



# MASSACHUSETTS WATER RESOURCES AUTHORITY

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

Frederick A. Laskey  
Executive Director

*Chair:* K. Theoharides

*Vice-Chair:* J. Carroll

*Secretary:* A. Pappastergion

*Board Members:*

C. Cook

P. Flanagan

J. Foti

B. Peña

H. Vitale

J. Walsh

P. Walsh

J. Wolowicz

## **BOARD OF DIRECTORS' MEETING**

**To be Held on Wednesday, January 19, 2022**

Time: 12:30pm

To be Held Virtually

Pursuant to An Act Relative to Extending Certain COVID-19  
Measures Adopted During the State of Emergency.

### **WebEx Meeting Link**

<https://mwra.webex.com/mwra/onstage/g.php?MTID=e30fb32a6c32e42c65c8fbf96d83fd>

Event Number: 2339 658 2418

Event Password: 11922

## **REVISED AGENDA (1)**

### **I. APPROVAL OF MINUTES**

### **II. REPORT OF THE CHAIR**

A. Annual Meeting of the Board of Directors

### **III. REPORT OF THE EXECUTIVE DIRECTOR**

### **IV. WASTEWATER POLICY AND OVERSIGHT**

#### **A. Approvals**

1. Memorandum of Agreement with Boston Water and Sewer Commission for the Union Park Detention/Treatment Facility Amendment No. 3

#### **B. Contract Awards**

1. Management, Operation, and Maintenance of the Union Park Pump Station/CSO Facility and the Unstaffed Pump Stations: Woodard & Curran, Inc., Contract S606

#### **C. Contract Amendments/Change Orders**

1. Chemical Tank Relining & Pipe Replacement, Deer Island Treatment Plant: Walsh Construction Company II, LLC, Contract 7373, Change Order 5
2. Remote Headworks Upgrade: Arcadis U.S., Inc., Contract 7206, Amendment 8

Telephone: (617) 242-6000

Fax: (617) 788-4899

TTY: (617) 788-4971

**V. WATER POLICY & OVERSIGHT**

**A. Information**

1. Wachusett Watershed Railroad Update
2. Update on Revisions to EPA's Lead and Copper Rule

**B. Contract Awards**

1. Wachusett Dam Bastion Improvements — Resident Engineering Services: Kleinfelder Northeast, Inc., Contract 7716
2. John J. Carroll Water Treatment Plant Chemical Feed System Improvements: Walsh Construction Co. II, Contract 7598
3. John J. Carroll Water Treatment Plant Chemical Feed System Improvements – Resident Engineering Services: CDM Smith, Contract 7972

**VI. PERSONNEL & COMPENSATION**

**A. Approvals**

1. PCR Amendments – January 2022
2. Appointment of Program Manager, Environmental Compliance and Monitoring, ENQUAL
3. Appointment of Program Manager, Structural Engineering, Engineering and Construction

**B. Contract Awards**

1. Workers' Compensation Third Party Administrator Services: USI Insurance Services, LLC d/b/a FutureComp, Contract A633

**VII. ADMINISTRATION, FINANCE & AUDIT**

**A. Information**

1. Update on New Environmental Justice Initiatives
2. Change Order and Amendment Statistics
3. Delegated Authority Report – December 2021
4. Update on HEEC Cross-Harbor Cable Funding
5. FY2022 Financial Update and Summary as of December 2021

**B. Approvals**

1. Transmittal of the FY2023 Proposed Capital Improvement Program

**VII. ADMINISTRATION, FINANCE & AUDIT (Continued)**

**B. Approvals (Continued)**

2. Proposed Amendments to the Management Policies of the Board of Directors
3. Legal Services Furnished by Special Assistant Attorney General Jonathan Ettinger/Foley Hoag LLP in the Boston Harbor Case, U.S. v. MDC, et al., USDC No. 85-0489-RGS

**C. Contract Awards**

1. Financial and Swap Advisory Services: PFM Financial Advisory LLC, Contract F264
2. Purchase of 45 Cisco Switches, Installation Services and a Five-Year Maintenance Service Agreement: ePlus Technology, Inc., WRA-5053Q, State Contract ITT50
3. Delegation of Authority to Execute Contracts for the Purchase and Supply of Electric Power for the MWRA Interval Accounts

**VIII. CORRESPONDENCE TO THE BOARD**

**IX. OTHER BUSINESS**

**X. EXECUTIVE SESSION**

- i. Approval of December 15, 2021 Executive Session Minutes

**A. Litigation**

1. Prison Point CSO Facility Improvements: Contract 7462
2. Annual Litigation and Claim Summary

**XI. ADJOURNMENT**

**MASSACHUSETTS WATER RESOURCES AUTHORITY**

Meeting of the Board of Directors

December 15, 2021

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A meeting of the Massachusetts Water Resources Authority (“MWRA”) Board of Directors was held on December 15, 2021. The meeting was conducted virtually, pursuant to Chapter 20 of the Acts of 2021, An Act Relative to Extending Certain COVID-19 Measures Adopted During the State of Emergency. Chair Theoharides presided remotely. Also participating remotely from the Board were Messrs. Cook, Flanagan, Foti, Pappastergion, Peña, Vitale, J. Walsh, and P. Walsh. Mr. Carroll and Ms. Wolowicz were absent.

MWRA staff in attendance virtually included 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; Kathy Murtagh, Director, Tunnel Redundancy; Andrea Murphy, Director, Human Resources; Paula Weadick, MIS Director; Matt Horan, Deputy Director of Finance/Treasurer; Doug Rice, Director, Procurement; Gary Cacace, Director, Security; Stephen Estes-Smargiassi, Director, Planning and Sustainability; John Colbert, Chief Engineer; Rebecca Weidman, Director, Environmental and Regulatory Affairs; Cori Barrett, Director, Construction; and Assistant Secretaries Ria Convery and Kristin MacDougall. Vandana Rao, Executive Office of Environmental Affairs (EEA), and Joseph Favaloro, MWRA Advisory Board, were also in attendance virtually.

Board Secretary Pappastergion temporarily served as Chair while MWRA staff worked to resolve a technical issue with Secretary Theoharides’ virtual meeting connection. Acting Chair Pappastergion called the meeting to order at 1:17pm. MWRA General Counsel Francisco Murphy took roll call of Board Members in attendance. The Acting Chair announced that except for Executive Session, the meeting was open to the public virtually, via a link posted on MWRA’s website ([www.mwra.com](http://www.mwra.com)). He added that the meeting would be recorded, and that the agenda and meeting materials were available on MWRA’s website. He also announced that the meeting would move into Executive Session after the Executive Director’s report, and that the Open Session would resume after the adjournment of Executive Session.

All motions were individually made and presented for discussion and deliberation. MWRA General Counsel Francisco Murphy explained that all motions would be individually presented and given an opportunity for discussion and deliberation; further, that after discussion and deliberation, any Board member could request an individual roll call vote on that motion, where Board Members could vote affirmatively or in the negative, or abstain from voting. She also said that if no request for an individual vote were made or concerns raised, the motion would advance for an omnibus roll call vote at the conclusion of all the presentations.

**APPROVAL OF OCTOBER 20, 2021 MINUTES**

A motion was duly made and seconded to approve the minutes of the Board of Directors’ meeting of October 20, 2021. Acting Chair Pappastergion called for any questions, discussion, or objections. Hearing none, he referred the motion to an omnibus roll call vote. (ref. I)

### REPORT OF THE EXECUTIVE DIRECTOR

MWRA Executive Director Fred Laskey reported that, consistent with statewide trends, MWRA continued to see rising numbers of COVID-19 cases among its staff (33 from November 1, 2021 through December 15, 2021). He noted that the MWRA cases were mostly contracted through outside contacts, and that staff was working diligently to minimize the ongoing pandemic's impacts on employees and operations. He briefly updated Board members on MWRA's Biobot wastewater COVID-19 tracking data. Next, Mr. Laskey announced that MWRA had executed a successful bond deal, in which approximately \$750 million in bonds were issued with a low interest rate. He said that the high demand for MWRA's green bonds was driven in part by interest in "ESG," or environmental, social and governance factors. He noted that MWRA was the fifth largest municipal green bond issuer in the United States and the top issuer in Massachusetts. He thanked Board members for their support and encouragement regarding green bonds, and commended MWRA finance staff for their contributions to the deal. Mr. Laskey then invited Mr. Pappastergion to speak on behalf of the MWRA Advisory Board.

Mr. Pappastergion announced that the MWRA Advisory Board was proposing the creation of a joint task force that would include Board members, community representatives, and staff of the Advisory Board and MWRA. He said that the goal of the task force would be to maximize the use of federal infrastructure funds by identifying projects that would promote community and regional benefits. He noted that MWRA and the Advisory Board shared a history of successful collaboration. He encouraged Board members to support the task force and to participate in its implementation.

(Chair Theoharides joined the meeting during the Executive Director's report.)

Mr. Laskey noted that the MWRA Board's Annual Meeting was planned for January 2022. Finally, he announced the upcoming retirement of Mr. Godfrey Ezeigwe, Financial and Administrative Manager. Mr. Laskey thanked Mr. Ezeigwe for his service and presented him with a commemorative plaque on behalf of MWRA staff. (ref. III)

### REPORT OF THE CHAIR

Chair Theoharides announced that Governor Baker had signed American Rescue Act (ARPA) legislation, which included \$100 million for water and sewer infrastructure. (ref. II)

### EXECUTIVE SESSION

Chair Theoharides requested that the Board move into Executive Session to discuss litigation, security and collective bargaining since open session may have a detrimental effect on the bargaining and litigation position of the Authority. She announced that the Board would return to Open Session after the conclusion of Executive Session. A motion was duly made and seconded to enter Executive Session, and to resume Open Session after Executive Session adjournment.

Ms. Francisco Murphy reminded Board members that under the Open Meeting Law members who are participating remotely in Executive Session must state that no person is present or able to hear the discussion at their remote location. A response of "yes" to the Roll Call to enter

Executive Session when their name is called would also be deemed their statement that no other person is present or able to hear the session discussion.

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

<u>Yes</u>	<u>No</u>	<u>Abstain</u>
Theoharides		
Cook		
Flanagan		
Foti		
Pappastergion		
Peña		
Vitale		
J. Walsh		
P. Walsh		

Voted: to enter Executive Session, and to resume Open Session after Executive Session adjournment.

The Board moved to Executive Session to discuss litigation, security, and collective bargaining, since discussing such in Open Session could have a detrimental effect upon the bargaining and litigation position of the Authority.

\*\*\* EXECUTIVE SESSION \*\*\*

The meeting entered Executive Session at 1:28pm and adjourned at 2:03pm.

\*\*\* CONTINUATION OF OPEN SESSION \*\*\*

Open Session resumed at 2:04pm. Chair Theoharides presided.

#### ADMINISTRATION, FINANCE AND AUDIT

##### Information

##### Delegated Authority Report – October and November 2001

Committee Chair Vitale invited questions or comments from Board Members.

Board Member Jack Walsh asked MWRA staff for an estimated return of investment for Nut Island interior lighting. MWRA Chief Operating Officer David Coppes explained that after factoring in a National Grid rebate, staff expected that the return of investment would be realized in approximately seven years.

Board Member Vitale asked MWRA staff if multiple Hewlett Packard supply contracts could have been combined for greater savings. Mr. Coppes and MWRA MIS Director Paula Weadick explained that the contracts were grouped by the geographic locations of receiving facilities to increase supplier competition and reduce shipping costs. Mr. Coppes added that staff had historically achieved greater overall cost savings by using this bidding method for similar procurements.

Hearing no further questions or discussion, Committee Chair Vitale proceeded to the next agenda item. (ref. V A.1)

#### FY2022 Financial Update and Summary as of December 2021

MWRA Director of Finance Thomas Durkin summarized financial results for fiscal year 2022 as of December 2021. He reported that the fiscal year was progressing as expected, and that MWRA was \$13.8 million (4%) under budget. He explained that direct expenses were \$8.7 million under budget, including \$5.6 million in underspending for wages and salaries. He said that indirect expenses were underspent by \$400,000 (1.7%), primarily due to underspending for watershed protection reimbursement and offset by \$167,000 from the annual true-up for the operation and maintenance of the HEEC cable. Mr. Durkin then reported that capital finance was 2.5% under budget due to lower than expected interest rates for variable rate bonds. He added that rising interest rates were expected to impact MWRA budgets. Finally, Mr. Durkin noted that MWRA staff was preparing future presentations on the FY2023 Capital Improvement Program and Current Expense Budget.

There was general discussion about interest rates and their potential impacts on MWRA budgets; challenges in the recruitment and retention of staff due in part to the ongoing pandemic; and, MHC modules, which are programs used to print checks and other remittances.

Hearing no further questions or discussion, Mr. Vitale proceeded to the next agenda item. (ref. V A.2)

#### Contract Awards

##### Maximo Software Maintenance and Support: IBM Corporation, State Contract ITS55

A motion was duly made and seconded to approve the award of a purchase order contract for one year of Maximo software maintenance and support to IBM Corporation and to authorize the Executive Director, on behalf of the Authority, to execute said purchase order contract in an amount not to exceed \$375,881.49 for a period of one year, from January 1, 2022 through December 31, 2022, under State Contract ITS55.

Ms. Weadick summarized the uses of Maximo Computerized Maintenance Management System and Enterprise Asset Management System, including asset life cycle and maintenance activity management; materials management; work orders; and, work schedule prioritization. She added that the proposed contract was for an annual maintenance renewal, and that the cost fell within a typical range.

There was brief discussion about a minor typographical error in the Staff Summary. Ms. Weadick assured Board members that the error would be corrected for the record.

Board Member Jack Walsh asked if IBM was a sole source for Maximo maintenance. Ms. Weadick explained that IBM provided the best available support for Maximo because it owned the code and offered direct access to bug fixes. There was general discussion about the procurement process. MWRA Director of Procurement Doug Rice noted that this procurement was under a statewide contract, which offered considerable buying and negotiating power. Mr. Jack Wash asked staff to provide a statewide vs. individual contract price comparison when presenting future Maximo annual maintenance contracts.

Chair Theoharides asked if there was further discussion or any objections. Hearing none, she advanced the motion to an omnibus roll call vote. (ref. V B.1)

Dental Insurance: Dental Service of Massachusetts, Inc., d/b/a Delta Dental of Massachusetts, Contract A631

A motion was duly made and seconded to approve the recommendation of the Consultant Selection Committee to select Dental Service of Massachusetts, Inc. d/b/a Delta Dental of Massachusetts to provide dental insurance to eligible employees and to authorize the Executive Director, on behalf of the Authority, to execute a contract with Dental Service of Massachusetts, Inc. d/b/a Delta Dental of Massachusetts for an amount not to exceed \$289,000, for a contract term of twelve months with three options to renew for a period of twelve months each, subject to further Board approval.

MWRA Director of Human Resources Andrea Murphy summarized the proposed contract for dental insurance. She noted that Delta Dental of Massachusetts was MWRA's current provider, that MWRA staff was satisfied with their services, and that there was no cost increase over last year.

Chair Theoharides asked if there was further discussion or any objections. Hearing none, she advanced the motion to an omnibus roll call vote. (ref. V B.2)

Contract Amendments/Change Orders

Security Guard Services for Various MWRA Facilities: Universal Protection Service, LLC d/b/a/ Allied Universal Security Services, Contract EXE-041, Amendment 1

A motion was duly made and seconded to authorize the Executive Director, on behalf of the Authority, to execute Amendment 1 to Contract EXE-041, Security Guard Service for Various MWRA Facilities, with Universal Protection Service, LLC d/b/a Allied Universal Security Services, exercising the first option to renew, increasing the contract amount by \$2,115,112.20, from \$6,849,216.00 to an amount not to exceed \$8,964,328.20, and extending the contract term by 365 calendar days from February 6, 2022 to February 6, 2023.

MWRA Director of Security Gary Cacace summarized the scope of the current contract with Allied Universal Security Services, including a 24-7 uniformed security presence at three critical

locations, business hour staffing at the Charlestown Navy Yard, and 24-hour staffing at the Chelsea command center. He noted that the current vendor provided a high level of service and was familiar with MWRA's systems, locations, procedures, and personnel.

Chair Theoharides asked if there was any discussion or objections. Hearing none, she advanced the motion to an omnibus roll call vote. (ref. V C.1)

## WASTEWATER POLICY AND OVERSIGHT

### Information

#### Cottage Farm CSO Facility: Facility Improvements and PCB Removal/Abatement

MWRA Chief Operating Officer Dave Coppes presented a summary to inform Board Members of upcoming work to rehabilitate the Cottage Farm Combined Sewer Overflow (CSO) Facility, including a polychlorinated biphenyls (PCBs) abatement plan. He noted that the facility's components were over fifty years old and reaching the end of their useful lives. Mr. Coppes then explained that the rehab work would trigger a regulatory requirement to perform PCB abatement at the entire facility. Next, Mr. Coppes described MWRA's intention to work with the US EPA to file a phased PCB abatement plan with a priority of replacing the facility's pump engines as soon as possible, then moving to a second phase of construction that would include a full facility PCB abatement and equipment replacement. He added that MWRA staff would update Board members as the plan developed.

Committee Chair Flanagan asked if there was any discussion or objections. Hearing none, he proceeded to the next agenda item. (ref. VI A.1)

#### Prison Point CSO Facility Improvements: Contract 7462 Update

Mr. Coppes updated Board members on the status of MWRA Contract 7462, Prison Point CSO Facility Improvements, which had been awarded to Barletta Heavy Division, Inc. ("Barletta"), as approved by the Board of Directors, on September 15, 2021. Mr. Coppes reported that after the Notice to Proceed was issued on October 29, 2021, Barletta notified MWRA that the electrical and plumbing filed subcontractors would not execute their contracts due to their inability to maintain their original bid prices, citing supply chain and inflation issues. He said that MWRA staff contacted the other subcontractors; none of the five electrical subcontractors was willing to hold their bid price, and one plumbing subcontractor had agreed to hold their bid price for the as-bid duration. Mr. Coppes then explained that Barletta had proposed a change order with an 18-20 month time extension, at an added cost of over \$5.3 million (13.5%), with a potential for further cost increases. He said that moving forward with this contract would require negotiations with Barletta as well as the design engineer at a potentially higher cost. Finally, Mr. Coppes advised Board members that MWRA staff was reassessing this project and considering whether to cancel the contract and rebid in smaller construction packages.

There was general discussion about the potential contract price increases, MWRA's discussions with Barletta and the subcontractors, and the project's scope, detailed work sequence and close timeframes.

Board Member Foti asked for clarification on whether Barletta had provided evidence to support their claims of supply chain issues and inflation. Ms. Francisco Murphy explained that price escalation and anticipated delays in the procurement of electrical equipment were key factors in Barletta's request for higher cost and time estimates. Mr. Foti expressed concern that Barletta could not guarantee against additional cost increases. Board Member Vitale advised MWRA staff that the Boston Water and Sewer Commission (BWSC) had similarly broken a larger contract into smaller packages when the bid price came in much higher than the Engineer's Estimate; the result was a greater aggregate cost than that of the original contract. He added that delaying the work could also lead to higher costs, and that BWSC's Legal team required contractors to lock in prices.

There was general discussion about the project scope and the original contract's bid and award timeline.

Committee Chair Flanagan asked if there was further discussion or any objections. Hearing none, he proceeded to the next agenda item. (ref. VI A.2)

#### Contract Awards

##### Screw Pump Replacement, Phase 1, Clinton Treatment Plant, IPC Lydon, LLC Contract 7704

A motion was duly made and seconded to approve the award of Contract 7704, Screw Pump Replacement, Phase 1 at the Clinton Wastewater Treatment Plant, to the lowest responsible and eligible bidder, IPC Lydon, LLC, and to authorize the Executive Director, on behalf of the Authority, to execute said contract in the bid amount of \$3,452,985, for a contract term of 540 calendar days from the Notice to Proceed.

MWRA Deer Island Treatment Plant Director Dave Duest presented an overview of the proposed project, including the function of the Clinton Treatment Plant's screw pumps and the need for their replacement. He explained that the three existing pumps were over 30 years old and beyond their useful lives. He added that two pumps were inoperable; MWRA was using the one remaining pump and two centrifugal pumps to maintain plant capacity, with a portable diesel pump as backup. Finally, Mr. Duest said that the new pumps' drives would be more efficient and potentially eligible for incentive funding from National Grid.

Chair Theoharides asked if there was if there was any discussion or objections. Hearing none, she advanced the motion to an omnibus roll call vote. (ref. VI B.1)

#### Contract Amendments/Change Orders

##### Gravity Thickener Upgrade, Deer Island Treatment Plant: Walsh Construction Company II, LLC, Contract 7428, Change Order 17

A motion was duly made and seconded to authorize the Executive Director, on behalf of the Authority, to approve Change Order 17 to Contract 7428, Gravity Thickener Upgrade, Deer Island Treatment Plant, with Walsh Construction Company II, LLC, for a lump sum amount of \$244,289.11, increasing the contract amount from \$19,979,541.22 to \$20,223,830.33, with no increase in contract term.

Mr. Duest presented the reasons for the proposed amendment to increase the contract price by \$244,289.11 with no increase in contract term. He explained that the upgrade project was funded through reimbursement issued by the Massachusetts Emergency Management Agency (MEMA) in response to damage sustained during a snow-related State of Emergency in January 2015.

Board Member Jack Wash asked for clarification on the additional labor and equipment required to remove foreign material in the digested sludge. Mr. Duest explained that the remnants of membrane from a prior project had resulted in a more laborious and costly membrane removal process than originally anticipated.

Chair Theoharides asked if there was further discussion or any objections. Hearing none, she advanced the motion to an omnibus roll call vote. (ref. VI C.1)

## WATER POLICY AND OVERSIGHT

### Information

#### Update on Lead and Copper Rule Compliance – Fall 2021

MWRA Director of Planning and Sustainability Stephen Estes-Smargiassi presented an update on annual Lead and Copper Rule sampling for fully supplied MWRA communities. He reported that system wide, MWRA's 90<sup>th</sup> percentile results for the most recent round of sampling were 8.5 parts per billion (ppb), below the Lead Action Level of 15ppb. He also reported that five communities (Boston, Malden, Medford, Melrose, and Winthrop) had results above the Lead Action Level. Mr. Estes-Smargiassi noted that the US EPA required these five communities to perform lead education, mail a brochure to each customer, and replace lead service lines. He added that those activities were underway with MWRA assistance. Mr. Estes-Smargiassi noted that MWRA continued to offer zero interest loans to its customer communities for lead service line replacement since 2016 (\$28.2 million for 13 communities, through December 2021.) He then noted that the recently enacted federal Infrastructure Investment and Jobs Act included additional funding for lead service line replacement, and that MWRA staff was monitoring the development of program guidance. Finally, Mr. Estes-Smargiassi said that staff expected the US EPA to issue additional revisions to the Lead and Copper Rule, and that staff would brief Board members and customer communities on those revisions on a later date.

There was general discussion about potential changes to corrosion control requirements. Board Member Vitale commended MWRA staff for their assistance with BWSC's ongoing efforts to reduce tap water lead levels in the City of Boston.

Committee Chair Peña asked if there was further discussion or any objections. Hearing none, he proceeded to the next agenda item. (ref. VII A.1)

### Approvals

#### Memorandum of Agreement between MWRA and the City of Waltham: Section 101 Extension Water Main Project

A motion was duly made and seconded to authorize the Executive Director, on behalf of the Authority, to execute a Memorandum of Agreement with the City of Waltham, substantially in the

form presented and filed with the records of the meeting, related to reimbursement to MWRA for design and construction costs associated with the installation of City of Waltham local water, sewer sand drain lines and appurtenances.

MWRA Chief Engineer John Colbert presented a summary of the proposed Memorandum of Agreement with Waltham for reimbursement by the city to MWRA for costs associated with utility work.

Chair Theoharides asked if there was any discussion or objections. Hearing none, she advanced the motion to an omnibus roll call vote. (ref. VII B.1)

#### Renewal of City of Marlborough and Dedham-Westwood Water District Water Supply Continuation Agreements

A motion was duly made and seconded to authorize the Executive Director, on behalf of the Authority, to execute the ten-year Water Supply Continuation Agreements with the City of Marlborough and Dedham-Westwood Water District, substantially in the form presented and filed with the records of this meeting as Attachments A and B to the December 15th Staff Summary.

MWRA Director of Environmental and Regulatory Affairs Rebecca Weidman summarized the terms of new, ten-year water supply agreements with the City of Marlborough and the Dedham-Westwood Water District. She explained that the Dedham-Westwood Water District was not seeking additional supply from MWRA, and that Marlborough's agreement had been updated to reflect that the city was now meeting its entire water demand with MWRA's supply. She added that water rates were based on actual usage under the agreement.

Chair Theoharides asked if there was any discussion or objections. Hearing none, she advanced the motion to an omnibus roll call vote. (ref. VII B.2)

#### Contract Awards

##### Wachusett Dam Bastion Improvements: MAS Building & Bridge, Inc., Contract 7697

A motion was duly made and seconded to approve the award of Contract 7697, Wachusett Dam Bastion Improvements, to the lowest responsible and eligible bidder, MAS Building & Bridge, Inc., and to authorize the Executive Director, on behalf of the Authority, to execute said contract in the bid amount of \$3,927,000, with a contract term of 456 calendar days from the Notice to Proceed.

Mr. Colbert presented a summary of the proposed project, including its location and purpose. He explained that the structural reconstruction work was needed to repair damage due to water infiltration, cracking walls, and roof damage.

Board Member Vitale requested more information about the accidental death of an MAS Building & Bridge, Inc. ("MAS") subcontractor's employee in 2015, as cited in the corresponding Staff Summary. Mr. Colbert explained the circumstances of the accident and noted that the subcontractor no longer worked for MAS.

Chair Theoharides asked if there was further discussion or any objections. Hearing none, she advanced the motion to an omnibus roll call vote. (ref. VII C.1)

Purchase Order Contract for the Pre-purchase of Materials for the Northern Extra High Pressure Zone Improvements Section 63 (Lexington): Everett J. Prescott, Inc., Bid WRA-5044

A motion was duly made and seconded to approve the award of Purchase Order Contract WRA-5044, for the supply, handling, storage, and delivery of water main materials to support construction Contract 6522, Northern Extra High Pressure Zone Improvements Construction Package 1, Section 63 (Lexington), to the lowest responsible and eligible bidder, Everett J. Prescott, Inc., and authorize the Executive Director, on behalf of the Authority, to execute said purchase order contract in an amount not to exceed \$1,989,791.00 for a period of 407 calendar days from the Notice to Proceed.

Mr. Coppes presented a summary that described the reasons for pre-purchasing materials for the Northern Extra High Section 63 project. He explained that pre-purchase was expected to ameliorate supply chain concerns and accelerate the work schedule relative to the construction of a Town of Burlington pipeline.

There was general discussion about the risks, benefits, and historical precedent for materials pre-purchase.

Chair Theoharides asked if there was further discussion or any objections. Hearing none, she advanced the motion to an omnibus roll call vote. (ref. VII C.2)

Contract Amendments/Change Orders

Quabbin Aqueduct Shaft 2 Repairs: Unified Contracting, Inc. Contract 7198, Change Order 1

A motion was duly made and seconded to authorize the Executive Director, on behalf of the Authority, to approve Change Order 1 to Contract 7198, Quabbin Aqueduct Shaft 2 Repairs, with Unified Contracting, Inc. for an amount not to exceed \$500,000, increasing the contract amount from \$789,000 to \$1,289,000, and extending the contract term by 110 calendar days, from March 12, 2022 to June 30, 2022. Further, to authorize the Executive Director to approve additional change orders as may be needed to Contract 7198 in an amount not to exceed the aggregate of \$250,000, in accordance with the Management Policies and Procedures of the Board of Directors.

MWRA Director of Construction Cori Barrett gave a presentation that summarized the reasons for the proposed change order for an amount not to exceed \$500,000, with a 110 calendar day extension. She explained that the concrete at Quabbin Shaft 2 was found to be more deteriorated than expected. She noted that very poor structural conditions, including the presence of old wooden timbers and deteriorating concrete, were discovered while performing the current repair project. Ms. Barrett said that that this change order would address related concerns about stability, internal stresses from water pressure.

Board Member Vitale commended the MWRA staff who prepared the presentation.

Chair Theoharides asked if there was further discussion or any objections. Hearing none, she advanced the motion to an omnibus roll call vote. (ref. VII D.1)

(Chair Theoharides left the meeting and Board Secretary Pappastergion served as Acting Chair.)

## PERSONNEL AND COMPENSATION

### Approvals

#### December PCR Amendments

A motion was duly made and seconded to approve amendments to the Position Control Register (PCR) as presented and filed with the records of the meeting.

MWRA Human Resources Director Andrea Murphy briefly summarized the four proposed PCR amendments, which included two title changes to two vacant positions and two salary adjustments for filled positions.

Acting Chair Pappastergion asked if there was any discussion or objections. Hearing none, he advanced the motion to an omnibus roll call vote. (ref. VIII A.1)

#### Appointment of Program Manager, Monitoring, TRAC

A motion was duly made and seconded to approve the appointment of Mr. Shawn Owen to the position of Program Manager, Monitoring (Unit 9, Grade 29) in the Toxic Reduction and Control department at the recommended salary of \$128,958.94 to be effective on a date to be determined by the Executive Director.

Ms. Murphy summarized the proposed candidate's work history, experience, education, and qualifications.

Acting Chair Pappastergion asked if there was any discussion or objections. Hearing none, he advanced the motion to an omnibus roll call vote. (ref. VIII A.2)

#### Appointment of Manager, Operations Support

A motion was duly made and seconded to approve the appointment of Ms. Jeannie Teixeira to the position of Manager, Operations Support (Non-Union, Grade 14), in the Operations Division at the recommended annual salary of \$118,000, commencing on a date to be determined by the Executive Director.

Ms. Murphy summarized the proposed candidate's work history, experience, education, and qualifications.

There was brief discussion about the qualifications of five internal candidates.

Acting Chair Pappastergion asked if there was further discussion or any objections. Hearing none, he advanced the motion to an omnibus roll call vote. (ref. VIII A.3)

Appointment of Senior Program Manager, Operations Engineering

A motion was duly made and seconded to approve the appointment of Ms. Kristen Hall to the position of Senior Program Manager, Operations Engineering (Unit 9, Grade 30) in the Operations Engineering Department at the recommended annual salary of \$134,318.33 commencing on a date to be determined by the Executive Director.

MWRA Human Resources Director Andrea Murphy summarized the proposed candidate's work history, experience, education, and qualifications.

Board Member Foti commended the proposed candidate's demonstrated work ethic.

Acting Chair Pappastergion asked if there was further discussion or any objections. Hearing none, he advanced the motion to an omnibus roll call vote. (ref. VIII A.4)

Appointment of Senior Program Manager, Master Planning

A motion was duly made and seconded to approve the appointment of Michael O'Keefe to the position of Senior Program Manager, Master Planning (Unit 9, Grade 30) in the Planning and Sustainability Department at an annual salary of \$119,503.32 commencing on a date to be determined by the Executive Director.

Ms. Murphy summarized the proposed candidate's work history, experience, education, and qualifications.

There was brief discussion about the selection process, the qualifications of internal candidates, and the proposed candidate's qualifications and work history.

Acting Chair Pappastergion asked if there was further discussion or any objections. Hearing none, he advanced the motion to an omnibus roll call vote. (ref. VIII A.5)

Appointment of Senior Staff Counsel for General Litigation

A motion was duly made and seconded to approve the appointment of Mr. Brian A. Schwartz to the position of Senior Staff Counsel, General Litigation, Law Division (Unit 6, Grade 13) at an annual salary of \$127,481.99, commencing on a date to be determined by the Executive Director.

Ms. Murphy summarized the proposed candidate's work history, experience, education, and qualifications.

Acting Chair Pappastergion asked if there was discussion or any objections. Hearing none, he advanced the motion to an omnibus roll call vote. (ref. VIII A.6)

Appointment of MBE/WBE Program Manager

A motion was duly made and seconded to approve the appointment of Mr. Kershny Gedeon to position of MBE/WBE Program Manager, (Grade 12, Unit 6) at an annual salary of \$84,625.06 commencing on a date to be determined by the Executive Director.

Ms. Murphy summarized the proposed candidate's work history, experience, education, and qualifications.

Acting Chair Pappastergion asked if there was discussion or any objections. Hearing none, he advanced the motion to an omnibus roll call vote. (ref. VIII A.7)

Appointment of Business Applications Manager, MIS, Administration

A motion was duly made and seconded to approve the appointment of Mr. Paul Fentross to the position of Business Applications Manager, MIS (Non-Union, Grade 14), at an annual salary of \$136,000.00 commencing on a date to be determined by the Executive Director.

Ms. Murphy summarized the proposed candidate's work history, experience, education, and qualifications.

There was brief discussion about the proposed candidate's qualifications and experience, and the job posting process.

Acting Chair Pappastergion asked if there was further discussion or any objections. Hearing none, he advanced the motion to an omnibus roll call vote. (ref. VIII A.8)

Contract Amendments/Change Orders

Extension of Employment Contract Copy and Supply Clerk, Administration

A motion was duly made and seconded to approve the extension of an employment contract for Mr. Ward Merithew, Copy and Supply Clerk, Facilities Management Department, for a period of 12 months from January 1, 2022 to December 31, 2022, at the current hourly rate of \$15.76 per hour for an annual compensation not to exceed \$12,300.00.

Ms. Murphy summarized the proposed amendment to extend Mr. Merithew's contract.

There was brief discussion about the position's duties and salary.

Acting Chair Pappastergion asked if there was further discussion or any objections. Hearing none, he advanced the motion to an omnibus roll call vote. (ref. VII B.1)

OMNIBUS ROLL CALL VOTE

Acting Chair Pappastergion called for an omnibus roll call vote on the motions made and seconded.

An omnibus roll call vote was taken in which the members were recorded as follows:

<u>Yes</u>	<u>No</u>	<u>Abstain</u>
Cook		
Flanagan		

<u>Yes</u>	<u>No</u>	<u>Abstain</u>
Foti		
Pappastergion		
Peña		
Vitale		
J. Walsh		
P. Walsh		

Voted: to approve the minutes of the Board of Directors' meeting of October 20, 2021 (ref.I);

Further, voted: to approve the award of a purchase order contract for one year of Maximo software maintenance and support to IBM Corporation and to authorize the Executive Director, on behalf of the Authority, to execute said purchase order contract in an amount not to exceed \$375,881.49 for a period of one year, from January 1, 2022 through December 31, 2022, under State Contract ITS55; (ref. V B.1)

Further, voted: to approve the recommendation of the Consultant Selection Committee to select Dental Service of Massachusetts, Inc. d/b/a Delta Dental of Massachusetts to provide dental insurance to eligible employees and to authorize the Executive Director, on behalf of the Authority, to execute a contract with Dental Service of Massachusetts, Inc. d/b/a Delta Dental of Massachusetts for an amount not to exceed \$289,000, for a contract term of twelve months with three options to renew for a period of twelve months each, subject to further Board approval; (ref. V B.2)

Further, voted: to authorize the Executive Director, on behalf of the Authority, to execute Amendment 1 to Contract EXE-041, Security Guard Service for Various MWRA Facilities, with Universal Protection Service, LLC d/b/a Allied Universal Security Services, exercising the first option to renew, increasing the contract amount by \$2,115,112.20, from \$6,849,216.00 to an amount not to exceed \$8,964,328.20, and extending the contract term by 365 calendar days from February 6, 2022 to February 6, 2023; (ref. V C.1)

Further, voted: to approve the award of Contract 7704, Screw Pump Replacement, Phase 1 at the Clinton Wastewater Treatment Plant, to the lowest responsible and eligible bidder, IPC Lydon, LLC and to authorize the Executive Director, on behalf of the Authority, to execute said contract in the bid amount of \$3,452,985, for a contract term of 540 calendar days from the Notice to Proceed; (ref. VI B.1)

Further, voted: to authorize the Executive Director, on behalf of the Authority, to approve Change Order 17 to Contract 7428, Gravity Thickener Upgrade, Deer Island Treatment Plant, with Walsh Construction Company II, LLC, for a lump sum amount of \$244,289.11, increasing the contract amount from \$19,979,541.22 to \$20,223,830.33, with no increase in contract term; (ref. VI C.1)

Further, voted: to authorize the Executive Director, on behalf of the Authority, to execute a Memorandum of Agreement with the City of Waltham, substantially in the form presented and filed with the records of the meeting, related to reimbursement to MWRA for design and construction costs associated with the installation of City of Waltham local water, sewer sand drain lines and appurtenances; (ref. VII B.1)

Further, voted: to authorize the Executive Director, on behalf of the Authority, to execute the ten-year Water Supply Continuation Agreements with the City of Marlborough and Dedham-Westwood Water District, substantially in the form presented and filed with the records of this meeting as Attachments A and B to the December 15th Staff Summary; (ref. VII B.2)

Further, voted: to approve the award of Contract 7697, Wachusett Dam Bastion Improvements, to the lowest responsible and eligible bidder, MAS Building & Bridge, Inc., and to authorize the Executive Director, on behalf of the Authority, to execute said contract in the bid amount of \$3,927,000, with a contract term of 456 calendar days from the Notice to Proceed; (ref. VII C.1)

Further, voted: to approve the award of Purchase Order Contract WRA-5044, for the supply, handling, storage, and delivery of water main materials to support construction Contract 6522, Northern Extra High Pressure Zone Improvements Construction Package 1, Section 63 (Lexington), to the lowest responsible and eligible bidder, Everett J. Prescott, Inc., and authorize the Executive Director, on behalf of the Authority, to execute said purchase order contract in an amount not to exceed \$1,989,791.00 for a period of 407 calendar days from the Notice to Proceed; (ref. VII C.2)

Further, voted: to authorize the Executive Director, on behalf of the Authority, to approve Change Order 1 to Contract 7198, Quabbin Aqueduct Shaft 2 Repairs, with Unified Contracting, Inc. for an amount not to exceed \$500,000, increasing the contract amount from \$789,000 to \$1,289,000, and extending the contract term by 110 calendar days, from March 12, 2022 to June 30, 2022; further, voted: to authorize the Executive Director to approve additional change orders as may be needed to Contract 7198 in an amount not to exceed the aggregate of \$250,000, in accordance with the Management Policies and Procedures of the Board of Directors; (ref. VII D.1)

Further, voted: to approve amendments to the Position Control Register (PCR) as presented and filed with the records of the meeting; (ref. VIII A.1)

Further, voted: to approve the appointment of Mr. Shawn Owen to the position of Program Manager, Monitoring (Unit 9, Grade 29) in the Toxic Reduction and Control department at the recommended salary of \$128,958.94 to be effective on a date to be determined by the Executive Director; (ref. VIII A.2)

Further, voted: to approve the appointment of Ms. Jeannie Teixeira to the position of Manager, Operations Support (Non-Union, Grade 14), in the Operations Division at the recommended annual salary of \$118,000, commencing on a date to be determined by the Executive Director; (ref. VIII A.3)

Further, voted: to approve the appointment of Ms. Kristen Hall to the position of Senior Program Manager, Operations Engineering (Unit 9, Grade 30) in the Operations Engineering Department at the recommended annual salary of \$134,318.33 commencing on a date to be determined by the Executive Director; (ref. VIII A.4)

Further, voted: to approve the appointment of Michael O'Keefe to the position of Senior Program Manager, Master Planning (Unit 9, Grade 30) in the Planning and Sustainability Department at an annual salary of \$119,503.32, commencing on a date to be determined by the Executive Director; (ref. VIII A.5)

Further, voted: to approve the appointment of Mr. Brian A. Schwartz to the position of Senior Staff Counsel, General Litigation, Law Division (Unit 6, Grade 13) at an annual salary of \$127,481.99, commencing on a date to be determined by the Executive Director; (ref. VIII A.6)

Further, voted: to approve the appointment of Mr. Kershny Gedeon to position of MBE/WBE Program Manager, (Grade 12, Unit 6) at an annual salary of \$84,625.06 commencing on a date to be determined by the Executive Director; (ref. VIII A.7)

Further, voted: to approve the appointment of Mr. Paul Fentross to the position of Business Applications Manager, MIS (Non-Union, Grade 14), at an annual salary of \$136,000.00 commencing on a date to be determined by the Executive Director; (ref. VIII A.8) and,

Further, voted: to approve the extension of an employment contract for Mr. Ward Merithew, Copy and Supply Clerk, Facilities Management Department, for a period of 12 months from January 1, 2022 to December 31, 2022, at the current hourly rate of \$15.76 per hour for an annual compensation not to exceed \$12,300.00; (ref. VIII B.1)

#### CORRESPONDENCE TO THE BOARD

There was no correspondence to the Board.

#### OTHER BUSINESS

There was no other business.

#### ADJOURNMENT

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

<u>Yes</u>	<u>No</u>	<u>Abstain</u>
Cook		
Flanagan		
Foti		
Pappastergion		
Peña		
Vitale		
J. Walsh		
P. Walsh		

Voted: to adjourn.

The meeting adjourned at 3:17pm.

Approved:      January 19, 2021

Attest:

\_\_\_\_\_  
Andrew M. Pappastergion, Secretary

**STAFF SUMMARY**

**TO:** Board of Directors

**FROM:** Kathleen A. Theoharides, Chairperson



**DATE:** January 19, 2022

**SUBJECT:** Annual Meeting: Election and Appointment of MWRA Officers, Retirement Board Member and Committee Assignments

**RECOMMENDATION:**

That the Board of Directors (1) designate this January 19, 2022 meeting as the Annual Meeting which, as provided in the Authority’s by-laws, will be deemed a special meeting of the Board for the purpose of election of officers; (2) elect a Vice-Chairman of the Board; and (3) appoint a Secretary of the Board, an MWRA Treasurer, and such Assistant Secretaries and Assistant Treasurers of the Board as the Board deems appropriate. New Committee Chairs will be appointed approximately every two years.

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

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

**DISCUSSION:**

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

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

The by-laws also provide that:

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

## Retirement Board Appointments

The provisions of G.L. c. 32 § 20 (4 7/8 D) regarding the MWRA Retirement Board, provide that:

“ . . . the secretary of the Authority shall be a member *ex officio*. . . .”

That same section of that statute further provides that a second member of the Retirement Board “ . . . shall be appointed by the board of directors of the authority for a term of 3 years . . .” Thomas J. Durkin was appointed as a member of the Retirement Board for a three-year term beginning on July 1, 2021 and will be re-appointed on July 1, 2024.

## Nomination of Officers

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

Vice-Chairman:	John J. Carroll
Secretary:	Andrew M. Pappastergion
Treasurer:	Matthew Horan
Retirement Board Member:	Thomas J. Durkin
Assistant Secretaries:	Kristin MacDougall Rose Marie Convery
Assistant Treasurer:	Robert Belkin Michael Cole

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

Vice-Chairman:	John J. Carroll
Secretary:	Andrew M. Pappastergion
Treasurer:	Matthew Horan
Retirement Board Member:	Thomas J. Durkin
Assistant Secretaries:	Kristin MacDougall Rose Marie Convery
Assistant Treasurers:	Robert Belkin Michael Cole

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

**STAFF SUMMARY**

**TO:** Board of Directors  
**FROM:** Frederick A. Laskey, Executive Director   
**DATE:** January 19, 2022  
**SUBJECT:** Memorandum of Agreement with Boston Water and Sewer Commission for the Union Park Detention/Treatment Facility Amendment No. 3

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**COMMITTEE:** Wastewater Policy & Oversight

       INFORMATION

VOTE

  
Carolyn Francisco Murphy

General Counsel

  
David W. Coppes, P. E.

Chief Operating Officer

Michael J. Altieri, Associate General Counsel  
Preparer/Title

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**RECOMMENDATION:**

To authorize the Executive Director, on behalf of the Authority, to approve Amendment No. 3 to the Memorandum of Agreement between the Boston Water and Sewer Commission and the Massachusetts Water Resources Authority governing the design, construction, operation, maintenance and costs of the Union Park Detention/Treatment Facility and associated equipment, substantially in the form attached hereto.

**DISCUSSION:**

The Union Park Detention/Treatment Facility was constructed to treat CSO flows that are discharged from the Boston Water and Sewer Commission’s (BWSC) Union Park Pump Station to the Fort Point Channel. Construction and operation of this facility is part of the court-approved CSO control plan. The Union Park Detention/Treatment Facility includes screens and a screenings removal area, a disinfection system, a dechlorination system, influent channels, an emergency bypass into the pump station, detention tanks, odor control equipment and an operation control system that is integrated with BWSC’s pump station control system.

On January 16, 2002, MWRA and BWSC executed a Memorandum of Agreement, which included terms pertaining to ownership responsibilities for the equipment and structural elements associated with the existing Union Park Pump Station and the Detention/Treatment Facility constructed on an adjacent BWSC parcel of land.

On December 17, 2003, the Board approved Amendment 1 to the Memorandum of Agreement that: (a) updated ownership and financial responsibilities to accurately reflect the final equipment list; (b) established the percentage of cost for the facilities for each respective party; and (c) revised the terms related to agency oversight of construction and protocols associated with processing change orders. On July 18, 2007, the Board approved Amendment 2 to the Memorandum of Agreement, which made certain updates related to the: (a) apportionment of the fixed annual fee; (b) apportionment of costs not covered by the annual fee; (c) apportionment

of the utility and supply costs; (d) accounts payable procedures; and (e) miscellaneous items between the parties.

### **This Amendment**

Since Amendment 2 was approved by the Board, MWRA staff and staff at BWSC have continuously sought to realize additional efficiencies through the procurement and administration of the shared operation and maintenance contract. The most recent solicitation and resulting contract realize certain efficiencies through the invoicing and payment provisions among the contracting parties, which replaces a more cumbersome fee reimbursement process previously used between MWRA and BWSC. This Amendment 3 updates and formalizes the arrangements between MWRA and BWSC related to:

- Incorporating the invoicing and related compensation payment processes set forth in the contract, including the monthly split invoicing and direct payment of the funding allowances and fixed annual fee by MWRA and BWSC to the contractor at the respective proportional shares formalized under Amendment 2, in lieu of BWSC first paying contractor invoices and MWRA ultimately reimbursing BWSC for MWRA's portion of each invoice; and
- Miscellaneous changes to the terms, conditions, and exhibits referencing the new shared operation and maintenance contract.

### **BUDGET/FISCAL IMPACTS:**

MWRA's CIP and CEB budgets contain adequate funds for ongoing operation and maintenance of the Union Park Detention/Treatment Facility.

### **ATTACHMENT:**

Draft Amendment 3 to Memorandum of Agreement

AMENDMENT NO. 3 TO MEMORANDUM OF AGREEMENT  
Between  
BOSTON WATER AND SEWER COMMISSION  
And  
MASSACHUSETTS WATER RESOURCES AUTHORITY  
GOVERNING  
THE DESIGN, CONSTRUCTION, OPERATION, MAINTENANCE AND COSTS  
OF THE UNION PARK PUMPING STATION,  
TREATMENT FACILITY AND ASSOCIATED EQUIPMENT

This AMENDMENT NO. 3 TO MEMORANDUM OF AGREEMENT is made on this \_\_\_\_\_ day of \_\_\_\_\_, 2022, between BOSTON WATER AND SEWER COMMISSION, a body politic and corporate and political subdivision of the Commonwealth (“BWSC”) with offices at 980 Harrison Avenue, Boston, Massachusetts 02119, and MASSACHUSETTS WATER RESOURCES AUTHORITY, a body politic and corporate and public instrumentality (“MWRA”) with offices at 100 First Avenue, Charlestown Navy Yard, Boston, Massachusetts 02129 (collectively, BWSC and MWRA are referred to as the “Parties”).

Whereas, on January 16, 2002, the Parties entered into a Memorandum of Agreement (“MOA”), which set forth the terms and conditions governing the design, construction, operation, maintenance, and costs associated with the Treatment Facility and Associated Equipment on the Union Park Pumping Station Premises, as defined in the MOA;

Whereas, on November 13, 2007, the Parties contemporaneously executed the following documents amending the MOA: (a) *Amended Memorandum of Agreement between Boston Water and Sewer Commission and Massachusetts Water Resources Authority Governing the Design, Construction, Operation, Maintenance and Costs of the Union Park Pumping Station, Treatment Facility and Associated Equipment*; and (b) *Amendment No. 2 to Memorandum of Agreement between Boston Water and Sewer Commission and Massachusetts Water Resources Authority Governing the Design, Construction, Operation, Maintenance and Costs of the Union Park Pumping Station, Treatment Facility and Associated Equipment* (“Amendment No. 2”); and

Whereas, the Parties now wish to further amend the MOA.

NOW, THEREFORE, for good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, the Parties agree that the MOA will be amended as follows:

1. Paragraph 7. in the section entitled “THE TERMS,” as most recently amended by Amendment No. 2, is hereby further amended by striking the last subparagraph at the end of Paragraph 7. and replacing it with the following subparagraph:

“MWRA and BWSC have entered into a contract with \_\_\_\_\_, dated \_\_\_\_\_, 2022, entitled *Contract for Management, Operation and Maintenance of the UPPS/CSO Facility and the [Unstaffed] Pump Stations by and between the Boston Water and Sewer*

*Commission, the Massachusetts Water Resources Authority and \_\_\_\_\_, IFB# BWSC No. 21-203-001 / MWRA Contract No. S606, a copy of which is attached as Exhibit 7, and as the same may be amended from time-to-time without further amending this Agreement.”*

2. Paragraph 14. in the section entitled “THE TERMS,” as most recently amended by Amendment No. 2, is hereby further amended by deleting Paragraph 14. in its entirety and replacing it with the following:

“14. Except as otherwise provided herein, all invoices and related compensation payment processes for the management, operation and maintenance of the jointly owned/operated facilities including, but not limited to, the invoicing and payment of the Fixed Annual Fee (as described Paragraph 8 of this Agreement) and the Funding Allowances, shall be done in accordance with the provisions of the contract set forth in Exhibit 7, and as the same may be amended from time-to-time without further amending this Agreement. For all other work and invoices for services and supplies for the jointly owned/operated facilities, payment shall be in accordance with the following:

- a. all invoices for utilities shall be received by BWSC. Copies of all utility invoices will be sent to MWRA for review. BWSC and MWRA will generate and transmit separate checks to the utilities for its respective portion of each bill (per cost sharing arrangements contained in this Agreement).

3. Paragraph 20. in the section entitled “THE TERMS,” as most recently amended by Amendment No. 2, is hereby further amended by deleting Exhibit 7 and replacing it with the following:

Exhibit 7 contract entitled “*Contract for Management, Operation and Maintenance of the UPPS/CSO Facility and the [Unstaffed] Pump Stations by and between the Boston Water and Sewer Commission, the Massachusetts Water Resources Authority and \_\_\_\_\_, IFB# BWSC No. 21-203-001 / MWRA Contract No. S606,*” dated \_\_\_\_\_, 2022, and as the same may be amended from time-to-time without further amending this Agreement.

In all other respects, the terms and conditions of the MOA shall remain in full force and effect.

IN WITNESS WHEREOF, the Parties have caused this Amendment No.3 to Memorandum of Agreement to be executed as an instrument under seal as of the date set forth above.

MASSACHUSETTS WATER RESOURCES AUTHORITY

By \_\_\_\_\_  
Frederick A. Laskey  
Its Executive Director

Date \_\_\_\_\_

BOSTON WATER AND SEWER COMMISSION

By \_\_\_\_\_  
Henry F. Vitale  
Its Executive Director

Date \_\_\_\_\_

**STAFF SUMMARY**

**TO:** Board of Directors  
**FROM:** Frederick A. Laskey, Executive Director   
**DATE:** January 19, 2022  
**SUBJECT:** Management, Operation, and Maintenance of the Union Park Pump Station/CSO Facility and the Unstaffed Pump Stations  
Woodard & Curran, Inc.  
Contract S606

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**COMMITTEE:** Wastewater Policy & Oversight

       INFORMATION  
  X   VOTE

  
Michele S. Gillen  
Director of Administration

Stephen D. Cullen, Director, Wastewater  
Charles B. Ryan, Director, Wastewater O&M  
Nathan H. Little, Program Manager, Ops Engineering  
Preparer/Title

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

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**RECOMMENDATION:**

To approve the award of Contract S606, Management, Operation, and Maintenance of the Union Park Pump Station/CSO Facility and the Unstaffed Pump Stations, to the lowest responsible and eligible bidder, Woodard & Curran, Inc., and to authorize the Executive Director, on behalf of the Authority, to jointly execute said contract along with the Boston Water and Sewer Commission for a contract service fee amount of \$6,181,262, of which MWRA will pay \$1,668,940.74 (27%) and Boston Water and Sewer Commission will pay \$4,512,321.26 (73%), plus a funding allowance amount of \$1,050,000 for preventative and corrective maintenance and repairs (which includes \$300,000 for MWRA and \$750,000 for Boston Water and Sewer Commission), for a total contract amount not to exceed \$7,231,262, and for a contract term of three years, from March 1, 2022 through February 28, 2025, with options to extend the term for up to two additional years, subject to future Board approval.

**DISCUSSION:**

The Boston Water and Sewer Commission (BWSC) and MWRA jointly own the Union Park Pump Station/CSO Facility, which is a wet-weather facility that handles combined wastewater in the South End of Boston (refer to the aerial image in Figure 1 and the exterior facility photograph in Figure 2 on the following page). The facility is staffed 24 hours per day, seven days per week and typically takes CSO flow into its storage tanks approximately 26 times per year and discharges treated water to Fort Point Channel approximately eight times per year.



Figure 1 - Aerial View of the Union Park Pump Station/CSO Facility



Figure 2 - Exterior View of the Union Park Pump Station/CSO Facility from Malden Street

As part of the federal court order, MWRA expanded the Union Park Pump 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 pump station (paid for by BWSC).

In 2002, MWRA and BWSC entered into a Memorandum of Agreement (MOA), which included terms pertaining to ownership responsibilities for the equipment and structural elements associated with the facility. In 2003, the Board approved Amendment 1 to the MOA that: (a) updated ownership and financial responsibilities to accurately reflect the final equipment list; (b) established the percentage of cost for the facilities for each respective party; and (c) revised the terms related to agency oversight of construction and protocols associated with processing change orders. Construction of the facility was substantially complete in late 2006. In 2007, the Board approved Amendment 2 to the MOA, which made certain updates related to the: (a) apportionment of the fixed annual fee; (b) apportionment of costs not covered by the annual fee; (c) apportionment of the utility and supply costs; (d) accounts payable procedures; and (e) miscellaneous items between MWRA and BWSC.

In 2007, 2012, and 2017, the two agencies worked jointly to procure a contract to manage, operate and maintain the facility, as well as nine smaller, unstaffed pump stations owned exclusively by BWSC. The current contract was awarded to Woodard & Curran and will expire on February 28, 2022. Further recommended revisions to the MOA are being presented at this Board meeting in a separate staff summary, in order to align the MOA terms with the terms of this replacement contract.

This replacement contract was bid for a three-year term with options to extend for up to two additional years. In addition to providing all necessary operations, the contract requires the operator to perform all necessary preventative and routine maintenance for the facilities. Corrective maintenance and repair will be paid for via the funding allowance. Other work beyond the scope of this contract, as well as chemical supplies and other services, will be performed under separate existing or future MWRA contracts.

MWRA and BWSC have agreed to continue to split the annual service fee portion of the contract at 73% (BWSC) and 27% (MWRA) based on a review of the existing contract and likely similar assignment of time of the contract base and wet-weather staffing to MWRA and BWSC for the Union Park facility and the nine unstaffed BWSC pump stations. Other cost splits (e.g., utilities) will be based on the percentage of Union Park ownership and/or the ability to clearly assign cost responsibility.

### **Procurement Process**

A low-bid procurement process was used, which included minimum experience and qualification requirements for firms and key personnel assigned to the project. The contract was advertised on October 27, 2021 on BWSC's electronic bidding platform (BidNet Direct Portal) as well as CommBuys, the Goods & Services Bulletin, the Central Register, The Boston Globe and El Mundo. A site visit was held on November 3, 2021. Woodard & Curran was the only attendee.

One bid was received and opened on November 30, 2021 and contained the following service fee for the full three-year term of contract:

Woodard & Curran	\$6,181,262
<i>Engineer's Estimate</i>	<i>\$4,389,534</i>

Woodard & Curran's annual service fees for the first three years of the contract are as follows:

<u>Year</u>	<u>Annual Service Fee</u>
1	\$1,999,826
2	\$2,059,821
3	\$2,121,615

Woodard & Curran's total annual service fee was \$1,791,728 (41%) more than the Engineer's estimate. The first year service fee is \$626,988 (or 46%) more than the last year of the current contract. Woodard & Curran identified several reasons for the increase, including inflation, increases in wages to achieve equity with market conditions, hiring a full-time electrician (previously one employee served as both the project manager and electrician, but that employee has since left), an increase in routine and preventative maintenance due to the age of the facility, and additional scope of work, including an annual SCADA/cybersecurity evaluation and report, as well as an arc flash analysis. The second and third year's annual service fees are based on a 3% annual increase over the previous year.

A review of historic annual service fees (2007-2021) shows that the fee increased an average of 1.4% per year, and in some years even decreased (7.2% decrease between 2016 and 2017). Overall, staff believe that MWRA and BWSC have been paying very favorable rates, particularly over the last five years.

Woodard & Curran operated these facilities for six years (2001-2006) prior to the new jointly owned Union Park Pump Station/CSO Facility coming online and has since operated the facilities for 15 years under the current and previous contracts, which were competitively bid and procured. Based on many years of experience working with Woodard & Curran, staff are of the opinion that the firm possesses the skill and ability necessary to successfully complete the work under this contract and can operate the facilities at the bid price. Qualifications of the firm and key personnel, as required in the Invitation for Bids, have been checked by BWSC and were found to meet the minimum requirements. Over the years that Woodard & Curran has been performing these services, both MWRA and BWSC staff have been satisfied with the firm's performance.

Included in the contract's not-to-exceed amount of \$7,231,262 is an annual "funding allowance" of \$350,000 per year (\$250,000 per year for BWSC and \$100,000 per year for MWRA) for corrective maintenance and repair costs. Use of the funding allowance requires various levels of reporting and task order approvals, depending on the nature and cost of the work.

BWSC's Board of Commissioners voted to approve award of the contract (pending approval by MWRA's Board of Directors) to Woodard & Curran during its meeting of December 21, 2021. Based on the reasons set forth above, staff recommend award of this contract to Woodard & Curran, Inc.

**BUDGET/FISCAL IMPACTS:**

The FY2022 Current Expense Budget currently includes adequate funds for MWRA's portion of the management, operation and maintenance of the Union Park Pump Station/CSO Facility. Any overspending in FY2022 of this multi-year contract will be absorbed within the Operations CEB. The FY2023 through FY2025 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 highly specialized work involved and the limited opportunities for subcontracting.



roof plates. In addition, there are a number of locations where small voids exist due to minor localized corrosion (Figure 1). The pinholes and voids have the potential to entrap air when the new rubber liner is installed and allow blisters to form under the lining. The formation of blisters may compromise the integrity of the rubber liner. To address this issue, a steel-filled epoxy putty will be used to fill the pinholes and voids to prevent the formation of blisters (Figure 2). The pinholes and voids could not be observed until the existing rubber lining was removed and, therefore, was not known during the design phase.



Figure 1 - Localized Corrosion Prior to Application of Steel-Filled Epoxy Putty



Figure 2 – Localized Corrosion after Application of Steel-Filled Epoxy Putty

This item has been identified as an unforeseen condition. MWRA staff and the Contractor agreed to a lump sum amount of \$112,167.20. The Contractor proceeded with this work at its own risk in order to continue with the remainder of the contract work.

**CONTRACT SUMMARY:**

	<u>AMOUNT</u>	<u>TIME</u>	<u>DATED</u>
Original Contract:	\$8,504,505.00	850 Days	08/13/19
<b>CHANGE ORDERS:</b>			
Change Order 1*	\$30,858.40	0 Days	08/17/20
Change Order 2*	\$34,677.95	0 Days	12/03/20
Change Order 3*	\$110,701.39	0 Days	02/25/21
Change Order 4*	\$17,597.95	0 Days	10/15/21
Change Order 5	<u>\$112,167.20</u>	<u>0 Days</u>	Pending
Total Change Orders	\$306,002.89	0 Days	
Adjusted Contract:	\$8,810,507.89	850 Days	

\*Approved under delegated authority

If Change Order 5 is approved, the cumulative total value of all change orders to this contract will be \$306,002.89 or 3.6% of the original contract amount. Work on this project is approximately 97% complete.

**BUDGET/FISCAL IMPACT:**

The FY22 CIP includes a budget of \$8,805,743 for Contract 7373. Including this change order for \$112,167.20 the adjusted subphase will be \$8,810,507.89, or \$4,764.89 over budget. This amount will be absorbed within the five-year CIP spending cap.

**MBE/WBE PARTICIPATION:**

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

## STAFF SUMMARY

**TO:** Board of Directors  
**FROM:** Frederick A. Laskey, Executive Director   
**DATE:** January 19, 2022  
**SUBJECT:** Remote Headworks Upgrade Design and Construction Administration  
Arcadis U.S., Inc.  
Contract 7206, Amendment 8

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**COMMITTEE:** Wastewater Policy & Oversight

       INFORMATION  
  X   VOTE

John P. Colbert, P.E., Chief Engineer  
Margery J. Johnson, Program Manager  
Preparer/Title

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

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### RECOMMENDATION:

To authorize the Executive Director, on behalf of the Authority, to approve Amendment 8 to Contract 7206, Remote Headworks Upgrade Design and Construction Administration, with Arcadis U.S., Inc., increasing the contract amount by \$148,000, from \$10,754,831 to \$10,902,831, with no increase in contract term.

### DISCUSSION:

On June 30, 2010, the Board approved the award of Contract 7206 to Malcolm Pirnie, Inc., now Arcadis, U.S., Inc., to provide design and construction administration services for the upgrade of the three remote headworks facilities, Chelsea Creek, Columbus Park, and Ward Street. These facilities provide preliminary treatment and flow control of the wastewater from MWRA's Northern Service Area before reaching the Deer Island Treatment Plant.

Following completion of Preliminary Design, staff reevaluated the design and construction sequencing for the project. Informational staff summaries were presented to the Board on January 18, 2012 and June 6, 2012 to discuss concerns with upgrading all three facilities at once, and to evaluate the best options to proceed. It was decided that Final Design for the Columbus Park and Ward Street Headworks would be performed under a separate contract, and that Contract 7206 would include Chelsea Creek Headworks only. This decision was codified through the first amendment approved by the Board of Directors approximately eight years ago.

During this time, amendments have also been issued for additional evaluations, a number of which led to the incorporation of new design elements. These include the provision of flood protection, contending with on-site contaminated soil, and relocation of odor control equipment and a portion of a MWRA water main. Amendments for the inclusion of e-Construction Software Services and additional level of effort for construction administration services; including Requests for Information (RFIs) and submittals, and design associated with unforeseen conditions, have been provided through additional amendments.

The Chelsea Creek Headworks was constructed in the 1960s and received its last significant upgrade in 1987. This project is a major upgrade of the entire facility. Although the construction was expected to reach substantial completion in April 2021, this milestone was not declared until August 2021. The upgrades have included automation of the grit and screenings collection and conveyance systems, new influent and effluent sluice gates, and new HVAC and odor control systems with added redundancy. Ancillary systems, including a new emergency generator, fuel oil tank, and MWRA-owned transformer have been constructed. Upgrades of instrumentation and control systems, including gas monitoring systems, have been performed. The facility has been abated of hazardous building materials; including PCBs, lead and asbestos. Upgrades to meet current code requirements, including new stair towers and a sprinkler system have been constructed, along with a new communications tower and equipment shelter. Flood protection measures to protect the facility to the 100-year flood elevation plus 2.5 feet have been included for both the existing facility and new construction.

### **This Amendment**

Proposed Amendment 8 will increase the contract amount by a total of \$148,000, from \$10,754,831 to \$10,902,831, with no increase in contract term. Amendment 7 anticipated that substantial completion for the project's construction Contract 7161 would be declared in April 2021, and that the level of effort for construction administration services would decrease following declaration of substantial completion. However, substantial completion was not declared until four months later on August 1, 2021. During the additional four months to achieve substantial completion, as well as during the contractor's completion of remaining punch list items, the Consultant continues to provide construction administration services to support the completion of this project. Ongoing work includes responding to requests for information and submittals, preparation of documentation required by DEP for close out of the site with respect to contaminated soils and documentation of PCB remediation required by EPA, as well development of the long-term monitoring and maintenance implementation plan and completion of record drawings to accurately reflect the upgrade for MWRA's future use. Over the past several months, staff have been negotiating with Arcadis on the cost for the additional engineering services to complete this contract.

This amendment is for engineering support for out-of-scope items including Construction Engineering Services and Project Administration Services. The cost proposed by Arcadis for the additional services is \$188,000. A reallocation of unused funds in the amount of \$40,000, from Special Services During Construction to Construction Administration Services, will be used to pay for a portion of the out of scope services. If Amendment 8 is approved, the remaining \$148,000 will be added to the contract to pay for the balance of the additional services furnished.

Out of Scope Engineering Services \$158,000

The number of RFIs and submittals that were originally included in the contract have been exceeded and further funds are needed to address additional RFIs and submittals that require response. Specifically, there are 1,052 RFIs and 1,376 submittals included in the contract. An additional 72 RFIs and 125 submittals are required to be answered above the contract amount.

In addition, Arcadis was required to resolve questions that needed significant effort, including the elevator design adjustments proposed to accommodate existing components so that a permit could

be obtained; control issues with the level elements upstream of the screens that required additional testing, troubleshooting, and SCADA support; and operational issues impacting the ductwork associated with the odor control system’s grease filter mist eliminators. Resolution of these matters required additional outside subconsultant support, meetings and coordination.

As discussed above, \$40,000 for this work will be paid from reallocated, unused funds.

Administration and Management Services \$30,000

Substantial completion for the Chelsea Creek Headworks construction contract was declared four months later than anticipated. Budget was included in Amendment 7, for three months following substantial completion to complete project deliverables and support the punch list completion and now additional administration and management services are required for daily project management, meetings and management of subconsultants.

Staff have compiled a list of all change order items that have resulted from errors or omissions and have begun cost recovery settlement discussions with the Arcadis.

**CONTRACT SUMMARY:**

	<u>AMOUNT</u>	<u>TIME</u>	<u>DATED</u>
Original Contract:	\$6,682,531	2,494 Days	07/01/10
Amendment 1:	\$0	458 Days	10/05/12
Amendment 2*:	\$249,500	0 Days	10/22/13
Amendment 3:	\$957,600	0 Days	09/17/14
Amendment 4:	\$897,200	1,160 Days	04/06/17
Amendment 5:	\$846,000	0 Days	07/23/18
Amendment 6:	\$683,000	0 Days	02/11/19
Amendment 7:	\$439,000	183 Days	09/09/21
Proposed Amendment 8:	<u>\$148,000</u>	<u>0 Days</u>	Pending
Adjusted Contract Amount	\$10,902,831	4,295 Days	

\*Approved under delegated authority

The percentage of amendments for this contract is 63% of the original contract value.

**BUDGET/FISCAL IMPACT:**

The FY22 CIP includes \$10,754,831 for Contract 7206. Including this amendment for \$148,000, the adjusted subphase total will be \$10,902,831 or \$148,000 over the funding in the CIP. This amount will be absorbed within the five-year CIP spending cap.

**MBE/WBE PARTICIPATION:**

The minimum MBE and WBE participation requirements for this contract are 17.5% and 6.57%, respectively, and will be unchanged by this amendment.

## STAFF SUMMARY

**TO:** Board of Directors  
**FROM:** Frederick A. Laskey, Executive Director  
**DATE:** January 19, 2022  
**SUBJECT:** Wachusett Watershed Railroad Update



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**COMMITTEE:** Water Policy & Oversight

       VOTE  
  X   INFORMATION

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



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

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### RECOMMENDATION:

For information only

### DISCUSSION:

At the December 15, 2021 meeting, staff provided the Board with an update on the status of negotiations with CSX related to the improvements to the Worcester Main Line. Since that meeting staff were able to finalize an agreement with CSX that will allow for significant upgrades to the condition of the track, limit speed and provide additional safety monitoring. The agreement focuses on the following six major points:

- Upgrade the tracks from FRA Class 1 to Class 3 and maintain at that level.
- Limit track speeds within the watershed to 25 miles per hour (which is lower than allowed by Class 3 track standards).
- Prohibit parking or idling trains and equipment within the watershed except in limited safety-related circumstances.
- Provide information describing the type and quantity of hazardous material transported with the watershed.
- Provide notice of derailments, spills or releases within the watershed.
- Install monitoring equipment to detect irregularities with railcars including dragging equipment and hot bearing detectors at either side of the watershed.

In addition to these six major points, CSX also agreed to some liability provisions and emergency coordination activities. CSX has agreed to pay all of the costs associated with work included in the agreement. Under the terms of the agreement, MWRA withdrew its request to appear at the Surface Transportation Board's (STB) public hearing, and the request for conditions to be imposed on the transactions. CSX has filed the agreement with the STB and requested that it be imposed as a term of the final approval of the sale of Pan Am to CSX. Under the current schedule, the STB is expected to issue a ruling on the application to purchase Pan Am in April 2022. A copy of the executed agreement between CSX and MWRA is included as an attachment to this staff summary.

## STAFF SUMMARY

**TO:** Board of Directors  
**FROM:** Frederick A. Laskey, Executive Director   
**DATE:** January 19, 2022  
**SUBJECT:** Update on Revisions to EPA's Lead and Copper Rule

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**COMMITTEE:** Water Policy & Oversight

X  INFORMATION  
  VOTE

Carolyn M. Fiore, Deputy Chief Operating Officer  
Stephen Estes-Smargiassi, Director, Planning  
Preparer/Title

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

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### RECOMMENDATION:

For information only.

### DISCUSSION:

In December 2021, as expected with the change of Administration, EPA released a federal register notice on further revisions to the Lead and Copper Rule. In short, the EPA notice indicated that the revisions promulgated in January 2021 will go into effect with a compliance deadline of October 2024, and that EPA anticipates making some additional changes over the next several years. Although EPA may change parts of the rule, MWRA and our member communities need to begin or continue moving towards compliance with all of the items that were in the January 2021 final regulation.

#### Summary of the January 2021 Revisions:

The principal point of EPA's December 2021 notice was to indicate that the January 2021 revisions were in effect and would require compliance by October of 2024. Staff reported to the Board on those long awaited revisions to the Lead and Copper Rule in February 2021 and conducted a training session for communities jointly with the Advisory Board in May 2021. Staff anticipate doing more training later this winter when EPA issues guidance manuals providing additional details on several areas of the revisions.

Highlights of the significant changes in the January 2021 rule revision include:

- A new requirement for "Tier 1" 24-hour notice if a water system exceeds the lead Action Level: similar to what is required for a confirmed *E. coli*.  
*This is likely to significantly complicate risk communication compared to the current rule that allows time for a community to develop a more complete and thoughtful communication and outreach plan after an Action Level exceedance.*
- Changes to how sampling will be done. Systems with any lead services must collect all their samples from those homes, and sample using a new technique collecting five liters of

water and analyzing the fifth one for lead. This is designed to capture water from the service line.

*While actual lead levels will not change, these changes will likely increase reported lead levels. It is anticipated that EPA may further change this requirement, perhaps requiring that both the first and fifth liter be analyzed and using the higher value for compliance.*

- In the next three years (by October of 2024), each community will need to develop a complete inventory of all of its service lines, make it available to the public and annually notify each homeowner that they have a lead or galvanized service line, or one of unknown material.

*The new notice explicitly indicated that this deadline is in force. While a number of MWRA communities have some type of existing inventory, meeting the new, more detailed requirements will be a significant undertaking for almost all communities.*

- Also in the first three years, each community must develop and submit a plan to DEP for replacing lead and galvanized service lines. This plan would be put into action if a newly created Trigger Level of 10 parts per billion (ppb) or the existing action level of 15 ppb is exceeded.

*While EPA announced its intention to revise this requirement and that the deadline may be changed, it will make sense for communities to begin to make plans for how lead service lines will be replaced, how to implement all the new associated notice and risk mitigation requirements, and in particular how funding for replacement of the private side of the service line will be handled.*

- New requirements for sampling in schools and childcare facilities. Water systems must contact 20 percent of schools and childcare facilities for the first five years, offering to take lead samples. The requirement is for five samples in each school and two in each childcare facility. *There were substantial comments on this requirement, but no indication of any specific changes the new Administration might make. MWRA and its member communities will need to be prepared to implement this beginning in 2025.*

- New requirements for risk mitigation efforts, including a requirement to provide to customers point-of-use filters after activities that disturb the service line.

*Communities will need to plan to do this and track compliance with the actions and deadlines.*

- New requirements for “find and fix” activities at any home where the LCR sample is over the Action Level.

*MWRA and its member its member communities will need to coordinate to conduct relatively short turn-around sampling both in the home and within the community distribution system to evaluate potential causes for the higher lead levels.*

Staff anticipate that the addition of the new 10 ppb Trigger Level and changes to sampling will make it more likely that MWRA will need to re-evaluate its corrosion control treatment. MWRA is already working proactively to be ready to perform a review of corrosion control in a thorough and thoughtful way.

The changes in sampling, the new Trigger Level and the probable direction of any additional changes the Administration will make, described below, will also likely mean that many more communities will exceed the Action Level and thus be required to do the new 24-hour public notice and mandatory lead service line replacement. Staff are continuing to work with communities to take advantage of MWRA's zero-interest loans for lead service line replacement as discussed in December's staff summary on Lead and Copper Rule compliance.

The White House held a broader press conference with the Administration's 15-point Lead Pipes and Paint Action Plan that laid out actions and funding by multiple federal agencies to deal more holistically with both lead paint and lead pipes. Focusing federal programs to provide equity in risk reduction will be a major Administration priority. The press conference summarized all the funding from recent legislation and offered additional flexibility in how some previous funding could be used for remediating lead risks. Most of the funding will flow through the existing state revolving loan (SRF) programs.

#### Potential Areas of Change:

EPA's notice indicated that it does expect to make some additional changes to the rule. EPA will probably release a draft in 2022 and final revisions before October 2024. The notice did not specifically list expected changes, but hinted at potential areas for change. Potential changes to the January revisions include:

- strengthening the lead service line (LSL) replacement mandate, requiring more replacements per year if a community is over the Action Level, and possibly including requirements even for those with lower lead results to replace LSLs over time. A clear goal of the Administration is full removal of all LSLs;
- changing the sampling procedures in ways that would make it more likely that any given site would have higher lead results;
- re-examining the addition of a Trigger Level (10 ppb) to the rule in addition to the existing Action Level (15 ppb), which many commenters indicated added confusion to the rule. Two potential paths seem to be either lowering the Action Level to 10 ppb and eliminating the Trigger Level OR if the LSL replacement requirement is made stronger, keeping the existing Action Level and eliminating the Trigger Level, as it might now be unnecessary;
- including more explicit means of prioritizing actions in economic justice areas; and
- perhaps making administrative changes to reduce some of the state and utility paperwork and record keeping burden.

Staff will report to the Board when and if EPA releases any further changes to the rule.

#### **BUDGET/FISCAL IMPACTS:**

Staff will evaluate the anticipated impacts on required sampling and laboratory resources prior to the compliance date of October 2024 in developing the FY25 CEB. If changes in corrosion control treatment are determined to be necessary, staff will add any capital costs to the Capital Improvement Program and estimated operating costs to the appropriate CEB as those plans are developed.

### STAFF SUMMARY

**TO:** Board of Directors  
**FROM:** Frederick A. Laskey, Executive Director *Frederick A. Laskey*  
**DATE:** January 19, 2022  
**SUBJECT:** Wachusett Dam Bastion Improvements Resident Engineering Services  
 Kleinfelder Northeast, Inc.  
 Contract 7716

**COMMITTEE:** Water Policy & Oversight

INFORMATION  
 VOTE

*Michele S. Gillen*  
 Michele S. Gillen  
 Director of Administration

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

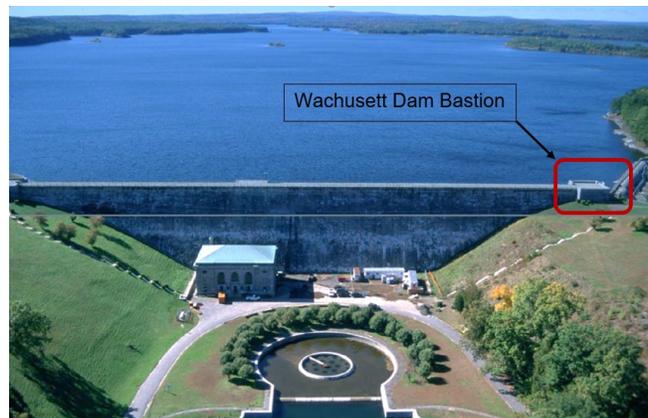
*David W. Coppes, P.E.*  
 David W. Coppes, P.E.  
 Chief Operating Officer

### RECOMMENDATION:

To approve the recommendation of the Consultant Selection Committee to award Contract 7716, Wachusett Dam Bastion Improvements Resident Engineering Services, to Kleinfelder Northeast, Inc., and to authorize the Executive Director, on behalf of the Authority, to execute said contract in an amount not to exceed \$435,044 for a contract term of 15 months from the Notice to Proceed.

### DISCUSSION:

Contract 7716 will provide Resident Engineering Services for the Wachusett Dam bastion improvements construction contract, which was awarded at the December 15, 2021 Board of Directors meeting. The construction contract will provide structural rehabilitation of the bastion, which is located at the northerly end of Wachusett Dam in Clinton, Massachusetts. The bastion is an enclosed room measuring approximately 40 feet by 50 feet by 12 feet high, which currently houses mechanical and electrical equipment. The primary electrical feed for Wachusett Dam, the Lower Gatehouse and the Cosgrove Intake pass through the bastion. Power generated from the hydro turbines at Cosgrove is transmitted to the electrical grid. This contract will undertake a major structural reconstruction of the facility. The work includes removal and replacement of the top three feet of the bastion walls, crack filling and water proofing all walls, providing a new roof and drainage system, and rebuilding the entryway arch and exterior stairway.



Photos of the wall cracks and exterior of the bastion are shown in Figures 2 and 3.



Figure 2: Bastion South Wall Crack



Figure 3: Exterior of Bastion

Since the bastion is a historic building, construction must be completed in a manner consistent with MWRA’s Memorandum of Agreement with the Massachusetts Historical Commission. Therefore, the exterior granite blocks will be catalogued prior to removal and replaced in the same location upon project completion, so that the building has the same exterior appearance.

The selected firm will provide resident engineering services during the 15-month construction contract. The Resident Engineer’s responsibilities include daily, on-site observation and documentation of the progress and quality of the construction work. MWRA staff will provide overall construction management for the contract.

**Procurement Process**

On November 3, 2021, MWRA issued a one-step Request for Qualifications Statements/Proposals (RFQ/P) that was publicly advertised in the Central Register, the Boston Herald, Banner Publications and El Mundo, and on the MWRA Supplier Portal. In addition, notice of the RFQ/P was sent directly to 72 engineering firms. A total of 23 firms requested the RFQ/P documents.

The RFQ/P included the following evaluation criteria and points: Cost (30 points); Qualifications and Key Personnel (30 points); Relevant Experience/Past Performance (30 points); and Technical Approach, Capacity/Organization and Management Approach (10 points).

On November 23, 2021, MWRA received one proposal from Kleinfelder. The following table represents the cost and level of effort proposed by Kleinfelder:

Proposer	Proposed Cost	Proposed Hours
<i>Engineer’s Estimate</i>	<i>\$435,600</i>	<i>2,904</i>
Kleinfelder	\$435,044	2,938

The Selection Committee met on December 2, 2021 to evaluate Kleinfelder's proposal. Kleinfelder's proposed Resident Engineer's qualifications exceed the experience requirements. The Resident Engineer has over 40 years of construction experience and has worked successfully on multiple MWRA construction projects. In addition to positive references for performance on resident engineering projects and past MWRA projects, Kleinfelder was the designer of this project and demonstrated a full understanding of the project requirements 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.

For the reasons set forth above, the Selection Committee recommends award of this contract to Kleinfelder Northeast, Inc. in an amount not to exceed \$435,044.

**BUDGET/FISCAL IMPACT:**

The FY22 CIP includes a budget of \$350,000 for Contract 7716. The contract award is \$435,044, or \$85,044 over budget. The increase is attributed to a longer construction schedule, which changed from 12 to 15 months during design. This amount will be absorbed within the five-year CIP spending cap. The cost estimate was updated to \$436,000 during the FY2023 Proposed CIP development process.

**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 *Frederick A. Laskey*  
**DATE:** January 19, 2022  
**SUBJECT:** John J. Carroll Water Treatment Plant Chemical Feed System Improvements  
Walsh Construction Company II, LLC  
Contract 7598

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**COMMITTEE:** Water Policy & Oversight

     INFORMATION  
  X   VOTE

*Michele S. Gillen*  
Michele S. Gillen

Director of Administration

*David W. Coppes*  
David W. Coppes, P.E.

Chief Operating Officer

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

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### RECOMMENDATION:

To approve the award of Contract 7598, John J. Carroll Water Treatment Plant Chemical Feed System 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 \$2,479,000, with a contract term of 457 calendar days from the Notice to Proceed.

### DISCUSSION:

Contract 7598 includes modifications to the fluoride and soda ash systems at the John J. Carroll Water Treatment Plant. The fluoride system is located in a separate room within the Chemical Building and consists of three bulk storage tanks, two transfer pumps, three day tanks, three weigh loss feeders, three metering pumps, piping and appurtenances. The feed system is controlled locally with three control panels located within the Fluoride Room. Modifications to the fluoride system include replacement of the existing weigh feeders (see Figure 1), control panels and piping. This equipment is past its useful life, the control panel components are obsolete and replacement parts are no longer available.



Figure 1: Weigh Feeder

The existing 730 feet of ½-inch to three-inch diameter Chlorinated Polyvinyl Chloride (CPVC) fluoride pipe within the Chemical and Post Treatment Buildings (see Figure 2) will be upgraded to fused joint Polyvinylidene (PVDF) pipe that has a better chemical resistance to fluoride than the CPVC glued joints. Currently, the sodium hypochlorite CPVC lines at the Carroll Water Treatment Plant are being replaced with PVDF due to multiple leaks that have occurred from exposure to sodium hypochlorite over the last 15 years. The CPVC pipes at the Deer Island Wastewater Treatment Plant have been changed to PVDF due to the superior performance of PVDF. The underground CPVC fluoride pipes that run from the Chemical Building to the Post Treatment Building will be replaced with PFA tubing. PFA also has excellent chemical resistance to fluoride. Tubing will simplify construction as it can be fed through the existing underground conduits between the Chemical and Post Treatment Buildings.



Figure 2: CPVC Piping

The soda ash feed system is located in the Post Treatment Building. It includes six soda ash silos, each with a bin activator, isolation valve, gravimetric feeder, solution tank, control panel and associated appurtenances. A soda ash solution is produced in the solution tank for application within four mix chambers. The soda ash is used to increase the alkalinity of the water for corrosion control for compliance with the Lead and Copper Rule. Modifications to the soda ash system include the replacement of the gravimetric feeders and control panels, coating, as well as mechanical modification to the soda ash silos (see Figure 3) to address bridging of the dry chemical and clogging in the silos, which creates a significant maintenance burden and affects equipment availability. The gravimetric feeders are approaching the end of their useful life after being in service for over 15 years. The transfer of a dry chemical with dust, grit and a high pH is a harsh environment, which results in significant maintenance requirements. These control panel components are also obsolete, so replacement parts are not available.



Figure 3: Soda Ash Silo

### Procurement Process

Contract 7598 was advertised in the Boston Herald, the Central Register, Banner Publications, El Mundo and on COMMBUYS, and bid utilizing MWRA's e-procurement system in accordance with Chapter 149 of the Massachusetts General Laws. Pre-bid conferences were held on August 31, 2021 and November 1, 2021. Site visits took place on September 1, 2021 and November 2, 2021. Four general bids were received and opened on December 15, 2021. The results are presented below.

<u>Bidder</u>	<u>Bid Amount</u>
<b>Walsh Construction Company II, LLC</b>	<b>\$2,479,000</b>
Harding & Smith LLC	\$2,660,360*
<i>Engineer's Estimate</i>	<i>\$3,411,000</i>
WES Construction Corporation	\$3,746,000
William M. Collins Company, Inc.	\$3,769,000

\*The general bid of Harding & Smith LLC has been adjusted to correct clerical errors.

The lowest bid from Walsh is 27.3% lower than the Engineer's Estimate and 6.8% lower than the next lowest bid from Harding & Smith. In comparison, WES' bid is 9.8% higher than the Engineer's Estimate and William Collins' bid is 10.5% higher than the Engineer's Estimate.

MWRA staff reviewed the scope of work with Walsh and are satisfied that the bid includes all elements of the work for the bid price. The difference between Walsh's bid and the Engineer's Estimate is likely due to Walsh's proposed construction schedule. For example, Walsh's schedule is sequenced around the lead times of critical equipment. Therefore, the schedule for onsite work is compressed, resulting in lower costs. Also, Walsh accounted for supply chain issues in its schedule and does not anticipate any resulting project delays. Consequently, staff believe Walsh's bid is sufficient for project construction.

References for Walsh were checked and found to be favorable. Recently, Walsh successfully completed emergency repairs to the gravity thickeners at the Deer Island Treatment Plant. Additionally, Walsh received an excellent rating for its \$5,573,000 design-build services contract for the Olympic Well Field facility in Santa Monica, California. The reference stated that it would rehire Walsh. Also, Walsh received an excellent rating for the construction of the \$21,027,756 Palos Community Hospital in Moken, Illinois. Similarly, the reference stated it would rehire Walsh.

Staff conducted a review of the OSHA database and determined Walsh had a serious OSHA violation in 2018 involving a joint venture with Archer Western (described as a Walsh sister company) that resulted in two fatalities in a traffic-related accident. Walsh indicated that following the incident it increased safety training for its workers, including OSHA 30 training. Walsh is currently constructing Contract 7548, Nut Island Odor Control and HVAC Improvements. Staff report that Walsh is very safety conscious and proactive in handling safety issues on that project.

Staff determined Walsh 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 incorporates all necessary labor and materials, including 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 FY2022 CIP includes \$3,000,000 for Contract 7598. The contract award is \$2,479,000.

**MBE/WBE PARTICIPATION:**

The minimum MBE and WBE participation requirements for this contract are 7.24% and 3.6% respectively. Walsh's bid includes 6.30% and 2.17% participation for MBE and WBE respectively. AACU reviewed the bids and granted a partial waiver for both the MBE and WBE participation requirements.

**STAFF SUMMARY**

**TO:** Board of Directors  
**FROM:** Frederick A. Laskey, Executive Director   
**DATE:** January 19, 2022  
**SUBJECT:** John J. Carroll Water Treatment Plant Chemical Feed System Improvements  
Resident Engineering Services  
CDM Smith Inc.  
Contract 7972

**COMMITTEE:** Water Policy & Oversight

     INFORMATION  
  X   VOTE

  
Michele S. Gillen  
Director of Administration

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

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

**RECOMMENDATION:**

To approve the recommendation of the Consultant Selection Committee to award Contract 7972, John J. Carroll Water Treatment Plant Chemical Feed System Improvements Resident Engineering Services, to CDM Smith Inc. and to authorize the Executive Director, on behalf of the Authority, to execute said contract in an amount not to exceed \$331,713, with a contract term of 15 months from the Notice to Proceed.

**DISCUSSION:**

Contract 7972 will provide resident engineering services for the John J. Carroll Water Treatment Plant Chemical Feed System Improvements construction project, which is also being presented for award at this Board meeting.

The selected firm will provide resident engineering services during the 15-month construction contract. The Resident Engineer’s responsibilities include daily, on-site observation and documentation of the progress and quality of the construction work. The Resident Engineer will serve as MWRA’s liaison with the construction contractor, conduct daily on-site inspections of the work to determine that the work is proceeding in accordance with the construction documents, and report to MWRA whenever work is not in conformance with the contract documents. MWRA staff will provide overall construction management for the contract.

**Procurement Process**

On September 29, 2021, MWRA issued a one-step Request for Qualifications Statements/Proposals (RFQ/P) that was publicly advertised in the Central Register, the Boston Herald, Banner Publications, El Mundo, and on the MWRA Supplier Portal. In addition, notice of

the RFQ/P was sent directly to 72 engineering firms. A total of 18 firms requested the RFQ/P documents.

The RFQ/P included the following evaluation criteria and points: Cost (30 points); Qualifications and Key Personnel (30 points); Relevant Experience/Past Performance (30 points); and Technical Approach, Capacity/Organization and Management Approach (10 points).

On October 20, 2021, MWRA received two proposals from CDM Smith Inc. and Kleinfelder Northeast, Inc. The following table represents the cost and level of effort proposed by each firm.

<b>Proposer</b>	<b>Proposed Cost</b>	<b>Proposed Hours</b>
CDM Smith Inc.	\$331,713	2,994
Kleinfelder Northeast, Inc.	\$389,664	2,982
<i>Engineer's Estimate</i>	<i>\$435,600</i>	<i>2,904</i>

The Selection Committee met on December 1, 2021 to evaluate and rank proposals. The results are presented below.

<b>Proposer</b>	<b>Total Final Score</b>	<b>Order of Preference Points</b>	<b>Ranking</b>
CDM Smith Inc.	383.5	5	1
Kleinfelder Northeast, Inc.	340.2	10	2

CDM Smith received the top ranking for this consultant selection process. Its cost estimate is \$103,886 (23.8% less than the Engineer's Estimate), due to a lower hourly rate carried by CDM Smith for the Resident Engineer than what was used in the Engineer's Estimate. The proposed Resident Engineer, who meets the experience requirement, has worked on similar chemical feed upgrades at a water treatment plant in New Jersey. The Project Manager has extensive experience in the design and construction of water treatment plants. CDM Smith demonstrated a clear understanding of the work required 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.

Kleinfelder received the second ranking for this consultant selection process. Its cost estimate is \$45,936, or 10.6% less than the Engineer's Estimate and \$57,950 more than CDM Smith's cost. The proposed Resident Engineer has 22 years of experience as a Resident Engineer, but the majority is with civil and building construction, rather than water treatment.

Based on the final rankings and for the reasons set forth above, the Selection Committee recommends award of this contract to CDM Smith Inc. in an amount not to exceed \$331,713.

**BUDGET/FISCAL IMPACT:**

The FY22 CIP does not include any funds for Contract 7972. These costs will be absorbed in the five-year CIP. Due to the increased complexity and scope of work required, this Resident Engineering services contract was included in the FY23 Proposed CIP for \$435,600. The contract award is \$331,713.

**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 Director  
**FROM:** Frederick A Laskey, Executive Director  
**DATE:** January 19, 2022  
**SUBJECT:** PCR Amendment - January 2022



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**COMMITTEE:** Personnel and Compensation

         INFORMATION  
  X   VOTE

Andrea Murphy, Director of Human Resources  
Preparer/Title

  
Michele S. Gillen  
Director, Administration

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### RECOMMENDATION:

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

### DISCUSSION:

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

### January PCR Amendment

There is one PCR Amendment this month.

#### Organizational Change:

1. Creation of a new position in the Operations Division, Metro Maintenance Department for Facilities Specialist I, Unit 3 Grade 16, to meet the staffing needs of the department.

### BUDGET/FISCAL IMPACT:

The annualized budget impact of this PCR amendment will be a maximum cost of \$75,889. Staff will ensure that the cost increase associated with this PCR amendment will not result in spending over the approved FY22 Wages and Salaries budget.

### ATTACHMENTS:

New Job Description

MASSACHUSETTS WATER RESOURCES AUTHORITY  
 POSITION CONTROL REGISTER AMENDMENTS  
 FISCAL YEAR 2022

PCR AMENDMENTS REQUIRING BOARD APPROVAL ~January 19, 2022															
Number	Current PCR #	V/F	Type	Current Title	UN	GR	Amended Title	UN	GR	Current/Budget Salary	Estimated New Salary		Estimated Annual		Reason For Amendment
													\$ Impact		
B27	Operations Metro Maintenance TBD	N/A	N/A	N/A	N/A	N/A	Facilities Specialist I	U3	16	\$0	\$53,247	\$75,889	\$53,247	\$75,889	To better meet staffing needs.
<b>BOARD TOTAL=</b>					1						<b>TOTAL:</b>		\$53,247	- \$75,889	

**MWRA  
POSITION DESCRIPTION**



**POSITION:** Facilities Specialist I

**DIVISION:** Operations

**DEPARTMENT:** Facility Equipment Maintenance-West, Facility Maintenance, Metro, Pipe Maintenance -Wastewater, Pipe Maintenance-Water, Trade Labor Maintenance

**BASIC PURPOSE:**

Performs skilled shop, field carpentry and masonry work to fabricate/repair objects of wood or masonry, for equipment structures and utilities. Treats, maintains and repairs the interior and exterior coatings of metal, wood and masonry structures and equipment. Installs and maintains locks and lock sets.

**SUPERVISION RECEIVED:**

Works under the general supervision of the Trades Foreperson, Unit Supervisor or Maintenance Manager.

**SUPERVISION EXERCISED:**

May exercise close supervision of assigned Facilities Specialists, OMC and Skilled Laborers.

**ESSENTIAL DUTIES AND RESPONSIBILITIES:**

- May supervise assigned personnel in the maintenance of equipment and systems, the construction and repair of structures and in the overall care and upkeep of MWRA facilities.
- Plans, accurately lays out work, selects appropriate stock or materials and tools or machines for the job, as specified by work order.
- Fabricates structures, devices, and assembles using powered or manual woodworking, or masonry tools. Installs locks and lock sets.
- Performs preventive, predictive and corrective maintenance on cabinets, locks and lock sets, wood structures, concrete or masonry objects and other related equipment, structures, or utility fixtures.
- Sets up ladders, staging and rigging and utilizes hoists, jacks, dollies, lifts, etc. for proper access to job by trade staff. Installs safety rails.

- Works from blueprints, sketches, oral and written directions, fabrications or devices as required; performs detailed work involving the use of precision measuring instruments, rotating machinery, cutting tools and other moving or stationary equipment.
- Prepares surfaces for painting, papering, and in the application of the other finishes.
- Prepares surfaces for painting by washing, dusting, sanding, puttying, and other means.
- Mixes and matches paints and stains.
- Applies paint, stain, varnish, wallpaper and other finishes to surfaces by means of a brush, roller or spray equipment.
- Requisitions paint and equipment as needed.
- Removes and replaces broken windows and performs glazing as required.
- Operates motor vehicles, such as vans and pick up trucks. Picks up and delivers supplies and equipment to work sites.
- Obtains necessary parts through established procedures.
- Performs work in a safe and professional manner.
- Reports and documents results of inspections and work performed.
- Follows established safety, operating and emergency response procedures and policies established by MWRA.
- Performs light maintenance independently or as part of a team. Light maintenance shall include but not limited to:
  - Operation of forklift or other light equipment that does not require a special license.
  - Generates inspection lists and maintenance reporting through the Computerized Maintenance Management System.
  - Inspects and troubleshoots various systems and equipment.
  - Installs and/or retrofits new equipment related to plant systems.
  - Modifies and/or aligns existing equipment to specifications.

- Operates ventilation and other equipment necessary to support and accomplish assigned tasks.
- Greases and lubricates, replaces oil reserves, minor packing adjustments and opens hatches.
- Changes light bulbs and replaces HVAC filters.
- Conducts routine testing, lockout/tagout, operation (startup/shutdown) and adjustment of process equipment.
- Removes snow from immediate work area in order to perform tasks.
- Performs necessary cleanup and housekeeping for work area and other light maintenance tasks.
- Assists other trades in the performance of their work, as required, or as assigned.

**SECONDARY DUTIES:**

- Promotes and participates in the productivity improvement plan.
- Trains peers and subordinates when required.
- Performs related duties as required.

**MINIMUM QUALIFICATIONS:**

Education and Experience:

- (A) A high school diploma or GED; and
- (B) Understanding of principles and practices of painting, masonry, carpentry and locksmithing as acquired through 3 to 5 years of directly related experience, with at least 1 year in a supervisory capacity; and
- (C) Successful completion of MWRA sponsored supervisory training programs and receipt of the training certificate may be substituted for supervisory experience; and
- (D) Considerable knowledge of methods of preparing wood, metal, glass, plaster, cement, and other materials and surfaces for painting, as well as the tools, methods and standard practices used in the painting trade; or
- (E) Any equivalent combination of education or experience.

Necessary Knowledge, Skills and Abilities:

- (A) Basic reading, writing, mathematical and oral communication skills.
- (B) Working knowledge of the tools, methods, materials, techniques common to the trade, to include the principles of carpentry, masonry, painting and locksmithing; the operation, calibration and adjustment of equipment including, but not limited to, drill presses, wood joiners, planners, sanders, saws, grinders, finishing machines and dust collecting and lock tumblers and cylinders.
- (C) Ability to read, interpret, plan and work from blueprints, diagrams, rough sketches or from written or oral directions to fabricate, assemble or erect, repair or replicate component parts or assemblies.
- (D) Ability to estimate painting, masonry, carpentry, locksmithing requirements for a particular task and requisition supplies for same.
- (E) Working knowledge of the occupational hazards and safety precautions common to the trade, to include the satisfactory completion of MWRA safety training in safe techniques for the use of staging and material handling equipment.
- (F) Ability to follow written and oral instructions.
- (G) Trained in confined space entry, CPR and First Aid. Capable of entering, setting up, installing and disassembling confined space equipment. Ability to work in a confined space.

**SPECIAL REQUIREMENTS:**

- A valid Massachusetts Class D Motor Vehicles Operators License.
- Complete competency based training program related to **ESSENTIAL DUTIES AND RESPONSIBILITIES** as outlined above and successfully demonstrates required competencies.

**TOOLS AND EQUIPMENT USED:**

Motor vehicle, power and hand tools, mobile radio, telephone, beeper.

**PHYSICAL DEMANDS:**

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

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

walk, talk or hear, sit, climb, or balance.

The employee must frequently lift and/or move up to 25 pounds and occasionally lift and/or move more than 100 pounds. Specific vision abilities required by this job include close vision, distance and peripheral vision, depth perception, and the ability to adjust focus.

**WORK ENVIRONMENT:**

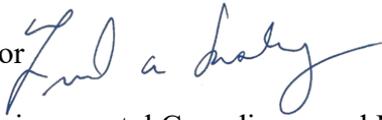
The work environment characteristics described here are representative of those an employee encounters while performing the essential functions of this job.

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

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

**May 2012**

**STAFF SUMMARY**

**TO:** Board of Directors  
**FROM:** Frederick A. Laskey, Executive Director   
**DATE:** January 19, 2022  
**SUBJECT:** Appointment of Program Manager, Environmental Compliance and Monitoring, ENQUAL

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**COMMITTEE:** Personnel & Compensation

     INFORMATION  
  X   VOTE

Andrea Murphy, Director, Human Resources  
Carolyn M. Fiore, Deputy Chief Operating Officer  
Betsy Reilley, Director, ENQUAL  
Preparer/Title

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

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**RECOMMENDATION:**

To approve the appointment of Ms. Maret Smolow to the position of Program Manager, Environmental Compliance and Monitoring, ENQUAL Wastewater (Unit 9, Grade 29) at an annual salary of \$105,752.38, commencing on a date to be determined by the Executive Director.

**DISCUSSION:**

The position of Program Manager, Environmental Compliance and Monitoring in the Environmental Quality’s Wastewater Quality section became vacant upon the promotion of the incumbent in September 2021. The Environmental Quality’s Wastewater Quality section is responsible for managing and reporting on federal and state environmental and regulatory issues (primarily wastewater) related to MWRA’s operations and projects. The Program Manager, Environmental Compliance and Monitoring is responsible for ensuring timely and accurate reporting on National Pollution Discharge Elimination System (NPDES) permit related issues to regulators, overseeing and managing staff activities, and monitoring regulatory changes and recent permits that may impact MWRA. The Program Manager oversees environmental monitoring programs in compliance with NPDES permits and Water Quality Standards variances. This position also has a critical role in managing notifications for Combined Sewer Overflows and other discharges in compliance with Water Quality Standards Variances and other regulations. This position reports to the Senior Program Manager, NPDES.

**Selection Process:**

The position of Program Manager, Environmental Compliance and Monitoring was posted internally. A total of three candidates applied; one was determined to be qualified and was referred for an interview. The Director of ENQUAL, the Senior Program Manager, NPDES, and the Associate Special Assistant to Affirmative Action conducted the interview. Upon completion of the interview, Ms. Maret Smolow was recommended for this position based on her experience, abilities, knowledge, skills and education.

Ms. Smolow has 15 years of environmental regulatory experience including eight years working in MWRA's ENQUAL Department in positions of increasing responsibility; first as a Project Engineer and then as Project Manager, as well as acting Program Manager. She has broad experience with NPDES permit requirements and other related environmental regulations, and in-depth knowledge of NPDES reporting and MWRA permit issues. Ms. Smolow manages technical projects associated with permit compliance, prepares related reports, and oversees on-call responsibilities for rapid reporting. She provides expertise during permit renewals, prepares permit applications, and effectively communicates any changes. She performs wastewater facility inspections, monitors new regulations and NPDES permits under development within the region and nationally, and supervises wet weather on-call monitoring and reporting activities. Ms. Smolow also reviews and updates Best Management Plans and stormwater pollution prevention plans. She is a recognized expert within MWRA on permit-related issues including sampling requirements and interpretation of regulations. She works well with staff in other MWRA departments and has experience coordinating operating staff activities. Her thorough understanding of MWRA operations allows her to effectively facilitate interdepartmental compliance efforts and to communicate well with regulatory agencies.

Prior to joining MWRA, Ms. Smolow had seven years of experience working on oil and hazardous materials compliance and remediation at environmental consulting firms and as a civilian employee at the Naval Facilities Engineering Command. In these positions, she served as a technical expert, oversaw site cleanup and remediation plans, supervised contractor work activities, designed and operated treatment technologies, performed lab analyses, and reviewed lab test data.

Ms. Smolow has a Bachelor of Science degree in Chemical Engineering with a minor in Environmental Science from Lafayette College. She has an Engineer in Training Certification, a Grade 6 Combined Wastewater Operators License, and a Grade 4 Collection System certification. She also has completed EPA's NPDES Permit Writers Training course.

**BUDGET/FISCAL IMPACTS:**

There are sufficient funds for this position in the Operations Division's FY2022 Current Expense Budget.

**ATTACHMENTS:**

Resume of Maret Smolow  
Position Description  
Organizational Chart

## Maret L. Smolow

### PROFESSIONAL EXPERIENCE

**Massachusetts Water Resources Authority**, Boston, Massachusetts  
*Environmental Quality – Wastewater Department*

**Acting Program Manager, Environmental Compliance and Monitoring**, *March 2019 – June 2019*

Managed compliance with NPDES permits throughout the Authority, including acting as a primary contact internally and externally (EPA and DEP) for NPDES permit issues. Coordinated permit-required monitoring and reporting projects while continuing with Project Manager, NPDES responsibilities.

- Supervised and trained technical staff.
- Conducted interviews and participated in the hiring process for a permanent staff position.
- Managed the submission of waiver applications for the MS4 General NPDES Permit at the Gillis Pump Station and the Southborough Facility.
- Managed the Deer Island NPDES Permit Part II response to two power failures at the Deer Island Treatment Plant.
- Managed the Multi-Sector General Permit Part II response to the accidental discharge of drinking water into the Deer Island Treatment Plant storm drain system.
- Updated and submitted the Carroll Water Treatment Plant NPDES Permit Fact Sheet.
- Coordinated with technical staff the submission of monthly and quarterly Discharge Monitoring Reports for the Deer Island Treatment Plant and CSOs, Clinton Wastewater Treatment Plant, Carroll Water Treatment Plant, Cosgrove Intake Facility, Oakdale Power Station, and Wachusett Aqueduct Pumping Station.

**Project Manager, NPDES**, *December 2018 – Present*

Manage technical projects for NPDES permit compliance for the Deer Island Treatment Plant, Clinton Treatment Plant, the collection system, and drinking water facilities, including data collection, evaluation, and reporting to fulfill regulatory compliance requirements pertaining to MWRA water and wastewater operations. Coordinate with other departments in the Authority, including Wastewater Operations, Water Operations & Maintenance, Operations Support, Toxics Reduction and Control, Deer Island Process Control, Laboratory Services, Water Quality Assurance, Engineering and Construction, as well as Law Division, regarding compliance requirement and NPDES permit applications. Act as primary contact and manager for the CSO and SSO notification and reporting program.

- Prepare and submit Notices of Intent to EPA and DEP for MWRA NPDES permits, including individual discharge permits, the Noncontact Cooling Water General Permit, the MS4 General Permit, the Multi-Sector General Permit, and the Remediation General Permit. Coordinate with other MWRA departments as necessary.
- Prepare and submit to EPA and DEP No Exposure Certifications for the Multi-Sector General Permit.
- Track and review other community NPDES permits and relevant federal and state regulations; prepare and submit comment letters to EPA and DEP on both permits and regulations.
- Prepare technical memos and intra- and interdepartmental presentations relevant to a future Deer Island NPDES permit; participate in small group discussions regarding potential future permit issues and negotiation strategies.

- Primary contact for MWRA's CSO and SSO public notification program; manage CSO and SSO database in Access with as-needed assistance from the department data management group.
- Maintain master list of SSOs.
- Manage Environmental Quality department wet weather preparation, including supervising staff assignment to NPDES On-Call and Wet Weather On-Call rotations and coordinating with other departments to ensure proper staffing to meet CSO and SSO public notification needs.
- Responsible for comparing monitoring results at CSO treatment facilities to NPDES permit limits and notifying MWRA senior management of permit exceedances.
- Conduct BMP inspections at wastewater facilities; update BMP manuals at wastewater and drinking water facilities; developed BMP training slides to incorporate into SPCC training, which is required for all MWRA field staff.
- Conduct interviews for and hire interns.
- Prepare or assist in preparation of as-needed notification letters such as blending notifications, SSO notifications, and Part II Prior Notice notifications.
- Generate monthly and quarterly discharge monitoring reports for Carroll Water Treatment Plant, Cosgrove Intake Facility, Oakdale Power Station, and Wachusett Aqueduct Pumping Station as well as Deer Island Treatment Plant, CSOs treatment facilities, and Clinton Wastewater Treatment Plant as needed; generated the Multi-Sector General Permit annual report.
- Query laboratory and operational data from MWRA databases (WWQ, OMS) using Discoverer and SQL Developer.
- Member of the Authority's NPDES Steering Committee.
- Member of the Deer Island Pollution Prevention Team and the Drinking Water Facility Pollution Prevention Team.

**Project Engineer**, *September 2013 – December 2018*

Assisted in the implementation of NPDES permits for wastewater and drinking water facilities, including monitoring of effluent quality, data verification and validation, preparation of regulatory reports, and generation of internal management reports.

- Supervised intern.
- Tracked and analyzed federal and state regulations, as well as other community NPDES permits, and assessed how they affected the MWRA.
- Managed and maintained the CSO and SSO web notifications and database using Access with as-needed assistance from the department data management group; generated and uploaded JavaScript files onto the MWRA website.
- Generated monthly and quarterly Discharge Monitoring Reports for the Deer Island Treatment Plant and the CSOs, Clinton Wastewater Treatment Plant, Carroll Water Treatment Plant, Cosgrove Intake Facility, Oakdale Power Station, and Wachusett Aqueduct Pumping Station.
- Queried laboratory and operational data from MWRA databases (WWQ, OMS) using Discoverer and SQL Developer.
- Compiled data for the annual TRAC Industrial Waste Report.
- Authored the annual, permit required *Technical Survey of Nitrogen Removal Alternatives for the Deer Island Treatment Plant*.
- Generated the annual NPDES compliance summary reports for the Deer Island Treatment Plant, CSO facilities, and the Clinton Wastewater Treatment Plant.

- Co-authored a study examining two Whole Effluent Toxicity test failures at the Clinton Wastewater Treatment Plant in 2014 looking for linkages between historical effluent, plant process data, and the test failures.
- Member of the Authority's NPDES Steering Committee.
- Member of the Deer Island Pollution Prevention Team and the Drinking Water Facility Pollution Prevention Team.

**Naval Facilities Engineering Command, Washington, D.C.**

**Environmental Engineer, September 2010 – August 2012**

Regional project manager for petroleum and storage tanks; project manager for FBI Training Academy; prepared technical reports for federal and state agencies to meet regulatory requirements including MS4 annual report, Title V semi-annual report, and Toxic Release Inventory Form R.

- Prepared statements of work and government cost estimates for compliance testing of aboveground and underground storage tanks and associated piping at Naval Support Activity Annapolis, Naval Support Facility Indian Head, and Naval Support Facility Dahlgren; also served as the technical expert during contract negotiations.
- Established an environmental compliance program consisting of petroleum, oil, and lubricants storage tanks, hazardous waste, air quality, and stormwater at the FBI Training Academy.
- Supervised contractors who conducted inspections, collected and removed hazardous waste, and prepared compliance reports.

**EA Engineering, Science and Technology, Syracuse, New York**

**Engineer II, May 2008 – April 2010**

Responsible for remedial investigations/feasibility studies and remedial designs; prepared technical reports including Site Management Plans, Periodic Review Reports and Operations and Maintenance Reports; performed site management activities including oversight and sampling (groundwater, system water, soil, and air).

- Conducted immunoassay tests on soil samples at a former greenhouse site in Patchogue, New York to determine extent of pesticide contamination; evaluated data and completed Remedial Investigation Report.
- Provided field oversight for the setup of soil/groundwater remediation projects at Fort Drum, New York; activities included technology research, startup/prove-out, coordination of treatability study sampling and testing and development of construction drawings and operation and maintenance procedures.
- Provided field oversight of excavation activities at a former manufactured gas plant in Ithaca, New York; responsibilities included site reconnaissance and citizen participation activities.

**Groundwater and Environmental Services, North Syracuse, New York**

**Engineer, October 2006 – May 2008**

Case manager for petroleum impacted sites and office chemical oxidation program; designed pilot tests and remediation systems; prepared site work plans and remedial action plans; inspected systems.

- Responsible for the design and operation of chemical oxidation injection systems for various Sunoco and ExxonMobil retail gasoline sites around New York State; calculated design parameters (radius of influence, flow rates, and peroxide concentrations) using pilot test data; prepared equipment specifications, provided field oversight and wrote preliminary design and final remedial reports.

- Conducted operation and maintenance activities at various remedial systems (pump and treat, soil vapor extraction and air sparge) around New York State; activities included field sampling, system operation and maintenance, operation and maintenance manual development, evaluation of monitoring data, modification of as-built drawings and completion of operation and maintenance reports.

**Lion Technology Inc.**, Lafayette, New Jersey  
**Regulatory Assistant**, *July 2005 – October 2006*

Consulted with clients to ensure regulatory compliance; tracked EPA, DOT, OSHA, IATA and IMO regulations for certification courses and independent projects.

- Created and updated content for hazardous waste and hazardous materials training courses.

## **OTHER EXPERIENCE**

**Lehigh University**, Bethlehem, Pennsylvania

**Research Experience for Undergraduates Program Team Leader**, *May 2004 – August 2004*

Trained graduate and undergraduate students on various pieces of equipment needed to analyze catalyst reactions; researched and purchased equipment needed to run the apparatuses necessary for heterogeneous catalysis in the production of dimethoxyethane and dimethoxymethane; developed standard operating procedures for and operated lab equipment.

**Lafayette College**, Easton, Pennsylvania

**General Chemistry Teaching Assistant**, *August 2003 – December 2003*

Conducted lectures; supervised students in laboratory; graded reports and quizzes.

## **EDUCATION**

**Lafayette College**, Easton, Pennsylvania

Bachelor of Science in Chemical Engineering, Minor in Environmental Science, *May 2005*

## **CERTIFICATIONS AND LICENSES**

- Certified Engineer-In-Training (#ET007650)
- Massachusetts Wastewater Operator License Grade 6-C (#17913, When and If status)
- NEWEA Grade IV Collection Systems Certification (#C-6727)
- Completed MWRA Supervisory Development Training (December 2019)
- Completed NPDES Permit Writers' Online Training (October 2013)

## **PROFESSIONAL AFFILIATIONS**

New England Water Environmental Association – Member

Water Environment Federation – Member

**MWRA  
POSITION DESCRIPTION**

**POSITION:** Program Manager, Environmental Compliance & Monitoring  
**PCR#:** 2250011  
**DIVISION:** Operations  
**DEPARTMENT:** Environmental Quality

**BASIC PURPOSE:**

Manages compliance with National Pollutant Discharge Elimination System (NPDES) permits, acts as internal and regulatory contact for NPDES permit issues. Manages activities relative to complex environmental monitoring data and permit-required reporting. Serves as senior technical consultant.

**SUPERVISION RECEIVED:**

Works under the general supervision of the Senior Program Manager.

**SUPERVISION EXERCISED:**

Supervises professional staff.

**ESSENTIAL DUTIES AND RESPONSIBILITIES:**

- Supervises and manages professional staff, including assignment of projects, evaluation of performance, and staff development to ensure that permit-required data are complete, accurate and available within the permit-required timeframe. Provides technical assistance to staff in project development and management.
- Manages compliance with monitoring and reporting requirements of MWRA's wastewater treatment system and permitted discharges from drinking water facilities. Prepares or summarizes technical data, correspondence and other permit-related documents as required.
- Coordinates NPDES program activities with other MWRA departments and staff. Provides guidance in formulating policy in response to environmental water quality issues and reviews preparation of compliance reports for internal and public distribution, including monthly, annual and web reporting. Participates in interdepartmental steering committee to evaluate and coordinate activities regarding wastewater operations/compliance. Maintains current knowledge of environmental science and technology in order to recommend appropriate research and monitoring.

- Provides expert technical assistance for NPDES permit negotiations and renewals, and acts as backup internal and regulatory contact. Coordinates permit-required environmental monitoring and reporting with state and federal regulatory agencies including Mass. Dept. of Environmental Protection, U.S. Environmental Protection Agency, and Mass. Division of Marine Fisheries.
- Assists staff in compiling water quality management plans, such as best management practice and storm water pollution prevention planning. Maintains familiarity with MWRA's wastewater operations to facilitate understanding and communication of regulatory changes on wastewater operations.
- Reviews and comments on state and federal environmental regulations, such as water quality standards. Interprets and disseminates existing and proposed legislation, rules and guidance with respect to state and federal environmental regulations and emerging issues, particularly those related to the Clean Water Act, and provides comments on proposed changes. Participates in regional organizations to track, develop, and influence water quality regulations and policies.
- Presents findings to scientific community, the Board of Directors, and the general public.
- Provides technical assistance and/or project oversight to the Director as required.

**SECONDARY DUTIES:**

- Performs related duties as required.

**MINIMUM QUALIFICATIONS:**

Education and Experience:

- (A) Knowledge of principles and practices of sanitary engineering as normally attained through a Master's degree in microbiology, public health, environmental science, sanitary engineering, or related field; and
- (B) Knowledge and understanding of issues related to wastewater treatment processes and NPDES permit requirements as acquired through seven (7) to nine (9) years of experience of which a minimum of three (3) years is in a supervisory or managerial capacity.

Necessary Knowledge, Skills and Abilities:

- (A) Experience in NPDES permit compliance, permit negotiations, and state and federal NPDES permit requirements.
- (B) Knowledge of Laboratory Information Systems (LIMS), and standard software (Microsoft Office Suite) and Oracle.

(C) Excellent interpersonal skills as well as good oral and written communication skills.

**SPECIAL REQUIREMENTS:**

Training in permit writing preferred.

Grade 4 Wastewater Treatment Plant Operator-in-training license preferred.

**TOOLS AND EQUIPMENT USED:**

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

**PHYSICAL DEMANDS:**

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

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

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

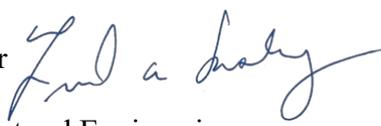
The noise level in the work environment is a moderately quiet office setting.

**October 2021**



## STAFF SUMMARY

**TO:** Board of Directors  
**FROM:** Frederick A. Laskey, Executive Director  
**DATE:** January 19, 2022  
**SUBJECT:** Appointment of Program Manager, Structural Engineering  
Engineering and Construction Department



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**COMMITTEE:** Personnel & Compensation

INFORMATION  
 VOTE

Andrea Murphy, Director, Human Resources  
John P. Colbert, P.E., Chief Engineer  
Preparer/Title



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

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### RECOMMENDATION:

To approve the appointment of Ms. Andrea Adams to the position of Program Manager, Structural Engineering (Unit 9, Grade 29) in the Engineering and Construction Department at an annual salary of \$128,958.93, commencing on a date to be determined by the Executive Director.

### DISCUSSION:

The position of Program Manager, Structural Engineering in the Engineering and Construction Department was created at the October 2021 Board Meeting to provide structural engineering support to operations and maintenance departments, and to manage engineering reviews and responses to permit applications MWRA uses to safeguard its water and wastewater infrastructure against damage from nearby construction activities, referred to as 8(m) permits. The Program Manager, Structural Engineering position works under the general supervision of the Senior Program Manager, Technical Support and Quality Management, and exercises close supervision of internal staff. This position performs design, engineering and construction support for in-house projects involving structural repair/replace/modifications and supervises project teams in overseeing professional engineering and design projects related to the rehabilitation and capital improvement of waterworks and wastewater facilities and infrastructure from conceptual planning through design and construction.

### Selection Process

This position was posted internally, and one candidate applied for the position. Ms. Adams was determined to be a qualified candidate and was referred for an interview. The Assistant Director of Engineering in the Engineering and Construction Department, the Director of the Toxic Reduction and Control Department and the Assistant Manager, Employment conducted the interview. Upon completion of the interview, Ms. Andrea Adams was recommended for the position based on her combination of education, experience, knowledge, skills and abilities.

Ms. Adams has 23 years of experience in structural engineering. She has worked at MWRA for the past seven years as a Senior Staff Engineer, Structural. Over this period of time, she has taken on increasing levels of responsibility and has become a respected member of the Engineering and Construction Department. She has provided structural engineering support, in-house designs and design reviews of structural components, as well as reviews of permit applications for construction work near MWRA facilities or infrastructure (8(m) permits) to ensure these time sensitive permits are evaluated properly. She has also managed consultant work and has coordinated in-house efforts to move projects through design to construction. Prior to MWRA, Ms. Adams worked for 16 years in structural engineering positions, including 11 years working as a Structural Engineer for CDM Smith where she worked on projects, equipment and facilities similar in nature to MWRA's water and wastewater facilities.

Ms. Adams has been responsible for writing various documents and contract specifications, developing structural design drawings, and evaluating complex structural systems for repair and stability. While completing these assignments Ms. Adams has effectively managed MWRA junior staff and consultant employees, and has been able to successfully and simultaneously manage multiple engineering and administrative tasks and projects.

Ms. Adams has a Bachelor of Science degree in Civil Engineering from the University of New Hampshire and a Master of Science degree in Civil Engineering from Worcester Polytechnic Institute, with an emphasis in Structural Engineering. She also holds a Massachusetts Professional Engineers License in Civil Engineering.

**BUDGET/FISCAL IMPACT:**

There are sufficient funds for this position in the Operations Division's FY2022 Current Expense Budget.

**ATTACHMENTS:**

Resume of Andrea Adams  
Position Description  
Engineering and Construction Department Organization Chart

## QUALIFICATIONS SUMMARY

- Highly creative, goal-oriented professional with solid structural engineering design and management experience.
- Demonstrated strength in building structure design with experience in the analysis and design of a variety of framing and lateral load resisting systems.
- Highly organized with the ability to manage multiple projects and meet/exceed deadlines.
- Strong work ethic combined with a commitment to excellence in all projects undertaken.
- Team player that works effectively with senior management to accomplish objectives.
- Exemplary communication and presentation skills.

## PROFESSIONAL EXPERIENCE

### **Massachusetts Water Resources Authority - Boston, MA** **Senior Staff Engineer, Structural (E&C)** **October 2014 - Present**

- Project manager tasked to prepare scope of services documents for RFQ/P and manage consultants including schedules, invoices and deliverables.
- Supervise and manage staff on current projects.
- Technical support and lead structural engineer tasked to manage, perform design calculations, perform site inspections, develop specifications and contract drawings and provide construction support of in-house engineering projects.
- Technical review and approval of 8(m) permits and assist with management of the 8(m) permit database.

### **Prison Point CSO Facility Improvements, Contracts 7359 and 7462 (on-going):**

Project Manager for the design and construction of architectural, structural, mechanical, instrumentation and electrical improvements to the current facility. Prepared RFQ/P scope for design and ESDC services and organized/scheduled Selection Committee. Prepared Staff Summary for a \$2,838,370 Professional Services Contract (\$40 million construction contract) with a 5-year duration awarded at the July 2016 Board of Directors meeting. Prepared Board and Delegated Staff Summaries for Amendments. Provided budget CIP Capital Expenditure Forecast updates and CIP schedules and narratives. Additional management tasks include schedule, invoice and submittal oversight of Consultant and supervising in-house staff. Completed management of preliminary design, 60%, 90% and 100% submittals. Worked with Procurement and completed bid services including sub-bidder and general contractor site visits and evaluations, responded to questions and prepared addendums. Construction Contract 7462 was awarded in September 2021. NTP was October 2021 (2 year construction duration).

**Remote Headworks Effluent Shaft Study, Contract 7237:** Project Manager for the award of a \$1.3 million study to evaluate the condition of each of the effluent shafts receiving flow from the four remote headworks facilities (Chelsea Creek, Ward Street, Columbus Park and Nut Island) and the three shafts at Deer Island Treatment Plant. Prepared the Scope of Services for RFQ/P. Study to include inspections of the seven effluent shafts and the adjoining effluent structures (where applicable), concrete core sampling, laboratory testing, visual inspection, atmospheric sampling to assess corrosivity and a report summarizing findings, repair methods, cost and schedule. Contract was awarded at the June 2018 Board meeting.

### Education

BS - University of New Hampshire, Durham, NH  
1997

MS - Worcester Polytechnic Institute, Worcester, MA 2008

### Registration

Professional Engineer: Massachusetts (51559)

### Professional Memberships

American Society of Civil Engineers  
Boston Society of Civil Engineers

### MWRA Professional Activities

MWRA Supervisory Development Training Course - May 2015

Leadership & Management Skills for Women - October 2015

Project Management Exam Prep Course - January 2017

Confined Space Entry Training - January 2015, January 2017

### Other Leadership Activities

Central Mass Drag Racers, Club President - January 2016 to Present.

## Andrea K. Adams, P.E.

**Nut Island Headworks Facility:** Project Manager for replacement of damaged fireproofing on steel members as a result of a fire in Wet Scrubber #4 in January 2016. Performed an emergency inspection at the facility and assessed the fire and water damage to the structural steel beams and columns in the vicinity of Scrubber # 4. Wrote an inspection report and provided drawings and specifications indicating limits of repair, repair materials and repair procedures. Worked with Procurement to advertise the project, led prospective bidders on a pre-bid walkthrough and resolved questions. Project was awarded in January of 2017.

**Maintenance Building Mezzanines, Chelsea, MA:** Project Manager of an in-house project to install four mezzanines for equipment storage in the Maintenance Building. Analyzed the existing pile-supported foundation to determine adequacy for new mezzanines, provided preliminary layout and specifications, reviewed and approved vendor submittal, met with vendor on site to resolve construction issues, provided and adhered to schedule. The construction of two mezzanines was completed in April, 2016 and two mezzanines were installed in 2018.

**Shipyards Building 11 (adjacent to MWRA's Pelletizing Plant):** Structural engineer tasked to perform an emergency investigation to provide guidance on the safe removal of piping that is routed along the collapsing Shipyards Building 11. Assisted on the Work Plan to safely and efficiently disconnect the piping from the failing structure so shoring could be installed to stabilize the structure. Observations, conclusions and recommendations on removal of the piping were documented in a Technical Memorandum. August 2018.

**Metropolitan Tunnel Redundancy Program:** Assisted senior management as lead structural engineer in the early stages of the tunnel redundancy project development. Attended monthly coordination meetings with senior management. Prepared meeting minutes, collected data and distributed information. March 2017 - August 2017.

**Deer Island Harbor Electric Energy Company (HEEC) Cable:** Attended meetings with MWRA senior management, Massport, U.S. Army Corps of Engineers, and HEEC/Eversource to discuss engineering and technical issues related to the implementation of a dredging/cable armoring project. The cable, located in the Reserved Channel of Boston Harbor, is the primary source of electricity to Deer Island. Provided structural expertise and assisted in the development of an Agreement in Principle among the parties. February 2017 - June 2017.

**Wachusett Dam Bastion Building Repair, Clinton, MA:** Project Manager for an in-house project to temporarily repair the deteriorating main entrance of the Bastion Building. Performed site inspections to observe and measure the undocumented existing layout and worked with drafting to create drawings of the as-built conditions. Analyzed deteriorated members and designed temporary repairs to maintain the existing structure until permanent repairs can be performed. Also managed the schedule and provided a detailed work plan to in-house staff for construction. Construction completed in March of 2016.

**MWRA Facility Emergency Roof Snow Removal:** Structural engineer tasked to evaluate roofs and oversee snow removal efforts at ten wastewater facilities during the multiple snow events in February, 2015. Performed emergency site inspections at the ten structures to measure snow depth, calculate weight of snow, determine roof capacities and allowable snow depths and investigate interiors for leakage and damage. All data and conclusions were documented in inspection reports. Quick response led to minimal damage of structures and allowed for continuous operation at MWRA facilities.

**Section 91B Mystic Valley Parkway, Arlington, MA:** Project Manager for an in-house project to install an aesthetically pleasing stone and mortar wall to direct flow and prevent erosion in the event of overflow at manhole located along the Mystic Valley Parkway. Performed an emergency site inspection during a wet weather event where overflow occurred and responded quickly with options to control flow. Provided drawings, details, construction schedule and a detailed work plan (including quantities of materials for purchasing, environmental requirements, and installation procedures) to in-house staff for construction. Project construction completed in May, 2015.

**Section 91B Lakeview Terrace, Medford, MA:** Project Manager for an in-house project to replace eroded riprap with a gabion system to prevent further erosion at siphon structure. Performed an emergency field inspection during a wet weather event to observe overflow and current erosion conditions. Designed options to repair sloped areas adjacent to the siphon structure where erosion occurred, provided drawings and details, construction schedule and a detailed work plan

## **Andrea K. Adams, P.E.**

(including quantities of materials for purchasing, environmental requirements, and installation procedures) to in-house staff for construction. Performed site inspections during construction. Project construction completed in November, 2015.

### **CDM Smith- Cambridge, MA**

#### **Structural Engineer**

**October 2003 - September 2014**

- Lead structural engineer tasked to analyze, design and develop structural contract drawings and specifications for numerous water and wastewater treatment projects.
- Managed and mentored junior engineering staff.
- Prepared budgets and assisted with proposal development.
- Reviewed shop drawing submittals and provided construction support.
- Conducted condition assessments of existing facilities, sewers and structures and prepared reports including observations, conclusions and recommendations for repairs and/or renovations.

### **Johnson & Seaman Engineering - Auburn, MA**

#### **Structural Engineer**

**July 1998 - August 2002**

- Designed the foundations and superstructures of numerous public and private projects including schools, libraries, office facilities, fire stations and churches.
- Experienced with the design of concrete, steel, masonry and timber building materials.
- Analyzed existing concrete, timber and steel structures, examined the results, and wrote technical reports recommending repairs.
- Reviewed shop drawing submittals and performed frequent site inspections.
- Maintained client and architect relations.

### **Tectonic Engineering Consultants - Northborough, MA**

#### **Staff Engineer**

**August 1997 - June 1998**

- Structurally analyzed lattice towers to support telecommunication equipment using STAAD-111.
- Climbed existing lattice towers, monopoles, and water tanks to verify the adequacy of the structural connections of the telecommunication equipment to the structure.
- Developed AutoCAD drawings of lattice towers, monopoles and water tanks including civil/site, structural, mechanical and electrical plans and details.

**MWRA  
POSITION DESCRIPTION**

**POSITION:** Program Manager, Structural Engineering

**DIVISION:** Operations

**DEPARTMENT:** Engineering - Chelsea

**BASIC PURPOSE:**

Provides structural engineering support to operation and maintenance departments, and manages engineering responses to 8(m) permit applications. Supervises project teams in the department to oversee professional engineering and design projects related to the rehabilitation and capital improvement of waterworks and wastewater facilities and infrastructure from conceptual planning through design and construction. Additionally, manages engineering and design projects related to the rehabilitation and capital improvement of water and wastewater facilities and infrastructure.

**SUPERVISION RECEIVED:**

Works under the general supervision of a Senior Program Manager.

**SUPERVISION EXERCISED:**

Supervises Senior Staff Engineer, Structural. Supervises operations and maintenance staff on a project basis as needed.

**ESSENTIAL DUTIES AND RESPONSIBILITIES:**

- Manages and prepares responses to 8(m) permit applications prepared by property owners and/or consultants. Provides structural review, comments, and approval for 8(m) permits. Oversees and reviews data and conducts site inspections to monitor conditions of infrastructure during construction work.
- Performs design, engineering and construction support of in-house projects involving repair/replace/modification activities, layout changes for shops, laboratories, offices and warehouses, lighting systems, and power distribution, including substation & power generation equipment.
- Develops preliminary designs and detailed designs and prepares plans and specifications for proposed structural modifications/replacement and construction projects.
- Oversees installation, operation, maintenance and repair of complex structures, systems, and equipment.

- Oversees the preparation of plans and specifications for vendor contracts for proposed structural modifications.
- Oversees reviews of and modifications to all operations and maintenance documentation with respect to structural design changes.
- Assists the Operations staff with engineering resolution and recommendations to structural engineering problems, which arise during normal operations.
- Assists the maintenance staff with complex work orders and with the development of contract maintenance contracts.
- Provides on-site engineering inspection of construction projects generated by the in-house engineering staff and outside consultants.
- Develops and maintains files and is familiar with all codes, code amendments, code cases, and industry standards applicable to the structural field. Ensures compliance of specifications to rehabilitate or construct MWRA structures and facilities with these codes and standards.
- Performs periodic inspections to ensure facility-wide compliance with local and national structural codes and other rules of safe structural practices are enforced.
- Reviews structural and related portions of design plans by outside firms who have been hired to design improvements or additions to facilities and infrastructure.
- Develops scope of services, assists with procurement, and manages the services of engineering consultants as required.
- Supervises the updating of structural engineering drawings and records, and the subsequent coordination (in accordance with established procedures) to ensure facility and equipment records are current.
- Provides oral and written reports to management detailing results of problem investigations, proposed resolution, and economic justification for the proposed changes.
- Evaluates assigned employees performance according to MWRA procedures.

**SECONDARY DUTIES:**

- Performs related duties as required.

**MINIMUM QUALIFICATIONS:**

Education and Experience:

- (A) Knowledge of principles and practices of structural engineering as attained through a Bachelor's degree in civil engineering, structural engineering or related field; and

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- (B) Demonstrated knowledge of water and wastewater treatment plant, pump station, and pipeline design and construction as normally acquired through seven (7) to nine (9) years of related structural engineering experience including at least three (3) years supervisory or project management experience; and
- (C) Experience with a complex processing facility and water or wastewater treatment operations and utility systems are desirable; or
- (D) Any equivalent combination of education and experience.

Necessary Knowledge, Skills and Abilities:

- (A) Knowledge of structural engineering work related to water and wastewater infrastructure and facilities design.
- (B) Knowledge of Microsoft Office Suite, project management and GDS, CADD and AutoCAD desired.
- (C) Knowledge of Massachusetts bidding laws, including M.G.L Chapter 30, Chapter 149, and Chapter 25A construction bidding regulations.
- (D) Clear understanding of codes and standards such as ACI, AISC, PCI, BOCA, AASHTO, OSHA, Massachusetts State Building and Highway codes, and ASCE .
- (E) Excellent interpersonal, written and oral communication skills.

**SPECIAL REQUIREMENTS:**

A valid Massachusetts Class D Driver's License required.

Massachusetts license as a Registered Professional Engineer (P.E.) is preferred.

**TOOLS AND EQUIPMENT USED:**

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

**PHYSICAL DEMANDS:**

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

While performing the duties of this job, the employee is regularly required to use hands to finger,

handle, feel or operate objects, tools or controls and reach with hands and arms. The employee frequently is required to sit and talk or hear. The employee is occasionally required to stand, walk, climb or balance, stoop, kneel, crouch, or crawl, taste or smell.

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

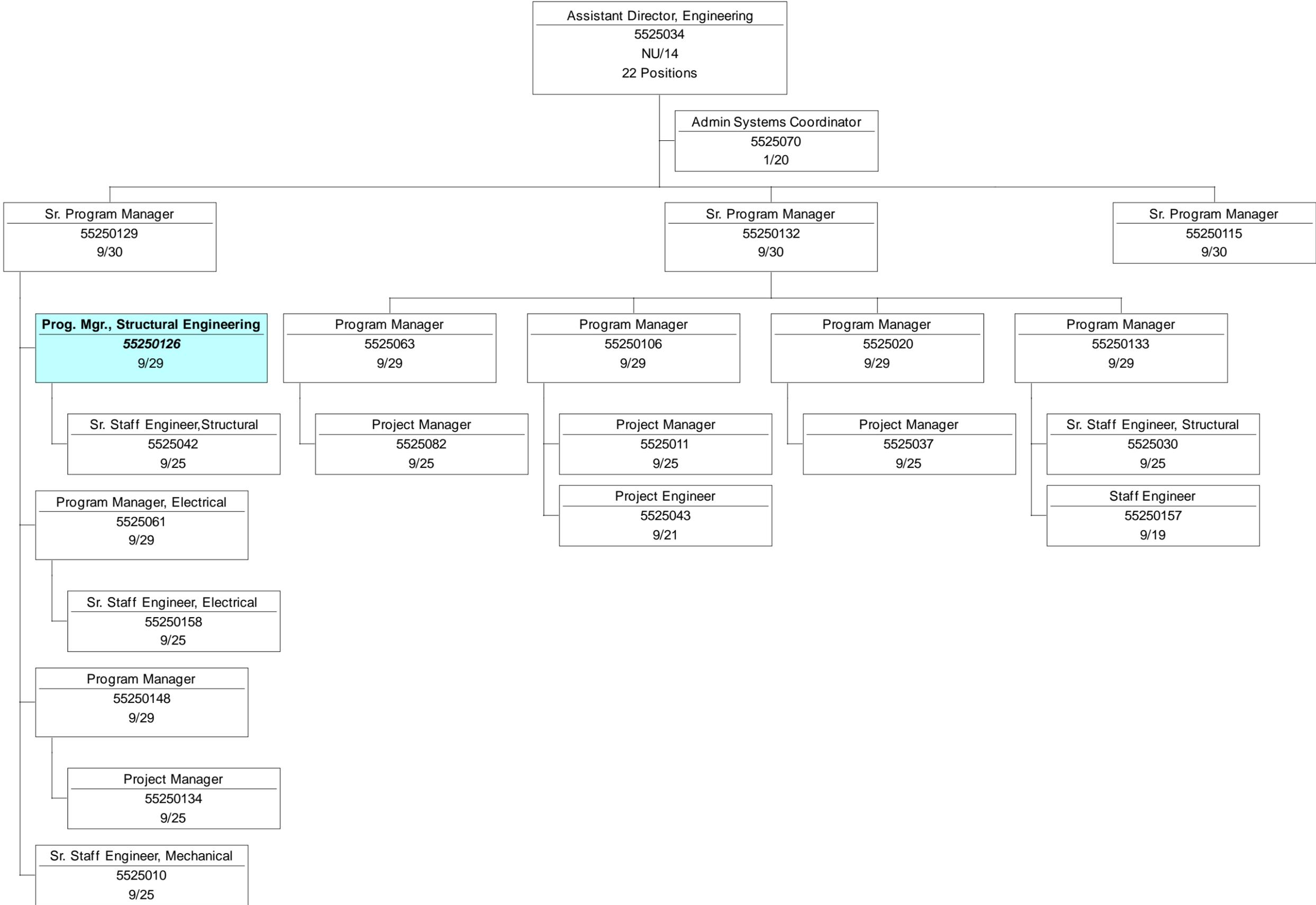
**WORK ENVIRONMENT:**

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

While performing the duties of this job, the employee occasionally works in outside weather conditions. The employee occasionally works near moving mechanical parts, and is occasionally exposed to wet and/or humid conditions and vibration. The employee occasionally works in high precarious places and is occasionally exposed to fumes or airborne particles, toxic or caustic chemicals and risk of electrical shock. The noise level in the work environment is usually loud in field settings and moderately quiet in an office setting.

**October 2021**

Engineering & Construction  
**Water/Wastewater Engineering**  
 January, 2022



## STAFF SUMMARY

**TO:** Board of Directors  
**FROM:** Frederick A. Laskey, Executive Director   
**DATE:** January 19, 2022  
**SUBJECT:** Workers' Compensation Third Party Administrator Services  
USI Insurance Services, LLC d/b/a FutureComp  
Contract A633

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**COMMITTEE:** Administration, Finance and Audit

       INFORMATION  
  X   VOTE

Ivana McGrail, Manager, HR Operations  
Andrea Murphy, Director, Human Resources  
Preparer/Title

  
Michele S. Gillen  
Director, Administration

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### RECOMMENDATION:

To approve the recommendation of the Consultant Selection Committee to award Contract A633, Workers' Compensation Third Party Administrator Services, to USI Insurance Services, LLC d/b/a FutureComp and authorize the Executive Director, on behalf of the Authority, to execute said contract in a not-to-exceed amount of \$135,975 and for a contact term from March 15, 2022 through March 31, 2025.

### DISCUSSION:

MWRA is a self-insurer for liability up to workers' compensation through the Department of Industrial Accidents in accordance with Chapter 152 of the Massachusetts General Law. Since 1987, MWRA has utilized the services of a third party administrator to process workers' compensation claims, set and adjust claim reserves, issue indemnity payments, review and pay medical expenses, notify and seek payment (for claims with expenditures over \$500,000) from excess carriers as needed, and file necessary reports all within strict adherence to Department of Industrial Accidents' rules and regulations. The administrator maintains an automated web based claim management system to manage this process, which includes medical claim history, financial claim history, and legal claim history. Additionally, the administrator advises MWRA on appropriate measures for complex cases. Presently, the administrator services are being provided to MWRA by Pennsylvania Manufactures Association (PMA) under Contract A618, which is set to expire on March 31, 2022.

### Procurement Process:

On November 15, 2021, MWRA issued a one-step Request for Qualifications Statements/Proposals (RFQ/P) that was publicly advertised in Goods and Services, the Boston Herald, Banner Publications and El Mundo. In addition, MWRA directly solicited four firms who provide third party administration services for workers' compensation in an attempt to increase competition. Nine firms requested the RFQ/P.

On December 10, 2021, MWRA received proposals from four firms: PMA , Gallagher Bassett Services, Inc. (Gallagher Bassett), Guardian Claims Services, Inc. (Guardian), and USI Insurance Services, LLC d/b/a FutureComp (FutureComp). Gallagher Bassett withdrew its proposal after MWRA clarified that no substantive exceptions to the Authority’s contract terms would be entertained.

Four criteria were used to evaluate the proposals: Cost (35 points), Technical Approach, Capacity, Organization and Management Approach (25 points), Relevant Experience/Past Performance (20 points), and Qualifications and Key Personnel (20 points).

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

<u>Firm</u>	<u>Proposed Price*</u>	<u>Total Points</u>	<u>Order of Preference Total Score</u>	<u>Final Ranking</u>
FutureComp	\$196,475	488.75	5	1
Guardian	\$207,500	370.60	11	2
PMA	\$203,750	312.25	14	3

\*To ensure all proposers were evaluated equally, the RFQ/P included a onetime allowance of \$60,500 for the transfer of existing claims for all proposers. This allowance was for both data migration of the large database (\$10,500) and to assume responsibility for open claims (\$50,000). The recommended contract price does not include this allowance because FutureComp is waiving all transfer costs.

FutureComp presented the lowest cost proposal and has highly relevant workers’ compensation and risk management services experience throughout New England and New York in both public and unionized settings. Also, this firm is the third party administrator for both the Boston Water and Sewer Commission and the Springfield Water and Sewer Commission. Additionally, the firm provided a detailed technical approach showing specifics for the life of a claim. Moreover, staff determined FutureComp’s proposed team to be very well qualified.

Guardian presented the highest cost proposal. The firm did indicate that it had experience with both private and public sector employers; however, it lacked experience with MWRA’s specific industry. Further, the description of its claims handling strategy was less detailed than that of FutureComp although MWRA staff believe such is consistent with industry standards. The Selection Committee staff found the proposed team to be well qualified.

PMA, the current provider of third party administrator services, presented a mid-range cost proposal. PMA did not provide descriptions of experience or references beyond its current work with MWRA as the incumbent. Of importance, the reference from MWRA indicated issues with staff turnover and at times unsatisfactory performance. Furthermore, PMA’s proposal did not document its claims handling process or strategy, nor did the firm provide any information about similar or other public employers that it works with as an administrator. Lastly, staff agreed the proposed team was qualified; however, it identified that a key staff member listed was no longer with the firm.

The Selection Committee determined that FutureComp's proposed cost, industry and municipal experience, and detailed technical and management approach led to the firm's first-ranked finish. Based on final rankings and the reasons set forth above, the Selection Committee recommends award of this contract to USI Insurance Services, LLC d/b/a FutureComp in an amount not to exceed \$135,975.

**BUDGET IMPACT:**

The FY2022 Current Expense Budget includes sufficient funds for Workers' Compensation claims administration. Funds for the remainder of the contract will be included in future fiscal years CEB requests.

**MBE/WBE UTILIZATION:**

No minimum MBE/WBE participation requirements were established for this contract, due to the specialized nature of the services.

**STAFF SUMMARY**

**TO:** Board of Directors  
**FROM:** Frederick A. Laskey, Executive Director *Frederick A. Laskey*  
 Patterson Riley, Special Assistant for Affirmative Action *Patterson Riley*  
**DATE:** January 19, 2022  
**SUBJECT:** Update on New Environmental Justice Initiatives

**COMMITTEE:** Administration, Finance, and Audit

X  INFORMATION  
  VOTE

Tomeka Cribb-Jones, Assoc. Special Asst. for Affirmative Action  
Rebecca Weidman, Director, Env. and Regulatory Affairs  
 Preparer/Title

*Michele S. Gillen*  
Michele S. Gillen  
 Director, Administration

**RECOMMENDATION:**

In 2021, the Executive Office of Energy and Environmental Affairs (EOEEA) launched two new environmental justice initiatives to be implemented in 2022. The first is a requirement for all EOEEA agencies to develop their own strategies to proactively promote environmental justice and tailored to each agency’s mission. The second is associated with new requirements under the Massachusetts Environmental Policy Act. This staff summary describes MWRA’s efforts to implement measures consistent with these new initiatives.

**DISCUSSION:**

Environmental Justice (EJ) is based on the principal that all people have the right to be protected from environmental hazards, and to live in and enjoy a clean and healthful environment regardless of race, color, national origin, income, or English language proficiency. On March 26, 2021, Governor Baker signed into law Chapter 8 of the Acts of 2021: An Act Creating a Next-Generation Roadmap for Massachusetts Climate Policy (the Climate Roadmap Act). Included in the Climate Roadmap Act is a new statutory definition of “Environmental Justice Population.”

On June 24, 2021, EOEEA issued an updated Environmental Justice Policy. Included in this policy is the requirement for all EOEEA agencies to develop their own EJ strategies to proactively promote EJ based on the agency’s mission. MWRA submitted a draft EJ Strategy to EEOEA in late 2021. This draft strategy outlined MWRA’s plan for promoting EJ considerations across MWRA’s programs, policies and activities. MWRA will begin reporting on our efforts to implement this strategy in calendar year 2022. Moving forward, MWRA will review all current and future projects through an EJ lens, looking at the associated costs and benefits for each project to member communities, specifically EJ populations. As part of this effort, MWRA will develop a methodology to quantify the cumulative environmental impact of each projects. Further, MWRA is committed to collaborating with other state and federal agencies to review and build upon current work designed to identify EJ populations and Indigenous peoples with disproportionately high and adverse environmental exposures.

The Climate Roadmap included a new definition of an EJ population. This new definition is intended to yield enhanced, meaningful public involvement and an expanded analysis of potential impacts to EJ populations during the MEPA review process. The MEPA regulations (301 C.M.R. 11.00) set 12 review thresholds (e.g., alteration of wetlands, waterways, and tidelands; new water withdrawals; additional generation of wastewater) for projects that require a state agency action such as a permit, financial assistance, or land transfer from state agencies. Projects undertaken in the Commonwealth that exceed one or more of these thresholds and require one or more state agency actions require a MEPA review. The review process involves preparation and submission of environmental documents for public comment. The goal of a MEPA review is to avoid, minimize, and mitigate damage to the environment associated with the project to the maximum extent possible. On December 24, 2021, the MEPA Office promulgated revisions to the MEPA regulations to reflect new requirements included in the Climate Roadmap Act.

The review thresholds established in the revised MEPA regulations remain unchanged. For projects that are required to go through the MEPA review process, project proponents will now need to take additional measures to improve public participation by EJ populations located within one mile of a project or within five miles of a project if it will impact air quality. Such measures may include reaching out to EJ population contacts identified by the MEPA office, translating key documents, providing translation services at public meetings, and requiring public meetings to be held at locations accessible by public transportation. Additionally, most MEPA filings for projects within close proximity to an EJ population will now require the development of an Environmental Impact Report (EIR). These EIRs must include an assessment of existing unfair or inequitable environmental burden, an analysis of project impacts to determine disproportionate adverse effects, and an analysis of project impacts to determine climate change effects to surrounding EJ populations.

A significant portion of the MWRA service area is located near or within designated EJ populations (see attached map). MWRA has an aggressive maintenance and replacement program to ensure that its customers have access to reliable water and sewer services. As a result, MWRA's projects generally provide substantial benefits to the EJ populations MWRA serves. The revised MEPA regulations will not expand the number or types of projects that require MEPA review. The revised regulations do, however, require an additional level of effort during the MEPA review process, specifically related to additional outreach requirements and an expanded project analysis in the form of an EIR.

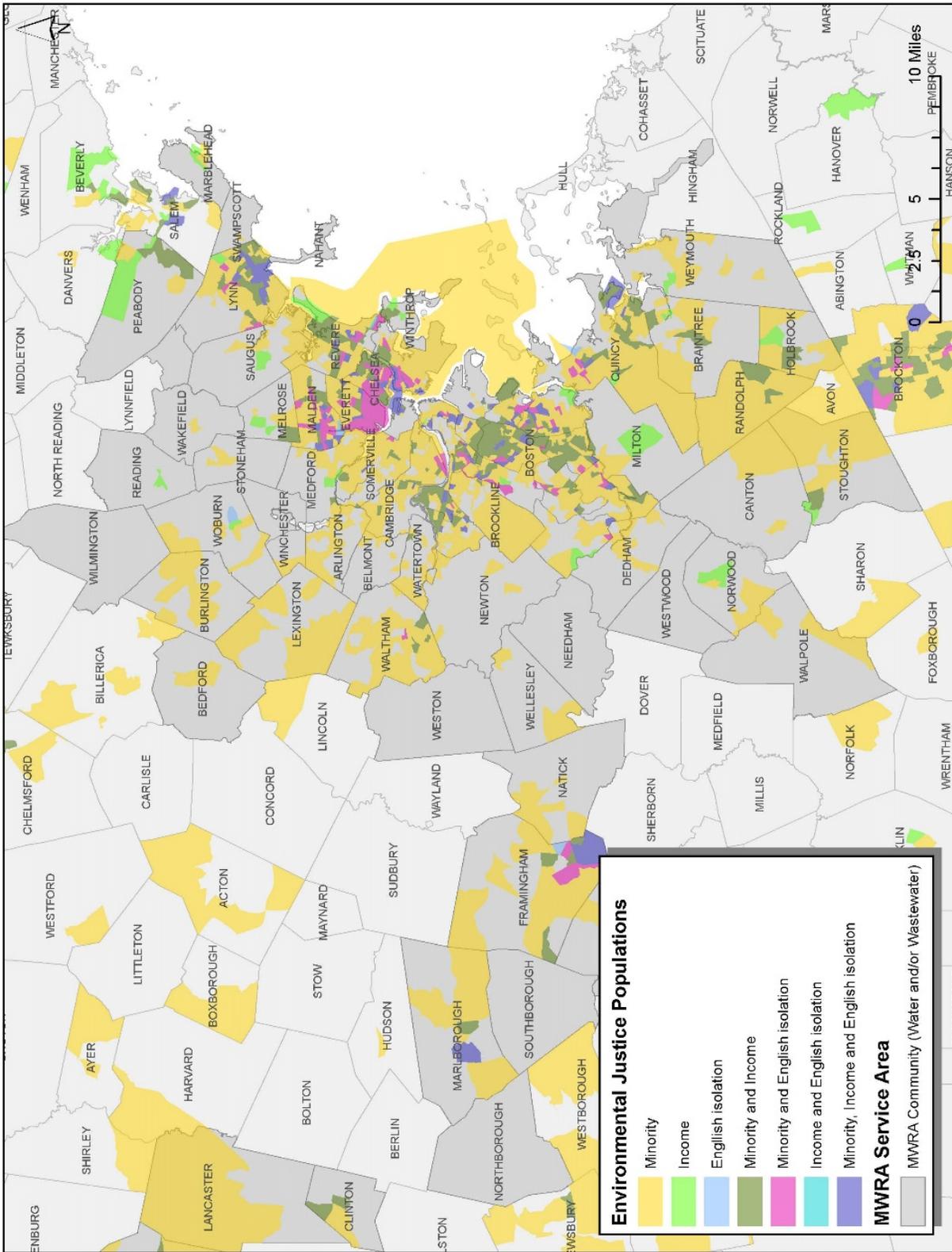
#### **BUDGET/FISCAL IMPACTS:**

There will be limited budget implications for implementing the new MEPA requirements. MWRA staff have identified all projects currently in design that will be required to meet the new MEPA requirements. Generally, MEPA review is only required for a small percentage of MWRA's projects. For future projects, MWRA will incorporate the new outreach and analysis components into scoping and design efforts.

#### **ATTACHMENT:**

Map of MWRA Service Area and Environmental Justice Populations

# Map of MWRA Service Area and Environmental Justice Populations



**STAFF SUMMARY**

**TO:** Board of Directors  
**FROM:** Frederick A. Laskey, Executive Director  
**DATE:** January 19, 2022  
**SUBJECT:** Change Order and Amendment Statistics



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**COMMITTEE:** Administration, Finance and Audit

X  INFORMATION  
  VOTE

  
Michele S. Gillen

Director, Administration

John P. Colbert, P.E., Chief Engineer  
Corinne M. Barrett, Director of Construction  
Preparer/Title

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

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**RECOMMENDATION:**

For information only. In response to a request at the October 20, 2021 Board meeting to put amendment percentages in context with other contracts, staff prepared an analysis of past construction contract changes and professional service design contract amendments.

**DISCUSSION:**

Professional engineering services design contracts and construction contracts are awarded to consultants and contractors as part of the overall Capital Improvement Program to support MWRA’s mission and operations.

MWRA has a long-established internal review process for handling both construction change orders and professional services contract amendments. Construction changes are governed by the policies set forth in ADM.03 – Change Order Process. This policy lays out the permitted basis for change orders, and the process for initiating, negotiating and documenting all changes in price and/or duration of a construction contract. The policy includes eight allowable reasons for a change order: (i) differing subsurface or latent site conditions; (ii) Authority ordered suspension or delay in the work; (iii) changed site conditions; (iv) unforeseen conditions or circumstances; (v) design changes; (vi) scope reduction; (vii) overruns or underruns in quantities; or (viii) schedule changes. Professional services contract amendments are governed by ADM.25 - Contract Amendments - Professional Services, which describes the process for developing, approving and executing a contract amendment including for time extensions, changes in services and changes in contract sums. These policies ensure that both change orders and amendments are thoroughly vetted by multiple departments and at multiple levels before either is executed or recommended to the Board for approval.

## Construction Contract Change Order Analysis

A review of all change orders issued in the past ten years\* was completed to determine the Chapter 30 (horizontal construction such as pipeline projects) and Chapter 149 (vertical construction such as new buildings or facility rehabilitations) change order percentages of the overall construction contract values.

### **Overall Change Order Percentages**

	<b>Total Contracts</b>	<b>Chapter 30</b>	<b>Chapter 149</b>
Number of Contracts	134	51	83
Contracts w/change orders	91	28	63
Original Contract Value	\$757,994,674	\$271,601,738	\$486,392,936
Change Order Amount	\$44,881,539	\$15,150,908	\$29,730,630
% Change Order	5.92%	5.58%	6.11%

\* This staff summary was not presented as planned last month and was updated to include data to January 2022.

Of the 134 construction contracts, 107 had a change order percentage of less than 10% and of those, 43 did not have any change orders at all. The contracts with the ten highest change order amounts account for \$28,957,784 or 65% of total change order cost. The change order percentage is similar for both Chapter 30 and Chapter 149 projects. See attached Figure 5.

A major challenge in MWRA construction contracts is the necessity to maintain continuity of service while building or rehabilitating water and sewer facilities. Renovations can be difficult and project requirements can be complex. Some facilities are old and code requirements may have changed over time. Change orders can arise from unforeseen conditions that cannot be identified during design. Some examples of unforeseen conditions include additional rock or hazardous soils found during a pipeline installation, utilities interfering with installations that were not shown on record drawings, and poor facility construction hidden behind facility walls.

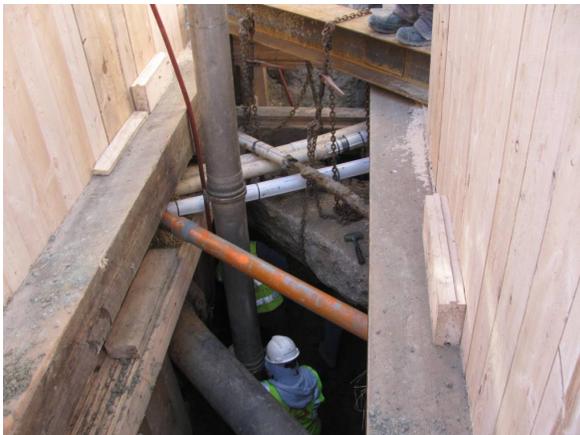


Figure 1 – East Boston Sewer Relief Utility Interferences



Figure 2 - Headworks Siding Removed

Change orders can also be associated with designer errors and omissions identified during construction that require correction or changes by the contractor. All error and omission change orders and costs are tracked by MWRA staff. The MWRA Consultant Performance Review Committee meets after project substantial completion to review consultant errors and omissions and determine whether cost recovery should be pursued. The Webster Avenue Pipe Bridge and the Watertown Pipe Section are two recent projects that resulted in cost recovery from both the consultant and contractor.

Professional Engineering Services Design Contract Amendment Analysis

A review of all design contract amendments for the past 11 years was completed. Eleven years was chosen to include all active design projects. The analysis included Chapter 30 horizontal construction, and Chapter 149 vertical facility professional services design contract amendments as percentages of the overall design contract values.

**Overall Amendment Percentages**

	<b>Total Contracts</b>	<b>Chapter 30</b>	<b>Chapter 149</b>
Number of Contracts	67	30	37
Contracts w/amendments	27	7	20
Original Contract Value	\$197,430,688	\$86,242,238	\$111,188,450
Amendments Amount	\$17,911,620	\$2,730,600	\$14,932,476
% Amendments	9.05%	3.17%	13.4%

Of the 67 professional engineering services design contracts, 40 did not have any amendments. The contracts with the ten highest design contract amendment amounts account for \$16,756,224 or 94% of the total amendment cost. See attached Figure 6.

Design contracts generally account for between 15%-25% of the value of the construction contract value depending on the complexity of the project. Facility rehabilitation projects (Chapter 149) for operational facilities are more complex to design and to replace equipment, while keeping the facilities operational with minimal redundancy. It can be difficult at the project concept stage to determine the extent of all of the constraints necessary to keep the facility operational while under construction. During construction, issues invariably arise that require addressing. This can translate into higher costs for additional design. As shown above, the amendment costs for facility design projects are significantly higher than the amendment costs for pipeline projects.

Professional engineering services design contract amendments are approved for various reasons. MWRA may request additional design services after the contract is awarded. These include incorporation of MWRA programmatic changes such as climate change improvements, the implementation of high performance SCADA graphics, and energy improvements. Examples include the addition of flood protection at Chelsea Creek Headworks and Alewife Pump Station and Zero Net Energy at the Wachusett Aqueduct Pump Station, and the change from oil to gas at the Clinton Wastewater Treatment Plant. In addition, scope may be added during preliminary design as a result of condition assessment activities, code reviews, testing for hazardous materials, and community meetings to determine impacts. Examples of such additions include a pipe routing change on the Northern Intermediate High Improvements project, the addition of more equipment replacements on the Prison Point Upgrades project, and additional plumbing modifications at the

Chelsea Creek Headworks project. Each change is reviewed and a decision is made to determine if additions to the contract using the existing consultant is the best or most efficient method to add this work. For the nine highest cost design contract amendments, approximately 67% of amendments were the result of MWRA requests.



Figure 3 – Wachusett Aqueduct Pump Station  
Zero Net Energy



Figure 4 - Headworks Flood Barrier

Design contract amendments can also arise from project delays or time extensions, which have many causes. Schedule delays may result from additional time required to obtain permits from regulatory agencies or communities. Construction projects can extend beyond the projected substantial completion date due to a variety of causes. During design, resolution of facility constraints in construction bid documents can extend the amount of time to construct the project beyond the assumptions made at the concept stage before the designer was hired. These factors can lead to additional costs for resident engineering and inspection, engineering services during construction and salary escalation.

Recently, the number of requests for information has increased from construction contractors. Consequently, additional engineering design time is required for consultants to review and respond to these requests.

As discussed above for change orders, unforeseen site conditions may require engineering design consultants to provide new or revised designs to the contractor to resolve unexpected field or facility conditions.

#### **BUDGET/FISCAL IMPACT:**

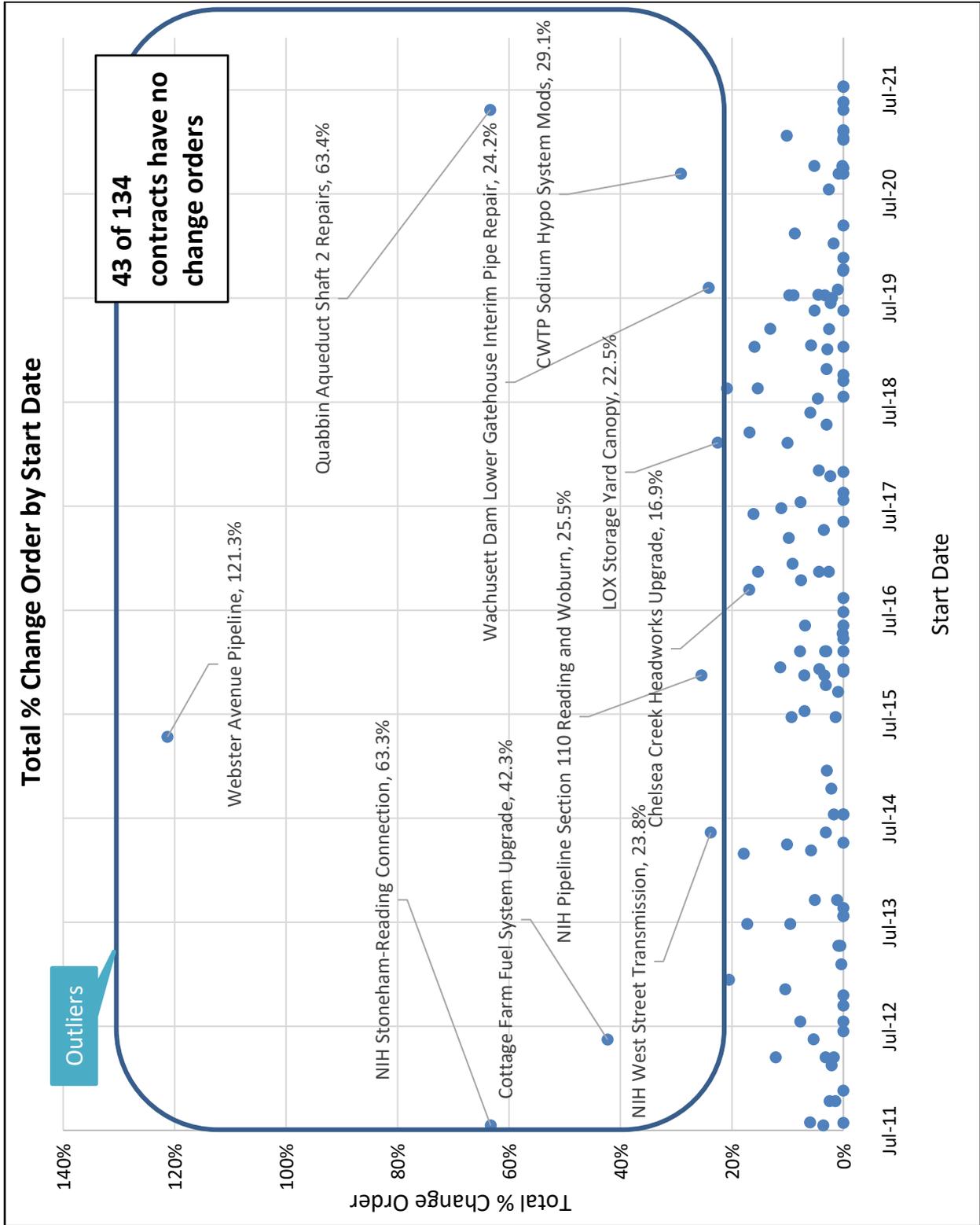
The cost of change orders and amendments as identified are included in the Capital Improvement Program budget.

#### **ATTACHMENTS:**

Figure 5 - Total % Change Orders for Construction Contracts

Figure 6 - Total % Amendments for Professional Design Contracts

**ATTACHMENTS**



**Figure 5**

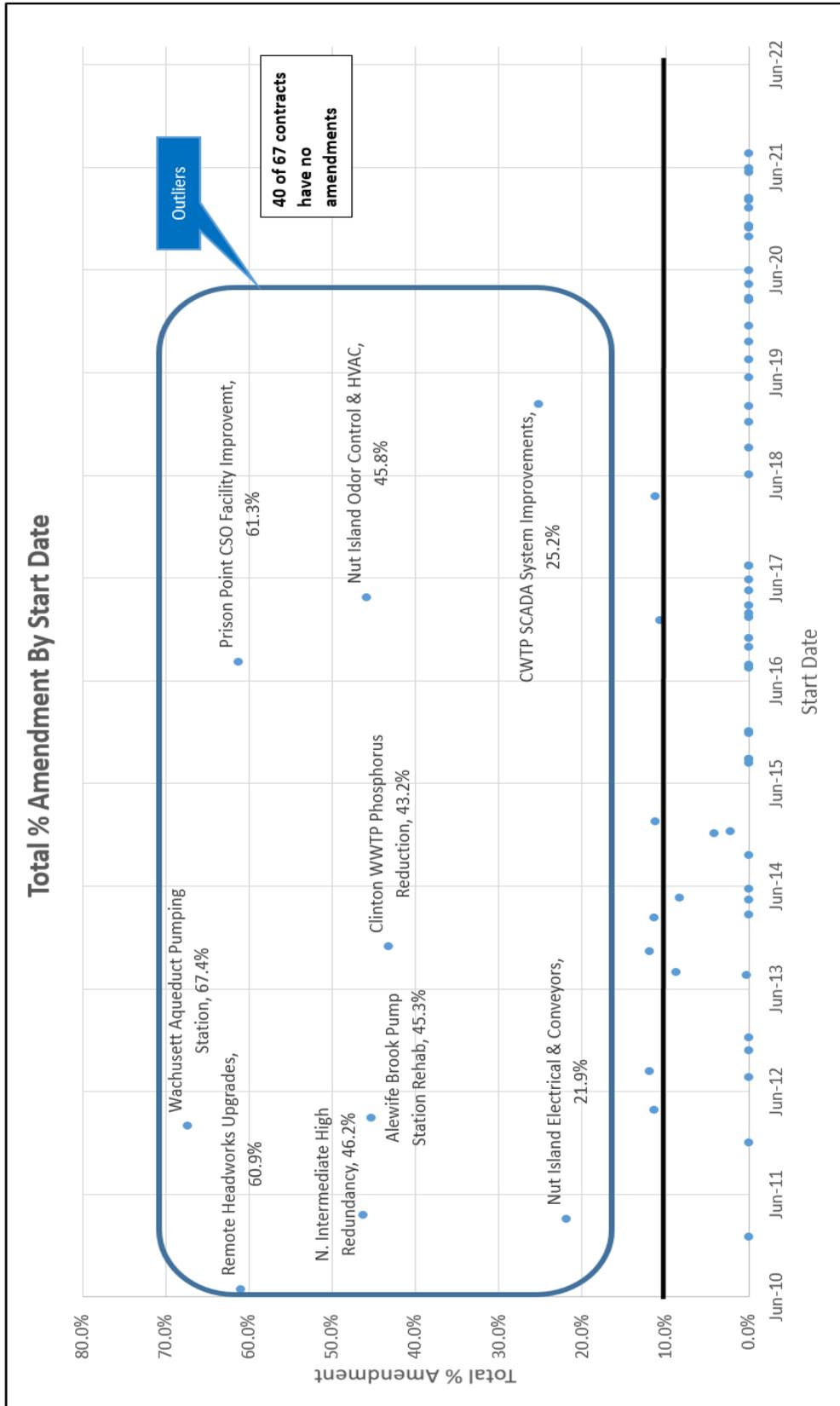


Figure 6

**STAFF SUMMARY**

**TO:** Board of Directors  
**FROM:** Frederick A. Laskey, Executive Director  
**DATE:** January 19, 2022  
**SUBJECT:** Delegated Authority Report – December 2021

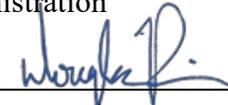


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**COMMITTEE:** Administration, Finance & Audit

INFORMATION  
 VOTE

Jacqueline Collins, Admin. Coordinator  
Barbara Aylward, Administrator A & F  
Preparer/Title

  
Michele S. Gillen  
Director, Administration  
Douglas J. Rice  
Director of Procurement

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**RECOMMENDATION:**

For information only. Attached is a listing of actions taken by the Executive Director under delegated authority for the period December 1 – 31, 2021.

This report is broken down into three sections:

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

**DISCUSSION:**

The Board of Directors’ Management Policies and Procedures, as amended by the Board’s vote on February 21, 2018, delegate authority to the Executive Director to approve the following:

Construction Contract Awards:

Up to \$1 million if the award is to the lowest bidder.

Change Orders:

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

Professional Service Contract Awards:

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

Non-Professional Service Contract Awards:

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

Purchase or Lease of Equipment, Materials or Supplies:

Up to \$1 million if the award is to the lowest bidder.

Amendments:

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

Amendments to the Position Control Register:

Amendments which result only in a change in cost center.

**BUDGET/FISCAL IMPACT:**

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

CONSTRUCTION/PROFESSIONAL SERVICES DELEGATED AUTHORITY ITEMS DECEMBER 1 - 31, 2021

NO.	DATE OF AWARD	TITLE AND EXPLANATION	CONTRACT	AMEND/CO	COMPANY	FINANCIAL IMPACT
C-1.	12/10/21	QUABBIN PARK CEMETERY BUILDINGS DEMOLITION AND HAZARDOUS MATERIALS ABATEMENT FINAL BALANCING CHANGE ORDER TO DECREASE THE FOLLOWING ITEMS TO REFLECT ACTUAL QUANTITIES USED: COVID-19 ALLOWANCE, FIRE WATCH SERVICES.	W329	1	ASSOCIATED BUILDING WRECKERS, INC.	(\$40,303.16)
C-2.	12/20/210	JOHN J. CARROLL WATER TREATMENT PLANT SODIUM HYPOCHLORITE SYSTEM MODIFICATIONS MODIFICATIONS TO CHANGE SODIUM HYPOCHLORITE PUMP POWER FROM SINGLE PHASE TO THREE PHASE.	7085H	4	HARDING & SMITH, LLC	\$55,000.00
C-3.	12/23/21	INSTRUMENTATION SERVICES - METROPOLITAN BOSTON INCREASE SCHEDULED PROCESS SYSTEM SERVICES HOURS FROM 1,000 TO 1,652.	OP-418	1	SAFETY, INC.	\$65,200.00

## PURCHASING DELEGATED AUTHORITY ITEMS December 1 - 31, 2021

NO.	DATE OF AWARD	TITLE AND EXPLANATION	CONTRACT	AMENDMENT	COMPANY	FINANCIAL IMPACT
P-1	12/06/21	<b>PURCHASE OF TWO DOUBLE SUCTION PUMPS</b> Award of a purchase order to the lowest responsive bidder for two Double Suction Pumps for the Deer Island Treatment Plant	WRA-5025		Hayes Pump, Inc.	\$41,546.50
P-2	12/06/21	<b>ANALYSIS OF EXTRACTABLE AND VOLATILE PETROLEUM HYDROCARBONS IN WASTEWATER AND BIOSOLIDS SAMPLES</b> Award of a two-year purchase order contract 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 at the Deer Island Treatment Plant	WRA-5033		Alpha Analytical, Inc.	\$59,200.00
P-3	12/06/21	<b>SUPPLY AND DELIVERY OF GRAVEL BORROW</b> Award of a one-year purchase order contract to the lowest responsive bidder for the Supply and Delivery of Gravel Borrow to the Clinton Wastewater Treatment Plant	WRA-5038		Rampco Construction Co., Inc.	\$189,750.00
P-4	12/10/21	<b>SUPPLY AND DELIVERY OF SUB BASE GRAVEL BORROW</b> Award of one-year purchase order contract to the lowest responsive bidder for the Supply and Delivery of Sub-Base Gravel Borrow to the MWRA Chelsea Facility	WRA-5045Q		Lorusso Corporation	\$36,000.00
P-5	12/10/21	<b>TELEPHONE SYSTEM HARDWARE, SOFTWARE, MAINTENANCE SUPPORT, MANAGED SERVICES AND INSTALLATION SERVICES</b> Award of a purchase order under State Contract ITT50 for Telephone System Hardware, Software, Five Years Maintenance Support, Three Years Managed Services, and Installation Services to Replace Existing PBX Systems that reside in Nine Locations throughout the MWRA	WRA-4957Q		ePlus Technology, Inc.	\$59,990.00
P-6	12/13/21	<b>PURCHASE OF TWO UNINTERRUPTABLE POWER SUPPLY UNITS</b> Award of a purchase order to the lowest responsive bidder for Two Uninterruptable Power Supply Units to the Deer Island Treatment Plant			Graybar Electric Company, Inc.	\$61,476.68
P-7	12/13/21	<b>PURCHASE OF TWENTY-FIVE SIXTEEN INCH RETURN SLUDGE LINE PLUG VALVES</b> Award of a purchase order to the lowest responsive bidder for twenty-five 16-inch Sludge Line Valves at the Deer Island Treatment Plant	WRA-5034		F.W. Webb Company	\$104,375.00
P-8	12/13/21	<b>PURCHASE OF ROCKWELL AUTOMATION LICENSES AND SUPPORT</b> Award of a Sole Source purchase order for Rockwell Automation Licenses and Support for the Deer Island Treatment Plant			Northeast Electrical Distributors, Inc.	\$141,017.00
P-9	12/17/21	<b>REMEDIATION OF A SODIUM HYDROXIDE SPILL AT COLUMBUS PARK HEADWORKS</b> Award of a critical need purchase order for the Remediation of a Sodium Hydroxide Spill at Columbus Park Headworks that occurred on August 9th 2021			Clean Harbors Environmental Services, Inc.	\$44,236.68
P-10	12/20/21	<b>SUPPLY OF CLASS 1 BITUMINOUS CONCRETE PAVEMENT</b> Award of a two-year purchase order to the lowest responsive bidder for the Supply of Class 1 Bituminous Concrete Pavement at various work sites	WRA-5035		M. Susi HMA, LLC	\$48,345.00
P-11	12/20/21	<b>MAINTENANCE AND SUPPORT OF TWENTY-EIGHT ARCHITECTURE ENGINEERING AND CONSTRUCTION LICENSES</b> Award of a one-year purchase order contract under State Contract ITS75 to the lowest bidder for Maintenance and Support of twenty-eight Architecture, Engineering and Construction Collection Network Licenses	WRA-5042Q		Insight Public Sector, Inc.	\$34,704.88
P-12	12/22/21	<b>SPECIAL HAZARD FIRE SUPPRESSION, DELUGE FIRE SYSTEMS, AND FUEL ISLAND INSPECTIONS AND SERVICES</b> Award of a three-year purchase order contract to the lowest responsive bidder for Special Hazard Fire Suppression, Deluge Fire Systems, and Fuel Island Inspections and Services	WRA-5040		ICS Fire Systems Inc.	\$71,000.00
P-13	12/22/21	<b>ANALYSIS OF PERFLUOROALKYL AND POLYFLUOROALKYL SUBSTANCES IN WASTEWATER SAMPLES</b> Award of a one-year purchase order contract to the lowest responsive bidder for the Analysis of Perfluoroalkyl and Polyfluoroalkyl Substances in Wastewater Samples at multiple MWRA facilities	WRA-5052		Pace Analytical Services, Inc.	\$87,450.00
P-14	12/22/21	<b>TRASH REMOVAL AND SINGLE STREAM RECYCLING SERVICES</b> Award of a two-year purchase order contract to the lowest responsive bidder for Trash Removal and Single Stream Recycling Services at the Deer Island Treatment Plant	WRA-5039		EZ Disposal Service, Inc.	\$191,645.00
P-15	12/27/21	<b>FILE SCANNING SERVICES</b> Award of a purchase order under State Contract FAC96 to the lowest responsive bidder for File Scanning Services at the Charlestown Navy Yard, Chelsea, and Deer Island Facilities as well as the Records Center	WRA-4967Q		Valley Green Shredding, LLC	\$80,542.50
P-16	12/27/21	<b>SUPPLY AND DELIVERY OF HYDROGEN PEROXIDE</b> Award of a one-year purchase order contract to the lowest responsive bidder for the Supply and Delivery of Hydrogen Peroxide to two pretreatment Facilities at Deer Island	WRA-5055		Brenntag Northeast, LLC	\$935,235.00

**STAFF SUMMARY**

**TO:** Board of Directors  
**FROM:** Frederick A. Laskey, Executive Director *Frederick A. Laskey*  
**DATE:** January 19, 2022  
**SUBJECT:** Financial Update on Construction of HEEC Cross-Harbor Cable

**COMMITTEE:** Wastewater Policy & Oversight

X INFORMATION  
     VOTE

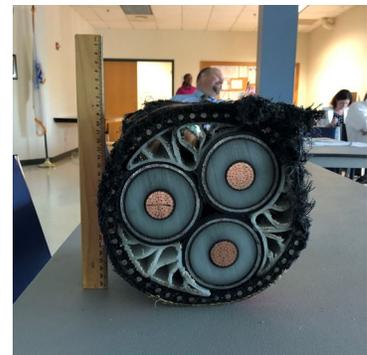
*Thomas J. Durkin*  
Thomas J. Durkin  
Director of Finance

**RECOMMENDATION:**

For information only. On December 2, 2021, the Harbor Electric Energy Company (HEEC) submitted the company’s proposed Final Tariff Addendum (Submission) with the Massachusetts Department of Public Utilities (DPU). The Submission requested the DPU’s approval for HEEC’s recovery of project costs of construction of the replacement electrical supply cable to the Deer Island Wastewater Treatment Plant. The Submission was made with MWRA’s agreement and resolves all issues related to the cable. On December 14, 2021, the DPU approved HEEC’s Submission in DPU Docket No. 21-147. Afterward, on December 22, 2021, the DPU also approved in DPU Docket No. 21-137 HEEC’s proposed Capacity and Support Charge for effect January 1, 2022, including the costs and project financing associated with the Submission.<sup>1</sup>

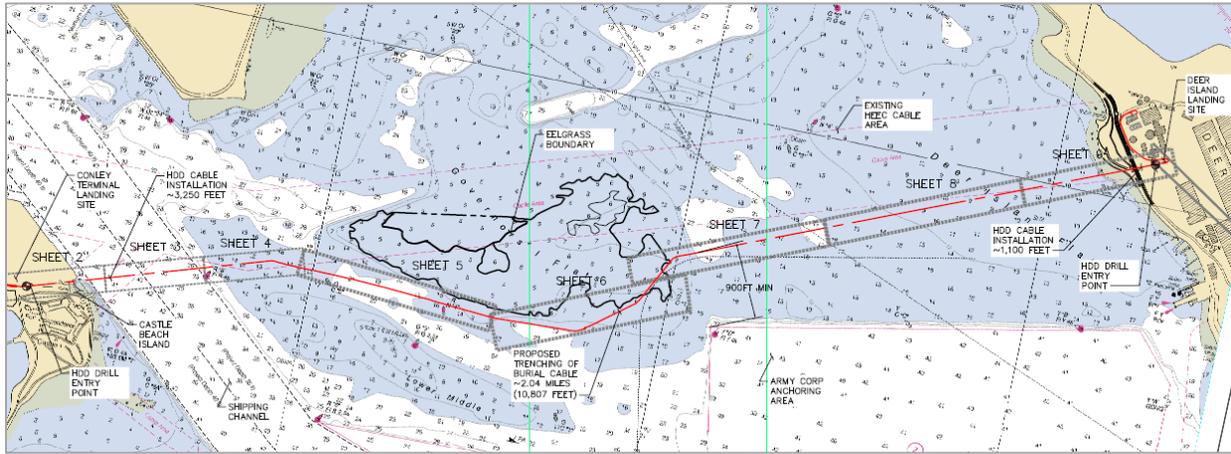
**DISCUSSION:**

Replacement of the HEEC cross-harbor cable, which was installed in 1990 as the main source of power for the Deer Island wastewater treatment plant, was completed on August 23, 2019, when the new cable was energized. The old cable interfered with planned dredging of Boston Harbor and the Reserved Channel. The depth of the old cable is the subject of a suit in federal court.



After entering into an agreement with MWRA, HEEC began design, permitting and all planning to replace the existing cross-harbor 115 KV cable. HEEC issued numerous contracts to supply design services, permitting, materials and construction services to replace the cable prior to the deadline. The cable was installed through a combination of land-based duct bank, directional drilling and cross-harbor cabling (path shown below) in compliance with the Order. The new cable is a 3-core (1 per phase), solid insulated cable.

<sup>1</sup> At the end of calendar year 2016, the DPU approved two tariffs, including M.D.P.U. No. 602 Terms and Conditions – Distribution Service and No. 603 Capacity and Support Charge (CSC), which govern the conditions upon which HEEC must provide transmission and maintenance services to MWRA in connection with MWRA’s continued use of the cross harbor cable. Once it was determined that a new cable would be installed by HEEC, the existing tariff M.D.P.U No. 603 required supplementation, which would capture the methods by which MWRA would be obligated to pay HEEC for all reasonable and prudent costs of installing the replacement cable, as detailed herein.



## Financing

MWRA staff were able to negotiate several key financing points that resulted in an advantageous agreement for the MWRA ratepayers. The cost of the cable was preliminarily estimated at \$110 - \$114 million. With further design developments, the estimate became \$115.6 million. The total actual cost most recently determined and agreed to by MWRA as of August 31, 2021 is \$116,458,200, which represents 98% completion of the cable replacement project. HEEC expects some additional costs including for restoration of an extraction trench and eelgrass mitigation/restoration, re-paving work at the MassPort Conley terminal area and removal of a ductbank. HEEC estimates these additional costs to the Authority, when accounting for the decommissioning cap (detailed below) to be \$2.9 million for a total estimated project cost of \$119.3 million.

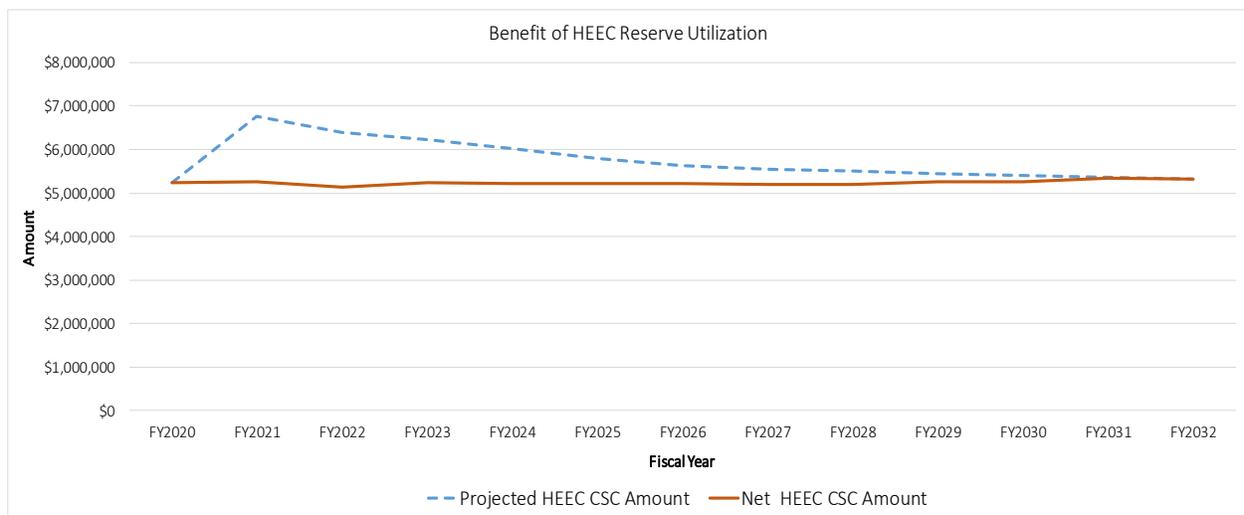
Recognizing that the return on equity that HEEC would receive on the project would be substantial, MWRA negotiated a 55% debt – 45% equity capital structure because of the lower cost of debt. The cost of debt originally estimated to be 4.5% is currently 3.54%. The rate of return on HEEC’s equity share for all 30 years is 9.60% for a current blended rate of 6.27% currently adjusted for a 27.32% tax rate to 7.89%. This rate of return is applied each year by HEEC. This capital structure is estimated to save MWRA \$4.1 million over the 30 years.

To reduce the amount HEEC itself would invest in the project and thereby reduce the profit MWRA would pay HEEC over the 30-year cost recovery period, MWRA negotiated three key points to reduce the total investment subject to the rate of return. First, MWRA negotiated a credit of \$17.5 million representing the expected remaining useful life of the existing cable. This credit with HEEC’s rate of return is estimated to save \$29 million. Second, a cap of \$9 million was placed on the old cable decommissioning costs. This eliminated the financial risks to MWRA associated with decommissioning the old cable. The unexpended amount under the \$9 million cap as of August 31, 2021 is \$388 thousand. The decommissioning cost is expected to exceed the \$9 million cap by \$1 million. MWRA is not responsible for this excess. Third, MWRA negotiated to pay 50% of the total project cost as a “down payment.” MWRA also negotiated to pay this Contribution in Aid of Construction (CIAC) as construction progressed. Making progress payments rather than waiting until substantial completion would save MWRA the cost of capital during construction. Without this financing point, technically referred to as the Allowance for Funds being Used During Construction, MWRA would pay this allowable expense and be subject to HEEC’s financing cost for the 30 years estimated to be \$2.2 million. Additionally, at the recommendation of the Advisory Board, MWRA negotiated to pay not only 50% but rather 100% of the \$9 million costs related to

the MassPort cable trench easement, and the winter flounder impact mitigation costs saving an estimated \$3.9 million. With Board approval, staff negotiated an addition \$1 million in CIAC in consideration of HEEC’s desire to make the Submission earlier than the strict language of the original agreement allowed as well as paying 100% for any costs incurred after December 31, 2020. MWRA has paid \$55.8 million in CIAC funded through current revenue for capital in MWRA’s construction fund. By making the CIAC payments and reducing the investment made by HEEC, MWRA is estimated to save over \$42 million.

**BUDGET/FISCAL IMPACT:**

The fiscal year 2018 Current Expense Budget included \$6.5 million that was set aside in the Rate Stabilization Fund to be used incrementally to ease the anticipated spike of the HEEC Cable Capacity and Support Charges (CSC) budget. \$1.5 million was used in fiscal year 2021 and \$1.25 million was budgeted to be used this fiscal year. The graph below illustrates the reduction and smoothing that the application of the reserve makes to the net budget impact.



The FY22 Current Expense Budget includes sufficient funds based on current estimates. Additionally, staff have estimated the future annual CSC payments to be paid to HEEC. These estimates will be adjusted to reflect the timing and amounts of the estimated \$2.9 million remaining costs to reach final completion, as well as for the annual actual costs for operations and maintenance costs as approved by the DPU on December 14 and December 22, 2021.

**STAFF SUMMARY**

**TO:** Board of Directors  
**FROM:** Frederick A. Laskey, Executive Director   
**DATE:** January 19, 2022  
**SUBJECT:** FY22 Financial Update and Summary through December 2021

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**COMMITTEE:** Administration, Finance & Audit

**INFORMATION**  
 **VOTE**

Michael J. Cole, Budget Director  
James J. Coyne, Budget Manager  
Preparer/Title

Thomas J. Durkin   
Director, Finance

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**RECOMMENDATION:**

For information only. This staff summary provides the financial results and variance highlights for Fiscal Year 2022 through December 2021, 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 recommending Board approval to use 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 \$6.3 million was transferred to the Defeasance Account. This variance is primarily due to lower than budgeted variable interest expense.

The total Year-to-Date variance for the FY22 CEB is \$12.8 million, due to lower direct expenses of \$11.5 million, lower indirect expenses of \$0.1 million, and higher revenue of \$1.2 million.

**FY22 Current Expense Budget**

The CEB expense variances through December 2021 by major budget category were:

- Lower Direct Expenses of \$11.5 million or 9.2% under budget. Spending was lower for Wages and Salaries, Maintenance, Fringe Benefits, Professional Services, Worker’s Compensation, Chemicals, Other Materials, Other Services, and Training and Meetings. Spending was higher than budget for Utilities and Overtime.
- Lower Indirect Expenses of \$0.1 million or 0.2% under budget primarily due to lower Watershed Reimbursements. Spending was higher for insurance payments/claims and HEEC costs.
- Debt Service expenses were right on budget after the transfer to the defeasance account, driven by lower than budgeted variable interest expense and the impact of the refunding and new money transaction.

- Revenue was \$1.2 million or 0.3% over budget driven by Other Revenue of \$0.8 million, and Other User Charges of \$0.5 million.

**FY22 Budget and FY22 Actual Variance by Expenditure Category  
(in millions)**

	FY22 Budget YTD	FY22 Actual YTD	\$ Variance	% Variance
Direct Expenses	\$124.9	\$113.4	-\$11.5	-9.2%
Indirect Expenses	\$25.7	\$25.7	-\$0.1	-0.2%
Capital Financing	\$225.8	\$225.8	\$0.0	0.0%
<b>Total</b>	<b>\$376.5</b>	<b>\$364.9</b>	<b>-\$11.5</b>	<b>-3.1%</b>

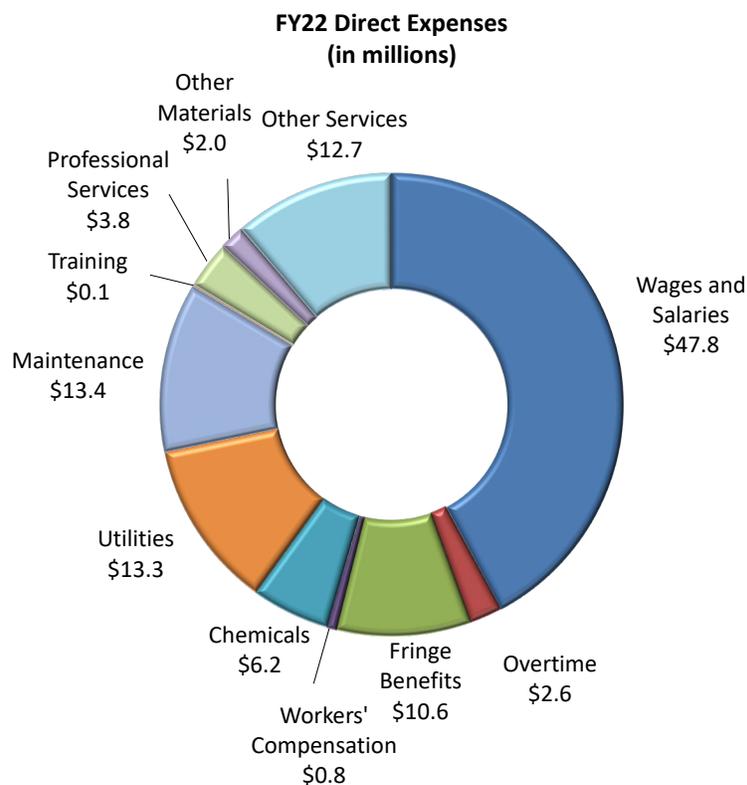
*Totals may not add due to rounding*

Total Revenues of \$408.9 million were \$1.2 million or 0.3% over budget due to higher Other Revenue and Other User Charges, offset slightly by lower Investment Income.

*Please refer to Attachment 1 for a more detailed comparison by line item of the budget variances for FY22.*

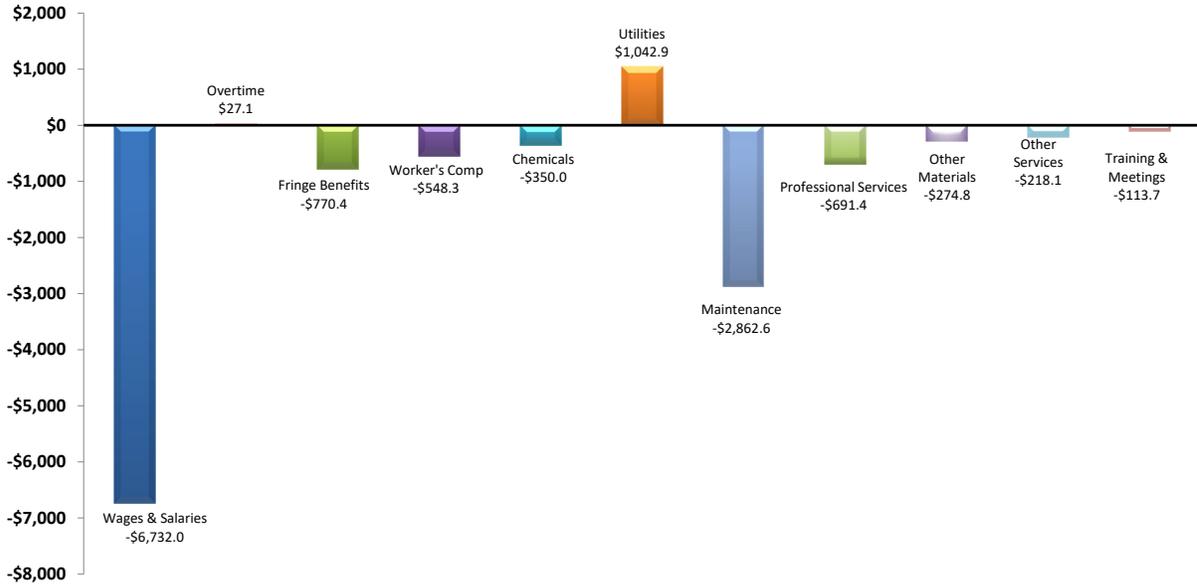
**Direct Expenses**

FY22 direct expenses through December totaled \$113.4 million, which was \$11.5 million or 9.2% less than budgeted.



Lower spending for Wages & Salaries, Maintenance, Fringe Benefits, Professional Services, Worker’s Compensation, Chemicals, Other Materials, Other Services, and Training and Meetings. Spending was higher than budget for Utilities and Overtime.

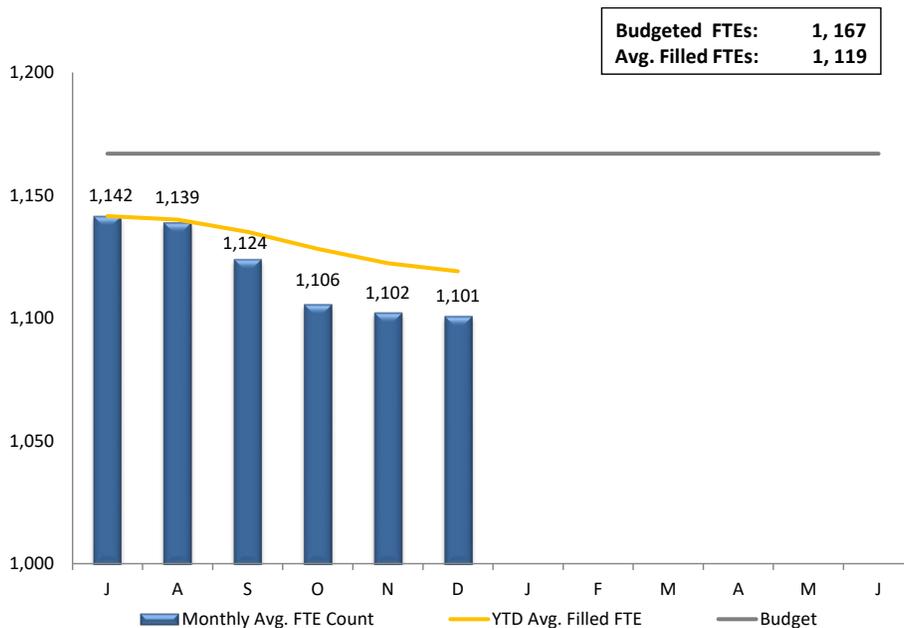
**FY22 Direct Expense Variance  
(in thousands)**



### Wages and Salaries

Wages and Salaries are under budget by \$6.7 million or 12.3%. Through December, there were 48 fewer average FTEs (1,119 versus 1,167 budget) or 4.1% and lower average salaries for new hires versus retirees. The timing of backfilling vacant positions also contributed to Regular Pay being under budget.

**FY22 MWRA Full Time Equivalent (FTE) Position Trend**



## **Maintenance**

Maintenance was less than budget by \$2.9 million or 17.6%, largely driven by the timing of projects. Maintenance Services are under budget by \$1.6 million driven by Plant and Machine Services of \$877,000 primarily due to timing of Deer Island scrubber work, less than expected boiler work and a delay on the final invoice for the Deer Island coating contract, Special Equipment Services of \$325,000 primarily due timing of service contracts and lower award than budgeted for the telephone system maintenance contract, Building and Grounds Services of \$282,000 due to timing of service contracts, and Computer Services of \$152,000 due to HP and Cisco Smartnet renewal contracts being less than budgeted and the Distributed Antenna System support agreement at Deer Island was delayed, partially offset by Electrical Services of \$92,000 due to timing of service contract work. Maintenance Materials are under budget by \$1.2 million, driven by Plant and Machine Materials of \$496,000 due to the timing of strainer and lathe purchases at Deer Island, Special Equipment Materials of \$295,000, and Pipe Materials of \$201,000, both also due to timing.

## **Fringe Benefits**

Fringe Benefit spending was lower than budget by \$0.8 million or 6.8%. This is primarily driven by lower Health Insurance costs of \$611,000 due to fewer than budgeted participants in health insurance plans, increased contribution by new hires vs. lower contribution rates of staff retiring, and the shift from family to individual plans, which are less expensive.

## **Professional Services**

Professional Services were lower than budget by \$0.7 million or 15.5%. The overall underspending is driven by lower spending in Computer Systems Consultant of \$581,000 in MIS primarily due to a reduction in scope for Managed Security Service Provider Year 5 monitoring extension and a delay in Internet/Intranet Pipeline project, and Engineering of \$207,000 primarily in Field Operations.

## **Worker's Compensation**

Worker's Compensation expenses were lower than budget by \$0.5 million or 41.9%. The lower expenses were primarily due to favorable variances in compensation payments of \$313,000, medical payments of \$190,000, and administrative expenses of \$46,000. Due to uncertainties of when spending will happen, the budget is spread evenly throughout the year.

## **Chemicals**

Chemicals were lower than budget by \$0.4 million or 5.3%. Lower than budget spending on Hydrogen Peroxide of \$306,000 was driven by Deer Island based on usage as excessive rainfall helped lower H<sub>2</sub>S levels, Polymer of \$96,000 driven by Deer Island due to less usage for centrifuge operations, Soda Ash of \$63,000 driven by Water Operations due to lower average flows at the Carroll Treatment Plant, Carbon Dioxide of \$57,000 driven by Water Operations due to lower dosing combined with lower flows, and Activated Carbon of \$54,000 driven by Deer Island due to timing of replacements, This is offset by higher than budget spending on Sodium Hypochlorite of \$98,000 driven by Deer Island and Field Operations due to increased disinfection usage, Liquid Oxygen of \$72,000 due to higher dosing at Carroll, and Sodium Bisulfite of \$72,000 driven by Deer Island and Field Operations due to higher use at wastewater facilities due to higher flows/rain. Deer Island flows are 31.6% higher than the budget and Carroll preliminary flows are 4.0% lower

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.

### **Other Materials**

Other Materials were lower than budget by \$0.3 million or 12.3%, driven by less than budgeted spending for Vehicle Purchases/Replacements of \$93,000, Computer Software of \$88,000 in Operations due to timing for Carroll SCADA, Equipment/Furniture of \$71,000, Other Materials of \$66,000, and Office Supplies of \$49,000 due to timing. This underspending was partially offset by higher spending for Computer Hardware of \$160,000 in MIS due to additional hardware purchased for teleworking.

### **Other Services**

Other Services were lower than budget by \$0.2 million or 1.7%. Lower than budgeted spending for Sludge Pelletization of \$86,000 due to lower quantities, Other Services of \$84,000 primarily due to timing of service contracts, and Health/Safety of \$36,000. These are partially offset by higher than budgeted spending for Grit and Screening Removal of \$50,000 due to higher quantities.

### **Training and Meetings**

Training and Meetings expenses were lower than budget by \$0.1 million or 44.5% driven by reduced spending during the pandemic, as well as the timing of spending.

### **Utilities**

Utilities were greater than budget by \$1.0 million or 8.5%. Overspending in Electricity of \$1.4 million primarily at Deer Island (\$773,000) driven by power demand charges being more than budgeted based on flows, new pricing for Eversource, and real time market prices for the non-block purchases under the Direct Energy contract; and Field Operations of \$593,000 primarily due to new rates and higher quantities. Underspending on Diesel Fuel of \$224,000 was driven by Deer Island (\$174,000) due to timing of deliveries.

### **Overtime**

Overtime expenses were greater than budget by \$27,000 million or 1.1%. Higher spending mainly at Deer Island of \$137,000 and Clinton of \$34,000 for storm and shift coverage. Year-to-date rainfall was a major contributor for the increased overtime.

### **Indirect Expenses**

Indirect Expenses totaled \$25.7 million, which is \$55,000 or 0.2% under budget. The variance is driven by lower Watershed Reimbursements of \$195,000, partially offset by higher insurance payments/claims of \$108,000 and slightly higher HEEC costs of \$32,000.

Based on FY22 operating activity only, the Watershed Division is \$264,000 or 3.5% under budget. Lower spending on Professional Services, Maintenance, Telecommunication costs, and Fringe Benefits are the drivers. When factoring in the FY21 balance forward (\$69,000) which was paid

during Q1 of FY22, Watershed Reimbursement is \$195,000 or 2.6% below budget through December 2021.

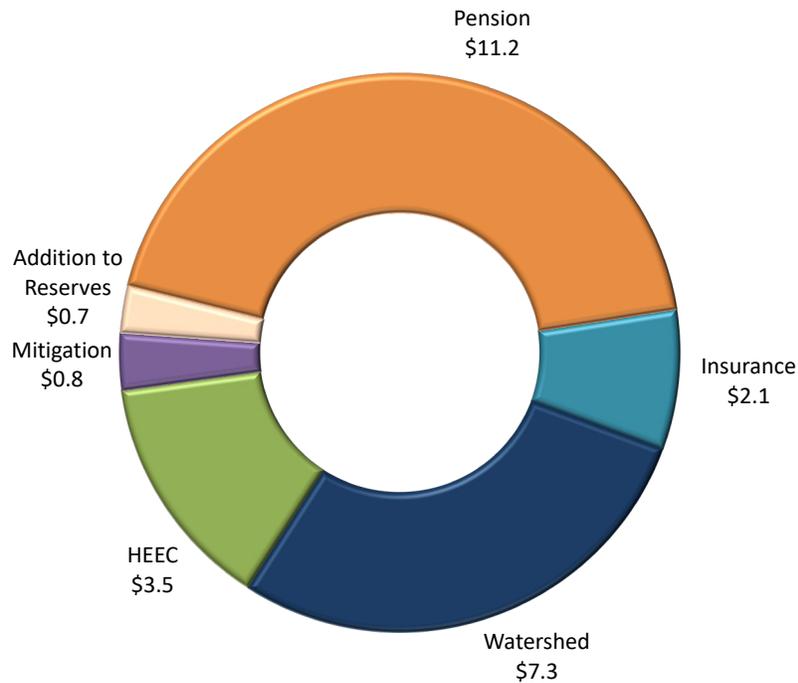
**FY22 Watershed Variance**

<b>\$ in millions</b>	<b>YTD Budget</b>	<b>YTD Actual</b>	<b>YTD \$ Variance</b>	<b>YTD % Variance</b>
Operating Expenses	8.1	7.9	-0.2	-2.4%
Operating Revenues - Offset	0.5	0.6	0.1	13.2%
<b>FY22 Operating Totals</b>	<b>7.5</b>	<b>7.3</b>	<b>-0.3</b>	<b>-3.5%</b>
DCR Balance Forward (FY21 4th quarter accrual true-up)	0.0	0.1	0.1	
<b>FY22 Adjusted Operating Totals</b>	<b>7.5</b>	<b>7.3</b>	<b>-0.2</b>	<b>-2.6%</b>
PILOT	0.0	0.0	0.0	0.0%
<b>Total Watershed Reimbursement</b>	<b>7.5</b>	<b>7.3</b>	<b>-0.2</b>	<b>-2.6%</b>

*Totals may not add due to rounding*

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 trued-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. The FTE count at the end of December was 130 (and 132 on a year-to-date basis) vs. a budget of 150.

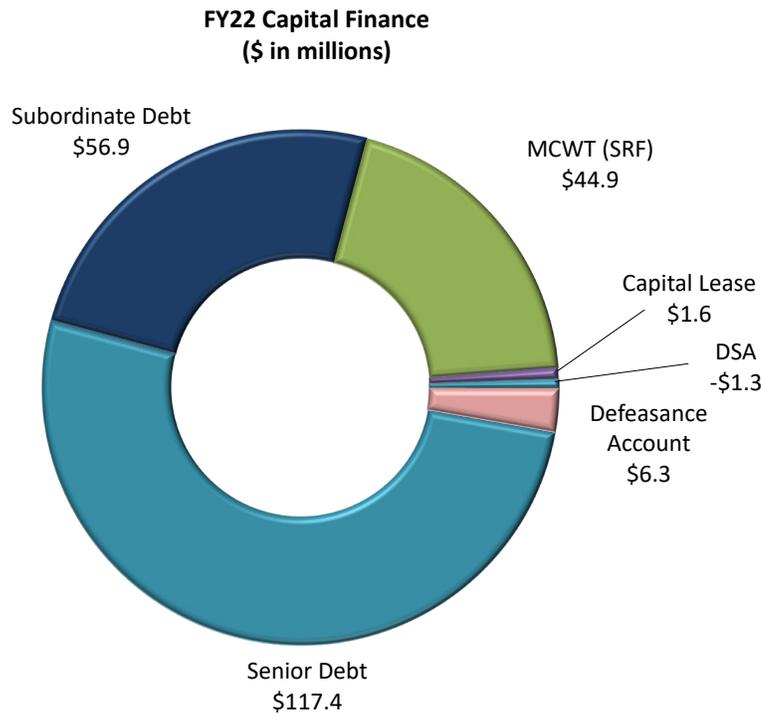
**FY22 Indirect Expenses  
(in millions)**



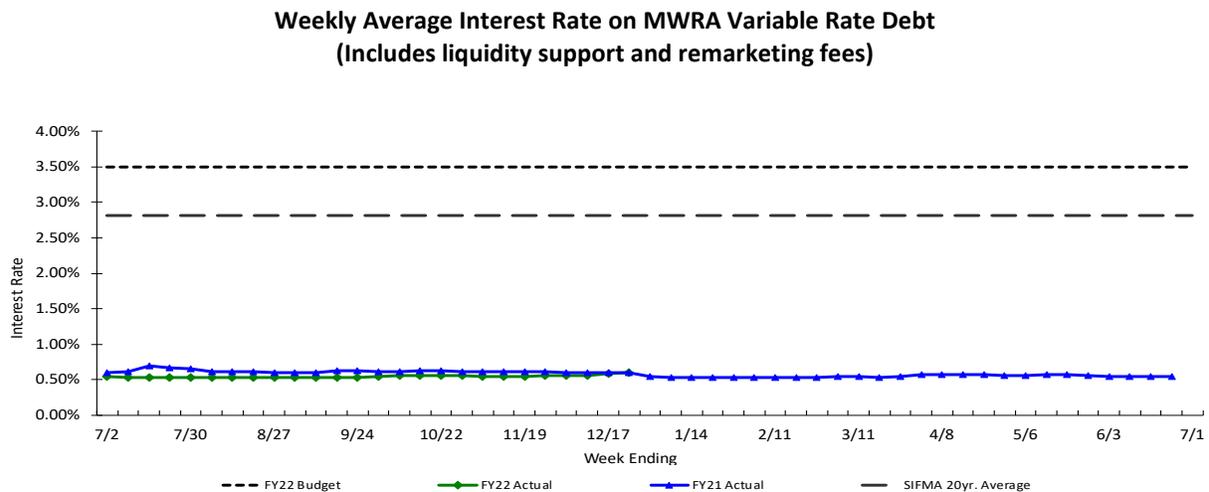
## Capital Financing

Capital Financing expenses include the principal and interest payments for fixed senior 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, Optional Debt Prepayment, and the Chelsea Facility lease payment.

Capital Financing expenses for FY22 through December totaled \$225.8 million, which is on the budget after the transfer of \$6.3 million to the Defeasance account, driven by lower than budgeted variable interest expense of \$5.4 million due to lower interest rates and \$0.8 million related to the refunding and new money transaction.



The graph below reflects the FY22 actual variable rate trend by week against the FY22 Budget.



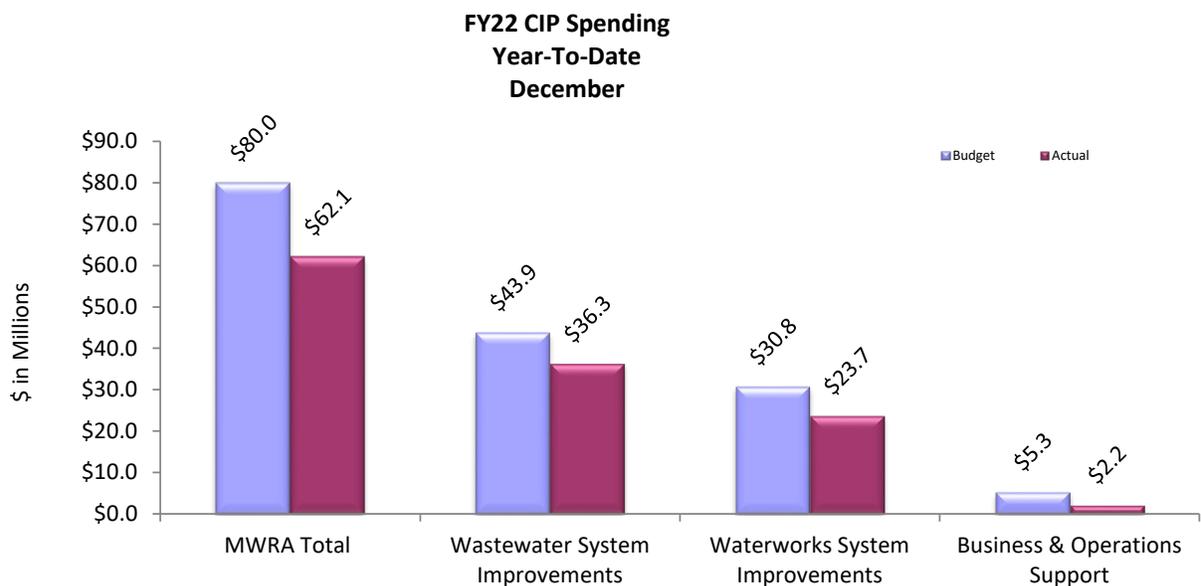
## Revenue and Income

Revenues of \$408.9 million were \$1.2 million or 0.3% over budget. Other Revenue was \$0.8 million or 16.0% over budget due to Miscellaneous Revenue of \$435,000 primarily due to reimbursement from the Commonwealth of Massachusetts for Biobot costs associated with FY21, income from the disposal of equipment of \$331,000, and Energy Rebates of \$172,000. These were partially offset by lower revenue for Permit Fees of \$234,000 due to timing and Energy Revenue of \$162,000. In addition, Other User Charges were over budget by \$487,000 or 11.2% primarily for unplanned water use by the Town of Burlington. Investment Income was \$9,000 or 0.5% under budget due to lower than budgeted interest rates (0.50% vs. 0.54%).

## **FY22 Capital Improvement Program**

Capital expenditures in Fiscal Year 2022 through December total \$62.1 million, \$17.9 million or 22.3% under 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 \$45.1 million, \$13.7 million or 23.3% under budget.



Overall, CIP spending reflects the underspending in Wastewater Improvements (\$7.6 million), Waterworks (\$7.1 million) and Business and Operations Support (\$3.1 million). Major variances in Wastewater are primarily due to updated schedule for the Prison Point Rehabilitation contract, timing of community grants and loans for the I/I Local Financial Assistance Program, timing of work for the Winthrop Terminal Facility VFD Replacement and Gravity Thickener contracts, and completion of some design and inspection tasks later than anticipated for the Ward Street and Columbus Park Headworks Upgrades Design/ESDC. This was partially offset by planned FY21 work completed in FY22 for the Chelsea Creek Headworks Upgrades and NI Odor Control and HVAC Improvements.

Waterworks variances are primarily due to updated schedule for NIH Section 89 & 29 Replacement, timing of community loan distributions for the Water Loan Program, and reduction in scope for Sections 50 & 57 Water Pipeline. This was partially offset by an earlier than anticipated land purchase for the Metropolitan Tunnel Redundancy Administration , Legal, Public Outreach contract, contractor progress for WASM/Spot Pond Supply Mains Pressure Reducing Valves Construction and WASM 3 Rehab CP-1, and timing of work for the Tunnel Program Support Services.

**FY22 Budget and FY22 Actual Variance by Program**  
(in millions)

\$ in Millions	Budget	Actuals	\$ Var.	% Var.
<b>Wastewater System Improvements</b>				
Interception & Pumping	22.6	18.7	(3.9)	-17.3%
Treatment	6.7	4.1	(2.6)	-39.4%
Residuals	0.0	0.0	0.0	0.0%
CSO	2.0	3.1	1.1	55.0%
Other	12.6	10.4	(2.2)	-17.3%
<b>Total Wastewater System Improvements</b>	<b>\$43.9</b>	<b>\$36.3</b>	<b>(\$7.6)</b>	<b>-17.3%</b>
<b>Waterworks System Improvements</b>				
Drinking Water Quality Improvements	1.0	1.3	0.4	36.4%
Transmission	13.2	15.3	2.1	15.8%
Distribution & Pumping	8.1	2.2	(5.8)	-72.4%
Other	8.5	4.8	(3.7)	-43.7%
<b>Total Waterworks System Improvements</b>	<b>\$30.8</b>	<b>\$23.7</b>	<b>(\$7.1)</b>	<b>-23.1%</b>
<b>Business &amp; Operations Support</b>	<b>\$5.3</b>	<b>\$2.2</b>	<b>(\$3.1)</b>	<b>-59.2%</b>
<b>Total MWRA</b>	<b>\$80.0</b>	<b>\$62.1</b>	<b>(\$17.9)</b>	<b>-22.3%</b>

*Totals may not add due to rounding*

**FY22 Spending by Program:**

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

**Other Waterworks:** Net underspending of \$3.7 million

- \$3.3 million for Local Financial Assistance due to timing of community loan distributions.
- \$0.3 million for Water System Hydraulic Model due to slower than anticipated start-up.

**Water Distribution and Pumping:** Net underspending of \$5.8 million

- \$4.0 million for Section 89 & 29 Replacement Construction and REI and \$0.6 million for CP-3 CP3-Sections 23, 24, 47 Final Design/CA/RI due to updated schedules.
- \$0.6 million for Sections 50 & 57 Water Rehabilitation - Design/ESDC due to contract scope reduction.
- \$0.4 million for SEH Redundancy Design CA/RI due to less than anticipated budgeted spending.
- This underspending was partially offset by overspending of \$0.3 million for NEH Improvements Design-ESDC due to timing of consultant work.

**Other Wastewater:** Net underspending of \$2.2 million

- \$2.2 million for Community I/I due to timing of community distributions of grants and loans.

**Wastewater Treatment:** Net underspending of \$2.6 million

- \$1.3 million for Winthrop Terminal Facility VFD and Motors Replacements, \$0.7 million for Gravity Thickener Rehabilitation, and \$0.4 million for Miscellaneous VFD Replacements due to timing of work.
- \$0.2 million each for Motor Control Center and Switchgear Replacement - Design/ESDC/REI, and Fire Alarm System Replacement - Design/CA due to updated construction schedules.
- \$0.2 million for Clarifier Rehab Phase 2 Design due to pending time extension.

**Interception and Pumping:** Net underspending of \$3.9 million

- \$2.7 million for Prison Point Design CA/RI and Construction due to updated construction schedule.
- \$1.7 million for Ward Street & Columbus Park Headworks - Design/CA due to completion of some design and inspection tasks later than anticipated.
- \$0.8 million for Interceptor Renewal No. 3, Dorchester Interceptor Sewer – Construction due to timing of contractor work. Contract is substantially complete.
- \$0.2 million for Fuel Oil Tank Replacement - Phase 1 Construction due to fabrication of tank top slabs at Gillis Pumping Station taking longer than anticipated.
- This underspending was partially offset by overspending of \$1.6 million for Chelsea Creek Headworks Upgrades - Construction and REI, and \$0.7 million for Nut Island Odor Control and HVAC Improvements Phase 2 – Construction due to work scheduled for FY21 performed in FY22.

**Business and Operations Support:** Net underspending of \$3.1 million

- \$1.8 million for As-Needed Technical Assistance and Resident Engineering and Inspection Services due to lower than projected task order work, \$0.6 million for Vehicle Purchases due to timing of purchases, and \$0.2 million each for Enterprise Content Management and Access Switches due to timing of work.

**Waterworks Transmission:** Net overspending of \$2.1 million

- \$1.9 million for Metropolitan Tunnel Redundancy Administration, Legal and Public Outreach due to earlier than anticipated land purchase.
- \$1.0 million for WASM/Spot Pond Supply Mains Pressure Reducing Valves Improvements due to timing of contractor work.
- \$0.3 million for Wachusett Dam Bridge Crane Removal for FY21 planned work completed in FY22.
- \$0.3 million for WASM 3 CP-1 due contractor progress.
- This overspending was partially offset by underspending of \$0.5 million for Watershed Land due to timing of land purchases, \$0.3 million for Tunnel Redundancy Preliminary Design & MEPA Review, and \$0.3 million for WASM 3 Design due to timing of consultants work.

**Combined Sewer Overflow:** Net overspending of \$1.1 million

- \$0.7 million for East Boston CSO Control - BOS014 due to work completed earlier than anticipated.
- \$0.6 million for Dorchester Inflow Removal Construction due to timing of payment.

**Drinking Water Quality Improvements:** Net overspending of \$0.4 million

- \$0.1 million for CP-7 Existing Facilities Modifications - Cosgrove Boat Storage due to contractor progress, and \$0.2 million for As-Needed Technical Assistance due to greater than projected task order work.
- 

**Construction Fund Balance**

The construction fund balance was \$159.3 million as of the end of December. Commercial Paper/Revolving Loan available capacity was \$222 million.

**ATTACHMENTS:**

Attachment 1 – Variance Summary December 2021

Attachment 2 – Current Expense Variance Explanations

Attachment 3 – Capital Improvement Program Variance Explanations

ATTACHMENT 1  
FY22 Actuals vs. FY22 Budget

	Dec 2021 Year-to-Date				
	Period 6 YTD Budget	Period 6 YTD Actual	Period 6 YTD Variance	%	FY22 Approved
<b><u>EXPENSES</u></b>					
WAGES AND SALARIES	\$ 54,562,190	\$ 47,830,182	\$ (6,732,008)	-12.3%	\$ 116,680,341
OVERTIME	2,542,900	2,569,974	27,074	1.1%	5,156,681
FRINGE BENEFITS	11,406,088	10,635,664	(770,424)	-6.8%	23,253,137
WORKERS' COMPENSATION	1,307,079	758,806	(548,273)	-41.9%	2,614,159
CHEMICALS	6,578,477	6,228,439	(350,038)	-5.3%	12,202,286
ENERGY AND UTILITIES	12,293,609	13,336,483	1,042,874	8.5%	24,749,865
MAINTENANCE	16,302,724	13,440,086	(2,862,638)	-17.6%	32,442,382
TRAINING AND MEETINGS	255,417	141,679	(113,738)	-44.5%	473,994
PROFESSIONAL SERVICES	4,467,655	3,776,251	(691,404)	-15.5%	8,773,258
OTHER MATERIALS	2,235,865	1,961,052	(274,813)	-12.3%	8,334,774
OTHER SERVICES	12,962,008	12,743,947	(218,061)	-1.7%	25,129,234
<b>TOTAL DIRECT EXPENSES</b>	<b>\$ 124,914,012</b>	<b>\$ 113,422,563</b>	<b>\$ (11,491,449)</b>	<b>-9.2%</b>	<b>\$ 259,810,111</b>
INSURANCE	\$ 1,971,800	\$ 2,080,586	\$ 108,786	5.5%	\$ 3,943,600
WATERSHED/PILOT	7,519,222	7,323,760	(195,462)	-2.6%	26,731,490
HEEC PAYMENT	3,495,977	3,528,161	32,184	0.9%	6,991,953
MITIGATION	846,680	846,679	(1)	0.0%	1,693,360
ADDITIONS TO RESERVES	706,323	706,323	-	0.0%	1,412,647
RETIREMENT FUND	11,205,000	11,205,000	-	0.0%	11,205,000
POST EMPLOYEE BENEFITS	-	-	-	---	4,673,624
<b>TOTAL INDIRECT EXPENSES</b>	<b>\$ 25,745,002</b>	<b>\$ 25,690,509</b>	<b>\$ (54,493)</b>	<b>-0.2%</b>	<b>\$ 56,651,674</b>
STATE REVOLVING FUND	\$ 44,882,248	\$ 44,882,248	\$ -	0.0%	\$ 95,673,399
SENIOR DEBT	118,265,507	117,424,634	(840,873)	-0.7%	244,957,128
DEBT SERVICE ASSISTANCE	(1,287,870)	(1,287,870)	-	0.0%	(1,287,870)
CURRENT REVENUE/CAPITAL	-	-	-	---	17,200,000
SUBORDINATE MWRA DEBT	62,351,365	62,351,365	-	0.0%	125,046,218
LOCAL WATER PIPELINE CP	-	-	-	---	6,120,127
CAPITAL LEASE	1,608,530	1,608,530	-	0.0%	3,217,060
VARIABLE DEBT	-	(5,410,531)	(5,410,531)	---	-
DEFEASANCE ACCOUNT	-	6,251,404	6,251,404	---	-
DEBT PREPAYMENT	-	-	-	---	5,609,355
<b>TOTAL CAPITAL FINANCE EXPENSE</b>	<b>\$ 225,819,779</b>	<b>\$ 225,819,779</b>	<b>\$ -</b>	<b>0.0%</b>	<b>\$ 496,535,417</b>
<b>TOTAL EXPENSES</b>	<b>\$ 376,478,793</b>	<b>\$ 364,932,851</b>	<b>\$ (11,545,942)</b>	<b>-3.1%</b>	<b>\$ 812,997,202</b>
<b><u>REVENUE &amp; INCOME</u></b>					
RATE REVENUE	\$ 396,042,000	\$ 396,042,000	\$ -	0.0%	\$ 792,084,000
OTHER USER CHARGES	4,360,428	4,847,730	487,302	11.2%	9,222,883
OTHER REVENUE	4,717,671	5,471,416	753,745	16.0%	6,479,203
RATE STABILIZATION	625,000	625,000	-	0.0%	1,250,000
INVESTMENT INCOME	1,964,418	1,955,252	(9,166)	-0.5%	3,961,116
<b>TOTAL REVENUE &amp; INCOME</b>	<b>\$ 407,709,517</b>	<b>\$ 408,941,398</b>	<b>\$ 1,231,882</b>	<b>0.3%</b>	<b>\$ 812,997,202</b>

**ATTACHMENT 2**  
**Current Expense Variance Explanations**

Total MWRA	FY22 Budget YTD December	FY22 Actuals December	FY22 YTD Actual vs. FY22 Budget		Explanations
			\$	%	
<b>Direct Expenses</b>					
Wages & Salaries	54,562,190	47,830,182	(6,732,008)	-12.3%	Wages and Salaries are under budget by \$6.7 million. Year to date, there have been 48 fewer average FTEs (1,119 versus 1,167 budget), lower average new hire salaries versus retirees, the timing of backfilling vacant positions.
Overtime	2,542,900	2,569,974	27,074	1.1%	Higher spending mainly in Deer Island of \$137,000 and Clinton of \$31,000 for storm and shift coverage. This was partially offset by underspending in Engineering & Construction of \$52,000 and Field Operations of \$54,000. Year-to-date rainfall was a major contributor for the increased overtime.
Fringe Benefits	11,406,088	10,635,664	(770,424)	-6.8%	Lower than budget in <b>Health Insurance</b> of \$611,000, 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.
Worker's Compensation	1,307,079	758,806	(548,273)	-41.9%	The lower expenses were due to favorable variances in <b>Compensation Payments</b> of \$313,000, <b>Medical Payments</b> of \$190,000, and <b>Administrative Expenses</b> of \$46,000. Due to uncertainties of when spending will happen, the budget is spread evenly throughout the year.
Chemicals	6,578,477	6,228,439	(350,038)	-5.3%	Lower than budget spending on <b>Hydrogen Peroxide</b> of \$306,000 driven by DITP based on usage as excessive rainfall helped lower H2S levels, <b>Polymer</b> of \$96,000 driven by DITP due to less usage for centrifuge operations, <b>Soda Ash</b> of \$63,000 driven by Water Operations due to lower average flows at CWTP, <b>Carbon Dioxide</b> of \$57,000 driven by Water Operations due to lower dosing combined with lower flows, and <b>Activated Carbon</b> of \$54,000 driven by DITP due to timing of replacements, This is offset by higher than budget spending on <b>Sodium Hypochlorite</b> of \$98,000 driven by DITP of \$65,000 and Field Operations of \$32,000 due to increased disinfection usage, <b>Liquid Oxygen</b> of \$72,000 due to higher dosing at JJCWTP, and <b>Sodium Bisulfite</b> of \$72,000 driven by DITP of \$41,000 and Field Operations of \$24,000 due to higher use at wastewater facilities due to higher flows/rain. DITP flows are 31.6% higher than the budget and CWTP preliminary flows are 4.0% lower 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	12,293,609	13,336,483	1,042,874	8.5%	Overspending in <b>Electricity</b> of \$1.4 million primarily at DITP of \$0.8 million driven by power demand charges being more than budgeted based on flows, new pricing for Eversource, and real time market prices for the non-block purchases under the Direct Energy contract. Also, Field Operations of \$0.6 million is over budget primarily due to new rates and quantity. <b>Diesel Fuel</b> is underspent by \$0.2 million driven by Deer Island Treatment Plant due to timing of deliveries. Deliveries started on October 5th and ran to October 15th with one invoice pending.

**ATTACHMENT 2**  
**Current Expense Variance Explanations**

Total MWRA	FY22 Budget YTD December	FY22 Actuals December	FY22 YTD Actual vs. FY22 Budget		Explanations
			\$	%	
Maintenance	16,302,724	13,440,086	(2,862,638)	-17.6%	Underspending in <b>Ongoing Maintenance</b> by \$2.9 million is largely driven by the timing of projects. <i>Maintenance Services</i> are under budget by \$1.6 million driven by <b>Plant and Machine Services</b> of \$877,000 primarily due to timing of DITP scrubber work, less than expected boiler work, and delay in final invoice for DI coating contract, <b>Special Equipment Services</b> of \$325,000 primarily due to timing of service contracts and lower award than budgeted for telephone system maintenance contract, <b>Building &amp; Grounds Services</b> of \$282,000 due to timing of service contracts, and <b>Computer Services</b> of \$152,000 due to HP and Cisco Smartnet renewal contracts were less than budgeted and Distributed Antenna System support agreement at DITP was delayed, partially offset by <b>Electrical Services</b> of \$92,000 due to timing of service contracts. <i>Maintenance Materials</i> are under budget by \$1.2 million, driven by <b>Plant and Machine Materials</b> of (\$496,000) due to timing including strainers and lathe purchases at DITP, <b>Special Equipment Materials</b> of \$295,000 and <b>Pipe Materials</b> of \$201,000 due to timing.
Training & Meetings	255,417	141,679	(113,738)	-44.5%	Lower than budget spending on <b>Training &amp; Meetings</b> by \$114,000 is driven by MIS of \$68,000, Tunnel Redundancy of \$13,000, DITP of \$10,000, and Procurement of \$8,000, partially offset by higher spending in Engineering & Construction of \$12,000.
Professional Services	4,467,655	3,776,251	(691,404)	-15.5%	Lower than budget spending primarily for <b>Computer Systems Consultant</b> of \$581,000 in MIS primarily due to a reduction in scope of Managed Security Services Provider (MSSP) Year 5 monitoring extension and delay in Internet/Intranet Pipeline Upgrade project and <b>Engineering</b> of \$207,000 primarily in Field Operations.
Other Materials	2,235,865	1,961,052	(274,813)	-12.3%	Driven by less than budgeted spending for Vehicle Purchases/Replacements (\$93,000), <b>Computer Software</b> of \$88,000 in Operations due to timing for CWTP SCADA, <b>Equipment/Furniture</b> of \$71,000, <b>Other Materials</b> of \$66,000, and <b>Office Supplies</b> of \$49,000 due to timing. This underspending was partially offset by <b>Computer Hardware</b> \$160,000 in MIS due to additional hardware purchased for teleworking.
Other Services	12,962,008	12,743,947	(218,061)	-1.7%	Lower than budgeted spending for <b>Other Services</b> of \$84,000 primarily due to timing of service contracts, <b>Health/Safety</b> \$36,000, <b>Space/Lease Rentals</b> \$25,000, and <b>Telecommunication</b> costs of \$20,000. These are partially offset by higher than budgeted spending for <b>Grit &amp; Screening Removal</b> of \$50,000 due to higher quantities and <b>Memberships/Dues/Subscriptions</b> of \$25,000 primarily in Operations and MIS.
<b>Total Direct Expenses</b>	<b>124,914,012</b>	<b>113,422,563</b>	<b>(11,491,449)</b>	<b>-9.2%</b>	

**ATTACHMENT 2**  
**Current Expense Variance Explanations**

Total MWRA	FY22 Budget YTD December	FY22 Actuals December	FY22 YTD Actual vs. FY22 Budget		Explanations
			\$	%	
<b>Indirect Expenses</b>					
Insurance	1,971,800	2,080,586	108,786	5.5%	Higher Payments/Claims of \$108,000 and higher Premiums of \$1,000 than budgeted.
Watershed/PILOT	7,519,222	7,323,760	(195,462)	-2.6%	Lower Watershed Reimbursement of \$0.2 million favorable variance to budget driven by lower spending on (1) Professional Services, (2) Maintenance, (3) Telecomm, and (4) Fringe Benefits.
HEEC Payment	3,495,977	3,528,161	32,184	0.9%	Increase is due to HEEC O&M charge partially offset by the HEEC Revenue Requirement.
Mitigation	846,680	846,679	(1)	0.0%	
Addition to Reserves	706,323	706,323	-	0.0%	
Pension Expense	11,205,000	11,205,000	-	0.0%	
Post Employee Benefits	-	-	-		
<b>Total Indirect Expenses</b>	<b>25,745,002</b>	<b>25,690,509</b>	<b>(54,493)</b>	<b>-0.2%</b>	
<b>Debt Service</b>					
Debt Service	225,819,780	225,819,780	-	0.0%	Debt Service matches the budget after the transfer of \$6.3 million to the Defeasance account, driven by lower than budgeted variable interest expense of \$5.4 million due to lower interest rates and lower Senior Debt spending of \$841,000 as a result of the refunding and new money transactions.
Debt Service Assistance			-		
<b>Total Debt Service Expenses</b>	<b>225,819,780</b>	<b>225,819,780</b>	<b>-</b>	<b>0.0%</b>	
<b>Total Expenses</b>					
<b>Total Expenses</b>	<b>376,478,794</b>	<b>364,932,852</b>	<b>(11,545,942)</b>	<b>-3.1%</b>	

**ATTACHMENT 2  
Current Expense Variance Explanations**

Total MWRA	FY22 Budget YTD December	FY22 Actuals December	FY22 YTD Actual vs. FY22 Budget		Explanations
			\$	%	
<b>Revenue &amp; Income</b>					
Rate Revenue	396,042,000	396,042,000	-	0.0%	
Other User Charges	4,360,428	4,847,730	487,302	11.2%	Unplanned water use by the town of Burlington.
Other Revenue	4,717,671	5,471,416	753,745	16.0%	Miscellaneous Revenue of \$435,000 primarily due to the reimbursement from the Commonwealth of Massachusetts for Biobot work (\$443,000); Disposal of surplus materials of \$331,000; Energy Rebates of \$172,000, partially offset by lower Permit Fees of \$234,000 due to timing and Energy Revenue of \$162,000.
Rate Stabilization	625,000	625,000	-	0.0%	HEEC Reserve.
Investment Income	1,964,418	1,955,252	(9,166)	-0.5%	Investment Income is under budget due to lower than budgeted interest rates (0.50% actual vs. 0.54% budget).
<b>Total Revenue</b>	<b>407,709,517</b>	<b>408,941,398</b>	<b>1,231,881</b>	<b>0.3%</b>	
<b>Net Revenue in Excess of Expenses</b>	<b>31,230,723</b>	<b>44,008,546</b>	<b>12,777,823</b>		

**ATTACHMENT 3  
FY22 CIP Year-to-Date Variance Report (\$000's)**

	FY22 Budget YTD December	FY22 Actuals YTD December	YTD Actuals vs. Budget		Explanations
			\$	%	
<b>Wastewater</b>					
Interception & Pumping (I&P)	\$22,577	\$18,681	(\$3,896)	-17.3%	<u>Underspending</u> Prison Point Design CA/RI and Construction: \$2.7M (updated construction schedule) Ward Street & Columbus Park Headworks - Design/CA: \$1.7M (completed some design and inspection tasks later than anticipated) Interceptor Renewal No. 3, Dorchester Interceptor Sewer - Construction: \$846k (timing of contractor work. Contract is substantially complete.) Fuel Oil Tank Replacement - Phase 1 Construction: \$226k (fabrication of tank top slabs at Gillis Pumping Station taking longer than anticipated) <u>Offset Overspending</u> Chelsea Creek Headworks Upgrades - Construction, CA and REI: \$1.6M, and Nut Island Odor Control & HVAC Improvements Phase 2 - Construction: \$715k (work scheduled for FY21 performed in FY22)
Treatment	\$6,709	\$4,063	(\$2,645)	-39.4%	<u>Underspending</u> Winthrop Terminal Facility (WTF) VFD Replacement - Construction: \$1.3M, Gravity Thickener Rehabilitation: \$676k, and Miscellaneous VFD Replacements FY19-FY23: \$350k (timing of work) Motor Control Center and Switchgear Replacement - Design/ESDC/REI: \$176k and Fire Alarm System Replacement - Design/CA: \$162k (updated construction schedules) Clarifier Rehabilitation Phase 2 - Design: \$153k (pending time extension) <u>Offset Overspending</u> Clinton Wastewater Treatment Plant Valves and Pipe Replacement: \$177k (contractor progress)
Residuals	\$0	\$14	\$14		
CSO	\$2,018	\$3,128	\$1,109	55.0%	<u>Overspending</u> East Boston CSO Control - BOS014: \$727k (work completed earlier than anticipated) Dorchester Inflow Removal Construction: \$572k (timing of payment)
Other Wastewater	\$12,590	\$10,415	(\$2,174)	-17.3%	<u>Underspending</u> I/I Local Financial Assistance: \$2.2M (timing of community distributions of grants and loans)
<b>Total Wastewater</b>	<b>\$43,894</b>	<b>\$36,302</b>	<b>(\$7,592)</b>	<b>-17.3%</b>	

**ATTACHMENT 3  
FY22 CIP Year-to-Date Variance Report (\$000's)**

	FY22 Budget YTD December	FY22 Actuals YTD December	YTD Actuals vs. Budget		Explanations
			\$	%	
<b>Waterworks</b>					
Drinking Water Quality Improvements	\$988	\$1,348	\$360	36.4%	<u>Overspending</u> CWTP As-Needed Technical Assistance: \$177k (greater than projected task order work) CP-7 Existing Facilities Modifications: \$91k (contractor progress)
Transmission	\$13,213	\$15,299	\$2,086	15.8%	<u>Overspending</u> Metropolitan Tunnel Redundancy Administration, Legal & Public Outreach: \$1.9M (timing of land purchase), and Program Support Services: \$258k (timing of consultant work) WASM/Spot Pond Supply Mains West Pressure Reducing Valves - Construction: \$994k, WASM 3 Rehabilitation, CP-1: \$284k, and CP1 Shafts 6, 8, 9A: \$172k (contractors progress) Wachusett Dam Bridge Crane Removal: \$291k (FY21 planned work completed in FY22) <u>Offset Underspending</u> Watershed Land: \$491k (timing of purchases) River Road Improvements-Wachusett: \$274k (timing of work) Tunnel Redundancy Preliminary Design & MEPA Review: \$252k and WASM 3 - MEPA/Design/CA/RI: \$251k (timing of consultant work) Winsor Station Pipeline Shaft 2 - Construction: \$186k (delays due to concrete issues) Weston Aqueduct Sluice Gates - Construction: \$167k (issues with hatches)
Distribution & Pumping	\$8,071	\$2,228	(\$5,843)	-72.4%	<u>Underspending</u> Section 89/29 Replacement - Construction and RE/RI Services: \$4.0M, and CP3-Sections 23, 24, 47 Final Design/CA/RI: \$642k (updated schedules) Sections 50 & 57 Water Rehabilitation - Design/ESDC; \$648k (contract scope reduction) SEH Redundancy Pipeline Phase 1 - Design/CA/RI: \$365k (Construction Administration and Resident Inspection services less than anticipated budgeted spending) <u>Offset Overspending</u> NEH Improvements Design - ESDC: \$294k (timing of consultant work)

**ATTACHMENT 3  
FY22 CIP Year-to-Date Variance Report (\$000's)**

	FY22 Budget YTD December	FY22 Actuals YTD December	YTD Actuals vs. Budget		Explanations
			\$	%	
Other Waterworks	\$8,547	\$4,814	(\$3,733)	-43.7%	<u>Underspending</u> Local Water Pipeline Financial Assistance Program: \$3.3M (timing of community distributions) Water System Hydraulic Model: \$254k (slower than anticipated start-up) <u>Offset Overspending</u> CWTP SCADA Upgrades Construction: \$211k (contractor progress)
<b>Total Waterworks</b>	<b>\$30,819</b>	<b>\$23,689</b>	<b>(\$7,131)</b>	<b>-23.1%</b>	

**ATTACHMENT 3  
FY22 CIP Year-to-Date Variance Report (\$000's)**

	FY22 Budget YTD December	FY22 Actuals YTD December	YTD Actuals vs. Budget		Explanations
			\$	%	
<b>Business &amp; Operations Support</b>					
<b>Total Business &amp; Operations Support</b>	\$5,289	\$2,156	(\$3,133)	-59.2%	<u>Underspending</u> As-Needed Technical Assistance and CS/REI Services: \$1.8M (lower than projected task order work) FY19-23 Vehicle Purchases: \$555k (due to timing) Enterprise Content Management: \$167k, Edge Switches: \$156k, Instrumentation & Controls: \$155k, and Servers: \$143k (timing of work)
<b>Total MWRA</b>	\$80,002	\$62,146	(\$17,855)	-22.3%	

**STAFF SUMMARY**

**TO:** Board of Directors  
**FROM:** Frederick A. Laskey, Executive Director   
**DATE:** January 19, 2022  
**SUBJECT:** Transmittal of the FY23 Proposed Capital Improvement Program to the MWRA Advisory Board

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**COMMITTEE:** Administration, Finance & Audit

     INFORMATION  
  X   VOTE

Michael J. Cole, Budget Director  
James J. Coyne, Budget Manager  
Preparer/Title

Thomas J. Durkin   
Director, Finance

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**RECOMMENDATION:**

To approve the transmittal of the FY23 Proposed Capital Improvement Program to the Advisory Board for its 60-day review and comment period.

**DISCUSSION:**

The Fiscal Year 2023 Proposed Capital Improvement Program (CIP) represents an update to the program approved by the Board in June 2021 for Fiscal Year 2022. The Proposed CIP includes the latest cost estimates, revised schedules, and new projects.

The FY23 Proposed Capital Improvement Program projects \$309.7 million spending for FY23, of which \$173.3 million supports Wastewater System Improvements, \$101.0 million supports Waterworks System Improvements, and \$35.4 million is for Business and Operations Support. The projects with significant spending in FY23 include Deer Island Clarifier Rehabilitation Phase 2 Construction (\$31.2 million), Prison Point Rehabilitation Construction (\$19.7 million), Nut Island Odor Control and HVAC Improvements (\$15.2 million), and Waltham Water Pipeline Construction (\$14.0 million).

The CIP has been impacted by inflation and supply chain issues. The Boston ENR Construction cost index has increased by over 12% and material costs have increased by nearly 44% since November 2020. Several upcoming projects have seen increases in cost estimates including the Deer Island Primary and Secondary Clarifier Rehab Phase 2, CP-3 Boston and Newton Sections 23, 24, and 47 Rehab, Waltham Water Pipeline, DI Fire Alarm System Replacement, as well as the Deer Island Motor Control Center and Switchgear Replacement.

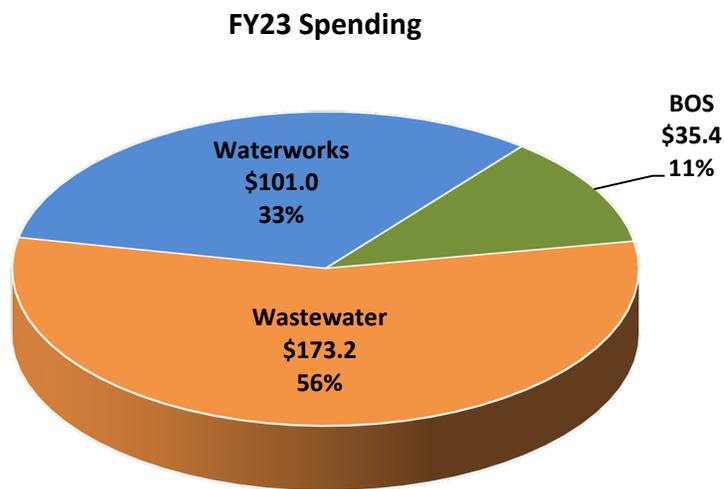
The CIP Program continues to address critical redundancy improvements for the Metropolitan Tunnel System. The FY23 Proposed CIP includes approximately \$1.6 billion in spending. The initial contract for Program Support Services was awarded in March 2019 with a budget of \$17.5 million and spanning over a nine-year period. The second contract, Preliminary Design and MEPA Review, for \$15.7 million was awarded in May 2020 with projected spending through FY24.

The FY23 Proposed Capital Program reaffirms MWRA’s commitment to the community financing assistance programs on both the water and wastewater sides.

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.

### **Proposed FY23 Spending**

The FY23 Proposed Capital Improvement Program projects \$309.7 million spending for FY23, of which \$173.2 million supports Wastewater System Improvements, \$101.0 million supports Waterworks System Improvements, and \$35.4 million is for Business and Operations Support.



The FY23 Proposed CIP includes \$29.7 million for community assistance programs, which are a combination of loan and partial grant programs, with net expenditures of \$35.5 million for the local Infiltration/Inflow program and net expenditures of (\$5.8 million) for the local water pipeline program.

The \$309.7 million in projected spending is driven by 44 active wastewater and water projects. Project contracts with spending greater than \$5.0 million in FY23, excluding local community assistance programs, total \$140.7 million and account for 45.4% of the total annual spending. These projects are presented in the following table:

Project	Subphase	FY23 \$s in Millions	% of Total
Deer Island Treatment Plant Asset Protection	Clarifier Rehabilitation Phase 2 - Construction	\$31.2	10.1%
Facility Asset Protection	Prison Point Rehabilitation - Construction	19.7	6.4%
Corrosion & Odor Control	NI Odor Control HVAC Improvements Construction Phase 2	15.2	4.9%
Metro Redundancy Interim Improvements	Waltham Water Pipeline Construction	14.0	4.5%
MWRA Facilities Management	Office Space Mods	13.8	4.5%
Deer Island Treatment Plant Asset Protection	Fire Alarm System Replacement - Construction	8.3	2.7%
Metro Redundancy Interim Improvements	WASM/SPSM West Pressure Reducing Valve Construction	7.9	2.5%
New Connecting Mains-Shaft 7	CP3-Sect 23,24,47, Rehabilitation	7.8	2.5%
NIH Redundancy & Storage	Section 89 & 29 Repl - Construction	7.1	2.3%
Central Monitoring System	CWTP SCADA Upgrade Construction	5.4	1.7%
Metro Redundancy Interim Improvements	WASM 3 CP-1	5.2	1.7%
Siphon Structure Rehabilitation	Construction	5.0	1.6%
<b>Total Contracts &gt; \$5.0 million (excl. Loan Programs)</b>		<b>\$140.7</b>	<b>45.4%</b>
<b>Other Project Spending</b>		<b>\$169.0</b>	<b>54.6%</b>
<b>Total FY23 Spending</b>		<b>\$309.7</b>	<b>100.0%</b>

**Clarifier Rehabilitation Phase 2 Construction** - \$31.2 million (\$160.0 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.

**Prison Point Rehabilitation Construction** - \$19.7 million (\$39.5 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. This contract was awarded in September 2021.

**Nut Island Odor Control and HVAC Improvements - Construction Phase 2** - \$15.2 million (\$59.7 million total construction cost). Improvements to the Nut Island Headworks odor control, HVAC and energy management systems. This contract began in February 2020. These are the long-term improvement projects that arose following the January 2016 fire, and the evaluation contract of the odor control, HVAC, and energy management completed in February 2017.

**Waltham Water Pipeline Construction** - \$14.0 million (\$21.8 million total construction cost). This contract will include installation of approximately 8,920 linear feet of new 36-inch diameter water main along Lexington Street in Waltham, from Meter 182 to a new meter near Totten Pond Road, including installation of valves, meters and other appurtenances, by-pass pumping, replacement of certain utilities, pavement restoration, traffic and environmental controls.

**MWRA Facilities Management Office Space Modifications** - \$13.8 million (\$13.8 million total construction cost). Office space modifications needed as a result of consolidating staff from the Charlestown Navy Yard to the Deer Island and Chelsea facilities.

**Deer Island Fire Alarm System Replacement** - \$8.3 million (\$31.0 million total construction cost) Project will replace obsolete fire alarm monitoring and control systems. Design awarded October 2015; construction phase to commence in FY23 and approximately every 20 years thereafter.

**Low Service Pressure Reducing Valve Improvements** - \$7.9 million (\$11.3 million total construction cost). The project will allow the Low Service system to be utilized to increase the supply to the Gillis Pumping Station in Stoneham to avoid the need to pump out of the Spot Pond Reservoir in an emergency. The Low Service pipelines would be operated at grade lines consistent with WASM 3 grade line to push additional flow to the Gillis Pumping Station in an emergency. Some Low Service revenue meters may require pressure reducing valves to lower pressures to communities along the way. In addition, PRVs on WASM 3/4 would also require replacement to maximize the supply to the north. This contract began in June 2021.

**CP3 Sections 23, 24 and 47 Rehabilitation** - \$7.8 million (\$24.2 million total construction cost). This contract includes cleaning and cement mortar lining approximately 4,500 linear feet of Section 23, which is a 36-inch diameter cast iron water main, 10,800 feet of 20-inch Section 24 and Section 47 cast iron water mains, and 500 feet of 20-inch steel water main along Section 24. The construction work will also include installing, by open-cut, 3,600 feet of 36-inch ductile iron Section 23 water main, 6,400 feet of 24-inch ductile iron Section 24 water main, and new valves and appurtenances, and replacing the check valve assembly at Boston Meter 120. Additionally, the construction contract will include replacing approximately 2,400 linear feet of City of Newton 20-inch diameter, 140 year old cast iron water main on Ward Street between Manet Road and Waverly Avenue. This contract was awarded in October 2021.

**Northern Intermediate High Redundancy Section 89 and 29 Replacement Construction** - \$7.1 million (\$32.6 million total construction cost). This is a redundancy project for MWRA's Northern Intermediate High service area. Section 89 will be replaced now that the redundant pipeline is completed. This contract was awarded in May 2021.

**Carroll Water Treatment SCADA Upgrade Construction** - \$5.4 million (\$12.9 million total construction cost). This project includes the replacement of PLC's nearing their end of life with an updated PLC platform. New PLCs 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. This contract was awarded in July 2021.

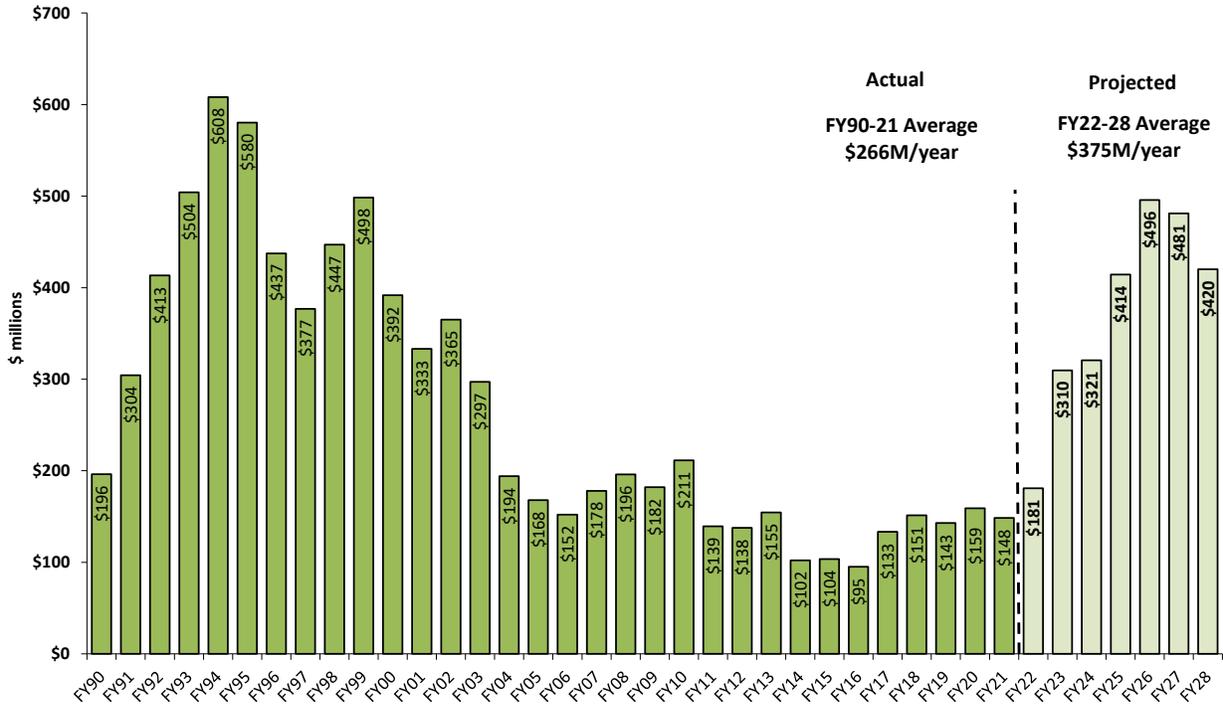
**WASM 3 CP-1** - \$5.2 million (\$19.7 million total construction cost). Construction of the WASM 3 rehabilitation. This first construction contract which began in October 2020 includes rehabilitation of approximately 13,800 feet of 56-inch and 60-inch diameter water main in Arlington, Somerville and Medford. Construction will include cleaning and cement mortar lining, some sliplining and some pipe replacement. This is a key element of the Metropolitan Redundancy Interim Improvement program.

**Siphon Structure Rehab Construction Phase 1** - \$5.0 million (\$8.3 million total cost). Improvements at high priority siphon locations. Scope includes 41 structures.

### **Historical and Projected Spending**

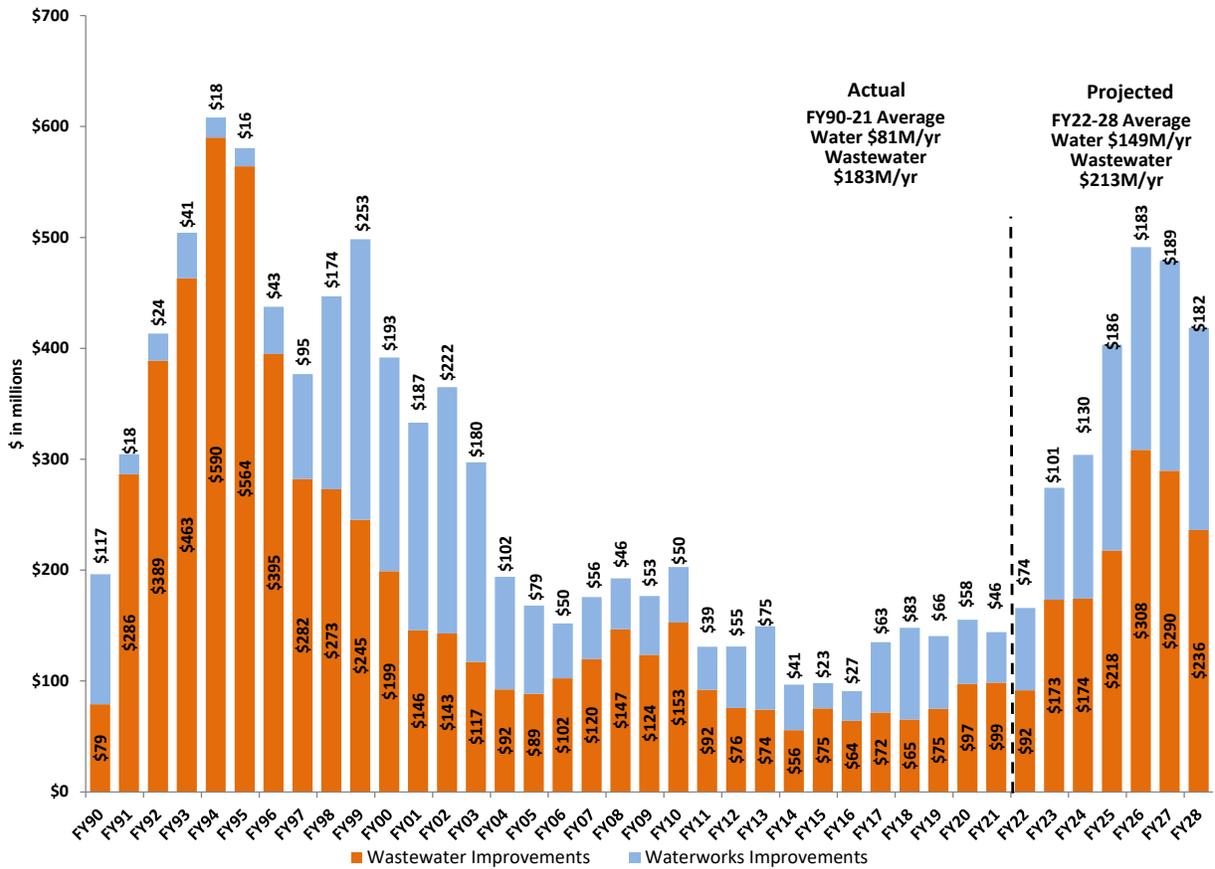
The chart below captures the historical CIP spending through FY21 and projects spending through FY23 based on the FY23 Proposed CIP. Average annual CIP spending through FY21 was \$266 million. Average annual CIP spending for the proposed FY22-28 period is projected to be \$375 million.

### Annual CIP Spending



The following chart shows the historical CIP spending from FY90 through FY21 by utility with projections through FY28. Average annual CIP spending through FY21 was \$81 million for Waterworks and \$183 million for Wastewater. Average annual CIP spending for FY22-28 is projected to be \$149 million for Waterworks and \$213 million for Wastewater.

## Annual CIP Spending by Utility



The spending projections set forth here include updates to the approved FY22 CIP with the latest cost estimates, revised schedules, and new projects.

### FY19-23 Spending and Five-Year Spending Cap

Spending during the FY19-23 timeframe is planned to be \$940.9 million, including local community spending of \$223.2 million for the I/I loan and grant program and \$57.5 million for the water pipeline loan program. Spending under the Wastewater and Waterworks programs is projected at \$535.5 million and \$344.5 million, respectively, followed by Business and Operations at \$60.9 million.

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

	Future Spending Beyond FY21	FY19	FY20	FY21	FY22	FY23	Total FY19-23
<b>Wastewater System Improvements</b>	<b>\$1,735.7</b>	<b>\$74.8</b>	<b>\$97.2</b>	<b>\$98.6</b>	<b>\$91.6</b>	<b>\$173.2</b>	<b>\$535.5</b>
Interception & Pumping	575.8	23.1	33.1	45.9	51.4	62.7	216.2
Treatment	964.7	10.0	14.2	17.6	10.3	73.1	125.3
Residuals	90.6	0.8	13.4	1.4	0.0	0.4	16.0
CSO	8.2	1.2	1.3	2.3	5.9	1.5	12.2
Other Wastewater	96.4	39.6	35.2	31.3	24.0	35.5	165.7
<b>Waterworks System Improvements</b>	<b>\$2,313.5</b>	<b>\$65.6</b>	<b>\$58.1</b>	<b>\$45.6</b>	<b>\$74.2</b>	<b>\$101.0</b>	<b>\$344.5</b>
Drinking Water Quality Improvements	61.5	0.8	1.5	1.6	3.6	5.5	13.0
Transmission	1,778.0	9.9	12.8	17.5	30.7	64.4	135.3
Distribution & Pumping	527.4	36.6	26.6	10.7	10.9	26.9	111.8
Other Waterworks	(53.4)	18.4	17.0	15.8	28.9	4.3	84.4
<b>Business &amp; Operations Support</b>	<b>\$86.4</b>	<b>\$2.4</b>	<b>\$3.7</b>	<b>\$4.2</b>	<b>\$15.2</b>	<b>\$35.4</b>	<b>\$60.9</b>
<b>Total MWRA</b>	<b>\$4,135.6</b>	<b>\$142.9</b>	<b>\$159.0</b>	<b>\$148.4</b>	<b>\$180.9</b>	<b>\$309.7</b>	<b>\$940.9</b>

FY19-23 Cap cash flows total \$747.2 million, \$237.6 million below the established Cap of \$984.8 million set in FY19. Annual cash flows for the proposed Cap period are shown below in millions:

FY23 Proposed		FY19	FY20	FY21	FY22	FY23	Total FY19-23
	Projected Expenditures		\$142.9	\$159.0	\$148.4	\$180.9	\$309.7
I/I Program		(39.6)	(35.2)	(31.3)	(24.0)	(35.5)	(165.7)
Water Loan Program		(13.8)	(11.4)	(14.9)	(23.1)	5.8	(57.5)
<b>MWRA Spending</b>		<b>\$89.4</b>	<b>\$112.3</b>	<b>\$102.2</b>	<b>\$133.8</b>	<b>\$279.9</b>	<b>\$717.7</b>
Contingency		0.0	0.0	0.0	7.9	18.0	25.9
Inflation on Unawarded Construction		0.0	0.0	0.0	0.0	3.6	3.6
Chicopee Valley Aqueduct Projects		(0.0)	0.0	0.0	0.0	0.0	(0.0)
<b>FY22 Draft Final FY19-23 Spending</b>		<b>\$89.4</b>	<b>\$112.3</b>	<b>\$102.2</b>	<b>\$141.7</b>	<b>\$301.5</b>	<b>\$747.2</b>

The format of the Cap table is adjusted 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.

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 \$10 million for the FY19-23 period total \$670.3 million, which includes local community assistance programs, and accounts for over 71.2% of total spending. Largest construction initiatives in terms of FY19-23 spending include the Nut Island Odor Control at \$59.7 million (total cost \$59.7 million), Chelsea Creek Upgrades at \$53.1 million (total cost \$84.6 million), Clarifier Rehabilitation at Deer Island at \$31.2 million (total cost \$160.0 million), and Prison Point Rehabilitation at \$29.6 million (total cost \$39.5 million), respectively between FY19-23. Net of the community loan programs and grants, the top construction related projects greater than \$10 million total \$325.7 million and account for over 34.6% of FY19-13 spending.

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

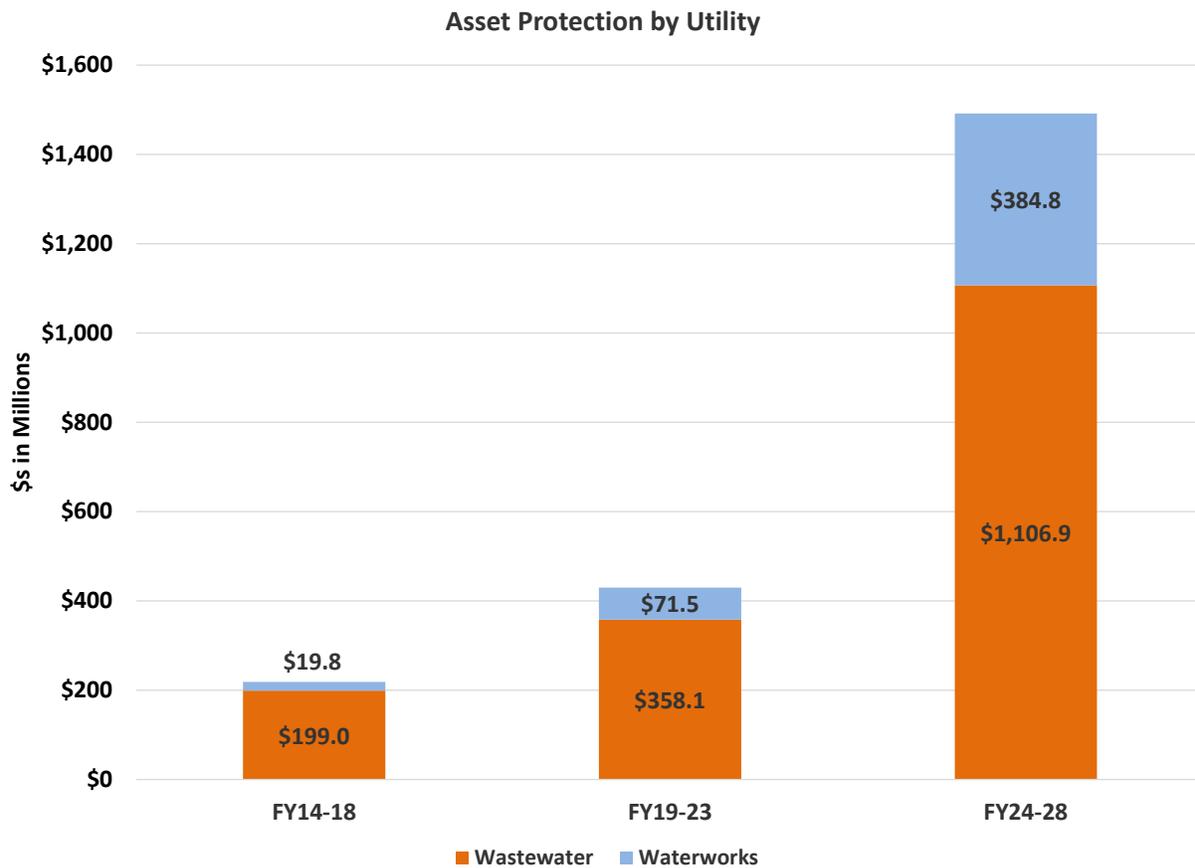
Project	Subphase	FY19-23 \$s in Millions
Local Water Pipeline Imp.	LWSAP Phase 3 Distributions	\$93.4
Local Water Pipeline Imp.	Local Water System Assistance Loans	59.9
Corrosion & Odor Control	NI Odor Control HVAC Improvements Construction Phase 2	59.7
Facility Asset Protection	Chelsea Creek Upgrades - Construction	53.1
I/I Local Financial Assist	Phase XI Grants	41.3
Deer Island Treatment Plant Asset Protection	Clarifier Rehabilitation Phase 2 - Construction	31.2
I/I Local Financial Assist	Phase XII Grants	31.1
Facility Asset Protection	Prison Point Rehabilitation - Construction	29.6
I/I Local Financial Assist	Phase X Grants	29.4
Local Water Pipeline Imp.	Lead Service Line Replace Loans	25.4
I/I Local Financial Assist	Phase IX Grants	25.0
SEH Redundancy & Storage	Redundancy Pipeline Sect 111 - Construction 3	20.0
NIH Redundancy & Storage	Section 89 & 29 Redundancy Construction Phase 2	19.8
Deer Island Treatment Plant Asset Protection	Gravity Thickener Rehabilitation	19.7
Metro Redundancy Interim Improvements	WASM 3 CP-1	15.8
I/I Local Financial Assist	I/I Loans Only	14.9
Metro Redundancy Interim Improvements	Waltham Water Pipeline Construction	14.5
SEH Redundancy & Storage	Redundancy Pipeline Sect 111 - Construction 2	13.9
MWRA Facilities Management	Office Space Modifications	13.8
I/I Local Financial Assist	Phase XI Loans	13.8
Metro Tunnel Redundancy	Preliminary Design & Massachusetts Environmental Policy Act Review	12.8
Metro Redundancy Interim Improvements	WASM/SPSM West Pressure Reducing Valve Construction	11.1
Residuals Asset Protection	Residual Electric/Machine/Drum Replacement	10.5
I/I Local Financial Assist	Phase XII Loans	10.4
	<b>Top Spending Subphase FY19-23 &gt; \$10 million</b>	<b>\$670.3</b>
	<b>% of 19-23 Spending</b>	<b>71.2%</b>
	<b>Spending Excluding Community Loan Programs</b>	<b>\$325.7</b>
	<b>% of 19-23 Spending</b>	<b>34.6%</b>
	<b>Total Projected FY19-23 Spending</b>	<b>\$940.9</b>

Asset Protection accounts for the largest share of capital expenditures for the FY19-23 period. The FY23 Proposed CIP includes \$443.0 million for asset protection initiatives, representing 47.1% of total MWRA spending in this timeframe. Asset protection spending by program is as follows: Wastewater (\$358.1 million), Waterworks (\$71.5 million), and Business and Operations Support (\$13.5 million). Deer Island Treatment Plant Asset Protection accounts for \$116.5 million in spending. Spending for water system redundancy projects totals \$192.4 million in the same FY19-23 period, accounting for 20.5% of total spending.

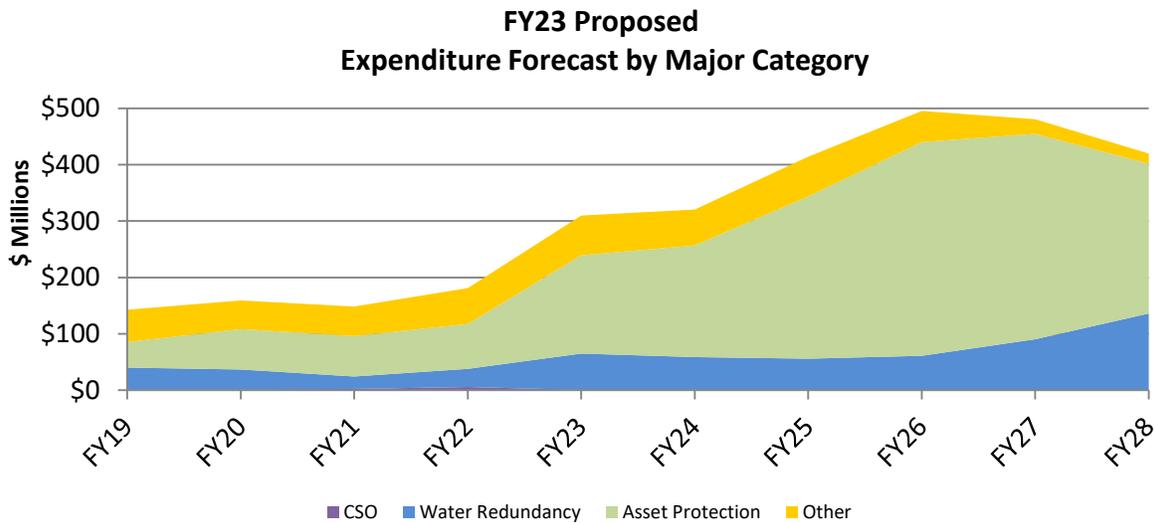
**Changing nature of the CIP by Category  
(\$s in millions)**

<b>Project Category</b>	<b>FY14-18</b>	<b>FY19-23</b>	<b>FY24-28</b>
Asset Protection	\$222.8	\$443.0	\$1,495.5
Water Redundancy	\$174.6	\$192.4	\$401.0
CSO	\$64.7	\$11.2	\$0.8
Other	\$123.5	\$294.2	\$234.4
<b>Total</b>	<b>\$585.6</b>	<b>\$940.9</b>	<b>\$2,131.7</b>
<b>Asset Protection</b>	<b>38.0%</b>	<b>47.1%</b>	<b>70.2%</b>
<b>Water Redundancy</b>	<b>29.8%</b>	<b>20.5%</b>	<b>18.8%</b>
CSO	11.0%	1.2%	0.0%
Other	21.1%	31.3%	11.0%
<b>Total</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>

In terms of utility spending, wastewater asset protection accounts for 80.8% of the FY19-23 projected asset projection spending at \$358.1 million of which \$116.5 million is designated for Deer Island, and \$241.6 million for the headworks and pipelines. The \$71.5 million targeted for waterworks asset protection includes \$32.8 million for water pipeline projects.



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 \$443.0 million or 47.1% of projected spending. Similarly, water redundancy spending for FY19-23 is projected at \$192.4 million or 20.5% of projected FY19-23 spending. For the FY24-28 spending window, total asset protection expenditures are projected at \$1.5 billion or 70.2% of projected spending. Similarly, water redundancy spending for FY24-28 is projected at \$401.0 million or 18.8% of projected FY24-28 spending.



**FY23 Proposed CIP Future Expenditures**

The FY23 Proposed CIP contains future spending estimated at \$4.1 billion, including \$1.7 billion for Wastewater (primarily Asset Protection of \$1.6 billion) and \$2.3 billion for Waterworks (primarily Asset Protection and Redundancy projects-\$2.4 billion).

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

	Future Spending Beyond FY21	Total FY19-23	Total FY24-28	Beyond 28
<b>Wastewater System Improvements</b>	<b>\$1,735.7</b>	<b>\$535.5</b>	<b>\$1,226.2</b>	<b>\$244.7</b>
Interception & Pumping	575.8	216.2	363.4	98.3
Treatment	964.7	125.3	743.9	137.4
Residuals	90.6	16.0	9.0	81.2
CSO	8.2	12.2	0.8	0.0
Other Wastewater	96.4	165.7	109.1	(72.3)
<b>Waterworks System Improvements</b>	<b>\$2,313.5</b>	<b>\$344.5</b>	<b>\$869.7</b>	<b>\$1,268.6</b>
Drinking Water Quality Improvements	61.5	13.0	24.1	28.3
Transmission	1,778.0	135.3	342.1	1,340.8
Distribution & Pumping	527.4	111.8	419.1	70.4
Other Waterworks	(53.4)	84.4	84.4	(171.0)
<b>Business &amp; Operations Support</b>	<b>\$86.4</b>	<b>\$60.9</b>	<b>\$35.9</b>	<b>\$0.0</b>
<b>Total MWRA</b>	<b>\$4,135.6</b>	<b>\$940.9</b>	<b>\$2,131.7</b>	<b>\$1,513.3</b>

## FY23 New Projects

The FY23 Proposed CIP adds 4 new projects at a total cost of \$9.0 million. These are all wastewater projects with the largest new project being the Belle Isle Sandcatcher Rehabilitation with a projected total cost of \$5.0 million.

- Belle Isle Sandcatcher Rehabilitation Design and Construction - **\$5.0 million**
- Phase IV – Fuel Storage Tank Replacement - **\$1.5 million**
- Phase V – Fuel Storage Tank Replacement - **\$1.5 million**
- Somerville Marginal CSO Facility New Pipe Connection - **\$1.0 million**

## Major Planned Contract Awards for FY23:

In Fiscal Year 2023, 65 contracts totaling \$233.5 million are projected to be awarded. The largest ten projected contract awards total \$134.8 million and account for nearly 58% of expected awards and are presented in the following table:

Project	Subphase	Notice to Proceed	Total Contract Amount \$s in Millions
DI Treatment Plant Asset Protection	Fire Alarm System Replacement - Construction	Oct-22	\$31.0
Metropolitan Redundancy Interim Improvements	WASM 3 Rehab CP-2	Jan-23	\$21.8
MWRA Facilities Management	Office Space Modifications	Aug-22	\$13.8
Facility Asset Protection	Hayes Pump Station Rehab Construction	Nov-22	\$13.1
DI Treatment Plant Asset Protection	Combined Heat & Power Design/ESDC/REI	Oct-22	\$11.4
Waterworks Facility Asset Protection	Steel Tank/Impr Construction	Apr-23	\$11.0
Metropolitan Tunnel Redundancy	Technical Assistance	Jan-23	\$9.0
Siphon Structure Rehabilitation	Construction	Jul-22	\$8.3
Facility Asset Protection	Interceptor Renewal 7-Malden & Melrose-Construction	Jan-23	\$8.1
DI Treatment Plant Asset Protection	Eastern Seawall Construction - 1	Oct-22	\$7.3
	<b>Top 10 Contracts</b>		<b>\$134.8</b>
	<b>% of Total Planned Awards</b>		<b>57.7%</b>
	<b>65 Contract Awards Planned</b>		<b>\$233.5</b>

## CIP Review and Adoption Process

The Advisory Board will have no less than 60 days from the transmittal of the FY23 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 FY23 Final to the Board for adoption.

## ATTACHMENTS:

- FY23 Proposed Project Level Expenditure Forecast
- Overview of the FY23 Proposed CIP and Changes from the FY22 Final CIP
- FY23 Proposed New Projects

**ATTACHMENT A**  
**FY23 Proposed CIP**  
**Expenditure Forecast at Project Level**  
**\$000s**

Program / Project Name	Total Program/Project Budget Amount	Spending through FY21	Remaining Balance	FY22	FY23	FY19-FY23	FY24-FY28	Beyond FY28
<b>Total MWRA</b>	<b>8,859,660</b>	<b>4,724,050</b>	<b>4,135,609</b>	<b>180,949</b>	<b>309,676</b>	<b>940,912</b>	<b>2,131,732</b>	<b>1,513,253</b>
<b>Wastewater</b>	<b>4,067,645</b>	<b>2,331,961</b>	<b>1,735,684</b>	<b>91,573</b>	<b>173,234</b>	<b>535,450</b>	<b>1,226,199</b>	<b>244,678</b>
<b>Interception &amp; Pumping</b>	<b>1,280,285</b>	<b>704,520</b>	<b>575,764</b>	<b>51,373</b>	<b>62,695</b>	<b>216,189</b>	<b>363,430</b>	<b>98,265</b>
102 Quincy Pump Facilities	25,907	25,907	-	completed project				
104 Braintree-Weymouth Relief Facilities	242,295	228,819	13,476	267	4,737	6,118	8,472	
105 New Neponset Valley Relief Sewer	30,300	30,300	-					
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 Rehabilit	19,023	2,147	16,876	974	5,324	7,505	10,578	
131 Upper Neponset Valley Sewer	54,174	54,174	-	completed project				
132 Corrosion & Odor Control	101,105	31,273	69,832	23,463	16,716	65,272	28,777	876
136 West Roxbury Tunnel	11,314	10,314	1,000	-	-	-	1,000	
137 Wastewater Central Monitoring	27,482	19,926	7,556	40	260	444	7,158	98
139 South System Relief Project	4,939	3,439	1,500	-	-	-	1,500	
141 Wastewater Process Optimization	8,310	1,903	6,407	283	200	885	2,954	2,970
142 Wastewater Meter System - Equipment Replacement	21,949	8,539	13,410	3,749	534	7,098		9,126
143 Regional I/I Management Planning	169	169	-	completed project				
145 Facility Asset Protection	606,408	166,398	440,010	22,597	34,924	128,868	297,294	85,195
146 D.I. Cross Harbor Tunnel	5,000	-	5,000	-	-	-	5,000	
147 Randolph Trunk Sewer Relief	698	-	698	-	-	-	698	
<b>Treatment</b>	<b>1,307,744</b>	<b>343,053</b>	<b>964,691</b>	<b>10,296</b>	<b>73,101</b>	<b>125,293</b>	<b>743,863</b>	<b>137,432</b>
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	1,238,299	292,371	945,928	8,923	67,581	116,514	731,993	137,432
210 Clinton Wastewater Treatment Plant	34,913	16,150	18,763	1,373	5,520	8,778	11,870	
211 Laboratory Services	2,212	2,212	-	completed project				
<b>Residuals</b>	<b>171,326</b>	<b>80,695</b>	<b>90,631</b>	<b>1</b>	<b>400</b>	<b>16,049</b>	<b>8,986</b>	<b>81,243</b>
261 Residuals	63,811	63,811	-					
271 Residuals Asset Protection	107,515	16,884	90,631	1	400	16,049	8,986	81,243

**ATTACHMENT A**  
**FY23 Proposed CIP**  
**Expenditure Forecast at Project Level**  
**\$000s**

Program / Project Name	Total Program/Project Budget Amount	Spending through FY21	Remaining Balance	FY22	FY23	FY19-FY23	FY24-FY28	Beyond FY28
<b>CSO</b>	<b>915,424</b>	<b>907,211</b>	<b>8,213</b>	<b>5,881</b>	<b>1,521</b>	<b>12,218</b>	<b>810</b>	
<b>CSO Community Managed</b>	<b>423,780</b>	<b>421,027</b>	<b>2,753</b>	<b>2,753</b>	<b>-</b>	<b>3,763</b>		
340 Dorch Bay Sewer Sep (Fox)	55,029	55,029	-	-	-	-		
341 Dorch Bay Sew Separ (Comm	61,443	60,871	572	572	-	1,581		
342 Neponset River Sewer Separ	2,492	2,492	-	-	-	-		
343 Constitution Beach Sewer S	3,731	3,731	-	-	-	-		
344 Stony Brook Sewer Separati	44,319	44,319	-	-	-	-		
346 Cambridge Sewer Separation	104,552	104,552	-	-	-	-		
351 BWSC Floatables Controls	946	946	-	-	-	-		
352 Cambridge Floatables Contr	1,127	1,127	-	-	-	-		
356 Fort Point Channel Sewer S	11,507	11,507	-	-	-	-		
358 Morrissey Boulevard Drain	32,181	32,181	-	-	-	-		
359 Reserved Channel Sewer Sep	70,524	70,524	-	-	-	-		
360 Brookline Sewer Separation	24,715	24,715	-	-	-	-		
361 Bulfinch Triangle Sewer Se	9,032	9,032	-	-	-	-		
362 East Boston CSO Control	2,182	-	2,182	2,182	-	2,182		
<b>CSO MWRA Managed</b>	<b>435,434</b>	<b>433,534</b>	<b>1,900</b>	<b>800</b>	<b>1,100</b>	<b>1,900</b>		
339 North Dorchester Bay	221,510	221,510	-	-	-	-		
347 East Boston Branch Sewer R	85,637	85,637	-	-	-	-		
348 BOS019 Storage Conduit	14,288	14,288	-	-	-	-		
349 Chelsea Trunk Sewer	30,679	29,779	900	800	100	900		
350 Union Park Detention Treat	49,583	49,583	-	-	-	-		
353 Upgrade Existing CSO Facil	22,385	22,385	-	-	-	-		
354 Hydraulic Relief Projects	3,295	2,295	1,000	-	1,000	1,000		
355 MWR003 Gate & Siphon	4,424	4,424	-	-	-	-		
357 Charles River CSO Controls	3,633	3,633	-	-	-	-		
<b>324 CSO Support</b>	<b>56,210</b>	<b>52,650</b>	<b>3,560</b>	<b>2,328</b>	<b>421</b>	<b>6,555</b>	<b>810</b>	
CSO Planning & Support	56,210	52,650	3,560	2,328	421	6,555	810	
<b>Other Wastewater</b>	<b>392,866</b>	<b>296,482</b>	<b>96,384</b>	<b>24,020</b>	<b>35,517</b>	<b>165,702</b>	<b>109,109</b>	<b>(72,262)</b>
128 l/ Local Financial Assistance	392,585	296,201	96,384	24,020	35,517	165,702	109,109	(72,262)
138 Sewerage System Mapping Upgrade	281	281	-					

**ATTACHMENT A**  
**FY23 Proposed CIP**  
**Expenditure Forecast at Project Level**  
**\$000s**

Program / Project Name	Total Program/Project Budget Amount	Spending through FY21	Remaining Balance	FY22	FY23	FY19-FY23	FY24-FY28	Beyond FY28
<b>Waterworks</b>	<b>4,594,200</b>	<b>2,280,708</b>	<b>2,313,492</b>	<b>74,223</b>	<b>101,014</b>	<b>344,530</b>	<b>869,680</b>	<b>1,268,575</b>
<b>Drinking Water Quality Improvements</b>	<b>715,370</b>	<b>653,893</b>	<b>61,476</b>	<b>3,645</b>	<b>5,454</b>	<b>13,020</b>	<b>24,107</b>	<b>28,271</b>
542 Carroll Water Treatment Plant	441,841	426,192	15,649	2,719	2,296	8,091	10,634	
543 Quabbin Water Treatment Plant	19,973	19,973	-	completed project				
544 Norumbega Covered Storage Facility	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 Carroll Water Treatment Plant (CWTP) Asset Protection	46,673	846	45,827	926	3,158	4,929	13,473	28,271
<b>Transmission</b>	<b>2,643,450</b>	<b>865,448</b>	<b>1,778,002</b>	<b>30,712</b>	<b>64,356</b>	<b>135,315</b>	<b>342,104</b>	<b>1,340,830</b>
597 Winsor Station Pipeline	58,122	5,938	52,184	774	-	978	50,757	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	24,202	9,364	14,838	1,040	8,343	10,080	5,405	50
617 Sudbury/Weston Aqueduct Repairs	12,985	4,123	8,863	918	-	2,809	7,278	667
620 Wachusett Reservoir Spillway Improvements	9,287	9,287	-	completed project				
621 Watershed Land	29,000	26,547	2,453	1,028	1,425	6,154		
622 Cosgrove Tunnel Redundancy	58,619	58,619	-	completed project		6,601		
623 Dam Projects	8,323	3,460	4,863	226	3,769	4,339	868	
625 Metropolitan Tunnel Redundancy	1,558,045	8,801	1,549,244	10,172	7,563	23,081	194,647	1,336,861
628 Metropolitan Redundancy Interim Improvements	143,309	23,183	120,125	14,891	38,887	74,124	63,747	2,600
630 Watershed Division Capital Improvements	23,550	1,119	22,431	1,663	4,368	7,150	16,400	
<b>Distribution And Pumping</b>	<b>1,065,683</b>	<b>538,300</b>	<b>527,383</b>	<b>10,937</b>	<b>26,889</b>	<b>111,768</b>	<b>419,118</b>	<b>70,439</b>
618 Peabody Pipeline Project	1,448	1,448	-	completed project		389		
677 Valve Replacement	22,635	12,016	10,619	-	-	-	6,747	3,872
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 Improvements	1,713	124	1,589	20	6	26	1,563	
693 NHS - Revere & Malden Pipeline Improvements	79,485	32,707	46,777	1,196	1,223	6,565	40,508	3,850
702 New Connecting Mains - Shaft 7 to WASM 3	71,082	15,042	56,040	1,735	9,611	13,464	44,694	
704 Rehab of Other Pump Stations	51,290	30,090	21,200	-	-	33	19,240	1,960
706 NHS-Connecting Mains from Section 91	2,360	2,360	-	completed project				
708 Northern Extra High Service (NEH) New Pipelines	42,467	3,776	38,691	1,053	4,001	5,198	33,100	537
712 Cathodic Protection of Distribution Mains	61,586	1,160	60,426	-	2,331	3,222	57,944	151
713 Spot Pond Supply Mains Rehabilitation	66,526	65,493	1,033	233	-	237	800	

**ATTACHMENT A**  
**FY23 Proposed CIP**  
**Expenditure Forecast at Project Level**  
**\$000s**

Program / Project Name	Total Program/Project Budget Amount	Spending through FY21	Remaining Balance	FY22	FY23	FY19-FY23	FY24-FY28	Beyond FY28
714 Southern Extra High (SEH) Sections 41 & 42	3,657	3,657	-	completed project				
719 Chestnut Hill Connecting Mains	39,663	18,287	21,376	-	-	-	21,376	
720 Warren Cottage Line Rehabilitation	1,205	1,205	-	completed project				
721 Southern Spine Distribution Mains	91,573	38,202	53,371	443	308	2,269	52,202	419
722 Northern Intermediate High (NIH) Redundancy & Storage	141,221	74,441	66,780	4,256	8,009	37,811	54,515	
723 Northern Low Service Rehabilitation - Section 8	62,277	5,592	56,685	1,312	1,013	4,962	53,259	1,101
725 Hydraulic Model Update	598	598	-	completed project				
727 Southern Extra High (SEH) Redundancy & Storage	143,146	64,964	78,182	686	83	37,288	19,036	58,377
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	16,483	1,925	14,558	1	251	252	14,132	174
<b>Other Waterworks</b>	<b>169,697</b>	<b>223,066</b>	<b>(53,369)</b>	<b>28,930</b>	<b>4,315</b>	<b>84,427</b>	<b>84,351</b>	<b>(170,966)</b>
753 Central Monitoring System	43,058	22,364	20,693	3,646	6,400	11,706	10,647	
763 Distribution Systems Facilities Mapping	3,087	1,036	2,051	500	288	788	1,263	
764 Local Water Infrastructure Rehabilitation	7,488	7,488	-	completed project				
765 Local Water System Assistance Program	-	180,413	(180,413)	23,105	(5,774)	57,470	4,829	(202,572)
766 Waterworks Facility Asset Protection	116,064	11,765	104,299	1,679	3,401	14,462	67,613	31,606
<b>Business &amp; Operations Support</b>	<b>197,815</b>	<b>111,382</b>	<b>86,433</b>	<b>15,153</b>	<b>35,427</b>	<b>60,932</b>	<b>35,853</b>	
881 Equipment Purchase	41,438	25,291	16,147	3,532	3,331	10,296	9,285	
925 Technical Assistance	1,500	-	1,500	483	482	965	535	
930 MWRA Facility - Chelsea	9,812	9,812	-	-	-	-	-	
931 Business Systems Plan	24,562	24,562	-	-	-	(1)	-	
932 Environmental Remediation	1,479	1,479	-	-	-	-	-	
933 Capital Maintenance Planning & Development	29,997	18,704	11,292	5,049	2,944	12,496	3,300	
934 MWRA Facilities Management	16,871	371	16,500	-	13,954	13,954	2,546	
935 Alternative Energy Initiatives	23,891	18,184	5,708	-	-	(234)	5,708	
940 Application Improvement Program	21,459	3,792	17,666	2,601	5,166	8,667	9,899	
942 Information Security Program (ISP)	8,225	2,338	5,887	1,848	2,060	4,538	1,979	
944 Information Technology Management Program	2	2	-	-	-	2	-	
946 IT Infrastructure Program	18,581	6,848	11,732	1,640	7,491	10,248	2,601	

**ATTACHMENT B**  
**Overview of the FY23 Proposed CIP and Changes from the Final FY22 CIP**

Program and Project	FY22 Final			
	Total Budget Amount	FY19-23	FY24-28	Beyond 28
<b>Total MWRA</b>	<b>8,622,863</b>	<b>986,483</b>	<b>2,005,231</b>	<b>1,357,392</b>
<b>Wastewater</b>	<b>3,948,852</b>	<b>573,167</b>	<b>1,150,131</b>	<b>164,234</b>
<b>Interception &amp; Pumping</b>	<b>1,254,100</b>	<b>233,562</b>	<b>342,826</b>	<b>75,312</b>
102 Quincy Pump Facilities	25,907	-	-	-
104 Braintree-Weymouth Relief Facilities	242,386	10,080	4,601	-
105 New Neponset Valley Relief Sewer	30,300	-	-	-
106 Wellesley Extension Replacement Sewer	64,359	-	-	-
107 Framingham Extension Relief Sewer	47,856	-	-	-
127 Cummingsville Replacement Sewer	8,999	-	-	-
130 Siphon Structure Rehabilitation	19,023	8,513	9,570	-
131 Upper Neponset Valley Sewer	54,174	-	-	-
132 Corrosion & Odor Control	100,175	64,414	28,741	840
136 West Roxbury Tunnel	11,314	-	1,000	-
137 Wastewater Central Monitoring	27,482	747	6,953	-
139 South System Relief Project	4,939	-	1,500	-
141 Wastewater Process Optimization	8,310	701	4,531	1,577
142 Wastewater Meter System-Equipment	21,938	7,087	-	9,126
143 Regional I/I Management Planning	169	-	-	-
145 Facility Asset Protection	581,071	142,020	280,232	63,769
146 D.I. Cross Harbor Tunnel Inspection	5,000	-	5,000	-
147 Randolph Trunk Sewer Relief	698	-	698	-
<b>Treatment</b>	<b>1,218,236</b>	<b>154,000</b>	<b>672,878</b>	<b>90,200</b>
182 DI Primary and Secondary	(958)	-	-	-
200 DI Plant Optimization	33,279	-	-	-
206 DI Treatment Plant Asset Protection	1,150,209	145,502	662,147	90,201
210 Clinton Wastewater Treat Plant	33,494	8,498	10,731	-
211 Laboratory Services	2,212	-	-	-
<b>Residuals</b>	<b>170,503</b>	<b>16,616</b>	<b>23,114</b>	<b>65,726</b>
261 Residuals	63,811	-	-	-
271 Residuals Asset Protection	106,692	16,616	23,114	65,726

Total Budget Amount	FY23 Proposed		
	FY19-23	FY24-28	Beyond 28
<b>8,859,666</b>	<b>940,913</b>	<b>2,131,733</b>	<b>1,513,258</b>
<b>4,067,648</b>	<b>535,450</b>	<b>1,226,198</b>	<b>244,677</b>
<b>1,280,287</b>	<b>216,190</b>	<b>363,431</b>	<b>98,265</b>
25,907	-	-	-
242,295	6,118	8,472	-
30,300	-	-	-
64,359	-	-	-
47,856	-	-	-
8,999	-	-	-
19,023	7,505	10,578	-
54,174	-	-	-
101,105	65,272	28,777	876
11,314	-	1,000	-
27,482	444	7,158	98
4,939	-	1,500	-
8,310	885	2,954	2,970
21,949	7,098	-	9,126
169	-	-	-
606,408	128,868	297,294	85,195
5,000	-	5,000	-
698	-	698	-
<b>1,307,745</b>	<b>125,292</b>	<b>743,863</b>	<b>137,431</b>
(958)	-	-	-
33,279	-	-	-
1,238,299	116,514	731,993	137,432
34,913	8,778	11,870	-
2,212	-	-	-
<b>171,326</b>	<b>16,049</b>	<b>8,986</b>	<b>81,243</b>
63,811	-	-	-
107,515	16,049	8,986	81,243

Total Budget Amount	Change from Final FY22		
	FY19-23	FY24-28	Beyond 28
<b>236,801</b>	<b>(45,571)</b>	<b>126,503</b>	<b>155,863</b>
<b>118,796</b>	<b>(37,717)</b>	<b>76,067</b>	<b>80,443</b>
<b>26,187</b>	<b>(17,372)</b>	<b>20,605</b>	<b>22,953</b>
-	-	-	-
(91)	(3,962)	3,871	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	(1,008)	1,008	-
-	-	-	-
930	858	36	36
-	-	-	-
-	(303)	205	98
-	-	-	-
-	184	(1,577)	1,393
11	11	-	-
-	-	-	-
25,337	(13,152)	17,062	21,426
-	-	-	-
-	-	-	-
<b>89,509</b>	<b>(28,708)</b>	<b>70,985</b>	<b>47,231</b>
-	-	-	-
-	-	-	-
88,090	(28,988)	69,846	47,231
1,419	280	1,139	-
-	-	-	-
<b>823</b>	<b>(567)</b>	<b>(14,128)</b>	<b>15,517</b>
-	-	-	-
823	(567)	(14,128)	15,517

**ATTACHMENT B**  
**Overview of the FY23 Proposed CIP and Changes from the Final FY22 CIP**

Program and Project	FY22 Final				FY23 Proposed				Change from Final FY22			
	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
<b>CSO</b>	<b>913,147</b>	<b>10,606</b>	<b>143</b>	<b>-</b>	<b>915,424</b>	<b>12,217</b>	<b>809</b>	<b>-</b>	<b>2,277</b>	<b>1,611</b>	<b>666</b>	<b>-</b>
324 CSO Support	55,210	6,221	144	-	56,210	6,555	810	-	1,000	334	666	-
339 North Dorchester Bay	221,510	-	-	-	221,510	-	-	-	-	-	-	-
340 Dorchester Bay Sewer Separation (Fox Point)	55,029	-	-	-	55,029	-	-	-	-	-	-	-
341 Dorchester Bay Sewer Separation (Commercial Point)	61,443	1,581	-	-	61,443	1,581	-	-	-	-	-	-
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	-	-	-	-	-	-	-
347 East Boston Branch Sewer Relief	85,637	-	-	-	85,637	-	-	-	-	-	-	-
348 BOS019 Storage Conduit	14,288	-	-	-	14,288	-	-	-	-	-	-	-
349 Chelsea Trunk Sewer	30,402	623	-	-	30,679	900	-	-	277	277	-	-
350 Union Park Detention Treatment Facility	49,583	-	-	-	49,583	-	-	-	-	-	-	-
351 BWSC Floatables Controls	946	-	-	-	946	-	-	-	-	-	-	-
352 Cambridge Floatables Control	1,127	-	-	-	1,127	-	-	-	-	-	-	-
353 Upgrade Existing CSO Facilities	22,385	-	-	-	22,385	-	-	-	-	-	-	-
354 Hydraulic Relief Projects	2,295	-	-	-	3,295	1,000	-	-	1,000	1,000	-	-
355 MWR003 Gate & Siphon	4,424	-	-	-	4,424	-	-	-	-	-	-	-
356 Fort Point Channel Sewer Separation	11,507	-	-	-	11,507	-	-	-	-	-	-	-
357 Charles River CSO Controls	3,633	-	-	-	3,633	-	-	-	-	-	-	-
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	-	-	-	-	-	-	-
362 East Boston CSO Control	2,182	2,182	-	-	2,182	2,182	-	-	-	-	-	-
<b>Other Wastewater</b>	<b>392,866</b>	<b>158,383</b>	<b>111,170</b>	<b>(67,004)</b>	<b>392,866</b>	<b>165,702</b>	<b>109,109</b>	<b>(72,262)</b>	<b>-</b>	<b>7,319</b>	<b>(2,061)</b>	<b>(5,258)</b>
128 I/I Local Financial Assistance	392,585	158,383	111,170	(67,004)	392,585	165,702	109,109	(72,262)	-	7,319	(2,061)	(5,258)
138 Sewerage System Mapping Upgrade	281	-	-	-	281	-	-	-	-	-	-	-
<b>Total Waterworks</b>	<b>4,493,700</b>	<b>359,949</b>	<b>829,185</b>	<b>1,193,161</b>	<b>4,594,201</b>	<b>344,532</b>	<b>869,682</b>	<b>1,268,581</b>	<b>100,501</b>	<b>(15,417)</b>	<b>40,497</b>	<b>75,420</b>
<b>Drinking Water Quality</b>	<b>709,234</b>	<b>13,527</b>	<b>17,464</b>	<b>28,271</b>	<b>715,370</b>	<b>13,020</b>	<b>24,107</b>	<b>28,271</b>	<b>6,136</b>	<b>(507)</b>	<b>6,643</b>	<b>-</b>
542 Carroll Water Treatment Plant	438,843	6,477	9,250	-	441,841	8,091	10,634	-	2,998	1,614	1,384	-
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	43,535	7,050	8,214	28,271	46,673	4,929	13,473	28,271	3,138	(2,121)	5,259	-

**ATTACHMENT B**  
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Program and Project	FY22 Final				FY23 Proposed				Change from Final FY22			
	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
<b>Transmission</b>	<b>2,562,768</b>	<b>128,934</b>	<b>321,699</b>	<b>1,286,941</b>	<b>2,643,452</b>	<b>135,318</b>	<b>342,106</b>	<b>1,340,833</b>	<b>80,684</b>	<b>6,384</b>	<b>20,407</b>	<b>53,892</b>
597 Winsor Station Pipeline	52,770	993	45,391	653	58,122	978	50,757	653	5,352	(15)	5,366	-
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	21,598	9,009	3,897	25	24,202	10,080	5,405	50	2,604	1,071	1,508	25
617 Sudbury/Weston Aqueduct Repairs	12,958	2,804	7,255	667	12,985	2,809	7,278	667	27	5	23	-
620 Wachusett Reservoir Spillway Improvement	9,287	-	-	-	9,287	-	-	-	-	-	-	-
621 Watershed Land	29,000	6,154	-	-	29,000	6,154	-	-	-	-	-	-
622 Cosgrove/Wachusett Redundancy	58,628	6,610	-	-	58,619	6,601	-	-	(9)	(9)	-	-
623 Dam Projects	7,223	3,583	525	-	8,323	4,339	868	-	1,100	756	343	-
625 Metro Tunnel Redundancy	1,500,218	22,939	188,228	1,285,594	1,558,045	23,081	194,647	1,336,861	57,827	142	6,419	51,267
628 Metro Redundancy Interim Improvement	129,526	69,815	56,874	-	143,309	74,124	63,747	2,600	13,783	4,309	6,873	2,600
630 Watershed Division Capital Improvement	23,550	7,025	16,525	-	23,550	7,150	16,400	-	-	125	(125)	-
<b>Distribution &amp; Pumping</b>	<b>1,053,151</b>	<b>130,297</b>	<b>395,512</b>	<b>62,987</b>	<b>1,065,682</b>	<b>111,769</b>	<b>419,117</b>	<b>70,441</b>	<b>12,531</b>	<b>(18,528)</b>	<b>23,605</b>	<b>7,454</b>
618 Peabody Pipeline	1,448	389	-	-	1,448	389	-	-	-	-	-	-
677 Valve Replacement	22,249	-	6,747	3,485	22,635	-	6,747	3,872	386	-	-	387
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	1,665	28	1,514	-	1,713	26	1,563	-	48	(2)	49	-
693 NHS - Revere & Malden Pipeline Improvement	85,985	9,880	45,350	2,193	79,485	6,565	40,508	3,850	(6,500)	(3,315)	(4,842)	1,657
702 New Connect Mains-Shaft 7 to WASM 3	60,694	16,546	31,224	-	71,082	13,464	44,694	-	10,388	(3,082)	13,470	-
704 Rehabilitation of Other Pump Stations	51,290	780	20,453	-	51,290	33	19,240	1,960	-	(747)	(1,213)	1,960
706 NHS-Connecting Mains from Section 91	2,360	-	-	-	2,360	-	-	-	-	-	-	-
708 Northern Extra High Service New Pipelines	42,467	5,440	33,000	395	42,467	5,198	33,100	537	-	(242)	100	142
712 Cathodic Protection Of Distrubution Mains	61,586	4,815	56,502	-	61,586	3,222	57,944	151	-	(1,593)	1,442	151
713 Spot Pond Supply Mains Rehabilitation	66,534	545	500	-	66,526	237	800	-	(8)	(308)	300	-
714 Southern Extra High Sections 41 & 42	3,657	-	-	-	3,657	-	-	-	-	-	-	-
719 Chestnut Hill Connecting Mains	38,886	-	20,590	9	39,663	-	21,376	-	777	-	786	(9)
720 Warren Cottage Line Rehabilitation	1,205	-	-	-	1,205	-	-	-	-	-	-	-
721 South Spine Distribution Mains	89,798	2,587	50,302	226	91,573	2,269	52,202	419	1,775	(318)	1,900	193
722 NIH Redundancy & Storage	140,130	44,640	46,585	10	141,221	37,811	54,515	-	1,091	(6,829)	7,930	(10)
723 Northern Low Service Rehabilitation Section 8	60,834	5,901	51,290	688	62,277	4,962	53,259	1,101	1,443	(939)	1,969	413
724 Northern High Service - Pipeline Rehabilitation	-	-	-	-	-	-	-	-	-	-	-	-
725 Hydraulic Model Update	598	-	-	-	598	-	-	-	-	-	-	-
727 Southern Extra High Redundancy & Storage	140,513	37,951	18,136	55,981	143,146	37,288	19,036	58,377	2,633	(663)	900	2,396
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 B**  
**Overview of the FY23 Proposed CIP and Changes from the Final FY22 CIP**

Program and Project	FY22 Final				FY23 Proposed				Change from Final FY22			
	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	15,985	742	13,318	-	16,483	252	14,132	174	498	(490)	814	174
<b>Other</b>	<b>168,547</b>	<b>87,191</b>	<b>94,510</b>	<b>(185,040)</b>	<b>169,697</b>	<b>84,425</b>	<b>84,352</b>	<b>(170,966)</b>	<b>1,150</b>	<b>(2,766)</b>	<b>(10,158)</b>	<b>14,074</b>
753 Central Monitoring System	43,729	14,954	8,070	-	43,058	11,706	10,647	-	(671)	(3,248)	2,577	-
763 Distribution Systems Facilities Mapping	2,799	885	878	-	3,087	788	1,263	-	288	(97)	385	-
764 Local water infrastructure rehabilitation Assistance	7,488	-	-	-	7,488	-	-	-	-	-	-	-
765 Local Water Pipeline Improvement Loan Program	-	55,104	20,215	(215,592)	-	57,470	4,829	(202,572)	-	2,366	(15,386)	13,020
766 Waterworks Facility Asset Protection	114,531	16,249	65,347	30,552	116,064	14,462	67,613	31,606	1,533	(1,787)	2,266	1,054
<b>Business &amp; Operations Support</b>	<b>180,311</b>	<b>53,367</b>	<b>25,915</b>	<b>-</b>	<b>197,817</b>	<b>60,931</b>	<b>35,853</b>	<b>-</b>	<b>17,504</b>	<b>7,563</b>	<b>9,939</b>	<b>-</b>
881 Equipment Purchase	41,106	10,092	9,157	-	41,438	10,296	9,285	-	332	204	128	-
925 Technical Assistance	1,350	899	451	-	1,500	965	535	-	150	66	84	-
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	26,869	12,669	-	-	29,997	12,496	3,300	-	3,128	(173)	3,300	-
934 MWRA Facilities Management	5,071	3,075	1,625	-	16,871	13,954	2,546	-	11,800	10,879	921	-
935 Alternative Energy Initiatives	23,684	(234)	5,500	-	23,891	(234)	5,708	-	207	-	208	-
940 Applicat Improv Program	20,227	11,417	5,918	-	21,459	8,667	9,899	-	1,232	(2,750)	3,981	-
942 Info Security Program ISP	7,976	4,568	1,700	-	8,225	4,538	1,979	-	249	(30)	279	-
944 Info Tech Mgmt Program	200	200	-	-	2	2	-	-	(198)	(198)	-	-
946 IT Infrastructure Program	17,977	10,683	1,563	-	18,581	10,248	2,601	-	604	(435)	1,038	-

**Attachment C  
New Capital Projects Added to the FY23 Proposed CIP**

Program	Project	Subphase	Contract Number	Total Contract Amount	NTP	FY23	FY24	FY25	FY26	FY27	FY28	FY24-28	Total Expenditures
Interception & Pumping	Facility Asset Protection	Belle Isle Sandcatcher Rehab Design/ESDC/REI	7989	\$ 1,000,000	Jul-22	\$ 475,000	\$ 475,000	\$ 50,000				\$ 525,000	\$ 1,000,000
Interception & Pumping	Facility Asset Protection	Belle Isle Sandcatcher Rehabilitation	7988	\$ 4,000,000	Jan-23		\$ 3,000,000	\$ 1,000,000				\$ 4,000,000	\$ 4,000,000
Interception & Pumping	Facility Asset Protection	Fuel Oil Tank Replacement - Phase 4 Construction	7986	\$ 1,500,000	Jan-24		\$ 500,000	\$ 500,000	\$ 500,000			\$ 1,500,000	\$ 1,500,000
Interception & Pumping	Facility Asset Protection	Fuel Oil Tank Replacement - Phase 5 Construction	7987	\$ 1,500,000	Jul-25				\$ 500,000	\$ 500,000	\$ 500,000	\$ 1,500,000	\$ 1,500,000
CSO MWRA Managed	Hydraulic Relief Projects	Somerville Marginal New Pipe Connection	7985	\$ 1,000,000	Jul-22	\$ 1,000,000						\$ -	\$ 1,000,000
<b>SUMMARY:</b>													
<b>Total Wastewater Projects</b>				<b>\$ 9,000,000</b>		<b>\$ 1,475,000</b>	<b>\$ 3,975,000</b>	<b>\$ 1,550,000</b>	<b>\$ 1,000,000</b>	<b>\$ 500,000</b>	<b>\$ 500,000</b>	<b>\$ 7,525,000</b>	<b>\$ 9,000,000</b>

**STAFF SUMMARY**

**TO:** Board of Directors  
**FROM:** Frederick A. Laskey, Executive Director   
**DATE:** January 19, 2022  
**SUBJECT:** Proposed Amendments to the Management Policies of the Board of Directors

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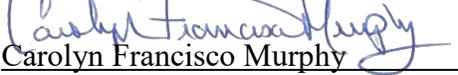
**COMMITTEE:** Administration, Finance & Audit

           INFORMATION

  X   VOTE

  
Michele S. Gillen

            
Director, Administration

  
Carolyn Francisco Murphy

            
General Counsel

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Douglas J. Rice, Director of Procurement  
Preparer/Title

**RECOMMENDATION:**

To adopt the proposed amendments to the Management Policies of the Board of Directors to (1) increase the Procurement Delegated Authority thresholds for certain staff to reflect inflationary increases since the current delegations were established; (2) provide the Executive Director with separate delegated authority for routine chemical purchases when awarded to the low bidder; (3) incorporate re-delegation of authority language for professional and non-professional service contract amendments to make it consistent with the Executive Director’s construction contract change order re-delegation authority, each substantially in the form presented and filed with the records of the meeting.

**DISCUSSION:**

In July 1985, the Board adopted a set of Management Procedures (MWRA Policy # ADM.01, Management Policies of the Board of Directors) designed to regulate the day-to-day responsibilities of the Authority. This Policy set forth specific delegations of authority for certain staff to purchase materials, award contracts, and execute amendments and change orders up to certain values. With the exception of minor increases to the delegated authority thresholds granted to the Purchasing Manager, COO and Director of Administration in 2015, these delegated thresholds have not been increased since they were established in 1985.

Since 1985, the annual rate of inflation in the United States has been approximately 2.6%. Staff are recommending increases to the 1985 delegated authority dollar amounts at slightly less than this rate. These inflationary adjustments will ensure that MWRA continues to efficiently handle routine matters, while larger awards will continue to be brought before the Board for approval. No amendments or changes are being recommended for either the Authority’s Change Order Process policy (ADM.03) or the Contract Amendments - Professional Services policy (ADM.25). A survey of peer agencies - MassPort, MassDOT and MBTA - revealed that the delegations proposed by staff would be comparable to, or in some cases, significantly lower than the delegations at those agencies.

Staff are recommending that a new purchasing delegation be created to specifically address routine, recurring chemical purchases. For this category, staff are recommending that the Executive Director be authorized to approve a purchase of up to \$15 million when that award is to the lowest responsive bidder.

This chart presents the current and proposed delegations:

<b>Category</b>	<b>Delegate</b>	<b>Current Delegation</b>	<b>Proposed Delegation</b>
Purchasing	Executive Director	\$1,000,000	\$2,000,000
	Director of Administration	\$35,000	\$70,000
	Director of Procurement	\$25,000	\$50,000
	Purchasing Manager	\$5,000	\$10,000
	Authorized Representative <sup>1</sup>	\$2,000	\$4,000
Purchasing Amendments	Executive Director	25% of original contract or \$250,000 and not more than 6 months.	25% of original contract or \$500,000 and not more than 6 months.
Chemical Purchases	Executive Director	N/A	\$15,000,000
Construction Contracts	Executive Director	\$1,000,000	\$2,000,000
Change Orders	Executive Director	25% of original contract or \$250,000 and not more than 6 months.	25% of original contract or \$500,000 and not more than 6 months.
Professional Services (With an Individual)	Executive Director	\$50,000 and 12 months	\$100,000 and 24 months
Professional Services (With a Firm)	Executive Director	\$100,000 and 12 months	\$500,000 and 36 months
Non-Professional Services	Executive Director	\$250,000	\$500,000
Professional and Non-Professional Services	Director of Administration and Chief Operating Officer	\$35,000 and 12 months	\$70,000 and 12 months
	Deputy Chief Operating Officer, Director of Finance and General Counsel	\$10,000 and 12 months	\$20,000 and 12 months
	Authorized Designee	\$5,000 and 12 months	\$10,000 and 12 months
Amendments	Executive Director	25% of original contract or \$250,000 and not more than 6 months.	25% of original contract or \$500,000 and not more than 6 months. Re-delegation from the Board consistent with Change Orders

<sup>1</sup> Only with the approval of the Executive Director

Staff are also recommending that the same re-delegation of authority language currently found in the Construction section be incorporated into the Amendment section, authorizing the Executive Director to approve additional amendments as may be needed to an engineering contract in an amount not to exceed the aggregate of \$500,000. In the event that this initial re-delegation becomes allocated, the Executive Director will need to seek additional approval from the Board for further incremental delegations of time and money.

**BUDGET/FISCAL IMPACT:**

The changes discussed in this staff summary will have no budgetary impacts.

**ATTACHMENTS:**

Attachment 1: Proposed Amendments to the Management Policies of the Board of Directors

Attachment 2: Delegated Authority Comparison Chart

Attachment 1: Proposed Amendments to the Management Policies of the Board of Directors

**Current**  
**Proposed**

**Management Policies of the Board of Directors (ADM.01)**

**E. Delegated Authority**

**1. Purchasing.**

(a) By Executive Director. The Executive Director may award contracts for purchase or lease of equipment, materials or supplies for not more than ~~\$1,000,000~~ \$2,000,000 where the recommendation to award is to the lowest responsive and eligible bidder under a competitive procurement conducted by the Authority or where the recommendation to award is under a contract awarded by the State Purchasing Agent, a Multi-State Cooperative or the Federal General Services Administration (see Article V.B above).

(i) For purchases of chemicals that are required for the normal day-to-day operations of the Authority's water and wastewater treatment operations, the Executive Director may award contracts for not more than \$15,000,000 where the recommendation to award is to the lowest responsive and eligible bidder under a competitive procurement conducted by the Authority.

(b) By Other than Executive Director. The Director of Administration may award contracts for purchase or lease of equipment, materials or supplies for not more than ~~\$35,000~~ \$70,000; the Director of Procurement may award such contracts for not more than ~~\$25,000~~ \$50,000; the Purchasing Manager may award such contracts for not more than ~~\$5,000~~ \$10,000; and persons duly authorized in writing by the Executive Director may award such contracts for not more than ~~\$2,000~~ \$4,000.

(c) Amendments. The Executive Director may amend any contract for purchase or lease of equipment, materials or supplies by not more than ~~25%~~ 25% of the original contract amount or ~~\$250,000~~ \$500,000 whichever is less and for a term not exceeding an aggregate of ~~six~~ six months.

**2. Construction Contracts.**

(a) Original Contract. The Executive Director may award construction contracts for an amount not more than ~~\$1,000,000~~ \$2,000,000 where the recommendation is in accordance with the competitive public bidding laws.

(b) Change Orders and Amendments. The Executive Director may award change orders or amendments to contracts for the construction of buildings or public works which increase the contract amount by not more than ~~25%~~ 25% of the original amount or ~~\$250,000~~ \$500,000 whichever is less and for a term not exceeding an aggregate of ~~six~~ six months, and which decrease the contract amount by any amount and for any term; provided however that cost increase changes and cost credit changes must be awarded separately.

(c) Additional Authority for Change Orders or Amendments. Once the delegated Authority granted to the Executive Director in paragraphs (a) and (b) above is exceeded, the Executive Director may request the Board of Directors to approve a set increment of additional delegated authority for time and money. This additional set increment of delegated authority shall be in amounts to be decided by the Board, although the Executive Director may make recommendations as he deems appropriate. Upon approval by the Board of Directors of the additional amount or time, the Executive Director shall be authorized to award any change orders or amendments within the approved increments.

**3. Professional and Non-Professional Service Contracts.**

(a) Professional Services:

(1) With Individual. The Executive Director may award an agreement for professional services with an individual for a term not exceeding ~~twelve~~ twenty-four months and for an amount not

more than ~~\$50,000~~ \$100,000, provided, however, that the Board of Directors reserves the right to approve any consecutive agreements with the same individual.

(2) With Firm. The Executive Director may award an agreement for professional services with a firm for a term not exceeding ~~twelve~~ twenty four months and for an amount not more than ~~\$100,000~~ \$500,000.

(b) Non-Professional Services: The Executive Director may award an agreement for non-professional services, by contract or purchase order, with either a firm or an individual for an amount not more than ~~\$250,000~~ \$500,000 if a competitive procurement process has been conducted by the Authority or if selecting a contract awarded by the State Purchasing Agent, a Multi-State Collective or the Federal General Services Administration (see Article V.B above), or for an amount not more than ~~\$100,000~~ if a procurement process other than a competitive process has been conducted.

(c) By Other than Executive Director. The Chief Operating Officer or the Director of Administration may award an agreement for professional or non-professional services for not more than ~~\$35,000~~ \$70,000 and for a term not exceeding ~~twelve~~ months; and the Deputy Chief Operating Officer, the Director of Finance or the General Counsel may award such agreements for an amount not more than ~~\$10,000~~ \$20,000 and for a term not exceeding ~~twelve~~ months. A designee duly authorized in writing by the Executive Director, the Chief Operating Officer, the Director of Administration, the Director of Finance or the General Counsel may award such agreements for not more than ~~\$5,000~~ and for a term not exceeding ~~twelve~~ months.

(d) Amendments. The Executive Director may amend any service agreement with individuals or with firms by not more than ~~25%~~ of the original contract amount or ~~\$250,000~~ \$500,000 whichever is less and for a term not exceeding an aggregate of ~~six~~ months.

(e) Additional Authority for Amendments. Once the delegated Authority granted to the Executive Director in paragraphs (a-d) above is exceeded, the Executive Director may request the Board of Directors to approve a set increment of additional delegated authority for time and money. This additional set increment of delegated authority shall be in amounts to be decided by the Board, although the Executive Director may make recommendations as he deems appropriate. Upon approval by the Board of Directors of the additional amount or time, the Executive Director shall be authorized to award any amendments within the approved increments.

#### 4. Miscellaneous.

(a) Reporting Requirements. The Executive Director shall on a monthly basis present a written report to the Board of Directors stating all actions under delegated authority for more than \$25,000. The report shall state the nature of the action taken, the name of each person or firm with whom the Authority has contracted, the duration and the amount of the contract, change order or amendment.

(b) Further Actions by the Executive Director. The Executive Director is authorized to take all actions deemed necessary or appropriate to effectuate, perform and benefit from contracts and agreements duly entered into by or on behalf of the Authority, including without limitation, the execution and delivery of documents and pertinent certificates.

(c) Request for Proposals and Other Pre-Contract Steps. Whenever the power to enter into agreements has not been delegated to the Executive Director, formal approval by the Board of Directors will be obtained prior to entering into the contractual arrangement except in emergencies. Requests for Proposals and other pre-contract steps may be taken by the responsible officer or staff of the Authority without prior approval by the Board of Directors.

(d) Retainages. The Executive Director may approve or execute any release of any retainage on any agreement, contract or order.

## Attachment 2: Delegated Authority Comparison Chart

	<u>MWRA Current</u>	<u>MassPort</u>	<u>MBTA</u>	<u>MassDOT</u>
Purchasing	\$1,000,000	\$5,000,000		\$15,000,000
Construction Contracts	\$1,000,000	\$5,000,000	\$15,000,000	\$15,000,000
Construction Change Orders	\$250,000	10%		\$15,000,000
Professional Services	\$100,000	\$2,000,000	\$3,000,000	\$15,000,000
Non-Professional Services	\$250,000			\$15,000,000
Prof & Non-Prof Amendments	\$250,000			\$15,000,000

## STAFF SUMMARY

**TO:** Board of Directors  
**FROM:** Frederick A. Laskey, Executive Director   
**DATE:** January 19, 2022  
**SUBJECT:** Legal Services Furnished by Special Assistant  
Attorney General Jonathan Ettinger/Foley Hoag LLP in the Boston Harbor Case,  
U.S. v. MDC, et al., USDC No. 85-0489-RGS

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**COMMITTEE:** Wastewater Policy and Oversight

INFORMATION  
 VOTE

  
Carolyn Francisco Murphy  
General Counsel

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### RECOMMENDATION:

That the Board approve an increase the hourly rate at which the Authority compensates Foley Hoag LLP for the legal services furnished by Attorney Jonathan Ettinger in his capacity as a Special Assistant Attorney General in the Boston Harbor case from \$700 an hour to \$790 an hour for CY2022, \$850 an hour CY2023 and \$950 an hour CY2024.

### BACKGROUND:

In 1985, a committee of the MWRA Board of Directors conducted a search for legal counsel to represent the interests of the Authority in the Boston Harbor case, along with other civil actions, which had been or would soon be consolidated with Clean Water Act enforcement suit brought by the Environmental Protection Agency. That search resulted in in the Board's selection and recommendation of the firm Foley Hoag & Eliot (now Foley Hoag LLP). The recommendation was transmitted to the Office of the Attorney General where it was approved by then Attorney General Francis X. Bellotti. Thereafter, Foley Hoag attorney John M. Stevens received an appointment as Special Assistant Attorney General to serve as lead counsel for the Authority in the case.

MWRA's Enabling Act requires that the Attorney General represent the Authority "in any action involving water pollution in which the Authority is a plaintiff or defendant." The appointment by the Attorney General of a private sector counsel as Special Assistant Attorney General meets that requirement of the Enabling Act. Attorney Stevens represented the Authority until his retirement in 2013 when his partner Jonathan Ettinger, who also worked on the Boston Harbor case, was appointed Special Assistant Attorney General to take the role as lead counsel.

The Board last approved an hourly rate increase for Attorney Ettinger's legal services in the Boston Harbor case in 2019. Staff confirmed with the Office of Attorney General that it is still left to agency for whom the legal services are provided to establish the billing rates for the Special Assistant Attorney General.

**DISCUSSION:**

Foley Hoag's experience and length of service to the Authority in the Boston Harbor case have been invaluable in building and maintaining a high level of credibility as a party before the Federal Court, as well as with other parties in the lawsuit. Attorney Ettinger has dedicated over 30 years to the practice of environmental law. His legal services and dedication to the Boston Harbor case have been stellar. The continuity of representation of the Authority in the Boston Harbor case, by competent counsel having the depth and breadth of knowledge and experience of Attorney Ettinger, is of the utmost importance. Attorney Ettinger serves as lead counsel in the case providing counsel and advice to the Authority, attending to issues and assisting with court filings in the case and representing the Authority before the Federal Court and is dealing with counsel for the various parties.

It is Foley Hoag's practice to adjust billing rates on an annual basis. In July, 2019, the Board approved a rate increase from \$460 an hour (established in 2005) to \$625 an hour for FY2020 and \$700 an hour for FY2021. Foley Hoag extended the hourly rate of \$700 through calendar year 2021 and has proposed new hourly rates for calendar years 2022-2023, and at the request of staff for 2024. The proposed new hourly rates for Attorney Ettinger's services are: \$790 for CY2022; \$850 CY2023; and \$950 CY2024 (but not to exceed Attorney Ettinger's standard rate less 10%). This represents a year over year increase of 13% in 2022, 8% for 2023 rate; and 12% for 2024. This hourly rates represent a discounted for Attorney Ettinger's standard hourly rate is \$980 per hour for 2021. These proposed rates are not only lower than the current rates, but based on Foley Hoag's typical 4% to 6% annual increase would still represent a discount throughout the term of the extension. Foley Hoag will apply a similar discount for other attorneys who also work on the case; and paralegals will be billed at their standard rate less a 10% discount. General Counsel is of the opinion that the proposed rates are reasonable given the expertise of Attorney Ettinger, quality of the legal services provided by Foley Hoag and legal significance of the Boston Harbor case.

Authority staff, including Law Division attorneys, oftentimes and whenever possible draft court filings, legal documents and other submissions in the Boston Harbor case to help keep costs down. Staff intend for this practice to continue. Fees billed by Foley Hoag since July, 2019 in the Boston Harbor case have been approximately \$81,000. Attorney Ettinger also represents the Authority in the HEEC federal litigation case and Foley Hoag attorney Tad Heuer represents the Authority in the DPU proceeding relating to the cross harbor cable. Rates were established separately for those matters. Both have been instrumental in assisting the Authority in those complex matters.

**BUDGET/FISCAL IMPACT:**

There are sufficient funds in the FY2022 CEB for the payment of Foley Hoag's legal bills, and sufficient funds will be included in the FY2023 CEB.

**STAFF SUMMARY**

**TO:** Board of Directors  
**FROM:** Frederick A. Laskey, Executive Director  
**DATE:** January 19, 2022  
**SUBJECT:** Financial and Swap Advisory Services  
PFM Financial Advisory LLC  
Contract F264



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**COMMITTEE:** Administration, Finance & Audit

VOTE  
 INFORMATION

  
Michele S. Gillen  
Director, Administration

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

  
Thomas J. Durkin  
Director, Finance

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**RECOMMENDATION:**

To approve the recommendation of the Consultant Selection Committee to award Contract F264 for financial and swap advisory services to PFM Financial Advisors LLC and to authorize the Executive Director, on behalf of the Authority, to execute Contract F264 in an amount not to exceed \$632,925 for a term of four years from the notice to proceed.

**DISCUSSION:**

To manage its multi-billion dollar capital program, MWRA requires the services of an Independent Registered Municipal Advisor (financial advisor) and a Qualified Independent Representative (swap advisor). The financial advisor will assist MWRA with the development of a long-term plan of finance, and debt issuances, including assistance with structuring the bond transaction, review and analysis of market conditions, and ongoing management of the debt program. The financial advisor will also assist MWRA with its other financial operations, including review of the existing loan programs and the commercial paper program. The swap advisor will provide MWRA with ongoing swap monitoring, annual reports required by GASB 53 and GASB 72 and other swap related services.

To help protect municipal debt issuers like MWRA, the Dodd-Frank Wall Street Reform and Consumer Protection Act (Dodd-Frank) placed a registration requirement and fiduciary responsibilities on municipal financial advisors. In addition to the restrictions on financial advisors, Dodd-Frank restricted investment banks from providing information to municipal bond issuers who are not represented by a registered independent municipal advisor. Dodd-Frank also required the Securities and Exchange Commission (SEC) and Municipal Securities Rulemaking Board (MRSB) to develop regulations for financial advisors. Dodd-Frank required the SEC and Commodity Futures Trading Commission to produce regulations related to firms providing swap

advisory services. The swap regulations place a similar registration and fiduciary responsibility on swap advisors.

### **Procurement Process:**

The procurement process to select a financial and swap advisor utilized a one-step Request for Qualification Statements and Proposals (RFQ/P), which was issued on October 20, 2021. In addition to the standard procurement advertising requirements, which included Goods & Services, the Boston Herald, the Banner Publication and El Mundo, copies of the advertisement were sent directly to six firms to encourage competition and 122 firms received notice of the RFQ/P via the MWRA Supplier Portal. Fifteen firms downloaded the RFQ/P and two firms, PFM Financial Advisors LLC (PFM) and Omnicap Group LLC (Omnicap) submitted proposals on November 19, 2021. In its proposal, PFM identified PFM Swap Advisors LLC as the subconsultant that would provide swap advisory services. Omnicap indicated that it would provide swap advisory services with the same team that provides financial advisor services.

As a result of a prior municipal market scandal involving MWRA's former financial advisor, beginning with its 1993 procurement for financial advisory services, eligibility of firms to provide financial advisory services was limited to financial firms that do not also provide underwriting services. This prohibition was recommended at that time by the Inspector General and MWRA has continued the practice without interruption since then. As a result of the requirements in the Dodd-Frank Act, the SEC and the MRSB through Rule G-23 places restrictions on entities from serving as both a financial advisor and underwriter on the same transaction. This regulation prohibits a financial advisor firm from simultaneously serving as an underwriter on a transaction for which it is providing advisory services. However, it does not prohibit a financial firm from serving as an underwriter on other municipal bonds or future transactions for that issuer or, at this time from purchasing the bonds it advised on in the secondary market. In order to reduce the risk of conflicts of interest between financial advisory services and underwriting, MWRA again made the business decision to continue its long-standing practice of prohibiting entities that conduct municipal underwritings from serving as its financial advisor. Proposers are required to submit a Statement of Fiduciary Responsibility Standards as part of the proposal which provides the information necessary to determine if a conflict or appearance of a conflict exists.

As part of the RFQ/P process, a Disclosure Panel comprised of MWRA legal and procurement staff reviewed the proposals for compliance with MWRA's Statement of Fiduciary Responsibility Standards. Based on the Panel's review, it was determined that no conflict or appearance of a conflict exists that would disqualify PFM or Omnicap from providing these services.

After that determination, the Selection Committee evaluated and ranked the two proposals based on the criteria contained in the RFQ/P including Cost (30 pts), Qualifications and Key Personnel (30 pts), Similar Experience and Past Performance (15 pts), Technical Approach (15pts), and Capacity/Organization, and Management Approach (10 pts). The proposals for Financial and Swap Advisory Services were ranked as follows:

<b>Firm</b>	<b>Cost</b>	<b>Total Points</b>	<b>Rank Points</b>
PFM	\$ 632,925	439	5
Omnicap	\$ 825,000	331	10

PFM's proposal offered an overall cost to MWRA that is \$192,075 lower than the total cost proposed by Omnicap. PFM's senior personnel are qualified and possess the necessary experience to provide financial advisory services to MWRA. PFM has served as MWRA's financial advisors for the last 16 years and its performance has been excellent. PFM's hourly rates for the managing director and senior managing consultant category increased by \$50 per hour over the rates that have been in effect since 2017 and PFM proposed no escalation in hourly rates over the four-year term of this contract. The hourly rate for analyst labor classification increased by \$30 per hour over the 2017 rate with no escalation over the contract term. PFM has served as financial advisor to several Massachusetts entities including the Office of the State Treasurer, Massachusetts Port Authority, Massachusetts Clean Water Trust, and Massachusetts Bay Transportation Authority as well as many other large issuers around the United States. All of the references for PFM were excellent.

While Omnicap's proposal included a well-qualified staff with experience in serving as financial advisors, its lead staff had less years of experience than those proposed by PFM. The Selection Committee also had some concern about the same staff providing both financial advisor and swap services given the specialized nature of both tasks. The overall cost of Omnicap's proposal was significantly higher than PFM's proposed cost to provide the same services.

The Selection Committee determined that PFM's senior personnel are qualified and possess the necessary experience to provide financial and swap advisory services to MWRA. The total not-to-exceed amount for the four years of this contract is \$632,925, which is \$52,175 higher than the last contract due primarily to the higher hourly rates.

The Selection Committee concluded that PFM had significant relevant experience and possesses the qualifications and capacity to provide MWRA with the required services. As a result, all of the committee members scored PFM in the very good and excellent range and unanimously selected PFM as first ranked. Therefore, the Selection Committee recommends that this contract be awarded to PFM.

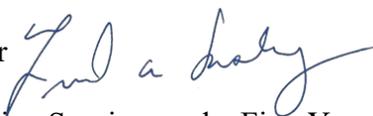
#### **BUDGET/FISCAL IMPACT:**

The costs associated with financial advisory services are split between the cost of issuance for a related bond transaction and the current expense budget depending on the task. There are sufficient funds in the FY22 CEB to pay for the work under this contract. Funds for the remaining years will be included in future CEBs.

#### **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 19, 2022  
**SUBJECT:** Purchase of 45 Cisco Switches, Installation Services and a Five-Year Maintenance Service Agreement  
ePlus Technology, Inc.  
WRA-5053Q, State Contract ITT50

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**COMMITTEE:** Administration, Finance & Audit

INFORMATION  
 VOTE

Paula Weadick, MIS Director  
Shantanu Patil, IT Architect  
Douglas J. Rice, Director, Procurement  
Preparer/Title

  
Michele S. Gillen  
Director, Administration

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### RECOMMENDATION:

To approve the award of Purchase Order Contract WRA-5053Q for 45 Cisco switches, installation services and a five-year maintenance service agreement to the lowest responsive bidder, ePlus Technology, Inc., and to authorize the Executive Director, on behalf of the Authority, to execute said Purchase Order Contract in the bid amount of \$484,163.00.

### DISCUSSION:

Switches connect multiple IT resources such as computers, wireless access points, printers, plotters and servers on the same network within a building or campus. MWRA has implemented a Two Tier network design consisting of Access switches and Core switches. Access switches are used in every MWRA facility to enable network connectivity to IT resources. Access switches are typically located in network closets at each location and provide network connectivity to the IT resources listed previously. Network cabling is a hub and spoke configuration that runs from all IT resources back to the Access switches. The network cabling provides both the connectivity and power to IT resources like wireless access points and the new IP phones (that work over the internet). Core switches are located in the data centers and are the backbone of the network that aggregate Access switch connections with core network resources such as servers and data storage and provide high speed routing for connectivity to other sites.

The existing Access switches are more than ten years old, have reached the end of support in November 2021 and are in need of replacement. In addition, demand for IT resources on the network have dramatically increased due to wireless networking, online training and video conferencing. Replacement of the aging equipment will ensure MWRA's ability to meet the bandwidth requirements with reliable performance.

In addition to furnishing the hardware, the contract includes installation services and five years of maintenance and support for the hardware and software provided by Cisco. Installation services consist of mounting the switches, cabling all the data ports, documenting each switch and adding the switches to Cisco DNA center. Cisco DNA center is a centralized management console and dashboard for these switches. Documentation and location mapping of each switch is a critical component for the new phone system.

This purchase is for the replacement of 45 Access switches at Deer Island and Southborough, and is the third phase of a multi-phase Switch Replacement project. These switches are being replaced with the latest Cisco Catalyst 9200 models to meet current business needs and industry standards. In July 2021, the Board of Directors approved the award of purchase order contract WRA-4985Q for switches in Chelsea and Carroll Water Treatment Plant as the first phase of this project. In September 2021, the second phase of this multi-phase Switch Replacement project was procured for Clinton, Cosgrove, Nut Island, Belchertown, Weston and Walpole. Procurement for the fourth and final phase of this project is anticipated in May 2022.

**Procurement Process:**

Under Bid WRA-5053Q, utilizing MWRA’s e-procurement system (Event 4886), staff directly solicited seven vendors listed on State Contract ITT50, which is authorized to provide Cisco Voice and Data Communications Systems, Services and Equipment.

On December 17, 2021, Event 4886 closed with the following result:

<b>BIDDER</b>	<b>BID AMOUNT</b>
<b>ePlus Technology, Inc.</b>	<b>\$484,163.00</b>

Purchasing Staff contacted the firms that were solicited but did not respond. Presidio Networked Solutions stated that it could not get pricing in time to submit a bid. NWN Corporation stated they did not respond because they were under the understanding that CISCO was already working with another partner. The other solicited vendors were contacted and were non responsive to phone calls and emails.

Staff have reviewed ePlus Technology’s bid and determined that it meets all of the requirements of the bid specifications. Therefore, staff recommend the award of this Purchase Order Contract to ePlus Technology, Inc. as the lowest responsive bidder.

**BUDGET/FISCAL IMPACT:**

The FY22 CIP includes a budget of \$1,400,000 for Access switch upgrades.

**MBE/WBE PARTICIPATION:**

ePlus Technology, Inc. is not a certified Minority-owned or Women-owned business.

**STAFF SUMMARY**

**TO:** Board of Directors  
**FROM:** Frederick A. Laskey, Executive Director   
**DATE:** January 19, 2022  
**SUBJECT:** Delegation of Authority to Execute Contracts for the Purchase and Supply of Electric Energy and Voluntary Renewable Energy Certificates for the MWRA Interval Accounts

**COMMITTEE:** Administration, Finance & Audit

     INFORMATION  
  X   VOTE

  
Michele S. Gillen  
Director of Administration

Carolyn M. Fiore, Deputy Chief Operating Officer  
Denise K. Breiteneicher, Prog. Mgr., Energy and Env. Manager  
Preparer/Title

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

*MWRA has competitively procured electricity supply since 2001. Historically, it has been economically beneficial for MWRA to buy electricity in the competitive market as opposed to paying for basic service from the utilities. In the competitive bid process, the challenge is to determine the level of risk versus certainty that MWRA is willing to assume, and to estimate the potential budget impact for a variety of options. The current contract for the Interval Accounts electricity supply expires in May 2022. Staff traditionally take electricity bids in spring or fall because the energy market pricing is typically more favorable during these seasons. Additionally, prices will be sought for a supply of enough Renewable Energy Certificates (RECs) to offset 100% of the Interval Accounts' electricity usage.*

*In a commodity market where prices change within a very short period of time, MWRA must be prepared to award the contract almost immediately after bids are received to lock-in the pricing. Therefore, on the day bids are received, staff will evaluate the bids based on market conditions and pricing received. To ensure that MWRA is prepared to execute replacement power contracts if the pricing received is favorable, staff recommend that the Board authorize the Executive Director to award contracts to the successful bidder(s). Staff will report to the Board on the bid results and on the new contract(s) that are executed for electric power supply and the supply of 100% renewable energy credits for the Interval Accounts.*

**RECOMMENDATION:**

To authorize the Executive Director, on behalf of the Authority, to execute a contract for the supply of electric power to the Interval Accounts, consisting of the Carroll Water Treatment Plant and the larger Field Operations and Facility Management Accounts, and a contract to purchase additional Renewable Energy Credits to voluntarily increase the percentage of the energy supply for the Interval Accounts to be 100% renewable, with the lowest responsive and responsible bidder(s) for the period and pricing structure selected, as determined by staff to be in MWRA's best interest, and for a contract supply term not to exceed 37 months. This delegation of authority is necessary because MWRA will be required to notify the selected bidders within a few hours of bid submittal to lock-in the bid prices in a constantly changing market.

## **DISCUSSION:**

Based on MWRA account load profiles and prior consults with energy advisors, MWRA has established three distinct electricity supply contracts. The largest contract is for the Deer Island Treatment Plant, which represents approximately 66% of MWRA's total purchased electricity. The next largest contract is for the Interval Accounts, which include the larger facilities, such as the Carroll Water Treatment Plant, the wastewater headworks facilities, the Clinton Wastewater Treatment Plant, and most of the water and wastewater pump stations, representing approximately 30% of MWRA's total purchased load. The third contract is for the smaller, non-time-of-use accounts, known as Profile Accounts, (e.g., the smaller pump stations and CSO facilities, and the Charlestown Navy Yard), representing the remaining 4% of MWRA's total purchased load.

The existing contract for the Interval Accounts expires in May 2022. Bids were received for the Deer Island account in May 2021, with a November 2021 start date, and the Profile Accounts will expire in October 2022. The three electricity supply contracts are structured to have staggered end dates to minimize the risk of procuring the bulk of MWRA's load at the same time. The electricity supply contract for MWRA's smaller Profile Accounts is procured separately because these accounts are based on a fixed pricing structure and typically have higher administrative contract management costs, which make them less attractive to prospective bidders. Additionally, when the current Deer Island contract was bid, MWRA, for the first time, sought price offers on enough renewable energy certificates (RECs) to drive Deer Island's energy supply to be 100% renewable.<sup>1</sup> MWRA accepted the price offer on RECs (\$4.84/REC) that was tied to Direct Energy's bid, which was the lowest cost energy supply offer.

The current Interval Accounts contract has a blended structure with a fixed block price and the balance of the load purchased from the ISO-NE real-time market. With a 3.4 MW block purchased at a fixed price each hour, the current Interval Account contract structure provides a fixed-price portion of approximately 70%, with 30% purchased in the ISO-NE real-time market.

Historically, bids have been taken for three different contract structures, including a 100% fixed all in rate, a blended structure with a fixed-price block and the balance of the load purchased from the ISO real-time market, and a 100% ISO real-time market structure.

MWRA's current contract for Interval Accounts consists of 28 accounts with an annual electricity use of approximately 44.5 million kWh per year and is set to expire in May 2022. Staff intend to pursue a new contract to take its place, targeting March for solicitation of bids in order to take advantage of anticipated favorability in the energy market during the spring season. The contract start date will be the first meter read date available for enrollment for each account in May 2022.

Bids for three pricing structures will be sought, each for 13, 25 and 37-month terms with pricing to include all services and products necessary to provide firm delivery of energy to the Interval Accounts. The first structure will be for an all-in, firm fixed price. The second will be for purchase of 100% of the electricity from the ISO-NE real-time market. The third blended option will be for supply of a base block of power at a fixed-price per kWh, 3.5 MW each hour, with the remaining power each hour purchased from the ISO-NE real-time market. The size of the base blocks of power will be the same as the existing contract structure, with a fixed fraction of approximately

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<sup>1</sup> A portion of the energy supply is already required to be renewable to comply with the Massachusetts Renewable Portfolio Standard.

70%. Although there may be a moderate premium for the fixed blocks of power, this fixed strategy provides budget certainty and protects MWRA from potential price spikes in the winter (due to natural gas supply constraints) and summer (due to increased air conditioning demand) and still offers an opportunity to see potential real-time spot market price savings. This third option is the pricing structure that has been used with success in recent contracts.

Staff have also looked at other electricity purchasing options available to state agencies and authorities, such as purchasing electricity through collaboratives. While a collaborative may generate more interest from the market by offering energy providers a larger block of electricity to bid on, MWRA has a history of success in securing competitive rates with its bidding process for the Interval Accounts.

In preparation for the receipt of bids, staff review market conditions and electricity price forecasts to obtain a sense of what premium may be included in the fixed energy bid prices, based on potential, anticipated volatility in the market, as well as other factors. This helps staff quantify price impacts of the various contract structures, which is important for determining the ideal structure to execute at that time.

As required by the Massachusetts Renewable Portfolio Standard (RPS), a minimum percentage of electricity supply (31% in 2022) offered by bidders must be from renewable resources, accomplished through the purchase of Renewable Energy Credits (RECs). As part of MWRA's evolving sustainability efforts, staff will also obtain bids for additional RECs from New England sources to voluntarily increase the percentage to 100%, similar to what was done with the Deer Island electricity bid, except that the Deer Island bid was tied to the electricity supply bid, while for the Interval Accounts, a bidder can bid on one or both contracts.

To ensure that MWRA is prepared to execute replacement power and renewable energy certificate contracts if the bid pricing received is favorable, staff recommend that the Board authorize the Executive Director to award contracts to the successful bidders.

#### **BUDGET/FISCAL IMPACT:**

MWRA's total electricity budget for FY22 is \$18.8 million. This amount includes approximately \$11.2 million for electricity supply and \$7.6 million for the transmission and distribution costs charged by the local distribution companies. The authorization staff are seeking is for:

- Purchasing the Interval Accounts electricity supply, which represents approximately 30% of MWRA's total purchased electricity supply, and
- Purchasing enough voluntary Renewable Energy Credits to offset 100% of the Interval Accounts electricity usage.

Staff will assess the impact of the bids taken in comparison with the budgeted amounts and update the Board accordingly.

#### **MBE/WBE PARTICIPATION:**

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