 2008 with the POTW still recovering from the process upset, the Clinton POTW experienced several occasions where the plant operators needed to increase the amount of sodium hypochlorite usage due to higher than normal chlorine demand. The high chlorine demand events typically occurred on weekends starting late Friday and generally ended around midday on Saturday. Clinton POTW staff believed that wastewater from possible industrial slug discharges and/or illegal discharges from septage hauling trucks caused the high chlorine demand episodes. Therefore, the Clinton POTW

staff requested assistance from TRAC to determine the source of the discharges that contributed to operational problems at the POTW.

Based on information provided by the Clinton POTW staff, TRAC developed and implemented a sampling plan to determine the cause of the high chlorine demand events. Initially, the plan included sampling the Town of Clinton's influent and the Town of Lancaster's influent separately to determine if one or both towns contributed to the high chlorine demand events. In addition, the sampling plan entailed sampling the POTW combined influent from both towns, as well as waste streams within the plant including the intermittent discharges from the sludge pressing process, the waste activated sludge discharge, and a continuous 24-hour overflow from the gravity thickener process.

TRAC staff conducted numerous sampling events at the Clinton POTW, the influents from both Clinton and Lancaster, and sites within the towns starting on April 25, 2008 and ending on July 2, 2008. TRAC staff used various sampling techniques that included composite samples, discrete composite samples and grab samples, which depended on the locations sampled. The list of sampling parameters included Biochemical Oxygen Demand, Chemical Oxygen Demand, Total Solids, Total Suspended Solids, Zinc, Copper, Acid/Base Neutrals, Volatile Organics, sulfates and sulfides. Early sampling results indicated the higher strength wastewater was coming from the Town of Lancaster's sewer system and not from the town of Clinton's sewer system. TRAC staff then sampled upstream at various locations in Lancaster in an attempt to pinpoint the source of the higher strength wastewater. In addition to sampling, TRAC staff re-inspected a number of companies in Lancaster and did not find anything that could contribute to discharges that would cause an upset at the Clinton POTW. The sampling events and inspections performed by TRAC staff from April 25, 2008 through July 2, 2008 did not uncover any illegal or offending discharges from industry or septage haulers that would be a causative factor for killing the nitrifying bacteria in the aeration tanks. Staff coordinated with the Lancaster police, who were advised to be on the lookout for illegal discharges into the Lancaster Sewer District system from industrial wastewater haulers or septage haulers. No illegal dischargers were ever found. TRAC staff did not see any flow spikes on the Clinton influent flow charts that would be similar to a flow spike expected from industrial or septage loads illegally discharged into the Lancaster Sewer System.

The "high chlorine demand" events noted by Clinton staff occurred during sludge pressing operations at the POTW. The sampling within the plant revealed that zinc and copper occurred at levels during sludge pressing operations that might pose an inhibitory threat to sensitive nitrifying bacteria. This type of impact, however, was not seen before or after these incidents, leaving staff to conclude that the plant may have simply been recovering from the impacts of the process water leak previously discussed. A consultant to the Treatment Plant identified two organic compounds found in the aeration tanks that were possibly causing the POTW upset. However, TRAC's sampling did not find these compounds inside the POTW or in the distribution system, and staff concluded that if they were present at the time of that sampling event, they were not a continuing presence and therefore did not represent a continuing threat to the health of the plant. TRAC's field investigation of industrial inputs did not find a source for these compounds. The investigation concluded during the summer of 2008. No industrial or commercial source of the plant's unusually high chlorine demand was found.

STAFF SUMMARY

TO: Board of Directors
FROM: Frederick A. Laskey, Executive Director
DATE: July 19, 2017
SUBJECT: Revised Enforcement Response Plan for the Toxic Reduction and Control Program

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COMMITTEE: Wastewater Policy & Oversight

X INFORMATION
____ VOTE

Carolyn M. Fiore, Deputy Chief Operating Officer
John A. Riccio, Director, TRAC
Tracy McGrath, Sr. Program Manager, Compliance
Preparer/Title

Michael J. Hornbrook
Chief Operating Officer

RECOMMENDATION:

For information only. The attached revised Enforcement Response Plan (ERP) describes how the Toxic Reduction and Control Department (TRAC) will address instances of noncompliance by regulated commercial/industrial users. The ERP was initially submitted to and approved by EPA in 1992, pursuant to a Court Order in the Boston Harbor Case. The ERP has been revised to incorporate changes made in TRAC's pretreatment program since the original ERP was approved in 1992 and will be submitted to EPA as required by Part C of the recently renewed Clinton NPDES Permit.

DISCUSSION:

MWRA developed the ERP in accordance with the Federal Regulations, 40 CFR Part 403(f)(5), governing the operation and implementation of Industrial Pretreatment Programs administered by Publically Owned Pretreatment Works (POTWs). These regulations set forth requirements that POTWs must follow to establish a framework to formalize procedures for investigating and responding to instances of noncompliance in a timely, fair, and consistent manner. In addition, the ERP is based upon MWRA Sewer Use Rules and Regulations (360 C.M.R. Sections 1.00, 2.00, and 10.000) and describes how the Enforcement Section of TRAC responds to instances of noncompliance. The ERP is a key component of the MWRA's pretreatment program. It includes step-by-step enforcement procedures developed and followed by TRAC personnel to identify, document, and respond to violations by industrial users.

The existing and revised ERPs were drafted in accordance with EPA's guidance documents, which emphasize timely and appropriate enforcement responses to violations of EPA and MWRA regulations. Two overarching concepts drive the appropriate level of enforcement response. First, enforcement actions should reflect the seriousness of the violation. For example, a discharge violation that causes a problem at a treatment plant should receive a higher level response than an isolated discharge violation causing no immediate harm. The second concept is that to the extent

possible, escalating enforcement should be employed. This is exemplified by MWRA's routine enforcement response protocol. The first or second violation is met with a lower level of enforcement such as a Notice of Violation, but continuing violations are addressed through what MWRA's regulations call a Notice of Noncompliance and Order, with the possibility of escalating to a Penalty if violations continue after the permittee has taken corrective action. Expectations of the party receiving the enforcement action in the first example versus the second are different, with higher level enforcement actions requiring higher level responses.

Per EPA guidance, the ERP describes the structure of TRAC's Enforcement Section, the roles and responsibilities of TRAC staff with respect to identification of violations and follow-up, priorities for enforcement, various enforcement options and mechanisms, and finally, a guide that identifies typical responses to specific types of violations and estimated timeframes within which the staff should initiate the actions. It is important to note that the ERP creates no legal rights or obligations nor does it limit MWRA's enforcement discretion.

Pursuant to Part C of the Clinton NPDES Permit, issued on December 21, 2016, updates to the ERP are required to be submitted to EPA within 180 days of the effective date of the permit (March 1, 2017). Staff will submit the document to EPA for comments by August 26, 2017. The Plan may be revised after EPA has provided comments.

There are no substantive changes proposed to the existing MWRA TRAC Enforcement Response Plan (ERP). It is a continuation of the past practice with regard to our enforcement strategy. The changes to the current plan only reflect the upgrade to our Pretreatment Information Management System (PIMS), and the development and addition of Group Permits for Photo Developers, Food Processors, and Low Flow/Low Pollutant dischargers.

MWRA will submit the ERP to EPA, where we expect routine approval of our comprehensive plan. If, however, comments on the plan are received from EPA, we will incorporate those comments prior to implementing the plan.

MWRA staff have reviewed the Federal Regulations at 40 CFR 403.18 and determined that the updates to the ERP do not meet the definition of a Substantial Program Modification. Therefore, we do not expect this revised plan to be considered a substantial change under EPA regulations and no formal approval process -including a public comment period will be required.

BUDGET/FISCAL IMPACT:

There is no budget or fiscal impact arising from these revisions.

ATTACHMENT:

Massachusetts Water Resources Authority Enforcement Response Plan

Massachusetts Water Resources Authority
Enforcement Response Plan

In accordance with 40 CFR Part 403.8(f)(5), and the Massachusetts Water Resources Authority (MWRA) NPDES Permits for the Deer Island Treatment Plant and Clinton Treatment Plant, the Toxic Reduction and Control Department (TRAC) has revised its Enforcement Response Plan (ERP) to reflect organizational changes within TRAC. The revised ERP was developed in accordance with EPA's 1988 *Pretreatment Compliance Monitoring and Enforcement Guidance*, and EPA's *1989 Guidance for Developing Control Authority Enforcement Response Plans*. In addition, the ERP is based upon MWRA's regulations (360 C.M.R. Sections 1.00, 2.00, and 10.000) and the MWRA's experience in initiating and following up on enforcement actions.

Regulatory Requirements and the Basis for the Enforcement Response Plan

The Enforcement Response Plan (ERP) meets the following criteria as set forth in 40 CFR 403.8(f)(5):

(i) Describes how the MWRA will investigate instances of noncompliance;

(ii) Describes the types of escalating enforcement responses the MWRA will take in response to all anticipated types of industrial user violations and the time periods within which responses will take place;

(iii) Identifies (by title) the official(s) responsible for each type of response;

(iv) Adequately reflects the MWRA's primary responsibility to enforce all applicable pretreatment requirements and standards, as detailed in 40 CFR 403.8(f)(1) and (f)(2).

This document is intended as guidance solely for the use of MWRA personnel. Nothing herein is intended to create legal rights or obligations or to limit the enforcement discretion of the Authority.

Organization of the ERP

The ERP is arranged into three major sections. The first section, Enforcement Organization and Priorities, describes how TRAC's Enforcement Group is organized and how it indentifies and investigates instances of noncompliance. This section includes TRAC's established priorities. The second section describes the enforcement mechanisms used by TRAC to respond to instances of noncompliance and the timeframes for initiating each type of action. The enforcement response mechanisms which are indentified are consistent with the requirements of MWRA Sewer Use Rules and Regulations and Massachusetts law. The third section presents the cornerstone of the ERP, the Enforcement Response Guide. The Guide sets forth the criteria, procedures, responsibilities, and time frames for selecting and initiating an enforcement response for violations of MWRA Sewer Use Rules and Regulations.

I. Organization and Priorities

Organization of the Enforcement Section

The Enforcement Section tracks the compliance status of industrial users regulated by the MWRA Sewer Use Rules and Regulations and responds to noncompliance. The section presently consists of a Senior Program Manager and four Compliance Coordinators. All staff in the Enforcement Section report directly to the Senior Program Manager, Compliance, who reports directly to the Director of TRAC.

The Senior Program Manager, Compliance, establishes enforcement priorities for the Enforcement Section. In addition, he/she provides advice to the enforcement staff on enforcement directions, document preparation, policies, *etc.*

Each Compliance Coordinator is assigned a subset of the MWRA's Sewer Use Communities, based on the number of significant industrial users (SIUs) in each community. The Compliance Coordinator is assigned the lead compliance role for all permitted industrial users within her/his assigned communities and is therefore responsible for tracking the compliance status of those users and for taking enforcement actions.

The Compliance Coordinators are the primary contacts on all compliance issues for their assigned caseload. They are responsible for:

- Responding to questions from industrial users regarding compliance issues;
- Tracking compliance for their assigned caseload; and,
- Responding to instances of noncompliance in accordance with MWRA regulations and the Enforcement Response Guide (section III of this Plan), including: a) initiating formal enforcement actions; b) drafting documents as necessary to support enforcement activity; c) responding to industrial users' requests for informal appeals of notices and orders; d) following up on enforcement actions by reviewing reports submitted pursuant to them; and, e) supporting administrative and judicial preparation and development.

Compliance Screening

The Compliance Coordinators become aware of instances of noncompliance from various sources including TRAC's Pretreatment Information Management System (PIMS), facility inspections and reports, monitoring reports, concerned citizens, concerned employees of permitted users, other federal, state, and local public agencies, and other MWRA departments.

PIMS contains information about each permitted Industrial User (IU) in the Authority's sewer service areas. Among other things, the database tracks all industrial user permitting requirements and all industrial user sampling and analytical data (from both self-monitoring reports and MWRA monitoring events). Self-monitoring data is securely submitted through TRAC's online web application called webSMR. MWRA sampling data is transferred to PIMS daily from the MWRA's Laboratory Information Management System (LIMS). PIMS is

designed to automatically calculate, on a daily basis, violations based on the reporting requirements and discharge limits established in an Industrial Users (IUs) permit. Discharge violations are calculated on all sampling results, both MWRA and self-monitoring.

Compliance Coordinators receive daily notifications via their PIMS homepage alerting them to violations generated in PIMS. Compliance Coordinators investigate the violations, by checking PIMS, and the industry's file to determine what type of enforcement action is required. The information considered includes, but is not limited to, previous enforcement actions, an industry's compliance history, and the significance of the violation. The information contained in PIMS is also available for review by Staff in various reports.

Compliance Coordinators also review reports generated by TRAC's Industrial Coordinators (ICs) and Sampling Staff. Significant Industrial Users (SIUs)[1] are inspected by an IC at least once per year. Other users are inspected periodically (every three, four, or five years, depending on permit category) to review for permit renewal. Any user may be inspected more frequently depending on the significance of its discharge, its compliance history, and enforcement related requests. During an inspection, ICs review the facility's operations and pretreatment systems to ensure the facility is in compliance with MWRA Sewer Use Regulations. After each inspection, the IC enters his/her findings in PIMS. PIMS generates a standardized inspection report that describes the IC's observations and provides specific information regarding processes, pretreatment systems, documents reviewed by the IC on site, flows, chemicals used on site, the hours of operation, and suspected or observed violations or potential violations. PIMS also generates a Sewer Use Discharge Permit and a Permit Fact Sheet. Routine inspections are planned one month in advance. In addition, ICs conduct follow-up inspections to support enforcement measures.

TRACs Sampling Associates are responsible for sampling industrial users. SIUs are sampled at least once per year. When necessary, more frequent sampling is conducted based on a user's compliance history, the impact on residuals of the pollutants discharged by the user, special projects, seasonal or other variations in discharge to the sewer system, contaminants and/or loadings of concern, site specific requirements, and to support enforcement actions. TRAC has established procedures so that sample results can be used to support enforcement actions. These procedures include a detailed chain of custody form that must accompany each sample and a system for recording field notes.

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[1] **Significant Industrial User (SIU)** *40 CFR 403.3(v)*
(1) All users subject to categorical pretreatment standards under 40 CFR 403.6 and 40 CFR chapter I, subchapter N, except those designated as NSCIUs; and (2) any other IU that discharges an average of 25,000 gpd or more of process wastewater to the POTW (excluding sanitary, noncontact cooling, and boiler blowdown wastewater); contributes a process wastestream that makes up 5 percent or more of the average dry-weather hydraulic or organic capacity of the POTW treatment plant; or is designated as such by the POTW on the basis that the IU has a reasonable potential for adversely affecting the POTW's operation or for violating any pretreatment standard or requirement in accordance with 40 CFR 403.8(f)(6).

Investigation of Noncompliance

Daily, Compliance Coordinators are notified electronically on their homepage in PIMS of all discharge and reporting violations flagged by PIMS in the previous twenty-four hours. The Compliance Coordinator reviews each violation and determines what level of enforcement action is appropriate according to the Enforcement Response Guide. If the Compliance Coordinator determines that a Notice of Violation is appropriate, he/she will generate the Notice of Violation automatically in PIMS and track compliance with the Notice of Violation.

When the Compliance Coordinator determines that escalated enforcement is appropriate, he/she will take the lead. In determining whether to escalate enforcement, the Compliance Coordinator will consider, among other things:

- the nature of the violation (pretreatment standards, reporting (late or deficient) compliance schedules);
- frequency of the violation (isolated or recurring);
- potential impact of the violation (e.g., interference, pass through, or POTW worker safety); and,
- economic benefit gained by the violator;

The Compliance Coordinator is the main contact on all compliance issues for his/her assigned region. He/she is responsible for:

- responding to questions from industrial users regarding compliance issues;
- tracking compliance for assigned caseloads; and,
- responding to instances of noncompliance in accordance with MWRA regulations and the Enforcement Response Guide, including:

    1. initiating formal informal response actions;
    2. drafting documents as necessary to support enforcement activity;
    3. responding to industrial users' requests for informal appeals of notices and orders;
    4. following up with enforcement actions by reviewing reports submitted pursuant to them; and
    5. supporting administrative and judicial case preparation and development.

Pollution Prevention Program

Formal enforcement actions issued by TRAC include a requirement that the Industrial User investigate the cause(s) of the violation(s) and submit a report that includes an evaluation of pollution prevention options as part of its corrective action.

Enforcement Priorities

To ensure that violations are addressed in order of seriousness, TRAC has established the following priorities for responding to violations.

1. Present or imminent danger to health, public welfare, the environment, the sewer, MWRA facility, or residuals.

2. SIUs

   (A) False reports, misrepresentation, or other intentional wrongs.
   (B) Violating a Notice or Noncompliance (NON), Order, or Settlement Agreement.
   (C) Discharge violations (Significant Noncompliance violations are higher priority[2]).
   (D) Failure to report or late reports (Significant noncompliance violations are higher priority).
   (E) Other permit or regulations violations.

3. Septage Haulers

   (A) False reports, misrepresentation, other intentional wrongs.
   (B) Violating a NON, Order, or Settlement Agreement.
   (C) Discharging a hazardous waste or industrial waste.
   (D) Discharging out-of-district waste.
   (E) Discharging in the wrong location.
   (F) Other permit or regulations violations.

4. NON-SIUs, including Group and General Permittees

   (A) False reports, misrepresentation, other intentional wrongs.
   (B) Violating a NON, Order, or Settlement Agreement.
   (C) Discharge Violations.
   (D) Failure to report or late reports.
   (E) Other permit or regulations violations.

5. Gas/Oil Separator Violations

   (A) False reports, misrepresentation, other intentional wrongs.
   (B) Violating a NON, Order of Settlement Agreement.
   (C) Failure to install or maintain a separator.
   (D) Failure to report or late reports.
   (E) Other regulations violations.

II. Enforcement Options

Each instance of noncompliance will be met with an enforcement response. The initial response may be formal or informal as indicated in the Enforcement Response Guide. The options reflect the MWRA's authority to take enforcement action against users that have violated or threaten to violate the MWRA Sewer Use Regulations (360 C.M.R. 10.000).

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[2] MWRA regulations at 360 CMR 10.000 state that Significant noncompliance (SNC) shall have the meaning contained in 40 CFR 403.8(f)(2)(viii).

When determining the appropriate response, a variety of criteria are reviewed, including but not limited to:

- Magnitude of the violation;
- Duration of the violation;
- Effect of the violation on the receiving water;
- Effect of the violation on the POTW;
- Compliance History of the industrial user; and,
- Good faith of the industrial user.

More serious violations will be met with more severe initial responses than less serious violations. Depending upon the level of egregiousness of the violation, and the recommended enforcement action, Compliance Coordinators consult with TRAC Department managers, assigned attorneys from MWRA's Law Division, and other senior managers at the MWRA. MWRA's enforcement options are described below.

Informal Enforcement Responses

Informal responses are appropriate when responding to relatively minor or infrequent instances of noncompliance. Informal responses include a Notice of Violation (NOV), an informal meeting, or other communication between MWRA and the user. A NOV for a discharge violation instructs the user to: 1) investigate the violation and submit a written explanation as to why the violation occurred and what steps the user will take to ensure the violation does not persist; 2) correct the problem and increase sampling to demonstrate compliance. When a NOV is issued for a reporting violation, the user is asked to correct the violation by submitting or re-submitting the missed report within 15 days of receipt of the NOV.

Informal actions should be initiated within 10 working days of discovering the violation. NOVs are generated and logged automatically in PIMS.

Formal Enforcement Responses

Notice of Noncompliance

A Notice of Noncompliance (NON) is typically the first formal enforcement action issued in response to more serious violations and /or recurring violations. A NON provides formal notification of the violation(s), requires compliance by a date certain, and requires the submission of a compliance schedule describing the steps a user will take to achieve compliance. In most cases, a NON is issued within 45 days of discovering a recurrent violation or other serious violation and is accompanied by an order.

Order or Compliance Schedule

The MWRA may issue an order or compliance schedule requiring an industrial user to complete certain actions or to correct a violation or threatened violation, and/or to cease and desist a violation and/or action that causes or threatens to cause a violation. Orders, generally issued with

a NON, usually include a compliance schedule with milestones and require a user to submit a plan and schedule for achieving compliance with MWRA's regulations. When an Order is issued for discharge violations, it will also require the user to demonstrate compliance by implementing a sampling schedule. The sampling schedule, which is more than is required by a user's permit, is required to demonstrate that corrective actions have been successful and will ensure compliance. An Order is generally issued within 45 days of discovering a violation. Compliance schedules may also be issued in a Sewer Use Discharge Permit.

Cease and Desist Order (C&DO)

A Cease and Desist Order is issued in instances when there is a need for an immediate halt to an action or activity that violates or threatens to violate MWRA rules, regulations, orders, permits and other requirements (for example, a discharge that causes harm to the sewerage system or worker health and safety). A Cease and Desist Order may be issued with a Penalty Assessment Notice (PAN).

Supplemental Order to Comply (SOC)

A SOC is issued after another Order has been issued and usually accompanied by a Penalty Assessment Notice. The requirements of an SOC are similar to the requirements of an Administrative Order. SOCs accompanying a Penalty Assessment Notice will be issued within 60 days of discovering the violation.

Enforcement Order (EO)

An EO is issued when traditional corrective actions are not required (for example, to septage hauler). EOs will be issued within 45-60 days of discovering a violation.

Milestones and deadlines for compliance established in all Orders and Compliance Schedules are entered into PIMS so compliance can be tracked while the action is pending. Orders describe penalties that may be assessed for noncompliance with the terms of the Order.

Penalty Assessment Notice (PAN)

360 C.M.R. 10.001[3] and 10.005 provide the MWRA the legal authority to assess penalties for violations of MWRA regulations or a sewer use discharge permit. The MWRA may assess a penalty of up to $10,000 per violation per day. In the case of a continuing violation, each day's violation may be a separate violation. The PAN will be issued consistent with 360 C.M.R. 2.00 and will be issued within 60 days of discovering a violation that requires a penalty. PANs will be issued when a user violates a NON and/or Order, and may be issued for other violations that the MWRA deems serious, including willful or intentional violations of the regulations or a permit.

[3] 360 CMR 10.001 cites MWRA's statutory authority: St. 1984, c. 372 (MWRA's Enabling Act), St. 1987, c. 307, and St. 1991, c. 41.

Revocation of Permit or Denial of Permit/Permit Renewal

The MWRA may revoke, deny renewal of, or deny initial issuance of an industrial user's permit. Permits may be revoked or denied, after notice to the industrial user pursuant to 360 CMR 10.007(10), and 2.11 and 2.15 to halt or prevent any discharge of pollutants. The MWRA will revoke a permit in a Notice of Proposed Permit Revocation (NPPR). Where revocation or denial is an appropriate enforcement response, the action will be taken within 60 days of determining that such a response is appropriate. NPPRs are generally issued when the violator has failed to come into and maintain compliance after less severe enforcement.

Criminal Prosecution

Actions that may be deemed to reflect criminal intent or criminal negligence will be referred to the Massachusetts Attorney General's Office, the Environmental Strike Force, or other appropriate governmental agencies, for criminal prosecution. See 360 CMR 2.11(7)(b). In deciding whether to pursue criminal prosecution, the MWRA may consider a variety of factors including but not limited to the following:

- willfulness of the violation;
- industrial user's knowledge of the violation;
- nature and seriousness of the violation;
- need for deterrence;
- compliance history of the industrial user; and
- adequacy of penalties and sanctions available through civil or administrative enforcement actions.

Referrals for criminal prosecution will be made within 30-60 days of the determination that a criminal violation is occurring or has occurred.

Civil Referral

Where administrative procedures are unsuccessful in returning a user to compliance or ensuring the continued compliance, or where the MWRA has determined that a civil action may be more effective, the MWRA may proceed with a civil referral to the Massachusetts Attorney General's Office or other appropriate governmental agencies within 30-60 days of a determination that a civil referral is appropriate.

Emergency Suspension of Service

Pursuant to 360 C.M.R. 10.107 , the MWRA may suspend service to any user, after informal notice, upon determination that a discharge appears to present an imminent danger to health, public welfare, or the environment, or threatens to interfere with the operation of the sanitary sewer system or a municipal sewer system.

TRAC Compliance Staff will take one or more of the enforcement options described above to respond to instances of noncompliance with the MWRA's Sewer Use Regulations. TRAC's

enforcement approach is progressive, that is, violations are addressed at the lowest level possible. Where an industrial user's response to an enforcement action is unacceptable to the MWRA, the MWRA will escalate its enforcement responses until the industrial user has returned to compliance. A decision to escalate enforcement to a formal level is generally in response to an unresolved instance of SNC, failure to achieve compliance in a specific time period through less formal means, or the advice of legal counsel. Enforcement action is not, however, contingent upon the completion of any less formal procedure and depending on the facts a formal procedure may be needed as an initial response to noncompliance.

The standard escalation path for continued or recurring violations is as follows:

> Notice of Violation⇒ Notice of Noncompliance and Order⇒Penalty Assessment Notice and Supplemental Order⇒Notice of Proposed Permit Revocation

III. The Enforcement Response Guide

The Enforcement Response Guide (The Guide) covers the following broad categories of violations: illegal discharges; discharge violations; sampling and reporting violations; compliance schedule violations; spill incidents; violations detected during site visits; violations by septage haulers; and, gas/oil separator violations. Within each category, more specific violations are described, along with the nature of the specific violations.

The Guide also provides a range of enforcement responses from which enforcement personnel will select an appropriate enforcement response for a specific violation. Although, the Guide identifies staff responsible for each type of response, the Senior Program Manager and TRAC Director provide oversight and guidance throughout the enforcement process.

Massachusetts Water Resources Authority
Enforcement Response Guide

Discharge Violations			
Noncompliance	**Nature of Violation**	**Enforcement Response Options**	**Personnel**
Exceedance of discharge limits	Isolated, 1st or 2nd violation (non-consecutive, or different parameters)	NOV within 10 working days of discovery	CC
	Repeated or frequent violations	NON/Order within 45 days of receipt of results of repeat sampling following NOV; PAN and SOC within 60 days of noncompliance with NON/Order; NPPR; civil referral	CC; Legal
	Significant Noncompliance	NON/Order within 60 days of SNC determination; PAN and SOC within 60 days of discovery of continuing violations after NON/Order or Ruling; NPPR within 60 days of noncompliance with SOC	CC; Legal
	Caused know environmental or POTW damage or endangered worker safety	Cease and Desist Order to halt discharge within 10 working days of discovery or immediate emergency suspension of service and PAN within 45-60 days; civil referral within 45 days of determination that further action is necessary; NPPR within 60 days of continued violations	CC; Legal
	Willful or intentional	PAN and Cease and Desist Order; criminal referral	CC
Slug Load Discharge	Isolated without known damage	NOV within 10 working days of discovery; Order to develop a spill control plan within 45 days if necessary; PAN and SOC within 60 days of noncompliance with Order	CC
	Isolated with known interference, pass-through, or damage	NON/Order within 45 days of discovery; PAN and SOC within 60 days: Immediate emergency suspension of service: NPPR within 60 days of continued noncompliance with SOC	CC
	Recurring (2nd violation is past 2 years)	SOC within 45 days; PAN within 60 days of recurrence or civil	CC

		referral within 45 days of recurrence; NPPR within 60 days of continued noncompliance with SOC	CC
	Willful or intentional	PAN and Cease and Desist Order within 60 days of discovery; criminal referral	

Sampling and Reporting Violations

Noncompliance	Nature of Violation	Enforcement Response Options	Personnel
Sampling or reporting deficiencies	Isolated or infrequent (1st or 2nd violation)	NOV within 10 working days of discovery	CC
	Frequent (3rd violation in the last 2 years) or persistent	NON/Order within 45 days; PAN within 60 days of violation of NON/Order	CC: Legal
Complete failure to sample or report	Significant Noncompliance	NOV within 10 working days of discovery of failure to receive report; NON/Order within 45 days of noncompliance with NOV; PAN and SOC within 60 days of compliance due date with NON/Order; NPPR	CC; Legal
	G1 Annual Silver Sample	NOV (if 1st time in past 5 years) within 10 days of discovery; PAN and Order (if 2nd time or more in past 5 years) within 90 days of discovery.	CC; Legal CC; Legal
	G1 Annual Group Permit Compliance Report	PAN and Order within 90 days of discovery	CC; Legal
	G2 Biennial Group Permit Compliance Report	PAN and Order within 90 days of discovery	CC; Legal
Failure to submit compliance schedule (SNC)	Violation of Order	SOC with PAN within 30-60 days of noncompliance with due date in Order; NPPR with 60 days; civil referral	CC; Legal CC; Legal CC; Legal
	Isolated or infrequent; no know effects	NOV within 10 working days of discovery	
Failure to notify of effluent limit violation or slug load discharge	Frequent or continued violations (2nd violation in last 2 years)	NON/Order within 45 days; PAN and SOC within 60 days of noncompliance with NON/Order	CC; Legal

	Caused know environmental or POTW damage (SNC)	Immediate emergency suspension of service, PAN within 45 days of discovery; Civil or criminal referral; NPPR	
Failure to install safe and accessible monitoring location		Letter requesting modifications within 10 working days of discovery; NON/Order within 45 days of noncompliance with letter; PAN and SOC within 60 days of compliance due date in NON/Order	

Compliance Schedule Violations

Noncompliance	Nature of Violation	Enforcement Response Options	Personnel
Missed milestone date	Will not affect other milestone dates or other dates	Telephone call or letter within 10 working days of discovery	CC
	Will affect other milestone or final compliance date	Meeting or letter within 10 working days of discovery; NON/Order within 45 days of missed date; PAN within 30-60 days of missed date.	CC
Failure to meet compliance schedule reporting requirements	Did not submit report but did complete milestone	NOV within 10 working days of deadline, NON/OTCA within 45 days of violation (for permit compliance schedules only)	CC
	Did not submit or complete Milestone	NON/Order within 45 days of deadline (for permit compliance schedules only); PAN within 60 days of continued noncompliance with NON/Order	CC; Legal
Missed final date	Demonstrably unavoidable, out of the control of permittee	Telephone call, letter, or meeting within 10 working days of due date	CC
	30 days of more outstanding; failure or refusal to comply without good cause	PAN; NPPR; civil referral	CC : Legal CC; Legal
Reporting false information	Any instance (SNC)	Criminal referral within 45 days of discovery; NPPR	

Spill Incidents

Noncompliance	Nature of Violation	Enforcement Response Options	Personnel
Spill incident	Reported and investigated	NOV within 10 working days of discovery	CC
	Failure to report spill	NON/Order with 45 days of discovery; PAN and SOC within 60 days of discovery of noncompliance with NON/Order	CC; TRAC
Repeated spill incidents	Occurs subsequent to NON/Order for prior incident	PAN within 60 days of discovery of subsequent spill	CC
	Failure to develop/upgrade spill control plan	NON/Order within 45 days of discovery; PAN and SOC within 60 days of noncompliance with NON/Order; NPPR	CC
	Results in known environmental or POTW damage	Immediate emergency suspension of service; PAN with EO or SOC within 60 days of discovery; NPPR	CC

Violations Detected During Site Visits

Noncompliance	Nature of Violation	Enforcement Response Options	Personnel
Denial of Access		Search warrant or PAN and EO within 30 days of denial	CC
Minor violation of sampling procedures	Any instance	Telephone call or letter within 10 working days of discovery	CC
Major violation of sampling procedures	No evidence of negligence or intent	NOV within 10 working days of discovery; NON/Order if violation continues without correction within 45 days of discovery of continuing violation; PAN within 60 days of deadline set in NON/Order	CC
	Willful or intentional to manipulate sample results	PAN within 60 days; Criminal referral	CC; Legal
Minor violation of permit condition	No evidence of negligence	NOV within 10 working days of	CC

(e.g., record keeping)	or intent	discovery; NON/Order within 45 days of noncompliance with NOV; PAN within 60 days of failure to comply with NON/Order	CC; Legal
	Willful or intentional to preclude MWRA's discovery of pertinent information	PAN within 60 days; criminal referral	CC; Legal
Major violation of permit condition (e.g., bypass of treatment system, once-through non-contact cooling water, dilution)	No evidence of negligence or intent	NON/Order within 45 days of discovery; PAN and SOC within 60 days of noncompliance with NON/Order; NPPR	CC; Legal
	Willful or intentional	PAN with Cease and Desist Order within 60 days of discovery; NPPR; Criminal referral	

Violations by Septage Haulers

Noncompliance	Nature of Violation	Enforcement Response Options	Personnel
Failure to comply with requirements of municipal permit issued by MWRA	Discharger unaware of requirements	NON/EO within 45 days of discovery; PAN and Cease and Desist Order with 60 days of noncompliance with EO	CC
	Intentional violation of requirements	PAN and EO within 30 to 60 days of discovery; Criminal referral	CC; Legal
Discharging septage originating outside of MWRA's Sewerage District	Discharger unaware of prohibition	NON/EO within 45 days of discovery; PAN and SOC within 60 days of noncompliance with EO	CC
	Willful or intentional	PAN and EO within 30-60 days of discovery; Criminal referral	CC; Legal
Discharging industrial septage without industry permit from MWRA	Discharger unaware of permit requirements, prohibitions and local limits not violated	NON/EO within 45 days of discovery; PAN and Cease and Desist Order within 60 days of noncompliance with EO	CC
	Willful or intentional, or discharge violates local limits and/or prohibitions	PAN and EO within 30-60 days of discovery; Criminal referral	CC; Legal

Gas/Oil Separator Violations

Noncompliance	Nature of Violation	Enforcement Response Options	Personnel
Failure to provide access	1st or 2nd attempt by MWRA	Verbal request immediately;	RI

	to check separator	Letter requesting access within 10 days of discovery	
	3rd attempt by MWRA to check separator	NON/Order within 45 days; PAN and SOC within 60 days of violation of NON/Order	RI; CC
Failure to maintain separator	1st or 2nd offense	Verbal notice and follow-up letter within 10 days of discovery	RI
	3rd offense or continued failure	NON/Order within 45 days; PAN and SOC within 60 days of violation of NON/Order	RI; CC
Failure to install separator	Owner/Operator unaware of requirement	Verbal notification and follow-up letter within 10 days of discovery; NON/Order within 45 days of noncompliance with letter	RI
	Continued failure to comply	PAN and SOC within 60 days of violation of NON/Order	RI; CC

STAFF SUMMARY

TO: Board of Directors
FROM: Frederick A. Laskey, Executive Director
DATE: July 19, 2017
SUBJECT: Chelsea Creek Headworks Upgrade
BHD/BEC 2015, A Joint Venture
Contract 7161, Change Order 3

COMMITTEE: Wastewater Policy & Oversight

____ INFORMATION
_X_ VOTE

Martin E. McGowan, Construction Coordinator
Corinne M. Barrett, 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 3 to Contract 7161, Chelsea Creek Headworks Upgrade, with BHD/BEC 2015, A Joint Venture, for an amount not to exceed $1,129,740.20, increasing the contract amount from $73,319,943.00 to $74,449,683.20, with no increase in contract term.

Further, to authorize the Executive Director to approve additional change orders as may be needed to Contract 7161 in an amount not to exceed the aggregate of $250,000, in accordance with the Management Policies and Procedures of the Board of Directors.

DISCUSSION:

The Chelsea Creek Headworks is one of three remote headworks facilities that provides preliminary treatment and flow control of the wastewater from MWRA's Northern Service Area before reaching the Deer Island Treatment Plant. Preliminary treatment at the headworks facilities includes grit and screenings removal, which prevents excessive wear and maintenance of equipment at the North Main Pump Station, and protects the cross harbor tunnels from filling with debris. The Chelsea Creek Headworks was constructed in the 1960s and received its last significant upgrade in 1987. This project is a major upgrade of the entire facility and includes automation of the screenings collection and solids conveyance system, allowing the facility to be unstaffed during dry weather flow. The grit collector systems will be replaced, and existing climber screens will be replaced with catenary screens. Influent and effluent sluice gates will be replaced, and the gates hydraulic operating system will be replaced with electric gate actuators. HVAC systems will be upgraded and a new carbon absorber odor control system will be installed and redundancy will be added to both systems. Ancillary systems including the emergency generator, fuel oil tank, and transformer will be replaced. Instrumentation and

control systems will be upgraded, the communications tower will be replaced and a communications building will be added. Abatement of hazardous building materials including paint containing PCBs, flood protection measures to protect the facility to the 100 year flood elevation plus 2.5 feet, and upgrades to meet current code requirements for egress, plumbing, electrical, and fire suppression are also included.

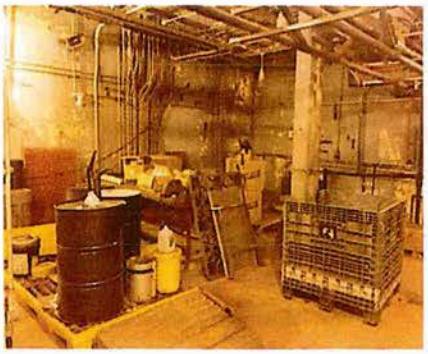
Staff previously informed the Board that due to the nature of rehabilitating this older wastewater facility and to address existing PCB contamination, together with the need to continuously operate the facility without any loss in capacity, would result in a series of change orders. The major item in this staff summary deals with required PCB contamination remediation.

This Change Order

Change Order 3 consists of the following five items:

Remediate Additional Surfaces of Polychlorinated Biphenyl
Containing Paint and Encapsulate or Paint $1,083,473.00

Existing porous and non-porous surfaces within the Chelsea Creek Headworks are coated with paint containing polychlorinated biphenyl (PCB). The Environmental Protection Agency (EPA) classifies PCBs as a probable human carcinogen and regulates this hazard in accordance with the Toxic Substances Control Act (TSCA). Porous surfaces include floors, walls, columns and ceilings constructed of concrete, concrete masonry units (CMU), brick and plaster. Non-porous surfaces include structural steel, mechanical equipment, door and window framing and miscellaneous piping and supports. The Contractor is required to remove all PCB contaminated paint at the Chelsea Creek Headworks pursuant to an EPA approved Risk-Based Disposal Plan which is included in the contract documents. For porous surfaces, the PCBs have migrated from the paint into the porous substrate. The Disposal Plan requires that after PCB remediation porous surfaces must be encapsulated with an epoxy lining system to prevent the residual PCBs from leaching back to the surface.



Abatement of PCB Paint in Mezzanine Level (Before)

Abatement of PCB Paint in Mezzanine Level (After)

There are no residual PCBs in non-porous surfaces following remediation, but these surfaces must still be painted. After commencement of the work, the Contractor identified an approximately 14% increase in additional porous and non-porous painted surfaces containing PCBs located within the facility that were not shown on the contract documents. For example:

equipment pads; interior curbs; and minor "bump outs" in walls, ceilings and floors. These additional surfaces containing PCBs must be abated along with subsequent encapsulation or painting as required by the EPA approved Disposal Plan.

The approved PCO for this item has been identified by MWRA staff as a design omission. MWRA staff, the Consultant, and the Contractor have agreed to a lump sum amount of $1,083,473.00 for this additional work with no increase in contract term. The Contractor proceeded with this work at its own risk in order to proceed with the remainder of the contract work.

Furnish and Install a High Performance Floor
Encapsulation System $152,922.00

Following remediation of the PCB contaminated paint the Contractor is required to coat the concrete floors throughout the facility with the above mentioned epoxy encapsulation system to prevent the PCBs from leaching back to the surface. The specified encapsulation system is required at all porous surfaces, including walls, columns, ceilings and floors. After commencement of the work and during the submittal phase, the coating system supplier noted that while the specified encapsulation system will work very well on the walls, columns and ceilings, it will not be as durable on the floors. Use of the specified encapsulation system could lead to premature failures of the finish flooring system as it is not designed for the typical wear and tear and maintenance of an industrial flooring system. It is critical that the coating system used to seal the floors is rugged and designed to withstand the normal wear and tear of an industrial facility like the Chelsea Creek Headworks. The flooring encapsulation system must also be corrosion resistant and able to withstand frequent power washing and detergent cleaning. For the concrete floors the Contractor will furnish and install a high performance floor encapsulation system that is used as a topcoat/sealer for heavy duty floor systems in lieu of the specified encapsulation system intended for use on walls and ceilings.

The approved PCO for this item has been identified by MWRA staff as a design error. MWRA staff, the Consultant, and the Contractor have agreed to a lump sum amount of $152,922.00 for this additional work with no increase in contract term. This work has not begun.

Dispose of PCB Remediation and PCB Bulk Product
Waste and Transport PCB Waste to an approved Treatment,
Storage and Disposal Facility Not to Exceed $143,128.20

PCB waste containerized, labeled and stored for shipment to waste disposal site in Ohio

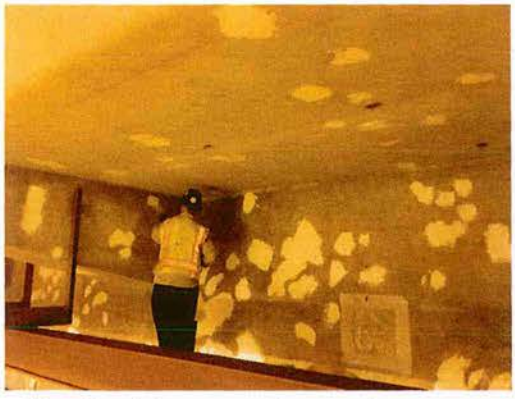
All PCB waste generated during the remediation must be managed and disposed of as PCB Bulk Product Waste or PCB Remediation Waste per 40 CFR 761. After commencement of the work certain CMU walls, concrete walls and floor penetrations were identified as requiring demolition because they interfere with new work or limit access to new equipment. These items are coated with paint containing PCBs and require handling and disposal as bulk product waste or remediation waste. The Consultant erred in not including the demolition of

these items which directly conflict with new work or equipment. In addition after commencement of the demolition work, CMU walls containing PCB contaminated paint were found to be unstable or not properly installed resulting in the need for removal. These concealed conditions were not known by staff or the Consultant and were unforeseen. This change will create unit prices to transport and dispose of this additional waste at a treatment, storage and disposal facility approved to receive PCB remediation waste and PCB bulk product waste.

The approved PCO for this item has been identified by MWRA staff as a design error for the exposed items that were not identified to be demolished and an unforeseen condition for the concealed items that require removal. MWRA staff, the Consultant, and the Contractor have agreed to a not to exceed amount $143,128.20 for this additional work with no increase in contract term. The Contractor proceeded with this work at its own risk in order to proceed with the remainder of the contract work.

Resurface the Porous Walls, Columns and Ceilings with an Epoxy Resurfacing System in lieu of the Specified Cementitious Resurfacing Layer ($374,783)

The design of the Chelsea Creek Headworks anticipated the Contractor's use of hydro blasting to remove the PCB contaminated paint which was a successful removal method at another Authority facility. Hydro blasting can be abrasive, and as a result can necessitate restoration of the cementitious substrate prior to application of a finish system. Anticipating hydro blasting, the specifications require that the Contractor apply a cementitious resurfacing layer to porous surfaces prior to applying the finish encapsulant system.



Trowel applied epoxy resurfacer to seal imperfections in the porous surfaces

Rather than hydro blasting the Contractor selected a slurry blast method to remove the paint containing PCBs. Slurry blasting is an EPA approved PCB removal method that leaves a relatively smooth surface profile. Less abrasive than hydro blasting the slurry blast method eliminates the need for restoration of the cementitious substrate prior to applying the encapsulant system. To prepare the abated porous surfaces for the encapsulant system, in lieu of the specified cementitious layer the Contractor will apply an epoxy resurfacing product designed to fill small voids, holes, cracks and other rough areas. This revised surface preparation system will achieve a pinhole free film quality of the epoxy encapsulation system which is required by the EPA.

The approved PCO for this item has been identified by MWRA staff as an unforeseen condition. MWRA staff, the Consultant, and the Contractor have agreed to a lump sum credit amount of ($374,783) for this revised scope of work with no increase in contract term. The Contractor proceeded with this work at its own risk in order to proceed with the remainder of the contract work.

Enlarge the Existing Opening in the Operating Room Floor Roof
Slab and Furnish and Install Additional Structural Steel — Not to Exceed $125,000

The existing opening must be enlarged for the new stairwell. Structural additions are required to support the roof

The Contractor is required to construct "Stair Tower C" to provide a means of access and egress from the below grade operating floor level to the outdoor ground level to meet the current Massachusetts State Building Code. This new stair tower will be located at an existing non-conforming ships ladder. The contract drawings indicate that the existing roof slab opening is large enough to accommodate the new stairs. The Consultant, however, used an incorrect dimension in preparing the drawings and did not account for the roof slab demolition required to accommodate the new stair tower in its overall structural design of the building. Once this error was identified, the Consultant performed a structural analysis and concluded that additional structural steel is required to maintain the integrity of the building and provide the required clearances for a new code complaint stair tower. The Contractor must cut the concrete roof slab to enlarge the roof opening to accommodate the new stairs and install the additional structural steel to support this larger opening.

The approved PCO for this item has been identified by MWRA staff as a design error. MWRA staff, the Consultant, and the Contractor have agreed to a not to exceed amount $125,000 for this additional work with no increase in contract term. The Contractor proceeded with this work at its own risk in order to proceed with the remainder of the contract work.

CONTRACT SUMMARY:

	Amount	**Time**	**Dated**
Original Contract:	$72,859,000.00	1,460 Days	11/22/16
Change Orders:			
Change Order 1	$252,512.00	0 Days	06/29/17
Change Order 2*	$208,431.00	0 Days	Pending
Change Order 3	$1,129,740.20	0 Days	Pending
Total of Change Orders:	$1,590,683.20	0 Days	
Adjusted Contract:	$74,449,683.20	1,460 Days	

*Approved under delegated authority

If Change Order 3 is approved, the cumulative value of all change orders to this contract will be $1,590,683.20 or 2.2% of the original contract amount. Work on this contract is approximately 9% complete.

BUDGET/FISCAL IMPACT:

The FY18 Capital Improvement Program budget includes $76,059,000 for Contract 7161. Including this change order for $1,129,740.20, the adjusted subphase total is $74,449,683.20.

MBE/WBE PARTICIPATION:

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

MASSACHUSETTS WATER RESOURCES AUTHORITY

Meeting of the
Water Policy and Oversight Committee

June 28, 2017

A meeting of the Water Policy and Oversight Committee was held on June 28, 2017 at the Authority headquarters in Charlestown. Vice-Chairman Peña presided. Present from the Board were Messrs. Carroll, Cotter, Flanagan, Pappastergion, Vitale and Walsh. Among those present from the Authority staff were Fred Laskey, Steve Remsberg, Pam Heidell, Pat Smith, Nava Navanandan, and Bonnie Hale. The meeting was called to order at 11:20 a.m.

Approvals

*Water Supply Continuation Agreement with Town of Bedford

The Committee recommended approval of the ten year agreement (ref. agenda item A.1).

Contract Awards

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

Staff gave a presentation on the project, and there was general discussion. The Committee recommended approval of the contract award (ref. agenda item B.1).

The meeting adjourned at 11:35 a.m.

* Approved as recommended at June 28, 2017 Board of Directors meeting.

STAFF SUMMARY

TO: Board of Directors
FROM: Frederick A. Laskey, Executive Director
DATE: July 19, 2017
SUBJECT: Strategies to Minimize the Adverse Impacts of an Oil / Contaminant Spill in Wachusett Reservoir on MWRA's Finished Water
University of Massachusetts, Amherst
Contract W320

COMMITTEE: Water Policy and Oversight

____ INFORMATION
_X_ VOTE

Michele S. Gillen
Director of Administration

Betsy Reilley, Ph.D., Director, ENQUAL
Mandu Inyang, Ph.D., Program Manager
Preparer/Title

Michael J. Hornbrook
Chief Operating Officer

RECOMMENDATION:

To approve the award of a sole source collaborative research contract with the University of Massachusetts, Amherst titled "Strategies to Minimize the Adverse Impacts of an Oil/ Contaminant Spill in Wachusett Reservoir on MWRA's Finished Water," MWRA Contract W320, and to authorize the Executive Director, on behalf of the Authority, to execute said contract in the amount not to exceed $300,000 for a contract term of thirty-six months from the Notice to Proceed.

BACKGROUND:

Petroleum products and especially crude oil are prominent among the materials transported by rail and by vehicles across the Route 140 and Route 12 bridges over the Wachusett Reservoir. In the event of a spill of these products into the Wachusett Reservoir, it is important to understand how these products degrade and how MWRA existing or other treatment processes may be used to mitigate the impacts. MWRA has worked with UMass Amherst to understand the impacts of a potential spill on drinking water quality. This work included the development of analytical methods to characterize petroleum products as they migrate through the reservoir. The initial study determined the expected levels of petroleum products at the Intake, then tested water treatment methods available at the Carroll Water Treatment Plant, specifically chlorine and ozone processes, to evaluate degradation of the petroleum products and identify the resulting byproducts. Future studies described below will be conducted to test additional water treatment scenarios, and improve the identification of byproducts, in an effort to evaluate the optimal

treatment conditions to mitigate potential impacts. This contract also includes studies of other (non-petroleum) contaminants of concern.

DISCUSSION:

Based on the results generated by the initial study, MWRA is interested in further investigating the persistence of oil constituents reaching the Cosgrove Intake. This study will evaluate various treatment scenarios including those utilizing chlorine-UV, ozone-peroxide, and high pH ozonation, to determine the best treatment-based mitigation strategy should oil constituents ever enter the Cosgrove Intake. Additional work under this contract will be to develop mathematical models to predict the destruction of oil constituents during the different treatment scenarios. Finally, as appropriate, other contaminants present in rail cars transported over Thomas Basin will be investigated. Progress reports and annual reports will be provided throughout the contract period to summarize the results to date.

UMass Amherst's Civil and Environmental Engineering Department is uniquely qualified to perform this study based on its experience and expertise, and familiarity with the Wachusett Reservoir and its water chemistry. Specifically,

- UMass Amherst has already collected data on the Wachusett Reservoir raw water quality from the on-going Wachusett Oil Spill Study for FY2016 and FY2017. This data will provide the knowledge base to expedite the progress of the proposed study from FY2018 to FY2020;

- UMass Amherst is very familiar with modeling of contaminant fate and transport within Wachusett Reservoir. For a number of years, UMass Amherst has been studying the potential impacts of a spill at the Route 140 Bridge and other Thomas Basin locations on water quality in Wachusett Reservoir. Of particular interest have been the resulting contaminant concentration profiles at the Cosgrove Intake. This was done in conjunction with DCR through an interagency service agreement;

- UMass Amherst has worked with MWRA and DCR on several projects in the past and they have prior experience testing the MWRA treatment processes on a bench scale;

- UMass Amherst is able to replicate MWRA's Carroll Water Treatment Plant treatment steps in its laboratory, and it has an inventory of instrumentation that can perform the required analysis to identify crude oil constituents;

- The investigation into the reaction and transformation of petroleum compounds entails the use of novel analytical tools in addition to conventional methods. UMass Amherst recently acquired specialized equipment with the capability of performing needed analyses; and

- UMass Amherst is relatively close-by in proximity for delivery of reservoir water. The University staff also have a ready pool of talent in terms of faculty and graduate students who can work on the project.

UMass Amherst is the only entity with more than 10 years of hydrologic modeling and water quality experience on Wachusett Reservoir and has the equipment and expertise required to complete these services. UMass Amherst charges a modified total direct cost overhead rate of 26% for projects with State organizations, including MWRA, rather than its standard 59%, resulting in a savings in overhead costs to MWRA. A continued collaboration with UMass Amherst for this study is beneficial to the MWRA as it provides an opportunity for an on-going partnership with a local research university in investigating and resolving potential water quality issues that can arise or affect MWRA's water supply and distribution system.

For the reasons set forth above, staff recommend that the Authority enter into a collaborative research contract with the University of Massachusetts, Amherst in the amount not to exceed $300,000, for a contract term of thirty-six months from the Notice to Proceed. The Director of Procurement has approved the sole source nature of this contract.

BUDGET/FISCAL IMPACTS:

The main components of the proposed budget include support of a full-time PhD student (20 hours/week as a Research Assistant) for one year, as well as an undergraduate research assistant, and some summer salary for the Primary Investigator and co-Primary Investigator. In addition, there will be expenses for consumable supplies, and additional minor expenses incurred by UMass Amherst's Environmental Engineering Laboratory. The total annual budget is approximately $100,000. The total budget over three years is $300,000. Sufficient funds are included in Operations FY18 Current Expense Budget for the first part of this contract. Funds will be included in future budgets for the remainder of the contract.

MBE/WBE PARTICIPATION:

No MBE or WBE participation requirements were established for this sole-source contract.

STAFF SUMMARY

TO: Board of Directors
FROM: Frederick A. Laskey, Executive Director
DATE: July 19, 2017
SUBJECT: Southern Extra High Pipeline - Section 111 (Dedham North)
P. Gioioso and Sons, Inc.
Contract 7504

COMMITTEE: Water Policy & Oversight

____ INFORMATION
__X__ VOTE

Michele S. Gillen
Director of Administration

Paul T. Rullo P.E., Program Manager
A. Navanandan P.E., Chief Engineer
Preparer/Title

Michael J. Hornbrook
Chief Operating Officer

RECOMMENDATION:

To approve the award of Contract 7504, Southern Extra High Pipeline Section 111 (Dedham North) to the lowest responsible and eligible bidder, P. Gioioso and Sons, Inc., and to authorize the Executive Director, on behalf of the Authority, to execute said contract in the amount of $17,226,350 for a contract term of 780 calendar days from the Notice to Proceed.

DISCUSSION:

MWRA's Southern Extra High service area includes Canton, Dedham, Norwood, Stoughton, Westwood, portions of Brookline and Milton, and the Roslindale and West Roxbury sections of Boston. The five communities in the southern portion of the service area (Canton, Norwood, Dedham, Westwood, and Stoughton) are served by a single 36-inch diameter transmission main (Section 77), which is five miles long. Canton and Stoughton are served by a branch (Section 88) off of Section 77. Although several of these communities are partially supplied by MWRA, the loss of Section 77 would result in a rapid loss of service in Norwood and Canton, and potential water restrictions for Stoughton and the Dedham/Westwood Water District. Correction of this deficiency has been assigned a Priority One in MWRA's Water Master Plan due to the potential critical impact to public health that could result from a failure in this single transmission main.

On November 14, 2012, staff presented to the Board an evaluation of alternatives and a recommendation to proceed with a 5.4-mile redundant pipeline alternative from the Bellevue

Water Storage Tanks in West Roxbury through Dedham to Westwood, where the proposed pipeline would interconnect with existing pipeline Section 77 near the Route 95 East Street Rotary. The route is shown on Figure 1. In June 2013, MWRA filed an Environment Notification Form for the project and in July 2013 MWRA received a Certificate of the Secretary of Energy and Environmental Affairs stating that the project does not require the preparation of an Environmental Impact Report. Upon completion of the Massachusetts Environmental Policy Act (MEPA) process, staff began to procure a consultant for design, construction administration, and resident inspection services. On January 5, 2014 the Board approved the award of the consultant contract to Fay, Spofford & Thorndike, LLC (now Stantec).

Contract Components and Schedule

The entire Southern Extra High Redundancy project is separated into three construction contracts as follows:

- Contract 6454, Section 111 (Boston) which consists of 11,000 linear feet of 36-inch water main, which is primarily located within the Department of Conservation and Recreation's Stony Brook Reservation in Boston. This contract was awarded in May 2016 and is scheduled for substantial completion in September 2018;

- Contract 7504, Section 111 (Dedham North), which is the subject of this staff summary, consists of 10,000 linear feet of 36-inch water main of which 3,000 linear feet is within DCR's Stony Brook Reservation in Dedham with the remaining 7,000 linear feet within residential neighborhoods of Dedham. This contract includes a new pipe bridge across Mother Brook on Sawmill Lane and coordination with MassDOT for work adjacent to its bridge on Walnut Street. This contract is scheduled for a construction Notice to Proceed in August 2017; and

- Contract 7505, Section 111 (Dedham South) which consists of 6,800 linear feet of 36-inch water main in Dedham and in Westwood at the Route 95 East Street Rotary. Pending permits from MassDOT and the MBTA, this contract is scheduled for advertisement of bids in October and a construction Notice to Proceed in December 2017. This contract also includes activation of the pipeline of all three contracts which is scheduled for late 2019. Final surface restoration will occur by July 2020.

A staff summary to authorize a Memorandum of Agreement with the Dedham/Westwood Water District to share the cost for construction of an MWRA water main and a local water main across Interstate 95 will be presented to the Board with award of contract 7505.

Procurement Process

Contract 7504 was advertised in the Central Register, Boston Herald, Banner Publication, El Mundo, and COMMBUYS, and bid utilizing MWRA's e-procurement system (Event 2908) in accordance with Massachusetts General Laws, Chapter 30. Seven bids were received and opened on June 29, 2017. The bid results were as follows:

Bidders	Bid Amount
P. Gioioso and Sons, Inc.	**$17,226,350**
RJV Construction Corp.	$18,235,000
Albanese Brothers Inc.	$18,714,000
Baltazar Contractors Inc.	$19,005,000
Albanese D&S, Inc.	$19,765,273
Revoli Construction Co., Inc.	$19,975,000
Engineers Estimate	*$20,255,000*
R. Zoppo Corp.	$22,455,000

P. Gioioso and Sons, Inc. submitted a bid price that is $3,028,650 (15.0%) lower than the Engineer's Estimate, but 5.5% less than the next lowest bidder which demonstrates reasonableness of price.

MWRA staff met with P. Gioioso and Sons, Inc. and confirmed that the bid price reflects all work described in the contract documents. References for the firm were checked and found to be favorable. P. Gioioso and Sons, Inc. has completed several large, complex projects for MWRA, including the University Avenue 36-inch Water Main Section 108 (MWRA Contract 6445, $6.2 million), Spot Pond Supply Mains project involving 48-inch water main rehabilitation and replacement (MWRA Contract 6381, $20 million) and the Upper Neponset Valley Relief Sewer Interceptor project (MWRA Contract 6191, $36 million). The firm is currently constructing MWRA Contract 6454, Southern Extra High Pipeline Section 111 located in Boston in the amount of $11,770,000. P. Gioioso and Sons, Inc. performed well on these projects. The firm also completed numerous large water, sewer, CSO, and drain projects for BWSC, MassDOT, City of Cambridge, Town of Brookline and others, all of which are similar in complexity to the Southern Extra High Pipeline Section 111 (Boston) project.

MWRA staff and Stantec have concluded that Gioioso possesses the skill, ability, and integrity necessary to perform the work under this contract, and is qualified to do so. Staff have determined that the bid price is reasonable, complete and includes the payment of prevailing wage rates, as required. Therefore, staff recommend that Contract 7504 be awarded to P. Gioioso and Sons, Inc. as the lowest responsible and eligible bidder.

BUDGET/FISCAL IMPACT:

The FY18 CIP includes a budget of $15,200,000 for Contract 7504. The contract award amount is $17,226,350 or $2,026,350 over budget. This amount will be covered within the five-year spending cap.

MBE/WBE PARTICIPATION:

The D/MBE and WBE participation requirements for this project were established at 3.4% and 3.8%, respectively. The Affirmative Action and Compliance Unit has reviewed the bids and has determined that P. Gioioso and Sons, Inc.'s bid is responsive to these requirements.

ATTACHMENT:

Figure 1: Section 111- Southern Extra High Redundancy.

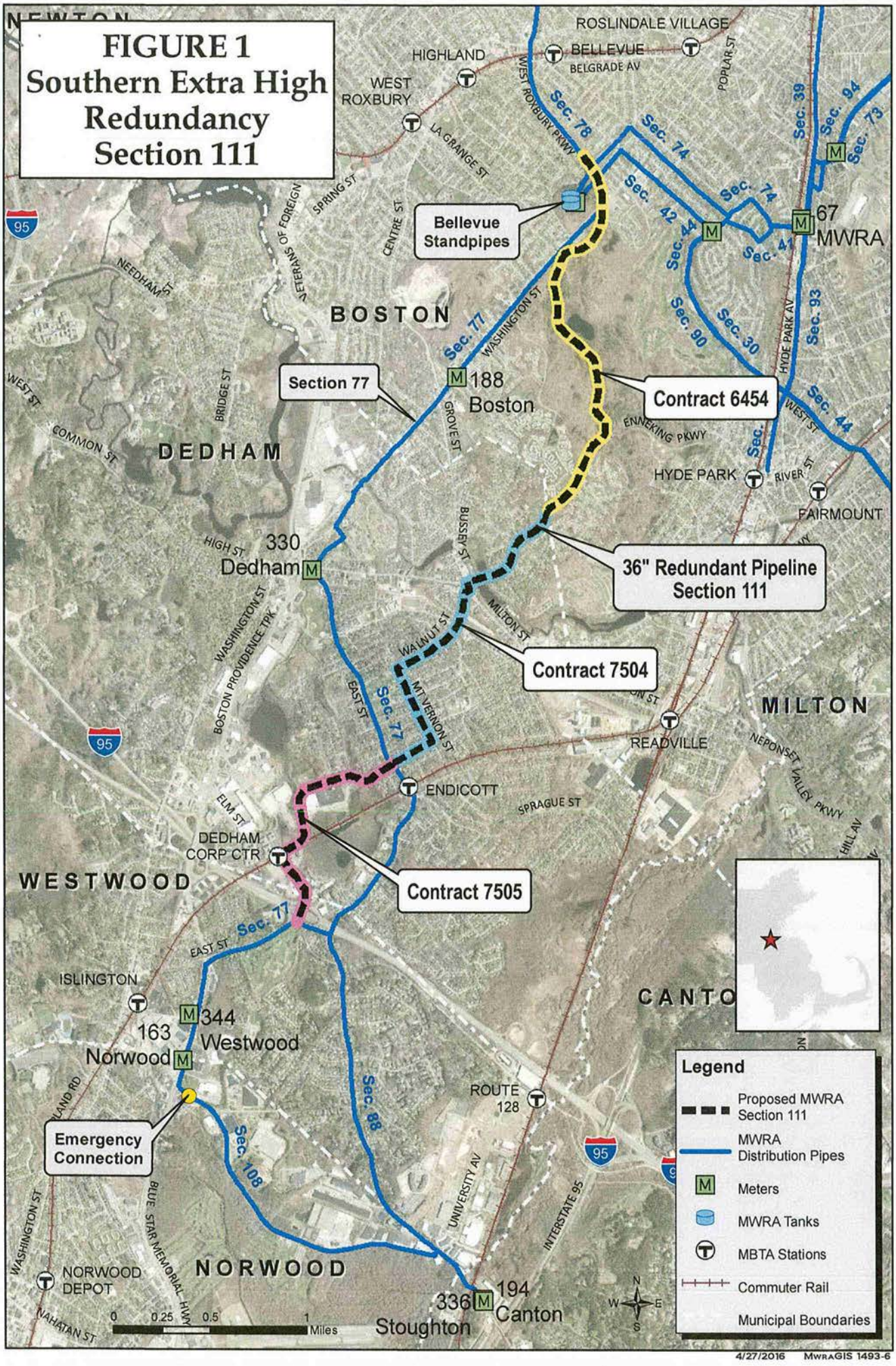


FIGURE 1
Southern Extra High Redundancy Section 111
ROSLINDALE VILLAGE
BELLEVUE
BELGRADE AV
POPLAR ST
HIGHLAND
WEST ROXBURY
LA GRANGE ST
WEST ROXBURY PKWY
Sec. 78
Sec. 74
Sec. 39
Sec. 94
Sec. 73
Sec. 42
Sec. 44
Sec. 41
67 MWRA
Bellevue Standpipes
SPRING ST
CENTRE ST
VETERANS OF FOREIGN
NEEDHAM ST
BOSTON
Sec. 77
WASHINGTON ST
Sec. 90
Sec. 30
Sec. 93
HYDE PARK AV
Section 77
188 Boston
Contract 6454
WEST ST
BRIDGE ST
COMMON ST
DEDHAM
GROVE ST
ENNEKING PKWY
Sec. 44
HYDE PARK
RIVER ST
FAIRMOUNT
330 Dedham
HIGH ST
BUSSEY ST
36" Redundant Pipeline Section 111
WASHINGTON ST
BOSTON PROVIDENCE TPK
WALNUT ST
MILTON ST
Contract 7504
EAST ST
Sec. 77
MT VERNON ST
MILTON
READVILLE
NEPONSET VALLEY PKWY
ENDICOTT
SPRAGUE ST
ELM ST
DEDHAM CORP CTR
WESTWOOD
Contract 7505
HILL AV
ISLINGTON
CANTO
344 Westwood
163 Norwood
ROUTE 128
Sec. 88
Sec. 108
Emergency Connection
BLUE STAR MEMORIAL HWY
UNIVERSITY AV
INTERSTATE 95
NORWOOD DEPOT
NORWOOD
194 Canton
336 Stoughton
NAHATAN ST
0 0.25 0.5 1 Miles
N
W E
S
Legend
Proposed MWRA Section 111
MWRA Distribution Pipes
Meters
MWRA Tanks
MBTA Stations
Commuter Rail
Municipal Boundaries
4/27/2016 MwraGIS 1493-6

STAFF SUMMARY

TO: Board of Directors
FROM: Frederick A. Laskey, Executive Director
DATE: July 19, 2017
SUBJECT: Southern Extra High Pipeline - Section 111 (Boston)
P. Gioioso and Sons, Inc.
Contract 6454, Change Order 1

COMMITTEE: Water Policy & Oversight

___ INFORMATION
_X_ VOTE

Terrence Flynn, P.E., Construction Coordinator
Corinne M. Barrett, Director, Construction
Preparer/Title

Michael J. Hornbrook
Chief Operating Officer

RECOMMENDATION:

That the Executive Director, on behalf of the Authority, approve Change Order 1 to Contract 6454, Southern Extra High Pipeline - Section 111 (Boston), for an amount not to exceed $380,000 increasing the contract amount from $11,770,000 to $12,150,000, with no increase in contract term.

Further, to authorize the Executive Director to approve additional change orders as may be needed to Contract 6454 in an amount not to exceed the aggregate of $250,000, in accordance with the Management Policies and Procedures of the Board of Directors.

DISCUSSION:

MWRA's Southern Extra High service area includes Canton, Dedham, Norwood, Stoughton, Westwood, portions of Brookline and Milton, and the Roslindale and West Roxbury sections of Boston. The five communities in the southern portion of the service area (Canton, Norwood, Dedham, Westwood, and Stoughton) are served by a single 36-inch diameter transmission main (Section 77), which is five miles long. Canton and Stoughton are served by a branch (Section 88) off of Section 77. Although several of these communities are partially supplied by MWRA, the loss of Section 77 would result in a rapid loss of service in Norwood and Canton, and potential water restrictions for Stoughton and Dedham/Westwood. Correction of this deficiency has been assigned a Priority One in MWRA's Water Master Plan due to the potential critical threat to public health that could result from a failure in this single transmission main.

On November 14, 2012, staff presented to the Board an evaluation of alternatives and a recommendation to proceed with a 5.4-mile redundant pipeline alternative from the Bellevue Water Storage Tanks in West Roxbury through Dedham to Westwood where the proposed pipeline would interconnect with existing pipeline Section 77 near the Route 95 East Street Rotary.

Contract 6454, Section 111, which is the subject of this staff summary, is the first of three main pipeline construction contracts and consists of 11,000 linear feet of 36-inch water main all which is primarily located within DCR's Stony Brook Reservation in Boston. Contract 7504, Section 111 (Dedham North) which is being awarded at this Board meeting, consists of 10,000 linear feet of 36-inch water main of which 3,000 linear feet is within DCR's Stony Brook Reservation in Dedham with the remaining 7,000 linear feet within residential neighborhoods of Dedham. In addition to permitting with DCR, this project requires permitting for two MassDOT bridges along the route.

This Change Order

Change Order 1 consists of the following item:

Furnish and Install A Structural Liner Within Existing 12-Inch BWSC Not to Exceed $380,000

The contract documents require the Contractor to install the new 36-inch ductile iron Section 111 in Dedham Parkway where ledge is present. The Contractor received approval to blast to remove the ledge. Design borings indicated a depth of bedrock averaging around four feet in the center line of the street. However, while the Contractor was conducting pre-drilling along the alignment of Section 111, it was determined that the rock profile in the area rises up toward the sidewalk where the BWSC main is located. In addition, a small portion of the BWSC main was uncovered and it was noted that the cast iron main was laid directly on the existing ledge rather than on a bedding material. Because the Section 111 will be within five feet of the existing BWSC main and it is assumed that the majority of the BWSC main is laid directly on ledge, it is not safe to blast for the installation of MWRA's new water main without precautions for BWSC's main. As a result, MWRA staff met with BWSC and determined that the installation of 1,000 linear feet of structural liner should be installed inside BWSC's 12-inch water main to allow the Contractor to safely proceed with blasting without damaging the BWSC line. To install the structural lining, five access pits will be excavated, three new 12-inch gate valves and a temporary bypass will be installed, and testing and disinfection of the completed work will be performed.

Typical blasting mat being removed.

Typical 36" pipe being installed.

The approved PCO for this item has been identified by MWRA staff as an unforeseen condition. MWRA staff, the Consultant, and the Contractor have agreed to an amount not to exceed $380,000 for this additional work with no increase in contract term. The Contractor has not begun the work. Therefore, staff recommend that this item be approved for an amount not to exceed $380,000.

CONTRACT SUMMARY:

	Amount	Time	Dated
Original Contract:	$11,770,000.00	780 Days	06/16/16
Change Orders:			
Change Order 1	$380,000.00	0 Days	Pending
Total of Change Orders:	$380,000.00	0 Days	
Adjusted Contract:	$12,150,000.00	780 Days	

*Approved under delegated authority

If Change Order 1 is approved, the cumulative value of all change orders to this contract will be $380,000 or 3.22% of the original contract amount. Work on this contract is approximately 40% complete.

BUDGET/FISCAL IMPACT:

The FY18 CIP includes a budget of $11,795,000 for contract 6454. Including this change order for $380,000, the adjusted subphase total is $12,150,000 or $355,000 over budget. This amount will be covered within the five-year CIP spending cap.

MBE/WBE PARTICIPATION:

The D/MBE and WBE participation requirements for this project were established at 3.4% and 3.8%, respectively.

STAFF SUMMARY

TO: Board of Directors
FROM: Frederick A. Laskey, Executive Director
DATE: July 19, 2017
SUBJECT: Wachusett Aqueduct Pumping Station
BHD/BEC JV 2015, A Joint Venture
Contract 7157, Change Order 18

COMMITTEE: Wastewater Policy and Oversight

___ INFORMATION
_X_ VOTE

Vincent Spada, Construction Coordinator
Corinne M. Barrett, 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 18 to Contract 7157, Wachusett Aqueduct Pumping Station, with BHD/BEC JV 2015, A Joint Venture, for a lump sum amount of $608,007, increasing the contract amount from $47,061,222.29 to $47,669,229.29 with no increase in contract term.

Further, to authorize the Executive Director to approve additional change orders as may be needed to Contract 7157 in an amount not to exceed the aggregate of $250,000, in accordance with the Management Policies and Procedures of the Board of Directors.

DISCUSSION:

The water transmission system between Wachusett Reservoir and the John J. Carroll Water Treatment Plant consists of the Cosgrove Tunnel and the Wachusett Aqueduct. The Cosgrove Tunnel provides the primary raw water supply to the Carroll Plant and the Wachusett Aqueduct is an emergency back-up. Although rehabilitation of the Wachusett Aqueduct in 2003 allowed its use during short winter duration so that the Cosgrove Tunnel could be connected to the Carroll Plant, it is limited in its flow capacity and it cannot meet the grade line requirements of the Carroll Plant in the event of an emergency. Since the Wachusett Aqueduct operates at a lower hydraulic grade line than the Cosgrove Tunnel, water cannot flow from it into the Carroll Plant's ozone contactors without pumping. If the Wachusett Aqueduct were needed in an emergency, the Carroll Plant would have to be shut down and temporary chlorination facilities would have to be installed at the Wachusett Reservoir-end of the aqueduct to provide disinfection.

Once completed, this new pumping station will allow the Wachusett Aqueduct to provide redundancy for the Cosgrove Tunnel. Completion of the Hultman Aqueduct rehabilitation and interconnections project provided redundancy for the MetroWest Water Supply Tunnel. Together, these projects will provide water transmission redundancy from Wachusett Reservoir to the metropolitan tunnel system.

This change order is for the issue previously mentioned in Change Order 15 concerning the unforeseen condition of the lower existing ledge elevations than anticipated requiring a redesign of the surge tank foundation, which was approved at the June 7, 2017 Board meeting.

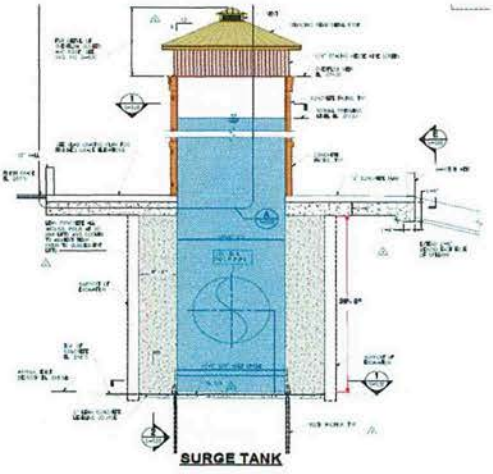
This Change Order

Change Order 18 consists of the following item:

Revised Surge Tank Foundation $608,007

Excavation for the Surge Tank

The 30-foot diameter surge tank was designed to be placed on the existing bedrock with a concrete leveling course in lieu of a structural foundation, and secured to the bedrock with six rock anchors. The bedrock elevation and rock quality was determined during design by a soil boring located approximately in the center of the surge tank layout. The support of excavation (SOE) specification required an SOE design that would allow excavation depth to two feet below the bedrock elevation. During excavation for the surge tank, bedrock was encountered above the design elevation in the western half of the 30 foot diameter excavation and at the design elevation at the center of the excavation, but not encountered at two feet below the SOE design elevation in the eastern half. Because of this, the construction was halted and a test pit and soil boring program was implemented. The initial test pits and additional soil borings were performed to determine the depth to bedrock in the eastern half and to determine bedrock quality required for the geotechnical evaluation of foundation design options. The eastern half bedrock elevation was found to vary approximately 2 to 6 feet below the bedrock design elevation. Uniform depth of bedrock is needed for placement of the surge tank. Based on the soil borings, rock coring results and geotechnical evaluations, the surge tank foundation was redesigned to provide a uniform reinforced concrete mat foundation supported on micro piles in the eastern half and the existing bedrock on the western half. The height of the surge tank needs to be shortened to



Cross Section of Surge Tank

be shortened to account for the increased concrete mat foundation elevation and allow excavation depth to be within the limits provided by the installed SOE, thereby avoiding the need to install additional, deeper SOE sheeting and ring beams.

The approved PCO for this item has been identified by MWRA staff as a differing site condition. MWRA staff, the Consultant, and the Contractor have agreed to a lump sum amount of $608,007 for this additional work with no increase in contract term. The Contractor proceeded with this work at its own risk in order to proceed with the remainder of the contract work.

CONTRACT SUMMARY:

	Amount	**Time**	**Dated**
Original Contract:	$47,011,000.00	1,260 Days	03/01/16
Change Orders:			
Change Order 1*	($1,500,000.00)	(180) Days	07/25/16
Change Order 2*	$14,766.00	0 Days	10/26/16
Change Order 3*	$24,822.00	0 Days	11/16/16
Change Order 4*	$199,629.92	0 Days	12/12/16
Change Order 5	$328,039.00	0 Days	12/23/16
Change Order 6*	$23,202.00	0 Days	01/18/17
Change Order 7*	$24,533.12	0 Days	02/06/17
Change Order 8*	$189,495.00	0 Days	03/06/17
Change Order 9	$100,079.80	0 Days	03/23/17
Change Order 10*	$24,521.45	0 Days	04/03/17
Change Order 11*	$24,455.00	0 Days	04/12/17
Change Order 12*	$24,659.00	0 Days	04/19/17
Change Order 13*	$22,491.00	0 Days	05/03/17
Change Order 14*	$19,515.00	0 Days	05/22/17
Change Order 15	$306,664.00	0 Days	06/12/17
Change Order 16*	$200,000.00	0 Days	Pending
Change Order 17*	$23,350.00	0 Days	Pending
Change Order 18	$608,007.00	0 Days	Pending
Total of Change Orders:	$658,229.29	(180) Days	
Adjusted Contract:	$47,669,229.29	1,080 Days	

*Approved under delegated authority

If Change Order 18 is approved, the cumulative total value of all change orders to this contract will be $658,229.29 or 1.4% of the original contract amount. Work on this contract is 53% complete.

BUDGET/FISCAL IMPACT:

The FY18 CIP includes a budget of $47,159,267 for Contract 7157. Including this change order for a lump sum amount of $608,007, the adjusted sub phase total will be $47,669,229.29 or $509,962.29 over budget. This amount will be covered within the five year spending cap.

MBE/WBE PARTICIPATION:

The MBE/WBE participation requirements for this project were established at 3.4% and 3.8%, respectively.

STAFF SUMMARY

TO: Board of Directors
FROM: Frederick A. Laskey, Executive Director
DATE: July 19, 2017
SUBJECT: Local Water System Assistance Program – Approval of Water Loan Program Guidelines Revision for Town of Winthrop

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COMMITTEE Water Policy & Oversight

____ INFORMATION
__X__ VOTE

Carl H. Leone, Senior Program Manager, Planning
Stephen Estes-Smargiassi, Director of Planning
Preparer/Title

Michael J. Hornbrook
Chief Operating Officer

On June 28, 2017, the Board approved $292 million in the final FY18 Capital Improvement Program to fund Phase 3 of the Local Water System Assistance Program to continue to provide ten-year interest-free loans to member water communities to finance local water projects. Winthrop's total allocation under the Phase 3 water loan program is $4,119,000 for the period FY18 through FY30. This staff summary recommends (similar to two prior Board approvals), a one-time exemption to the Program Guidelines to allow the Town of Winthrop to access its entire $4,119,000 water loan allocation, thus waiving the annual allocation restriction. Winthrop has made this request to MWRA based on urgent water quality projects that are shovel ready and will leverage additional non-MWRA funding sources that are in place. The Board has approved similar one-time exemptions to the water loan Program Guidelines to allow Reading (January 16, 2013) and Winthrop (June 4, 2014) to access its water loan allocation early.

RECOMMENDATION:

To approve a one-time exemption to the Program Guidelines for the Local Water System Assistance Program to waive the annual allocation restriction for the Town of Winthrop to allow the Town to borrow up to its entire $4,119,000 water loan allocation contingent upon Winthrop Town Council bonding authorization to meet this request.

DISCUSSION:

Under MWRA's Phase 3 Local Water System Assistance Program (LWSAP), the Town of Winthrop has a FY18-30 total allocation of $4,119,000. However, the Program Guidelines restrict each community's annual allocation to the larger of (1) 10% of their total allocation or (2) $500,000. If not utilized in a given year, annual allocations roll-over and accumulate up to the community's total allocation. The annual allocation restrictions are intended to limit MWRA's annual financial exposure for community loan distributions.

FY18 is the first year of the Phase 3 LWSAP, thus Winthrop's available allocation as of July 1, 2017 is $500,000. An additional $500,000 becomes available each fiscal year up to the $4,119,000 total. Staff recommend the Board approve a one-time exemption to the Program Guideline annual allocation restriction, which will allow staff to work with Winthrop representatives to rapidly provide a 10-year, interest-free water loan to fund water main replacement construction of three priority projects. As outlined in Winthrop's letter request to MWRA (see Attachment 1), the three projects totaling approximately $4.0 million include:

- Water main replacement in the Revere Street area outlined as Winthrop Contract 5 at an estimated cost of $750,000;
- Winthrop's share of water main replacement associated with the DCR's project on Shore Drive at an estimated cost of $700,000; and
- Water main replacement as part of the Winthrop Center Redevelopment Project at an estimated cost of $2,550,000.

Winthrop has been working to improve its local water distribution system. The Town has recently completed a $2.3 million construction project (FY15-16) to replace over 10,000 feet of unlined cast-iron water main, loop dead ends, and upgrade valves and hydrants on a large group of streets. Winthrop's prior (FY14) project replaced 1,150 feet of unlined cast-iron water main on Sea View Avenue and Winthrop Street at a cost of $275,000. Each of these projects received financial assistance through MWRA's LWSAP.

The Phase 3 LWSAP provides $292 million in interest-free loans to 45 member water communities[1] for local water system improvement projects during FY18-30. Community loans are repaid to MWRA over a 10-year period. The new Phase 3 and remaining Phase 2 LWSAP loan allocation to each member water community are listed on Attachment 2. The Phase 3 LWSAP follows the $210 million Phase 2 and $222 million Phase 1 water loan programs.

The water loan Program Guidelines require Phase 2 funds to be used prior to Phase 3 funds and include an annual allocation restriction, as follows:

> Distribution of Phase 2 LWSAP funds are authorized for FY11 through FY23. As of FY18, all undistributed Phase 2 LWSAP funds are allocated for distribution. Each community's Phase 2 funds will be distributed prior to their Phase 3 funds. Distribution of Phase 3 LWSAP funds are authorized for FY18 through FY30. Each community's Phase 3 annual allocation is restricted to the larger of (1) 10 percent of their total Phase 3 allocation or (2) $500,000. If not utilized in a given year, annual Phase 3 allocations roll-over and accumulate up to the community's total Phase 3 allocation. The annual allocation restrictions are intended to limit MWRA loan distributions annually.

[1] MWRA has a total of 50 water communities (with Dedham/Westwood Water District counted as one), of which 45 are allocated loan funds under the Local Water System Assistance Program. The five ineligible water communities have special case consideration; these include: Clinton, Leominster (emergency only), and Worcester (emergency only), that receive untreated water from the Wachusett Reservoir; Cambridge, that receives water on an emergency-only basis; and Lynn, that receives water for the GE plant only.

MWRA's goal in providing financial assistance to member communities is to improve local water systems to help maintain high quality water as it passes from MWRA's facilities through local pipelines to customers' taps. Continued improvement of local water systems is a critical element of MWRA's Integrated Water Supply Improvement Program. Older water mains, particularly those constructed of unlined, cast-iron pipe, need to be replaced or cleaned and lined to prevent tuberculation (rust build-up) (as depicted in the photos below), loss of disinfectant residual, and potential bacteria growth. Approximately 27% (over 1,800 miles) of local distribution systems remain unlined.

Unlined cast-iron tuberculated water mains

BUDGET/FISCAL IMPACT:

The FY18 CIP includes an overall net budget of zero dollars for water loans because community loans are offset by repayments over time. However, depending on the timing and level of community loan requests, annual loan distributions can fluctuate significantly, sometimes causing over-spending or under-spending (versus budget) for any particular year. From FY00 through FY17, MWRA has distributed a total of $350 million in 10-year, interest-free water loans to member communities.

For FY18, staff have projected total MWRA water loan at $33.1 million. The distribution of early loan funds to Winthrop, expected to be distributed in early FY18, will have no impact on the FY18 CIP budget. The accelerated distribution of water loans will result in accelerated repayments and a net offset over time. As community loans are repaid, the funds are deposited into MWRA's construction fund. Funds for this community loan program are secured through MWRA's tax exempt commercial paper.

ATTACHMENTS:

Attachment 1 - Letter Request from Town of Winthrop
Attachment 2 - LWSAP Allocation and Funding Utilization by Community

TOWN OF WINTHROP
OFFICE OF THE TOWN MANAGER

Town Hall, 1 Metcalf Square, Winthrop, MA 02152 Telephone: 617-846-1077 Fax: 617-846-5458

James McKenna
Town Manager

July 17, 2017

Mr. Frederick Laskey
Executive Director
MWRA
Charlestown Navy Yard
100 First Ave, Building 39
Boston, MA 02129

Dear Fred,

Please accept this letter as a request for the Board of Directors of the MWRA to consider the consolidation of fund allotment allocated for the Town of Winthrop under the Phase III Local Assistance fund as per the request below. Please know that there are urgent circumstances in support of this request due to the fact that the town has three projects that involve both street and utility infrastructure improvements that are "shovel ready", and all with other partial funding that is in place. Thus, the additional funds under Phase III allocation would allow the town to take advantage of the opportunity to make needed improvements in these project areas.

The projects listed below require additional Phase III funding as follows:

- $750K for water main replacement on the streets outlined in Contract 5 (Revere Street area)
- $700K for the Town's contribution to water main replacement associated with the DCR Project on Shore Drive; and
- $2,550,000 for water main replacement associated with the Winthrop Center Redevelopment Project.

Thank you for your consideration of this important request.

Sincerely,

James McKenna

ATTACHMENT 2

MWRA LOCAL WATER SYSTEM ASSISTANCE PROGRAM
ALLOCATION AND FUND UTILIZATION BY COMMUNITY
THROUGH JULY 2017

Community	Community Total Phase 2 Allocation	Phase 2 Funds Distributed Thru July 17	Total Remaining Phase 2 Funds	Community Total Phase 3 Allocation	Community Phase 3 Annual Allocation	Phase 3 Allocation To Date (Year 1)	Phase 3 Funds Distributed Thru July 17	Phase 3 Funds Currently Available	Total Phase 2 and 3 Funds Available
Arlington	$6,225,000	$3,300,000	$2,925,000	$8,687,000	$868,700	$0	$0	$0**	$2,925,000
Bedford *	$2,418,000	$2,418,000	$0	$3,649,000	$500,000	$500,000	$0	$500,000	$500,000
Belmont	$3,477,000	$3,000,000	$477,000	$3,852,000	$500,000	$500,000	$0	$500,000	$977,000
Boston	$38,754,000	$27,127,800	$11,626,200	$52,787,000	$5,278,700	$0	$0	$0**	$11,626,200
Brookline	$3,426,000		$3,426,000	$4,585,000	$500,000	$500,000	$0	$500,000	$3,926,000
Canton *	$3,216,000	$2,000,000	$1,216,000	$2,971,000	$500,000	$500,000	$0	$500,000	$1,716,000
Chelsea	$3,814,000	$3,011,200	$802,800	$5,039,000	$503,900	$503,900	$0	$503,900	$1,306,700
Dedham/Westwood *	$503,000	$503,000	$0	$849,000	$500,000	$500,000	$0	$500,000	$500,000
Everett	$4,672,000	$3,500,000	$1,172,000	$6,298,000	$629,800	$0	$0	$0**	$1,172,000
Framingham	$7,357,000	$5,149,900	$2,207,100	$9,003,000	$900,300	$0	$0	$0**	$2,207,100
Lexington	$3,024,000	$1,145,015	$1,878,985	$3,777,000	$500,000	$500,000	$0	$500,000	$2,378,985
Lynnfield Water Dist.	$1,396,000	$650,000	$746,000	$1,678,000	$500,000	$500,000	$0	$500,000	$1,246,000
Malden	$7,272,000	$1,774,000	$5,498,000	$10,605,000	$1,060,500	$0	$0	$0**	$5,498,000
Marblehead	$4,237,000		$4,237,000	$5,112,000	$511,200	$0	$0	$0**	$4,237,000
Marlborough *	$1,917,000	$1,283,800	$633,200	$3,512,000	$500,000	$500,000	$0	$500,000	$1,133,200
Medford	$6,959,000		$6,959,000	$10,800,000	$1,080,000	$0	$0	$0**	$6,959,000
Melrose	$3,988,000	$2,440,000	$1,548,000	$6,865,000	$686,500	$686,500	$0	$686,500	$2,234,500
Milton	$4,123,000	$2,000,000	$2,123,000	$5,967,000	$596,700	$596,700	$0	$596,700	$2,719,700
Nahant	$1,490,000	$1,142,100	$347,900	$1,835,000	$500,000	$500,000	$0	$500,000	$847,900
Needham *	$794,000		$794,000	$1,894,000	$500,000	$500,000	$0	$500,000	$1,294,000
Newton	$13,602,000	$8,161,200	$5,440,800	$20,837,000	$2,083,700	$0	$0	$0**	$5,440,800
Northborough *	$1,048,000	$986,053	$61,947	$1,450,000	$500,000	$500,000	$0	$500,000	$561,947
Norwood	$4,395,000	$3,500,000	$895,000	$6,296,000	$629,600	$629,600	$0	$629,600	$1,524,600
Peabody *	$1,089,000	$1,089,000	$0	$2,756,000	$500,000	$500,000	$0	$500,000	$500,000
Quincy	$10,505,000	$7,353,500	$3,151,500	$14,252,000	$1,425,200	$0	$0	$0**	$3,151,500
Reading	$4,146,000	$4,146,000	$0	$5,073,000	$507,300	$507,300	$0	$507,300	$507,300
Revere	$5,034,000	$1,850,000	$3,184,000	$5,315,000	$531,500	$0	$0	$0**	$3,184,000
Saugus	$6,621,000	$3,529,844	$3,091,156	$9,688,000	$968,800	$0	$0	$0**	$3,091,156
Somerville	$7,419,000	$3,355,234	$4,063,766	$10,791,000	$1,079,100	$0	$0	$0**	$4,063,766
Southborough	$1,512,000		$1,512,000	$1,920,000	$500,000	$500,000	$0	$500,000	$2,012,000
Stoneham	$2,339,000	$2,339,000	$0	$2,742,000	$500,000	$500,000	$0	$500,000	$500,000
Stoughton*	$2,506,000	$2,506,000	$0	$3,547,000	$500,000	$500,000	$0	$500,000	$500,000
Swampscott	$3,755,000	$2,849,468	$905,532	$5,276,000	$527,600	$527,600	$0	$527,600	$1,433,132
Wakefield *	$2,325,000	$1,776,250	$548,750	$3,356,000	$500,000	$500,000	$0	$500,000	$1,048,750
Waltham	$10,293,000	$4,318,370	$5,974,630	$14,904,000	$1,490,400	$0	$0	$0**	$5,974,630
Watertown	$2,978,000	$2,500,000	$478,000	$3,745,000	$500,000	$500,000	$0	$500,000	$978,000
Wellesley *	$2,350,000	$241,569	$2,108,431	$3,268,000	$500,000	$500,000	$0	$500,000	$2,608,431
Weston	$1,625,000	$1,005,000	$620,000	$2,295,000	$500,000	$500,000	$0	$500,000	$1,120,000
Wilmington *	$611,000		$611,000	$1,306,000	$500,000	$500,000	$0	$500,000	$1,111,000
Winchester *	$882,000	$600,000	$282,000	$1,394,000	$500,000	$500,000	$0	$500,000	$782,000
Winthrop	$3,312,000	$3,312,000	$0	$4,119,000	$500,000	$500,000	$0	$500,000	$500,000
Woburn *	$2,591,000	$2,591,000	$0	$3,905,000	$500,000	$500,000	$0	$500,000	$500,000
SUBTOTAL	**$200,000,000**	**$118,454,303**	**$81,545,697**	**$278,000,000**	**$32,859,500**		**$0**	**$14,951,600**	**$96,497,297**
Chicopee	$7,153,000	$4,035,000	$3,118,000	$9,774,000	$977,400	$0	$0	$0**	$3,118,000
South Hadley F.D. 1	$1,538,000		$1,538,000	$2,026,000	$500,000	$500,000	$0	$500,000	$2,038,000
Wilbraham	$1,309,000		$1,309,000	$2,200,000	$500,000	$500,000	$0	$500,000	$1,809,000
SUBTOTAL	**$10,000,000**	**$4,035,000**	**$5,965,000**	**$14,000,000**	**$1,977,400**		**$0**	**$1,000,000**	**$6,965,000**
TOTAL	**$210,000,000**	**$122,489,303**	**$87,510,697**	**$292,000,000**	**$34,836,900**		**$0**	**$15,951,600**	**$103,462,297**

* Partially Served Communities

** No Phase 3 Allocation for FY18 because Phase 2 Allocation for years 9/10 covers first year of Phase 3

MASSACHUSETTS WATER RESOURCES AUTHORITY

Meeting of the
Personnel and Compensation Committee

June 28, 2017

A meeting of the Personnel and Compensation Committee was held on June 28, 2017 at the Authority headquarters in Charlestown. Vice-Chair Cotter presided. Present from the Board were Messrs. Carroll, Flanagan, Pappastergion, Peña, Vitale and Walsh. Among those present from the Authority staff were Fred Laskey, Steve Remsberg, and Bonnie Hale. The meeting was called to order at 11:35 a.m.

Approvals

*Appointment of Principal Civil Engineer

The Committee recommended approval of the appointment of Mr. James Bird (ref. agenda item A.1).

The meeting adjourned at 11:40 a.m.

* Approved as recommended at June 28, 2017 Board of Directors meeting.

STAFF SUMMARY

TO: Board of Director
FROM: Frederick A Laskey, Executive Director
DATE: July 19, 2017
SUBJECT: July PCR Amendment

COMMITTEE: Personnel and Compensation

____ INFORMATION
__X__ VOTE

Karen Gay-Valente, Director of Human Resources
Preparer/Title

Michele S. Gillen
Director, Administration

RECOMMENDATION:

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

DISCUSSION:

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

July PCR Amendment

There is one PCR amendment proposed to address a salary equity issue for a non-union manager in the Administration Division.

Joan Carroll joined the MWRA in 2004 and since 2007 has served as the Manager, Compensation, a non-union grade 14. As the Manager, Compensation Ms. Carroll is responsible for managing the Authority's compensation function including ensuring an appropriate classification structure for all MWRA bargaining unit and non-union positions, reviewing all position requisitions and hiring packages for consistency with collective bargaining agreements and salary guidelines and providing wage and benefit costing information critical to collective bargaining negotiations. Ms. Carroll's salary is significantly below the average of all other non-union pay grade 14 managers. Given the scope of her responsibilities, it is recommended that a salary equity adjustment be implemented to bring her salary more in line with similarly situated grade 14 non-union managers.

The amendment is:

1. Salary adjustment to a filled position in Human Resources, Administration Division (Manager, Compensation) to address a salary equity issue.

This amendment requires approval by the Personnel and Compensation Committee.

BUDGET/FISCAL IMPACT:

The annualized budget impact of this PCR amendment is $9,535.23. Staff will ensure that the cost increase associated with this PCR amendment will not result in spending over the approved FY18 Wages and Salary budget.

MASSACHUSETTS WATER RESOURCES AUTHORITY
POSITION CONTROL REGISTER AMENDMENTS
FISCAL YEAR 2017

PCR AMENDMENTS REQUIRING PERSONNEL & COMPENSATION COMMITTEE APPROVAL - July 19, 2017

Number	Current PCR #	V/F	Type	Current Title	UN	GR	Amended Title	UN	GR	Current/Budget Salary	Estimated New Salary	Estimated Annual $ Impact	Reason For Amendment
P15	Administration Human Resources 8510011	F	SA	Manager, Compensation	NA	14		NA	14	$91,465	$101,000 - $101,000	$9,535 - $9,535	to provide a salary equity adjustment to align position with similarly situated non-union managers
PERSONNEL & COMP COMMITTEE TOTAL=					1						**SUBTOTAL:**	$9,535 - $9,535	

PCR AMENDMENTS REQUIRING BOARD APPROVAL- July 2017

BOARD TOTAL =	0	**SUBTOTAL:**	$0 -	$0
GRAND TOTAL =	1	**TOTAL ESTIMATED COSTS:**	$9,535 -	$9,535

STAFF SUMMARY

TO: Board of Directors
FROM: Frederick A. Laskey, Executive Director
DATE: July 19, 2017
SUBJECT: Appointment of Laboratory Supervisor III, Laboratory Services

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COMMITTEE: Personnel and Compensation

X INFORMATION
____ VOTE

Carolyn M. Fiore, Deputy Chief Operating Officer
Michael F. Delaney, Director, Laboratory Services
Preparer/Title

Michael J. Hornbrook
Chief Operating Officer

RECOMMENDATION:

To approve the appointment of Mr. Charles Blodget to the position of Laboratory Supervisor III (Unit 9, Grade 25) at an annual salary of $104,221.76 commencing on a date to be determined by the Executive Director.

DISCUSSION:

The position of Laboratory Supervisor III, was posted in June 2017 when the previous incumbent indicated her intention to retire. The primary responsibility of this position is to supervise the Nutrients Team at the Central Laboratory at Deer Island. The Laboratory Supervisor III position is responsible for the day-to-day supervision of six chemists who carry out a wide range of laboratory tests for nutrients and other inorganic chemicals using DEP-certified and EPA-approved laboratory methods. They use a variety of complex laboratory instruments in support of various MWRA programs, including Deer Island and Clinton Treatment Plants, Harbor and Outfall Monitoring, and the Drinking Water programs.

The duties of the Laboratory Supervisor III include supervising Chemist I, II, III and/or Senior Laboratory Technicians, scheduling laboratory work, reviewing laboratory and quality control results, performing analyst audits, writing and revising Standard Operating Procedures, overseeing instrument service contracts, preparing for laboratory certification audits, and overseeing supply ordering.

Organizationally, the Laboratory Supervisor III reports to one of two Laboratory Managers, in Laboratory Services.

Selection Process

This position was posted internally. Two candidates applied for this position. The Director of Laboratory Services, the supervising Laboratory Manager, and the Manager of Operations Support, representing Human Resources and AACU, interviewed both candidates. Upon

completion of the interviews, Mr. Blodget was identified as the most qualified candidate based on his education, experience, and knowledge of the requirements of the position.

Mr. Blodget has over twenty-four years experience working at the MWRA, with over four years of prior laboratory experience at a commercial environmental consulting company before joining MWRA. He was hired by MWRA as a Chemist I in 1993 and was progressively promoted to Chemist III in 1994. He is currently working on the inorganics analysis team where he performs a wide range of analyses using ion chromatography and multi-channel autoanalyzers, and the Carbon / Hydrogen / Nitrogen analyzer. He was the lead chemist for our switch to an automated cyanide analyzer and has published four peer-reviewed papers on cyanide analysis. He has a total of 27 years working in environmental laboratories, most of which has been on inorganics analyses. As a Chemist III, he has performed supervisory and leadership tasks such as scheduling and training more junior staff, evaluating and developing new methods and writing SOPs. Mr. Blodget has also completed MWRA's Supervisory Development Program. Mr. Blodget is highly recommended for the position of Lab Supervisor III.

Mr. Blodget has performed all of his previous responsibilities at the MWRA at a high level and has demonstrated excellent communication skills, initiative, and leadership. He has been an integral part of MWRA Central Laboratory.

Mr. Blodget earned his Bachelor of Science Degree in Chemistry at the University of New Hampshire.

BUDGET/FISCAL IMPACT:

There are sufficient funds in the Operations Division's FY18 Current Expense Budget to fund this position.

ATTACHMENTS:

Resume of Charles Blodget
Position Description
Organization Chart

CHARLES S. BLODGET

(617)660-7811 charles.blodget@mwra.com

OBJECTIVE

Continued growth in analytical chemistry

EXPERIENCE

1999 - Present Chemist III Massachusetts Water Resources Authority, Nut Island & Deer Island
1996 – 1999 Chemist II
1993 – 1996 Chemist I

- Analyze, troubleshoot, maintain, report, and validate all Red Team tests in accordance with SOPs, QAMPs, & QAPPs.
- Provide technical direction, training, and mentoring for analysts.
- Writing and editing of SOPs and other guidance documents.
- Participate in the purchase of equipment, instrumentation, computer software and hardware.
- Developing methods and new instrumentation. Performing and documenting ADOC.
- Develop, test, maintain and troubleshoot LIMS functions.
- Stream-line data flow, transfer and reporting to Labware.
- Assist in validation, scheduling, coordination and planning; especially in the absence of supervisor.
- Participate in studies including planning, coordination and implementation.
- Respond to client issues, DAIRs and CARs. Ensuring that data quality objectives are met.
- Record keeping, data and record archiving.
- Served on the safety committee.
- Cross-trained on violet and green teams.

1990 – 1993 Environmental Chemist GEI Consultants, Winchester, Ma

- Lab and field work relative to environmental consulting; report writing; data analysis and validation.
- Analysis, maintenance, development, and reporting of GC/PID, IR, field PID & FID, PCB immunoassay.
- External Laboratory coordination and validation.

EDUCATION

1986-1990 B.S. Chemistry University of New Hampshire Durham, NH

CONTINUTING EDUCATION AND CERTIFICATON

- Geochemistry of Groundwater, Northeastern University, 1992
- Grade IV Wastewater Operator License, (lapsed), 1997
- NEWEA Laboratory Analyst Certification, 1998
- MWRA Supervisory Development Training, 2017

SELECTED PUBLICATIONS

Delaney, M.F.; Blodget, C.; Hoey, C.E.; McSweeney, N.E.; Epelman, P.E.; Rhode, S. F.; **2007**. False Cyanide Formation During Drinking Water Sample Preservation and Storage. *Environmental Science and Technology*, 41:24:8383.

Delaney, M.F. & Blodget, C., 2016. Reliable Determination of Cyanide in Treated Water. *Journal of the American Water Works Association*, E87-E98, **Feb. 2016**, http://dx.doi.org/10.5942/jawwa.2016.108.0006.

MWRA
POSITION DESCRIPTION

POSITION: Laboratory Supervisor III

PCR#:

DIVISION: Operations

DEPARTMENT: Laboratory Services

BASIC PURPOSE:

Supervises the high quality, cost-effective and timely performance of a broad range of the most complex laboratory tasks in a manner that results in data of the highest integrity. Supervises special laboratory projects and studies as required. Staff supervised may be in more than one laboratory location.

SUPERVISION RECEIVED:

Works under the general supervision of the Laboratory Section Manager.

SUPERVISION EXERCISED:

Supervises from approximately five (5) to fifteen (15) chemists (up to level III), biologists, microbiologists (up to level II) and support staff.

ESSENTIAL DUTIES AND RESPONSIBILITIES:

- Supervises personnel in the performance of a broad range of the most complex laboratory analyses.

- Assures that all operations adhere to applicable Standing Operating Procedures (SOPs) and support established quality control programs. Approves new SOPs to reflect changes in work procedures and recommends Quality Assurance/Quality Control (QA/QC) standards for high data reliability.

- Plans and schedules analytical/ test activities and special requests to meet commitments to client groups.

- Evaluates, recommends, acquires and implements new procedures and equipment to support continuous efforts at reducing the cost of laboratory operations, and increasing service and analytical capability.

- Evaluates and recommends the need for contract laboratories to provide analyses in assigned areas and may assist in managing contracts.

- Provides assistance to the Laboratory Section Manager for consultation to client groups, to assist in defining environmental problems, determine appropriate methodology and resources, and assess the significance of results and suggest possible solutions.

- Maintains equipment maintenance and calibration programs, including records to assure proper operation and minimize downtime.

- Assures that assigned personnel maintain a current knowledge of environmental regulations in order to forecast MWRA research needs.

- Assures the validation of analytical data in accordance with QA/QC procedures.

- Assures the efficient maintenance of laboratory records in accordance with SOPs.

- Supervises the selection and utilization of statistical and graphical techniques, including computer modeling, appropriate to render data meaningful to users.

- Assures that all activities support the production of data of the highest integrity. Evaluates and recommends computer software, applications packages, and hardware for the efficient handling of analytical data.

- Assures that adequate laboratory equipment and supplies are available and recommends the purchase of equipment and supplies; prepares capital and operating budget recommendation.

- Assures the training of employees in laboratory, quality control, administrative, and safety procedures, and provides instruction as appropriate.

- Assures clean and safe working conditions in conjunction with the Safety Officer, and implements safety programs.

- Conducts employee performance reviews in accordance with MWRA procedures, and recommends hires, merit raises and promotions.

- Assists in maintaining harmonious labor management relations through application of collective bargaining agreement provisions and established personnel policies.

SECONDARY DUTIES:

- Performs related duties as required.

MINIMUM QUALIFICATIONS:

Education and Experience:

(A) A bachelor's degree in Chemistry, Biology or a related field is required. A masters degree is preferred; and

(B) Six (6) to eight (8) years of related Laboratory experience including two (2) years in a supervisory capacity; or

(C) Any equivalent combination of education and experience.

Necessary Knowledge, Skills and Abilities:

(A) A comprehensive understanding of laboratory procedures and operations, research methodology and quality control procedures.

(B) Specialized computer software, modeling, statistical techniques, and LIMS and project management techniques.

(C) Requires excellent communications, interpersonal and management skills and the completion of the MWRA supervisory training program, or equivalent supervisory training.

(D) Ability to follow oral and written instructions.

(E) Ability to communicate and work well with others.

SPECIAL REQUIREMENTS:

A valid Massachusetts Class D Motor Vehicle Operators License.

TOOLS AND EQUIPMENT USED:

Laboratory equipment and instruments, 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 duties.

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 and to talk and hear. The employee is occasionally required to walk, sit, climb, 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 more than 25 pounds. 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 a field/office environment. The employee regularly works near moving mechanical parts, is frequently exposed to wet and/or humid conditions, and is occasionally exposed to fumes and airborne particles, toxic or caustic chemicals and the risk of electric shock.

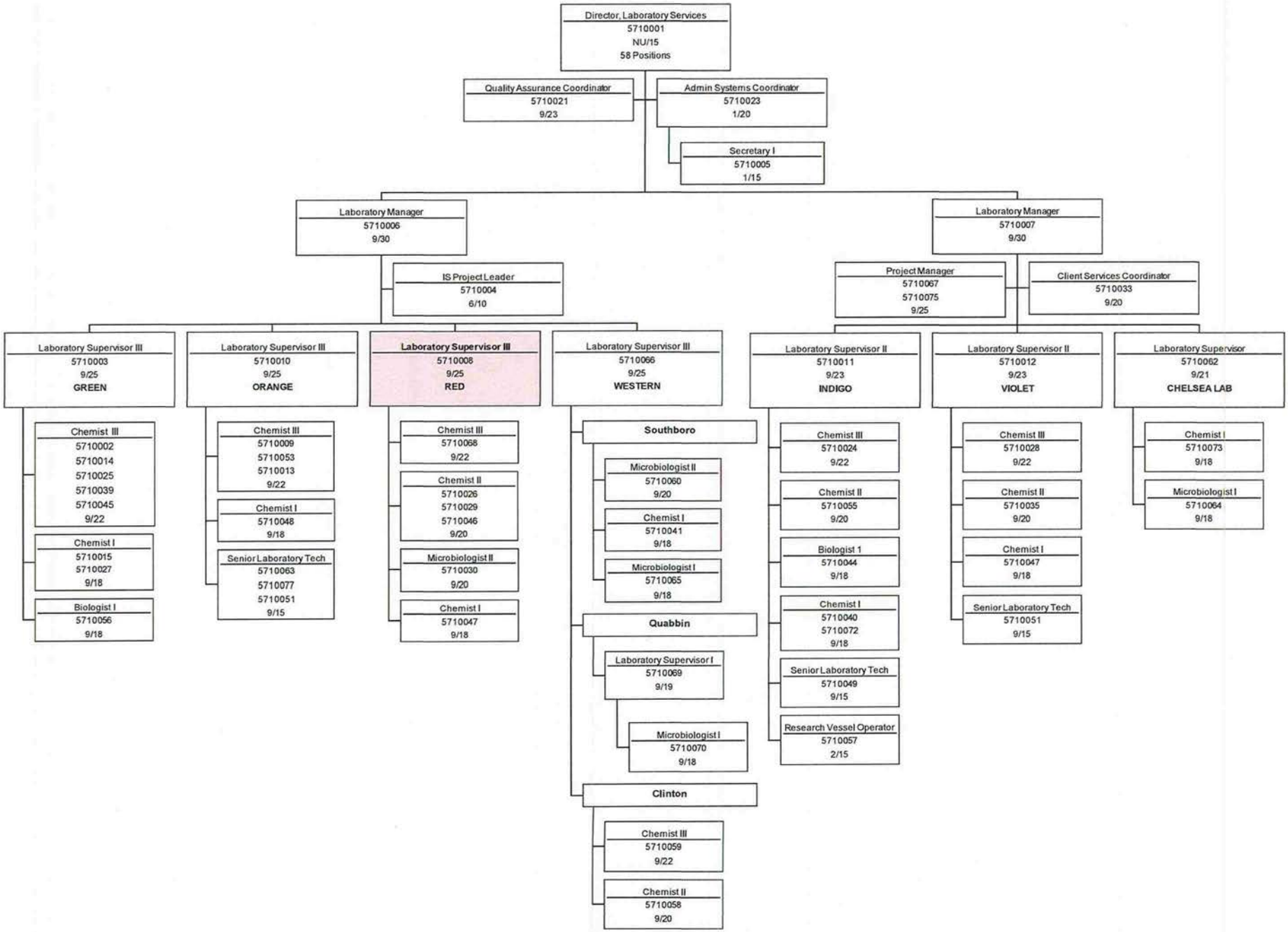
The job is hearing protection required and the noise level in the work environment is very loud in field settings and moderately loud at treatment facilities.

March 2007

Programs, Policy & Planning

Laboratory Services

July, 2017



STAFF SUMMARY

TO: Board of Directors
FROM: Frederick A. Laskey, Executive Director
DATE: July 19, 2017
SUBJECT: Appointment of Assistant Director, Engineering
Engineering & Construction Department

COMMITTEE: Personnel & Compensation

____ INFORMATION
_X_ VOTE

Karen Gay-Valente, Director, Human Resources
John P. Vetere, Deputy Chief Operating Officer
A. Navanandan, P.E., Chief Engineer
Preparer/Title

Michael J. Hornbrook
Chief Operating Officer

RECOMMENDATION:

That the Board approve the appointment of Mr. Brian L. Kubaska to the position of Assistant Director, Engineering (Non-Union, Grade 14), in the Engineering & Construction Department, at the recommended salary of $134,769.58, to be effective on a date to be determined by the Executive Director.

DISCUSSION:

The position of Assistant Director, Engineering, in the Engineering & Construction Department became vacant in March 2017 as a result of the retirement of the incumbent. The Assistant Director position reports directly to the Deputy Chief Engineer and manages an in-house staff of twenty-nine, as well as numerous consultant contracts. This position directs the development and administration of capital improvement and current expense projects; assists in the preparation of and oversees the department's capital improvement budget; and in the evaluation of solutions to engineering problems to develop environmentally sound solutions. In addition, the person in this position provides supervision and technical oversight to engineering staff, and is responsible for managing projects within the Engineering section, including overseeing and coordinating staffing with project workload to assure consistency of project execution and quality, and adherence to MWRA policy and procedures.

Selection Process

This Assistant Director position was posted internally and externally. A total of seventeen candidates applied for this position. Four internal and two external candidates were determined to be qualified and were referred for an interview. The Chief Engineer, Deputy Chief Engineer and the Director of Affirmative Action and Compliance Unit conducted the interviews. One

candidate was initially selected and then withdrew prior to acceptance. The position was then reposted internally and one additional candidate applied. Upon completion of the interviews, Mr. Brian Kubaska was identified as the most qualified candidate based on his education, experience and knowledge of the requirements of the position.

Mr. Kubaska has twenty-seven years of engineering experience including twenty-three years at the MWRA serving in progressively responsible positions and currently holds the position of Manager, SCADA & Process Control which is the same grade as the Assistant Director position. Mr. Kubaska has extensive experience initiating, directing, and managing consultant evaluation and design projects. His experience includes the design and implementation of the Wastewater SCADA project; process control support for wastewater pumping, headworks and CSO facilities; hydraulic modeling of the MWRA wastewater system; managing multiple maintenance service contracts; and managing a staff of thirty-two engineers and SCADA technicians. He has demonstrated his experience managing professional services contracts and has successfully supervised and provided technical support to staff. Prior to his employment at MWRA Mr. Kubaska worked for 4 years in design and construction for Metcalf & Eddy. During his 23 years at the MWRA Mr. Kubaska has earned the respect of his colleagues and supervisors.

Mr. Kubaska earned a Bachelor of Science degree in Civil Engineering from the University of Massachusetts Amherst. He is a registered Professional Engineer in Massachusetts. In addition he holds a Massachusetts Grade 6 Wastewater Treatment Plant Operator's License.

BUDGET/FISCAL IMPACT:

There are sufficient funds in the FY18 CEB for this position.

ATTACHMENTS:

Resume of Brian Kubaska
Position Description
Organization Chart

Brian L. Kubaska

Education/Certification:

BS, Civil Engineering, University of Massachusetts, Amherst
Massachusetts Register Professional Civil Engineer
Massachusetts Certified Grade 6-C Wastewater Treatment Facilities Operator

Experience:

Massachusetts Water Resources Authority (MWRA), Manager, SCADA & Process Control (April 2014 – Present)

- Managing the SCADA group consisting of 32 managers, engineers and SCADA technicians and the Process Control & Project Support group consisting of six (6) managers and engineers. Responsibilities include:

  - Overseeing the development, maintenance and implementation of SCADA & Process Control systems for all metropolitan wastewater facilities and water transmission and storage facilities.
  - Overseeing the procurement, management and contract administration of various as-needed design efforts, in-house design efforts, and maintenance service contracts.
  - Overseeing the review and development of capital project procurements and designs and directing staff support in the testing and startup of new equipment and facility.
  - Assessing and addressing staffing needs to meet group responsibilities including hiring and ensuring adequate training for both groups.
  - Reviewing and providing guidance and input on multiple water and wastewater design and construction efforts.
  - Supporting 8(m) permit efforts on permit applications requiring management oversight and direction.
  - Proposing, preparing and reporting on CIP and CEB project for SCADA and wastewater operation and coordinated with wastewater engineering to prioritize and better define projects.
  - Setting group priorities to ensure efficient use of MWRA staff and resources and to meet overall department objectives.

MWRA, Sr. Program Manager, Wastewater Operation/ Process Control & Project Support (Sept 2008 – April 2014)

- Managed the day-to-day work of as many as eight (8) program managers, project managers & engineers, and field inspection staff performing the diverse responsibilities of the Process Control & Project Support group, including:

  - Initiating, directing and managing in-house and consultant design and evaluation efforts. Projects included Backup Pump Control, MWR010 Cleaning, Somerville Marginal CSO Gate Replacement, Cottage Farm Fuel Oil System Upgrades, Prison Pt. CSO Pumping and Gear Box Rehab., NI Switchgear Modifications, CSO Treatment Evaluation, etc.
  - Leading the problem assessment of process control systems and directing and managing modifications to wastewater pumping, headworks, and CSO storage and treatment

facilities. Examples include headworks automated choking and isolation modifications, pumping strategy changes to reduce maintenance and improve operation and energy efficiency, wet scrubber monitoring and control improvements, chemical treatment of H_2S within interceptors, CSO facility equipment audits, numerous instrumentation data analyses to access facility operation and performance, etc.

- Providing 8(m) and direct connection permit application reviews, processing, documentation and field monitoring. Major permits included, Wentworth Residential Building, Mass. College of Art, Brookline Sewer Separation, etc.
- Scoping, procuring and managing service and purchase contracts. Contracts included the Union Park Pump Station O&M contract, and MWRA service and supply contracts (instrumentation, fuel storage tanks, crane, boilers, elevator, fire & sprinkler system, carbon replacement, manhole rehabilitation contract, etc.).

- Directed and developed multiple RFQ/Ps, performed design reviews and provided technical support for wastewater planning, engineering studies, and design projects.
- Guided operations and maintenance and provided technical support on various process control, operations, and maintenance issues.

MWRA, SCADA Program Manager, Field Operations Department / Operations Engineering (July 2001 – Sept 2008)

- Managed the Design and Implementation of the Wastewater SCADA implementation Program including:
  - Development of the RFQ/P for design and implementation (PLC programming, HMI development and testing).
  - Management of the SCADA design consultant, including review and approval of schedules, budgets, and invoices, development of construction bid documents, procurement of construction contracts, and preparation of project updates to senior managers and the BOD.
  - Coordinated the efforts of MWRA operations, SCADA, and consultant staff to implement SCADA at MWRA's wastewater facilities.
  - Managed the development of control strategies, consultant PLC and HMI programming efforts, and participated in system testing.
  - Served as a key team member during SCADA construction by reviewing and approving responses to contractor questions, and participating in construction coordination meetings.
- Served as the Field Operations Department liaison on several recent facility design and construction projects, including the Intermediate Pumping Station, BOS019 CSO facility, and BWRPS. Provided detailed review and guidance on control strategy development, implementation and testing.
- Supported the incident commander in the Emergency Operations Center to direct and monitor wastewater field operations during storm events.
- Developed and assisted in presentations to MWRA's Board of Directors, Senior Staff, and Wastewater Advisory Committee for the purposes of informational updates, and contract and amendment approvals.
- Managed the Wastewater Hydraulic Optimization project to update MWRA's hydrologic and hydraulic model and then used the model to evaluate hydraulic optimization alternatives.

MWRA, Project Manager, Sewerage Division – Planning & CSO Departments (February 1994 - July 2001)

- Managed the Master Planning phase of the Wastewater SCADA Implementation Program, which included a need assessment, peer review, and alternative evaluation.
- Advanced wastewater operations towards the goal of implementing SCADA, including providing presentations to various groups, coordinating with other related MWRA projects and programs to ensure standardization of critical equipment, and participation in development of SCADA standards documents.
- Managed the Sewerage Division's hydrologic and hydraulic modeling efforts to assist in; planning and design of various sewer rehabilitation, replacement and relief projects, optimization of transport system hydraulics, providing input on court ordered CSO reports, providing project support to determine bypass requirements, and to help develop facility and system standard operating procedures.
- Developed various reports to document current and future MWRA wastewater transport facility process components and hydraulic impacts on upstream and downstream systems and facilities, including the Wastewater Transport Current Equipment and Operational Summary Report.
- Assisted in the planning, design and implementation of the MWRA's CSO control program, including developing scope of services and reviewing consultant deliverables on existing and proposed wastewater collection systems, facility performance, and receiving water impacts.
- Coordinated with and provided assistance to MWRA member communities and regulatory agencies regarding wastewater collection system flows, hydraulics and operations.
- Evaluated and provided guidance on the overall wastewater system expansion and permit applications for connection to the MWRA's wastewater transport system.
- Assisted in development and use of databases and Graphical Information Systems to answer planning and design questions and present data.

Metcalf & Eddy, Inc. Wakefield, MA (May 1990 - February 1994)

- Part of a project team which developed a system master plan and CSO facilities plan for the MWRA.
- Used EPA diffuser models and various water quality models to assist in design of river and ocean effluent discharges and to evaluate the effects of point source and non-point source discharges.
- Participated in sampling efforts to meet NPDES permit application requirements and to evaluate several hazardous waste sites and contaminated streams.
- Assisted in the design of stormwater drainage channels, culverts, detention ponds, leachate collection systems, roadways and berms for sanitary landfills, ash monofills and transfer stations.
- Participated in the design phase of the Boston Harbor Project, Deer Island Wastewater Treatment Facility. Responsibilities included; reviewing and writing standard and nonstandard specifications, preparing conceptual designs, and tracking plant wide design problems.

Daniel O'Connell's Sons, Holyoke, MA (Summers 1988 & 1989)

- Assisted the field engineer in the construction of the Connecticut River Fish Research Laboratory, which included significant site development and substantial poured in place concrete construction.
- Supervised construction and assisted personnel in adherence to location, dimension and specification of contract documents.

MWRA
POSITION DESCRIPTION

POSITION: Assistant Director, Engineering

DIVISION: Operations

DEPARTMENT: Engineering and Construction

BASIC PURPOSE:

Assists in the direction of all aspects of engineering capital projects and current expense projects, including conceptual development planning, design and pre-construction for assigned unit.

SUPERVISION RECEIVED:

Works under the general supervision of the Chief Engineer

SUPERVISION EXERCISED:

Exercises close supervision of the assigned unit.

ESSENTIAL DUTIES AND RESPONSIBILITIES:

- Directs the development and administration of capital improvement and current expense projects within the assigned unit. Develops funding plans for projects; assists in the preparation of and oversees the department's capital improvement budget.

- Assists in the evaluation of solutions to engineering problems and develops environmentally sound solutions.

- Oversees the work of staff and consulting engineers to insure adherence to budgets, schedules, quality of outputs and compliance with scope of services and contract terms.

- Oversees coordination of projects and engineering functions with appropriate MWRA Divisions and sees that projects comply with MWRA policies and procedures.

- Recommends and develops agency, program, or department policy by analyzing all pertinent issues and information regarding the impact of proposed policy on the provision of services to clients, consumers, or the general public and by determining the resources necessary to implement such policy.

- Maintains communication with local, State, and Federal agencies, professional organizations and community groups to provide information on and gain support for programs.

- Participates in preparing for collective bargaining and hears Step One Grievances.

- Develops and oversees current expense budget for assigned unit.

- Oversees and coordinates staffing with project workload to assure consistency of project execution and quality, and adherence to Massachusetts Water Resources Authority's policy and procedures.

SECONDARY DUTIES:

- Performs related duties as required.

MINIMUM QUALIFICATIONS:

Education and Experience:

(A) A four (4) year college program in engineering or a related field. Graduate degree preferred; and

(B) An understanding of water and/or wastewater engineering and contract construction management as acquired by a minimum of twelve (12) years experience including at least four (4) years in a supervisory position.

Necessary Knowledge, Skills and Abilities:

(A) Knowledge of engineering practices and principles.

(B) A general understanding of engineering principles and practices.

(C) Demonstrated verbal and written communication skills.

SPECIAL REQUIREMENTS:

A Massachusetts Registered Professional Engineer.
A Massachusetts Class D driver's license

TOOLS AND EQUIPMENT USED:

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

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

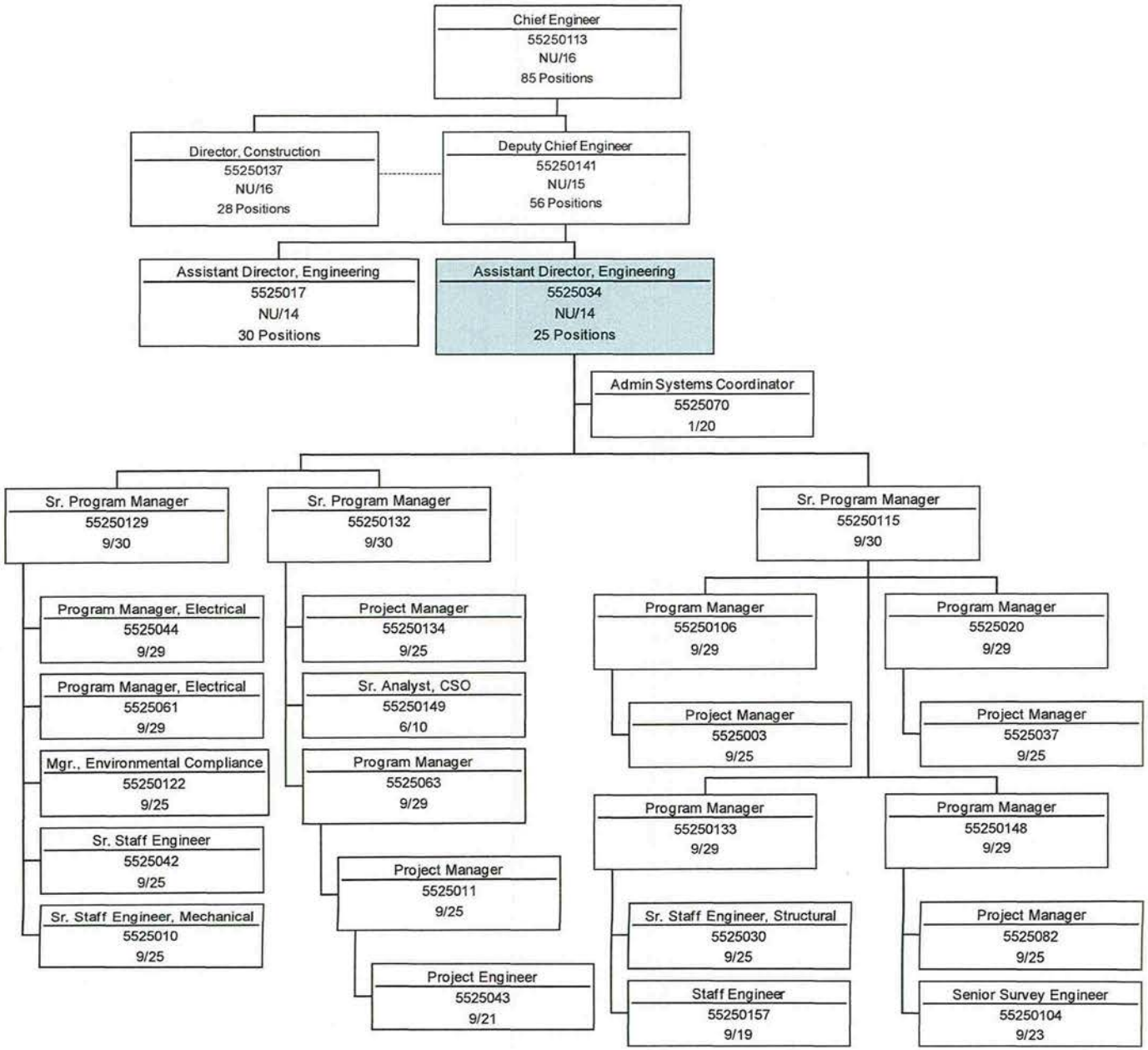
WORK ENVIRONMENT:

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 office setting.

Engineering & Construction

Engineering
July 2017



STAFF SUMMARY

TO: Board of Directors
FROM: Frederick A. Laskey, Executive Director
DATE: July 19, 2017
SUBJECT: Appointment of Materials Manager, Administration Division

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COMMITTEE: Personnel & Compensation

X VOTE
____ INFORMATION

Karen Gay-Valente, Director, Human Resources
Carolyn Francisco Murphy, Director, Procurement
Preparer/Title

Michele S. Gillen
Director of Administration

RECOMMENDATION:

To approve the appointment of Mr. Stephen Coffey to the position of Materials Manager, Administration Division (Unit 6, Grade 13) at an annual salary of $109,341 commencing on a date to be determined by the Executive Director.

DISCUSSION:

The Materials Manager position became vacant in July, 2017, with the retirement of the incumbent. Organizationally, this position reports to the Director of Procurement.

The Materials Manager coordinates and manages all of the activities of the Authority's regional warehouses. Exercising close supervision over the regional warehouse managers, the Materials Manager develops and implements policies and procedures for the receipt, distribution and replenishment of materials and supplies within these facilities. In addition, the Materials Manager directs and oversees the implementation of security measures at inventory sites, maintains the Authority's material management segments of the integrated financial software to ensure reliability and credibility of inventory data, directs the disposition of obsolete and surplus property and is overall responsible for a unit of 25-30 staff.

Selection Process

This position was posted internally and externally. Three internal and fifteen external candidates applied. One internal candidate withdrew her application. The remaining two internal candidates met the minimum requirements for the position and were referred for an interview. The Director of Human Resources, Director of Procurement and Special Assistant for Affirmative Action conducted the interviews. Upon completion of the interviews Mr. Coffey was identified as the most qualified candidate based on his experience, abilities and knowledge of the requirements of the position.

Mr. Coffey began his career at the MWRA in 1997 as a Skilled Laborer. In 2000, he worked as a Construction Pipelayer. In 2002, he was promoted to a Materials Handler position at the Deer Island warehouse where he received and distributed plant material and supplies to staff and led cycle counts, audits and yearly inventories. In 2013, Mr. Coffey was promoted to a Planning/Scheduling Coordinator where he planned, estimated, scheduled and coordinated work orders for preventative and corrective maintenance. In 2016, Mr. Coffey was promoted to Warehouse Manager at the Deer Island warehouse. As Warehouse Manager Mr. Coffey manages all warehousing and inventory control activities at Deer Island, including stock replenishment, shipping, receiving and issuance functions and supervises nine materials management staff.

In addition to his positions in Procurement and Operations, for over seven years Mr. Coffey served as AFSCME Local 1242 Vice President, representing MWRA warehouse and operations staff. As Union Vice President, Mr. Coffey participated in collective bargaining negotiations and disciplinary and employee relations matters, and represented Union members in grievance proceedings.

Mr. Coffey holds an Associate's Degree from North Shore Community College. He has fifteen years of warehousing experience, holding several positions of progressive responsibility at the Deer Island warehouse which exposed him to multiple aspects of inventory control. Mr. Coffey is highly experienced in both Lawson and Maximo software, has demonstrated a thorough understanding of warehousing, materials management and inventory controls and is highly regarded and well respected by his colleagues.

BUDGET/FISCAL IMPACT:

There are sufficient funds in the FY18 CEB to fund this position.

ATTACHMENTS:

Stephen Coffey Resume
Position Description
Procurement Department Organization Chart

Stephen Coffey

Summary of Professional Qualifications

Over twenty years of experience in Warehouse Maintenance Operations. Proven leadership skills. Adept at establishing relationships at all levels of the organization. Respected leader with focus on organized, efficient and effective workflow. Experience with a variety of departments and including Warehouse Maintenance, Work Coordination, and Purchasing. Nine years of Labor Relation experience.

Expertise

- People Management
- Change Management
- Process Improvement and Best Practices
- Performance Management
- Organizational Effectiveness
- Negotiations
- Purchasing Management
- Inventory Control

Related Work Experience

Warehouse Manager **February 2016 – Present**

Manages all warehouse activities, including but not limited to, shipping, receiving, inventory control and stock replenishment. Manages inventory ordering to meet Authority's needs as well as coordinates with other plant managers on issues regarding long and short term inventory needs. Supervises Material Handlers, Inventory Control and Warehouse Supervisory staff. Manages the development and maintenance of inventory control reports. Coordinates with multiple departments including MIS, Procurement, Maintenance, Operations and Finance to assure accuracy and efficiency of the purchasing and inventory control system.

Vice President of AFSCME Local 1242 **November 2008 – February 2016**

Assisted in the implementation of new work procedures within the bargaining unit. Successfully negotiated and ratified two contracts for union members. Worked closely with Human Resources to resolve disciplinary matters. Worked directly with Labor Relations and Human Resources on collective bargaining agreement disputes.

MWRA **June 2013 – February 2016**
Planning/Scheduling Coordinator

Received and analyzed work requests and work orders. Coordinated with managers to establish work order priorities. Worked directly with managers and supervisors on organizing work flow for the day to day operations. Ensured all work orders were received and processed efficiently. Developed work orders with proper trades and proper amount of hours and job plans to maximize job at hand. Coordinated with warehouse staff and outside vendors to ensure all necessary parts are allocated for job efficiency. Ensured all equipment replacement was entered into the proper database and tic center for future information.

MWRA **June 2002 – June 2013**
Warehouse Materials Handler

Distributed all plant material to appropriate parties. Skilled in Lawson and Maximo software. Prepared and delivered issue kits for maintenance department. Performed cycle counts, audit and yearly physical inventories.

MWRA
Construction Pipelayer Grade 14 **July 2001 – June 2002**

Installed and repaired valves/pipes on major metropolitan water distribution systems ranging from 8"-60". Assisted field supervisors in deciphering blue prints. Followed all MWRA safety regulations to ensure a safe work zone.

Waste Water Collection Systems Operator Grade 2
DL Class B with Tankers Endorsement

Education

Northeast Community College, Danvers, MA
Associates Degree
Major: Fire and Safety Management

MWRA
POSITION DESCRIPTION

POSITION: Materials Manager

DIVISION: Administration

DEPARTMENT: Procurement

BASIC PURPOSE:

Manages and coordinates all of the activities of the Authority's regional warehouses and distribution centers. Directs and oversees the implementation of security measures to guard against unaccounted for shrinkage. Develops and implements the policies and procedures for the replenishment, receipt, disbursement and accountability within these facilities. Makes recommendations on disposition of obsolete and surplus property. Ensures integrity of automated system information by enforcing controls on system usage and promoting quality control of data.

SUPERVISION RECEIVED:

Reports directly to the Director, Procurement.

SUPERVISION EXERCISED:

Exercises close supervision over the regional warehouse managers for each inventory site (3-5, approximate value of inventory $12 million); exercises close supervision over unit manager charged with technical support and analysis functions; and supervises an overall unit of 25-30 staff.

ESSENTIAL DUTIES AND RESPONSIBILITIES:

- Defines policies and procedures for all of the Authority's inventory; what to store, where to store, and how much to store. Works with the warehouse managers, defines receiving, inspecting, and testing of all inventory items as appropriate.

- Maintains all of the Authority's material management segments of the Integrated Financial Software and ensure the reliability and credibility of the data. Directs and oversees implementation of security measures at inventory sites.

- Produces reports for management's use in defining such areas as "inventory turns", total inventory dollar value", "inventory count accuracy rate", and other reports as needed.

- Maintains and updates an "item master" database utilizing the National Institute of Governmental Purchasing (NIGP) index and make the index available to all the Authority divisions.

- Maintains and improves the service levels for the Authority's operations and maintenance units.

- Causes annual and/or cycle counting of all regional warehouses and satellite inventory sites. Reconciles the differences between system quantities and actual counts.

- Works closely with purchasing, identifies those commodities that should be covered under price agreements.

- Works with the Authority's operating division to forecast annual needs for new projects, and the budget department to define and maintain a budget for the material management unit.

- Defines and implements training for all materials management personnel in the areas of inventory control, material handling, inventory security and safety procedures.

- Works with the Surplus Property Committee, in conjunction with the Authority's Surplus Property Procedures, to define, reallocate, or dispose of surplus material in the best interest of the Authority.

SECONDARY DUTIES:

- Performs related duties as required.

MINIMUM QUALIFICATIONS:

Education and Experience:

(A) Knowledge of procurement policies and procedures and inventory management practices normally attained through a four (4) year college program in Business Administration ; and

(B) Knowledge of purchasing, inventory control, management practices and budgets as acquired from ten (10) years experience in the materials management and or purchasing area. Must have a minimum of five (5) years supervisory experience; and

(C) Experience dealing with union personnel and automated inventory/computer system; or

(D) Any equivalent combination of education or experience.

Necessary Knowledge, Skills and Abilities:

(A) Strong orientation to business goals, objectives and bottom line results.

(B) Excellent analytical, interpersonal, written and verbal communication skills.

(C) Proficiency in the use of personal computers, Excel and Microsoft Word.

SPECIAL REQUIREMENTS:

A valid Massachusetts Class D Motor Vehicle Operators License.

TOOLS AND EQUIPMENT USED:

Office machines such as the telephone, personal computer 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 the essential duties.

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 and to talk and hear. The employee is occasionally required to walk, sit, climb, balance, stoop, kneel, crouch or crawl.

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

WORK ENVIRONMENT:

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

While performing the duties of this job, the employee regularly works in a field/office environment. The employee regularly works near moving mechanical parts, is frequently exposed to wet and/or humid conditions, and is occasionally exposed to fumes and airborne particles, toxic or caustic chemicals and the risk of electric shock.

The job is hearing protection required and the noise level in the work environment is very loud in field settings and moderately loud at treatment facilities.

Procurement Department
July 2017