



MASSACHUSETTS WATER RESOURCES AUTHORITY

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

Posted 01/10/2020
12:30PM

Frederick A. Laskey
Executive Director

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WASTEWATER POLICY & OVERSIGHT COMMITTEE MEETING

to be held on

Wednesday, January 15, 2020

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

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

Time: 10:00 a.m.

AGENDA

A. Contract Awards

1. Janitorial Services at the Deer Island Treatment Plant: Star Building Services, Inc., Bid WRA-4775
2. Supply and Delivery of Hydrogen Peroxide to the Deer Island Treatment Plant: Brenntag Northeast, LLC, Contract Bid WRA-4784
3. Nut Island Headworks Odor Control and HVAC Improvements: Walsh Construction Co. II, LLC, Contract 7548

B. Contract Amendments/Change Orders

1. Nut Island Headworks Odor Control and HVAC Improvements – Inspections, Evaluations, Design, Construction Administration and Resident Engineering Services: Hazen and Sawyer, PC, Contract 7517, Amendment 1
2. Management, Operation and Maintenance of the Union Park Pump Station/CSO Facility and the Unmanned Stations: Woodard & Curran, Inc., Contract S559, Amendment 2
3. Remote Headworks and Deer Island Shafts Study: Mott MacDonald, LLC, Contract 7237, Amendment 2

MASSACHUSETTS WATER RESOURCES AUTHORITY

Meeting of the Wastewater Policy and Oversight Committee November 20, 2019

A meeting of the Wastewater Policy and Oversight Committee was held on November 20, 2019 at the Authority headquarters in Charlestown. Committee Chair Flanagan presided. Present from the Board were Ms. Wolowicz and Messrs. Cook, Cotter, Foti, Pappastergion, Peña, Vitale and Walsh. Mr. Carroll was absent. Among those present from the Authority staff were Frederick Laskey, Carolyn Francisco Murphy, David Coppes, Thomas Durkin, Carolyn Fiore, Michele Gillen, Andrew Hildick-Smith, Stephen Estes-Smargiassi, Rodrigo Pineros, Michael Greeley, Betsy Reilly, Kenneth Keay, David Taylor, Corinne Barrett, Martin McGowan, John Colbert and Kristin MacDougall. The meeting was called to order at 10:56 a.m.

Information

Wastewater Metering System Replacement Project Update

Staff made a presentation. (Mr. Foti returned to the meeting during the presentation.) There was discussion and questions and answers. (Mr. Vitale briefly left and returned to the meeting during discussion.) (ref. WW A.1)

Contract Awards

*Harbor and Outfall Monitoring Contracts for 2020-2023: Battelle Memorial Institute, Contract OP-401A, Normandeau Associates, Inc., Contract OP-401B

Staff made a verbal presentation. There were questions and answers.

The Committee recommended approval. (ref. WW B.1)

*Cooperative Research Project with Center for Coastal Studies in Provincetown to Conduct Water Quality Monitoring in Cape Cod Bay: Contract OP-406

Staff made a verbal presentation. There was brief discussion.

The Committee recommended approval. (ref. WW B.2)

Contract Amendments/Change Orders

*Chelsea Creek Headworks Upgrade: BHD/BEC 2015, A Joint Venture, Contract 7161, Change Order 34

* Committee recommendation approved by the Board on November 20, 2019

Staff made a presentation. There were questions and answers.

The Committee recommended approval. (ref. WW C.1)

Staff also made a brief presentation about the premature failure of the grit collector chain in Channel 1 at the Chelsea Creek facility. Staff reported on the interim measures taken to keep the project progressing while review and investigation is underway. There was discussion and questions and answers.

The meeting adjourned at 11:40 a.m.

* Committee recommendation approved by the Board on November 20, 2019

Documents used for this meeting, referenced above, can be found here:
<http://www.mwra.com/monthly/bod/boardmaterials/2019/o-BoardMaterials11-20-19.pdf>

STAFF SUMMARY

TO: Board of Directors
FROM: Frederick A. Laskey, Executive Director
DATE: January 15, 2020
SUBJECT: Janitorial Services at the Deer Island Treatment Plant
Star Building Services, Inc.
Bid WRA-4775



COMMITTEE: Wastewater Policy & Oversight

 INFORMATION

 X VOTE



Director of Administration

Ted Regan, Deputy Director, Maintenance Deer Island WWTP
David Duest, Director Deer Island WWTP
Douglas J. Rice, Director of Procurement
Preparer/Title



David W. Coppes, P.E.

Chief Operating Officer

RECOMMENDATION:

To approve the award of Contract WRA-4775, Janitorial Services at the Deer Island Treatment Plant, to Star Building Services, Inc., and to authorize the Executive Director, on behalf of the Authority, to execute said contract in an amount not to exceed \$1,589,300, for a contract term of three years.

DISCUSSION:

MWRA has been contracting janitorial and window cleaning services at the Deer Island Treatment Plant for the past 22 years. The current contract will expire on January 22, 2020.

Deer Island consists of over 229,000 square feet of usable space in 14 occupied buildings. The facilities covered under this contract requiring daily janitorial services include computer rooms, laboratories, warehouse space, offices, common-use areas (e.g., kitchenettes, conference rooms, hallways, etc.) locker rooms, shower rooms, lavatories, control rooms, and workshops.

In addition, the contract includes periodic cleaning of the exterior windows and skylights, which requires special equipment (mechanical lifts) and safety procedures.



The contract includes all necessary labor, equipment, materials, and supplies, with the exception of paper products and hand soap, which MWRA procures separately. The contractor is required to implement and manage a comprehensive janitorial program intended to protect and maintain the facilities and provide a healthy, clean environment for MWRA staff and visitors.

As has been the past practice, the contractor will be required to continue using “Green Seal Certified” products to minimize the use of hazardous cleaning products and, in accordance with the Commonwealth’s “sustainability program,” will work with MWRA staff to maintain the single stream recycling program.

The award of a contract for janitorial services for the Chelsea Facility is the subject of a separate staff summary being presented at this meeting.

Procurement Process

Purchasing staff solicited bids from six firms listed as approved contractors on the Commonwealth of Massachusetts janitorial contract (Massachusetts State Contract #FAC81 to perform janitorial services at Deer Island for a contract term of three years. In addition to being listed on the State contract, two of the six firms solicited have bid on previous janitorial services contracts at Deer Island and, as such, are familiar with the Deer Island facility.

On October 31, 2019, pricing submittals were received from three bidders with the following results:

| VENDOR | BID PRICE |
|-------------------------------------|-----------------------|
| Star Building Services, Inc. | \$1,589,300.00 |
| FM&M, Inc. | \$2,230,691.08 |
| Compass Facility Services | \$2,592,129.00 |

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

Star Building Services, Inc. submitted the lowest of the three responsive bids received. Under the current contract with Star Building Services., which will expire on January 22, 2020, MWRA is paying an annual rate of \$511,145.11 for similar services. Star Building Services, Inc.’s bid price for year one of the new contract is \$517,314.92, which reflects an increase of \$6,169.81 or 1.2% year over year from the existing contract. Star Building Services, Inc.’s bid price will be \$528,050.00 for year two and \$543,935.08 for year three.

Staff are satisfied by the performance of Star Building Services, Inc. under the existing contract. The firm has extensive experience in providing janitorial services for other large public agencies, such as Lynn Public Schools and the Boston Fire Department. Star Building Services, Inc. possesses the skill, ability, and experience necessary to perform the work under this contract and is qualified to do so. Therefore, staff recommend the award of this contract to Star Building Services, Inc. as the lowest responsive bidder.


BUDGET/FISCAL IMPACT:

The FY20 Current Expense Budget included sufficient funding for the first year of this contract. Appropriate funding will be included in subsequent Proposed CEB requests for the remaining term of the contract.

MBE/WBE PARTICIPATION:

Star Building Services, Inc. is a certified Minority and Women-owned business.

STAFF SUMMARY

TO: Board of Directors
FROM: Frederick A. Laskey, Executive Director 
DATE: January 15, 2020
SUBJECT: Supply and Delivery of Hydrogen Peroxide to the Deer Island Treatment Plant
Brenntag Northeast, LLC
Bid WRA-4784

COMMITTEE: Wastewater Policy & Oversight

INFORMATION

VOTE


Michele S. Gillen

Director of Administration

David F. Duest, Director, Deer Island WWTP
Douglas J. Rice, Director of Procurement
Preparer/Title


David W. Coppes, P.E.
Chief Operating Officer

RECOMMENDATION:

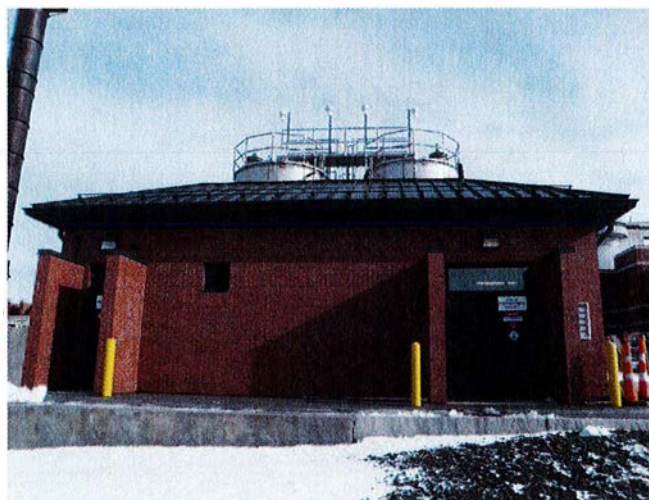
To approve the award of Purchase Order Contract WRA-4784, for the supply and delivery of hydrogen peroxide to the Deer Island Treatment Plant, to the lowest responsive bidder, Brenntag Northeast, LLC, and to authorize the Executive Director, on behalf of the Authority, to execute said purchase order contract in an amount not to exceed \$1,734,300 for a period of two years, from April 1, 2020 through March 31, 2022.

DISCUSSION:

MWRA uses hydrogen peroxide to control hydrogen sulfide levels in Deer Island's influent, which most typically become elevated during the warmer summer and fall months (June through November). Hydrogen peroxide destroys hydrogen sulfide and reduces the need for additional odor control chemicals and equipment in other areas of the plant.

There are two pretreatment facilities on Deer Island, one to treat flows from the North System and one to treat flows from the South System. A picture of the South System Pretreatment Facility is shown on the right.

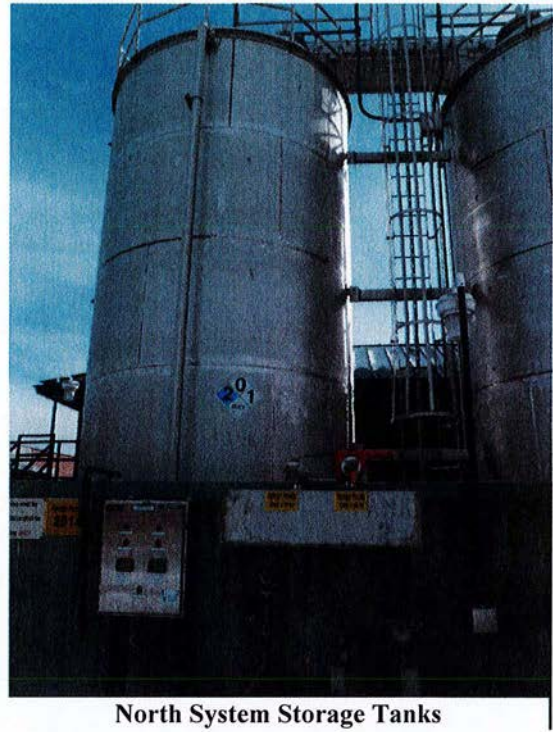
Each facility has two associated 20,000-gallon storage tanks for a total on-island capacity of 80,000 gallons.



When hydrogen sulfide levels exceed 50 parts per million in the inlet to the east and west grit/primary odor control systems, staff pump a solution of 50% hydrogen peroxide from the North and South System Pretreatment Facilities into the wastewater influent at each pump station as needed.



South System Hydrogen Peroxide Pump Room



North System Storage Tanks

Based upon reasonable assumptions and historic usage, staff estimate that Deer Island will use approximately 450,000 gallons of hydrogen peroxide in each year of this two-year contract. Actual usage is largely dependent on weather conditions during summer months. During an extremely hot and dry season, usage could increase dramatically. The anticipated usage is an estimate only. MWRA will only pay for chemical that is received.

Procurement Process

Bid WRA-4784 was advertised in the following publications: Boston Herald, Goods and Services Bulletin, El Mundo, and Banner Publications. In addition, bids were made available for public downloading on MWRA’s e-procurement system (Event 4096), and four potential bidders were solicited through the e-Portal.

On December 6, 2019, Event 4096 closed with the following results:

| Description | Brenntag Northeast, LLC | U.S. Peroxide, LLC |
|-----------------------------------------------------------------------------|-----------------------------------------------------|--------------------------------------------|
| YEAR ONE (4/1/20 – 3/31/21) 450,000 Gallons of Hydrogen Peroxide | \$1.927 per gallon x 450,000 = \$867,150 | \$2.19 per gallon x 450,000 = \$985,500 |
| YEAR TWO (4/1/21 – 3/31/22) 450,000 Gallons of Hydrogen Peroxide | \$1.927 per gallon x 450,000 = \$867,150 | \$2.19 per gallon x 450,000 = \$985,500 |
| TOTAL | \$1,734,300.00 | \$1,971,000.00 |

Contract WRA-4784 is structured as a two-year contract similar to the existing contract with U.S. Peroxide, LLC, which expires on March 31, 2020. Under the existing contract, MWRA is paying \$1.87 per gallon (year two pricing). Compared to the existing year two contract price, the cost has increased by \$0.057 per gallon or 3%. The unit cost from Brenntag Northeast, LLC as submitted is 12% less than the unit price submitted by U.S. Peroxide, LLC for this bid.

Staff have reviewed Brenntag Northeast, LLC's bid and have determined that it meets all of the requirements of the bid specifications. Therefore, staff recommend the award of this contract to Brenntag Northeast, LLC as the lowest responsive bidder.


BUDGET/FISCAL IMPACT:

There are sufficient funds available for the first portion of this contract in the FY20 Current Expense Budget. Appropriate funding will be included in subsequent Proposed CEB Requests for the remaining term of the contract.

MBE/WBE/PARTICIPATION:

Brenntag Northeast, LLC is not a certified Minority- or Women-owned business.

STAFF SUMMARY

TO: Board of Directors
FROM: Frederick A. Laskey, Executive Director 
DATE: January 15, 2020
SUBJECT: Nut Island Headworks Odor Control and HVAC Improvements
Walsh Construction Company II, LLC
Contract 7548

COMMITTEE: Wastewater Policy & Oversight

 INFORMATION

 X VOTE


Michele S. Gillen

Director of Administration


David W. Coppes, P.E.

Chief Operating Officer

John P. Colbert, P.E., Chief Engineer
David K. Pottle, P.E., Program Manager
Preparer/Title

Contract 7548 was designed under MWRA Contract 7517 - Nut Island Headworks Odor Control and HVAC Improvements Inspections, Evaluations, Design, Construction Administration and Resident Engineering Services. A separate staff summary requesting approval of Amendment 1 to Contract 7517 is also being presented to the Board of Directors at this meeting.

RECOMMENDATION:

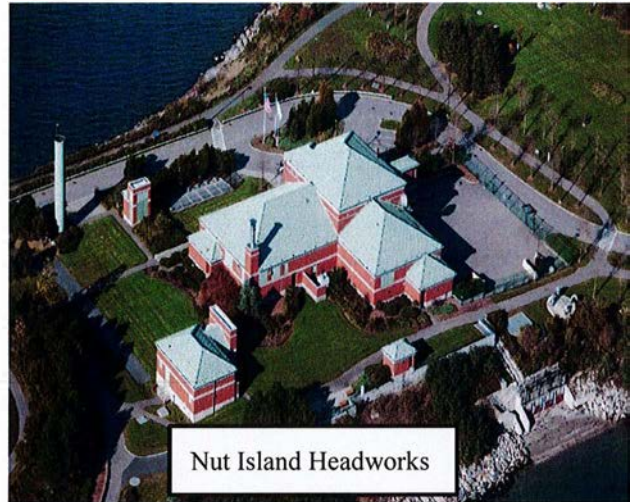
To approve the award of Contract 7548, Nut Island Headworks Odor Control and HVAC Improvements, to the lowest responsible and eligible bidder, Walsh Construction Company II, LLC, and to authorize the Executive Director, on behalf of the Authority, to execute said contract in the bid amount of \$57,565,399, for a contract term of 1,034 calendar days from the Notice to Proceed.

BACKGROUND:

The Nut Island Headworks, located in the Hough's Neck section of Quincy, was placed into operation in 1998. The facility provides screening and grit removal, flow metering, and flow control for the Deer Island South System Pump Station. The facility receives flow from almost the entire MWRA southern wastewater collection system. The Nut Island Headworks serves 22 communities and has a peak hydraulic capacity of 360 million gallons per day. The odor control system includes carbon adsorbers and wet scrubbers.

Odor Control Room Fire

Following the January 25-26, 2016 fire that consumed wet scrubber 4 and damaged equipment throughout the odor control area, significant recovery work was undertaken to restore operation of the odor control system. Demolition, cleaning, testing and repair of electrical and instrumentation systems, rebuilding fan motors, and repair and reconfiguration of ductwork were performed. Smoke and water damage throughout the facility was addressed. The odor control system was returned to operation in April 2016 and has remained in continuous operation ever since.



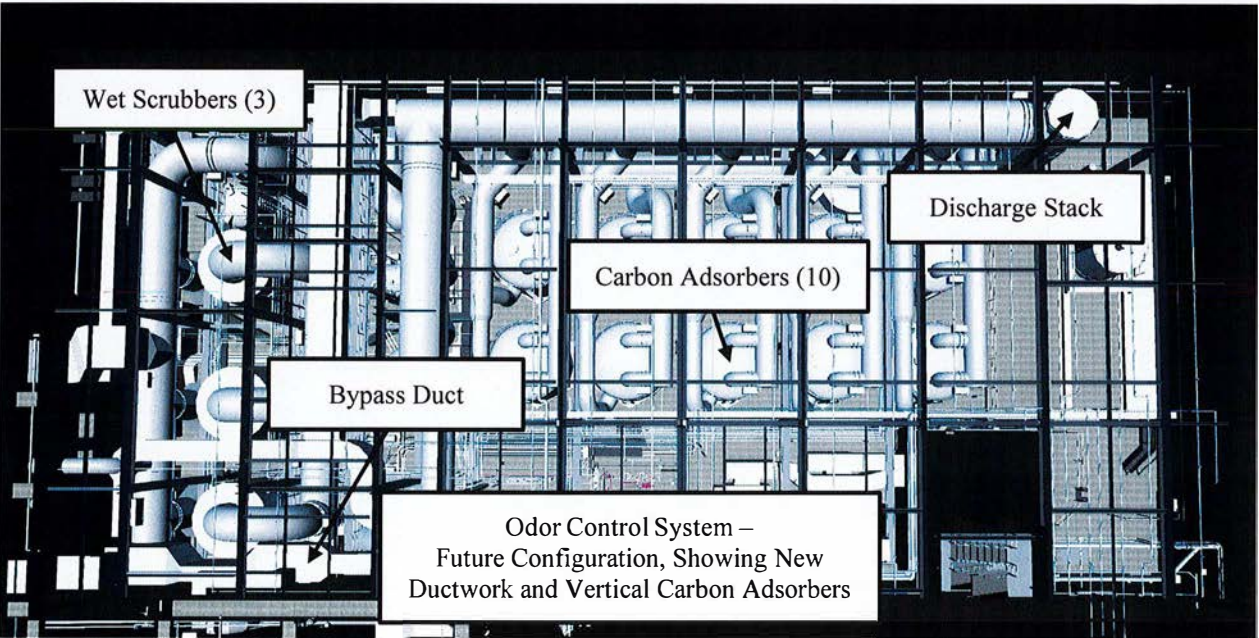
The current odor control system consists of fans drawing air from process areas for treatment through activated carbon adsorbers. The undamaged scrubbers were emptied of their media, the mist eliminators were cleaned, and the system now serves as extensions of the inlet ductwork.



DISCUSSION:

Construction Contract 7548 will provide upgrades to the odor control system, heating, ventilation and air conditioning system and other equipment. Most of the equipment is at or near the end of its useful life and replacement is required to ensure the continued reliability of this critical facility. This contract will also provide reconfiguration of ductwork serving the odor control system to expand the system's operational flexibility, and will improve surface access into the below-grade odor control room, the need for which was made evident during the January 2016 fire.

Improvements to the odor control system include replacement of the carbon adsorbers, fans, ductwork dampers, and the odor control SCADA system including the programmable logic controller and instrumentation; installation of ductwork to allow bypassing of the wet scrubbers; rehabilitation of the wet scrubbers system including replacement of chemical tanks, pumps, piping, media and mist eliminators; and installation of roof hatches and a new stairway to improve access into the odor control room.



Improvements to the HVAC system include replacement of the air handling units and unit heaters; replacement of the boilers; replacement of the energy management system; and installation of equipment to provide ventilation setbacks and recirculation to improve energy efficiency, as allowed by code.

Improvements to other equipment include replacement of the underground fuel oil storage tanks serving the standby generator and boilers; replacement of the dewatering system pumps serving the bottom level; and replacement of the emergency spillway isolation sluice gates.

Procurement Process

Contract 7548, designed by Hazen and Sawyer, P.C., was advertised and bid in accordance with Chapter 149 of Massachusetts General Laws. General bids were received and opened on October 8, 2019. Three contractors bid and the results are presented below.

| <u>Bidders</u> | <u>Bid Amount</u> |
|------------------------------------|-------------------|
| <i>Engineer's Estimate</i> | \$52,672,900 |
| Walsh Construction Company II, LLC | \$57,565,399 |
| Daniel O'Connell's Sons, Inc. | \$57,725,000 |
| Barletta Heavy Division, Inc. | \$57,763,000 |

The two lowest bids differ by 0.28% and the three bids are within 0.34% of each other. The Engineer's Estimate is 8.5% lower than the low bid and 8.7% lower than the average of all bids. Hazen and Sawyer has reviewed the bids and attributes the variance from its estimate to the strong construction market with numerous bidding opportunities being available. This contracting environment is resulting in higher bid prices.

Based on discussions with Walsh, MWRA staff and Hazen and Sawyer staff believe that Walsh Construction Company II, LLC understands the full nature and scope of this project. References were checked and found to be favorable. Walsh recently successfully completed emergency repairs to gravity thickeners at the Deer Island Treatment Facility.

Staff have determined that Walsh Construction Company II, LLC possesses the skill, ability, and integrity necessary to perform the work under this contract and is qualified to do so. Staff have further determined that the bid price is reasonable, complete, and includes the payment of prevailing wages, as required. Therefore, staff recommend the award of this contract to Walsh Construction Company II, LLC as the lowest responsible and eligible bidder.

BUDGET/FISCAL IMPACT:


The FY20 CIP includes a budget of \$45,000,000 for Contract 7548. The contract award amount is \$57,565,399 or \$12,565,399 over the budgeted amount. This amount will be covered within the five-year CIP spending cap.

The total claim amount for the damage caused by the 2016 fire was \$6,586,247, which exceeded the insurance policy self-insured retention of \$2,500,000. MWRA absorbed the \$2,500,000 retention amount in the FY16 Current Expense Budget and the balance in excess of the self-insured retention, totaling \$4,086,247, was paid to the Authority. A portion of the insurance proceeds (\$2,545,382) represented recovery for some items that were damaged but not immediately repaired or replaced, such as Scrubber #4, Control Panels CP-3 and 4, and Air Handling Unit Panels 10 and 11. It should be noted these proceeds were deposited into MWRA's Construction Fund for future capital improvements.

MBE/WBE PARTICIPATION:

Contract 7548 will receive CWSRF funding from the Massachusetts Clean Water Trust. The D/MBE and D/WBE participation requirements for this project were established by DEP at 4.2% and 4.5%, respectively. Walsh requested a partial waiver of these requirements citing insufficient certified D/MBE and D/WBE subcontractors available to work on the project despite good faith efforts made by Walsh to solicit participation. The partial waiver was granted by DEP. Walsh will provide 1.1% D/MBE and 1.2% D/WBE participation.


STAFF SUMMARY

TO: Board of Directors
FROM: Frederick A. Laskey, Executive Director 
DATE: January 15, 2020
SUBJECT: Nut Island Headworks Odor Control and HVAC Improvements
Inspections, Evaluations, Design, Construction Administration and Resident
Engineering Services
Hazen and Sawyer, P.C.
Contract 7517, Amendment 1

COMMITTEE: Wastewater Policy & Oversight

INFORMATION
 VOTE

John P. Colbert, P.E., Chief Engineer
David K. Pottle, P.E., Program Manager
Preparer/Title

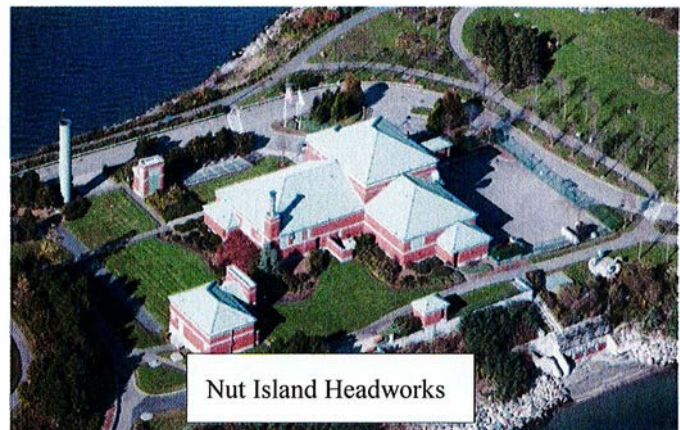

David W. Coppes, P.E.
Chief Operating Officer

RECOMMENDATION:

To authorize the Executive Director, on behalf of the Authority, to approve Amendment 1 to Contract 7517, Nut Island Headworks Odor Control and HVAC Improvements Inspections, Evaluations, Design, Construction Administration and Resident Engineering Services, with Hazen and Sawyer, P.C., to increase the contract amount by \$1,542,925.00 from \$5,736,900.77 to \$7,279,825.77 and increase the contract term by 700 days from December 28, 2021 to November 28, 2023.

BACKGROUND:

The Nut Island Headworks, located in the Hough's Neck section of Quincy, was placed into operation in 1998. The facility provides screening and grit removal, flow metering, and flow control for the Deer Island South System Pump Station. The facility receives flow from almost the entire MWRA southern wastewater collection system. The Nut Island Headworks serves 22 communities and has a peak hydraulic capacity of 360 million gallons per day. The odor control system includes carbon adsorbers and wet scrubbers.



DISCUSSION:

Contract 7517 was awarded to Hazen and Sawyer, P.C. in March 2017 to provide inspections, evaluations, preliminary and final design, construction administration and resident inspection services for long-term improvements to the odor control and HVAC systems and other equipment of the facility, some of which was damaged by the January 2016 fire.

The project consists of permanent improvements to the odor control system including replacement of the carbon adsorbers, fans, ductwork dampers, and the odor control SCADA system including the programmable logic controller and instrumentation, installation of ductwork to allow bypassing of the wet scrubbers, rehabilitation of the wet scrubbers system including replacement of chemical tanks, pumps, piping, media and mist eliminators, and installation of roof hatches and a new stairway to improve access into the odor control room. The project also includes improvements to the HVAC system including replacement of the air handling units and unit heaters, replacement of the boilers, replacement of the energy management system, and installation of equipment to provide ventilation setbacks and recirculation as allowed by code; and improvements to other equipment of the headworks including replacement of the underground fuel oil storage tanks serving the standby generator and boilers, replacement of the dewatering system pumps serving the bottom level, and replacement of the emergency spillway isolation sluice gates.

The facility improvements were advertised for bid in June 2019 as construction Contract 7548 - Nut Island Headworks Odor Control and HVAC Improvements.

This Amendment

Amendment 1 will increase the contract amount by \$1,542,925.00 from \$5,736,900.77 to \$7,279,825.77 and increase the contract term by 700 days from December 28, 2021 to November 28, 2023 for the following items:

Additional Time for Design Services

13 months

Contract 7517 provides design and ESDC services for improvements to the Nut Island Headworks following the January 2016 fire in the odor control room. Given the urgency to implement facility improvements after this event, including improving surface access into the odor control room and upgrading the odor control system, Contract 7517 included an aggressive 17-month schedule for preliminary and final design services. Design of this large project, which required development of detailed odor control and HVAC sequencing to maintain operation of these systems throughout construction, preparation of 311 contract drawings, and obtaining a Non-Major Comprehensive Air Plan approval from MADEP for the odor control system, as well as a longer than typical bidding, bid review and award period, took longer than provided for in Contract 7517, resulting in the need for an additional 13 months to the design phase. There is no increase in the cost of design services associated with this additional time.

Additional Time for Engineering Services During Construction (ESDC)

10 months

Contract 7517 assumed an aggressive 24-month duration for construction. Analysis of the critical path associated with the construction contract has determined that this duration is not sufficient. Long lead times are anticipated for fabrication of odor control system equipment including the four 56,000 cfm fan assemblies. In addition, replacement of odor control and HVAC equipment cannot be performed all at once but must be performed in numerous sequenced steps to maintain operation of these systems. It's anticipated 34 months will be required to construct the project, resulting in 10 months needing to be added to the construction phase. There is an increase in the amount and cost of ESDC services associated with this additional time, as described below.

Resident Engineering Services

\$893,000

Contract 7517 includes 4,700 hours for the services of a single field engineer to provide combined resident engineer and resident inspection services for this project. The 4,700 hours was established by MWRA as a predetermined level of effort in the Contract 7517 RFQ/P, and assumes full-time site coverage for 24 months of construction (at 2,200 hours/year and 300 hours for as-needed services during the 12-month warranty period). This level of effort was established in December 2016 prior to development of the project sequencing. To construct the project, concurrent work must be performed on the odor control and HVAC systems at numerous locations inside the facility, while continuously maintaining facility ventilation and process air treatment, and on project elements at several locations outside the facility.

The MWRA-established predetermined level of effort for one person to provide RE/RI services for this project is no longer considered sufficient. A highly experienced full-time resident engineer is required to oversee the construction, along with assistance by a full-time resident inspector.

Proposed Amendment 1 adds 34 months of resident engineering services, to be performed by a civil engineer with over 20 years of experience overseeing the construction of wastewater facilities projects.

Additional ESDC Services

\$357,308

Additional level of effort will be required in proportion to the additional 10 months of construction for performing on-site technical inspections, resident inspection services and project administration and documentation. The budget for Contract 7517 assumed preparation of 210 record drawings whereas the construction contract includes 311 drawings. This requires a proportional increase in the budget for preparation of record drawings.

Orion E-Construction System

\$247,617

Contract 7517 includes services for review of documents generated during construction including contractor requests for information (RFIs), submittals and proposed change orders (PCOs), and

includes services for preparation of documents including daily reports and logs of RFIs, submittals and PCOs. Contract 7517 did not include services for use of a construction program management system (i.e. an e-construction system) for performing and managing this work. Proposed Amendment 1 adds services for use of the Orion construction program management system during the 34-month construction period and 12-month warranty period of Contract 7548. The system will provide centralized access to project information, simplify communications, document transactions and secure critical data. The Orion system is being successfully used on the ongoing Chelsea Creek Headworks Rehabilitation project to provide efficient document reviews and approvals.

High-Performance SCADA HMI Graphics Display Screens \$45,000

The Nut Island Headworks is served by the Authority’s SCADA system. Operators interact with the SCADA system through human-machine interface (HMI) display screens. The Authority recently adopted a new standard for the graphics of its SCADA system display screens based on the International Society for Automation’s Standard 101.01 - High Performance Machine Interfaces for Process Automations Systems. Services are required to develop new SCADA display screens for the Nut Island Headworks odor control system in accordance with this standard. New display screens shall be developed for the HMI at the headworks and the HMI at the Operations Control Center in Chelsea.

CONTRACT SUMMARY:

| | <u>AMOUNT</u> | <u>TIME</u> | <u>DATED</u> |
|-----------------------|-----------------------|-----------------|--------------|
| Contract Amount: | \$5,736,900.77 | 1,734 Days | 02/15/17 |
| Proposed Amendment 1: | <u>\$1,542,925.00</u> | <u>700 Days</u> | Pending |
| Adjusted Contract: | \$7,279,825.77 | 2,434 Days | |

Amendment 1 increases the total contract amount by 26.89%.


BUDGET/FISCAL IMPACT:

The FY20 CIP includes a budget of \$6,236,901.00 for Contract 7517. Including this amendment for \$1,542,925.00, the adjusted sub-phase total will be \$7,279,825.77 or \$1,042,924.77 over budget. This amount will be covered within the five-year CIP spending cap.

MBE/WBE PARTICIPATION:

The contractual MBE and WBE participation requirements of 7.18% and 5.77%, respectively, remain unchanged by this amendment.


STAFF SUMMARY

TO: Board of Directors
FROM: Frederick A. Laskey, Executive Director 
DATE: January 15, 2020
SUBJECT: Management, Operation and Maintenance of the Union Park Pump Station/CSO Facility and the Unmanned Stations
Woodard & Curran, Inc.
Contract S559, Amendment 2

COMMITTEE: Wastewater Policy & Oversight

INFORMATION
 VOTE

Stephen D. Cullen, Director, Wastewater
Charles B. Ryan, Director, Wastewater O&M
Preparer/Title


David W. Coppes, P.E.
Chief Operating Officer

Contract S559 was approved by the Board on December 14, 2016 and was jointly executed by MWRA and BWSC with the lowest responsible bidder, Woodard & Curran, Inc., for a period of three years. The original vote allowed for two one-year extensions of the contract term upon approval by the Board. The Contractor has performed satisfactorily. Negotiations resulted in Woodward & Curran's agreement, subject to Board approval, that the annual service fee portion of the contract will be funded by a 1.5% increase per extension year. MWRA staff and BWSC jointly recommend that both one-year extensions be approved at this time.

RECOMMENDATION:

To authorize the Executive Director, on behalf of the Authority, to approve Amendment 2 to Contract S559, Management, Operation and Maintenance of the Union Park Pump Station/CSO Facility and the Unmanned Stations, with Woodard & Curran, Inc., and to execute said Amendment jointly with Boston Water and Sewer Commission in the amount of \$3,385,389.03, of which MWRA shall be responsible for \$895,854.94 and Boston Water and Sewer Commission shall be responsible for \$2,489,534.09, for a total not to exceed amount of \$4,801,706.00 to \$8,187,095.04, and increase the contract term by 730 calendar days, from March 2, 2020 to March 2, 2022.

BACKGROUND:

MWRA and BWSC currently own and operate the Union Park Pump Station/CSO Facility, which is a wet-weather facility that handles combined sewage in the South End of Boston. This facility is staffed 24 hours per day, 7 days per week and typically takes CSO flow into its storage tanks

approximately 23 times per year and discharges to Fort Point Channel approximately 10 times per year.



As part of the Boston Harbor case, the MWRA expanded the Union Park Pumping Station to include CSO control (screening, chlorination, storage, and dechlorination). In addition to the CSO process equipment, the project included upgrading pumping equipment and other improvements to BWSC's pumping station, which was paid by BWSC.

Construction of the facility was substantially complete in 2006. In 2007, MWRA and BWSC entered into a Memorandum of Agreement (MOA) establishing that the jointly-owned Union Park Pumping Station/CSO would be operated as one facility. The MOA proportionally allocated 73% of certain costs associated with the contract to BWSC and 27% to MWRA, based on BWSC's and MWRA's estimated staffing needs at the Union Park facility and the nine other unstaffed BWSC pump stations. Other shared costs (e.g., utilities, repairs, and replacements) are based on the percentage of Union Park ownership (determined as part of the MOA) and/or the ability to clearly assign cost responsibility.

In 2007, 2012 and 2017 the two agencies worked together to procure a contract to manage, operate and maintain the Union Park Pumping Station/CSO facility, as well as nine other smaller, unstaffed pumping stations owned exclusively by BWSC. Woodard & Curran was the low responsive bidder for all three contracts and has operated and maintained the facility since 2007. Under the contract, Woodard & Curran is paid an annual fee for the operation and preventative maintenance work. In addition, the contract includes a funding allowance for corrective maintenance and minor repairs of facility process equipment and building systems. Use of the funding allowance requires various

levels of reporting and/or task order pre-approvals, depending on the nature and estimated cost of the work.

DISCUSSION:

The current contract, as approved by the Board, allows for two one-year extensions. With the approaching expiration date of the contract in March 2020, MWRA and BWSC entered into negotiations with Woodard & Curran on the feasibility of exercising both of the one-year options. Those negotiations resulted in Woodard & Curran’s agreement, subject to Board approval, that the first one-year extension option would be exercised at an increase of 1.5% on the annual fee paid during the final year of the contract; and the second one-year extension would also be exercised at an additional increase of 1.5%. The total increase in the annual fee if the Amendment is approved would be \$2,725,389.04, of which MWRA is responsible for \$735,854.94 and BWSC would be responsible for \$1,989,534.09. BWSC and MWRA staff are satisfied with Woodard & Curran’s performance and agree that the proposed annual service fee increases are reasonable.

The contract’s original total allowance for corrective maintenance and minor repairs was \$780,000 for the three year term. The responsibility for this sum was allocated as follows: \$180,000 for MWRA related corrective maintenance/minor repair work (\$60,000 per year); and \$600,000 for BWSC related corrective maintenance/minor repair work (\$200,000 per year). Amendment 1 added \$101,894.00 to the total allowance sum, allocated as set forth below. To date, almost all of the original allowance has been spent. MWRA and BWSC staff recommend an additional allowance of \$660,000 for the extension years, of which MWRA will be responsible for \$160,000 (\$80,000 per year) for MWRA related work and BWSC will be responsible for \$500,000 (\$250,000 per year) for BWSC related work. As the facility ages, the amount of effort required to keep the equipment operating has increased and staff believe the additional amount may be needed to ensure continued performance and reliability during wet weather events.

MWRA and BWSC staff have reviewed the Woodard & Curran’s current and continuing contract staffing levels and qualifications of key staff and have determined that they are sufficient and appropriate to adequately meet the facility’s operational and maintenance needs for the next two years. Staff also have reviewed Woodard & Curran’s operation and maintenance efforts at the facility (and the nine unstaffed BWSC-owned pump stations) and have determined that the firm has performed satisfactorily and has met all contractual requirements. Staff recommend the Board’s approval of this Amendment. This Amendment request is being considered by the BWSC Commissioners at its January 29th meeting. This Amendment will only be executed by MWRA if the Commissioners also approve the Amendment.

CONTRACT SUMMARY:

| | <u>MWRA Share</u> | <u>BWSC Share</u> | <u>Total Amount</u> | <u>Time</u> | <u>Dated</u> |
|--------------------|---------------------|-----------------------|-----------------------|-----------------|--------------|
| Orig. Contract | \$1,238,349.24 | \$3,461,462.76 | \$4,699,812.00 | 1,095 Days | 03/01/17 |
| Amendment 1* | \$92,294.00 | \$9,600.00 | \$101,894.00 | 0 Days | Pending |
| Amendment 2 | <u>\$895,854.95</u> | <u>\$2,489,534.09</u> | <u>\$3,385,389.03</u> | <u>730 Days</u> | Pending |
| Adj. Contract Amt. | \$2,226,498.19 | \$5,960,596.85 | \$8,187,095.03 | 1,825 Days | |

*Approved under delegated authority


BUDGET/FISCAL IMPACT:

The FY20 Current Expense Budget currently includes adequate funds for MWRA's portion of the operation and maintenance of the Union Park Pumping Station/CSO Facility. The Proposed FY20 through FY23 CEBs will include adequate funds for the remaining term of the contract.

MBE/WBE PARTICIPATION:

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

STAFF SUMMARY

TO: Board of Directors
FROM: Frederick A. Laskey, Executive Director 
DATE: January 15, 2020
SUBJECT: Remote Headworks and Deer Island Shafts Study
Mott MacDonald, LLC
Contract 7237, Amendment 2

COMMITTEE: Wastewater Policy & Oversight


INFORMATION

VOTE


Michele S. Gillen

Director of Administration

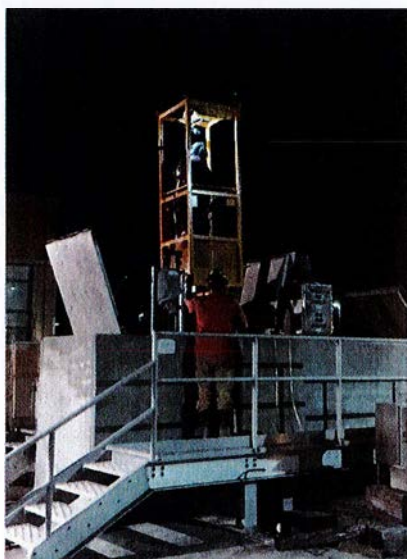
John P. Colbert, P.E., Chief Engineer
Jenna S. Silva, Project Manager
Preparer/Title


David W. Coppes, P.E.
Chief Operating Officer

RECOMMENDATION:

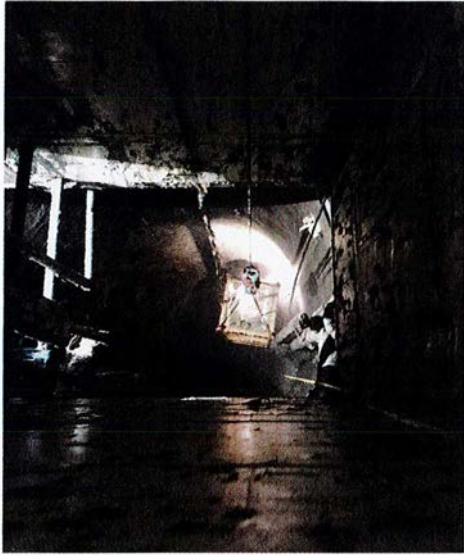
To authorize the Executive Director, on behalf of the Authority, to approve Amendment 2 to Contract 7237, Remote Headworks and Deer Island Shafts Study, with Mott MacDonald, LLC, to modify the scope of work in the existing contract and extend the contract term by 5 months, from January 24, 2020 to June 24, 2020, with no increase in the contract amount.

DISCUSSION:



Divers Entering Shaft C (Deer Island)

Contract 7237 was approved by the Board on June 20, 2018, to provide inspections, testing, evaluations and assessments for a comprehensive study report of the condition and proposed rehabilitation of the four effluent shafts receiving flow from the remote headworks facilities (Columbus Park, Chelsea Creek, Ward Street and Nut Island Headworks), and the three shafts located at Deer Island. The connecting structures and channels at the Ward Street, Columbus Park and Chelsea Creek Headworks facilities are also included in the scope of work. Inspections of the shafts, connecting structures and channels include visual examination, probing, hammer sounding, extracting of concrete core samples for laboratory testing, sampling of the atmosphere to assess corrosivity, measuring the shaft diameters and an assessment of the current ventilation system serving each area.



Divers inside Shaft C (Deer Island)

Scope of Services Revisions

The shaft and channel inspections were scoped to be performed under confined space entry conditions during non-peak flow times. The scope further anticipated that MWRA would perform headworks isolations to allow for inspections. The scope of work did not anticipate all of the limitations on the inspections to ensure that the work would be completed in a safe manner, nor to guarantee that the headworks isolations would not cause problems in the upstream communities' systems. Further, wet weather conditions caused significant delay in timely inspection and testing, which were not anticipated. The following changes to the scope are needed to complete the assessment safely and make recommendations.

The scope of services included inspections of the Nut Island Headworks shaft and effluent channel and the South Main Pump Station Shaft on Deer Island. Under Amendment 2, these will no longer be inspected as part of the project due to the inability to hold back flow in the Southern collection system for a period of time adequate to perform entries for inspection and sample collection. The consultant instead will conduct and rely on video inspections of these facilities to assess the conditions and make recommendations on needed rehabilitation.

The scope of services will be further amended to modify the specific requirement of inspection methods and analysis to be performed within the remaining structures under the project. Mott MacDonald, developed a revised plan to refine the needed inspection information and samples to prepare the study report, which takes into consideration the more complicated and limited confined space entry conditions.

Sub-consultant Revisions

Under the existing contract, sub-consultant Semper Diving and Marine was to perform all internal shaft and effluent channel inspections and sample collection. The contract was structured for payment to Semper for individual inspection/sampling tasks on a facility-by-facility basis (e.g. Ward Street Headworks concrete coring, Columbus Park Headworks visual, video, and camera inspections, etc.). However, the scope did not contemplate, and the payments structure thus did not provide, payment terms for services in the event of unforeseen conditions requiring additional time and labor by the sub-consultant. These unforeseen conditions include greater than originally anticipated safety procedures, significant cleaning of shaft walls in order to collect samples, and intermittent work periods given wet weather and conditions that do not allow shaft shutdowns. The extra cost due to these unforeseen conditions is \$80,706. The proposed amendment will reallocate funds to pay these costs and revise the payment structure to allow payment based on unit prices for mobilization costs, a daily dive rate and overtime provisions.

Under this contract, a second sub-consultant, RedZone Robotics was to provide detailed scans of the interior of the shafts to determine degradation of the tunnel walls and measurements for future rehabilitation alternatives. However, RedZone has informed Mott MacDonald that it no longer has the equipment to perform this service. Therefore, Mott MacDonald has identified another sub-consultant, EST Associates, Inc., to perform these services at a lower fee than originally proposed by RedZone. The savings for providing scans of the shaft interior will be \$138,480. A portion of these savings will be reallocated to address higher costs for Semper's services, as discussed above. The remaining \$57,774 will be reallocated to a Contract allowance task to provide supplemental services as needed. It is not anticipated at this time that any of this allowance money will be expended. Should any unforeseen tasks be identified before completion of this Contract, such work would only be authorized through execution of a task order utilizing appropriate delegation of authority.

Time Extension

Given wet weather conditions in late summer and fall of 2018, and more recently over the past several months, the Consultant has not been able to perform the required number of inspections requiring shutdowns to collect all the samples and data needed for the project. MWRA staff have been working diligently with the inspection team. With the current schedule (including wet weather delays), it is expected that all inspection work will be completed prior to the end of the current contract term. However, laboratory testing of collected samples will require six to seven weeks from the day they are collected. The results are required to finalize the Final Remote Headworks and Deer Island Shafts Inspections and Evaluations Technical Memorandum.

Amendment 1, which was approved under delegated authority, extended the contract term by six months allowing staff to perform trial shutdowns and complete inspection work. However, given the continued wet weather the MWRA service area has experienced, and the limited hours and times when the work can be safely performed, this initial delegated authority time extension was not adequate to complete the subsequent final reports.

In summary, the purpose of this amendment includes revisions to the project scope of services and sub-consultants; reallocation of costs and the payment structure; and a five-month extension to provide time for Mott MacDonald to complete laboratory testing and submit the study report providing recommendations for repair and rehabilitation of the effluent channels and shafts. These recommendations will be incorporated into future design and construction contracts.

CONTRACT SUMMARY:

| | <u>AMOUNT</u> | <u>TIME</u> | <u>DATED</u> |
|--------------------|----------------|-----------------|----------------|
| Original Contract: | \$1,371,788.67 | 303 Days | 09/24/18 |
| Amendment 1*: | <u>0.00</u> | <u>181 Days</u> | 08/19/19 |
| Adjusted Contract | \$1,371,788.67 | 484 Days | |
| Amendment 2: | <u>0.00</u> | <u>152 Days</u> | <u>Pending</u> |
| | \$1,371,788.67 | 636 Days | |

*Approved under delegated authority

BUDGET/FISCAL IMPACT:

The FY20 CIP includes a budget of \$1,371,789 for Contract 7237. There is no budget/fiscal impact due to this amendment.

MBE/WBE PARTICIPATION:

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



MASSACHUSETTS WATER RESOURCES AUTHORITY

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Frederick A. Laskey
Executive Director

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WATER POLICY & OVERSIGHT COMMITTEE MEETING

to be held on

Wednesday, January 15, 2020

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

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

Time: Immediately following Wastewater Committee

AGENDA

A. Information

1. Project Update: Section 22 Rehabilitation Alternatives Analysis and Environmental Permitting, Contract 7155

B. Contract Awards

1. Wachusett Dam Bastion Improvements, Design and Engineering Services During Construction: Kleinfelder Northeast, Inc., Contract 7333

MASSACHUSETTS WATER RESOURCES AUTHORITY

Meeting of the

Water Policy and Oversight Committee

November 20, 2019

A meeting of the Water Policy and Oversight Committee was held on November 20, 2019 at the Authority headquarters in Charlestown. Committee Chair Peña presided. Present from the Board were Ms. Wolowicz and Messrs. Cook, Cotter, Foti, Flanagan, Pappastergion, Vitale and Walsh. Mr. Carroll was absent. Among those present from the Authority staff were Frederick Laskey, Carolyn Francisco Murphy, David Coppes, Carolyn Fiore, Thomas Durkin, Kathleen Murtagh, Stephen Estes-Smargiassi, Beverly Anderson, Mark Johnson, Andrew Hildick-Smith, John Colbert, Milan Horbaczewski, Terrance Flynn, Corinne Barrett and Kristin MacDougall. The meeting was called to order at 11:40 a.m.

Information

Update on Lead and Copper Rule – Fall 2019

Staff made a presentation. (Mr. Pappastergion briefly left and returned to the meeting during the presentation.) There were questions and answers. (ref. W A.1)

America's Water Infrastructure Act: Risk and Resiliency Assessments

Staff made a verbal presentation. (Ms. Wolowicz briefly left and returned to the meeting during the presentation.) There was brief discussion and questions and answers. (ref. W A.2)

Contract Awards

* Section 53 and 99 Improvements Design/CA: Hazen and Sawyer, P.C, Contract 7485

Staff made a presentation. There were questions and answers.

The Committee recommended approval. (ref. W B.1)

Contract Amendments/Change Orders

* Southern Extra High Pipeline – Section 111 (Dedham North): P. Gioioso and Sons, Inc., Contract 7504, Change Order 11

* Committee recommendation approved by the Board on November 20, 2019

Staff made a presentation.


The Committee recommended approval. (ref. W C.1)

The meeting adjourned at 12:09 a.m.

* Committee recommendation approved by the Board on November 20, 2019

Documents used for this meeting, referenced above, can be found here:
<http://www.mwra.com/monthly/bod/boardmaterials/2019/o-BoardMaterials11-20-19.pdf>


STAFF SUMMARY

TO: Board of Directors
FROM: Frederick A. Laskey, Executive Director 
DATE: January 15, 2020
SUBJECT: Project Update: Section 22 Rehabilitation Alternatives Analysis and Environmental Permitting
Black & Veatch Corporation, Contract 7155

COMMITTEE: Water Policy & Oversight

X INFORMATION
 VOTE

John P. Colbert, P.E., Chief Engineer
Paul T. Rullo, P.E., Program Manager
Preparer/Title


David W. Coppes, P.E.
Chief Operating Officer

On July 17, 2019 the Board of Directors voted to award contract 7155, Section 22 Rehabilitation Alternatives Analysis and Environmental Permitting, to Black & Veatch Corporation in the amount of \$2,870,000 for a contract term of 36 months from the Notice to Proceed. At the Board's request following the notice to proceed, MWRA staff is providing quarterly updates of the project design status including pipeline condition activities completed in the last quarter and the planned activities for the next quarter. Staff will make a presentation to the Board at the meeting.

RECOMMENDATION:

For information only.

DISCUSSION:

During the last quarter, the primary project stakeholders were contacted to discuss the project scope and impacts. The stakeholders contacted included DCR, MassDOT, MassDEP, Army Corps of Engineers, the City of Boston, the City of Quincy, and the Town of Milton. The borings included in the initial phase make up approximately one third of the total in the contract and the test pits make up approximately half of the total included in the contract. The locations were selected, marked in the field, wetlands flagged (if required), traffic plans developed, and the permitting requests initiated. The initial testing program will determine the condition of the piping, dresser couplings and pile supports, and soil corrosivity so that pipe replacement options can be evaluated. Planning has begun for hydraulic analysis model runs to determine required pipe sizes of various alternatives and for the water supply plan during construction.

It is expected in the next four to six months that permits will be obtained and the majority of the Phase 1 borings and test pits completed. Depending on the initial results of the testing program, the need for additional test pits and borings will be evaluated. As of December 1, 2019, 4.1% of the contract value has been expended.

BUDGET/FISCAL IMPACT:

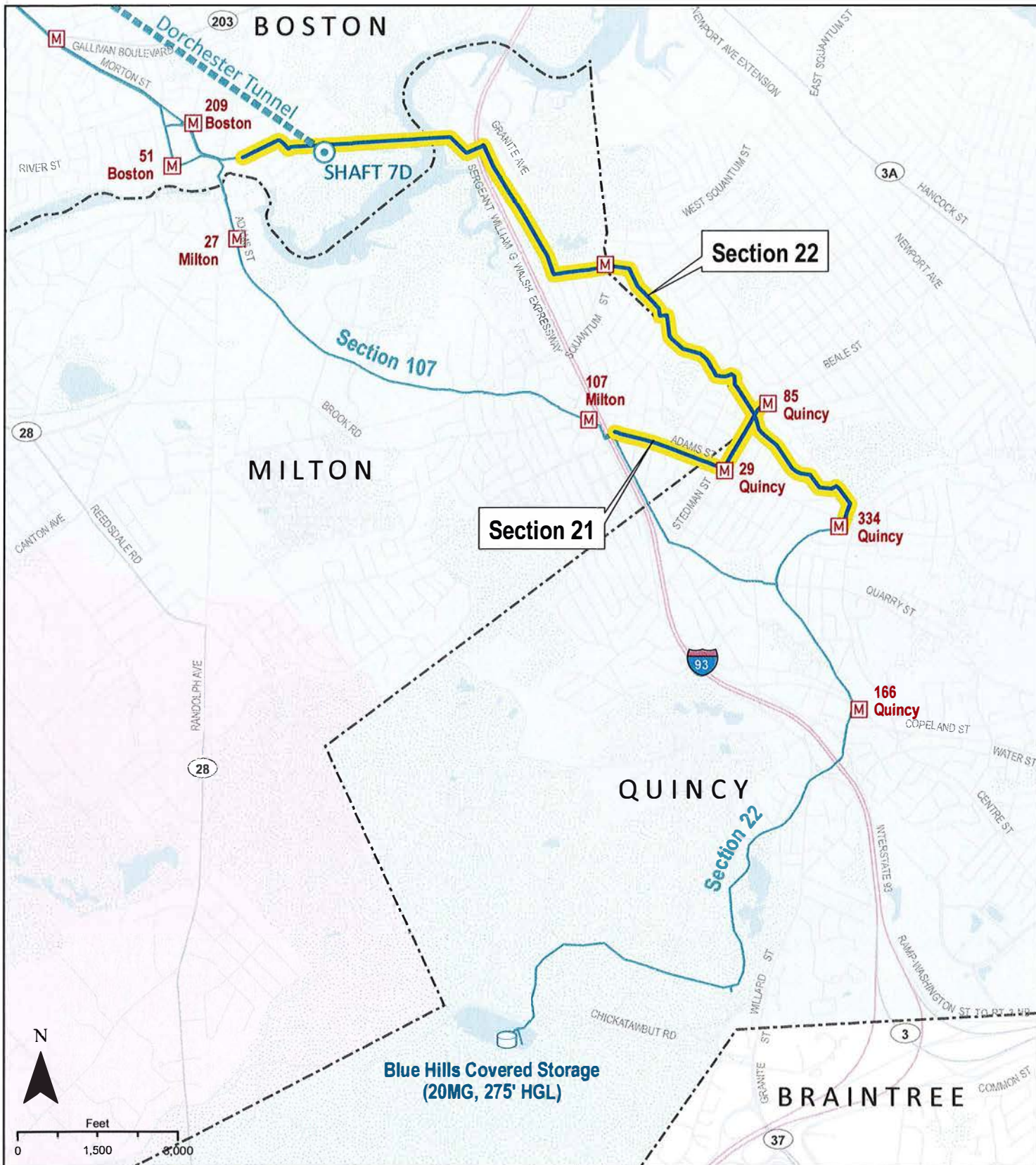
The FY20 CIP includes a budget of \$2,900,000 for Contract 7155.

MBE/WBE PARTICIPATION:

The contract with Black & Veatch includes 25.4% MBE and 15.6% WBE participation.

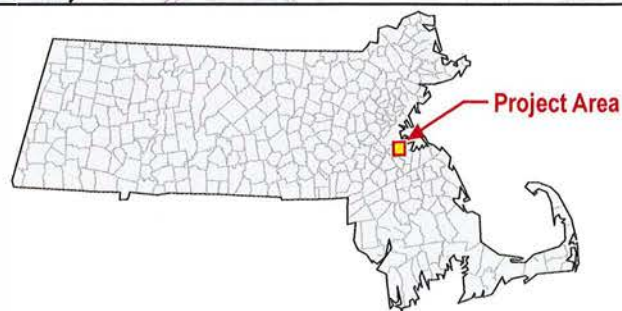
ATTACHMENT:

Section 22 – Project Map




Section 22 Project Location Schematic

- | | |
|-------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------|
|  Project Location |  MWRA Transmission Shafts |
|  Other Distribution Pipes |  MWRA Water Storage |
|  MWRA Transmission Lines |  Meters |
|  Protected Open Space | |



STAFF SUMMARY

TO: Board of Directors
FROM: Frederick A. Laskey, Executive Director 
DATE: January 15, 2020
SUBJECT: Wachusett Dam Bastion Improvements
Design and Engineering Services During Construction
Kleinfelder Northeast, Inc.
Contract 7333

COMMITTEE: Water Policy & Oversight

John P. Colbert, P.E., Chief Engineer
Patricia A. Mallett, P.E., Program Manager
Preparer/Title

 INFORMATION

 X VOTE


Michele S. Gillen

Director of Administration


David W. Coppes, P.E.

Chief Operating Officer

RECOMMENDATION:

To approve the recommendation of the Consultant Selection Committee to award Contract 7333, Wachusett Dam Bastion Improvements, Design and Engineering Services During Construction, to Kleinfelder Northeast, Inc., and to authorize the Executive Director, on behalf of the Authority, to execute said contract in the amount of \$768,274.74 for a contract term of 45 months from the Notice to Proceed.

BACKGROUND:

The Wachusett Dam, located in Clinton, Massachusetts, was completed in 1905. The dam and its ancillary structures are constructed primarily with cast-in-place concrete and stone masonry. The Bastion, at the northerly end of the dam, (see photo 1 on the next page), is an enclosed structure measuring approximately 40 feet by 50 feet by 12 feet high, which currently houses mechanical and electrical equipment. The structure has significant structural and architectural deterioration. There are large vertical cracks in the concrete walls and entryway (see photo 2 on the next page). There are also leaks in the roof, which have resulted in corrosion of the ceiling structural beams. A recent structural assessment recommended replacing the top three feet of the Bastion walls, providing a new roof and drainage system, and rebuilding the entryway arch and exterior stairway.

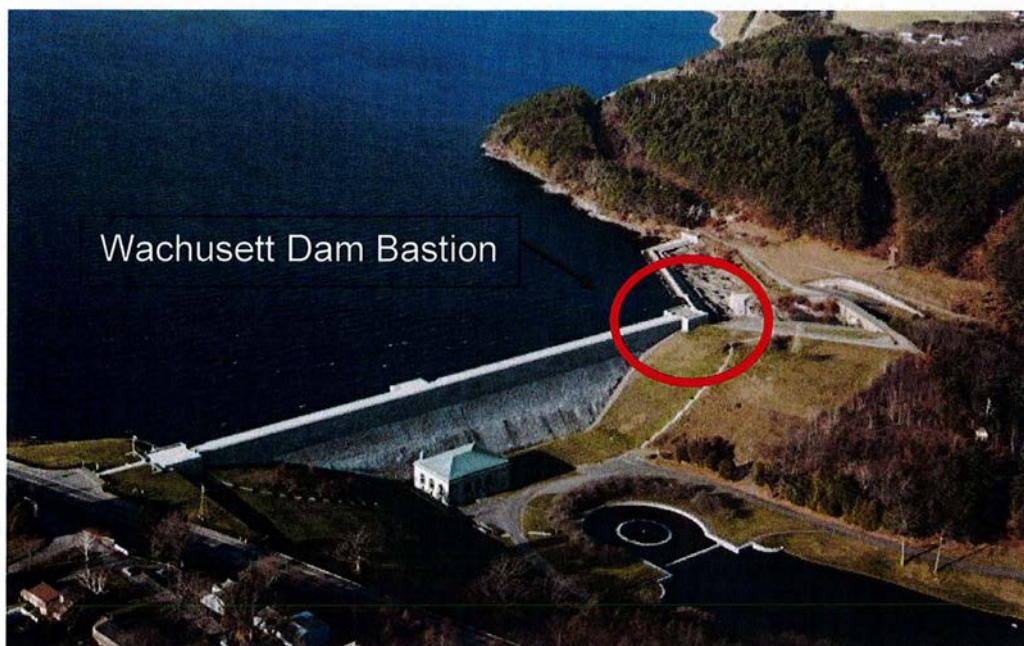


Photo 1 Dam Bastion



Photo 2 Bastion Wall Crack

DISCUSSION:

This project includes preliminary and final design and engineering services during construction of the Bastion improvements. Preliminary design will include a code investigation and evaluation of the existing facilities, preparation of a base map, and development of a preliminary design report. The final design will include the preparation of contract plans, specifications, construction cost estimates, and permitting and bidding assistance.

Once a construction contract has been awarded, Engineering Services During Construction (ESDC) will include administration, reviews of submittals and requests for information; and assistance with change orders, start-up services and record drawings. ESDC services will be provided during construction of the project through completion, final acceptance, and the one-year warranty period. Resident Engineering/Inspection services are not included in this contract, but will be procured separately at a later date.

The project schedule includes an 18-month design phase and 15-month construction phase. The consultant contract duration will be 45 months, including the one-year warranty period.

Procurement Process

On October 30, 2019, MWRA issued a one-step Request for Qualifications Statements/Proposals (RFQ/P) that was publicly advertised in the Central Register, Boston Herald, Banner Publication and El Mundo, and directly solicited firms by email. Twenty-eight firms received copies of the RFQ/P. The RFQ/P included the following evaluation criteria and points: Cost (25 points); Qualifications and Key Personnel (25 points); Experience/Past Performance on Similar Non-Authority Projects and Past Performance on Authority Projects (25 points); Capacity/Organization and Management Approach (15 points); and Technical Approach (10 points).

On December 13, 2019, MWRA received proposals from the following two firms: Kleinfelder Northeast, Inc. and Simpson Gumpertz & Heger Inc. The following table represents the cost and level of effort proposed by each firm:

| Proposer | Proposed Cost | Proposed Hours |
|----------------------------|---------------------|----------------|
| Kleinfelder | \$768,274.74* | 5,118 |
| <i>Engineer's Estimate</i> | <i>\$798,500.00</i> | <i>4,490</i> |
| Simpson Gumpertz & Heger | \$1,063,682.47 | 6,317 |

*Reflects corrections to Task 3 Fixed Fee

The Selection Committee met on December 23, 2019 to evaluate and rank the proposals. The results are presented below.

| Proposer | Total Final Score | Order of Preference* Points | Ranking |
|--------------------------|-------------------|-----------------------------|---------|
| Kleinfelder | 420.75 | 5 | 1 |
| Simpson Gumpertz & Heger | 334.75 | 10 | 2 |

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

assigned a “2”, and so on.

Kleinfelder’s cost was approximately \$30,225 less than the Engineer’s Estimate, or 3.8%, and includes 5,118 hours compared to the 4,490 hours. Kleinfelder’s distribution of hours reflects its understanding of the scope of work and is consistent with the distribution of hours in the estimate.

Kleinfelder’s proposal included highly qualified personnel who have extensive, relevant experience in structural engineering. Kleinfelder presented a multi-disciplinary team, including subconsultants with whom it has successfully worked in the past. In addition to positive references for performance on past Authority projects and structural rehabilitation projects for others, Kleinfelder also demonstrated a full understanding of the project requirements as evidenced by the site-specific construction challenges presented in its Technical Approach. The proposal was clearly presented, and the team has the capacity, organization and management approach necessary to successfully complete the project.

The Selection Committee concluded that the Simpson Gumpertz & Heger team, while capable of performing the work, presented costs that are too high for the scope of work presented in the RFQ/P. The cost estimated by Simpson Gumpertz & Heger is approximately 33% more than the Engineer’s Estimate and 38% greater than Kleinfelder’s estimate. Simpson Gumpertz & Heger included 6,317 hours compared to the 4,490 hours in the Engineer’s estimate. Additionally, while its team members include well-qualified structural engineers, its proposal lacks specificity regarding its organization/management and technical approach.

The Selection Committee recommends the award of this contract to Kleinfelder in the amount of \$768,274.74.

BUDGET/FISCAL IMPACT:

The FY20 Capital Improvement Program includes a budget of \$500,000 for Contract 7333; the recommended contract amount is \$768,274.74 or \$268,274.74 over budget. This amount will be covered within the five-year CIP spending cap.

MBE/WBE PARTICIPATION:

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



MASSACHUSETTS WATER RESOURCES AUTHORITY

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Executive Director

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PERSONNEL & COMPENSATION COMMITTEE MEETING

to be held on

Wednesday, January 15, 2020

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

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

Time: Immediately following Water Committee

AGENDA

A. Approvals

1. PCR Amendments – January 2020
2. Appointment of Business Systems Analyst III, Administration
3. Appointment of Manager, Metering and Monitoring, Operations
4. Appointment of Associate General Counsel, Law Division

MASSACHUSETTS WATER RESOURCES AUTHORITY

Meeting of the

Personnel and Compensation Committee

November 20, 2019

A meeting of the Personnel and Compensation Committee was held on November 20, 2019 at the Authority headquarters in Charlestown. Committee Vice Chair Cotter presided. Present from the Board were Messrs. Cook, Foti, Flanagan, Pappastergion, Peña, Vitale and Walsh. Mr. Carroll and Ms. Wolowicz were absent. Among those present from the Authority staff were Frederick Laskey, Carolyn Francisco Murphy, David Coppes, Carolyn Fiore, Michele Gillen, Andrea Murphy and Kristin MacDougall. The meeting was called to order at 12:09 p.m.

Approvals

*** PCR Amendments - November 2019**

Staff made a verbal presentation. There was brief discussion.

Mr. Foti moved that the Committee recommend approval of the PCR Amendments without the Director, Security and Emergency Response position.

The Committee recommended approval as amended. (ref. P&C A.1)

*** Appointment of Program Manager, Metro Meter Maintenance**

There were questions and answers.

The Committee recommended approval. (ref. P&C A.2)

*** Appointment of Program Manager SCADA Engineering**

The Committee recommended approval. (ref. P&C A.3)

*** Appointment of Manager, Wastewater Operations**

There were questions and answers.

The Committee recommended approval. (ref. P&C A.4)

*** Appointment of Senior Program Manager, Design Information Systems Center**

* Committee recommendation approved by the Board on November 20, 2019

There were questions and answers.

The Committee recommended approval. (ref. P&C A.5)

The meeting adjourned at 12:15 p.m.

* Committee recommendation approved by the Board on November 20, 2019

Documents used for this meeting, referenced above, can be found here:

<http://www.mwra.com/monthly/bod/boardmaterials/2019/o-BoardMaterials11-20-19.pdf>

STAFF SUMMARY

TO: Board of Director
FROM: Frederick A Laskey, Executive Director
DATE: January 15, 2020
SUBJECT: January PCR Amendments



COMMITTEE: Personnel and Compensation


Andrea Murphy, Director of Human Resources
Preparer/Title

 INFORMATION

 X VOTE


Michele S. Gillen
Director, Administration

RECOMMENDATION:

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

DISCUSSION:

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

January PCR Amendments

There are three PCR Amendments this month.

The amendments are:

Organizational Changes

1. Title and grade change to one filled position in the Operations Division, Deer Island Capital Engineering department from CADD Coordinator Unit 9 Grade 23, to CADD Manager, Unit 9 Grade 25, as part of a union settlement.
2. Title and grade change to one filled position in the Operations Division, Deer Island Operations and Maintenance department from Financial Analyst Unit 1 Grade 20, to Accounting and Procurement Administrator, Unit 1 Grade 22, as part of a union settlement.
3. Title and grade change to one filled position in the Office of Emergency Preparedness department from Security Services Administrator Unit 6 Grade 10, to Manager, Security Services, Unit 6 Grade 12, to align the position with new job requirements and security needs.

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

BUDGET/FISCAL IMPACT:

The annualized budget impact of these PCR amendments will be a cost of \$28,728. Staff will ensure that the cost increase associated with these PCR amendments will not result in spending over the approved FY20 Wages and Salaries budget.

ATTACHMENTS:

Old Job Descriptions
New Job Descriptions

MASSACHUSETTS WATER RESOURCES AUTHORITY
 POSITION CONTROL REGISTER AMENDMENTS
 FISCAL YEAR 2020

| PCR AMENDMENTS REQUIRING PERSONNEL & COMPENSATION COMMITTEE APPROVAL - January 15, 2020 | | | | | | | | | | | |
|-----------------------------------------------------------------------------------------|----|----|----|----|----|--------|----|----|------------------|----|--------|
| Current | UN | GR | UN | GR | UN | GR | UN | GR | UN | GR | UN |
| PERSONNEL & COMPENSATION COMMITTEE TOTAL = | | | | | | TOTAL: | | | Estimated Annual | | Reason |
| 0 | | | | | | | | | \$0 - \$0 | | |

| PCR AMENDMENTS REQUIRING BOARD APPROVAL - January 15, 2020 | | | | | | | | | | | | | |
|------------------------------------------------------------|----------------------------------------------------|-----|------|---------------------------------|----|----|------------------------------------------|----|----|-----------------------|----------------------|----------------------------|---------------------------------------------------------------------|
| 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 |
| B12 | Deer Island Capital Engineering Operations 2971006 | F | T, G | CADD Coordinator | 9 | 23 | CADD Manager | 9 | 25 | \$101,240 | \$110,568 | \$9,328 | Union settlement. |
| B13 | Deer Island Operations & Maint Operations 2945005 | F | T, G | Financial Analyst | 1 | 20 | Accounting and Procurement Administrator | 1 | 22 | \$80,798 | \$89,079 | \$8,281 | Union settlement. |
| B14 | Office of Emergency Preparedness 1710005 | F | T, G | Security Services Administrator | 6 | 10 | Manager, Security Services | 6 | 12 | \$103,357 | \$114,476 | \$11,119 | To align the position with new job requirements and security needs. |
| BOARD TOTAL = | | | | | 3 | | TOTAL ESTIMATED COSTS: | | | | | \$28,728 - \$28,728 | |
| GRAND TOTAL = | | | | | 3 | | TOTAL ESTIMATED COSTS: | | | | | \$28,728 - \$28,728 | |

**MWRA
POSITION DESCRIPTION**



POSITION: CADD Coordinator
DIVISION: Operations
DEPARTMENT: Capital Planning, Deer Island

BASIC PURPOSE:

Coordinates all Deer Island Treatment Plant (DITP) CADD-related work by developing standards, scheduling the flow of work, checking the quality of work and performing CADD file maintenance.

SUPERVISION RECEIVED:

Works under the general supervision of the Program Manager, Technical.

SUPERVISION EXERCISED:

None.

ESSENTIAL DUTIES AND RESPONSIBILITIES:

- Prepares drawings and other designs-related documents according to MWRA/BHP CADD procedures, design standards and existing conditions, using both computerized and manual systems.
- Coordinates the work of other CADD engineers by scheduling flow of work, checking quality of work and performing CADD file maintenance.
- Develops and implements procedures for as-built process and MWRA CADD systems.
- Participates in customizing the CADD system and development of standards, including preparation of standard symbols and details.
- Assists in the installation, implementation and updating of the standard and customized CADD systems, for both in-house and consultant prepared design projects.
- Oversees the work of professional engineering consultants, outside contractors and vendors and DITP staff for conformance to MWRA CADD standard.

- Applies full range of CADD commands to manipulate, modify or otherwise edit existing drawings and utilize software to display final drawing on screen to verify their completeness, clarity and accuracy.
- Applies commands to produce hard copies using peripheral equipment. Manages the supply inventory and assures operability of CADD-related peripheral equipment.
- Develops and maintains libraries of all manuals and software pertinent to the CADD system. Manages the supply inventory of the CADD program.
- Conducts tests and evaluations on equipment, supplies, techniques and procedures in order to determine if equipment or methods will meet specifications and expectations.

SECONDARY DUTIES:

- Performs other CADD-related duties as required.

MINIMUM QUALIFICATIONS:

Education and Experience:

- (A) A bachelor of science degree; and
- (B) Three (3) to five (5) years of related CADD and manual drafting experience; and
- (C) Experience in the peripheral devices associated with CADD drafting, i.e. digitizers, plotters, scanners, workstations and different backup systems. Ability to install, configure and troubleshooting of different CADD-related peripheral devices; or
- (D) Any equivalent combination of education or experience.

Necessary Knowledge, Skills and Abilities:

- (A) Ability to plan, organize and schedule work assignments of several CADD engineers and operators.
- (B) Familiarity copying and archiving electronic drawing files. Basic knowledge of electronic Document Management systems, word processors, electronic spreadsheets and databases.
- (C) Ability to read blueprints specifications, vendor drawings and engineer sketches.
- (D) Excellent interpersonal, oral and written communication skills are required.

SPECIAL REQUIREMENTS:

None.

TOOLS AND EQUIPMENT USED:

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

PHYSICAL DEMANDS:

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

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

October, 1999

**MWRA
POSITION DESCRIPTION**



POSITION: CADD Manager
DIVISION: Operations
DEPARTMENT: Engineering & Construction, Deer Island

BASIC PURPOSE:

Supervises the activities of the CADD (Computer Aided Design and Drafting) staff in the department. Performs design work of substantial difficulty and importance requiring the application of AutoCad and other computer software.

SUPERVISION RECEIVED:

Works under the general supervision of the Senior Program Manager in the Design Information Systems Center (DISC) Group (E&C) or Program Manager, Technical Information Center (TIC) (Deer Island).

SUPERVISION EXERCISED:

Exercises direct supervision over CADD staff.

ESSENTIAL DUTIES AND RESPONSIBILITIES:

- Participates in requested MWRA wastewater, water, civil and facility, repair improvement and replacement projects with engineers and other MWRA staff.
- Supervises CADD staff including assignment of tasks, evaluation of performance, staff development planning and providing technical assistance.
- Manages CADD work, including developing scopes of work, job scheduling/priority setting, checking of CADD drawings and work outputs, running CADD meetings, and oversight of CADD consultants.
- Administers the CADD staff, including work request processing, work status reporting, application of Standard Operation Procedures, approval of leave, travel, training, and writing performance reviews.
- Develops, maintains, and teaches CADD standard practices including layering schemes, project file structure, symbol/detail/template libraries, model layout, file security, etc.

- Layout pipeline, system, facility, equipment, and component designs through field investigations, derivation of equipment/material/finish specifications, development of CADD drawings, and performance of routine calculations.
- Responds to drawing requests from MWRA staff and external consultants and contractors. Prepares and provides drawings and/or drawing files according to existing procedures.
- Reports design process impacts involving constructability, maintainability, housekeeping, manufacturability, performance, and value to the engineering project manager.

SECONDARY DUTIES:

- Performs related duties as required.
- Performs CADD related peripheral equipment reviews; Makes recommendations to the supervisor of new CADD peripheral equipment that meets the demands of CADD and document control works.
- Makes recommendations of new CADD software systems and tools. Performs tests, evaluations and implementations of new CADD software systems. Develops and maintains libraries of all manuals and software pertinent to the CADD system.

MINIMUM QUALIFICATIONS:

Education and Experience:

- (A) A Bachelor's degree in engineering, technology, science or a related field; and
- (B) Seven (7) to nine (9) years of related CADD and manual drafting experience with at least three (3) years in a supervisory capacity; or
- (C) Any equivalent combination of education or experience.

Necessary Knowledge, Skills and Abilities:

- (A) Knowledge of engineering design.
- (B) Demonstrated proficiency in civil, structural, mechanical, electrical or architectural design using CADD applications.
- (C) Demonstrated proficiency in MS Windows, AutoCad, and the MS Office Suite.
- (D) Demonstrated ability to work effectively as part of a project team and also to function independently with minimal supervision.

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

SPECIAL REQUIREMENTS:

None.

TOOLS AND EQUIPMENT USED:

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

PHYSICAL DEMANDS:

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

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

January 2020

**MWRA
POSITION DESCRIPTION**



POSITION: Financial Analyst
DIVISION: Operations
DEPARTMENT: Deer Island Administration and Finance

BASIC PURPOSE:

Coordinates and performs activities to ensure monitoring and preparation of Department current expense budget. Analyzes budget variances and assists Cost Center Managers with related operational, budgeting, financial management and accounting issues.

SUPERVISION RECEIVED:

Works under the general supervision of the Manager, Administration and Finance, DITP.

SUPERVISION EXERCISED:

None.

ESSENTIAL DUTIES AND RESPONSIBILITIES:

- Coordinates the preparation of the annual current expense budget. Assures that the gathering and compilation of budget information is in conformance with established standards/procedures.
- Coordinates and performs functions key to the monthly management budget report and variance report. Identifies and receives feedback on significant areas of concern via monthly meetings with Cost Center Managers. Provides detailed maintenance program spending information in stylized format.
- Performs appropriate functions to analyze the causes of significant budget variances and provides the basis for corrective action.
- Prepares and analyzes monthly CEB accrual reporting process. Initiates appropriate contact for information. Responds to issues in appropriate fashion.
- Provides support DITP financial staff and cost center managers in assessment of expenditures, initiates back charge assessments and appropriate corrective actions where errors in accounting occur.

- Initiates purchasing actions for Releases to TSOs when required for all DITP services.
- Provides first hands resolution of invoice activity island-wide as the critical interface with Central Accounts Payable. Provides high-level problem resolution activity where required and reports resolution to appropriate stakeholders within the Authority: Central Accounts Payable, Sewerage Division Accounts Management, and Purchasing.
- Develops and updates varied spreadsheets to support business functions at the direction of the manager, of A&F, DITP.

SECONDARY DUTIES:

- Performs related duties as required.

MINIMUM QUALIFICATIONS:

Education and Experience:

- (A) Analytical and writing skills as normally attained through a two (2) year program in finance, accounting, business or a related field; and
- (B) Two (2) to four (4) years of related experience, including experience in the development and modification of spreadsheet formats databases and varied functions key to performing analysis function. Familiarity with MWRA business functions: purchasing, accounting and budget functions desired but not required; or
- (C) Any equivalent combination of education or experience.

Necessary Knowledge, Skills and Abilities:

- (A) Strong analytical, oral and written communication and interpersonal skills.
- (B) Proficiency in the use of personal computers and software packages: Excel, Lotus 1-2-3 and Word. Knowledge of Authority internal applications: PSI, BEARS desired but not required.
- (C) Skill in the operation of the listed tools and equipment.

SPECIAL REQUIREMENTS:

None.

TOOLS AND EQUIPMENT USED:

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

PHYSICAL DEMANDS:

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

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

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

WORK ENVIRONMENT:

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

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

August, 1999

**MWRA
POSITION DESCRIPTION**



POSITION: Accounting and Procurement Administrator

DIVISION: Operations

DEPARTMENT: Deer Island Administration and Finance

BASIC PURPOSE:

Supports Administration, Finance, Maintenance, & Operations by performing work related to administrative, financial, procurement & operation functions.

SUPERVISION RECEIVED:

Works under the direct supervision of the Manager, Administration and Finance, DITP.

SUPERVISION EXERCISED:

None.

ESSENTIAL DUTIES AND RESPONSIBILITIES:

- Coordinates with Area Managers to gather the necessary information to accurately prepare and process monthly Current Expense Budget (CEB) and Capital Improvement Program (CIP) accrual journal entries.
- Prepares and analyzes monthly CEB accrual reporting process. Initiates appropriate contact for information. Responds to issues in appropriate manner.
- Provides analysis to DITP financial staff and cost center managers in assessment of expenditures, initiates chargeback assessments and appropriate corrective actions where errors in accounting occur.
- Collaborates with Accounts Payable and Procurement to ensure invoices are accurate and processed on a timely basis.
- Troubleshoots and resolves problems with procurement/accounts payable issues.

- Compiles and prepares various spreadsheets for managerial staff at DITP.
- Initiates purchasing actions for releases to Time Standing Orders (TSOs) when required for all DITP services.
- Monitors current contracts and identifies contract needs.
- Acquires bids and analyzes responses for the procurement of furniture and equipment in accordance with policies.
- Creates all RFM's and POs in Lawson for DITP services, non-stock items, and CIP expenditures.
- Provides all data required for Current Expense Budget (CEB) purchase orders and contracts.
- Performs all NPO invoicing (i.e.: permits, reimbursements, memberships, dues etc.) Prepares, coordinates, and processes employee licenses and membership annual reimbursements.
- Processes employee requests for expense reimbursement and ensures proper documentation and accuracy in accordance with purchasing policy.
- Prepares and processes all DITP staff travel vouchers for in state and out of state travel.
- Coordinates and schedules with Facilities Manager the purchase of fuel and chemicals.
- Assists Facilities Manager in developing and executing schedules for annual maintenance and preventive maintenance projects for Deer Island and Clinton such as pest control, trash, janitorial, public access, and ROCA services. Accompanies contractors during site visits to identify problem areas.
- Provides administrative assistance to Clinton staff as needed (procurement, human resources, and accounts payable).

SECONDARY DUTIES:

- Performs related duties as required.

MINIMUM QUALIFICATIONS:

Education and Experience:

- (A) Analytical and writing skills as normally attained through an Associate's degree in finance, accounting, business or a related field; and
- (B) Four (4) () to six (6) years of related experience in finance or procurement; or
- (C) Any equivalent combination of education or experience.

Necessary Knowledge, Skills and Abilities:

- (A) Strong analytical, communication, and interpersonal skills.
- (B) Proficiency in the use of personal computers and software packages such as MS Office and Lawson
- (C) Familiarity with MWRA business functions: purchasing, accounting and budget functions desired.
- (D) Ability to work independently.
- (E) Ability to work effectively with internal and external customers at all levels of the organization.

SPECIAL REQUIREMENTS:

None.

TOOLS AND EQUIPMENT USED:

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

PHYSICAL DEMANDS:

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

accommodations may be made to enable individuals with disabilities to perform the essential functions.

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

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

WORK ENVIRONMENT:

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

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

January 2020

**MWRA
POSITION DESCRIPTION**



POSITION: Security Services Administrator

DIVISION:

DEPARTMENT: Office of Emergency Preparedness

BASIC PURPOSE:

Oversees and coordinates MWRA physical security systems and access control procedures to ensure operations continuity and to ensure the safety and security of personnel, property and equipment. Oversees 24/7 intrusion alarm monitoring by security guard and responds to security incidents.

SUPERVISION RECEIVED:

Reports to the Deputy Director, Security and Emergency Preparedness.

SUPERVISION EXERCISED:

Exercises supervision of guard and maintenance contractor's staff and contract resources as needed.

ESSENTIAL DUTIES AND RESPONSIBILITIES:

- Maintains access control plans for MWRA facilities including implementation of electronic security and key control strategies. Coordinates with Operations and Procurement to acquire, install and maintain security equipment. Assists in developing access control plans as needed.
- Develops, updates and administers operating/maintenance standards, policies and standard operating procedures (SOPs) for security, locks and key control, intrusion and motion detection devices, and other systems and activities relating to facility access.
- Develops and oversees maintenance contracts for electronic security equipment. Serves as the liaison to various site and facility supervisors regarding proper maintenance and operation of electronic security equipment.
- Reviews performance of electronic security systems and the need for updating. Oversees procurement and installation of updated electronic security systems.

- Working with Procurement, manages the procurement of and administers contracts for private security personnel and oversees the activities of private security contractors.
- Responds to security incidents, documents the occurrence, and recommends corrective measures. Assists in conducting confidential investigations.
- Participates in risk assessments and evaluates alternatives for mitigating vulnerabilities including physical hardening improvements, use of technology, and changes in policies and procedures.
- Serves as a member of the Task Force on Security and Emergency Preparedness. Approved for access to Security-Most Sensitive documents.
- Participates in developing an audit program to ensure that facilities meet MWRA security standards and provide a secure working environment.
- Oversees the tracking and implementation of recommendations for improvement based on the audit findings including monitoring performance against operational needs and requests.
- Assists managers and the Training Unit with development and delivery of security-related training.
- As directed by the Deputy Director, Security and Emergency Preparedness, communicates with outside public safety agencies regarding the MWRA's security operations.
- Retrieves and reviews documents as needed. Develops spreadsheets and compiles contract information. Prepares reports and communications necessary to carry out the activities of the Authority's security program.
- Develops and maintains tracking logs for security incidents and the access systems, audits the quality of the data and ensures its timely update.

SECONDARY DUTIES:

Performs related duties as required.

MINIMUM QUALIFICATIONS:

Education and Experience:

(A) A four (4) year college degree in business administration, public administration or a

related field; and

- (B) Four (4) to Seven (7) years of public sector administration required.
- (C) Previous experience in contract administration preferred; previous experience in design, operation, maintenance or alarm response associated with physical security systems preferred.
- (D) Understanding of physical security concepts and incident investigations as may be obtained in law enforcement, military or public safety related fields preferred.
- (E) Any equivalent combination of education or experience.

Necessary Knowledge, Skills and Abilities:

- (A) Demonstrated knowledge and skills in structuring, analyzing and presenting data.
- (B) Working knowledge of database management.
- (C) Strong technical project management and organizational skills, previous experience with manual and automated document tracking is preferred.
- (D) Demonstrated interpersonal, written and oral communication skills.
- (E) Must be available to be part of 24/7 on-call rotation for security incident response.

SPECIAL REQUIREMENTS:

Valid Massachusetts Class D Motor Vehicle Operator's license required.

Participates in the Security on-call rotation.

TOOLS AND EQUIPMENT USED:

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

PHYSICAL DEMANDS:

The physical demands described are representative of those that must be met by an employee to successfully perform the essential functions of the 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 required to sit, talk or hear. The employee is frequently required to use hands to finger, handle or operate objects including office equipment, controls and reach with hands and arms. The employee is occasionally required to stand and walk.

The employee may frequently be required to lift and/or move up to 10 pounds and occasionally lift and/or move up to 50 pounds. Specific vision abilities required by this job include close vision and the ability to 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 employee occasionally works in outside weather conditions and at remote field sites and facilities that are industrial in nature.

The noise level in the work environment is a moderately quiet in office setting and frequently loud at remote facilities.

May 2015

**MWRA
POSITION DESCRIPTION**



POSITION: Manager, Security Services

PCR#: 1710005

DIVISION:

DEPARTMENT: Office of Emergency Preparedness

BASIC PURPOSE:

Oversees and coordinates MWRA physical security systems and access control procedures to ensure operations continuity and safety and security of personnel, property and equipment. Oversees security guard services including 24/7 intrusion alarm monitoring by security guards and responds to security incidents.

SUPERVISION RECEIVED:

Reports to the Director, Security and Emergency Response.

SUPERVISION EXERCISED:

Exercises direct supervision of Security Specialist and Administrative Systems Coordinator in the absence of the Director as well as 3rd party security guard and security system maintenance contractor's staff and other contract resources as needed.

ESSENTIAL DUTIES AND RESPONSIBILITIES:

- Maintains access control plans for MWRA facilities including implementation of electronic security and key control strategies. Coordinates with Operations and Procurement to acquire, install, and maintain security equipment. Assists in developing access control plans as needed.
- Oversees the security badge entrance system. Ensures access rights (badges and keys) are granted for new MWRA employees and revoked for those restricted or who have left employment.
- Develops, updates and administers operating/maintenance standards, policies and standard operating procedures (SOPs) for security, locks and key control, intrusion and motion detection devices, fire alarms, cameras, video-cameras, and other systems and activities relating to facility access.

- Develops and oversees maintenance contracts for electronic security equipment. Serves as the liaison to various site and facility supervisors regarding proper maintenance and operation of electronic security equipment.
- Ensures staff schedule fire alarm inspections by local fire department and electrical inspectors. Approves orders for related equipment. Evaluates staff service recommendations and reviews reports on facility fire alarms.
- Reviews performance of electronic security systems and assesses the need for system updates. Oversees procurement and installation of updated electronic security systems.
- Working with the Procurement department, oversees the procurement contracts for private security personnel. Administers contracts for private security personnel and oversees the activities of private security contractors.
- Responds to security incidents, documents the occurrence, and recommends corrective measures. Conducts confidential investigations.
- Provides support to Human Resources and seniors managers on investigations involving MWRA employees.
- Acts as a liaison to federal, state, and local law enforcement and emergency preparedness authorities including Massachusetts Emergency Management Agency (MEMA) and the Federal Emergency Management Agency (FEMA). Collaborates with these agencies regarding responses to security threats, logistical support, jurisdictional issues, and security enhancement tactics.
- Conducts risk assessments and evaluates alternatives for mitigating vulnerabilities including physical hardening improvements, use of technology, and changes in policies and procedures.
- Serves as a member of the MWRA Security Task Force. Approved for access to Security-Most Sensitive documents.
- Audits MWRA facilities to ensure compliance with MWRA security standards and provides a secure working environment.
- Notifies MWRA Occupational Health and Safety Department of any hazardous conditions. Coordinates with Occupational Health and Safety Department on security/safety matters as needed.
- Coordinates with Emergency Planning to assure that security staff are appropriately

trained on all MWRA emergency response plans; reviews and provides input on emergency response plans.

- Oversees the tracking and implementation of recommendations for improvement based on the audit findings including monitoring performance against operational needs and requests.
- Assists managers and the Training Unit with development and delivery of security-related training.
- Delivers training at new employee orientation session which covers workplace security and the active shooter video.
- Communicates with outside public safety agencies regarding the MWRA's security operations.
- Retrieves and reviews documents as needed. Develops spreadsheets and compiles contract information. Prepares reports and communications necessary to carry out the activities of the Authority's security program. Gathers, analyzes, and prepares information and data to be presented to the Executive Office and Senior Managers.
- Develops and maintains tracking logs for security incidents and the access systems, audits the quality of the data and ensures its timely update.

SECONDARY DUTIES:

Performs related duties as required.

MINIMUM QUALIFICATIONS:

Education and Experience:

- (A) A four (4) year college degree in business administration, public administration, criminal justice, or a related field; and
- (B) Five (5) to Seven (7) years of public sector administration required, including at least (1) one year of supervisory experience. Experience in contract administration, alarm response, and physical security systems preferred; or
- (C) Any equivalent combination of education or experience.

Necessary Knowledge, Skills and Abilities:

- (A) Demonstrated knowledge and skills in structuring, analyzing and presenting data.
- (B) Working knowledge of database management.
- (C) Strong technical project management and organizational skills, previous experience with manual and automated document tracking is preferred.
- (D) Demonstrated interpersonal, written and oral communication skills.
- (E) Understanding of physical security concepts and incident investigations as may be obtained in law enforcement, military or public safety related fields.
- (F) Ability to maintain confidentiality and exercise discretion and tact in sensitive matters.
- (G) Ability to plan, organize, direct, train and assign duties to subordinates.
- (H) Must be available to be part of 24/7 on-call rotation for security incident response.

SPECIAL REQUIREMENTS:

Valid Massachusetts Class D Motor Vehicle Operator's license required.

Participates in the Security on-call rotation.

TOOLS AND EQUIPMENT USED:

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

PHYSICAL DEMANDS:

The physical demands described are representative of those that must be met by an employee to successfully perform the essential functions of the 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 required to sit, talk or hear. The employee is frequently required to use hands to finger, handle or operate objects including office equipment, controls and reach with hands and arms. The employee is occasionally required to stand and walk.

The employee may frequently be required to lift and/or move up to 10 pounds and occasionally lift and/or move up to 50 pounds. Specific vision abilities required by this job include close vision and the ability to 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 employee occasionally works in outside weather conditions and at remote field sites and facilities that are industrial in nature.


The noise level in the work environment is a moderately quiet in office setting and frequently loud at remote facilities.

January 2020

STAFF SUMMARY

TO: Board of Directors
FROM: Frederick A. Laskey, Executive Director 
DATE: January 15, 2020
SUBJECT: Appointment of Business Systems Analyst III, MIS Department

COMMITTEE: Personnel and Compensation


Andrea Murphy, Director, Human Resources
Paula Weadick, MIS Director
Joe Barrett, IS Custom Support Manager
Preparer/Title

 INFORMATION
 X VOTE


Michele S. Gillen
Director of Administration

RECOMMENDATION:

To approve the appointment of Mr. John Rothermel to the position of Business Systems Analyst III (Unit 6, Grade 12), in the MIS Department, at an annual salary of \$117,748.43, commencing on a date to be determined by the Executive Director.

DISCUSSION:

In September 2019, the Board of Directors approved a PCR Amendment to change the title of the vacant Program Manager position to Business Systems Analyst III. That position became vacant following the retirement of the incumbent.

The Business Systems Analyst III reports to the IS Custom Support Manager and works with all MWRA divisions and departments to assess, develop and implement IT application needs and requirements to support their operational and business needs. The Business Systems Analyst III serves as the primary liaison between the IT development team and the end users to ensure work processes are documented and understood, enhanced or revised as appropriate, and translated into IT system/application requirements. These requirements are then used to develop or procure technology-based solutions. Responsibilities include working with MWRA staff to understand business needs and to identify appropriate technology improvements and solutions to satisfy those needs, and to improve operational efficiencies. This position will take the lead in development of User Requirements and User Acceptance Testing.

Selection Process

The position was posted internally. One internal candidate applied and was referred for an interview. The IS Custom Support Manager and Operations Support Manager interviewed the candidate and recommended Mr. Rothermel for the position based on his experience, knowledge, skills and education.

Mr. Rothermel has 24 years of experience at the MWRA in several positions with increasing and diverse technical responsibilities. He started at the MWRA in 1995 at the Deer Island Central Laboratory where he advanced from Chemist, to LIMS Systems Analyst, to Lab Supervisor III over a 4 year span. In 2000, he became a Database Analyst/Programmer in the MIS Department.

His focus in that role was supporting users of the Laboratory Information Management System (LIMS) and performing data analysis, and application development and support for users. In 2017, he transferred into the newly formed Business Systems Analysis group. During this time, he has continued to further develop his Business Analysis skills developing User Requirements, User Acceptance Test Plans, user interface designs and attending related professional training classes and conferences. He also worked on a number of applications including the DCR Water Quality Web application, Electronic Lab Notebook, Dental Permitting application, Pretreatment Information Management System and LIMS Systems.

Mr. Rothermel has worked closely with MWRA IT staff, user staff, management and consultants throughout the IT project life cycle. He has strong analytical and written communications skills, and a proven record of identifying business process improvements and application configurations. Additionally, as a Database Analyst/Programmer in MIS, Mr. Rothermel has further developed his technical skills.

Mr. Rothermel graduated from Gannon University with a Bachelor of Science Degree in Biology. Mr. Rothermel's formal training in Business Analysis includes Business Analysis Essentials, Business Analysis Requirements Development, Documentation and Management, as well as attendance and participation at several related conferences. He possesses the required Information Technology Infrastructure Library Foundation Certification, and has formal training on System Development Life Cycle and Project Management. In addition, he has been trained in Information Mapping Methodology® and has applied the documentation methodology to technical and user documentation.

BUDGET/FISCAL IMPACT:

There are sufficient funds for this position in the FY2020 Current Expense Budget.

ATTACHMENTS:

- Resume of John Rothermel
- Position Description
- Organization Chart

JOHN ROTHERMEL

Professional Summary

Strongly motivated, versatile and successful Business Systems Analyst looking to assume a senior role in the business relations team, by leveraging over 18 years of IT experience supporting mission critical applications for the compliance team. Striving to hone my analytical skills, as well as, improve my use of proven elicitation and modeling techniques to provide valuable IT solutions that support and advance the changing business needs of the M.W.R.A.

Professional Experience

Massachusetts Water Resources Authority

August 1995 – Present

Business Systems Analyst II (2017 – Present)

- Engage business leaders, IT and vendor staff to identify, translate and document client's business and software requirements into various tangible deliverables, such as functional requirements, workflow diagrams, use cases, and data flow/data model diagrams.
- Perform gap analysis between existing "as-is" business practices and recommended "to-be" processes.
- Analyze, compile and draft data analysis reports that summarize issues with IT solutions that do not satisfy stated user requirements.
- Develop test plans and User Acceptance Test (UAT) scripts to exercise business solutions against documented requirements.

Database Analyst/Programmer (2001 – 2017)

- Create, validate and implement ELN and LIMS solutions based on client needs.
- Interface with users to elicit requirements and document existing logbook processes.
- Design and create ELN experiments, workbooks, sheets, SQL scripts and Crystal Reports as requirements dictate.

Lab Supervisor III (October 1999 – February 2000)

Project Highlights

Dental Permit Application (Active):

- The United States Environmental Protection Agency (EPA) promulgated regulations requiring the MWRA to regulate dental industry wastewater discharges.
- TRAC is developing a permit for dental discharges that will require dental practices to submit an initial permit application to the MWRA by December 2019 and a biennial compliance report by year 2022.
- This project is designed to replace a paper intensive process by automating the submission of new permit requests through the use of the web based Permit Application in the Pre-treatment Information Management System (PIMS).

DCR Water Quality System

- The Department of Conservation and Recreation (DCR) Water Quality System (WQS) project replaced the previous MWRA WQS website, with a new and improved web solution.
- The key objectives of the project included; increasing data availability, providing the ability to monitor recent parameter readings and providing ability to download multiple water quality data parameters collected at the Quabbin and Wachusett Reservoirs.

JOHN ROTHERMEL

Comprehensive State Audit- (LIMS Application)

- Staff from the Massachusetts State Auditor's Office (SAO) executed a comprehensive audit of the M.W.R.A.
- A data reliability assessment (DRA) of the LIMS application was performed.
- Successfully compiled information to answer DRA criteria that resulted in zero audit findings, an extremely favorable audit outcome and glowing reviews from senior management.

Education

Bachelor of Science, Biology, 1987 • Gannon University, Erie, PA

Professional Affiliations

International Institute of Business Analysis (IIBA®)

- IIBA Greater Boston Chapter

Certifications

- ITIL Foundation V3 Certificate in IT Service Management
- LabWare LIMS Certified Administrator

Relevant Coursework

Information Mapping

- Mastering Policies, Procedures and Documentation™ is a three day Information Mapping® course focusing on powerful, proven techniques for analyzing, organizing, and presenting information that is clear, concise and user focused.

Business Analysis

- Requirements Development, Documentation, and Management – Global Knowledge

Business Writing

- Professional Business Writing – M.W.R.A.

DATABASE - Oracle

- PL/SQL Program Units
- 10g JAVA Programming
- 10g: Building J2EE Applications

MWRA POSITION DESCRIPTION

POSITION: Business Systems Analyst III
DIVISION: Administration
DEPARTMENT: Management Information System (MIS)

BASIC PURPOSE:

The Business Systems Analyst III works with business unit staff to understand business processes and to document and prioritize user requirements and functional specifications for new and existing systems that support the organizational needs. Serves as the conduit between the development team and the rest of the organization. Facilitates communications to expeditiously translate business requirements to help develop technical specifications as well as translate technical specification into language accessible to user and management audiences. Communicates and consults with end users or management to provide information regarding the costs and ramifications of the decisions made.

Evaluates MWRA application and business workflows, identifies improvements, documents requirements, prototyping, quality assurance and makes recommendations on how business processes can be improved through better implementation of technology. Identifies stake holders and develops Requirements Development Work Plans.

In addition, the Business Systems Analyst III will serve as Business Systems Analyst team lead and will update and maintain Business Systems Analysis specific project plans and schedules.

SUPERVISION RECEIVED:

Works under the general supervision of the Manager II, Business Systems Analysis

SUPERVISION EXERCISED:

Exercises supervision of assigned vendor resources and IT project team.

ESSENTIAL DUTIES AND RESPONSIBILITIES:

- Use proven business analysis methodologies and elicitation techniques to:
 - Gather and document business, functional and technical requirements from business leaders, end users, and vendors for new and upgraded software applications (in-house and third party software).
 - Document project scope and vision documents.
- Support Quality Assurance/Quality Control activities including developing functional and user test acceptance test plans in conjunction with IT and user stakeholders.

- Research new approaches to improve business and system processes and develop reports and/or proposals for new or enhanced solutions.
- Identify and document documents gaps between the current as-is and recommended to-be processes.
- Collaborate with IT Department engineering staff contractors and vendors to support development of technical specification for appropriate system infrastructure hardware and software.
- Research, design, and test interfaces between existing and new system applications and platforms to produce seamless integration that complies with business requirements.
- Maintain professional interaction with the IT staff and user community to ensure adequate system functionality, promote team participation and encourage user confidence in the applications staff quality of service.
- Develop and maintains design documentation, report requirements and test plans of applications throughout the design process.
- Support user acceptance testing and release management activities.
- Coordinate vendor access and resources as assigned.
- Documents and communicates issues and risks.
- Develops and maintains Business Systems Analyst functional unit's business continuity documentation as appropriate.
- Maintains professional interaction with the Business Systems Analyst staff, user and extended IT community (i.e. project teams) to ensure adequate system functionality, promotes team participation and encourages user confidence in the IT Department's quality of service.
- Conducts stakeholder analyses by gathering and assessing information to determine whose interests should be taken into account for each project. Based on this analysis, identifies the stake holders for each project.
 - Develops Requirements Work Plan.
 - Manages Issue & Risk Lists as assigned.
- Coordinates project team testing and user acceptance testing for assigned projects ensuring testing is formalized, adheres to department standards and best practices.

SECONDARY DUTIES:

Performs related duties as required.

MINIMUM QUALIFICATIONS:

Education and Experience:

- (A) A four (4) year college program in management science, engineering management, computer science or related fields; and
- (B) Five (5) to seven (7) years experience gathering functional requirements, analyzing and accurately documenting requirements specifications, workflow diagrams, data flow diagrams, etc. to effectively communicate needs to internal and external development teams and/or developing and testing prototypes.
- (C) Any equivalent combination of education or experience.

Necessary Knowledge, Skills and Abilities:

- A) Formal training or certification on methodologies/frameworks for business systems analysis, project management, software development and IT Service Management such as:
 - Rapid Application Development SDLC methodologies such as Agile.
 - Project Management concepts and tools.
- (B) Analytical and interpersonal skills.
- (C) Written and oral communication skills.
- (D) Knowledge of the following is desirable: MS Project, MS Visio, MS .Net, J2EE, Crystal Reporting, ORACLE, SQL Server and PL/SQL.

SPECIAL REQUIREMENTS:

Information Technology Infrastructure Library (ITIL) Foundation Certification is required or the ability to obtain within 6 months.

International Institute of Business Analysis (IIBA) Certification or formal IIBA Training or the ability to obtain within one year.

TOOLS AND EQUIPMENT USED:

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

PHYSICAL DEMANDS:

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

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

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

WORK ENVIRONMENT:

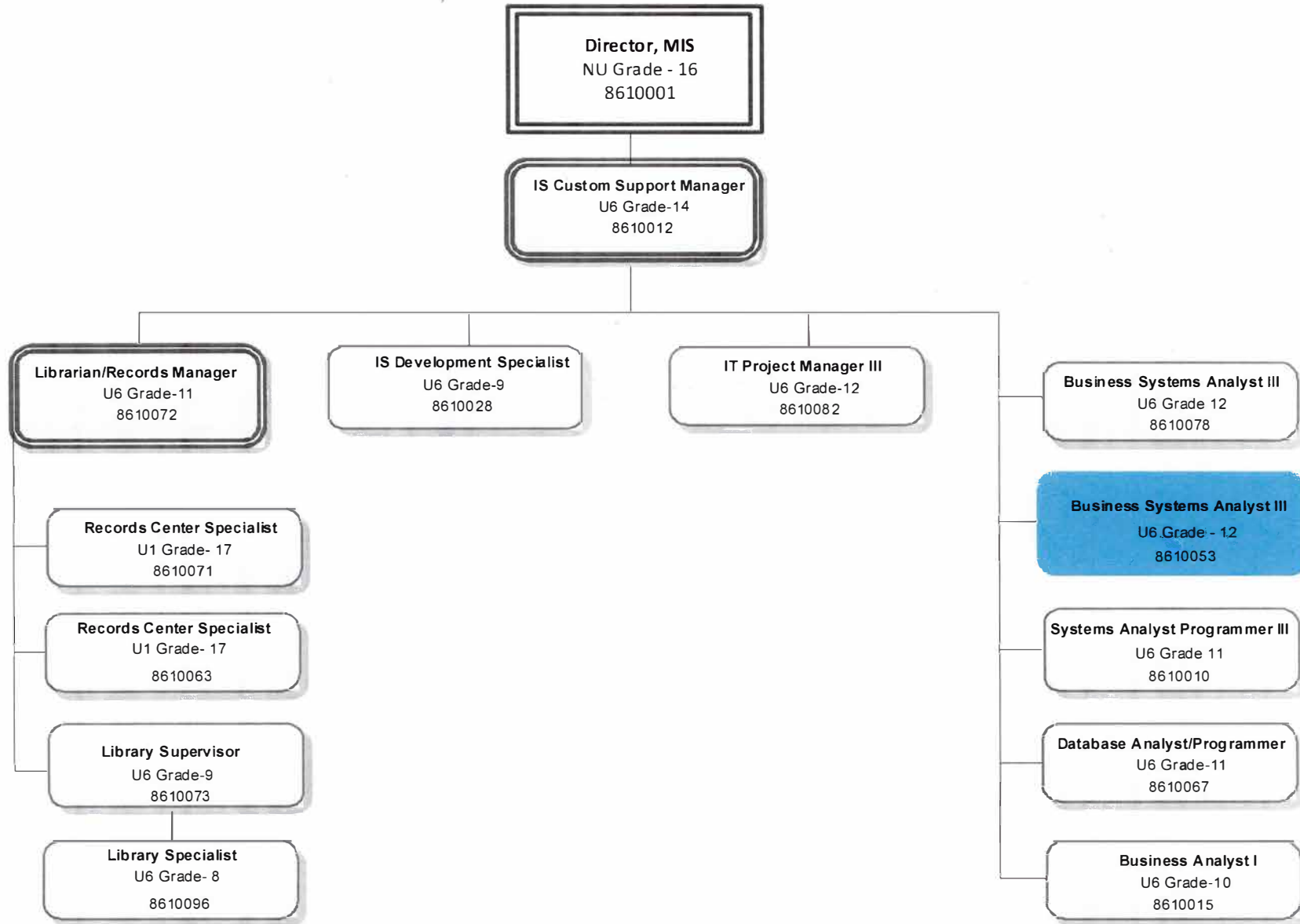
The work characteristics described here are representative of those an employee encounters while performing the essential functions of this job.

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


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

December 2016

Administration
MIS Department
November 2019




STAFF SUMMARY

TO: Board of Directors
FROM: Frederick A. Laskey, Executive Director 
DATE: January 15, 2020
SUBJECT: Appointment of Manager of Metering and Monitoring, Operations Department

COMMITTEE: Personnel & Compensation

INFORMATION
 VOTE

Andrew Hildick-Smith, P.E., Director, SCADA,
Metering and Monitoring
Andrea Murphy, Director, Human Resources
Mark Johnson, P.E., Director of Waterworks
Preparer/Title


David W. Coppes, P.E.
Chief Operating Officer

RECOMMENDATION:

To approve the appointment of Mr. Michael Greeley to the position of Manager of Metering and Monitoring (Non-Union, Grade 14), in the SCADA, Metering and Monitoring Department, at an annual salary of \$133,000, commencing on a date to be determined by the Executive Director.

DISCUSSION:

The position of Manager of Metering and Monitoring became vacant in July 2019 upon the retirement of the incumbent. The Manager of Metering and Monitoring reports directly to the Director of SCADA, Metering and Monitoring and supervises a staff of 23 who are responsible for the maintenance and engineering of all water and wastewater flow meters and the associated flow data collection for operational and rate revenue allocation purposes. The position works closely with Operations Engineering staff in field operations, community support staff in Planning, the MWRA Rates and Budget, SCADA, and Engineering and Construction staff.

Selection Process

The Manager, Metering and Monitoring position was posted internally and five candidates applied for the position. All five were determined to be qualified and were referred for an interview. The Deputy Chief Operating Officer, the Director of SCADA, Metering and Monitoring, the Director of Waterworks and the Associate Special Assistant for Affirmative Action conducted the interviews. Upon completion of the interviews, Mr. Greeley was determined to be the best candidate based on his experience, knowledge, skills and education.

Michael Greeley is currently the Program Manager, Meter Data and Engineering at MWRA, a position he has held for the past nine months. He has done an excellent job with his staff analyzing raw meter data and preparing it for MWRA sewer and water rate calculations. He has also excelled at working with communities to answer usage and metering questions. Before coming to the

MWRA, Mr. Greeley worked for 12 years at Hazen and Sawyer, where he held progressively more responsible positions as an Assistant Engineer, a Principal Engineer, a Senior Principal Engineer and an Associate. He was the design manager for significant projects including the Maine Water Company's Saco River Water Treatment Facility Upgrade and the MWRA's Spot Pond Water Storage and Pump Station. In this role, he coordinated the work of teams of up to eight different design disciplines, up to 20 employees and multiple sub consultants. He was the lead mechanical engineer for dissolved air flotation and finished water pump systems for the City of Portsmouth's Madbury Water Treatment Plant. He also acted as the Resident Engineer for that plant's startup that included SCADA and metering installations. Mr. Greeley's other metering work at Hazen and Sawyer included non-revenue meters for the MWRA, raw, filtered and finished water meters at the Saco River Water Treatment Plant, and the remote radio monitoring of flow meters for the Town of Newmarket, NH. Prior to that, Mr. Greeley worked in the Engineering Department of the City of Melrose as Assistant City Engineer. There his duties included water distribution system and wastewater collection system engineering and he acted as the communication liaison with the local government.

Mr. Greeley possesses good knowledge of the technologies used for metering and meter data collection, as well as of the meter maintenance procedures and data roll-up used for billing. He also has valuable multi-discipline team experience managing and overseeing staff and contractors in both office and field roles. He has made many presentations at regional and national AWWA conferences, and has played an active role in the Program Committee of the NEWWA, including time as its chair. All of this will help make Mr. Greeley a successful leader of the metering team.

Mr. Greeley has a Bachelor of Science in Civil Engineering and a Master of Engineering in Engineering Project Management from Cornell University. He is a Registered Professional Engineer in Massachusetts, New Hampshire and Maine.

BUDGET/FISCAL IMPACT:

There are sufficient funds for this position in the FY20 current expense budget.

ATTACHMENTS:

Resume of Michael Greeley
Position Description
Organization Chart

MICHAEL M. GREELEY PE, ENV SP

SKILLS & ABILITIES Registered Professional Engineer (MA #47546, NH #14146, ME #14330)
Project Management of Diverse Multidisciplinary Teams
Envision™ Sustainability Professional ENV SP
Database Development, SQL, Python/R Data analytics

EXPERIENCE

MASSACHUSETTS WATER RESOURCES AUTHORITY – CHELSEA, MA

Program Manager – Meter Data and Engineering - April 2019 to current

- Coordinates data collection and analysis monthly from and ~190 wastewater meters and ~250 water meters
- Community liaison for usage questions for MWRA's customer communities
- Direct reporting from one project manager and two data analysts

HAZEN AND SAWYER, PC – BOSTON, MA

Associate – April 2013 – April 2019

Senior Principal Engineer/Principal Engineer – April 2009- April 2013

Assistant Engineer – January 2007-April 2009

- Design manager of large scale (up to \$60 mil) construction projects with up to twenty design team members and four design consultants
- Direct supervision/mentoring of up to three junior staff

CITY OF MELROSE, MA ENGINEERING DEPARTMENT – MELROSE, MA

Assistant City Engineer – February 2005 to October 2006

- Water distribution system/Wastewater collection system engineer
- Recorded and analyzed flow rate data for unidirectional flushing program
- Public communications liaison – Board of Aldermen, Conservation Commission, etc.

Key Projects

Saco River Water Treatment Facility Upgrade – Maine Water Company

Biddeford, ME – \$62 mil. Construction (Estimated), \$3.8 mil. Design

- Project Manager for the design of Maine Water Company's Saco River Water Treatment Facility
- Budgeted 25,000 man-hour design effort with negotiation and management of 4 subconsultant design partners. Delivered the \$1.3 concept level and 30% design packages on time and under budget
- Project was the pilot program for 2 new design tools: Holobuilder for 3D modeling of the facility design and ProjectWise document management software

Spot Pond Water Storage Facility and Pump Station - Massachusetts Water Resources Authority Stoneham, MA - Online December 2015 - \$50 mil. Construction, \$3.3 mil. Design

- Project included installation and SCADA coordination of 4 non-revenue meters
- Drafted functional descriptions in accordance with MWRA SCADA standards
- Provided functional description for MWRA Telog system
- Provided coordination efforts with local Stoneham officials and state building code officials to ensure smooth project delivery

Madbury Water Treatment Plant – City of Portsmouth, NH

Madbury, NH - Online November 2011– \$21 mil. Construction – \$2 mil. Design

- Lead mechanical project engineer during design and project manager during construction
- Project startup resident including meter installation and SCADA historian data collection.
- Madbury WTP was New England’s first LEED® Silver Certified water treatment plant.

MacIntosh Well and Blending Facility – Town of Newmarket, NH

Online November 2016 - \$1.7 mil. Construction, \$180K Design

- Used remote radio monitoring of several flow meters within the town’s distribution system to control high service pumps to maintain minimum supply pressures throughout distribution system during high demand times

City of Melrose Water Main Flushing and Replacement Program – 2005-2006

- Used distribution system flushing rate data to identify city water mains with highest likelihood of failure, informing selection of CIP projects
- Managed replacement programs for water mains, lead service lines, gate valve and hydrant replacement programs

EDUCATION

CORNELL UNIVERSITY, ITHACA, NY

Bachelor of Science – Civil Engineering – 2002

Master of Engineering – Engineering Project Management – 2003

- Project management capstone analyzing production efficiency utilizing data envelopment analysis with General Motors
- Database design, SQL, Visual Basic

COURSERA SPECIALIZATIONS

Python for Everybody (Univ. Of Michigan)

Machine Learning Foundations (Univ. Of Washington)

R Programming, Exploratory Analysis, Data Cleaning (Johns Hopkins Univ.)

- Python and R Programming for Data Analysis, mining, visualization and pattern recognition
- Machine learning specializations including: linear and logistic regression, K-means and nearest neighbor clustering

OUTREACH

2 Time Presenter at the American Water Works Association Annual Conference.

8 Time Presenter at regional AWWA Conferences (NEWWA and CTAWWA)

NEWWA Program Committee 2008-Current (Vice Chair: 2011-2014, Chair: 2014-2017)

NEWWA Younger Member of the Year – 2014

**MWRA
POSITION DESCRIPTION**

POSITION: Manager, Metering & Monitoring
PCR#: 1520001
DIVISION: Operations
DEPARTMENT: SCADA, Metering and Monitoring

BASIC PURPOSE:

Oversees the maintenance, repair, and engineering for MWRA's revenue meters, master meters, and other associated equipment used in monitoring and control of the MWRA water system. Oversees meter data collection, quality assurance, quality control, and water & wastewater flow calculations used for the allocation of MWRA's rate revenue requirements.

SUPERVISION RECEIVED:

Works under the general supervision of the Director, SCADA, Metering and Monitoring.

SUPERVISION EXERCISED:

Exercises close supervision of professional, engineering, technical and administrative personnel within the meter data management unit and the meter maintenance unit. Coordinates closely with Operations Engineering staff in field operations, community support staff in Planning, the MWRA Rates Manager, SCADA, Engineering and Construction staff.

ESSENTIAL DUTIES AND RESPONSIBILITIES:

- Oversees water and wastewater meter data collection, quality control, data access for users and customer reporting.
- Oversees meter maintenance to ensure emergency and preventive maintenance is performed on all meters used to measure and record water and wastewater flow and pressure.
- Represents MWRA in discussions with member communities related to water or wastewater flows and works to resolve discrepancies.
- Oversees the preparation of staff summaries to the Board of Directors, and presents meter and flow related information to the Board. Prepares the monthly submissions for the Management Indicators reports (Yellow and Orange Notebooks).

- Directs and/or oversees direction of consultant contracts related to meter design, selection, installation, and/or maintenance.
- Coordinates with Management Information Systems Department and external consultants to ensure up-to-date and user-friendly data management systems integral to MWRA's meter program.
- Participates in meter design, construction and start-up for capital or other projects.
- Oversees planning and implementation of appropriate in-house or consultant-led training programs.
- Oversees the development, periodic review and updating of policies and procedures relating to meter maintenance, metering of water and wastewater flows for revenue, operational and regulatory matters. Ensures all staff are properly trained.
- Ensures consistency and uniformity of work rules in accordance with established policies and procedures.
- Manages the unit's safety program, maximizes employee involvement, supports the Authority-wide safety program, and conducts inspections. Acts as liaison to the Manager, Occupational Safety and Health. Immediately notifies Occupational Safety and Health of any safety issues or risks that need attention.
- Oversees personnel management and staff hiring for the program. Ensures that major initiatives and policy changes are properly communicated to all staff. Identifies organizational needs and proposes re-organization plans to address changing needs.
- Manages successful administration of collective bargaining agreement provisions to maintain harmonious labor management relations. Participates in grievance resolution, collective bargaining and contract negotiations. Serves as Step I hearing officer. Hears disciplinary actions.
- Oversees staff productivity monitoring and continual improvement through staff skills development, strategic planning, standard operating procedure (SOP) improvements and research and implementation of technology advances. Maximizes effective use of the Maximo maintenance software and related computer programs.
- Oversees and manages the program budget for meter data management and meter maintenance units. Ensures that budget resources are allocated appropriately. Monitors spending and ensures budget compliance. Assesses resources needed to effectively manage the program, prepares budget requests including in-depth justification, and explains budget variances.

SECONDARY DUTIES:

- Performs related duties as required.

MINIMUM QUALIFICATIONS:

Education and Experience:

- (A) Bachelor of Science degree in civil, electrical or mechanical engineering or related field. Masters degree preferred; and
- (B) Eight (8) to ten (10) years experience with water and wastewater metering, and associated electrical, electronic, pneumatic and mechanical instrumentation systems including at least four (4) years in a supervisory position; and
- (C) Experience with data quality control and quality assurance processes, and
- (D) Experience with work process continuous improvement preferred; or
- (E) Any equivalent combination of education or experience.

Necessary Knowledge, Skills and Abilities:

- (A) Knowledge of water and wastewater metering, instrumentation, electronics and data management and communication systems
- (B) Proficiency in computer hardware and software, including communications technology, databases, data presentation and analysis tools, HMI design and Microsoft Office.

SPECIAL REQUIREMENTS:

Professional Engineer license preferred.

Required to be on call as needed.

A valid Massachusetts Class D Driver's License.

TOOLS AND EQUIPMENT USED:

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

PHYSICAL DEMANDS:

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

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

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

WORK ENVIRONMENT:

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

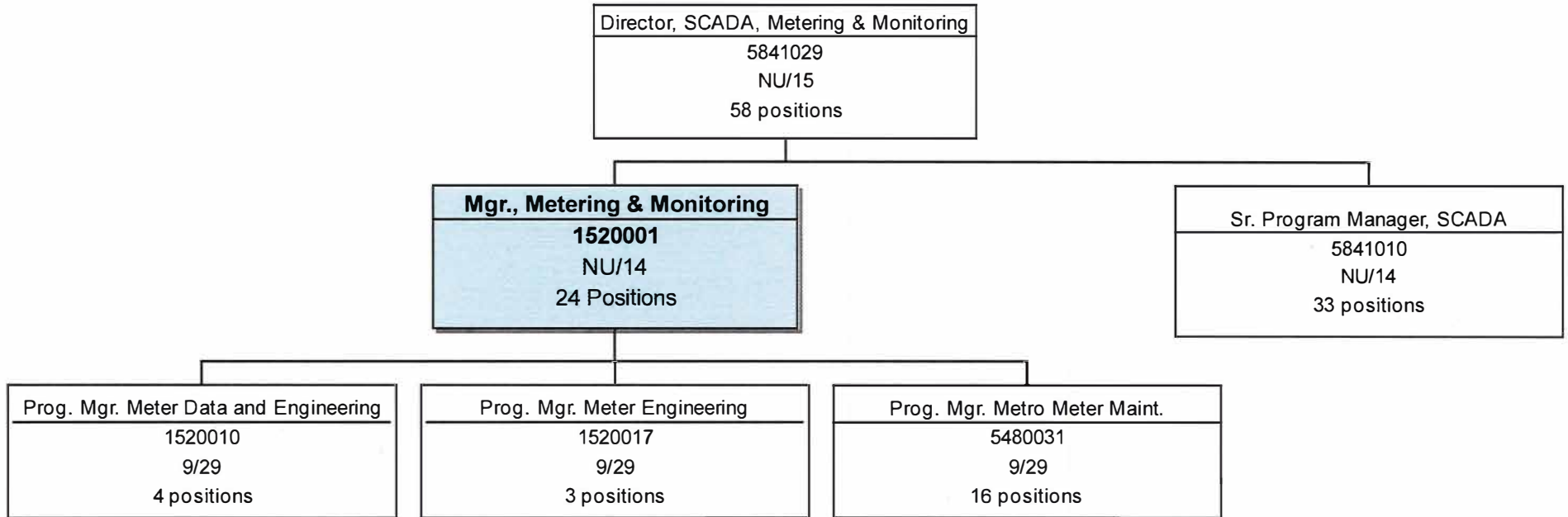
While performing the duties of this job, the employee regularly works in an office environment. The employee occasionally exposed to outdoor weather conditions. The employee is occasionally exposed to fumes and airborne particles.

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


May 2019

Metering & Monitoring


January 2020



STAFF SUMMARY

To: Board of Directors
From: Frederick A. Laskey, Executive Director 
Date: January 15, 2020
Subject: Appointment of Associate General Counsel

COMMITTEE: Personnel & Compensation


Andrea Murphy, Director, Human Resources
Preparer/Title

 INFORMATION

 X VOTE


Carolyn M. Francisco Murphy
General Counsel

RECOMMENDATION:

To approve the appointment of Angela D. Atchue to the position of Associate General Counsel, Law Division (Non-Union, Grade 15) at an annual salary of \$139,900, commencing on a date to be determined by the Executive Director.

DISCUSSION:

The position of Associate General Counsel became vacant due to the resignation of the incumbent. The position reports to the General Counsel and has traditionally involved a broad range of legal duties arising out of MWRA's day-to-day operations. Areas of responsibility handled by this position include: real estate transactions; DCR watershed parcel acquisitions; 8(m) permit issuances; public procurement, bid laws and contracting; disputes and claims by and against the Authority involving contractors and consultants, including cost-recovery analysis of construction and design contracts and surety bond issues; and environmental, energy and health and safety laws. The Associate General Counsel oversees the Authority's response to public records requests and provides advice and guidance to staff on requests pursuant to that law. The position also provides counsel regarding the open meeting law and the Authority's Toxic Reduction and Control Program, including regulatory, permitting and enforcement matters. Finally, the Associate General Counsel advises on the Authority's rules, regulations, policies and Enabling Act and handles transactions and agreements with other public entities.

SELECTION

This position was posted internally and externally. Forty-nine applications were received. Nine candidates were interviewed by the General Counsel, Director of the Affirmative Action and Compliance Unit and Director of Administration. Following the first round of interviews, two well qualified finalists, including Ms. Atchue, were selected for a second interview with the General Counsel, Deputy Chief Operating Officer and Director of Environmental and Regulatory Matters. Ms. Atchue is recommended for appointment as Associate General Counsel and is well suited and qualified for the position based upon her experience, background and knowledge.

Attorney Atchue began her legal career as a Judicial Law Clerk for the Connecticut Superior Court. She served for two years as Deputy General Counsel at the Massachusetts Office of

Inspector General where she was the lead attorney providing advice and guidance to state and local officials, vendors and the public regarding public contracts. As Deputy General Counsel she also reviewed various procurement and contract documents, analyzed matters for possible investigation and prosecution, developed and drafted procurement and public bid law guides, manuals and educational materials, reviewed, analyzed and drafted legislation and researched, wrote and advised on issues pertaining to public records, municipal finance and ethics.

In 2006, Attorney Atchue joined the City of Boston’s Law Department where she has held the positions of Senior Legal Officer, Special Assistant Corporation Counsel and Legal Advisor. Ms. Atchue is responsible for all legal services for design and capital construction projects for the Public Facilities Department. She also manages litigation involving design and construction, contract, tort, trespass and land damage disputes. Attorney Atchue serves as Legal Advisor to the City’s Public Facilities Commission where she provides counsel on matters before the Commission including relating to the open meeting law, public records law, conflicts of interest law and public bid laws. Attorney Atchue is the primary counsel on the City’s eminent domain takings, and leads complex real estate transactions for the City’s projects including takings, easements, leases, licenses and various land dispositions. Ms. Atchue is responsible for drafting contract documents for design, construction and non-construction services and advising staff on such documents, as well as risk allocation, disputes and claims. Finally, Attorney Atchue provides counsel for compliance with the City’s Charter, ordinances, executive orders and state and federal laws and regulations.

Ms. Atchue received a Bachelor of Arts degree in 1998 from the University of Vermont and her Juris Doctor from Suffolk University School of Law in 2001. She has held leadership roles with the Massachusetts Municipal Lawyers Association, has been a frequent presenter and speaker on various legal topics including land acquisition and disposition and was honored in 2017 by the Massachusetts Lawyers Weekly publication as one of the Top Women of Law. She is a member in good standing of the Massachusetts Bar and is admitted to practice before the state courts.

BUDGET/FISCAL IMPACT:

There are sufficient funds for this position in the FY20 CEB.

ATTACHMENTS:

- Resume of Angela D. Atchue
- Position Description
- Organizational Chart for Law Division

ANGELA D. ATCHUE

LEGAL EXPERIENCE

City of Boston, Law Department, Boston, 2006 – present

Senior Legal Officer, Special Assistant Corporation Counsel and Legal Advisor

- Responsible for all in-house legal services for public design and capital construction projects for the Public Facilities Department with a current portfolio of 700+ million dollars. Advise director, assistant directors and project managers on design, construction, property management and real estate projects. Lead attorney representing department in trial court litigation and administrative hearings with AGO. Draft pleadings, motions, briefs, memoranda, subpoenas, discovery requests, and settlement agreements. Manage a wide-ranging litigation practice involving complex design and construction disputes, breach of contract, torts, trespass, and land damage lawsuits. Experienced in all phases of litigation, mediation and alternative dispute resolution.
- Legal Advisor to the City's Public Facilities Commission, a three-member mayoral appointed board for real property acquisitions and dispositions (e.g. commercial, residential, affordable housing and public land use), acceptance and expenditure of federal and state funds, and approval for design and construction contract awards. Supervise staff, draft vote requests, agenda, review project background information for public presentation and provide legal guidance on all matters presented to the PFC to ensure compliance with the Open Meeting Law, Public Records Law, Conflicts of Interest Law, Public Bid Laws, applicable state and federal laws, including the City Charter. Review meeting minutes to ensure accuracy and legal compliance with applicable state laws.
- Lead complex, prioritized real estate transactions for public building construction, right-of-way road and bridge construction, and mixed-use development. Draft request for proposals, orders of taking, deeds, easements, leases, licenses, and agreements (purchase and sale, release and indemnification, land damage, land disposition and settlement).
- Primary counsel on eminent domain takings. Experienced with highest and best use valuations and reconciling differing comparables to strategize with client on pro tanto offers, land damage lawsuits and settlements.
- Draft contracts for City on G.L. c.149A Construction Management at Risk (CMR), G.L. c. 149, § 44A½(c) Owner's Project Manager (OPM) Services, G.L. c.7, §§ 44-57 Professional Design Services, Design Studies and Design Review Services. Lead counsel for all CMR projects, G.L. c.149, §§ 44A-44J vertical building construction and G.L. c.30, §39M horizontal construction projects, including pre-qualification of general contractors and subcontractors. Additionally, draft procurements and contract terms for G.L. c.30B, §§ 5,6 supplies and non-construction services. Draft contracts and negotiate terms for energy

savings in construction projects, and environmental testing and monitoring services for property acquisitions and public building projects.

- Review and advise client on contract documents, risk allocation, disputes, claims, liquidated damages, change order proposals, change orders and contract amendments.
- Provide counsel for compliance with public procurement laws, City charter, ordinances, executive orders, state and federal laws and regulations. Guide contracts management staff to ensure complete, timely services for all projects and public records requests.
- Advise on all stages of public bidding, procurement, contract award, execution and administration for building construction and public works projects, design services, owner's project manager services, real property services (e.g. appraisal, broker, title exam, relocation, surveying, environmental).

Massachusetts Office of the Inspector General, Boston, 2004 - 2006
Deputy General Counsel

Lead attorney, fielding over 6000 inquiries providing legal advice and guidance to state and local officials, vendors, and concerned citizens regarding public contracts for supplies, services, real property, construction and designer selection. Review requests for proposals, invitations for bids, and contract terms and conditions for local governments. Resolve bid disputes between local governments and vendors/contractors. Conduct factual analysis, interview witnesses, and marshal evidence. Develop and refer criminal cases for investigation and prosecution. Draft legal opinions and advisories pertaining to municipal procurement laws.

- Drafted new sections and edited the fifth edition of the Chapter 30B manual, entitled *Municipal, County, District, and Local Authority Procurement of Supplies, Services, and Real Property*. Edited the sixth edition of the Public Construction manual, entitled *Designing and Constructing Public Facilities*. Revised and edited the *Practical Guide to Drafting Invitation for Bids and Requests for Proposals for Supplies and Services*.
- Lead attorney and trainer for the Inspector General's Massachusetts Certified Public Purchasing Official Program (MCPPO) and the office's traveling procurement training seminars, Bidding Basics 101 and Bidding Basics and Contract Administration. Taught local officials and vendors bidding requirements and contract administration for building construction, public works construction, supplies, equipment, services, and real property. Primary attorney for all other public speaking engagements and requests for presentations from local governments, state agencies, state colleges, and professional associations, such as the Massachusetts Municipal Lawyers Association.
- Developed and updated MCPPO courses and seminars, designed PowerPoint presentations, revised and edited speeches, text materials, exercises and exam questions.
- Reviewed legislation pertaining to public contracts. Researched, wrote, and advised on issues pertaining to public records, municipal finance, and ethics. Drafted legislation to amend the Uniform Procurement Act, Massachusetts General Laws Chapter 30B.

Researched, reviewed, and analyzed legislation pertaining to public construction, public works, and designer selection procurements.

- Drafted, designed and edited a quarterly newsletter, *OIG Procurement Bulletin*, which is circulated to over 3000 local officials, citizens, and vendors. Drafted informational articles on the public bid laws and provided frequently asked questions and answers on municipal law and local government procurement.

**Connecticut Superior Court, New Haven, New London, Norwich, Putnam, CT 2001– 2002
Judicial Law Clerk**

- Drafted memoranda and opinions for judges. Researched and analyzed state, federal, civil, criminal, family, housing, and administrative legal issues. Attended trials, motions, and administrative appeal hearings.

EDUCATION

Suffolk University Law School, Boston, Massachusetts
Juris Doctor, May 2001, Member of the Massachusetts Bar
Finalist, Thomas Clark Moot Court Competition
Winner, ABA Intra-Law School Client Counseling Competition
Finalist, ABA Regional Client Counseling Competition
Distinguished Oral Advocate, Legal Practice Skills Competition

University of Vermont, Burlington, Vermont
Bachelor of Arts in History and Women's Studies, May 1998
Outstanding Women's Studies Scholar, 1998

PROFESSIONAL AFFILIATIONS

President, Massachusetts Municipal Lawyers Association (MMLA), July 2017 – June 2018
Vice President, Massachusetts Municipal Lawyers Association (MMLA), July 2016 – June 2017
Executive Board Member, MMLA, 2011 – present
Managing Editor, MMLA Quarterly Journal, 2011 – 2017
Member, Massachusetts Women's Bar Association, 2010 – present
Member, Boston Bar Association, 2018 - present

AWARDS

Honoree, Top Women of Law, Massachusetts Lawyers Weekly, 2017
Robert W. Ritchie, Special Achievement Award MMLA, August 2012

PRESENTATIONS

Complex Land Acquisitions and Dispositions under State Laws, August 2019, MMLA
Eminent Domain Process for Cities and Towns, August 2019, MMLA
Construction Management at Risk for Local Government – January 2018, MMA
Open Meeting & Public Records Law Training for Elected Officials, 2017 and 2018, MMA
Real Estate Disposition Practices, May 2017, Boston Bar Association
Construction Management at Risk – Lessons Learned, April 2017, MMLA
Design and Construction for the MA Supplier Diversity Regional Series, June 2016, COB
Development and Redevelopment Projects with Relocation of Tenants, August 2015, MMLA

House Doctor and Design Review Services for Construction Projects, April 2015, MMLA
Real Property Acquisition and CM at Risk Municipal Development Project, Jan. 2015, MMLA
Procuring and Managing House Doctor and Design Review Services, Oct. 2014, MAPPO
CM at Risk Construction for City of Boston, April 2013, MMLA
Real Property Acquisitions and Dispositions, April 2013, OIG
Real Estate Procurement, Assistant Corporation Counsel University, Oct. 2009 – 2013 (annual)
Construction & Public Bidding Updates, Asst. Corp. Counsel Univ., Oct. 2007 – 2013 (annual)

INTERESTS

Mentoring at risk youth through Sole Train: Boston Runs Together; and avid runner participating in the Boston Athletic Association 5K, 10K, Half-Marathon and Marathon Races.

**MWRA
POSITION DESCRIPTION**

POSITION: Associate General Counsel

PCR#: 7110027

DIVISION: Law

DEPARTMENT: Law

BASIC PURPOSE:

Handles all legal issues, providing advice and counsel, and managing staff in the areas of responsibilities described below.

SUPERVISION RECEIVED:

Works under the general supervision of the General Counsel.

SUPERVISION EXERCISED:

Exercises direct supervision of the Senior Staff Counsel and administrative staff.

ESSENTIAL DUTIES AND RESPONSIBILITIES:

- Supervises attorneys and administrative staff involved in the handling of legal issues.
- Responsible for, handles, supervises and provides advice and counsel regarding Authority real estate transactions, including grants of easements and licenses; reviews documentation involving the Department of Conservation and Recreation watershed acquisitions; and manages Law Division review of the issuance of permits under section 8(m) of the Authority's Enabling Act - Chapter 372 of the Acts of 1984.
- Handles a variety of transactions and legal agreements involving Authority projects and facilities typically involving a wide range of procurement and contracting issues.
- Provides legal counsel, advice and assistance to staff regarding contractor and consultant disputes and claims against the Authority and cost recovery claims by the Authority against contractors and consultants. Serves as Law Division's representative on all cost recovery matters.

- Provides counsel and advice and develops the Authority's response to environmental, health, and safety law matters, including interacting with applicable state and federal regulatory offices.
- Provides counsel and advice on energy law and public utility law matters including renewable (hydro, wind, combined heat & power, and solar) and other energy projects; energy efficiency; demand response; regulated utility contracts; and applicable tariffs. Represents the Authority on energy matters, including those that affect the Authority and arise under the jurisdiction of the Massachusetts Department of Public Utilities and the ISO-NE.
- Provides counsel and advice to staff regarding the Authority's Toxic Reduction and Control (TRAC) program and regulations, including permitting and enforcement matters. Oversees promulgation or amendments of TRAC's regulations.
- Drafts, analyzes and reviews legislation and regulations affecting the Authority and advises senior managers about the potential impacts upon the Authority's activities, practices and procedures.
- Researches, interprets and determines the applicability of federal, state and local laws, regulations, and case law. Conducts legal research as required.
- Analyzes and develops rules, regulations, and policies, and provides advice on interpretations of the MWRA Enabling Act.
- Apprises the Board of Directors, Executive Director, and General Counsel on issues and developments in areas of responsibility.
- Provides counsel and advice to staff on requests made pursuant to the public records law. Provides Authority's response to public records requests and ensures that public records requests are handled in a timely, well-organized manner within the requirements of law.
- Advises senior staff and General Counsel on matters concerning open meeting law.

SECONDARY DUTIES:

- Performs related duties as required.

MINIMUM QUALIFICATIONS:

Education and Experience Required:

- (A) Analytical and writing skills as normally attained through a Bachelor's degree; and
- (B) A J.D. from accredited law school; and

- (C) At least seven (7) to ten (10) years of legal experience in the legal areas of real estate, contracts, energy, public utility, environmental (e.g., air, water, waste regulatory compliance, permitting and enforcement matters), health, safety and procurement law; and
- (D) At least one to three years of managerial or supervisory experience; or
- (E) Any combination of education or experience.

Necessary Knowledge, Skills and Abilities:

- (A) Strong understanding of and knowledge in the legal areas of real estate, contracts, energy, public utility, environmental (e.g., air, water, waste regulatory compliance, permitting and enforcement matters), health, safety and procurement law.
- (B) Strong supervisory skills are preferred.
- (C) Knowledge and experience in public records law and open meeting law preferred.
- (D) Strong analytical, organizational, and writing skills.

SPECIAL REQUIREMENTS:

Admittance in good standing to the bar to practice law in Massachusetts.

A valid Massachusetts Class D Motor Vehicle Operator'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 multi-function office machines (copy, fax, scan, etc.).

PHYSICAL DEMANDS:

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

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

There are no requirements that weight be lifted or force be exerted in the performance of this job.

Specific vision abilities required by this job include close vision, and the ability to adjust focus.

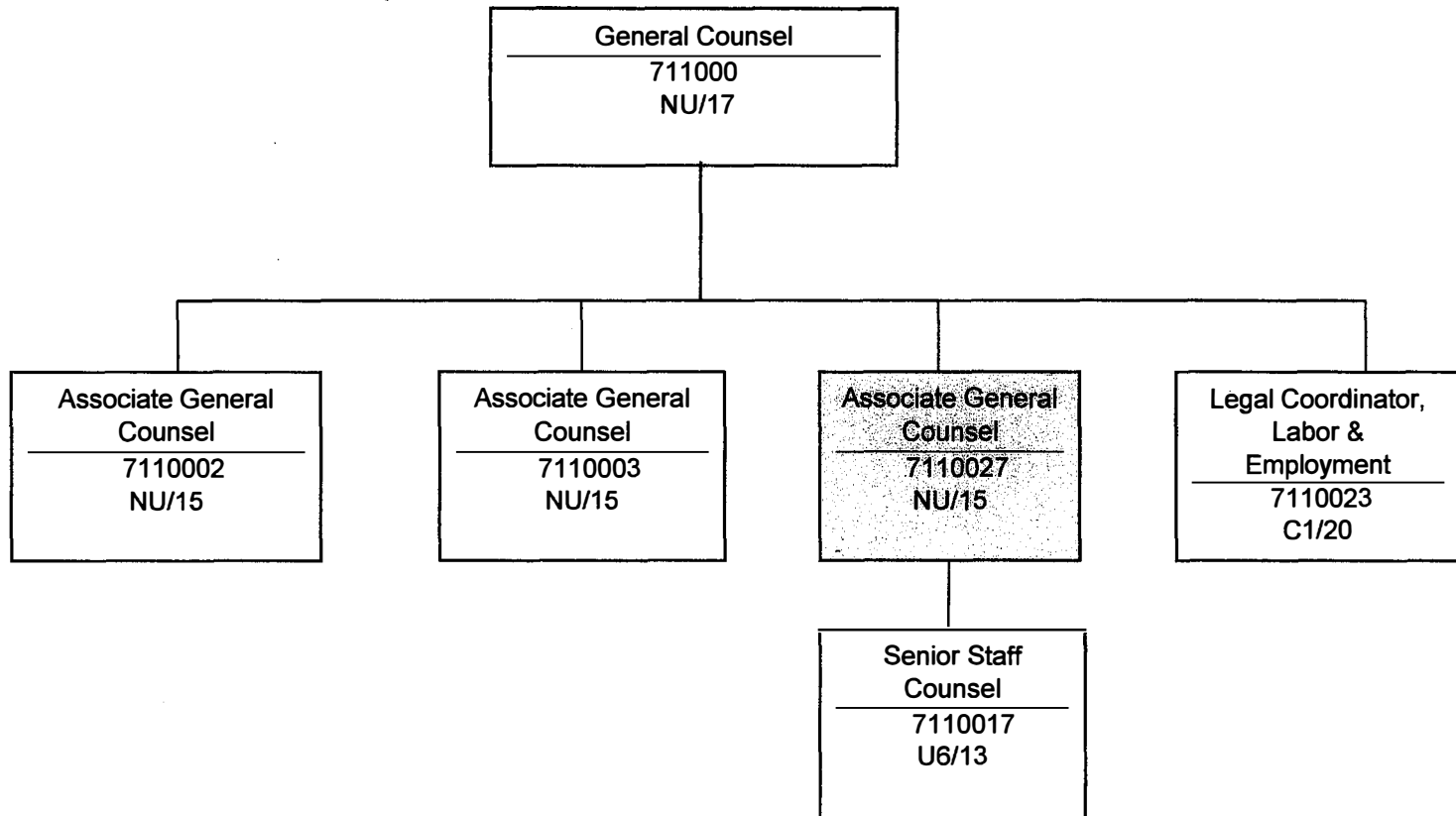
WORK ENVIRONMENT:

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

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

September 2019

**Law Division
November 2019**





MASSACHUSETTS WATER RESOURCES AUTHORITY

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

Frederick A. Laskey
Executive Director

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

ADMINISTRATION, FINANCE & AUDIT COMMITTEE MEETING

to be held on

Wednesday, January 15, 2020

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

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

Time: Immediately following P&C Committee

AGENDA

A. Information

1. Delegated Authority Report – November and December 2019
2. FY2020 Financial Update and Summary as of December 2019

B. Approvals

1. Transmittal of the Proposed FY2021 Capital Improvement Program to the MWRA Advisory Board

C. Contract Awards

1. Bond Counsel Services: Greenberg Traurig LLP, MWRA Contract F253
2. Deer Island Demand Response Services: Consultant Direct Energy Business Marketing, LLC, Contract S590
3. Janitorial Services at the Chelsea Facility: Star Building Services, Inc., Bid WRA-4776

MASSACHUSETTS WATER RESOURCES AUTHORITY

Meeting of the

Administration, Finance and Audit Committee

November 20, 2019

A meeting of the Administration, Finance and Audit Committee was held on November 20, 2019 at the Authority headquarters in Charlestown. Committee Chair Vitale presided. Present from the Board were Ms. Wolowicz and Messrs. Cook, Cotter, Flanagan, Foti, Pappastergion, Peña and Walsh. Mr. Carroll was absent. Among those present from the Authority staff were Frederick Laskey, Carolyn Francisco Murphy, David Coppes, Carolyn Fiore, Thomas Durkin, Michele Gillen, Douglas Rice, Stephen Estes-Smargiassi, Steve Perry, Ivana McGrail, Michael Cole, James Coyne, Ronald Zizza and Kristin MacDougall. The meeting was called to order at 10:24 a.m.

Information

Delegated Authority Report – October, 2019

There were questions and answers. (ref. AF&A A.1)

FY20 First Quarter Orange Notebook

Staff made a presentation. (Mr. Foti briefly left and returned to the meeting during the presentation.) There was discussion and questions and answers. (ref. AF&A A.2)

FY2020 Financial Update and Summary as of October 2019

Staff made a verbal presentation. (Mr. Flanagan joined the meeting, and Mr. Foti left the meeting during discussion.) There was discussion and questions and answers. (ref. AF&A A.3)

Contract Amendments/Change Orders

Automated Vehicle Locator Tracking System: Verizon Connect NWF, Inc., Contract A606, Amendment 1

Staff made a presentation. There was discussion and questions and answers.

* Committee recommendation approved by the Board on November 20, 2019

The Committee recommended approval. (ref. AF&A B.1)

The meeting adjourned at 10:56 a.m.

* Committee recommendation approved by the Board on November 20, 2019

Documents used for this meeting, referenced above, can be found here:

<http://www.mwra.com/monthly/bod/boardmaterials/2019/o-BoardMaterials11-20-19.pdf>

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.

Amendments:

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

Amendments to the Position Control Register:

Amendments, which result only in a change in cost center.

BUDGET/FISCAL IMPACT:

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

PURCHASING DELEGATED AUTHORITY ITEMS NOVEMBER 1-30, 2019

| NO. | DATE OF AWARD | TITLE AND EXPLANATION | CONTRACT | AMENDMENT | COMPANY | FINANCIAL IMPACT |
|------|---------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|-----------|--------------------------------------------|------------------|
| P-1. | 11/05/19 | MAINTENANCE AND SERVICE FOR THE GAI-TRONICS PAGE PARTY SYSTEM AWARD OF A THREE-YEAR SOLE SOURCE PURCHASE ORDER FOR MAINTENANCE AND SERVICE FOR GAI-TRONICS PAGE PARTY SYSTEM AT 16 HEADWORKS, PUMP STATIONS AND TREATMENT PLANTS FOR THE PERIOD OF NOVEMBER 1, 2019 THROUGH OCTOBER 31, 2021. | | | GAI-TRONICS CORPORATION | \$57,200.00 |
| P-2 | 11/05/19 | SUPPLY AND DELIVERY OF LIQUID EMULSION POLYMER AWARD OF A TWO-YEAR PURCHASE ORDER TO THE LOWEST RESPONSIVE BIDDER FOR THE SUPPLY AND DELIVERY OF LIQUID EMULSION POLYMER TO THE DEER ISLAND TREATMENT PLANT. | WRA-4753 | | POLYDYNE, INC. | \$927,000.00 |
| P-3 | 11/08/19 | PURCHASE OF TWO FLYGT PUMPS AWARD OF A SOLE SOURCE PURCHASE ORDER FOR TWO REPLACEMENT FLYGT PUMPS FOR THE BOS019 CSO STORAGE CONDUIT. | | | XYLEM, INC. | \$29,774.00 |
| P-4 | 11/08/19 | NETWORK ENGINEER IV AND PROJECT MANAGEMENT SERVICES AWARD OF A PURCHASE ORDER UNDER STATE CONTRACT ITS63 CAT2B TO THE LOWEST RESPONSIVE BIDDER FOR NETWORK ENGINEER IV AND PROJECT MANAGEMENT SERVICES TO ASSIST WITH SCADA NETWORK PROJECTS. | WRA-4761Q | | OVERTURE PARTNERS, LLC. | \$48,359.72 |
| P-5 | 11/08/19 | TRASH REMOVAL AND SINGLE STREAM RECYCLING AWARD OF A TWO-YEAR PURCHASE ORDER TO THE LOWEST RESPONSIVE BIDDER FOR TRASH REMOVAL AND SINGLE STREAM RECYCLING SERVICES AT THE DEER ISLAND TREATMENT PLANT. | WRA-4760 | | EZ DISPOSAL SERVICE, INC. | \$149,140.00 |
| P-6 | 11/14/19 | PURCHASE OF FIVE ABOVE GROUND ELECTRICAL ENCLOSURES AWARD OF A PURCHASE ORDER TO THE LOWEST RESPONSIVE BIDDER FOR FIVE REPLACEMENT ABOVE GROUND ELECTRICAL ENCLOSURES FOR WASTEWATER FLOW METERS. | WRA-4740 | | LJ KAI BLOCKER, INC. | \$43,692.00 |
| P-7 | 11/14/19 | MAINTENANCE AND SUPPORT OF SAP BUSINESS OBJECTS BUSINESS INTELLIGENCE SUITE AWARD OF A ONE-YEAR PURCHASE ORDER TO THE LOWEST RESPONSIVE BIDDER FOR MAINTENANCE AND SUPPORT OF THE SYSTEMS, APPLICATIONS AND PRODUCTS BUSINESS OBJECTS' BUSINESS INTELLIGENCE SUITE (MWRA'S STANDARD REPORTING AND QUERY TOOL) FOR THE PERIOD DECEMBER 30, 2019 THROUGH DECEMBER 29, 2020. | WRA-4774Q | | CARASOFT TECHNOLOGY CORP. | \$45,213.89 |
| P-8 | 11/14/19 | ANALYSIS OF EXTRACTABLE AND VOLATILE PETROLEUM HYDROCARBONS FOR NPDES COMPLIANCE AWARD OF A TWO-YEAR PURCHASE ORDER TO THE LOWEST RESPONSIVE BIDDER FOR THE ANALYSIS OF EXTRACTABLE AND VOLATILE PETROLEUM HYDROCARBONS IN WASTEWATER SAMPLES AND TOTAL PETROLEUM HYDROCARBON AND CYANIDE IN BIOSOLIDS SAMPLES. | WRA-4766 | | TEST AMERICA LABORATORIES, INC. | \$63,425.00 |
| P-9 | 11/21/19 | SOURCE CODE AND DATABASE CHANGES FOR PIMS AWARD OF A SOLE SOURCE PURCHASE ORDER FOR SOURCE CODE AND DATABASE CHANGES TO THE PRETREATMENT INFORMATION MANAGEMENT SYSTEM ONLINE PERMIT APPLICATION. | | | INFLECTION POINT SOLUTIONS, LLC | \$32,353.00 |
| P-10 | 11/26/19 | PURCHASE OF AUDIOVISUAL EQUIPMENT UPGRADES AWARD OF A PURCHASE ORDER TO THE LOWEST RESPONSIVE BIDDER FOR AUDIOVISUAL EQUIPMENT UPGRADES AT 5 MWRA FACILITIES AND A THREE-YEAR SERVICE CONTRACT. | WRA-4739Q | | CAROUSEL INDUSTRIES OF NORTH AMERICA, INC. | \$254,795.82 |
| P-11 | 11/26/19 | SUPPLY AND DELIVERY OF 420,000 GALLONS OF ULTRA-LOW SULFUR CLEAR #2 DIESEL FUEL AWARD OF A PURCHASE ORDER TO THE LOWEST RESPONSIVE BIDDER FOR THE SUPPLY AND DELIVERY OF 420,000 GALLONS OF ULTRA-LOW SULFUR CLEAR #2 DIESEL FUEL FOR THE DEER ISLAND TREATMENT PLANT. | WRA-4786 | | GLOBAL MONTELLO GROUP CORPORATION | \$839,958.00 |
| P-12 | 11/27/19 | PURCHASE OF TWO NEW 20-TON TRAILERS AWARD OF A PURCHASE ORDER TO THE LOWEST RESPONSIVE BIDDER FOR TWO NEW BEAVER TAIL 20-TON TRAILERS FOR WESTERN OPERATIONS. | WRA-4768Q | | TECHNOLOGY INTERNATION, INC. | \$39,160.00 |
| P-13 | 11/27/19 | IT PROJECT SERVICES AWARD OF A PURCHASE ORDER UNDER STATE CONTRACT ITS74PROJSERV: IT PROJECT SERVICES TO ASSESS RISK AND RESILIENCY OF MWRA'S IT ENVIRONMENT AS IS REQUIRED BY THE AMERICA'S WATER INFRASTRUCTURE ACT. | WRA-4771Q | | JANUS SOFTWARE INC. | \$149,722.49 |
| P-14 | 11/27/19 | MAXIMO SOFTWARE MAINTENANCE AND SUPPORT AWARD OF A ONE-YEAR PURCHASE ORDER UNDER STATE CONTRACT ITS55 FOR MAXIMO SOFTWARE MAINTENANCE AND SUPPORT FOR THE PERIOD OF JANUARY 1, 2020 THROUGH DECEMBER 31, 2020. | | | IBM CORPORATION | \$318,247.96 |

PURCHASING DELEGATED AUTHORITY ITEMS DECEMBER 1-31, 2019

| NO. | DATE OF AWARD | TITLE AND EXPLANATION | CONTRACT | AMENDMENT | COMPANY | FINANCIAL IMPACT |
|------|---------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|-----------|-----------------------------------------|------------------|
| P-1. | 12/05/19 | PURGE AND TRAP CONCENTRATORS PREVENTATIVE AND CORRECTIVE MAINTENANCE AWARD OF A THREE-YEAR PURCHASE ORDER TO THE LOWEST RESPONSIVE BIDDER FOR PURGE AND TRAP CONCENTRATORS PREVENTATIVE AND CORRECTIVE MAINTENANCE FOR THE CENTRAL LABORATORY ON DEER ISLAND. | WRA-4782Q | | THE REMI GROUP, LLC | \$31,868.55 |
| P-2 | 12/06/19 | PURCHASE OF ONE NEW TRACTOR WITH MOWING ARM AWARD OF A PURCHASE ORDER TO THE LOWEST RESPONSIVE BIDDER FOR ONE REPLACEMENT TRACTOR WITH MOWING ARM TO BE UTILIZED BY WESTERN OPERATIONS GROUNDS MAINTENANCE. | WRA-4769 | | BACHER CORP. OF CONNECTICUT | \$140,485.75 |
| P-3 | 12/10/19 | PURCHASE OF TWO HEAVY-DUTY VEHICLE LIFTS AWARD OF A PURCHASE ORDER UNDER STATE CONTRACT VEH105 - VEHICLE LIFTS FOR TWO REPLACEMENT HEAVY-DUTY VEHICLE LIFTS FOR THE CHELSEA FACILITY. | | | VEHICLE SERVICE GROUP, DBA ROTARY LIFTS | \$80,968.76 |
| P-4 | 12/10/19 | PURCHASE OF ONE NEW DIESEL-POWERED TRUCK AWARD OF A PURCHASE ORDER TO THE LOWEST RESPONSIVE BIDDER FOR ONE REPLACEMENT DIESEL-POWERED TRUCK WITH TWO-TON COMBINATION BODY. | WRA-4770 | | BOSTON FREIGHTLINER, INC. | \$151,865.00 |
| P-5 | 12/17/19 | WHOLE EFFLUENT TOXICITY TESTING OF THE MWRA'S NPDES SAMPLES ASSIGNMENT AND ASSUMPTION OF THE THREE-YEAR PURCHASE ORDER CONTRACT FOR WHOLE EFFLUENT TOXICITY TESTING OF THE MWRA'S NPDES SAMPLES FROM ENVIROSYSTEMS, INC. TO ENTHALPY ANALYTICAL, LLC AND ISSUANCE OF A NEW PURCHASE ORDER CONTRACT TO ENTHALPY ANALYTICAL, LLC. | WRA-4641 | | ENTHALPY ANALYTICAL, LLC | \$53,845.00 |
| P-6 | 12/20/19 | BACKUP SYSTEM ADMINISTRATION SERVICES AWARD OF A PURCHASE ORDER UNDER STATE CONTRACT ITS63STAFFAUGCAT1 TO THE LOWEST RESPONSIVE BIDDER FOR BACKUP SYSTEM ADMINISTRATION SERVICES. MWRA'S MIS DEPARTMENT REQUIRES AN INTERIM BACKUP SYSTEM ADMINISTRATOR TO SUPPORT THE DAY-TO-DAY OPERATION OF THE BACKUP ENVIRONMENT TO ENSURE HIGH AVAILABILITY, PERFORMANCE AND EFFICIENCY. | WRA-4781Q | | THE COMPUTER MERCHANT, LTD. | \$87,174.75 |
| P-7 | 12/23/19 | PURCHASE OF 50 TELOG 4G LTE MODEMS AWARD OF A SOLE SOURCE PURCHASE ORDER TO THE LOWEST RESPONSIVE BIDDER FOR 50 4G LTE MODEMS FOR THE TELOG SYSTEM. | | | TELOG INSTRUMENTS, INC. | \$30,000.00 |
| P-8 | 12/23/19 | REPAIR OF ONE SODIUM HYPOCHLORITE STORAGE TANK AWARD OF A PURCHASE ORDER TO THE LOWEST RESPONSIVE BIDDER FOR THE REPAIR OF ONE OF TWO SODIUM HYPOCHLORITE STORAGE TANK AT THE DEER ISLAND TREATMENT PLANT. | WRA-4773 | | AMERICAN FIBERGLASS TANK REPAIR | \$31,500.00 |

CONSTRUCTION/PROFESSIONAL SERVICES DELEGATED AUTHORITY ITEMS NOVEMBER 1 - 30, 2019

| NO. | DATE OF AWARD | TITLE AND EXPLANATION | CONTRACT | AMEND/CO | COMPANY | FINANCIAL IMPACT |
|------|---------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|----------|---------------------------------|------------------|
| C-1. | 11/12/19 | SOUTHERN EXTRA HIGH PIPELINE - SECTION 111 - DEDHAM SOUTH FURNISH AND INSTALL A LINE STOP AND RESTRAINED DUCTILE IRON PIPE; FURNISH AND INSTALL REINFORCED CONCRETE DRAIN PIPE, DUCTILE IRON DRAIN PIPE, CATCH BASINS AND DRAIN MANHOLES ON RUSTCRAFT ROAD. | 7505 | 1 | RJV CONSTRUCTION CORP. | \$77,981.22 |
| C-2. | 11/12/19 | SOUTHERN EXTRA HIGH PIPELINE - SECTION 111 - DEDHAM NORTH FURNISH AND INSTALL PVC PIPE AND HYMAX COUPLINGS AT TEN LOCATIONS IN LIEU OF THE SPECIFIED; INCREASE THE POLICE DETAIL ALLOWANCE; EXTEND CONTRACT TERM BY 180 CALENDAR DAYS FROM NOVEMBER 25, 2019 TO MAY 23, 2020. | 7504 | 10 | P. GIOIOSO & SONS, INC. | \$100,000.00 |
| C-3. | 11/12/19 | CHELSEA CREEK HEADWORKS UPGRADE FURNISH AND INSTALL FAN PROTECTION CONTROL PANELS AND CONTROL POWER TRANSFORMERS (CPTs) AND LARGER CPTs IN LIEU OF SPECIFIED; THICKENER NO. 1 AND NO. 2; FURNISH AND INSTALL EXPLOSION PROOF BOXES, STAINLESS STEEL CONDUIT, FITTINGS, FLEXIBLE COUPLINGS AND WIRE FURNISH AND INSTALL A HOUSEKEEPING PAD, RELOCATE ODOR CONTROL FAN VARIABLE FREQUENCY DRIVE, EXTEND ELECTRICAL CONDUITS AND DEMOLISH ORIGINAL HOUSEKEEPING PAD; FIELD CUT THE EFFLUENT SLUICE GATE WALL THIMBLES. | 7161 | 33 | BHD/BEC 2015, A JOINT VENTURE | \$200,073.00 |
| C-4. | 11/14/19 | BELLEVUE 2 AND TURKEY HILL WATER TANK PAINTING PROJECT FURNISH AND INSTALL A WATERPROOF COATING TO THE FOUNDATION REPAIRS, PROVIDE EXTERNAL BRACING AND CONCRETE BEARING SURFACE FOR REPAIRS; EXTEND CONTRACT TERM BY 18 CALENDAR DAYS FROM SEPTEMBER 28, 2019 TO OCTOBER 16, 2019. | 7634 | 9 | WORLDWIDE INDUSTRIES CORP. | \$160,000.00 |
| C-5. | 11/21/19 | WIND TURBINE MAINTENANCE FINAL BALANCING CHANGE ORDER TO DECREASE THE FOLLOWING BID ITEMS TO REFLECT ACTUAL QUANTITIES USED: MAINTENANCE AND REPAIR SERVICES, REPLACEMENT PARTS, FACTORY AUTHORIZED SERVICE REPRESENTATIVE, FIRE DEPARTMENT SERVICES/PERMITS. | 5555 | 4 | BALDWIN CRANE & EQUIPMENT CORP. | (\$70,828.76) |
| C-6. | 11/21/19 | ROOFING REPLACEMENT, CLINTON WASTEWATER TREATMENT PLANT PROVIDE A PERMANENT GUARDRAIL SYSTEM AROUND ROOF ACCESS HATCHES, ROOF ACCESS WALKWAY AND HVAC UNITS NEAR ROOF EDGE AT SIX CLINTON WASTEWATER TREATMENT PLANT BUILDINGS; EXTEND CONTRACT TERM BY 90 CALENDAR DAYS FROM SEPTEMBER 25, 2019 TO DECEMBER 24, 2019 | 7450 | 1 | GREENWOOD INDUSTRIES, INC. | \$93,498.08 |
| C-7. | 11/26/19 | PRISON POINT CSO FACILITY TIDE GATE REPLACEMENT AWARD OF A CONTRACT TO THE LOWEST RESPONSIVE BIDDER FOR THE PRISON POINT CSO FACILITY TIDE GATE REPLACEMENT FOR A TERM OF 270 CALENDAR DAYS. | OP-405 | AWARD | UNIFIED CONTRACTING, INC. | \$124,920.00 |
| C-8. | 11/26/19 | COMMONWEALTH AVENUE PUMP STATION IMPROVEMENTS FURNISH AN AIS COMPLAINT 60-INCH MECHANICAL JOINT RESTRAINT DEVICE MANUFACTURED BY EBAA IN LIEU OF THE DEVICE MANUFACTURED BY SIGMA; FURNISH AND INSTALL AN EPA AMERICAN IRON AND STEEL COMPLAINT 60-INCH BY 24-INCH DUCTILE IRON TEE FITTING CONFORMING TO THE AMERICAN WATER WORKS ASSOCIATION C153 STANDARDS IN LIEU OF THE SPECIFIED AWWA C110 STANDARDS; PROVIDE AN ALLOWANCE FOR THE CITY OF NEWTON FIRE WATCH SERVICES. | 7524 | 2 | WES CONSTRUCTION CORP. | \$146,503.51 |


CONSTRUCTION/PROFESSIONAL SERVICES DELEGATED AUTHORITY ITEMS DECEMBER 1 - 31, 2019

| NO. | DATE OF AWARD | TITLE AND EXPLANATION | CONTRACT | AMEND/CO | COMPANY | FINANCIAL IMPACT |
|------|---------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|----------|---------------------------------------------------------------|------------------|
| C-1. | 12/04/19 | FUEL MANAGEMENT SYSTEM REPLACEMENT AT THE CHELSEA AND DEER ISLAND TREATMENT PLANT AWARD OF A CONTRACT TO THE LOWEST RESPONSIVE BIDDER FOR THE HARDWARE, SOFTWARE, INSTALLATION AND CONFIGURATION OF A NEW FUEL SYSTEM MANAGEMENT SYSTEM LOCATED AT THE CHELSEA FACILITY AND THE DEER ISLAND TREATMENT PLANT FOR A TERM OF FOUR MONTHS. | A620 | AWARD | FLEET DATA SYSTEMS, LLC | \$99,608.00 |
| C-2. | 12/05/19 | OVERHEAD DOOR MAINTENANCE SERVICES FINAL BALANCING CHANGE ORDER TO DECREASE THE FOLLOWING BID ITEMS TO REFLECT ACTUAL QUANTITIES USED: EMERGENCY MAINTENANCE SERVICES AND REPLACEMENT PARTS. | OP-349 | 1 | SAFEWAY OVERHEAD CRANE SERVICE, INC. | (\$25,857.89) |
| C-3. | 12/05/19 | ROOFING REPLACEMENT, CLINTON WASTEWATER TREATMENT PLANT REMOVE AND DISPOSE OF ADDITIONAL ROOFING MATERIAL AT OPERATIONS BUILDING, HEADWORKS BUILDING - UPPER AND LOWER ROOF AND CHEMICAL BUILDING; REPLACE SEVEN ADDITIONAL ROOF DRAINS; PROVIDE ONE OVERFLOW SCUPPER ON THE OPERATIONS BUILDING; PROVIDE ONE STAINLESS STEEL RAIN COLLAR AT THE EXISTING GENERATOR FLUE. | 7450 | 2 | GREENWOOD INDUSTRIES, INC | \$46,952.25 |
| C-4. | 12/09/19 | PAINTING OF DEER ISLAND STEEL WATER STORAGE TANK POWER TOOL CLEAN AND OVERCOAT OF THE BOTTOM SECTION OF THE INTERIOR LOWER LEVEL WALL IN LIEU OF THE SPECIFIED, STEAM CLEAN THE REMAINDER OF WALLS AND CEILING IN INTERIOR LOWER LEVEL; DELETE THE REQUIREMENT TO INSTALL BIRD SCREENS FOR THE VENT. | 7601 | 1 | ATLAS PAINTING AND SHEETING CORP. | (\$56,839.38) |
| C-5. | 12/09/19 | DIESEL GENERATOR MAINTENANCE JOHN J. CARROLL WATER TREATMENT PLANT AWARD OF A CONTRACT TO THE LOWEST RESPONSIVE BIDDER FOR DIESEL GENERATOR MAINTENANCES AT THE JOHN J. CARROLL WATER TREATMENT PLANT FOR A TERM OF 1,095 CALENDAR DAYS. | OP-402 | AWARD | KNM HOLDINGS, LLC d/b/a AUTHORIZED SERVICES OF NEW ENGLAND | \$521,500.00 |
| C-6. | 12/23/19 | SECURITY EQUIPMENT MAINTENANCE & REPAIR SERVICES INCREASE THE FOLLOWING BID ITEMS AND EXTEND THE CONTRACT TERM BY 90 CALENDAR DAYS FROM JANUARY 1, 2020 TO MARCH 31, 2020: SCHEDULED INFORMATION TECHNOLOGY SYSTEM OPERATION AND MAINTENANCE SERVICES, NON-EMERGENCY ON-CALL TECHNOLOGY SYSTEM OPERATIONS MAINTENANCE REPAIR SERVICES, SPARE PARTS AND REPLACEMENT PARTS AND MARK-UP ON SPARE PARTS. | EXE-038 | 1 | VISCOM SYSTEMS, INC. | \$47,489.58 |

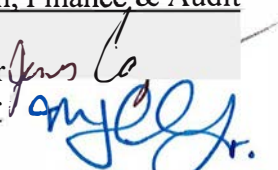
POSITION CONTROL REGISTER (PCR) LOCATION CHANGES DECEMBER 2019

| <u>DATE OF CHANGE</u> | <u>POSITION TITLE</u> | <u>CURRENT PCR#</u> | <u>CURRENT COST CENTER</u> | <u>NEW PCR #</u> | <u>NEW COST CENTER</u> | <u>REASON FOR CHANGE</u> |
|-----------------------|------------------------|---------------------|-----------------------------------------|------------------|-------------------------|--------------------------|
| 12/14/2019 | Unit Supervisor (Mech) | 2988030 | Operations - Trade Labor Maintenance | 5470083 | Operations - EQ General | Employee reassignment. |

STAFF SUMMARY

TO: Board of Directors
FROM: Frederick A. Laskey, Executive Director 
DATE: January 15, 2020
SUBJECT: FY20 Financial Update and Summary Through December 2019

COMMITTEE: Administration, Finance & Audit

James J. Coyne, Budget Manager 

Michael J. Cole, Budget Director 

Preparer/Title

INFORMATION

VOTE


Thomas J. Durkin

Director, Finance

RECOMMENDATION:

For information only. This staff summary provides the preliminary financial results and variance highlights for Fiscal Year 2020 through December 2019, comparing actual spending to the budget.

DISCUSSION:

Starting this month, MWRA is continuing the practice of setting aside favorable Capital Finance variances into the Defeasance Account with the intention of using these funds to defease debt and provide rate relief in future years. Targeted defeasances are a critical component of the Authority's multi-year rate management strategy. As such, in December the year-to-date debt related savings of \$5.0 million was transferred to the Defeasance Account. This favorable variance is the result of the lower than budgeted variable rates and refunding savings.

The total Year-to-Date variance for the FY20 CEB is \$10.5 million, due to lower direct expenses of \$5.1 million, indirect expenses of \$3.5 million, and higher revenue of \$1.9 million.

FY20 Current Expense Budget

The CEB expense variances through December 2019 by major budget category were:

- Lower Direct Expenses of \$5.1 million or 4.1% under budget. Spending was lower for Wages & Salaries, Maintenance, Professional Services, Worker's Compensation, Fringe Benefits, Chemicals, Other Materials, and Training & Meetings. This is partially offset by higher spending on Utilities, Overtime, and Other Services.
- Lower Indirect Expenses of \$3.5 million or 14.1% under budget due to lower Watershed reimbursements, and lower claim spending for Insurance.

FY20 Budget and FY20 Actual Year-to-Date Variance by Expenditure Category
(in millions)

| | FY20 Budget YTD | FY20 Actual YTD | \$ Variance | % Variance |
|-------------------|--------------------|--------------------|---------------|--------------|
| Direct Expenses | \$122.5 | \$117.4 | -\$5.1 | -4.1% |
| Indirect Expenses | \$25.1 | \$21.5 | -\$3.5 | -14.1% |
| Capital Financing | \$229.0 | \$229.0 | \$0.0 | 0.0% |
| Total | \$376.6 | \$368.0 | -\$8.6 | -2.3% |

Totals may not add due to rounding

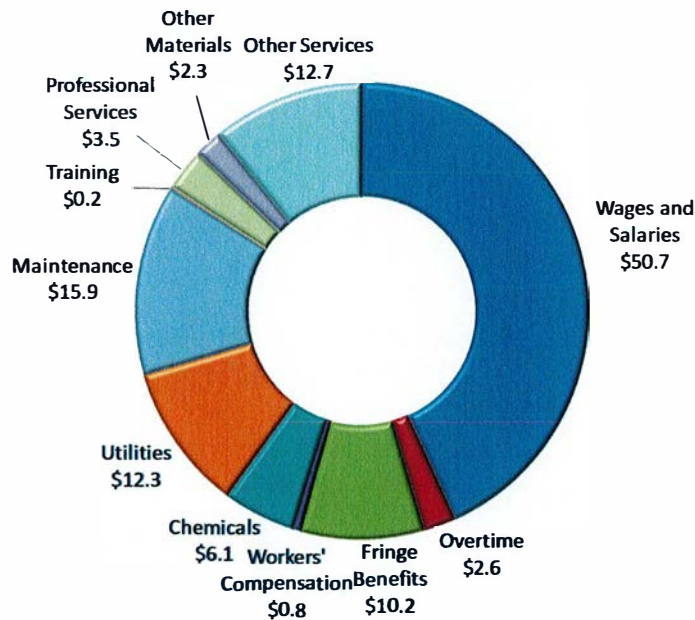
Total Revenues of \$398.9 million were \$1.9 million or 0.5% over budget. The biggest drivers of the variance are Stoughton's \$1.1 million prepayment of their entrance fee note and favorable Other Revenue of \$0.8 million driven by income from the disposal of equipment, Miscellaneous Revenue, Energy Revenue, and Energy Rebates.

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

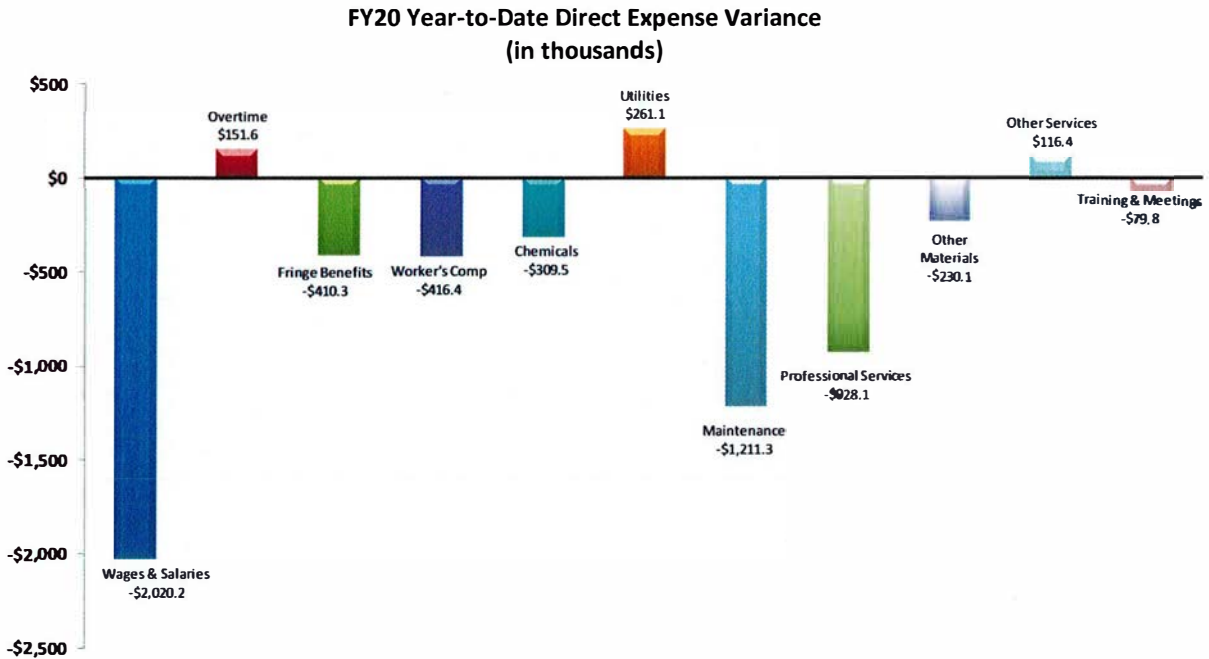
Direct Expenses

Year-to-date direct expenses totaled \$117.4 million, which was \$5.1 million or 4.1% less than budgeted.

FY20 Year-to-Date Direct Expenses
(in millions)

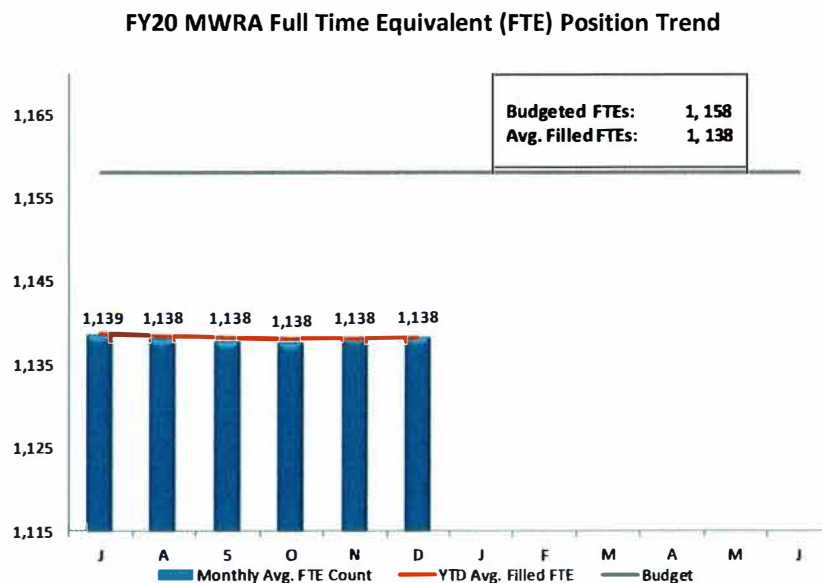


Lower than budgeted spending for Wages & Salaries, Maintenance, Professional Services, Worker's Compensation, Fringe Benefits, Chemicals, Other Materials, and Training and Meetings. This is partially offset by higher spending on Utilities, Overtime, and Other Services.



Wages and Salaries

Wages and Salaries are under budget by \$2.0 million or 3.8%. Through December, there were 20 fewer average FTEs (1,138 versus 1,158 budget) or 1.7% and lower average salaries for new hires versus retirees. The timing of backfilling vacant positions and lower leave balance accruals also contributed to Regular Pay being under budget.



Maintenance

Maintenance was lower than budget by \$1.2 million or 7.1%, largely driven by the timing of projects. Maintenance Services are under budget by \$1.9 million driven by Plant and Machine Services (\$1.5 million), Computer Software Licenses (\$0.3 million), and Pipe Services (\$0.1 million). This is offset by Maintenance Materials which are over budget by \$0.7 million, driven by Plant and Machine Materials (\$0.8 million).

Professional Services

Professional Services were lower than budget by \$0.9 million or 20.8%. The overall underspending year-to-date is due to Computer Systems Consultant (\$0.6 million) in MIS and Other Professional Services (\$0.2 million) in Finance and Law.

Worker's Compensation

Worker's Compensation expenses were lower than budget by \$0.4 million or 35.4%. The lower expenses were primarily due to favorable variances in compensation payments (\$305,000), medical payments (\$80,000), and administrative expenses (\$31,000).

Fringe Benefits

Fringe Benefit spending was lower than budget by \$0.4 million or 3.9%. This is primarily driven by lower Health Insurance costs of \$0.3 million due to fewer employees and retirees participating in health insurance plans, the change to the ratio of employee contribution for past employees versus new hires that contribute at a higher percentage, and change from family to individual plans which are less costly. In addition, Paid Family Medical Leave was under budget by \$0.1 million due to a delay in the start of plan contributions until October 1, 2019.

Chemicals

Chemicals were lower than budget by \$0.3 million or 4.8%. Lower than budget spending on Soda Ash of \$0.2 million at the Carroll Water Treatment Plant and the Clinton Wastewater Treatment Plant and Activated Carbon of \$0.2 million is driven by DITP due to lower than expected cost. This is offset by higher than budget spending on Sodium Bisulfite of \$0.1 million driven by the Deer Island Wastewater Treatment Plant due to increasing inventory volume and higher flows. The Deer Island Wastewater Treatment Plant flows are 1.6% higher than the budget and the Carroll Water Treatment Plant flows are 4% less than the budget through December. However, the timing of deliveries is an important factor.

Other Materials

Other Materials were lower than budget by \$0.2 million or 8.9%. Lower than budgeted spending for Computer Hardware of \$0.4 million in MIS, offset by higher than budgeted spending for Vehicle Purchases of \$0.1 million due to timing.

Training & Meetings

Training & Meetings expenses were lower than budget by \$80,000 or 30.5% driven by lower spending in Tunnel Redundancy, Field Operations, MIS, and DITP.

Utilities

Utilities were higher than budget by \$0.3 million or 2.2%. Diesel Fuel is overspent by \$0.7 million driven by DITP due to timing of deliveries and replenishing the inventory used during the HEEC cable installation (the outage lasted 18 days vs. the 5 days anticipated). This is partially offset by underspending in Electricity of \$0.6 million driven by DITP which had less purchased power in August when the CTGs were operated during the HEEC cable installation and in Field Operations due to lower rates for Interval accounts.

Overtime

Overtime expenses were higher than budget by \$0.2 million or 6.2%. The over spending is mainly due to coverage during the HEEC cable installation in August, 2019.

Other Services

Other Services were higher than budget by \$0.1 million or 0.9%. Higher than budgeted spending for Sludge Pelletization of \$0.4 million is due to higher year-to-date quantities. This is offset by lower spending for Telecommunication Services of \$0.2 million in MIS and FOD, and Other Services of \$0.1 million for a number of services.

Indirect Expenses

Year-to-date Indirect Expenses totaled \$21.5 million, which is \$3.5 million or 14.1% under budget. There are variances within the lines that comprise Indirect Expenses, including lower Watershed Reimbursements and Insurance claims. Watershed costs are lower than budget by \$3.5 million due to lower costs associated with fringe benefits, compensation, equipment, major projects, and prior period adjustments.

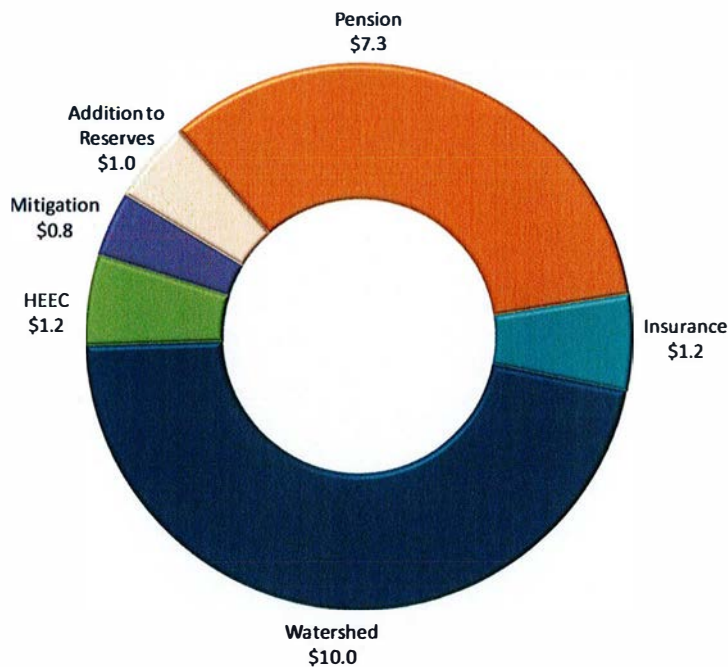
FY20 Watershed Protection Actual Year-to-Date Variance

| \$ in millions | YTD Budget | YTD Actual | YTD \$ Variance | YTD % Variance |
|---------------------------------------------|-------------------|-------------------|------------------------|-----------------------|
| Operating Expenses | 8.9 | 6.8 | -2.1 | -23.3% |
| Major Project Expenses | 0.8 | 0.6 | -0.2 | -24.2% |
| PILOT | 4.3 | 4.3 | 0.0 | 0.0% |
| Subtotal | 14.0 | 11.7 | -2.3 | -16.3% |
| Revenue offset | 0.5 | 0.5 | 0.1 | 19.9% |
| Current fiscal year net total budget | 13.5 | 11.1 | -2.4 | -17.5% |
| Prior year 4th quarter accrual true-up | 0.0 | -0.6 | -0.6 | |
| FY16 credit balance | 0.0 | -0.5 | -0.5 | |
| Total Budget | 13.5 | 10.0 | -3.5 | -25.6% |

MWRA reimburses the Commonwealth of Massachusetts Department of Conservation (DCR) and Recreation - Division of Water Supply Protection – Office of Watershed Management for expenses. The reimbursements are presented for payment quarterly in arrears. Accruals are being made monthly based on estimated expenses provided by DCR and true-up quarterly based on the quarterly invoice. MWRA’s budget is based on the annual Fiscal Year Work Plan approved by the Massachusetts Water Supply Protection Trust.

December’s estimated expenses were not available due to the timing of the DCR’s accounting calendar but will be included in the quarterly invoice expected in mid-January. Because of that, the December expenses have been accrued to budget. The FTE count at the end of December 2019 was not provided by the DCR Watershed Division.

**FY20 Year-to-date Indirect Expenses-YTD
(in millions)**



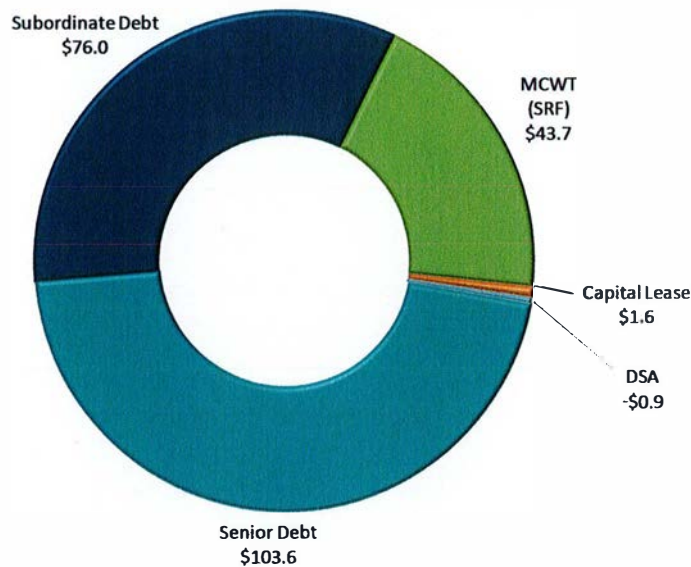
Capital Financing

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

Year-to-date Capital Financing expenses for FY20 totaled \$229.0 million, which is right on budget. In December the year-to-date debt related savings of \$5.0 million was transferred to the Defeasance Account. This favorable variance is the result of the lower than budgeted variable rates and refunding savings. Senior debt service is over budget by \$5.0 million as a result of the 2019 Series G refunding for savings which moved debt service expense from the subordinate to

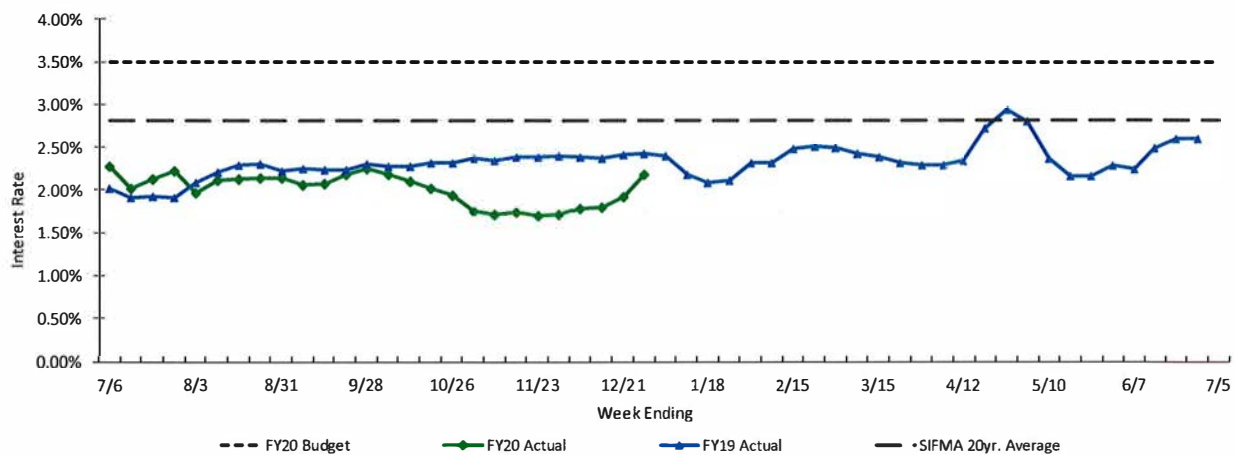
the senior lien. This increase is offset by a corresponding decrease of \$6.0 million to the subordinate debt service expense.

**Year-to-date FY20 Capital Finance
(in millions)**



The graph below reflects the FY20 actual variable rate trend by week year-to-date against the FY20 Budget.

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



Revenue & Income

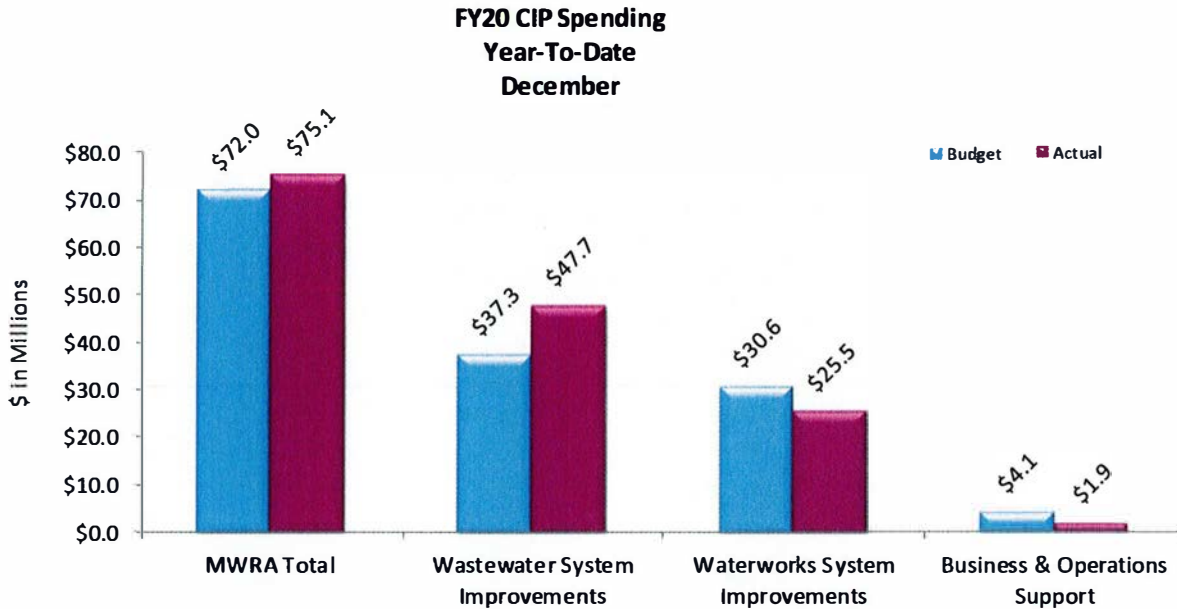
Year-to-date Revenues of \$398.9 million were over budget by \$1.9 million or 0.5%. Other User Charges were over budget by \$0.9 million or 22.1% due to Stoughton prepaying their entrance fee note. Other Revenue was favorable to budget by \$0.8 million due to income from the disposal of

equipment (\$0.3 million), miscellaneous revenue (\$0.2 million), energy revenue for RPS credits (\$0.2 million), grant funds received (\$0.1 million), and energy rebates (\$0.1 million).

FY20 Capital Improvement Program

Capital expenditures in Fiscal Year 2020 through December total \$75.1 million, \$3.1 million or 4.3% over budget.

After accounting for programs which are not directly under MWRA’s control, most notably the Inflow and Infiltration (I/I) grant/loan program, the Local Water System Assistance loan program, and the community managed Combined Sewer Overflow (CSOs) projects, capital spending totaled \$53.5 million, \$3.8 million or 6.6% under budget.



Overall, CIP spending reflects the overspending in Wastewater Improvements (\$10.4 million), and underspending in Waterworks (\$5.1 million) and Business and Operations Support (\$2.1 million). Major variances in Wastewater are primarily due to greater than anticipated community requests for grants and loans for the I/I Local Financial Assistance Program and greater than anticipated progress on the Residuals Electrical/Mechanical/Drum Dryer Replacement and Chelsea Creek Upgrades Construction, earlier than anticipated equipment purchase for the Wastewater Metering project, and scheduled work in FY19 that was completed in FY20 for the Clinton Roofing Replacement project. This was partially offset by delayed award for the Nut Island Odor Control HVAC Improvements and Dorchester Interceptor Sewer Construction contracts and timing of work for the Deer Island Gravity Thickener Rehabilitation contract.

Waterworks variances are primarily due to less than budgeted community loan requests, less than anticipated consultant progress on Section 50/57 Water and Sections 21/20/19 Sewer Design CA/RI, underspending of some of the sub-tasks for the Wachusett Pumping Station Design CA/RI

contract which will be reallocated to other sub-tasks, MBTA crossing issues for Southern Extra High (SEH) Section 111 Construction 3, and paving delays for the Southern Extra High (SEH) Section 111 Construction 2. This was partially offset by contractor progress on the Northern Intermediate High Redundancy Sections 89 & 29 Construction Phase 2, timing of watershed land purchases, and work scheduled in FY19 that was completed in FY20 for the Cosgrove Intake Roof Replacement.

FY20 Budget and FY20 Actual Year-to-Date Variance by Program
(in millions)

| \$ in Millions | Budget | Actuals | \$ Var. | % Var. |
|---------------------------------------------|---------------|---------------|----------------|---------------|
| Wastewater System Improvements | | | | |
| Interception & Pumping | 14.6 | 12.5 | (2.2) | -14.8% |
| Treatment | 7.0 | 6.5 | (0.5) | -7.4% |
| Residuals | 2.9 | 6.1 | 3.2 | 107.9% |
| CSO | 0.6 | 0.7 | 0.1 | 15.6% |
| Other | 12.2 | 22.0 | 9.8 | 80.7% |
| Total Wastewater System Improvements | \$37.3 | \$47.7 | \$10.4 | 27.8% |
| Waterworks System Improvements | | | | |
| Drinking Water Quality Improvements | 1.0 | 0.7 | (0.4) | -35.5% |
| Transmission | 7.0 | 6.3 | (0.7) | -9.6% |
| Distribution & Pumping | 16.8 | 15.3 | (1.6) | -9.3% |
| Other | 5.8 | 3.3 | (2.5) | -43.6% |
| Total Waterworks System Improvements | \$30.6 | \$25.5 | (\$5.1) | -16.7% |
| Business & Operations Support | \$4.1 | \$1.9 | (\$2.1) | -52.8% |
| Total MWRA | \$72.0 | \$75.1 | \$3.1 | 4.3% |

Totals may not add due to rounding

FY20 Year-to-date Spending by Program:

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

Other Wastewater: Net overspending of \$9.8 million

- \$9.8 million for Community I/I due to greater than anticipated budgeted requests for grants and loans.

Residuals: Net overspending of \$3.2 million

- \$3.1 million for Electrical, Mechanical, and Dryer Drum Improvements due to greater than anticipated contractor progress and engineering costs and \$0.1 million for timing of final work completed for Sludge Tank and Silo Coating.

Other Waterworks: Net underspending of \$2.5 million

- \$2.9 million for the Local Water System Assistance Program due to less than budgeted loan requests.
- \$0.2 million for Gillis Pumping Station and Cottage Farm Roof Replacement due to delay in contractor mobilization.
- \$0.2 million DI Water Tank Painting due to timing of final work and pending credit change order.

- This underspending was partially offset by overspending of \$0.5 million for Cosgrove Intake Roof Replacement due to work scheduled in FY19 that was completed in FY20, and \$0.1 million for Generator Docking Station due to timing of work.

Interception & Pumping: Net underspending of \$2.2 million

- \$1.4 million for Nut Island Odor Control HVAC Improvements Design/CA/RI and Construction and \$0.8 million for Dorchester Interceptor Sewer Design and Construction due to delay in construction awards.
- \$0.2 million for Wastewater Metering Planning/Study and \$0.1 million for Wastewater Central Monitoring Design due to less than anticipated budgeted work.
- \$0.2 million for Prison Point Design/ESDC/REI due to delay in 100% Design Report review.
- \$0.1 million for Sections 191 and 192 Rehabilitation due to delay in the contract notice-to-proceed.
- This underspending was partially offset by overspending of \$0.5 million for Wastewater Metering Equipment due to equipment purchased earlier than anticipated, \$0.2 million for Chelsea Creek Headworks Upgrades construction due to greater than anticipated contractor progress, and \$0.2 million for Remote Headworks & Deer Island Shaft Study due to timing of work.

Business & Operations Support: Net underspending of \$2.1 million

- \$1.0 million for the timing of MIS work, \$0.4 million for timing of vehicle purchases, \$0.4 million for As-Needed Technical Assistance and Resident Engineering and Inspection Services due to lower than projected task order work, and \$0.3 million for Security Equipment & Installation due to timing of security initiatives.

Water Distribution and Pumping: Net underspending of \$1.6 million

- \$0.4 million for Southern Extra High Redundancy Construction 3 due to an issue with MBTA crossing and \$0.2 million for Construction 2 due to paving delays.
- \$0.5 million for Sections 50, 57 Water and Sections 21, 20, 19 Sewer and \$0.2 million for Sections 25, 75, 59, and 60 Design due to consultants scheduled tasks being less than anticipated.
- \$0.2 million for Cathodic Protection Shaft E & L for final work scheduled for FY20 that was completed in FY19.
- \$0.2 million for Section 22 Rehabilitation Alternatives Analysis and Environmental Permitting due to schedule change.
- \$0.2 million for NIH Section 89 and 29 Design/CA/RI due to less than anticipated contract administration/resident inspection budgeted spending and \$0.1 million for NIH Sections 89 and 29 Replacement Design due to field testing being behind schedule.
- This underspending was partially offset by overspending of \$0.4 million for Northern Intermediate High Section 89 & 29 Redundancy Construction Phase 2 due to contractor progress and \$0.1 million for Section 56 Pipe Demolition for final work completed.

Waterworks Transmission: Net underspending of \$0.7 million

- \$0.5 million for Wachusett Aqueduct Pump Station Design/ESDC/REI due to underspending of some of the sub-tasks which will be reallocated to other sub-tasks.

- \$0.2 million for WASM 3 MEPA/Design/CA/RI and \$0.2 million for Commonwealth Avenue Pumping Station Construction due to progress being less than anticipated.
- \$0.2 million for Chestnut Hill Emergency Pumping Station Design/CA due to longer than anticipated receipt of hydraulic information.
- \$0.1 million for Wachusett Lower Gate House Interim Pipe Repair due to delayed notice-to-proceed.
- This underspending was partially offset by \$0.5 million for Watershed Land Acquisition due to timing of land purchases and \$0.1 million for Metropolitan Tunnel Redundancy Program Support Services due to greater than anticipated consultant progress.

Wastewater Treatment: Net underspending of \$0.5 million

- \$0.2 million for Gravity Thickener Rehabilitation, \$0.2 million for Motor Control Center Switchgear Replacement/ESDC, and \$0.1 million for Combined Heat and Power Energy Alternatives Study due to timing of work.
- \$0.3 million for As-Needed Design Services due to less than anticipated task order work.
- \$0.2 million for Winthrop Terminal Facility VFD and Motors Replacements due to potential issues with equipment.
- This underspending was partially offset by overspending of \$0.5 million for Clinton Roofing Rehabilitation due to work scheduled in FY19 that was completed in FY20.

Drinking Water Quality Improvements: Net underspending of \$0.4 million

- \$0.2 million due to updated schedule for Ancillary Modifications Construction work.
- \$0.1 million due to timing of task order work.
- \$0.1 million for Carroll Water Treatment Plant HVAC Replacement due to long lead time for equipment.

Combined Sewer Overflow: Net overspending of \$0.1 million

- \$0.1 million for CSO Performance Assessment due to greater than anticipated consultant progress.

Construction Fund Balance

The construction fund balance was \$152.2 million as of the end of December. Commercial Paper/Revolving Loan available capacity was \$222 million.

ATTACHMENTS:

Attachment 1 – Variance Summary December 2019

Attachment 2 – Current Expense Variance Explanations

Attachment 3 – Capital Improvement Program Variance Explanations

ATTACHMENT 1
FY20 Actuals vs. FY20 Budget

| | Dec 2019 Year-to-Date | | | | |
|------------------------------------|--------------------------|------------------------|--------------------------|---------------|-----------------------|
| | Period 6 YTD Budget | Period 6 YTD Actual | Period 6 YTD Variance | % | FY20 Approved |
| <u>EXPENSES</u> | | | | | |
| WAGES AND SALARIES | \$ 52,752,880 | \$ 50,732,705 | \$ (2,020,175) | -3.8% | \$ 109,953,483 |
| OVERTIME | 2,461,744 | 2,613,360 | 151,616 | 6.2% | 4,898,965 |
| FRINGE BENEFITS | 10,642,977 | 10,232,647 | (410,330) | -3.9% | 21,717,533 |
| WORKERS' COMPENSATION | 1,177,128 | 760,729 | (416,399) | -35.4% | 2,354,256 |
| CHEMICALS | 6,438,332 | 6,128,834 | (309,498) | -4.8% | 11,811,222 |
| ENERGY AND UTILITIES | 11,997,847 | 12,258,993 | 261,146 | 2.2% | 24,454,796 |
| MAINTENANCE | 17,087,171 | 15,875,827 | (1,211,344) | -7.1% | 32,726,954 |
| TRAINING AND MEETINGS | 261,685 | 181,928 | (79,757) | -30.5% | 504,394 |
| PROFESSIONAL SERVICES | 4,453,032 | 3,524,945 | (928,087) | -20.8% | 8,295,315 |
| OTHER MATERIALS | 2,572,695 | 2,342,604 | (230,091) | -8.9% | 6,867,239 |
| OTHER SERVICES | 12,616,271 | 12,732,635 | 116,364 | 0.9% | 24,683,370 |
| TOTAL DIRECT EXPENSES | \$ 122,461,762 | \$ 117,385,207 | \$ (5,076,556) | -4.1% | \$ 248,267,527 |
| INSURANCE | \$ 1,305,611 | \$ 1,230,136 | \$ (75,475) | -5.8% | \$ 2,611,222 |
| WATERSHED/PILOT | 13,416,800 | 9,964,013 | (3,452,787) | -25.7% | 26,833,600 |
| HEEC PAYMENT | 1,155,631 | 1,155,630 | (1) | 0.0% | 4,429,316 |
| MITIGATION | 827,309 | 825,534 | (1,775) | -0.2% | 1,654,618 |
| ADDITIONS TO RESERVES | 1,047,142 | 1,047,142 | - | 0.0% | 2,094,284 |
| RETIREMENT FUND | 7,315,000 | 7,315,000 | - | 0.0% | 7,315,000 |
| POST EMPLOYEE BENEFITS | - | - | - | --- | 5,962,457 |
| TOTAL INDIRECT EXPENSES | \$ 25,067,493 | \$ 21,537,455 | \$ (3,530,038) | -14.1% | \$ 50,900,497 |
| STATE REVOLVING FUND | \$ 43,837,982 | \$ 43,741,190 | \$ (96,792) | -0.2% | \$ 92,797,294 |
| SENIOR DEBT | 98,596,887 | 103,640,896 | 5,044,009 | 5.1% | 202,299,609 |
| DEBT SERVICE ASSISTANCE | (890,235) | (890,235) | - | 0.0% | (890,235) |
| CURRENT REVENUE/CAPITAL | - | - | - | --- | 15,200,000 |
| SUBORDINATE MWRA DEBT | 85,877,606 | 79,856,604 | (6,021,002) | -7.0% | 169,609,845 |
| LOCAL WATER PIPELINE CP | - | - | - | --- | 5,846,823 |
| CAPITAL LEASE | 1,608,530 | 1,608,530 | - | 0.0% | 3,217,060 |
| DEBT PREPAYMENT | - | - | - | --- | - |
| VARIABLE DEBT | - | (3,901,462) | (3,901,462) | --- | - |
| DEFESANCE ACCOUNT | - | 4,975,246 | 4,975,246 | --- | 5,000,000 |
| TOTAL DEBT SERVICE | \$ 229,030,769 | \$ 229,030,769 | \$ - | 0.0% | \$ 493,080,396 |
| TOTAL EXPENSES | \$ 376,560,024 | \$ 367,953,431 | \$ (8,606,594) | -2.3% | \$ 792,248,420 |
| <u>REVENUE & INCOME</u> | | | | | |
| RATE REVENUE | \$ 380,883,500 | \$ 380,883,500 | \$ - | 0.0% | \$ 761,767,000 |
| OTHER USER CHARGES | 4,288,236 | 5,236,629 | 948,393 | 22.1% | 9,216,425 |
| OTHER REVENUE | 4,161,344 | 4,951,838 | 790,494 | 19.0% | 5,761,022 |
| RATE STABILIZATION | - | - | - | --- | - |
| INVESTMENT INCOME | 7,605,377 | 7,808,459 | 203,082 | 2.7% | 15,503,973 |
| TOTAL REVENUE & INCOME | \$ 396,938,457 | \$ 398,880,426 | \$ 1,941,969 | 0.5% | \$ 792,248,420 |

ATTACHMENT 2
Current Expense Variance Explanations

| Total MWRA | FY20 Budget YTD December | FY20 Actuals YTD December | FY20 YTD Actual vs. FY20 Budget | | Explanations |
|------------------------|--------------------------------|---------------------------------|------------------------------------|--------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| | | | \$ | % | |
| Direct Expenses | | | | | |
| Wages & Salaries | 52,752,880 | 50,732,705 | (2,020,175) | -3.8% | Wages and Salaries are under budget by \$2.0 million. Year to date, there have been 20 fewer average FTEs (1,138 versus 1,158 budget), lower average new hire salaries versus retirees, the timing of backfilling vacant positions, and lower leave balance accruals contributed to Regular Pay being under budget. |
| Overtime | 2,461,744 | 2,613,360 | 151,616 | 6.2% | Higher spending mainly in Deer Island for coverage during the HEEC cable installation. |
| Fringe Benefits | 10,642,977 | 10,232,647 | (410,330) | -3.9% | Lower than budget in Health Insurance of \$324,000, due to fewer than budgeted participants in health insurance plans, increased contribution by external new hires vs. lower contribution rates of staff retiring, and the shift from family to individual plans which are less expensive. In addition, PFML was under budget by \$70,000 due to a delay in the start of plan contributions until 10/1/19. |
| Worker's Compensation | 1,177,128 | 760,729 | (416,399) | -35.4% | The lower expenses were due to favorable variances in Compensation Payments of \$305,000, Medical Payments of \$80,000, and Administrative Expenses of \$31,000. Due to uncertainties of when spending will happen, the budget is spread evenly throughout the year. |
| Chemicals | 6,438,332 | 6,128,834 | (309,498) | -4.8% | Lower than budget spending on Soda Ash of \$195,000 at CWTP and Clinton and Activated Carbon of \$188,000 driven by DITP (\$156,000) and FOD (\$33,000) due to lower than expected cost at NITP. This is offset by higher than budget spending on Sodium Bisulfite of \$135,000 driven by DITP (\$121,000) due to increasing inventory and higher flows. DITP flows are 1.6% higher than the budget and CWTP flows are 4% less than the budget through December. It is important to note that Chemical variances are also based on deliveries which in general reflect the usage patterns. However, the timing of deliveries is an important factor. |
| Utilities | 11,997,847 | 12,258,993 | 261,146 | 2.2% | Underspending in Electricity of \$561,000 primarily at DITP (\$248,000) driven by less purchased power in August when DI operated the CTGs during the HEEC cable installation. Also, Field Operations (\$214,000) is under budget primarily due to lower rates for Interval accounts. Diesel Fuel is overspent by \$743,000 driven by DITP due to timing of deliveries and replenishing the inventory used during the HEEC cable installation (the outage lasted 18 days vs. the 5 days anticipated). |
| Maintenance | 17,087,171 | 15,875,827 | (1,211,344) | -7.1% | Underspending in Ongoing Maintenance by \$1.2 million is largely driven by the timing of projects. <i>Maintenance Services</i> are under budget by \$1.9 million driven by Plant and Machine Services (\$1.5 million), Computer Software Licenses (\$0.3 million), and Pipe Services (\$0.1 million). This is offset by <i>Maintenance Materials</i> which are over budget by \$0.7 million, driven by Plant and Machine Materials (\$0.8 million). |
| Training & Meetings | 261,685 | 181,928 | (79,757) | -30.5% | Lower than budget spending on Training & Meetings by \$80,000 is driven by Tunnel Redundancy (\$21,000), Field Operations (\$19,000), MIS (\$17,000), and DITP (\$14,000). |

ATTACHMENT 2
Current Expense Variance Explanations

| Total MWRA | FY20 Budget YTD December | FY20 Actuals YTD December | FY20 YTD Actual vs. FY20 Budget | | Explanations |
|------------------------------|--------------------------------|---------------------------------|------------------------------------|--------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| | | | \$ | % | |
| Professional Services | 4,453,032 | 3,524,945 | (928,087) | -20.8% | Lower than budget spending in Computer Systems Consultant of \$621,000 in MIS; Other Professional Services of \$169,000 in Finance, Law, and Administration; and Engineering Services of \$130,000 primarily for SCADA project delays due to staffing/resources and DITP for study of biosolids exemptions for MWRA pellets relative to MDAR regulations (study is on hold). |
| Other Materials | 2,572,695 | 2,342,604 | (230,091) | -8.9% | Lower than budgeted spending for Computer Hardware of \$357,000 driven by MIS, offset by higher than budgeted spending for Vehicle Purchases/Replacements of \$122,000 due to timing. |
| Other Services | 12,616,271 | 12,732,635 | 116,364 | 0.9% | Higher than budgeted spending for Sludge Pelletization of \$358,000 due to higher year-to-date quantities and Health/Safety of \$32,000 driven by DITP (\$26,000). This is offset by lower spending for Telecommunication Services of \$171,000 in MIS and FOD and Other Services of \$107,000 for a number of services. |
| Total Direct Expenses | 122,461,762 | 117,385,207 | (5,076,555) | -4.1% | |

ATTACHMENT 2
Current Expense Variance Explanations

| Total MWRA | FY20 Budget YTD December | FY20 Actuals YTD December | FY20 YTD Actual vs. FY20 Budget | | Explanations |
|------------------------------------|--------------------------------|---------------------------------|------------------------------------|---------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| | | | \$ | % | |
| Indirect Expenses | | | | | |
| Insurance | 1,305,611 | 1,230,136 | (75,475) | -5.8% | Lower claims than budgeted of \$69,000. |
| Watershed/PILOT | 13,416,800 | 9,964,013 | (3,452,787) | -25.7% | Lower Watershed Reimbursement of \$3.5 million due to \$1.1 million over accrual at end of FY19 as compared to actual amount paid in first quarter of FY20. December FY20 YTD favorable variance to budget estimated to be \$2.4 million driven by (1) lower Fringe Benefits of \$1.2 million, (2) lower Wages & Salaries of \$665,000, (3) lower spending on Equipment of \$217,000 due to timing of purchases, and (4) lower spending on major projects of \$188,000. Note: December's estimated expenses were not available due to the timing of the DCR's accounting calendar but will be included in the quarterly invoice expected in mid-January. Therefore, December's expenses have been accrued to budget. |
| HEEC Payment | 1,155,631 | 1,155,630 | (1) | 0.0% | |
| Mitigation | 827,309 | 825,534 | (1,775) | -0.2% | |
| Addition to Reserves | 1,047,142 | 1,047,142 | - | 0.0% | |
| Pension Expense | 7,315,000 | 7,315,000 | - | 0.0% | |
| Post Employee Benefits | - | - | - | | |
| Total Indirect Expenses | 25,067,493 | 21,537,455 | (3,530,038) | -14.1% | |
| Debt Service | | | | | |
| Debt Service | 229,921,004 | 229,921,004 | - | 0.0% | Senior debt service is over budget by \$5.0 million as a result of the 2019 Series G refunding for savings which moved debt service expense from the subordinate to the senior lien. This increase is offset by a corresponding decrease of \$6.0 million to the subordinate debt service expense. |
| Debt Service Assistance | (890,235) | (890,235) | - | 0.0% | |
| Total Debt Service Expenses | 229,030,769 | 229,030,769 | - | 0.0% | |
| Total Expenses | 376,560,024 | 367,953,431 | (8,606,593) | -2.3% | |

**ATTACHMENT 2
Current Expense Variance Explanations**

| Total MWRA | FY20 Budget YTD December | FY20 Actuals YTD December | FY20 YTD Actual vs. FY20 Budget | | Explanations |
|------------------------------------------|--------------------------------|---------------------------------|------------------------------------|-------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| | | | \$ | % | |
| Revenue & Income | | | | | |
| Rate Revenue | 380,883,500 | 380,883,500 | - | 0.0% | |
| Other User Charges | 4,288,236 | 5,236,629 | 948,393 | 22.1% | \$1.1 million prepayment of entrance fee note by Stoughton. |
| Other Revenue | 4,161,344 | 4,951,838 | 790,494 | 19.0% | Disposal of surplus materials of \$257,000; Miscellaneous Revenue of \$206,000 primarily associated with worker's compensation reimbursement for older claims; \$183,000 for Energy Revenue for RPS credits; \$106,000 in grant money (Commonwealth Operating Grant for \$44,000 and DCR Aqueduct Trails Grant for \$62,000); and Energy Rebates of \$81,000. |
| Investment Income | 7,605,377 | 7,808,459 | 203,082 | 2.7% | Investment Income is favorable due to higher than anticipated balances offset by lower than budget short-term rates (2.16% actual vs. 2.25% budget). |
| Total Revenue | 396,938,457 | 398,880,426 | 1,941,969 | 0.5% | |
| Net Revenue in Excess of Expenses | 20,378,433 | 30,926,995 | 10,548,562 | | |

**ATTACHMENT 3
FY20 CIP Year-to-Date Variance Report (\$000's)**

| | FY20 Budget YTD December | FY20 Actuals YTD December | YTD Actuals vs. Budget | | Explanations |
|------------------------------|--------------------------------|---------------------------------|------------------------|--------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| | | | \$ | % | |
| Wastewater | | | | | |
| Interception & Pumping (I&P) | \$14,647 | \$12,474 | (\$2,173) | -14.8% | <u>Underspending</u> Nut Island Odor Control & HVAC Improvements - Construction: \$1.1M (schedule shift) Interceptor Renewal No. 3, Dorchester Interceptor Sewer - Design, CA/RI and Construction: \$825k (schedule shift) Nut Island Odor Control & HVAC Design/CA/REI: \$258k (CA and REI services delayed as a result of construction schedule shift) Wastewater Meter System Planning/Study/Design: \$180k, and Wastewater Central Monitoring Design & Programming Services: \$141k (less than anticipated budgeted work) Prison Point Rehabilitation - Design/CA/RI: \$167k (delay in 100% Design Report review) Sections 191 & 192 Rehabilitation: \$125k (delay in the contract notice-to-proceed) Other smaller projects totaling \$178k. <u>Offset Overspending</u> Wastewater Metering Asset Protection/Equipment Purchases: \$486k (sooner than anticipated equipment purchases) Chelsea Creek Headworks Upgrades - Construction: \$164k (contractor progress) Remote Headworks & Deer Island Shaft - Study: \$151k (timing of work) |
| Treatment | \$7,003 | \$6,486 | (\$518) | -7.4% | <u>Underspending</u> As-Needed Design: \$281k (less than anticipated task order work) Gravity Thickener Rehab: \$216k, Motor Control Center Switchgear Replacement/ESDC/REI \$154k, and Combined Heat and Power Energy Alternatives Study: \$105k (timing of work) <u>Offset Overspending</u> Clinton Roofing Rehabilitation: \$450k (work scheduled for FY19 performed in FY20) |
| Residuals | \$2,926 | \$6,084 | \$3,158 | 107.9% | <u>Overspending</u> Residuals Electrical/Mechanical/Drum Replacements: \$3.1M (contractor progress) |
| CSO | \$584 | \$675 | \$91 | 15.6% | CSO Performance Assessment: \$147K (greater than anticipated consultant progress) |
| Other Wastewater | \$12,164 | \$21,983 | \$9,819 | 80.7% | <u>Overspending</u> I/I Local Financial Assistance: \$9.8M (greater than budgeted requests for grants and loans) |
| Total Wastewater | \$37,324 | \$47,702 | \$10,378 | 27.8% | |


**ATTACHMENT 3
FY20 CIP Year-to-Date Variance Report (\$000's)**

| | FY20 Budget YTD December | FY20 Actuals YTD December | YTD Actuals vs. Budget | | Explanations |
|-------------------------------------|--------------------------------|---------------------------------|------------------------|--------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| | | | \$ | % | |
| Waterworks | | | | | |
| Drinking Water Quality Improvements | \$1,027 | \$663 | (\$364) | -35.5% | Carroll Water Treatment Plant Ancillary Modifications - Construction: \$173k (updated schedule) Technical Assistance 9 & 10: \$145k (timing of task order work) HVAC Equipment Replacement: \$102k (long lead time for equipment) |
| Transmission | \$6,964 | \$6,294 | (\$670) | -9.6% | <u>Underspending</u> Wachusett Aqueduct Pumping Station - Design/ESDC/RI: \$506k (underspending of some of the sub-tasks which will be reallocated to other sub-tasks) WASM 3 - MEPA/Design/CA/RI: \$240k, and Commonwealth Ave Pumping Station Improvements Construction: \$207k (progress less than anticipated) Chestnut Hill Emergency Pump Station - Design/CA: \$158k (longer than anticipated receipt of hydraulic information) Wachusett Lower Gate House Interim Pipe Repair: 150k (delayed notice-to-proceed) <u>Offset Overspending</u> Watershed Land Acquisition: \$509k (timing of land purchases) Metropolitan Tunnel Redundancy Program Support Services: \$126k (consultant progress greater than anticipated) |
| Distribution & Pumping | \$16,826 | \$15,265 | (\$1,560) | -9.3% | <u>Underspending</u> Sections 50 & 57 Water & 21/20/19 Sewer Rehab - Design/CA/RI: \$532k (less than anticipated consultant work) SEH Redundancy Pipeline Section 111 - Construction Phase 3: \$352k (delay due to MBTA crossing issue) SEH Redundancy Pipeline Section 111 - Construction Phase 2: \$228k (paving delayed due to Eversource work) Cathodic Protection Shafts E & L: \$212k (work scheduled for FY20 performed in FY19) Sections 25, 75, 59 & 60 Replacement - Design/CA/RI: \$184k (scheduled tasks being less than anticipated) Section 89 & 29 Redundancy - Design/CA: \$171k (Construction Administration services less than anticipated) Section 89 & 29 Replacement Design/ESDC: \$115K (field testing being behind schedule) Other smaller projects totaling \$142k <u>Offset Overspending</u> Section 89 & 29 Redundancy Construction Phase 2: \$376k (contractor progress) |

**ATTACHMENT 3
FY20 CIP Year-to-Date Variance Report (\$000's)**

| | FY20 Budget YTD December | FY20 Actuals YTD December | YTD Actuals vs. Budget | | Explanations |
|------------------------------------------------|--------------------------------|---------------------------------|------------------------|---------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| | | | \$ | % | |
| Other Waterworks | \$5,775 | \$3,254 | (\$2,521) | -43.6% | <u>Underspending</u> Local Water Pipeline Financial Assistance Program: \$2.9M (less than budgeted requests for loans) Gillis Pump Station and Cottage Farm Roof Replacements: \$229k (delay in contractor mobilization) Deer Island Water Tank Repainting: \$182k (timing of final work and pending credit change order) <u>Offset Overspending</u> Cosgrove Intake Roof Replacement: \$470k: (work scheduled in FY19 performed in FY20) Generator Docking Station: \$107k (timing of work) Other smaller projects totaling \$213k |
| Total Waterworks | \$30,591 | \$25,476 | (\$5,114) | -16.7% | |
| Business & Operations Support | | | | | |
| Total Business & Operations Support | \$4,061 | \$1,917 | (\$2,144) | -52.8% | <u>Underspending</u> MIS Projects: \$1.0M (timing of work) FY19-23 Vehicle Purchases: \$439k, and Security Equipment & Installation: \$334k (timing of purchases) As-Needed Technical Assistance: \$366k (timing of task order work) |
| Total MWRA | \$71,976 | \$75,095 | \$3,119 | 4.3% | |

STAFF SUMMARY

TO: Board of Directors
FROM: Frederick A. Laskey, Executive Director 
DATE: January 15, 2020
SUBJECT: Transmittal of the FY21 Proposed Capital Improvement Program to the MWRA Advisory Board

COMMITTEE: Administration, Finance & Audit

James J. Coyne, Budget Manager 

Michael J. Cole, Budget Director 

Preparer/Title

 INFORMATION
 X VOTE


Thomas J. Durkin
Director, Finance

RECOMMENDATION:

To approve the transmittal of the FY21 Proposed Capital Improvement Program to the Advisory Board for its 60-day review and comment period.

DISCUSSION:

The Fiscal Year 2021 Proposed Capital Improvement Program (CIP) represents an update to the program approved by the Board in June 2019 for Fiscal Year 2020. The Proposed CIP includes the latest cost estimates, revised schedules, and new projects.

The FY21 Proposed Capital Improvement Program projects \$256.3 million spending for FY21, of which \$166.6 million supports Wastewater System Improvements, \$67.9 million supports Waterworks System Improvements, and \$21.8 million is for Business and Operations Support. The projects with significant spending include Clarifier Rehabilitation Phase 2 Construction, Infiltration/Inflow Local Financial Assistance, Chelsea Creek Headworks Upgrades, Prison Point Rehabilitation, Nut Island Odor Control and HVAC Improvements, NIH Section 89 and 29 Replacement, and Gravity Thickener Rehabilitation.

The CIP Program continues to address critical redundancy improvements for the Metropolitan Tunnel System. The FY21 CIP includes approximately \$1.5 billion in spending. The initial contract for Program Support Services began in April 2019 and Preliminary Design and MEPA Review is expected to commence in May 2020.

The FY21 Proposed Capital Program reaffirms MWRA's commitment to the community financing assistance programs on both the water and wastewater side.

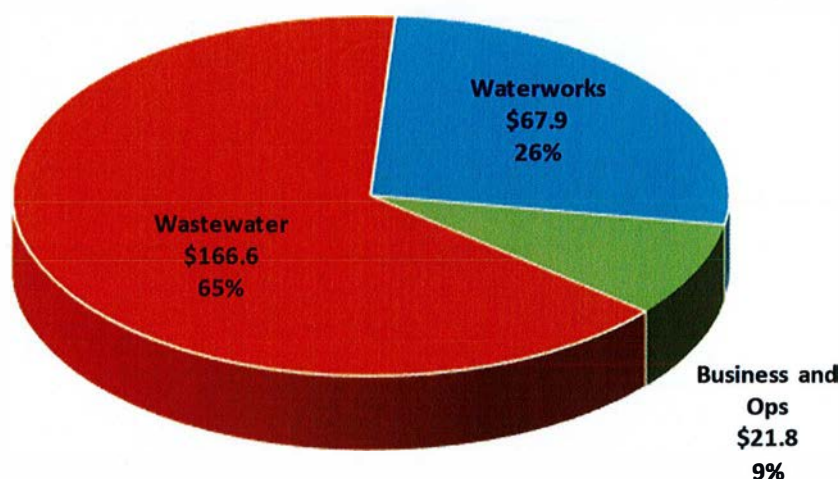
Today, the Authority is better positioned to reinvest in rehabilitation and replacement of aging facilities as result of conservative fiscal management which includes judicious control of expenses,

and the fact that MWRA has implemented the practice of utilizing available funds for defeasances resulting in the reduction of debt service expense. MWRA projects an overall reduction in outstanding principal of debt during the FY19-23 cap period.

FY21 Proposed CIP

Proposed Spending

The FY21 Proposed Capital Improvement Program projects \$256.3 million spending for FY21, of which \$166.6 million supports Wastewater System Improvements, \$67.9 million supports Waterworks System Improvements, and \$21.8 million is for Business and Operations Support.



The FY21 Proposed CIP includes \$31.7 million for community assistance programs, which are a combination of loan and partial grant programs, with net expenditures of \$25.7 million for the local Infiltration/Inflow program and net expenditures of \$6.0 million for the local water pipeline program.

Project contracts with spending greater than \$5 million in FY21, excluding local community assistance programs, total \$101.5 million and account for 40% of the total annual spending.

| Project | Subphase | FY21 (\$000) | % of Total |
|-------------------------------------|----------------------------------------|------------------|---------------|
| DI Treatment Plant Asset Protection | Clarifier Rehab Phase 2 - Construction | \$34,475 | 13.4% |
| I&P Facility Asset Protection | Chelsea Creek Upgrades - Construction | \$16,091 | 6.3% |
| I&P Facility Asset Protection | Prison Point Rehab - Construction | \$15,490 | 6.0% |
| Corrosion & Odor Control | NI Odor Ctrl HVAC Imp Constr Ph 2 | \$14,854 | 5.8% |
| NIH Redundancy & Storage | Section 89 & 29 Repl - Constr | \$9,150 | 3.6% |
| DI Treatment Plant Asset Protection | Gravity Thickener Rehab | \$6,444 | 2.5% |
| Central Monitoring System | CWTP SCADA Upgrade Construction | \$5,000 | 2.0% |
| Top FY21 Spending Subphases | | \$101,504 | 39.6% |
| Other Changes | | \$154,824 | 60.4% |
| Total FY21 Spending | | \$256,328 | 100.0% |

Chelsea Creek Headworks Upgrade Construction - \$16.1 million (\$82.9 million total construction cost). This major rehabilitation project includes replacement/upgrade to the screens, grit collection system, grit and handling systems, odor control systems, HVAC, mechanical, plumbing and instrumentation. Solids handling systems are being automated and the building's egress and fire suppressions systems are also being upgraded.

Prison Point Rehabilitation Construction - \$15.5 million (\$36.1 million total construction cost). This rehabilitation will include upgrades to the facility including replacement of diesel pump engines, dry weather screens, wet weather screens, sluice gates, chemical tanks, updating of other facility equipment including electrical distribution and chemical disinfection systems, and repair/replacement of miscellaneous equipment. Improvement/installation of systems as appropriate for energy efficiencies, security, and fire alarm will also be included.

Nut Island Odor Control and HVAC Improvements - Construction Phase 2 - \$14.9 million (\$57.6 million total construction cost). Improvements to the Nut Island Headworks odor control, HVAC and energy management systems. These are the long-term improvement projects that arose following the January 2016 fire and the odor control, HVAC and energy management systems evaluation contract completed in February 2017.

Northern Intermediate High Redundancy Section 89 and 29 Replacement Construction - \$9.2 million (\$21.3 million total construction cost). This is a redundancy project for MWRA's Southern Extra High service area. Section 89 will be replaced after the redundant pipeline is completed.

Carroll Water Treatment SCADA Upgrade Construction - \$5.0 million (\$9.9 million total construction cost). This project includes the replacement of PLC's nearing their end of life with an updated PLC platform. New PLC's will provide enhanced security capabilities, continued vendors support and future reliability. Project will also include standardizing PLC logic and HMI graphics, and upgrading aging field instrumentation

Deer Island Wastewater Treatment Plant Asset Protection and Residuals:

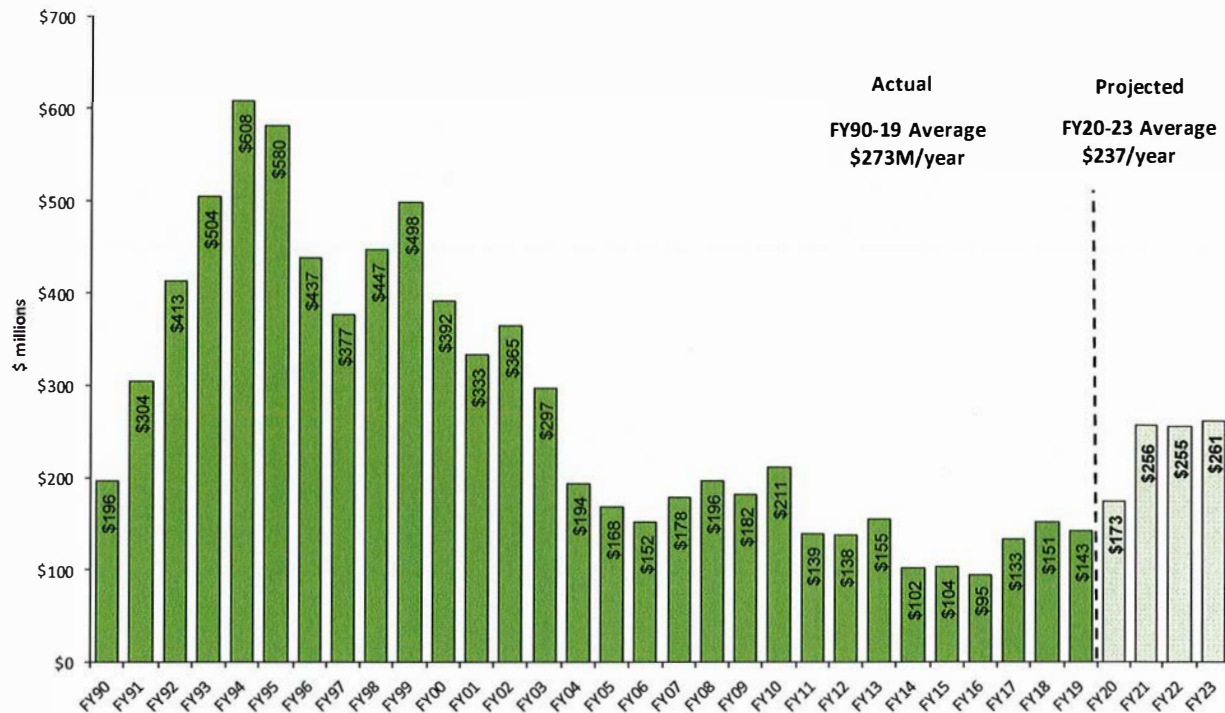
Clarifier Rehabilitation Phase 2 Construction - \$34.5 million (\$148.9 million total construction cost). This project will rehabilitate the sludge removal system in the primary tanks and the aeration/recirculation systems in the secondary tanks. The influent gates, effluent launders and aeration systems, and concrete corrosion in primary clarifiers will also be addressed and repaired.

Gravity Thickener Rehabilitation - \$6.4 million (\$19.7 million total construction cost). This project involves installing catwalks around the perimeter of several tanks, removing concrete blocks in the effluent channels, and modifying the sludge thickener roofing to improve staff access and operating efficiency.

Historical Spending

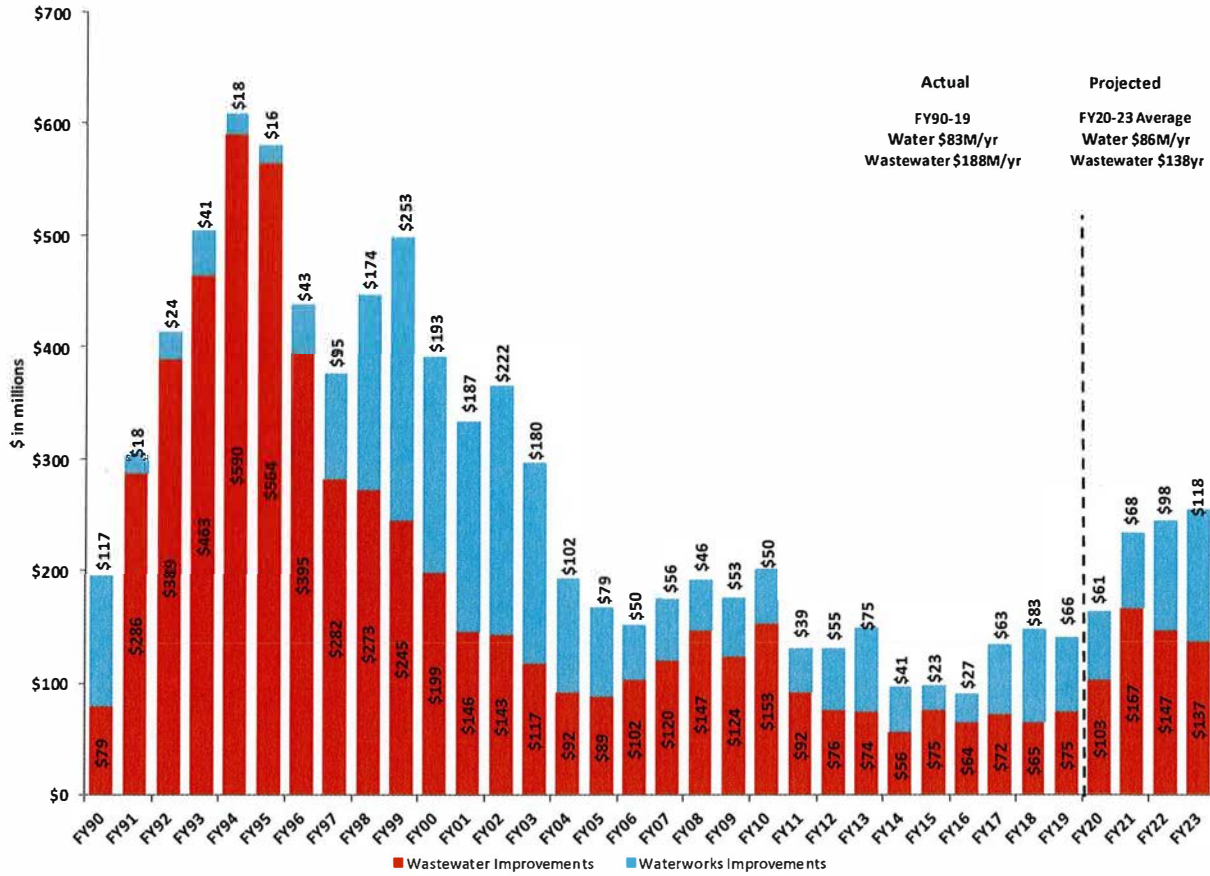
The chart below captures the historical CIP spending through FY19 and projects spending through FY23 based on the FY21 Proposed CIP. Average annual CIP spending through FY19 was \$273 million. Average annual CIP spending for the proposed FY20-23 Cap is projected to be \$237 million.

Annual CIP Spending



The following chart shows the historical CIP spending from FY90 through FY19 by utility with projections through FY23. Average annual CIP spending through FY19 was \$83 million for Waterworks and \$188 million for Wastewater. Average annual CIP spending for FY20-23 is projected to be \$86 million for Waterworks and \$138 million for Wastewater.

Annual CIP Spending by Utility



The spending projections set forth here include updates to the approved FY20 CIP with the latest cost estimates, revised schedules, and new projects.

FY19-23 Five-Year Spending Cap

Spending during the FY19-23 timeframe is planned to be \$1.1 billion, including local community spending of \$142.1 million for the I/I loan and grant program and \$35.5 for the water pipeline loan program.

Annual cash flows for the proposed Cap period are shown below in millions:

| | | FY19 | FY20 | FY21 | FY22 | FY23 | Total FY19-23 |
|---------------|---------------------------------------|---------------|----------------|----------------|----------------|----------------|----------------|
| FY21 Proposed | Projected Expenditures | \$142.9 | \$173.3 | \$256.3 | \$255.1 | \$261.2 | \$1,088.9 |
| | I/I Program | (39.6) | (24.9) | (25.7) | (28.3) | (23.6) | (142.1) |
| | Water Loan Program | (13.8) | (8.0) | (6.0) | (10.6) | 3.0 | (35.5) |
| | MWRA Spending | 89.4 | 140.4 | 224.6 | 216.3 | 240.6 | \$911.3 |
| | Contingency | 0.0 | 9.0 | 13.8 | 14.4 | 16.4 | 53.7 |
| | Inflation on Unawarded Construction | 0.0 | 0.0 | 2.0 | 5.8 | 10.6 | 18.4 |
| | Chicopee Valley Aqueduct Projects | (0.0) | 0.0 | 0.0 | 0.0 | 0.0 | (0.0) |
| | FY21 Proposed FY19-23 Spending | \$89.4 | \$149.5 | \$240.5 | \$236.5 | \$267.5 | \$983.3 |

The format of the Cap table has changed to account separately for MWRA spending, which excludes the local I/I grant and loan program and the local water pipeline loan spending which are both outside of MWRA’s control. As in past Caps, contingency for each fiscal year is incorporated into the CIP to fund the uncertainties inherent to construction. The contingency budget is calculated as a percentage of budgeted expenditure outlays. Specifically, contingency is 7% for non-tunnel projects and 15% for tunnel projects. Inflation is added for unawarded construction contracts. Finally, the Cap excludes Chicopee Valley Aqueduct system projects.

The proposed FY19-23 cap cash flow totals \$983.3 million, \$1.5 million under the approved Cap of \$984.8 million.

Yearly projected expenditures for the Proposed FY19-23 Cap period by program are shown below in millions:

| | Projected Spending After FY19 | FY19 | FY20 | FY21 | FY22 | FY23 | Total FY19-23 |
|------------------------------------------|-------------------------------|----------------|----------------|----------------|----------------|----------------|------------------|
| Wastewater System Improvements | \$1,696.2 | \$74.8 | \$103.0 | \$166.6 | \$146.7 | \$137.4 | \$628.5 |
| Interception & Pumping | 597.0 | 23.1 | 40.6 | 64.0 | 47.0 | 35.0 | 209.8 |
| Treatment | 823.8 | 10.0 | 26.3 | 66.3 | 69.6 | 77.5 | 249.6 |
| Residuals | 103.0 | 0.8 | 9.0 | 5.3 | 0.5 | 0.8 | 16.4 |
| CSO | 9.5 | 1.2 | 2.3 | 5.2 | 1.3 | 0.6 | 10.6 |
| Other Wastewater | 162.9 | 39.6 | 24.9 | 25.7 | 28.3 | 23.6 | 142.1 |
| | | | | | | | |
| Waterworks System Improvements | \$2,330.1 | \$65.6 | \$60.9 | \$67.9 | \$97.9 | \$117.6 | \$409.9 |
| Drinking Water Quality Improvements | 54.7 | 0.8 | 1.6 | 3.5 | 5.1 | 2.8 | 13.8 |
| Transmission | 1,783.6 | 9.9 | 14.0 | 26.2 | 38.3 | 59.3 | 147.7 |
| Distribution & Pumping | 524.5 | 36.6 | 30.6 | 24.3 | 35.2 | 45.3 | 172.0 |
| Other Waterworks | (32.7) | 18.4 | 14.6 | 13.9 | 19.3 | 10.3 | 76.5 |
| | | | | | | | |
| Business & Operations Support | 68.9 | 2.4 | 9.4 | 21.8 | 10.5 | 6.2 | 50.4 |
| | | | | | | | |
| Total MWRA | \$4,095.2 | \$142.9 | \$173.3 | \$256.3 | \$255.1 | \$261.2 | \$1,088.9 |

It is important to emphasize that the majority of spending within the Wastewater and Waterworks programs is concentrated in several larger projects with significant spending in the FY19-23 timeframe. Project contracts with expenditures greater than \$14 million for the FY19-23 Cap total \$693.8 million, which includes local community assistance programs, and accounts for nearly 64% of total spending. Large initiatives include the Clarifier Rehabilitation at Deer Island and Chelsea Creek Upgrades at \$111.9 million (\$148.9 million total cost) and \$51.4 million (\$82.9 million total cost), respectively between FY19-23.

The table below highlights major project spending in the FY19-23 timeframe:

| Project | Subphase | FY19-23 Spending (\$ in Millions) |
|-------------------------------------|------------------------------------------|-----------------------------------|
| DI Treatment Plant Asset Protection | Clarifier Rehab Phase 2 - Construction | \$111.9 |
| Local Water Pipeline Improvement | LWSAP Phase 3 Distributions | \$84.5 |
| Local Water Pipeline Improvement | Local Water System Assistance Loans | \$59.9 |
| I&P Facility Asset Protection | Chelsea Creek Upgrades - Construction | \$51.4 |
| Corrosion & Odor Control | NI Odor Ctrl HVAC Imp Constr Ph 2 | \$49.6 |
| I/I Local Financial Assistance | Phase XI Grants | \$43.3 |
| I&P Facility Asset Protection | Prison Point Rehab - Construction | \$36.1 |
| I/I Local Financial Assistance | Phase X Grants | \$33.0 |
| I/I Local Financial Assistance | Phase XII Grants | \$24.5 |
| I/I Local Financial Assistance | Phase IX Grants | \$24.2 |
| Local Water Pipeline Improvement | Lead Service Line Replace Loans | \$22.6 |
| NIH Redundancy & Storage | Section 89 & 29 Repl - Constr | \$21.3 |
| NIH Redundancy & Storage | Section 89 & 29 Redun Const. Phase 2 | \$19.8 |
| SEH Redundancy & Storage | Redundancy Pipeline Sect 111 - Constr 3 | \$19.3 |
| DI Treatment Plant Asset Protection | Gravity Thickener Rehab | \$19.3 |
| DI Treatment Plant Asset Protection | Fire Alarm System Replacement - Construc | \$15.9 |
| New Connect Mains-Shaft 7 | CP3-Sect 23,24,47, Rehab | \$14.7 |
| I/I Local Financial Assistance | Phase XI Loans | \$14.4 |
| Metro Tunnel Redundancy | Prelm Des & MEPA Review | \$14.2 |
| SEH Redundancy & Storage | Redundancy Pipeline Sect 111 - Constr 2 | \$14.1 |
| | Total Contracts > \$14 million | \$693.8 |
| | % of FY19-23 Spending | 63.7% |
| | Excluding Community Loan Programs | \$387.5 |
| | % of FY19-23 Spending | 35.6% |
| | Total Projected FY19-23 Spending | \$1,088.9 |

Asset Protection accounts for the largest share of capital expenditures for the FY19-23 period. The FY21 Proposed CIP includes \$607.7 million for asset protection initiatives, representing nearly 56% of total MWRA spending in this timeframe. Asset protection spending by program is as follows: Wastewater (\$474.1 million), Waterworks (\$120.3 million), and Business and Operations Support (\$13.4 million). Deer Island Treatment Plant Asset Protection accounts for over \$241.5 million in spending. Spending for water system redundancy projects totals \$232.8 million in the same FY19-23 period, accounting for 21.4% of total spending.

**Changing nature of the CIP by Category
(\$s in millions)**

| Project Category | FY14-18 | FY19-23 | FY24-28 |
|-------------------------|----------------|------------------|------------------|
| Asset Protection | \$222.8 | \$607.7 | \$1,209.3 |
| Water Redundancy | \$174.6 | \$232.8 | \$376.9 |
| CSO | \$64.7 | \$10.6 | \$0.1 |
| Other | \$123.5 | \$237.7 | \$235.4 |
| Total | \$585.6 | \$1,088.9 | \$1,821.6 |
| Asset Protection | 38.0% | 55.8% | 66.4% |
| Water Redundancy | 29.8% | 21.4% | 20.7% |
| CSO | 11.0% | 1.0% | 0.0% |
| Other | 21.1% | 21.8% | 12.9% |
| Total | 100.0% | 100.0% | 100.0% |

FY21 New Projects

The FY20 Proposed CIP adds \$57.0 million in new projects of which Wastewater projects total \$6.7 million and Waterworks projects total \$50.3 million.

The following table shows the new projects added by the major programs:

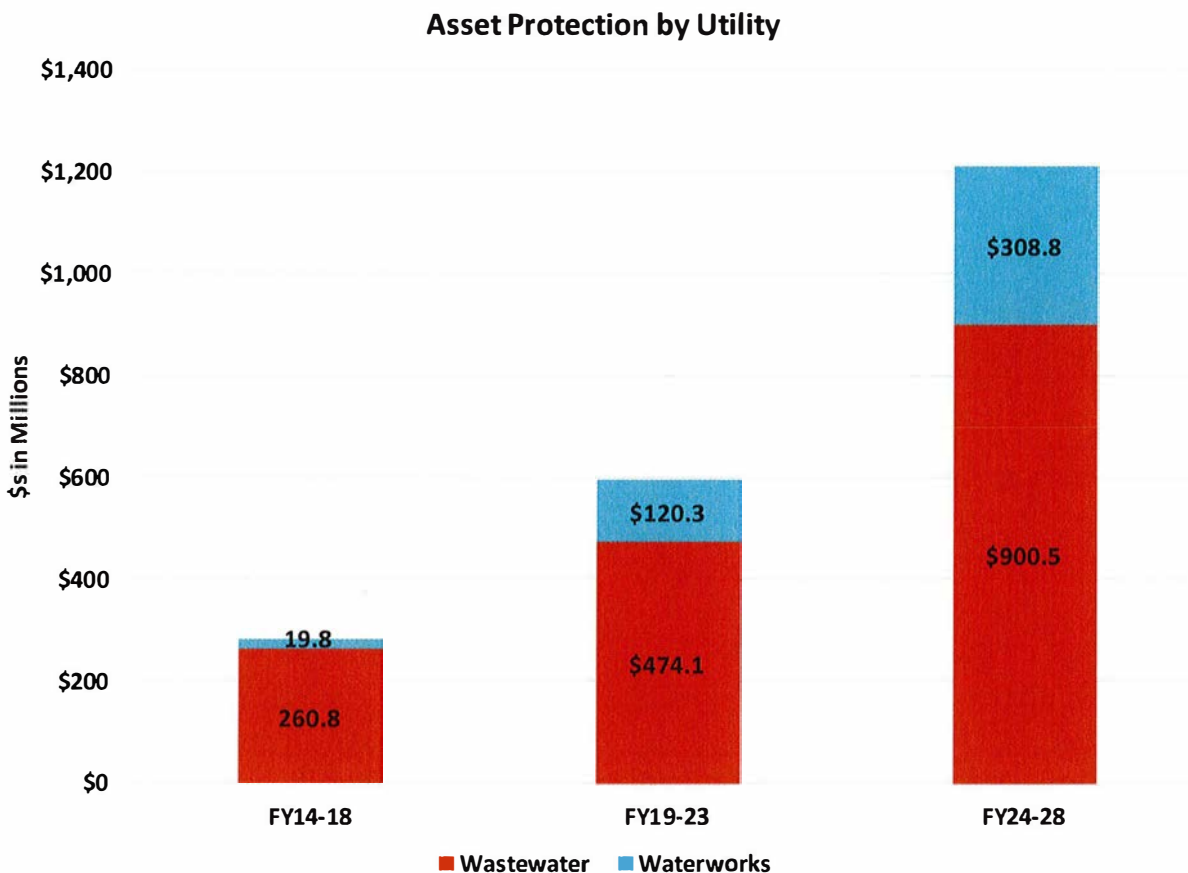
\$ in millions

| Project | Total Contract Amount | FY19-23 Spending |
|-------------------------------|-----------------------|------------------|
| Wastewater | \$ 6.7 | \$ 5.9 |
| Waterworks | \$ 50.3 | \$ 3.3 |
| Business & Operations Support | \$ - | \$ - |
| Total New Projects | \$ 57.0 | \$ 9.2 |

The largest project added is the Future Painting of the Water Tanks Phase 1 and 2 for \$27.9 million and Phase 2 and Cosgrove Tunnel Rehabilitation Design/Engineering Services During Construction for \$10.0 million.

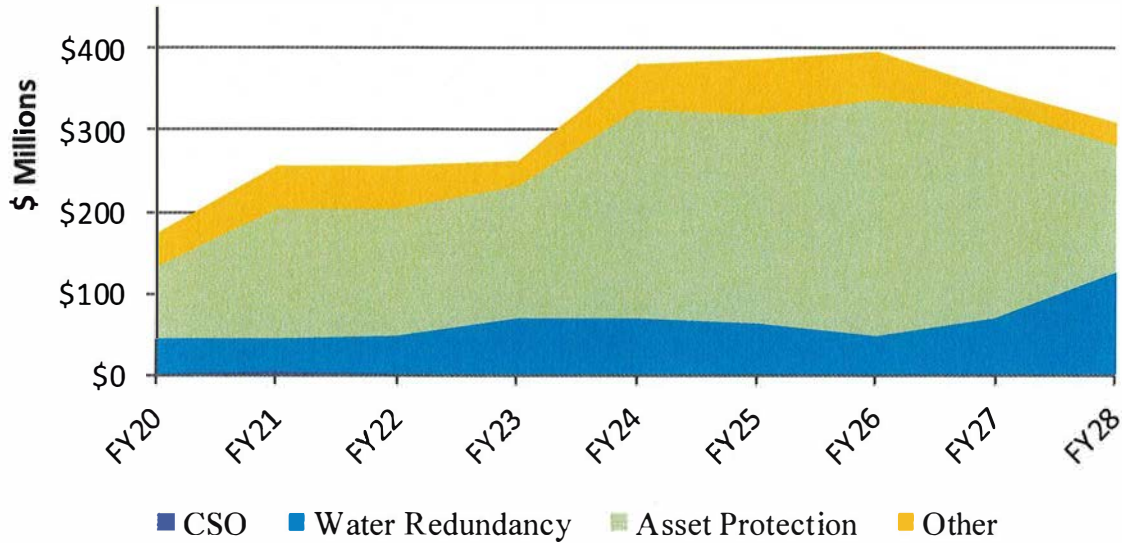
A complete list of new projects with cash flows is attached as Attachment A.

In terms of utility spending, wastewater asset protection accounts for 78% of the FY19-23 projected asset protection spending at \$474.1 million of which \$241.5 million is designated for the Deer Island Wastewater Treatment Plant and \$232.6 million for headworks and pipelines. The \$120.3 million targeted for waterworks asset protection includes \$57.0 million for water pipeline.



As illustrated by the following graph, the next two waves of spending over the FY19-23 Cap period and the FY24-28 Cap period will be for asset protection and water redundancy. This reflects MWRA’s commitment to maintaining its physical plant and addressing the need for water system redundancy in some critical service areas. Total asset protection spending for FY19-23 is projected at \$607.7 million or 55.8% of projected spending. Similarly, water redundancy spending for FY19-23 is projected at \$232.8 million or 21.4% of projected FY19-23 spending.

FY 21 Proposed Expenditure Forecast by Major Category



FY21 Proposed CIP Future Expenditures

The FY21 Proposed CIP contains future spending estimated at \$4.1 billion.

The table below represents the projected spending by the major project categories:

| | FY19 | FY20 | FY21 | FY22 | FY23 | Total FY19-23 | Beyond 23 |
|------------------------------------------|----------------|----------------|----------------|----------------|----------------|------------------|------------------|
| Wastewater System Improvements | \$74.8 | \$103.0 | \$166.6 | \$146.7 | \$137.4 | \$628.5 | \$1,142.5 |
| Interception & Pumping | 23.1 | 40.6 | 64.0 | 47.0 | 35.0 | 209.8 | 410.4 |
| Treatment | 10.0 | 26.3 | 66.3 | 69.6 | 77.5 | 249.6 | 584.2 |
| Residuals | 0.8 | 9.0 | 5.3 | 0.5 | 0.8 | 16.4 | 87.4 |
| CSO | 1.2 | 2.3 | 5.2 | 1.3 | 0.6 | 10.6 | 0.1 |
| Other Wastewater | 39.6 | 24.9 | 25.7 | 28.3 | 23.6 | 142.1 | 60.4 |
| Waterworks System Improvements | \$65.6 | \$60.9 | \$67.9 | \$97.9 | \$117.6 | \$409.9 | \$1,985.9 |
| Drinking Water Quality Improvements | 0.8 | 1.6 | 3.5 | 5.1 | 2.8 | 13.8 | 41.7 |
| Transmission | 9.9 | 14.0 | 26.2 | 38.3 | 59.3 | 147.7 | 1,645.8 |
| Distribution & Pumping | 36.6 | 30.6 | 24.3 | 35.2 | 45.3 | 172.0 | 389.1 |
| Other Waterworks | 18.4 | 14.6 | 13.9 | 19.3 | 10.3 | 76.5 | (90.8) |
| Business & Operations Support | 2.4 | 9.4 | 21.8 | 10.5 | 6.2 | 50.4 | 20.9 |
| Total MWRA | \$142.9 | \$173.3 | \$256.3 | \$255.1 | \$261.2 | \$1,088.9 | \$3,149.2 |

Major Planned Contract Awards for FY21:

In Fiscal Year 2021, 57 contracts totaling \$174.7 million are projected to be awarded. The largest ten projected contract awards total \$102.4 million and account for nearly 59% of expected awards and are presented in the following table.

Top 10 Contract Awards

| Project | Contract No. | Subphase | Notice to Proceed | Total Contract Amount (\$s in millions) |
|----------------------------------------------|--------------|------------------------------------------------------------------------------------------------|-------------------|-----------------------------------------|
| DI Treatment Plant Asset Protection | 7051 | Fire Alarm System Replacement - Construction | Oct-20 | \$28.8 |
| NIH Redundancy & Storage | 7117 | Section 89 & 29 Replacement - Construction | Jul-20 | \$21.3 |
| Central Monitoring System | 7582 | Carroll Water Treatment Plant SCADA Upgrade Construction | Jul-20 | \$9.9 |
| Cathodic Protection Of Distribution Mains | 7611 | Cathodic Protection Metropolitan System Design/Construction Administration | Jan-21 | \$9.2 |
| DI Treatment Plant Asset Protection | 7059 | Switchgear Relay Replacement Construction | Apr-21 | \$8.0 |
| Metropolitan Redundancy Interim Improvements | 7563 | Weston Aqueduct Supply Mains/Spot Pond Supply Mains West Pressure Reducing Valves Construction | Nov-20 | \$7.1 |
| Application Improvements Program | 7286 | Lawson Upgrade | Jul-20 | \$5.0 |
| DI Treatment Plant Asset Protection | 7088 | Odor Control Rehab - Design/Engineering Services During Construction | Mar-21 | \$4.5 |
| DI Treatment Plant Asset Protection | 7125 | Misc. VFD Replacements FY19-FY23 | Oct-20 | \$4.5 |
| DI Treatment Plant Asset Protection | 7052 | Digester & Storage Tank Rehab Design/Engineering Services During Construction | Jun-21 | \$4.1 |
| Top 10 Contract Awards | | | | \$102.4 |
| 57 Contract Awards Planned for FY21 | | | | \$174.7 |

CIP Review and Adoption Process

The Advisory Board will have no less than 60 days from the transmittal of the FY21 Proposed CIP to review the budget and prepare comments and recommendations. During the review period, Advisory Board and MWRA staff will continue to meet and discuss the changes to the capital budget. The Advisory Board will then transmit its comments and recommendations to MWRA in the spring after its review. Staff will prepare draft responses to the Advisory Board's recommendations for discussion at the budget hearing. During the spring, MWRA will update the CIP to incorporate the latest information into the Final budget. In June, staff will present the FY21 Final to the Board for adoption.

ATTACHMENTS:

- A. New Capital Projects Added to the FY21 Proposed CIP
- B. FY21 Proposed Project Level Expenditure Forecast
- C. Overview of the FY21 Proposed CIP and Changes from the FY20 Final CIP

ATTACHMENT A
New Capital Projects Added to the FY21 Proposed CIP

| Program | Project | Subphase | Contract Number | Total Contract Amount | NTP | SC | FY20 | FY21 | FY22 | FY23 | FY19-23 | Beyond FY23 | Total Expenditures |
|-------------------------------------|------------------------------------|-------------------------------------------------------------------------------------------------------|-----------------|-----------------------|--------|--------|------------|------------|--------------|------------|--------------|-------------|--------------------|
| Treatment | DITP Asset Protection | DITP Roofing Replacement | 7734 | \$ 2,000,000 | Jan-21 | Jun-22 | \$ - | \$ 333,000 | \$ 1,333,000 | \$ 334,000 | \$ 2,000,000 | \$ - | \$ 2,000,000 |
| Treatment | Clinton Wastewater Treatment Plant | Clinton SCADA Upgrades | 7736 | \$ 750,000 | Jan-24 | Jan-26 | \$ - | \$ - | \$ - | \$ - | \$ - | \$ 750,000 | \$ 750,000 |
| Treatment | Clinton Wastewater Treatment Plant | Clinton Fire Alarm Replacement | 7735 | \$ 900,000 | Jan-21 | Jul-22 | \$ - | \$ 142,000 | \$ 568,000 | \$ 190,000 | \$ 900,000 | \$ - | \$ 900,000 |
| Treatment | Clinton Wastewater Treatment Plant | Clinton Landfill Cell #1 Closure | 7754 | \$ 1,000,000 | Apr-20 | Sep-20 | \$ 500,000 | \$ 500,000 | \$ - | \$ - | \$ 1,000,000 | \$ - | \$ 1,000,000 |
| Combined Sewer Overflows | CSO Support | CSO System Optimization for Alewife Brook and Lower Charles River Basins Study and Preliminary Design | 7732 | \$ 1,500,000 | Dec-20 | Dec-22 | \$ - | \$ 240,000 | \$ 720,000 | \$ 540,000 | \$ 1,500,000 | \$ - | \$ 1,500,000 |
| Combined Sewer Overflows | CSO Support | MWR205 & SOM007/MWR205A CSO Reduction Study and Preliminary Design | 7733 | \$ 500,000 | Dec-20 | Dec-21 | \$ - | \$ 153,000 | \$ 347,000 | \$ - | \$ 500,000 | \$ - | \$ 500,000 |
| Drinking Water Quality Improvements | Carroll Water Treatment Plant | Technical Assistance 11 | 7713 | \$ 750,000 | Jan-21 | Dec-22 | \$ - | \$ 95,000 | \$ 375,000 | \$ 280,000 | \$ 750,000 | \$ - | \$ 750,000 |
| Drinking Water Quality Improvements | Carroll Water Treatment Plant | Technical Assistance 12 | 7714 | \$ 750,000 | Jan-21 | Dec-22 | \$ - | \$ 95,000 | \$ 375,000 | \$ 280,000 | \$ 750,000 | \$ - | \$ 750,000 |

ATTACHMENT A
New Capital Projects Added to the FY21 Proposed CIP

| Program | Project | Subphase | Contract Number | Total Contract Amount | NTP | SC | FY20 | FY21 | FY22 | FY23 | FY19-23 | Beyond FY23 | Total Expenditures |
|-------------------------------------|------------------------------------------------|-----------------------------------------------------------------------------------|-----------------|-----------------------|--------|--------|------|------------|------------|------------|------------|---------------|--------------------|
| Transmission | Watershed Division Capital Improvements | Quabbin Water Supply Design/CA/RI | 7752 | \$ 250,000 | Jan-21 | Jun-23 | \$ - | \$ 25,000 | \$ 100,000 | \$ 100,000 | \$ 225,000 | \$ 25,000 | \$ 250,000 |
| Transmission | Watershed Division Capital Improvements | Quabbin Water Supply Construction | 7753 | \$ 850,000 | Jun-22 | Jun-23 | \$ - | \$ - | \$ - | \$ 654,000 | \$ 654,000 | \$ 196,000 | \$ 850,000 |
| Drinking Water Quality Improvements | Carroll Water Treatment Plant Asset Protection | Corrosion Control Pipe Loop Study | 7737 | \$ 500,000 | Sep-20 | Sep-21 | \$ - | \$ 346,000 | \$ 154,000 | \$ - | \$ 500,000 | \$ - | \$ 500,000 |
| Other Waterworks | Waterworks Facilities Asset Protection | Beacon Street Line Rehabilitation Design/Engineering Services During Construction | 7729 | \$ 900,000 | Jun-21 | Jun-26 | \$ - | \$ - | \$ 195,000 | \$ 234,000 | \$ 429,000 | \$ 471,000 | \$ 900,000 |
| Other Waterworks | Waterworks Facilities Asset Protection | Beacon Street Line Rehabilitation Construction | 7730 | \$ 6,900,000 | Jun-23 | Jun-25 | \$ - | \$ - | \$ - | \$ - | \$ - | \$ 6,900,000 | \$ 6,900,000 |
| Other Waterworks | Waterworks Facilities Asset Protection | Beacon Street Line Rehabilitation Resident Engineering Inspection | 7731 | \$ 1,500,000 | Jun-23 | Jun-25 | \$ - | \$ - | \$ - | \$ - | \$ - | \$ 1,500,000 | \$ 1,500,000 |
| Other Waterworks | Waterworks Facilities Asset Protection | Cosgrove Tunnel Rehabilitation Design/ESDC | 7738 | \$ 10,000,000 | Jul-24 | Jul-29 | \$ - | \$ - | \$ - | \$ - | \$ - | \$ 10,000,000 | \$ 10,000,000 |

ATTACHMENT A
New Capital Projects Added to the FY21 Proposed CIP

| Program | Project | Subphase | Contract Number | Total Contract Amount | NTP | SC | FY20 | FY21 | FY22 | FY23 | FY19-23 | Beyond FY23 | Total Expenditures |
|------------------|----------------------------------------|----------------------------------------------------------------------------------------|-----------------|-----------------------|--------|--------|------|------|------|------|---------|---------------|--------------------|
| Other Waterworks | Waterworks Facilities Asset Protection | Water Tanks Paint Phase 1 Design/ESDC Bellevue 2/Deer Island/Turkey Hill | 7739 | \$ 751,707 | Jul-34 | Jul-39 | \$ - | \$ - | \$ - | \$ - | \$ - | \$ 751,707 | \$ 751,707 |
| Other Waterworks | Waterworks Facilities Asset Protection | Water Tanks Paint Phase 1 Construction Bellevue 2/Turkey Hill | 7740 | \$ 4,079,988 | Jul-36 | Jul-38 | \$ - | \$ - | \$ - | \$ - | \$ - | \$ 4,079,988 | \$ 4,079,988 |
| Other Waterworks | Waterworks Facilities Asset Protection | Water Tank Paint Phase 1 Deer Island Construction | 7748 | \$ 2,678,780 | Jul-36 | Jul-38 | \$ - | \$ - | \$ - | \$ - | \$ - | \$ 2,678,780 | \$ 2,678,780 |
| Other Waterworks | Waterworks Facilities Asset Protection | Water Tanks Paint Phase 1 Construction Bellevue 2/Deer Resident Engineering/Inspection | 7741 | \$ 1,545,450 | Jul-36 | Jul-38 | \$ - | \$ - | \$ - | \$ - | \$ - | \$ 1,545,450 | \$ 1,545,450 |
| Other Waterworks | Waterworks Facilities Asset Protection | Water Tanks Paint Phase 2 Design/ESDC Bellevue 1/Park Circle/Walnut Hill | 7742 | \$ 3,296,960 | Jul-37 | Jul-42 | \$ - | \$ - | \$ - | \$ - | \$ - | \$ 3,296,960 | \$ 3,296,960 |
| Other Waterworks | Waterworks Facilities Asset Protection | Water Tanks Paint Phase 2 Construction Bellevue 1/Park Circle/Walnut Hill | 7743 | \$ 14,012,080 | Jul-39 | Jul-41 | \$ - | \$ - | \$ - | \$ - | \$ - | \$ 14,012,080 | \$ 14,012,080 |

ATTACHMENT A
New Capital Projects Added to the FY21 Proposed CIP

| Program | Project | Subphase | Contract Number | Total Contract Amount | NTP | SC | FY20 | FY21 | FY22 | FY23 | FY19-23 | Beyond FY23 | Total Expenditures |
|------------------------------------------|----------------------------------------|------------------------------------------------------------------|-----------------|-----------------------|--------|--------|------------|--------------|--------------|--------------|--------------|---------------|--------------------|
| Other Waterworks | Waterworks Facilities Asset Protection | Water Tanks Paint Phase 2 REI Bellevue 1/Park Circle/Walnut Hill | 7744 | \$ 1,545,450 | Jul-39 | Jul-41 | \$ - | \$ - | \$ - | \$ - | \$ - | \$ 1,545,450 | \$ 1,545,450 |
| SUMMARY: | | | | | | | | | | | | | |
| Total Wastewater Projects | | | | \$ 6,650,000 | | | \$ 500,000 | \$ 1,368,000 | \$ 2,968,000 | \$ 1,064,000 | \$ 5,900,000 | \$ 750,000 | \$ 6,650,000 |
| Total Waterworks Projects | | | | \$ 50,310,415 | | | \$ - | \$ 561,000 | \$ 1,199,000 | \$ 1,548,000 | \$ 3,308,000 | \$ 47,002,415 | \$ 50,310,415 |
| Business & Operations Support | | | | \$ - | | | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - |
| Total Projects | | | | \$ 56,960,415 | | | \$ 500,000 | \$ 1,929,000 | \$ 4,167,000 | \$ 2,612,000 | \$ 9,208,000 | \$ 47,752,415 | \$ 56,960,415 |

ATTACHMENT B
FY21 Proposed CIP
Expenditure Forecast at Project Level in \$000s

| Program / Project Name | Total Program/Project Amount | Spending through FY19 | Remaining Balance | FY20 | FY21 | FY22 | FY23 | FY19-FY23 | FY24-FY28 | Beyond FY28 |
|-----------------------------------------------------|------------------------------|-----------------------|-------------------|-------------------|----------------|----------------|----------------|------------------|------------------|------------------|
| Total MWRA | 8,511,886 | 4,416,667 | 4,095,219 | 173,343 | 256,328 | 255,140 | 261,162 | 1,088,877 | 1,821,643 | 1,327,603 |
| Wastewater | 3,832,381 | 2,136,167 | 1,696,214 | 103,040 | 166,562 | 146,724 | 137,368 | 628,545 | 1,023,791 | 118,727 |
| Interception & Pumping | 1,222,535 | 625,547 | 596,988 | 40,628 | 63,987 | 47,028 | 34,960 | 209,750 | 354,293 | 56,092 |
| 102 Quincy Pump Facilities | 25,907 | 25,907 | - | completed project | - | - | - | - | - | - |
| 104 Braintree-Weymouth Relief Facilities | 240,415 | 227,909 | 12,505 | 391 | 417 | 417 | 417 | 1,847 | 10,863 | - |
| 105 New Neponset Valley Relief Sewer | 30,300 | 30,300 | - | completed project | - | - | - | - | - | - |
| 106 Wellesley Extension Replacement Sewer | 64,359 | 64,359 | - | completed project | - | - | - | - | - | - |
| 107 Framingham Extension Relief Sewer | 47,856 | 47,856 | - | completed project | - | - | - | - | - | - |
| 127 Cummingsville Replacement Sewer | 8,999 | 8,999 | - | completed project | - | - | - | - | - | - |
| 130 Siphon Structure Rehabilitation | 13,041 | 940 | 12,102 | 160 | 650 | 1,425 | 3,333 | 5,568 | 6,533 | - |
| 131 Upper Neponset Valley Sewer System | 54,174 | 54,174 | - | completed project | - | - | - | - | - | - |
| 132 Corrosion & Odor Control | 97,943 | 6,491 | 91,452 | 5,551 | 15,793 | 16,093 | 16,093 | 53,840 | 37,083 | 840 |
| 136 West Roxbury Tunnel | 11,314 | 10,314 | 1,000 | - | - | - | - | - | 1,000 | - |
| 137 Wastewater Central Monitoring | 27,482 | 19,810 | 7,672 | 260 | 260 | 447 | 447 | 1,442 | 6,258 | - |
| 139 South System Relief Project | 4,939 | 3,439 | 1,500 | - | - | - | - | - | 1,500 | - |
| 141 Wastewater Process Optimization | 8,933 | 1,519 | 7,414 | 212 | 281 | 191 | - | 701 | 5,154 | 1,577 |
| 142 Wastewater Meter System - Equipment Replacement | 21,688 | 6,736 | 14,952 | 2,888 | 3,150 | 157 | - | 7,207 | - | 8,757 |
| 143 Regional I/I Management Planning | 169 | 169 | - | completed project | - | - | - | - | - | - |
| 145 Facility Asset Protection | 559,319 | 116,626 | 442,693 | 31,166 | 43,436 | 28,299 | 14,408 | 138,884 | 280,465 | 44,918 |
| 146 Deer Island Cross Harbor Tunnel | 5,000 | - | 5,000 | - | - | - | - | - | 5,000 | - |
| 147 Randolph Trunk Sewer Relief | 698 | - | 698 | - | - | - | 262 | 262 | 436 | - |
| Treatment | 1,134,973 | 311,181 | 823,792 | 26,256 | 66,283 | 69,572 | 77,461 | 249,596 | 523,168 | 61,051 |
| 182 DI Primary and Secondary Treatment | (958) | (958) | - | completed project | - | - | - | - | - | - |
| 200 DI Plant Optimization | 33,279 | 33,279 | - | completed project | - | - | - | - | - | - |
| 206 DI Treatment Plant Asset Protection | 1,068,958 | 261,375 | 807,583 | 24,765 | 64,069 | 66,913 | 76,742 | 241,505 | 514,042 | 61,051 |
| 210 Clinton Wastewater Treatment Plant | 31,483 | 15,274 | 16,209 | 1,491 | 2,214 | 2,660 | 718 | 8,092 | 9,126 | - |
| 211 Laboratory Services | 2,212 | 2,212 | - | completed project | - | - | - | - | - | - |
| Residuals | 168,915 | 65,880 | 103,034 | 8,961 | 5,341 | 518 | 795 | 16,449 | 31,279 | 56,139 |
| 261 Residuals | 63,811 | 63,811 | - | completed project | - | - | - | - | - | - |
| 271 Residuals Asset Protection | 105,104 | 2,070 | 103,034 | 8,961 | 5,341 | 518 | 795 | 16,449 | 31,279 | 56,139 |

ATTACHMENT B
FY21 Proposed CIP
Expenditure Forecast at Project Level in \$000s

| Program / Project Name | Total Program/Project Amount | Spending through FY19 | Remaining Balance | FY20 | FY21 | FY22 | FY23 | FY19-FY23 | FY24-FY28 | Beyond FY28 |
|--------------------------------------------------------|------------------------------|-----------------------|-------------------|-------------------|---------------|---------------|---------------|----------------|----------------|-----------------|
| CSO | 913,093 | 903,593 | 9,500 | 2,269 | 5,206 | 1,347 | 601 | 10,620 | 76 | - |
| CSO MWRA Managed | 433,534 | 433,534 | - | completed project | - | - | - | - | - | - |
| 339 North Dorchester Bay | 221,510 | 221,510 | - | completed project | - | - | - | - | - | - |
| 347 East Boston Branch Sewer Relief | 85,637 | 85,637 | - | completed project | - | - | - | - | - | - |
| 348 BOS019 Storage Conduit | 14,288 | 14,288 | - | completed project | - | - | - | - | - | - |
| 349 Chelsea Trunk Sewer | 29,779 | 29,779 | - | completed project | - | - | - | - | - | - |
| 350 Union Park Detention Treatment Facility | 49,583 | 49,583 | - | completed project | - | - | - | - | - | - |
| 353 Upgrade Existing CSO Facilities | 22,385 | 22,385 | - | completed project | - | - | - | - | - | - |
| 354 Hydraulic Relief Projects | 2,295 | 2,295 | - | completed project | - | - | - | - | - | - |
| 355 MWR003 Gate & Siphon | 4,424 | 4,424 | - | completed project | - | - | - | - | - | - |
| 357 Charles River CSO Controls | 3,633 | 3,633 | - | completed project | - | - | - | - | - | - |
| CSO Community Managed | 423,780 | 420,017 | 3,763 | 941 | 2,822 | - | - | 3,763 | - | - |
| 340 Dorchester Bay Sewer Separation (Fox Point) | 55,029 | 55,029 | - | completed project | - | - | - | - | - | - |
| 341 Dorchester Bay Sewer Separation (Commercial Point) | 63,625 | 59,862 | 3,763 | 941 | 2,822 | - | - | 3,763 | - | - |
| 342 Neponset River Sewer Separation | 2,492 | 2,492 | - | completed project | - | - | - | - | - | - |
| 343 Constitution Beach Sewer Separation | 3,731 | 3,731 | - | completed project | - | - | - | - | - | - |
| 344 Stony Brook Sewer Separation | 44,319 | 44,319 | - | completed project | - | - | - | - | - | - |
| 346 Cambridge Sewer Separation | 104,552 | 104,552 | - | completed project | - | - | - | - | - | - |
| 351 BWSC Floatables Controls | 946 | 946 | - | completed project | - | - | - | - | - | - |
| 352 Cambridge Floatables Control | 1,127 | 1,127 | - | completed project | - | - | - | - | - | - |
| 356 Fort Point Channel Sewer Separation | 11,507 | 11,507 | - | completed project | - | - | - | - | - | - |
| 358 Morrissey Boulevard Drain | 32,181 | 32,181 | - | completed project | - | - | - | - | - | - |
| 359 Reserved Channel Sewer Separation | 70,524 | 70,524 | - | completed project | - | - | - | - | - | - |
| 360 Brookline Sewer Separation | 24,715 | 24,715 | - | completed project | - | - | - | - | - | - |
| 361 Bulfinch Triangle Sewer Separation | 9,032 | 9,032 | - | completed project | - | - | - | - | - | - |
| CSO Planning & Support | 55,778 | 50,041 | 5,737 | 1,328 | 2,384 | 1,347 | 601 | 6,857 | 76 | - |
| 324 CSO Support | 55,778 | 50,041 | 5,737 | 1,328 | 2,384 | 1,347 | 601 | 6,856.91 | 76 | - |
| Other Wastewater | 392,866 | 229,966 | 162,900 | 24,925 | 25,745 | 28,259 | 23,551 | 142,129 | 114,974 | (54,555) |
| 128 I/I Local Financial Assistance | 392,585 | 229,685 | 162,900 | 24,925 | 25,745 | 28,259 | 23,551 | 142,129 | 114,974 | (54,555) |
| 138 Sewerage System Mapping Upgrades | 281 | 281 | - | completed project | - | - | - | - | - | - |

ATTACHMENT B
FY21 Proposed CIP
Expenditure Forecast at Project Level in \$000s

| Program / Project Name | Total Program/Project Amount | Spending through FY19 | Remaining Balance | FY20 | FY21 | FY22 | FY23 | FY19-FY23 | FY24-FY28 | Beyond FY28 |
|----------------------------------------------------------|------------------------------|-----------------------|-------------------|-------------------|---------------|---------------|----------------|----------------|----------------|------------------|
| Waterworks | 4,507,208 | 2,177,062 | 2,330,146 | 60,868 | 67,930 | 97,874 | 117,615 | 409,934 | 776,982 | 1,208,876 |
| Drinking Water Quality Improvements | 705,463 | 650,743 | 54,720 | 1,638 | 3,488 | 5,098 | 2,775 | 13,769 | 13,450 | 28,271 |
| 542 Carroll Water Treatment Plant | 437,939 | 423,860 | 14,079 | 843 | 2,524 | 902 | 560 | 5,573 | 9,250 | - |
| 543 Quabbin Water Treatment Plant | 19,973 | 19,973 | - | completed project | - | - | - | - | - | - |
| 544 Norumbega Covered Storage | 106,674 | 106,674 | - | completed project | - | - | - | - | - | - |
| 545 Blue Hills Covered Storage | 40,083 | 40,083 | - | completed project | - | - | - | - | - | - |
| 550 Spot Pond Covered Storage Facility | 60,126 | 60,126 | - | completed project | - | - | - | - | - | - |
| 555 CWTP Asset Protection | 40,668 | 26 | 40,641 | 795 | 964 | 4,196 | 2,215 | 8,197 | 4,200 | 28,271 |
| Transmission | 2,618,719 | 835,114 | 1,783,605 | 13,987 | 26,184 | 38,346 | 59,263 | 147,693 | 361,085 | 1,284,740 |
| 597 Winsor Station Pipeline | 52,103 | 5,938 | 46,165 | - | - | - | - | 204 | 45,513 | 653 |
| 601 Sluice Gate Rehabilitation | 9,158 | 9,158 | - | completed project | - | - | - | - | - | - |
| 604 MetroWest Tunnel | 700,184 | 697,182 | 3,002 | - | - | - | - | - | 3,002 | - |
| 615 Chicopee Valley Aqueduct Redundancy | 8,666 | 8,666 | - | completed project | - | - | - | - | - | - |
| 616 Quabbin Transmission System | 20,777 | 8,670 | 12,107 | 330 | 4,308 | 3,462 | 1,710 | 9,813 | 2,272 | 25 |
| 617 Sudbury/Weston Aqueduct Repairs | 12,150 | 2,627 | 9,524 | 165 | 1,435 | - | - | 1,995 | 7,257 | 667 |
| 620 Wachusett Reservoir Spillway Improvements | 9,287 | 9,287 | - | completed project | - | - | - | - | - | - |
| 621 Watershed Land | 29,000 | 25,020 | 3,980 | 894 | 1,000 | 1,000 | 1,000 | 6,068 | 86 | - |
| 622 Cosgrove Tunnel Redundancy | 58,623 | 57,369 | 1,253 | 1,250 | 4 | - | - | 6,605 | - | - |
| 623 Dam Projects | 6,323 | 3,139 | 3,184 | 227 | 483 | 1,524 | 908 | 3,164 | 43 | - |
| 625 Metropolitan Tunnel Redundancy | 1,507,270 | 3,716 | 1,503,553 | 1,900 | 5,660 | 8,184 | 7,722 | 23,726 | 197,950 | 1,282,137 |
| 628 Metropolitan Redundancy Interim Improvements | 181,757 | 4,340 | 177,417 | 9,196 | 12,171 | 19,780 | 45,066 | 87,715 | 89,947 | 1,258 |
| 630 Watershed Division Capital Improvements | 23,420 | - | 23,420 | 26 | 1,124 | 4,396 | 2,857 | 8,403 | 15,017 | - |
| Distribution And Pumping | 1,025,452 | 500,961 | 524,491 | 30,640 | 24,311 | 35,164 | 45,292 | 172,011 | 327,117 | 61,966 |
| 618 Peabody Pipeline Project | 1,448 | 1,430 | 18 | 18 | - | - | - | 389 | - | - |
| 677 Valve Replacement | 22,279 | 12,016 | 10,263 | - | - | - | - | - | 6,747 | 3,515 |
| 678 Boston Low Service - Pipe & Valve Rehabilitation | 23,691 | 23,691 | - | completed project | - | - | - | - | - | - |
| 683 Heath Hill Road Pipe Replacement | 19,358 | 19,358 | - | completed project | - | - | - | - | - | - |
| 689 James L. Gillis Pump Station | 33,419 | 33,419 | - | completed project | - | - | - | - | - | - |
| 692 Northern High Service (NHS) - Section 27 Improvement | 1,668 | 124 | 1,545 | 1 | 2 | 12 | 12 | 27 | 1,518 | - |
| 693 NHS - Revere & Malden Pipeline Improvements | 86,244 | 30,301 | 55,943 | 743 | 1,545 | 4,528 | 10,867 | 19,422 | 36,363 | 1,898 |
| 702 New Connecting Mains - Shaft 7 to WASM 3 | 57,584 | 13,332 | 44,252 | 958 | 5,900 | 8,233 | 10,919 | 26,417 | 18,242 | - |
| 704 Rehabilitation of Other Pump Stations | 51,258 | 30,058 | 21,200 | - | - | - | 747 | 747 | 20,453 | - |
| 706 NHS - New Connecting Mains from Section 91 | 2,360 | 2,360 | - | completed project | - | - | - | - | - | - |
| 708 Northern Extra High Service - New Pipelines | 26,770 | 3,632 | 23,138 | 14 | 550 | 608 | 5,365 | 6,537 | 16,601 | - |
| 712 Cathodic Protection of Distribution Mains | 63,483 | 979 | 62,504 | 181 | 308 | 2,927 | 7,940 | 12,066 | 51,148 | - |
| 713 Spot Pond Supply Mains Rehabilitation | 66,289 | 65,489 | 800 | - | - | 600 | 200 | 800 | - | - |

ATTACHMENT B
FY21 Proposed CIP
Expenditure Forecast at Project Level in \$000s

| Program / Project Name | Total Program/Project Amount | Spending through FY19 | Remaining Balance | FY20 | FY21 | FY22 | FY23 | FY19-FY23 | FY24-FY28 | Beyond FY28 |
|------------------------------------------------------|------------------------------|-----------------------|-------------------|-------------------|---------------|---------------|---------------|---------------|---------------|------------------|
| 714 Southern Extra High - Sections 41 & 42 | 3,657 | 3,657 | - | completed project | - | - | - | - | - | - |
| 719 Chestnut Hill Connecting Mains | 38,945 | 18,287 | 20,659 | - | - | - | - | - | 20,648 | 11 |
| 720 Warren Cottage Line Rehabilitation | 1,205 | 1,205 | - | completed project | - | - | - | - | - | - |
| 721 Southern Spine Distribution Mains | 90,585 | 36,683 | 53,902 | 767 | 852 | 887 | 735 | 3,241 | 50,423 | 238 |
| 722 Northern Intermediate High Redundancy & Storage | 128,724 | 66,302 | 62,423 | 7,803 | 11,004 | 10,914 | 3,708 | 50,836 | 28,983 | 10 |
| 723 Northern Low Service Rehabilitation - Section 8 | 60,945 | 4,907 | 56,038 | 646 | 1,171 | 5,617 | 3,812 | 13,198 | 44,660 | 133 |
| 725 Hydraulic Model Update | 598 | 598 | - | completed project | - | - | - | - | - | - |
| 727 Southern Extra High Redundancy & Storage | 140,117 | 42,462 | 97,654 | 19,454 | 2,981 | 471 | 496 | 37,419 | 18,091 | 56,162 |
| 730 Weston Aqueduct Supply Mains | 80,457 | 80,403 | 54 | 54 | - | - | - | 54 | - | - |
| 731 Lynnfield Pipeline | 5,626 | 5,626 | - | completed project | - | - | - | - | - | - |
| 732 Walnut St. & Fisher Hill Pipeline Rehabilitation | 2,717 | 2,717 | - | completed project | - | - | - | - | - | - |
| 735 Section 80 Rehabilitation | 16,024 | 1,925 | 14,099 | - | - | 367 | 491 | 858 | 13,240 | - |
| Other Waterworks | 157,574 | 190,245 | (32,670) | 14,602 | 13,947 | 19,267 | 10,285 | 76,461 | 75,330 | (166,101) |
| 753 Central Monitoring System | 39,002 | 21,197 | 17,805 | 1,066 | 6,600 | 5,200 | 1,566 | 14,924 | 3,373 | - |
| 763 Distribut Systems Facilities Mapping | 2,799 | 1,036 | 1,763 | - | 231 | 654 | 298 | 1,183 | 580 | - |
| 764 Local Water Infrastructure Rehabilitation | 7,488 | 7,488 | - | completed project | - | - | - | - | - | - |
| 765 Local Water Pipeline Financial Assistance | - | 154,098 | (154,098) | 7,989 | 5,994 | 10,616 | (2,966) | 35,458 | 20,905 | (196,636) |
| 766 Waterworks Facility Asset Protection | 108,286 | 6,425 | 101,860 | 5,548 | 1,122 | 2,796 | 11,388 | 24,896 | 50,472 | 30,534 |
| Business & Operations Support | 172,297 | 103,438 | 68,859 | 9,434 | 21,835 | 10,542 | 6,179 | 50,397 | 20,870 | - |
| 881 Equipment Purchase | 41,937 | 22,820 | 19,117 | 1,732 | 2,368 | 1,580 | 2,625 | 9,266 | 10,814 | - |
| 925 Technical Assistance | 1,125 | - | 1,125 | - | 391 | 366 | 368 | 1,125 | - | - |
| 930 MWRA Facility - Chelsea | 9,812 | 9,812 | - | completed project | - | - | - | - | - | - |
| 931 Business Systems Plan | 24,562 | 24,562 | - | completed project | - | - | - | (1) | - | - |
| 932 Environmental Remediation | 1,479 | 1,479 | - | completed project | - | - | - | - | - | - |
| 933 Capital Maintenance Planning & Development | 26,455 | 15,457 | 10,999 | 2,592 | 4,582 | 3,185 | 640 | 12,254 | - | - |
| 934 MWRA Facilities Management | 3,071 | 371 | 2,700 | 43 | 262 | 1,362 | 1,028 | 2,695 | 5 | - |
| 935 Alternative Energy Initiatives | 23,700 | 18,184 | 5,516 | - | - | - | - | (234) | 5,516 | - |
| 940 Application Improvement Program | 18,249 | 3,157 | 15,092 | 943 | 5,628 | 3,136 | 1,000 | 10,971 | 4,385 | - |
| 942 Information Security Program (ISP) | 5,506 | 1,708 | 3,798 | 1,087 | 2,711 | - | - | 3,798 | - | - |
| 944 Information Technology Management Program | 200 | - | 200 | 100 | 100 | - | - | 200 | - | - |
| 946 IT Infrastructure Program | 16,202 | 5,890 | 10,312 | 2,938 | 5,793 | 913 | 518 | 10,321 | 150 | - |

ATTACHMENT C
Overview of the FY21 Proposed CIP and Changes from the Final FY20 CIP in \$000s

| Program and Project | FY20 Final | | | | FY21 Proposed | | | | Change from Final FY20 | | | |
|-------------------------------------------|---------------------|------------------|------------------|------------------|---------------------|------------------|------------------|------------------|------------------------|-----------------|----------------|----------------|
| | Total Budget Amount | FY19-23 | FY24-28 | Beyond 28 | Total Budget Amount | FY19-23 | FY24-28 | Beyond 28 | Total Budget Amount | FY19-23 | FY24-28 | Beyond 28 |
| Total MWRA | 8,184,170 | 1,086,786 | 1,611,220 | 1,212,406 | 8,511,886 | 1,088,877 | 1,821,643 | 1,327,603 | 327,717 | 2,087 | 210,426 | 115,199 |
| Wastewater | 3,719,452 | 640,479 | 906,340 | 111,314 | 3,832,381 | 628,545 | 1,023,791 | 118,727 | 112,931 | (11,934) | 117,448 | 7,413 |
| Interception & Pumping | 1,193,347 | 195,338 | 337,111 | 58,498 | 1,222,536 | 209,751 | 354,292 | 56,092 | 29,189 | 14,413 | 17,181 | (2,406) |
| 102 Quincy Pump Facilities | 25,907 | - | - | - | 25,907 | - | - | - | - | - | - | - |
| 104 Braintree-Weymouth Relief Facilities | 240,104 | 1,832 | 10,568 | - | 240,415 | 1,847 | 10,863 | - | 311 | 15 | 295 | - |
| 105 New Neponset Valley Relief Sewer | 30,300 | - | - | - | 30,300 | - | - | - | - | - | - | - |
| 106 Wellesley Extension Replacement Sewer | 64,359 | - | - | - | 64,359 | - | - | - | - | - | - | - |
| 107 Framingham Extension Relief Sewer | 47,856 | - | - | - | 47,856 | - | - | - | - | - | - | - |
| 127 Cummingsville Replacement Sewer | 8,999 | - | - | - | 8,999 | - | - | - | - | - | - | - |
| 130 Siphon Structure Rehabilitation | 12,127 | 4,478 | 6,709 | - | 13,041 | 5,568 | 6,533 | - | 914 | 1,090 | (176) | - |
| 131 Upper Neponset Valley Sewer | 54,174 | - | - | - | 54,174 | - | - | - | - | - | - | - |
| 132 Corrosion & Odor Control | 84,132 | 42,407 | 34,705 | 840 | 97,943 | 53,840 | 37,083 | 840 | 13,811 | 11,433 | 2,378 | - |
| 136 West Roxbury Tunnel | 11,314 | - | 1,000 | - | 11,314 | - | 1,000 | - | - | - | - | - |
| 137 Wastewater Central Monitoring | 27,482 | 1,926 | 5,774 | - | 27,482 | 1,442 | 6,258 | - | - | (484) | 484 | - |
| 139 South System Relief Project | 4,939 | - | 1,500 | - | 4,939 | - | 1,500 | - | - | - | - | - |
| 141 Wastewater Process Optimization | 10,327 | 702 | 6,546 | 1,577 | 8,933 | 701 | 5,154 | 1,577 | (1,394) | (1) | (1,392) | - |
| 142 Wastewater Meter System-Equipment | 22,628 | 7,662 | - | 9,242 | 21,688 | 7,207 | - | 8,757 | (940) | (455) | - | (485) |
| 143 Regional I/I Management Planning | 169 | - | - | - | 169 | - | - | - | - | - | - | - |
| 145 Facility Asset Protection | 542,832 | 135,633 | 265,309 | 46,839 | 559,319 | 138,884 | 280,465 | 44,918 | 16,487 | 3,251 | 15,156 | (1,921) |
| 146 D.I. Cross Harbor Tunnel Inspection | 5,000 | - | 5,000 | - | 5,000 | - | 5,000 | - | - | - | - | - |
| 147 Randolph Trunk Sewer Relief | 698 | 698 | - | - | 698 | 262 | 436 | - | - | (436) | 436 | - |
| Treatment | 1,054,394 | 279,023 | 424,954 | 49,259 | 1,134,974 | 249,597 | 523,168 | 61,050 | 80,580 | (29,426) | 98,214 | 11,791 |
| 182 DI Primary and Secondary | (958) | - | - | - | (958) | - | - | - | - | - | - | - |
| 200 DI Plant Optimization | 33,279 | - | - | - | 33,279 | - | - | - | - | - | - | - |
| 206 DI Treatment Plant Asset Protection | 993,149 | 273,449 | 418,081 | 49,260 | 1,068,958 | 241,505 | 514,042 | 61,051 | 75,809 | (31,944) | 95,961 | 11,791 |
| 210 Clinton Wastewater Treat Plant | 26,712 | 5,574 | 6,873 | - | 31,483 | 8,092 | 9,126 | - | 4,771 | 2,518 | 2,253 | - |
| 211 Laboratory Services | 2,212 | - | - | - | 2,212 | - | - | - | - | - | - | - |
| Residuals | 167,793 | 15,212 | 31,338 | 56,197 | 168,915 | 16,449 | 31,279 | 56,140 | 1,122 | 1,237 | (59) | (57) |
| 261 Residuals | 63,811 | - | - | - | 63,811 | - | - | - | - | - | - | - |
| 271 Residuals Asset Protection | 103,982 | 15,212 | 31,338 | 56,197 | 105,104 | 16,449 | 31,279 | 56,140 | 1,122 | 1,237 | (59) | (57) |

ATTACHMENT C

Overview of the FY21 Proposed CIP and Changes from the Final FY20 CIP in \$000s

| Program and Project | FY20 Final | | | | FY21 Proposed | | | | Change from Final FY20 | | | |
|--------------------------------------------------------|---------------------|----------------|----------------|------------------|---------------------|----------------|----------------|------------------|------------------------|---------------|---------------|----------------|
| | Total Budget Amount | FY19-23 | FY24-28 | Beyond 28 | Total Budget Amount | FY19-23 | FY24-28 | Beyond 28 | Total Budget Amount | FY19-23 | FY24-28 | Beyond 28 |
| CSO | 911,052 | 8,655 | (1) | - | 913,092 | 10,619 | 75 | - | 2,040 | 1,964 | 76 | - |
| 340 Dorchester Bay Sewer Separation (Fox Point) | 55,029 | - | - | - | 55,029 | - | - | - | - | - | - | - |
| 341 Dorchester Bay Sewer Separation (Commercial Point) | 63,625 | 3,763 | - | - | 63,625 | 3,763 | - | - | - | - | - | - |
| 342 Neponset River Sewer Separation | 2,492 | - | - | - | 2,492 | - | - | - | - | - | - | - |
| 343 Constitution Beach Sewer Separation | 3,731 | - | - | - | 3,731 | - | - | - | - | - | - | - |
| 344 Stony Brook Sewer Separation | 44,319 | - | - | - | 44,319 | - | - | - | - | - | - | - |
| 346 Cambridge Sewer Separation | 104,552 | - | - | - | 104,552 | - | - | - | - | - | - | - |
| 351 BWSC Floatables Controls | 946 | - | - | - | 946 | - | - | - | - | - | - | - |
| 352 Cambridge Floatables Control | 1,127 | - | - | - | 1,127 | - | - | - | - | - | - | - |
| 356 Fort Point Channel Sewer Separation | 11,507 | - | - | - | 11,507 | - | - | - | - | - | - | - |
| 358 Morrissey Boulevard Drain | 32,181 | - | - | - | 32,181 | - | - | - | - | - | - | - |
| 359 Reserved Channel Sewer Separation | 70,524 | - | - | - | 70,524 | - | - | - | - | - | - | - |
| 360 Brookline Sewer Separation | 24,715 | - | - | - | 24,715 | - | - | - | - | - | - | - |
| 361 Bulfinch Triangle Sewer Separation | 9,032 | - | - | - | 9,032 | - | - | - | - | - | - | - |
| 339 North Dorchester Bay | 221,510 | - | - | - | 221,510 | - | - | - | - | - | - | - |
| 347 East Boston Branch Sewer Relief | 85,637 | - | - | - | 85,637 | - | - | - | - | - | - | - |
| 348 BOS019 Storage Conduit | 14,288 | - | - | - | 14,288 | - | - | - | - | - | - | - |
| 349 Chelsea Trunk Sewer | 29,779 | - | - | - | 29,779 | - | - | - | - | - | - | - |
| 350 Union Park Detention Treatment Facility | 49,583 | - | - | - | 49,583 | - | - | - | - | - | - | - |
| 353 Upgrade Existing CSO Facilities | 22,385 | - | - | - | 22,385 | - | - | - | - | - | - | - |
| 354 Hydraulic Relief Projects | 2,295 | - | - | - | 2,295 | - | - | - | - | - | - | - |
| 355 MWR003 Gate & Siphon | 4,424 | - | - | - | 4,424 | - | - | - | - | - | - | - |
| 357 Charles River CSO Controls | 3,633 | - | - | - | 3,633 | - | - | - | - | - | - | - |
| 324 CSO Support | 53,738 | 4,893 | - | - | 55,778 | 6,857 | 76 | - | 2,040 | 1,964 | 76 | - |
| Other Wastewater | 392,866 | 142,251 | 112,938 | (52,640) | 392,866 | 142,129 | 114,974 | (54,555) | - | (122) | 2,036 | (1,915) |
| 128 I/I Local Financial Assistance | 392,585 | 142,251 | 112,938 | (52,640) | 392,585 | 142,129 | 114,974 | (54,555) | - | (122) | 2,036 | (1,915) |
| 138 Sewerage System Mapping Upgrade | 281 | - | - | - | 281 | - | - | - | - | - | - | - |
| Total Waterworks | 4,299,729 | 398,370 | 688,857 | 1,101,095 | 4,507,208 | 409,934 | 776,982 | 1,208,876 | 207,479 | 11,564 | 88,130 | 107,786 |
| Drinking Water Quality | 704,202 | 12,834 | 13,125 | 28,271 | 705,463 | 13,770 | 13,450 | 28,271 | 1,261 | 936 | 325 | - |
| 542 Carroll Water Treatment Plant | 436,138 | 3,772 | 9,250 | - | 437,939 | 5,573 | 9,250 | - | 1,801 | 1,801 | - | - |
| 543 Quabbin Water Treatment Plant | 19,973 | - | - | - | 19,973 | - | - | - | - | - | - | - |
| 544 Norumbega Covered Storage | 106,674 | - | - | - | 106,674 | - | - | - | - | - | - | - |
| 545 Blue Hills Covered Storage | 40,083 | - | - | - | 40,083 | - | - | - | - | - | - | - |
| 550 Spot Pond Storage Facility | 60,126 | - | - | - | 60,126 | - | - | - | - | - | - | - |
| 555 CWTP Asset Protection | 41,208 | 9,062 | 3,875 | 28,271 | 40,668 | 8,197 | 4,200 | 28,271 | (540) | (865) | 325 | - |

ATTACHMENT C

Overview of the FY21 Proposed CIP and Changes from the Final FY20 CIP in \$000s

| Program and Project | FY20 Final | | | | FY21 Proposed | | | | Change from Final FY20 | | | |
|------------------------------------------------------|---------------------|----------------|----------------|------------------|---------------------|----------------|----------------|------------------|------------------------|----------------|---------------|---------------|
| | Total Budget Amount | FY19-23 | FY24-28 | Beyond 28 | Total Budget Amount | FY19-23 | FY24-28 | Beyond 28 | Total Budget Amount | FY19-23 | FY24-28 | Beyond 28 |
| Transmission | 2,522,587 | 150,245 | 337,716 | 1,209,433 | 2,618,720 | 147,695 | 361,089 | 1,284,742 | 96,133 | (2,550) | 23,373 | 75,309 |
| 597 Winsor Station Pipeline | 49,559 | 204 | 42,969 | 653 | 52,103 | 204 | 45,513 | 653 | 2,544 | - | 2,544 | - |
| 601 Sluice Gate Rehabilitation | 9,158 | - | - | - | 9,158 | - | - | - | - | - | - | - |
| 604 MetroWest Tunnel | 700,184 | - | 3,002 | - | 700,184 | - | 3,002 | - | - | - | - | - |
| 615 Chicopee Valley Aqueduct Redundancy | 8,666 | - | - | - | 8,666 | - | - | - | - | - | - | - |
| 616 Quabbin Transmission System | 19,032 | 8,168 | 2,172 | 25 | 20,777 | 9,813 | 2,272 | 25 | 1,745 | 1,645 | 100 | - |
| 617 Sudbury/Weston Aqueduct Repairs | 11,507 | 1,464 | 7,144 | 667 | 12,150 | 1,995 | 7,257 | 667 | 643 | 531 | 113 | - |
| 620 Wachusett Reservoir Spillway Improvement | 9,287 | - | - | - | 9,287 | - | - | - | - | - | - | - |
| 621 Watershed Land | 29,000 | 5,600 | 554 | - | 29,000 | 6,068 | 86 | - | - | 468 | (468) | - |
| 622 Cosgrove/Wachusett Redundancy | 59,146 | 7,128 | - | - | 58,623 | 6,605 | - | - | (523) | (523) | - | - |
| 623 Dam Projects | 6,048 | 2,890 | 43 | - | 6,323 | 3,164 | 43 | - | 275 | 274 | - | - |
| 625 Metro Tunnel Redundancy | 1,421,750 | 24,313 | 185,993 | 1,207,988 | 1,507,270 | 23,726 | 197,950 | 1,282,137 | 85,520 | (587) | 11,957 | 74,149 |
| 628 Metro Redundancy Interim Improvement | 177,348 | 92,636 | 81,777 | 98 | 181,757 | 87,715 | 89,947 | 1,258 | 4,409 | (4,921) | 8,170 | 1,160 |
| 630 Watershed Division Capital Improvement | 21,900 | 7,840 | 14,060 | - | 23,420 | 8,403 | 15,017 | - | 1,520 | 563 | 957 | - |
| Distribution & Pumping | 981,767 | 161,266 | 297,468 | 58,675 | 1,025,450 | 172,009 | 327,118 | 61,967 | 43,683 | 10,743 | 29,650 | 3,292 |
| 618 Peabody Pipeline | 1,509 | 450 | - | - | 1,448 | 389 | - | - | (61) | (61) | - | - |
| 677 Valve Replacement | 21,655 | - | 6,487 | 3,151 | 22,279 | - | 6,747 | 3,515 | 624 | - | 260 | 364 |
| 678 Boston Low Service-Pipe & Valve Rehabilitation | 23,691 | - | - | - | 23,691 | - | - | - | - | - | - | - |
| 683 Heath Hill Road Pipe Replacement | 19,358 | - | - | - | 19,358 | - | - | - | - | - | - | - |
| 689 James L. Gillis Pump Station Rehabilitation | 33,419 | - | - | - | 33,419 | - | - | - | - | - | - | - |
| 692 NHS - Section 27 Improvements | 1,326 | 27 | 1,175 | - | 1,668 | 27 | 1,518 | - | 342 | - | 343 | - |
| 693 NHS - Revere & Malden Pipeline Improvement | 82,804 | 10,344 | 42,000 | 1,898 | 86,244 | 19,422 | 36,363 | 1,898 | 3,440 | 9,078 | (5,637) | - |
| 702 New Connect Mains-Shaft 7 to WASM 3 | 56,376 | 25,839 | 17,612 | - | 57,584 | 26,417 | 18,242 | - | 1,208 | 578 | 630 | - |
| 704 Rehabilitation of Other Pump Stations | 50,258 | 1,247 | 18,953 | - | 51,258 | 747 | 20,453 | - | 1,000 | (500) | 1,500 | - |
| 706 NHS-Connecting Mains from Section 91 | 2,360 | - | - | - | 2,360 | - | - | - | - | - | - | - |
| 708 Northern Extra High Service New Pipelines | 10,874 | 447 | 6,795 | - | 26,770 | 6,537 | 16,601 | - | 15,896 | 6,090 | 9,806 | - |
| 712 Cathodic Protection Of Distribution Mains | 66,704 | 9,740 | 56,695 | - | 63,483 | 12,066 | 51,148 | - | (3,221) | 2,326 | (5,547) | - |
| 713 Spot Pond Supply Mains Rehabilitation | 66,289 | 800 | - | - | 66,289 | 800 | - | - | - | - | - | - |
| 714 Southern Extra High Sections 41 & 42 | 3,657 | - | - | - | 3,657 | - | - | - | - | - | - | - |
| 719 Chestnut Hill Connecting Mains | 33,827 | - | 15,534 | 6 | 38,945 | - | 20,648 | 11 | 5,118 | - | 5,114 | 5 |
| 720 Warren Cottage Line Rehabilitation | 1,205 | - | - | - | 1,205 | - | - | - | - | - | - | - |
| 721 South Spine Distribution Mains | 80,308 | 3,271 | 40,245 | 109 | 90,585 | 3,241 | 50,423 | 238 | 10,277 | (30) | 10,178 | 129 |
| 722 NIH Redundancy & Storage | 121,188 | 41,066 | 31,215 | 11 | 128,724 | 50,836 | 28,983 | 10 | 7,536 | 9,770 | (2,232) | (1) |
| 723 Northern Low Service Rehabilitation Section 8 | 69,584 | 29,898 | 35,936 | 796 | 60,945 | 13,197 | 44,660 | 133 | (8,639) | (16,701) | 8,724 | (663) |
| 724 Northern High Service - Pipeline Rehabilitation | - | - | - | - | - | - | - | - | - | - | - | - |
| 725 Hydraulic Model Update | 598 | - | - | - | 598 | - | - | - | - | - | - | - |
| 727 Southern Extra High Redundancy & Storage | 132,426 | 37,378 | 13,899 | 52,704 | 140,117 | 37,419 | 18,091 | 56,162 | 7,691 | 41 | 4,192 | 3,458 |
| 730 Weston Aqueduct Supply Mains | 80,457 | 54 | - | - | 80,457 | 54 | - | - | - | - | - | - |
| 731 Lynnfield Pipeline | 5,626 | - | - | - | 5,626 | - | - | - | - | - | - | - |
| 732 Walnut St. & Fisher Hill Pipeline Rehabilitation | 2,717 | - | - | - | 2,717 | - | - | - | - | - | - | - |

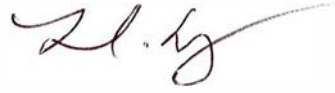
ATTACHMENT C

Overview of the FY21 Proposed CIP and Changes from the Final FY20 CIP in \$000s

| Program and Project | FY20 Final | | | | FY21 Proposed | | | | Change from Final FY20 | | | |
|------------------------------------------------------------|---------------------|---------------|---------------|------------------|---------------------|---------------|---------------|------------------|------------------------|--------------|---------------|---------------|
| | Total Budget Amount | FY19-23 | FY24-28 | Beyond 28 | Total Budget Amount | FY19-23 | FY24-28 | Beyond 28 | Total Budget Amount | FY19-23 | FY24-28 | Beyond 28 |
| 733 NHS Pipeline Rehabilitation 13-18 & 48 | - | - | - | - | - | - | - | - | - | - | - | - |
| 734 Southern Extra High Pipelines-Sections 30, 39,40, & 44 | - | - | - | - | - | - | - | - | - | - | - | - |
| 735 Section 80 Rehabilitation | 13,552 | 706 | 10,921 | - | 16,024 | 858 | 13,240 | - | 2,472 | 152 | 2,319 | - |
| Other | 91,173 | 74,025 | 40,548 | (195,286) | 157,575 | 76,460 | 75,330 | (166,101) | 66,402 | 2,435 | 34,782 | 29,185 |
| 753 Central Monitoring System | 39,002 | 10,203 | 5,576 | 2,518 | 39,002 | 14,924 | 3,373 | - | - | 4,721 | (2,203) | (2,518) |
| 763 Distribution Systems Facilities Mapping | 2,799 | 1,549 | 214 | - | 2,799 | 1,183 | 580 | - | - | (366) | 366 | - |
| 764 Local Water Infrastructure Rehabilitation Assistance | 7,488 | - | - | - | 7,488 | - | - | - | - | - | - | - |
| 765 Local Water Pipeline Improvement Loan Program | - | 37,498 | 20,033 | (197,804) | - | 35,458 | 20,905 | (196,635) | - | (2,040) | 872 | 1,169 |
| 766 Waterworks Facility Asset Protection | 41,884 | 24,776 | 14,725 | - | 108,286 | 24,896 | 50,472 | 30,534 | 66,402 | 120 | 35,747 | 30,534 |
| Business & Operations Support | 164,989 | 47,937 | 16,023 | - | 172,297 | 50,397 | 20,870 | - | 7,307 | 2,457 | 4,848 | - |
| 881 Equipment Purchase | 39,090 | 10,453 | 6,780 | - | 41,937 | 9,266 | 10,814 | - | 2,847 | (1,187) | 4,034 | - |
| 925 Technical Assistance | 1,125 | 1,125 | - | - | 1,125 | 1,125 | - | - | - | - | - | - |
| 930 MWRA Facility - Chelsea | 9,812 | - | - | - | 9,812 | - | - | - | - | - | - | - |
| 931 Business Systems Plan | 24,562 | (1) | - | - | 24,562 | (1) | - | - | - | - | - | - |
| 932 Environmental Remediation | 1,479 | - | - | - | 1,479 | - | - | - | - | - | - | - |
| 933 Capital Maintenance Planning | 27,587 | 13,386 | - | - | 26,455 | 12,254 | - | - | (1,132) | (1,132) | - | - |
| 934 MWRA Facilities Management | 2,971 | 2,600 | - | - | 3,071 | 2,695 | 5 | - | 100 | 95 | 5 | - |
| 935 Alternative Energy Initiatives | 23,364 | (234) | 5,181 | - | 23,700 | (234) | 5,516 | - | 336 | - | 335 | - |
| 940 Applicat Improv Program | 13,093 | 6,290 | 3,911 | - | 18,249 | 10,971 | 4,385 | - | 5,156 | 4,681 | 474 | - |
| 942 Info Security Program ISP | 5,506 | 3,798 | - | - | 5,506 | 3,798 | - | - | - | - | - | - |
| 944 Info Tech Mgmt Program | 200 | 200 | - | - | 200 | 200 | - | - | - | - | - | - |
| 946 IT Infrastructure Program | 16,202 | 10,321 | 150 | - | 16,202 | 10,321 | 150 | - | - | - | - | - |

STAFF SUMMARY

TO: Board of Directors
FROM: Frederick A. Laskey, Executive Director
DATE: January 15, 2020
SUBJECT: Bond Counsel Services
Greenberg Traurig, LLP
Contract F253

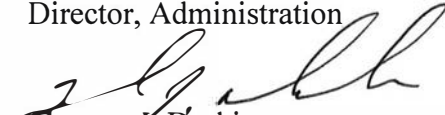


COMMITTEE: Administration, Finance & Audit

VOTE
 INFORMATION


Michele S. Gillen
Director, Administration

Matthew R. Horan, Deputy Director, Finance/Treasurer *MAH*
Preparer/Title


Thomas J. Durkin
Director, Finance

RECOMMENDATION:

To approve the recommendation of the Consultant Selection Committee to award Contract F253 to Greenberg Traurig LLP for Bond Counsel Services and to authorize the Executive Director, on behalf of the Authority, to execute contract F253 in an amount not to exceed \$1,558,800 and for a term of four years from the Notice to Proceed.

DISCUSSION:

All issuers of tax-exempt debt are required to have a Bond Counsel to ensure that bonds are being issued in compliance with all applicable federal and state laws and regulations. Revenue bond issuers, like MWRA, also require Bond Counsel to ensure the bonds are issued in compliance with their bond resolution. For each bond transaction, Bond Counsel will render an opinion that the bonds are legal, binding obligations of the Authority and, if applicable, are exempt from federal and state income taxes. Beyond the issuance process, Bond Counsel assists with providing legal opinions and advice on the management of the outstanding debt, ensuring compliance with the requirements of the General Revenue Bond Resolution and all applicable laws, regulations, and pronouncements on an ongoing basis. Along with the maintenance of the existing outstanding debt, Bond Counsel also provides MWRA with advice as it relates to questions raised by the rating agencies, Internal Revenue Service, bondholders, underwriters and other interested parties.

PROCUREMENT PROCESS:

The procurement process to select Bond Counsel utilized a one-step Request for Qualification Statements and Proposals (RFQ/P), which was issued on September 25, 2019. In addition to MWRA's standard procurement advertising requirements, copies of the advertisement were sent directly to seven firms.

Five firms, Greenberg Traurig, LLP (Greenberg), Locke Lord, LLP (Locke), McCarter English, LLP (McCarter), McGuire Woods LLP (McGuire), and Mintz, Levin, Cohn, Ferris, Glovsky, and Popeo, P.C. (Mintz), submitted proposals on October 25, 2019.

As part of the procurement process, proposers are required to provide Disclosure Statements assuring that firm’s engagement would not result in a conflict of interest or other activity prohibited by Rules 1.7-1.10 of the Massachusetts Supreme Judicial Court Rule 3:07 Rules of Professional Conduct. Those statements are reviewed by a separate Disclosure Panel, comprised of staff from Procurement and the Law Division, which reports any areas of non-compliance or concern to the Selection Committee. After review of the Disclosure Statements and clarifications received from Locke and McGuire, the Panel determined that Greenberg, Locke, McCarter, and McGuire did not have conflicts of interest or other prohibited activity under the SJC Rules. The Disclosure Panel determined, however, that since Mintz serves as Bond Counsel and Program Counsel to the Massachusetts Clean Water Trust there could be a potential for disalignment of interests. Mintz noted this potential disalignment of interest in its proposal and suggested that if selected, the MWRA utilize Disclosure Counsel or another law firm to provide these Bond Counsel services. As result of these factors, the Disclosure Panel concluded that Mintz was not eligible to serve as Bond Counsel and reported this to the Selection Committee.

The Selection Committee evaluated and ranked the proposals from Greenberg, Locke, McCarter and McGuire based on the criteria contained in the RFQ/P: Cost (30 pts), Qualifications and Key Personnel (30 pts), Experience and Past Performance (25 pts), Capacity/Organization, and Management and Technical Approach (15 pts). The proposals for Bond Counsel Services were ranked as follows:

| Rank | Firm | Cost | Total Points | Total Ranking Points |
|-------------|--------------------|--------------|---------------------|-----------------------------|
| 1 | Greenberg Traurig | \$1,558,800* | 397.1 | 7 |
| 2 | Locke Lord | \$1,389,320 | 384.8 | 11 |
| 3 | McCarter & English | \$1,475,375* | 390.3 | 12 |
| 4 | McGuire Woods | \$4,541,320 | 264 | 20 |

Total Ranking Points represents the sum of the individual Selection Committee members’ ranking where the firm receiving the highest number of points is assigned a “1”; the firm receiving the next highest number of points a “2” and so on.

* Reflects corrections due to math errors/rounding.

All four proposals reviewed by the Selection Committee were from firms with significant relevant experience that are well respected in the municipal bond market. Greenberg proposed a total cost of \$1,558,800 with a total of 2,484 hours. Those hours were allocated 81% to the partner level and 19% at the associate level. Greenberg’s cost proposal did not include any escalation in hourly rates over the term of the contract. Greenberg proposed a strong team that has significant familiarity with MWRA and its capital financing program. The proposed lead partner has been involved with MWRA’s debt issuance since 1986 and has served as Disclosure Counsel since 2008. Greenberg has provided MWRA with assistance related to the amendment to the General Revenue Bond Resolution, as well as other tax and bond related matters. Greenberg’s experience with both MWRA and the broader bond markets make it well suited to assist MWRA with its complex debt portfolio. Greenberg provided a detailed and well-structured technical approach. The

RFQ/P required that if selected as Bond Counsel, any firms providing Disclosure Counsel Services or serving as counsel to MWRA's Trustee resign from those positions. Greenberg Traurig currently serves as MWRA's Disclosure Counsel and, if awarded the Bond Counsel contract, will resign. Staff will start the process to procure a new firm to provide Disclosure Counsel Services after award of this contract. If a disclosure matters arises prior to a new firm being hire, Bond Counsel will assist MWRA in addressing the issue.

Locke proposed a total contract cost of \$1,389,320 with a total of 2,258 hours. Those hours were allocated 63% to the partner level, 31% to the associate level and 6% to paralegal staff. Locke proposed an annual \$25 per hour increase to all key personnel, which resulted in a 2% to 7% increase depending on the key personnel's hourly rate for each year of the contract period. While overall Locke presented a strong team, the Selection Committee was concerned with 31% of the level of effort being assigned to an associate with only one year of experience and 6% allocated to paralegal staff. Given the complex nature of MWRA's debt portfolio there was concern that portions of the work might require a higher level of expertise. This may result in higher costs to MWRA since the proposed partners' hourly rates are significantly higher than the associate.

McCarter proposed a total contract cost of \$1,475,375 with a total of 3,842 hours. The hours were allocated 66% partner, 19% special counsel and 14% associate. McCarter proposed increasing hourly rates between years two and three of the contract. This increase ranged from 7% to 10% depending on the individual. While McCarter proposed a team with significant experience in the bond market, there were changes to the key personnel proposed to do the work. McCarter currently serves as MWRA's Bond Counsel, however the lead partner who had provided Bond Counsel services for the last 12 years has left the firm to work in government. As a result of this change, a new partner working out of the firm's Newark New Jersey office was proposed to serve as bond counsel, with a proposed level of effort of 1,285 hours. While this individual is qualified to provide bond counsel services from a national perspective, the Selection Committee had some concerns given the Massachusetts specific legal issues that may arise, including regulatory matters before the State Finance and Governance Board. This limited exposure to Massachusetts specific issues could result in additional costs and delays in the work.

McGuire proposed a total contract cost of \$4,541,302 for the work under this contract. Its proposed cost was approximately \$3.0 million more than the other proposers. While McGuire's team has good experience in the bond market, the high cost proposal was not the best value for MWRA. Also, McGuire's entire team was located outside of Massachusetts, which raised similar concerns related to Massachusetts legal and regulatory issues.

Based on the cost, experience and qualifications of the firm, the Selection Committee recommends award of contract F253 Bond Counsel Services to Greenberg Traurig, LLP.

BUDGET/FISCAL IMPACT:

Most costs associated with Bond Counsel services are included as part of the cost of issuance and are funded from the proceeds of bond transactions. A small portion of the work is funded through the CEB. The FY20 CEB has sufficient funds to pay for the work included in this contract.

MBE/WBE PARTICIPATION:

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

STAFF SUMMARY

TO: Board of Directors
FROM: Frederick A. Laskey, Executive Director
DATE: January 15, 2020
SUBJECT: Deer Island Demand Response Services
Direct Energy Business Marketing, LLC
Contract S590



COMMITTEE: Administration, Finance & Audit

 INFORMATION

 X VOTE



Michele S. Gillen
Director of Administration

David F. Duest, Director, Deer Island Treatment Plant
Carolyn Fiore, Deputy Chief Operating Officer
Robert Huang, Program Manager, Energy Management
Preparer/Title



David W. Coppes, P.E.
Chief Operating Officer

RECOMMENDATION:

To approve the award of Contract S590, Deer Island Demand Response Services, to Direct Energy Business Marketing, LLC, and to authorize the Executive Director, on behalf of the Authority, to execute said contract in the bid amount of five percent of the revenue received from ISO New England for a four-year term from June 1, 2020 through May 31, 2024.

DISCUSSION:

MWRA participates in ISO New England’s (ISO-NE) Forward Capacity Market through its Demand Response Program at both the Deer Island and John J. Carroll treatment plants. Under this program, MWRA is paid monthly settlement payments to be available to deploy backup generators and take facilities off the electric grid during peak demand periods. In FY19, the participation of Deer Island’s combustion turbine generator (CTG) in the ISO-NE Demand Response Program resulted in MWRA receiving \$1.3 million in settlement payments.

MWRA enrolls in these programs through contracts with Lead Market Participants (LMPs).¹ LMPs are authorized by ISO-NE to secure an allotment of capacity in the program through auctions held three years in advance, hence requiring advance coordination and planning. MWRA is not an LMP and thus is required to procure these services.

In March 2019, the Board approved a one-year extension to a sole source purchase order with Direct Energy Business Marketing, LLC (Direct Energy) for LMP services for Deer Island that expires on May 31, 2020 and allows time to secure two competitive replacement contracts. The

¹ The John J, Carroll Water Treatment Plant is enrolled through a Division of Capital Asset Management and Maintenance (DCAMM) contract.

first, Contract S590, will bridge from the time period of June 1, 2020 to May 31, 2024 for which auctions have already been held or auction deadlines have passed. The second, covering June 1, 2024 to May 31, 2027, is currently being advertised and will allow Deer Island’s load reduction to be entered into the auction and will most likely encourage more bidders to participate.

The sole source purchase order to be replaced by Contract S590 defined the LMP’s share of ISO-NE settlement payments as:

- 5 percent for the first four years of the sole source purchase order – from June 1, 2015 to May 31, 2019
- 10 percent for the one-year extension of the sole source purchase order – from June 1, 2019 to May 31, 2020.

Procurement Process

On November 13, 2019, MWRA issued a Request for Bid (RFB) which was advertised in Goods and Services, the Boston Herald, Banner Publication and El Mundo. In addition, notification was sent directly to 12 potential bidders. Seven firms requested the bid documents, and on Friday, December 13, 2019, one bid was received as follows:

| Share of ISO-NE Settlement Payments to MWRA | |
|--------------------------------------------------------------------------------------|------------|
| Direct Energy: Proposed Share of Settlement Payment for June 1, 2020 to May 31, 2024 | 5% |
| <i>Existing Purchase Order: Existing Share for June 1, 2019 to May 31, 2020</i> | <i>10%</i> |

Staff recommend award to Direct Energy as the lowest responsive bidder to provide demand response services for the Deer Island Treatment Plant.

Direct Energy was the only firm to submit a bid, although a handful of other firms had expressed interest. Asked why they declined to bid, one firm stated that the ISO-NE Forward Capacity Auction is held three years in advance and it is time-consuming and administratively difficult to re-enter the auction after it has been held to establish new capacity. Another firm responded that it offers demand response services in other ISOs, but not ISO-NE. A third firm replied that the services required did not align with its experience.

Direct Energy’s bid of 5% of ISO-NE settlement payments is lower than the terms of the current purchase order. Given that decreasing market clearing capacity prices (\$7.03/kW-month to \$3.08/kW-month in the next four years) will drastically lower future settlement payments, the rate was deemed very reasonable by staff. For comparison, the LMP under the DCAMM contract receives 28% of ISO-NE settlement payments.

Direct Energy (and formerly Direct Energy’s predecessor Hess Corporation), a demand response provider since 2004, has been providing LMP services for Deer Island the past 14 years. Staff have been satisfied with the level of service provided by Direct Energy. Direct Energy’s other references were checked and found to be favorable. Staff recommend award of Contract S590 to Direct Energy.

BUDGET/FISCAL IMPACT:

The projected total ISO-NE settlement payments over the four-year term of the contract is \$2,725,955. Direct Energy's 5% share of settlement payments are expected to be approximately \$136,298, resulting in \$2,589,657 payable to MWRA from the ISO-NE program over the four-year period.

MBE/WBE PARTICIPATION:

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

STAFF SUMMARY

TO: Board of Directors
FROM: Frederick A. Laskey, Executive Director
DATE: January 15, 2020
SUBJECT: Janitorial Services at the Chelsea Facility
Star Building Services, Inc.
Bid WRA- 4776



COMMITTEE: Administration, Finance & Audit

INFORMATION

VOTE


Michele S. Gillen

Director of Administration

Stephen D. Cullen, Director, Wastewater
Gino A. Rizzo, Material Coordination Manager
Douglas J. Rice, Director of Procurement
Preparer/Title



David W. Coppes, P.E.

Chief Operating Officer

RECOMMENDATION:

To approve the award of Contract WRA-4776, Janitorial Services at the Chelsea Facility, to Star Building Services, Inc., and to authorize the Executive Director, on behalf of the Authority, to execute said contract in an amount not to exceed \$583,884, for a contract term of three years.

DISCUSSION:

MWRA has been contracting janitorial cleaning services at the Chelsea Facility for the past 18 years. The current contract will expire on January 22, 2020.

The Chelsea Facility consists of 125,000 square feet of usable space in two buildings that include the Administration Building and the Maintenance Building. The facilities covered under this contract requiring daily janitorial services include computer rooms, laboratories, warehouse space, offices, common-use areas (e.g., kitchenettes, conference rooms, hallways, etc.) locker rooms, shower rooms, lavatories, control rooms, and workshops.



The contract includes all necessary labor, equipment, materials, and supplies, with the exception of paper products, waste receptacle liners and all liquid soap, which MWRA procures separately. The contractor is required to implement and manage a comprehensive janitorial program intended to protect and maintain the facilities and provide a healthy, clean environment for MWRA staff

and visitors.

As has been the past practice, the contractor will be required to continue using “Green Seal Certified” products to minimize the use of hazardous cleaning products and, in accordance with the Commonwealth’s “sustainability program,” will work with MWRA staff to maintain the single stream recycling program.

The award of a contract for janitorial services at the Deer Island Treatment Plant is the subject of a separate staff summary being presented at this meeting.

Procurement Process

Purchasing staff solicited bids from six firms listed as approved contractors on the Commonwealth of Massachusetts’ janitorial contract (Massachusetts State Contract #FAC81) to perform janitorial services at the Chelsea Facility for a contract term of three years.

On October 31, 2019, pricing submittals were received from three bidders with the following results:

| VENDOR | BID PRICE |
|-------------------------------------|---------------------|
| Star Building Services, Inc. | \$583,884.00 |
| FM&M, Inc. | \$599,802.39 |
| Compass Facility Services | \$925,392.00 |

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

Star Building Services, Inc. submitted the lowest of the three responsive bids received. Under the existing contract with S.J Services, Inc., which is set to expire on January 22, 2020, MWRA is paying \$381,324 for three years of janitorial services. Star Building Services’ bid of \$583,884 for the full three years of the contract represents a 53% increase over the current contract. The firm’s bid price for years one through three are \$190,980, \$194,004 and \$198,900 respectively.

Staff reached out to Star Building Services to discuss its pricing, which is 2.7% lower than the next lowest bid. The firm’s representatives report that new salary rates, benefits, and escalators over the three-year duration of the contract account for the majority of its bid price.

Star Building Services, Inc. has been successfully performing janitorial services for Deer Island since January 2017 and staff are satisfied with its work. The firm has proven it possesses the skill, ability, and experience necessary to perform the work under this contract and are qualified to do so. Therefore, staff recommend the award of this contract to Star Building Services, Inc. as the lowest responsive bidder.

BUDGET/FISCAL IMPACT:

The FY20 Current Expense Budget contains sufficient funding for the first year of this contract. Appropriate funding will be included in subsequent Proposed CEB requests for the remaining term of the contract.

MBE/WBE PARTICIPATION:

Star Building Services, Inc. is a certified Minority- and Women-owned business.



MASSACHUSETTS WATER RESOURCES AUTHORITY

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

Frederick A. Laskey
Executive Director

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

BOARD OF DIRECTORS' MEETING

Chair: K. Theoharides
Vice-Chair: J. Carroll
Secretary: A. Pappastergion
Board Members:
C. Cook
K. Cotter
P. Flanagan
J. Foti
B. Peña
H. Vitale
J. Walsh
J. Wolowicz

to be held on

Wednesday, January 15, 2020

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

Time: 1:00 p.m.

REVISED AGENDA

- I. APPROVAL OF MINUTES**
- II. REPORT OF THE CHAIR**
- III. REPORT OF THE EXECUTIVE DIRECTOR**
- IV. BOARD ACTIONS**

A. Approvals

1. PCR Amendments – January 2020 (ref. P&C A.1)
2. Appointment of Business Systems Analyst III, Administration (ref. P&C A.2)
3. Appointment of Manager, Metering and Monitoring, Operations (ref. P&C A.3)
4. Appointment of Associate General Counsel, Law Division (ref. P&C A.4)
5. Transmittal of the Proposed FY2021 Capital Improvement Program to the MWRA Advisory Board (ref. AF&A B.1)

B. Contract Awards

1. Janitorial Services at the Deer Island Treatment Plant: Star Building Services, Inc., Bid WRA-4775 (ref. WW A.1)

2. Supply and Delivery of Hydrogen Peroxide to the Deer Island Treatment Plant: Brenntag Northeast, LLC, Contract Bid WRA-4784 (ref. WW A.2)
3. Nut Island Headworks Odor Control and HVAC Improvements: Walsh Construction Co. II, LLC, Contract 7548 (ref. WW A.3)
4. Wachusett Dam Bastion Improvements, Design and Engineering Services During Construction: Kleinfelder Northeast, Inc., Contract 7333 (ref. W B.1)
5. Bond Counsel Services: Greenberg Traurig LLP, MWRA Contract F253 (ref. AF&A C.1)
6. Deer Island Demand Response Services: Consultant Direct Energy Business Marketing, LLC, Contract S590 (ref. AF&A C.2)
7. Janitorial Services at the Chelsea Facility: Star Building Services, Inc., Bid WRA-4776 (ref. AF&A C.3)

C. Contract Amendments/Change Orders

1. Nut Island Headworks Odor Control & HVAC Improvements – Inspections, Evaluations, Design, Construction Administration and Resident Engineering Services: Hazen and Sawyer, PC, Contract 7517, Amendment 1 (ref. WW B.1)
2. Management, Operation and Maintenance of the Union Park Pump Station/CSO Facility and the Unmanned Stations: Woodard & Curran, Inc., Contract S559, Amendment 2 (ref. WW B.2)
3. Remote Headworks and Deer Island Shafts Study: Mott MacDonald, LLC, Contract 7237, Amendment 3 (ref. WW B.3)

V. OTHER BUSINESS

VI. CORRESPONDENCE TO THE BOARD

VII. EXECUTIVE SESSION

A. Real Estate:

1. Watershed Land Acquisition
2. Pan Am Negotiations: Increase in Professional Services Contract Budget and Extension of Contract Term for Outside Counsel Nelson Mullins Riley & Scarborough LLP

B. Collective Bargaining:

1. Collective Bargaining Update (presentation)

C. Litigation:

1. Annual Summary of Litigation and Construction Claims
2. In Re GSE Bonds Antitrust Litigation, No 1:19-cv-01704 (JSR) – Information on class action
3. U.S. and Massachusetts Port Authority v. NSTAR Electric Company et al., USDC No. 16-11470-RGS Extension of Professional Services Contract with Foley Hoag LLP
4. DPU Proceedings: Increase Budget and Extension of Professional Legal Services Contract with Foley Hoag LLP

D. Security:

1. Security Update

VIII. ADJOURNMENT

MASSACHUSETTS WATER RESOURCES AUTHORITY

Meeting of the Board of Directors

November 20, 2019

A meeting of the Board of Directors of the Massachusetts Water Resources Authority was held on Wednesday, November 20, 2019 at the Authority headquarters in Charlestown. Board Secretary Pappastergion presided. Present from the Board were Messrs. Cook, Cotter, Flanagan, Peña, Vitale and Walsh. Chair Theoharides, Ms. Wolowicz and Messrs. Carroll and Foti were absent. Among those present from the Authority staff were Frederick Laskey, Executive Director, Carolyn Francisco Murphy, General Counsel, David Coppes, Chief Operating Officer, Carolyn Fiore, Deputy Chief Operating Officer, Thomas Durkin, Director of Finance, Michele Gillen, Director of Administration, Kathleen Murtagh, Director of Tunnel Redundancy and Assistant Secretaries Ria Convery and Kristin MacDougall. Vandana Rao, EEA, was also in attendance. The meeting was called to order at 1:02 p.m.

APPROVAL OF OCTOBER 16, 2019 MINUTES

Upon a motion duly made and seconded, it was

Voted: to approve the minutes of the Board of Directors' meeting of October 16, 2019 as presented and filed with the records of the meeting.

REPORT OF THE EXECUTIVE DIRECTOR

Mr. Laskey made a presentation to update the Board on the Northern Intermediate High Pipeline Disinfection and Southern Extra High Section 77 Crossing projects. He also congratulated Kathleen Murtagh and MWRA Tunnel Redundancy staff for hosting a successful expert panel forum on November 14 and 15, 2019. Finally, Mr. Laskey updated the Board on a Boston Globe request for information regarding PFAS levels in MWRA sludge pellets.

APPROVALS

PCR Amendments - November 2019 (ref. P&C A.1)

Upon a motion duly made and seconded, it was

Voted: to approve amendments to the Position Control Register (PCR) as presented, without the Director, Security and Emergency Response position.

Appointment of Program Manager, Metro Meter Maintenance Operations Division (ref. P&C A.2)

Upon a motion duly made and seconded, it was

Voted: to approve the appointment of Mr. Scott A. Winn to the position of Program Manager, Metro Meter Maintenance (Unit 9, Grade 29), in the Meter Maintenance Program, at an annual salary of \$114,681.78, commencing on a date to be determined by the Executive Director.

Appointment of Program Manager, Supervisory Control and Data Acquisition Engineering, Operations Department (ref. P&C A.3)

Upon a motion duly made and seconded, it was

Voted: to approve the appointment of Mr. Mark Soutter to the position of Program Manager, Supervisory Control and Data Acquisition Engineering (Unit 9, Grade 29), in the Operations Department, at an annual salary of \$96,821.48, commencing on a date to be determined by the Executive Director.

Appointment of Manager, Wastewater Operations, Operations Division (ref. P&C A.4)

Upon a motion duly made and seconded, it was

Voted: to approve the appointment of Mr. James MacPherson to the position of Manager, Operations (Non-Union, Grade 14), in the Wastewater Operations Department, at an annual salary of \$137,700, commencing on a date to be determined by the Executive Director.

Appointment of Senior Program Manager, Design Information Systems Center Engineering & Construction Department (ref. P&C A.5)

Upon a motion duly made and seconded, it was

Voted: to approve the appointment of Ms. Kim Dennis to the position of Senior Program Manager, Design Information Systems Center (Unit 9, Grade 30) in the

Engineering & Construction Department, at an annual salary of \$119,503.32, commencing on a date to be determined by the Executive Director.

CONTRACT AWARDS

Harbor and Outfall Monitoring Contracts for 2020-2023, Water Column Monitoring, Battelle Memorial Institute, Contract OP-401A; and Benthic, Fish and Shellfish Monitoring, Normandeau Associates, Inc., Contract OP-401 B (ref. WW B.1)

Upon a motion duly made and seconded, it was

Voted: to approve the recommendation of the Consultant Selection Committee to select two separate firms to provide Harbor and Outfall Monitoring services from 2020 to 2023, and to authorize the Executive Director, on behalf of the Authority, to execute two separate contracts as follows:

Contract OP-401A, Harbor and Outfall Monitoring, Water Column Monitoring, with Battelle Memorial Institute, for an amount not to exceed \$2,389,177.57, with a contract term of 48 months from the Notice to Proceed; and;

Contract OP-401B, Harbor and Outfall Monitoring, Benthic, Fish and Shellfish Monitoring, with Normandeau Associates, Inc., for an amount not to exceed \$1,399,332.30, with a contract term of 46 months from the Notice to Proceed.

Cooperative Research Project to Conduct Water Quality Monitoring in Cape Cod Bay Center for Coastal Studies, Inc., Contract OP-406 (ref. WW B.2)

Upon a motion duly made and seconded, it was

Voted: to approve the award of Contract OP-406, a sole-source contract for a cooperative research project to conduct permit-required water quality monitoring in Cape Cod Bay, with the Center for Coastal Studies Inc. in Provincetown, and to authorize the Executive Director, on behalf of the Authority, to execute said contract in the amount of \$407,665, for a contract term of three years from the Notice to Proceed.

Sections 53 and 99 Improvements, Design and Engineering Services During Construction, Hazen and Sawyer, P.C., Contract 7485 (ref. W B.1)

Upon a motion duly made and seconded, it was

Voted: to approve the recommendation of the Consultant Selection Committee to award Contract 7485, Sections 53 and 99 Improvements, Design and Engineering Services During Construction, to Hazen and Sawyer, P.C., and to authorize the Executive Director, on behalf of the Authority, to execute said contract in the amount of \$4,985,263, for a contract term of 102 months from the Notice to Proceed.

CONTRACT AMENDMENTS/CHANGE ORDERS

Automated Vehicle Locator Tracking System, Networkfleet, Inc., Contract A606,

Amendment 1 (ref. AF&A B.1)

Upon a motion duly made and seconded, it was

Voted: to authorize the Executive Director, on behalf of the Authority, to approve Amendment 1 to Contract A606, Automated Vehicle Locator Tracking System with Networkfleet, Inc., in the amount of \$93,708, exercising the first option to renew and increasing the contract amount from \$427,490 to an amount not to exceed \$521,198, and increasing the contract term by 12 months from December 28, 2019 to December 28, 2020.

Further, it was voted to approve a change in the name of the Consultant Contract A606 from Networkfleet, Inc., to Verizon Connect NWF, Inc.

Chelsea Creek Headworks Upgrade BHD/BEC 2015, A Joint Venture Contract 7161,

Change Order 34 (ref. WW C.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 34 to Contract 7161, Chelsea Creek Headworks Upgrade, with BHD/BEC 2015, A Joint Venture, for an amount not to exceed \$425,000.00, increasing the contract amount from \$81,991,350.46 to \$82,416,350.46, with no increase in contract term.

Further, it was voted 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.

Southern Extra High Pipeline - Section 111 (Dedham North) P. Gioioso and Sons, Inc.,
Contract 7504, Change Order 11 (ref. W C.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 11 to Contract 7504, Southern Extra High Pipeline - Section 111 (Dedham North), with P. Gioioso and Sons, Inc., for a lump sum amount of \$135,148.01, increasing the contract amount from \$18,522,439.62 to \$18,657,587.63, with no increase in contract term.

Further, it was voted to authorize the Executive Director to approve additional change orders as may be needed to Contract 7504 in an amount 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 1:17 p.m.

Approved: January 15, 2020

Attest:

Andrew M. Pappastergion, Secretary

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Documents used for this meeting, referenced above, can be found here:

<http://www.mwra.com/monthly/bod/boardmaterials/2019/o-BoardMaterials11-20-19.pdf>