



MASSACHUSETTS WATER RESOURCES AUTHORITY

Deer Island
33 Tafts Avenue
Boston, MA 02128

Frederick A. Laskey
Executive Director

Chair: R. Tepper
Vice-Chair: A. Pappastergion
Secretary: B. Peña
Board Members:
P. Flanagan
J. Foti
L. Taverna
H. Vitale
J. Walsh
P. Walsh
M. White-Hammond
J. Wolowicz

BOARD OF DIRECTORS' MEETING

Telephone: (617) 242-6000
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Date: Wednesday, December 13, 2023
Time: 1:00pm
Location: Deer Island Reception/Training Building, 1st Floor
33 Tafts Avenue – Favaloro Meeting Room
Boston, MA 02128

A photo ID will be required for entry to the building.
The meeting will also be available via Webex. The Webex meeting link, event number and password to attend virtually are:

Webex meeting link (registration required):

<https://mwra.webex.com/weblink/register/rc97f041d689ffb14c1b7b96fd80e5b06>

Event number: 2347 960 3768 Password: 121323

AGENDA

- I. APPROVAL OF MINUTES**
- II. REPORT OF THE CHAIR**
- III. REPORT OF THE EXECUTIVE DIRECTOR**
- IV. EXECUTIVE SESSION**
 - i.** Approval of November 15, 2023 Executive Session Minutes
 - A. Real Estate**
 - 1. Watershed Land Acquisition
 - 2. MWRA Contract 6224/6225 - Siphon and Junction Structure Rehabilitation Project and MWRA Contract 7991/6898 – West Roxbury Tunnel Inspection – Sections 637 and 637A, Approval of Orders of Taking
 - B. Litigation**
 - 1. Karen Reardon v. MWRA and Anandan Navanandan, Suffolk Superior Court, Civil Action No. 2184-01434
- V. WASTEWATER POLICY & OVERSIGHT (See additional items below)**
 - A. Contract Awards**
 - 1. Combustion Turbine Generator Maintenance, Deer Island Treatment Plant, O'Connor Corporation, Contract S616

VI. WATER POLICY & OVERSIGHT (See additional items below)**A. Contract Amendments/Change Orders**

1. John J. Carroll Water Treatment Plant SCADA System Upgrade – Design, Engineering Services During Construction and Resident Engineering Services, Arcadis U.S., Inc., Contract 7581, Amendment 4

VII. ADMINISTRATION, FINANCE AND AUDIT (See additional items below)**B. Contract Awards**

1. Security Officer Services for Various MWRA Facilities, United Security, Inc., Contract EXE-048

VIII. PERSONNEL & COMPENSATION**A. Information**

1. Recruitment and Retention Update
2. Administration Division Proposed Organizational Changes
3. Metropolitan Water Tunnel Program, Consultant and Contract Structure Update and Tunnel Department Proposed Organizational Changes

B. Approvals

1. December 2023 PCR Amendments
2. Appointment of Ivana McGrail, Manager, Benefits & HRIS
3. Appointment of Jeannie Teixeira, Manager, Human Resources Operations

IX. WATER POLICY & OVERSIGHT (Continued)**A. Contract Amendments/Change Orders**

1. Metropolitan Water Tunnel Program, Program Support Services, JCK Underground, Inc., Contract 7655, Amendment 2 – First Optional 24-Month Renewal

X. WASTEWATER POLICY & OVERSIGHT (Continued)**A. Approvals**

1. First Amendments to the Memorandum of Understanding and Financial Assistance Agreement with the Boston Water and Sewer Commission for Implementation of the Fort Point Channel and Mystic/Chelsea Confluence Combined Sewer Overflow Control Projects

B. Contract Awards

1. Electrical Equipment Testing, Deer Island Treatment Plant, Infra-Red Building and Power Service, Inc., Contract S618

XI. ADMINISTRATION, FINANCE & AUDIT (Continued)**A. Information**

1. Delegated Authority Report – November 2023

XI. ADMINISTRATION, FINANCE & AUDIT (Continued)

A. Information (continued)

2. FY2021-FY2025 Strategic Business Plan: Annual Update for FY23
3. FY2024 Financial Update and Summary through November 2023

XII. CORRESPONDENCE TO THE BOARD

XIII. OTHER BUSINESS

XIV. ADJOURNMENT

MASSACHUSETTS WATER RESOURCES AUTHORITY

Meeting of the Board of Directors

November 15, 2023

A meeting of the Massachusetts Water Resources Authority (“MWRA”) Board of Directors was held on November 15, 2023 at MWRA’s headquarters at Deer Island in Boston, and also via remote participation.

Chair Tepper and Vice Chair Andrew Pappastergion presided from MWRA headquarters. Board Members Flanagan, Peña, Taverna, Jack Walsh, and White-Hammond also participated from MWRA headquarters. Board Members Vitale and Patrick Walsh participated remotely. Board Members Foti and Wolowicz were absent.

MWRA Executive Director Frederick Laskey; General Counsel Carolyn Francisco Murphy; Chief Operating Officer David Coppes; Deputy Chief Operating Officer Rebecca Weidman; Director of Finance Thomas Durkin; Director of Administration Michele Gillen; Special Assistant for Affirmative Action Patterson Riley; Human Resources Director Wendy Chu; Deputy Finance Director/Treasurer Matthew Horan; Director of Planning and Sustainability Stephen Estes-Smargiassi; Deer Island Treatment Plant Director David Duest; Procurement Director Douglas Rice; Director of Security Gary Cacace; MIS Director Paula Weadick; Director of Environmental Quality Betsy Reilley; Senior Program Manager, Environmental Quality Wendy Leo; Senior Program Manager, Environmental Monitoring David Wu; Deer Island Engineering Services Manager Rick Adams; Director of Construction Marty McGowan; Chief of Staff Katie Ronan; Associate General Counsel Kristen Schuler Scammon; and, Assistant Secretary Kristin MacDougall participated at MWRA headquarters.

Vandana Rao, EEA, and Matt Romero, MWRA Advisory Board, also participated at MWRA headquarters.

Chair Tepper called the meeting to order at 1:00pm.

ROLL CALL

MWRA General Counsel Francisco Murphy took roll call of Board Members in attendance and announced that Board Member Vitale was participating remotely. The Chair announced that the meeting was being held at MWRA’s headquarters at Deer Island and virtually, via a link posted on MWRA’s website. She added that the meeting would be recorded, and that the agenda and meeting materials were available on MWRA’s website. She also announced that individual roll call votes would be conducted after each motion was made and given an opportunity for discussion.

APPROVAL OF OCTOBER 18, 2023 MINUTES

A motion was duly made and seconded to approve the minutes of the Board of Directors’ meeting of October 18, 2023.

Chair Tepper asked if there was any discussion or questions from the Board. Hearing none, she requested a roll call vote in which the members were recorded as follows:

<u>Yes</u>	<u>No</u>	<u>Abstain</u>
Tepper		

<u>Yes</u>	<u>No</u>	<u>Abstain</u>
Flanagan		
Pappastergion		
Peña		
Taverna		
Vitale		
J. Walsh		

P. Walsh

(Board Member Patrick Walsh abstained due to Webex technical issues.) (ref. I)

REPORT OF THE EXECUTIVE DIRECTOR

MWRA Executive Director Fred Laskey reported that MWRA held its annual Veterans Day ceremony and luncheon at Deer Island on November 8, 2023, and that the event was well attended by MWRA's veterans and Union representatives. Finally, he noted that MWRA had kicked off the second year of its Mentoring Program in November, adding that the program has proven to be successful in advancing MWRA's staff recruitment and retention efforts.

(Board Member White-Hammond joined the meeting during the report.) (ref. III)

EXECUTIVE SESSION

Chair Tepper requested that the Board move into Executive Session to discuss Real Estate and Litigation, since discussing such in Open Session could have a detrimental effect on the negotiating and litigating positions of the Authority. She announced that the planned topics for discussion in Executive Session were a watershed land acquisition, pending class action settlements with the 3M Company and DuPont entities, and a Chapter 21E Notice from Massachusetts Natural Fertilizer Company and others. 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 for these purposes, and to resume Open Session after Executive Session adjournment.

General Counsel Francisco Murphy reminded Board members that under the Open Meeting Law members who were participating remotely in Executive Session must state that no other 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 was called would also be deemed their statement that no other person was present or able to hear the Executive 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>
Tepper		
Flanagan		
Pappastergion		
Peña		

<u>Yes</u>	<u>No</u>	<u>Abstain</u>
Taverna		
Vitale		
J. Walsh		P. Walsh
White-Hammond		

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

(Mr. Patrick Walsh abstained due to Webex technical issues.)

*** EXECUTIVE SESSION ***

The meeting entered Executive Session at 1:04pm and adjourned at 1:55pm.

*** CONTINUATION OF OPEN SESSION ***

PERSONNEL AND COMPENATION

Approvals

PCR Amendments – November 2023

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

Wendy Chu, MWRA Human Resources Director, described three proposed PCR amendments, including a title and grade change to one filled position in the Administration Department; a salary adjustment to one filled position in the Waterworks Division, Metro Water Department; and a title and grade change to one vacant position in the Operations Division, Inspection-Water Department.

Hearing no discussion or questions from the Board, Chair Tepper requested a roll call vote in which the members were recorded as follows:

<u>Yes</u>	<u>No</u>	<u>Abstain</u>
Tepper		
Flanagan		
Pappastergion		
Peña		
Taverna		
Vitale		
J. Walsh		
P. Walsh		
White-Hammond		

(ref. V A.1)

Appointment of Manager, Transmission and Treatment, Western Operations

A motion was duly made and seconded to approve the appointment of Mr. John Beckley to the position of Manager, Transmission and Treatment, Western Operations (Non-Union, Grade 14) in the Operations Division at the recommended annual salary of \$156,000 commencing on a date to be determined by the Executive Director.

Ms. Chu summarized the position's duties, the job candidate selection process, and the recommended candidate's work history and qualifications.

There was brief general discussion about the recent vacancy of the Manager, Transmission and Treatment position. Board Member Vitale requested information about MWRA's policy regarding midyear across the board (ATB) raises for staff who are promoted internally to non-Union manager positions. Ms. Chu explained that staff who are promoted to non-union manager positions midyear receive raises according the same schedule as all other non-Union managers.

Hearing no further discussion or questions from the Board, Chair Tepper requested a roll call vote in which the members were recorded as follows:

<u>Yes</u>	<u>No</u>	<u>Abstain</u>
Tepper		
Flanagan		
Pappastergion		
Peña		
Taverna		
Vitale		
J. Walsh		
P. Walsh		
White-Hammond		

(ref. V A.2)

Appointment of Assistant Director of Engineering, Operations Division

A motion was duly made and seconded to approve the appointment of Ms. Ester Lwebuga to the position of Assistant Director of Engineering, Operations Division (Non-Union Grade 14) at an annual salary of \$158,000 commencing on a date to be determined by the Executive Director.

Ms. Chu described the recommended candidate's work experience and qualifications.

Chair Tepper asked if there was any discussion or questions from the Board. Hearing none, she requested a roll call vote in which the members were recorded as follows:

<u>Yes</u>	<u>No</u>	<u>Abstain</u>
Tepper		
Flanagan		
Pappastergion		
Peña		

<u>Yes</u>	<u>No</u>	<u>Abstain</u>
Taverna		
Vitale		
J. Walsh		
P. Walsh		
White-Hammond		

(ref. V A.3)

ADMINISTRATION, FINANCE AND AUDIT

Information

Delegated Authority Report – October 2023

Michele Gillen, MWRA Director of Administration, invited Board Members' questions on the report.

Board Member Jack Walsh requested more information about the Report Item C-4: *Electrical Equipment Testing – Deer Island Treatment Plant* ("DITP"). David Coppes, MWRA Chief Operating Officer, explained that Item C-4 included a range of testing methods for DITP electrical gear, including infrared testing. There was brief discussion about Item C-4's scope and cost, and the contract's benefits for preventative maintenance. Mr. Walsh asked if the Item C-4 contract includes oil testing. David Duest, MWRA Deer Island Treatment Plant Director, advised that it does not.¹ There was brief, general discussion about oil testing.

Mr. Walsh then requested more information about the scope and cost of Report Item C-6: *Thermal and Hydro Power Plant Maintenance*. Mr. Coppes briefly described the scope and explained that the purpose of the contract extension is to complete necessary work on a DITP hydro turbine gear box.

Next, Mr. Walsh asked for more information about the cost of Report Item C-9: *Rehabilitation of Sections 23, 24 and 47 Water Mains – Boston and Newton*. Mr. Coppes explained that this amendment was executed on behalf of the City of Newton for work performed by MWRA under a Memorandum of Understanding (MOA). He further explained that the purpose of Item C-9 is to expand the limits of MWRA-installed bypass piping, and that per the MOA, the City of Newton would be responsible for the costs.

Mr. Pappastergion asked if permitting for Report Item C-7: *Quinapoxet Dam Removal* was complete. Mr. Laskey responded in the affirmative. Rebecca Weidman, MWRA Deputy Chief Operating Officer, added that MWRA holds all required permits for the dam removal project, and that construction is planned to start in fall, 2024. Mr. Laskey noted that MWRA staff are seeking funding for the project, and briefly described its scope and environmental benefits. Mr. Taverna requested information about the number of bids received for Item C-7. Ms. Weidman advised that MWRA received four bids, and that the lowest bidder, Lucianos Excavation, Inc. ("Lucianos Inc."), was selected. There was brief discussion about the price range of the bids. Ms. Weidman noted that Lucianos Inc. has extensive relevant experience and received very good recommendations. She discussed factors attributable to Lucianos Inc.'s low bid price,

¹ Correction: There is certain specialty electrical oil testing performed under the November 13, 2023 Delegated Authority Report Item C-7: *Electrical Equipment Testing – Deer Island Treatment Plant*.

including local staff, ownership of all equipment, and the performance of work without subcontractors. Mr. Taverna asked about the terms of the contract. Mr. Coppes advised that Item C-7 is a lump sum contract. He added that the seasonal timing of the work may have also contributed to Lucianos Inc.'s relatively low price.

With regards to Report Item P-2: *Purchase Order for Three New Ford Transit Crew Vans*, Board Member Vitale asked why MWRA was purchasing Ford vans rather than Chevrolets, and why this purchase was not for electric vehicles (EVs). Ms. Gillen advised that Chevrolet does not produce a comparable model and explained that the Fords satisfy MWRA's need for vans that are capable of operating all day and running equipment. She further explained that while MWRA pursues opportunities to purchase EVs whenever feasible, EVs would not be practical in this case because of their limited abilities to operate for long periods of time without recharging.

Hearing no further discussion or questions from the Board, Committee Vice Chair Flanagan moved to the next Information item. (ref. VI A.1)

FY24 Financial Update and Summary through October 2023

Thomas Durkin, MWRA Finance Director, summarized financial highlights for FY2024 through October 2023. He advised that the budget is progressing well despite ongoing challenges such as interest rates and associated impacts to expenses for chemicals and energy. He then reported that direct expenses were under budget, driven in part by continued underspending for wages and salaries. He noted that full time equivalency (FTE) counts had risen from 1,061 to 1,073 as of November 10, 2023. Next, Mr. Durkin reported that revenue was \$2.3 million over budget (0.8%), attributable to higher than budgeted interest rates on investments. He then reported 23.4% in underspending for the Capital Improvement Program (CIP) through October 2023. He explained that the CIP underspending is in line with historical budgetary patterns, and added that staff are using FY2024 budget results to prepare the FY2025 budget. Finally, Mr. Durkin noted that in his view, interest rates were settling down, and advised that staff will keep Board members apprised of any upcoming developments.

Mr. Vitale requested information about the yields of MWRA's Pension Trust Fund and Other Post-Employment Benefits (OPEB) Trust Fund. Matthew Horan, MWRA Deputy Finance Director/Treasurer, reported that yields through September 2023 were 3.5% for the Pension fund, and 4.6% for the OPEB fund.

Hearing no further discussion or questions from the Board, Mr. Flanagan moved to the next Information item. (ref. VI A.2)

FY2024 First Quarter Orange Notebook

Stephen Estes-Smargiassi, MWRA Director of Planning and Sustainability, updated the Board on the FY2024 First Quarter Orange Notebook. He briefly summarized the purpose of the Orange Notebook and discussed some key highlights, including continued low staffing levels and slightly accelerated hiring rates. Next, Mr. Estes-Smargiassi advised that the most notable recent trend in the current Orange Notebook is summer 2023's historic precipitation, which was approximately 50% higher than normal. He discussed some operational impacts related to the precipitation, including record high flows at DITP,

which resulted in higher rates of power and chemical use. He further explained that the high precipitation had increased tributary flows, which raised natural organic matter levels and affected reservoir operations and drinking water quality. Finally, Mr. Estes-Smargiassi reported that some MWRA communities had detected total coliform levels in drinking water that were higher than usual, attributable to factors related to the high precipitation.

Board Member Pappastergion asked for more information about the practice of blending at DITP. David Duest, MWRA Deer Island Treatment Plant Director, explained that blending can take place during significant rain events. He then summarized the steps, which include secondary treatment for as much influent as possible; followed by blending of primary effluent with the effluent that had received secondary treatment; and, finally, disinfection and dechlorination. There was brief, general discussion about the blending process; the short duration of a typical blending operation; the relative infrequency of blending operations; and, the low proportion of primary effluent (approximately 1-2%) in DITP's blended discharges.

Board Member Taverna asked if staff expect community coliform levels to stabilize in the upcoming months. Mr. Estes-Smargiassi explained that the levels are beginning to taper off, and noted that most of the communities' total coliform positives were one-time events that cleared on repeat testing. He advised that staff believe the increased number of community positives could be related to the historic precipitation levels. He further advised that staff currently believe that the treatment adjustments MWRA made in response to similar conditions in 2021 had improved the water quality levels vs. levels that would have been achieved without them. There was brief, general discussion about environmental factors that could have contributed to the recent community total coliform positives, including warmer temperatures; increased precipitation; and, low chlorine residuals in pipelines related to reduced water use. Mr. Jack Walsh asked if the recent community positives were geographically clustered. Mr. Estes-Smargiassi explained that they were geographically scattered. There was further discussion about potential factors related to the community total coliform positives, and steps that MWRA is taking to toward reducing the frequency of total coliform detections in the future.

Board Member Peña asked if community positives had triggered EPA Revised Total Coliform Rule ("RTCR") Level 2 Assessments. Mr. Estes-Smargiassi advised that staff track this data, and noted that Level 2 Assessments had been triggered for some of the affected communities. He provided brief background on RTCR Assessments and their inclusion in MWRA's Annual Water Quality Reports. Finally Mr. Estes-Smargiassi advised that he would provide more detailed information on recent community Level 2 Assessments as soon as possible. (Mr. Estes-Smargiassi followed up on Mr. Peña's question after the meeting.)

Mr. Pappastergion asked why MWRA's leak detection and valve replacement programs were below target in FY2024. Mr. Estes-Smargiassi explained that the program was below target due to staffing and scheduling issues. Mr. Coppes added that MWRA had recently hired a new member of the leak detection team. Mr. Estes-Smargiassi advised that MWRA is meeting operability targets for valves. Hearing no further discussion or questions from the Board, Mr. Flanagan moved to Contract Awards. (ref. VI A.3)

Contract Awards

Security Equipment Maintenance and Repair Services: Viscom Systems, Inc., Contract EXE-047

A motion was duly made and seconded to approve the award of Contract EXE-047, Security Equipment Maintenance and Repair Services, to the lowest responsible bidder, Viscom Systems, Inc., and to authorize the Executive Director, on behalf of the Authority, to execute said contract in the bid amount of \$2,395,680.05 for a contract term of 1095 days from the Notice to Proceed.

Douglas Rice, MWRA Procurement Director, summarized a proposed security equipment and repair services contract. He noted that proposed contract EXE-047 is one of two contracts for MWRA security maintenance and repair that are being procured under Commonwealth of Massachusetts State Blanket Contracts, and that State Contract ITC-71: *Security, Surveillance, Monitoring, and Access Control Systems* was utilized for this first procurement. Mr. Rice then explained that the two security services contracts represent a repackaging of a larger, single contract in response to feedback received at the October 18, 2023 Board of Directors meeting.

Next, Mr. Rice reported that while the procurement of EXE-047 had generated interest from several vendors, the only firm to submit a bid was Viscom Systems, Inc. (“Viscom”). He noted that MWRA has had a strong working relationship with Viscom on prior iterations of the contract, and are confident that the relationship will continue. Finally, Mr. Rice advised that staff plan to solicit the second security services blanket contract for award under delegated authority later in 2023.

Mr. Pappastergion requested the cost of Viscom’s prior three-year contract. Gary Cacace, MWRA Director of Security, explained that nationwide wage inflation and cost increases for the replacement of security equipment such as cameras were factored into the proposed new contract, and that staff would provide more details about the previous contract’s cost as soon as possible.

Chair Tepper asked if there was further discussion or questions from the Board. Hearing none, she requested a roll call vote in which the members were recorded as follows:

<u>Yes</u>	<u>No</u>	<u>Abstain</u>
Tepper		
Flanagan		
Pappastergion		
Peña		
Taverna		
Vitale		
J. Walsh		
P. Walsh		
White-Hammond		

(ref. VI B.1)

Contract Amendments/Change Orders

Maximo Lawson Interface Enhancements: Starboard Consulting, LLC, Contract No.7649 - Amendment 3

A motion was duly made and seconded that the Executive Director, on behalf of the Authority, approve Amendment 3 to Contract 7649, Maximo Lawson Interface Enhancements, with Starboard Consulting, LLC, to extend the contract term by six months from December 26, 2023 to June 26, 2024 at no additional cost to the Authority.

Paula Weadick, MWRA MIS Director, invited questions from Board Members.

Mr. Jack Walsh requested the reasons for the proposed amendment for a contract time extension. Ms. Weadick explained that the first contract amendment was needed to conduct an additional workshop, and the second amendment was needed to accommodate concurrent internal upgrades to MWRA's Maximo system. She then advised that Contract 7649 was entering the testing phase and nearing completion. There was brief, general discussion about the cost of the contract, the payment schedule for deliverables, and potential impacts of contract delays.

Hearing no further discussion or questions from the Board, Chair Tepper requested a roll call vote.

Mr. Vitale asked if Contract 7649 time extensions have caused any negative impacts to MWRA. Ms. Weadick advised that there have been no negative impacts, and that Maximo Lawson continues to be functional and usable. She explained that the scope of work under the time extension includes routine error fixes, and advised that protracted contract delays could impact the schedules of other MIS systems upgrade projects.

Hearing no further discussion or questions from the Board, Chair Tepper requested a roll call vote in which the members were recorded as follows:

<u>Yes</u>	<u>No</u>	<u>Abstain</u>
Tepper		
Flanagan		
Pappastergion		
Peña		
Taverna		
Vitale		
J. Walsh		
P. Walsh		
White-Hammond		

(ref. VI C.1)

Delta Dental of Massachusetts, Inc., d/b/a Delta Dental of Massachusetts, Contract A631, Amendment 2

A motion was duly made and seconded to approve Amendment 2 to Contract A631 with Delta Dental of Massachusetts, Inc., d/b/a Delta Dental of Massachusetts, exercising the second option to renew, increasing the contract amount by \$240,000 for a total not-to-exceed amount of \$764,000, and extending the term by 12 months from January 1, 2024 to December 31, 2024 for a total contract term of 36 months.

Ms. Chu briefly discussed a proposed renewal of a dental services provider contract.

Hearing no discussion or questions from the Board, Chair Tepper requested a roll call vote in which the members were recorded as follows:

<u>Yes</u>	<u>No</u>	<u>Abstain</u>
Tepper		
Flanagan		
Pappastergion		
Peña		
Taverna		
Vitale		
J. Walsh		
P. Walsh		
White-Hammond		

(ref. VI C.2)

WASTEWATER POLICY AND OVERSIGHT

Information

MWRA Comment Letter on the Deer Island Wastewater Treatment Plant Draft National Pollutant Discharge Elimination System (NPDES) Permit and Draft State Surface Water Discharge Permit

Staff presented an overview of MWRA's comments on the Draft National Pollutant Discharge Elimination System (NPDES) Permit for MWRA's Deer Island Treatment Plant ("DITP"). Betsy Reilley, MWRA Director of Environmental Quality, began with a summary of the Draft Permit's timeline. She noted that it was issued by EPA and the Massachusetts Department of Environmental Protection (DEP) on May 31, 2023, that its comment period closes on November 28, 2023. She advised that MWRA will submit extensive comments, which is necessary in order for MWRA to request changes to certain elements, and to reserve its right to appeal.

Next, Wendy Leo, MWRA Senior Program Manager, NPDES Compliance, explained that the Draft Permit includes important positive elements, including a seasonal *Enterococcus* limit, no nitrogen limits, and the elimination of the Outfall Contingency Plan. Ms. Leo then discussed staff's review of the Draft Permit, and their assessment of the Permit's potential impacts to MWRA operations with respect to compliance, operations and cost.

Next, Ms. Leo discussed significant issues with the Draft Permit, including its exclusion of blending, which is important to maximize MWRA's ability to protect DITP, handle incoming flows and prevent combined sewer overflows ("CSOs"); the Draft Permit's inclusion of co-permittees, which would require MWRA sewer community compliance with certain sections; and, major storm event planning/adaption requirements for MWRA and all sewer communities, which would entail a significant level of effort that is out of balance with other operational needs. She noted that EPA had recently modified language for the storm planning requirements in recent permits.

Ms. Leo then described some Draft Permit requirements of concern with respect to compliance, including limits for activations and volumes at each CSO outfall and required additional monitoring for nuisance and harmful algal blooms. She advised that the required algal bloom monitoring would be costly and has no clear connection to the DITP outfall in staff's view. She further advised that the Draft Permit's Pretreatment Program reporting schedule and deadlines were also of concern because they disregard MWRA's longstanding reporting schedule and fail to recognize the scale and complexity of MWRA's Pretreatment Program.

Dr. Reilley continued the discussion about elements of concern in the Draft Permit, including a strict acute toxicity test limit that does not recognize the high level of dilution provided by the MWRA outfall's diffusers; a challenging seasonal event CSO sampling program; a costly outfall tunnel video inspection requirement that is unnecessary and not as accurate as MWRA's existing monitoring methods; and a vague generic narrative requirement that could make MWRA vulnerable to inadvertent noncompliance.

Dr. Reilley then described the next steps in the Draft Permit process. She explained that after the comment period closes, EPA will develop responses to all comments submitted, and potentially make language changes as appropriate before issuing the Final Permit. Dr. Reilley advised that there is no set timeline for EPA to issue the Final Permit, and that the process could take months or years. She further advised that the Final Permit requirements were expected to take effect 60 days after issuance. She explained that MWRA would have 30 days to file an appeal with the EPA's Environmental Appeals Board if it opposes any of the Final Permit requirements. Finally, Dr. Reilley advised that filing an appeal with the First Circuit Court of Appeals or DEP's Office of Appeals and Dispute Resolution could also be necessary, and that any items not appealed would take effect.

Board Member White-Hammond asked if any particular events at MWRA had prompted the changes to the Draft Permit for DITP, and if NPDES permits for other wastewater service providers were being similarly changed. Dr. Reilley explained that permits for some other wastewater providers were also being changed, and that factors such as MWRA's ongoing Long-Term CSO Control Program and associated monitoring data could have contributed to the new Draft Permit changes. Ms. Leo added that MWRA's current Permit was issued 23 years ago, and explained that some of the proposed changes are intended to bring MWRA's Permit up to date with more recent water quality standards. She further explained that certain Draft Permit requirements that are new to MWRA are the standard for Permits issued more recently to other service providers. Finally, Ms. Leo noted that MWRA's NPDES Permit has historically tended to include exceptions to the broader standard because MWRA is by far the largest permittee.

Mr. Jack Walsh requested more information about the Draft Permit's DITP secondary process limit of at least 700 million gallons per day (mgd), and asked why a secondary process limit was not maintained or referenced in the Draft Permit. Dr. Reilley explained that the 700 mgd limit was determined through MWRA testing and agreed upon as a Stipulation and Order entered in the Boston Harbor Case in 2008. Mr. Walsh asked if DITP could comfortably surpass 700 mgd limit. Dr. Reilley explained that MWRA testing had determined that 700 mgd was the achievable maximum, and advised that the absence of the stipulated secondary process limit in the Draft Permit is of concern to staff.

Matt Romero, Executive Director of the MWRA Advisory Board advised that the Advisory Board had engaged outside counsel to review the Draft Permit, with particular focus on its inclusion of MWRA's sewer communities as co-permittees, and its requirements with respect to these newly named co-permittees, climate adaptation and storm preparedness. He thanked MWRA staff for their help in putting together their comments on the Draft Permit. He then noted that the Boston Water and Sewer Commission's outside counsel had joined a common interest agreement with MWRA and the Advisory Board and it has been a great working relationship. He then advised that the MWRA Advisory Board membership would meet to review and discuss the Draft Permit, and take an endorsing vote on the Advisory Board's comments. Finally, Mr. Romero congratulated MWRA staff for preparing thorough and thoughtful comments.

(Mr. Peña left and returned to the meeting during the discussion.)

Hearing no further discussion or questions from the Board, Committee Chair Jack Walsh moved to Contract Awards. (ref. VII A.1)

CONTRACT AWARDS

Harbor and Outfall Monitoring, 2024-2027: Battelle Memorial Institute, Contract OP-466

A motion was duly made and seconded to approve the recommendation of the Consultant Selection Committee to award Contract OP-466, Harbor and Outfall Monitoring 2024-2027, to Battelle Memorial Institute and to authorize the Executive Director, on behalf of the Authority, to execute said contract in the bid amount not to exceed \$3,581,397.74 for a contract term of 48 months from the Notice to Proceed.

David Wu, MWRA Senior Program Manager, Environmental Monitoring, briefly described the scope of a proposed contract to perform Boston Harbor and Deer Island Outfall monitoring as required by MWRA's NPDES permit. He explained that the recommended vendor, Battelle Memorial Institute ("Battelle"), is the incumbent consultant and the sole bidder on the contract. Mr. Wu noted that staff had presented the annual Outfall Monitoring Review for 2022 at the October 18, 2023 Board of Directors Meeting, and that monitoring results continued to show no adverse environmental impacts from the Outfall. Finally, he noted that the proposed contract includes contingencies to address known potential changes to the NPDES Permit requirements.

Mr. Jack Walsh requested the cost of the previous Harbor and Outfall Monitoring contract. Mr. Wu explained that historically the contract amount for analysis tasks had increased incrementally by approximately 2%, and that the new, proposed contract includes a more significant increase for field tasks, likely due to rising fuel costs. There was brief, general discussion about Battelle's staffing and subcontracting practices.

Chair Tepper requested confirmation that the proposed contract is expected to cover any potential changes in the Final NPDES Permit. Mr. Wu explained that staff believe that all known potential changes would be covered, but could not guarantee coverage for unanticipated changes. Chair Tepper asked if it was unlikely that there would be a circumstance in which Battelle would increase the contract price, given the current conditions of the Draft Permit. Mr. Wu responded in the affirmative.

With regards to Mr. Jack Walsh's earlier question about the cost of the previous contract, Mr. Rice advised that the prior amount was approximately \$2.3 million, and noted that the proposed new contract amount is approximately \$3.5 million. There was brief, general discussion about the cost of the proposed contract.

Hearing no further discussion or questions from the Board, Chair Tepper requested a roll call vote in which the members were recorded as follows:

<u>Yes</u>	<u>No</u>	<u>Abstain</u>
Tepper		
Flanagan		
Pappastergion		
Peña		
Taverna		
Vitale		
J. Walsh		
P. Walsh		
White-Hammond		

(ref. VII B.1)

Roofing Replacement at Various Buildings, Deer Island Treatment Plant: Greenwood Industries, Inc., Contract 7734

A motion was duly made and seconded to approve the award of Contract 7734, Roofing Replacement at Various Buildings, Deer Island Treatment Plant to the lowest eligible and responsible bidder, Greenwood Industries, Inc. and to authorize the Executive Director, on behalf of the Authority, to execute said contract in the amount of \$8,873,000 for a contract term of 365 calendar days from the Notice to Proceed.

Mr. Duest summarized the scope and procurement process for a contract to replace the roofs of nine process buildings at DITP. He noted that the new ethylene propylene diene monomer (EPDM) roofs are expected to last for approximately 20 years. He explained that the existing roofs are nearing the end of their useful lives, and briefly described the scope of the roof removal and replacement work. Finally, Mr. Duest discussed the contract procurement process. He advised that the recommended contractor, Greenwood Industries, Inc. was the lowest bidder, at 7.5% below the Engineer's Estimate, and noted the three bids received were within 3% of each other.

Mr. Taverna requested more information about the terms of the contract. Rick Adams, MWRA Deer Island Engineering Services Manager, explained that proposed contract 7734 was a lump sum contract for all nine buildings. Board Member Flanagan asked if all of the existing roofs that are part of this contract will be removed. Mr. Adams responded in the affirmative. There was brief, general discussion about the lowest bid, and the conditions of the existing roofs. Mr. Duest explained that the Cryogenics Compressor Building and the Thermal/Power Plant roofs have experienced multiple failures; therefore, they will be replaced via a "built-up roof system" consisting of layers of thicker, reinforced material. Mr. Adams added that the built-up roofs would be comprised of two or three separate layers of EPDM and a

gravel top layer for added protection. There was brief, general discussion about characteristics and construction methods for EPDM roofs. Mr. Flanagan asked for more information about the warranties for the new roofs. Mr. Adams explained that the roofs have a 30-year manufacturer's warranty, and that the contractor's warranties are five years for single ply, and three-years for triple-ply roofs. Mr. Jack Walsh asked if the existing roofs' damage was caused by sun exposure. Mr. Adams explained that most of the damage has been caused by other environmental factors, such as high winds and ocean storms.

Hearing no further discussion or questions from the Board, Chair Tepper requested a roll call vote in which the members were recorded as follows:

<u>Yes</u>	<u>No</u>	<u>Abstain</u>
Tepper		
Flanagan		
Pappastergion		
Peña		
Taverna		
Vitale		
J. Walsh		
P. Walsh		
White-Hammond		

(ref. VII B.2)

Operations and Maintenance of the Fore River Pelletizing Plant: New England Fertilizer Company, Contract S592

A motion was duly made and seconded to approve the recommendation of the Selection Committee to award Contract S592, Operations and Maintenance of the Fore River Pelletizing Plant, to the New England Fertilizer Company and to authorize the Executive Director, on behalf of the Authority, to execute said contract for the base amount of \$229,289,350 plus escalation, cost of excess quantities and, if necessary, additional costs associated with alternate disposal, with a contract term of ten years from January 1, 2024 through December 31, 2033.

(Mr. Pappastergion temporarily left the meeting during the motion.)

Mr. Duest presented an overview of the scope and procurement process for an Operations and Maintenance ("O&M") contract for the Fore River Pelletizing Plant ("Pellet Plant"). He provided a brief history of Pellet Plant O&M contracts since the facility's startup in 1991, and described the process of processing digested, liquid sludge from DITP into pellets for use as fertilizer.

Next, Mr. Duest discussed the scope of work for MWRA's Pellet Plant O&M contractors, which includes receiving and storing digested sludge; dewatering the sludge with centrifuges; drying it with thermal dryers; and, producing fertilizer pellets. He advised that the contractor is required to landfill all product that is out of compliance for any reason.

Mr. Duest then outlined additional terms of proposed Contract S592, which is scheduled to start on January 1, 2024 for a duration of 10 years, with an expected production rate of 105 dry tons per day and

a base rate of 95 dry tons per day. He explained that the goal of the pelletizing process is beneficial use as fertilizer, and advised that because of PFAS concerns, proposed Contract S592 includes a landfill contingency for PFAS. He further advised that the proposed contract stipulates the option for MWRA to exit the beneficial use market and switch to landfill-only operations. Mr. Duest noted that all capital projects would be covered by MWRA and subject to Board approval. He then advised that the distribution of MWRA's fertilizer pellets within Massachusetts has decreased significantly due to PFAS concerns.

Next, Mr. Duest discussed the procurement process for proposed Contract S592. He explained that the RFQ/P was issued in April 2023, and that 10 firms had requested RFQ documents. He noted that three firms submitted qualification statements, and two firms were deemed qualified to receive the RFP. He explained that the two final firms were then invited to comment on the draft scope of services and contract agreements with the goal of engaging a contractor that would perform the work and sign the contract agreement with no changes. Mr. Duest then noted that over 150 questions were received and answered, and that many of the questions were related to title retention, liability and indemnification. He advised that one of the final two firms withdrew its bid near the end of the procurement process, citing risk allocation concerns, leaving one remaining bidder for the contract.

Mr. Duest then summarized the proposal for the remaining bidder, New England Fertilizer Company ("NEFCo"). He reported that the proposal price of approximately \$229 million does not include the cost of estimated excess quantities, index adjustments, or alternative disposal options. Finally, he advised that the estimated total contract cost is approximately \$340 million over a 10-year period.

(Mr. Pappastergion returned to the meeting during the presentation.)

Mr. Peña asked if PFAS concerns or the reduced local distribution of MWRA's fertilizer pellets were factors in proposed Contract S592's higher overall cost vs. that of the previous contract. Mr. Duest explained that the price of electricity represented the largest cost difference, noting that marketing and disposal costs had also increased by 20%. He further explained that the new contract includes measures to temper market volatility, such as a Change of Law provision to allow MWRA to renegotiate further as needed, as well as the previously discussed landfill contingency. Mr. Peña asked if the proposed new contract includes any changes to the indemnification language. Mr. Duest advised that the indemnification language had not changed.

Chair Tepper requested further information about proposed Contract S592's landfall contingency. Mr. Duest explained that the contract stipulates that MWRA would be responsible if pellets exceed EPA compliance standards, and that NEFCo would be responsible if combined materials were out of compliance. Chair Tepper asked how the landfill contingency would work with regards to PFAS. Mr. Duest explained that a potential new EPA standard for PFAS in fertilizer pellets would qualify as a Change in Law that would prompt contract renegotiation. Mr. Laskey noted MWRA may need to identify and secure new landfill space if a PFAS standard were issued. Mr. Duest added that proposed Contract S592 includes requirements for the contractor to provide up to one year of landfiling, and noted that the contract also stipulates that MWRA may cease pellet distribution and switch to landfill-only operations at its discretion.

Mr. Jack Walsh requested the proposed contract's maximum cost. Mr. Duest explained that the maximum cost would be approximately \$340 million if pellets are produced for beneficial use and approximately \$360 million if all pellets are landfilled. There was brief discussion about the contract's maximum cost. Mr. Walsh asked for clarification on the proposed contract's Original Equipment Manufacturer ("OEM") costs. Mr. Duest explained that staff have seen an approximate 7% index adjustment in the last four years, and an adjustment of less than 3% for earlier contracts. Mr. Walsh asked why proposed contract S592 was for ten years, rather than a shorter duration. Mr. Duest explained that pelletizing firms prefer longer-term contracts because they spread risk over time and support staff recruitment and retention. There was brief, general discussion about the risk of PFAS, and the potential impacts of rising electricity costs on NEFCo's operations.

Mr. Vitale requested information about the maximum contract term allowed per Massachusetts procurement law. Mr. Rice explained that there are no statutory limits on the length of this type of O&M contract, and that MWRA staff procure contracts in accordance with MWRA's policies and procedures and in the interest of MWRA and its ratepayers. General Counsel Francisco Murphy added that there may be certain constraints regarding the length of certain contracts from other sources.

(Chair Tepper left the meeting during the discussion.)

Vice Chair Pappastergion asked if there was any further discussion or questions from the Board. Hearing none, he requested a roll call vote in which the members were recorded as follows:

<u>Yes</u>	<u>No</u>	<u>Abstain</u>
Flanagan		
Pappastergion		
Peña		
Taverna		
Vitale		
J. Walsh		
P. Walsh		
White-Hammond		

(ref. VII B.3)

WATER POLICY AND OVERSIGHT

Information

Update on Lead and Copper Rule Compliance – Fall 2023

Mr. Estes-Smargiassi presented the fall 2023 update on MWRA's Lead and Copper Rule compliance. He provided a brief overview of MWRA's program to perform lead and copper testing on drinking water samples taken from homes that are likely to have elevated lead levels due to lead service lines or lead solder. He noted that the testing takes place in MWRA's fully-supplied water service communities served by the Carroll Water Treatment Plant every September and October, and briefly described the testing protocols.

Next, Mr. Estes-Smargiassi reported that during the most recent sampling round, the MWRA water

system's preliminary 90th percentile lead value was 10.8 parts per billion ("ppb"), which is well below the 90% Lead Action Level of 15 ppb. He advised that while the fall 2023 results were below the Action Level, they were higher than those of previous years, due to factors discussed in this agenda item's Staff Summary. Mr. Estes-Smargiassi then reported that six MWRA communities were above the Action Level, and were therefore required to issue public notices within 24 hours of the results. He noted that in general, the public notices' resulting press coverage generally focused on lead service lines and communities' lead service line removal programs. Mr. Estes-Smargiassi explained that communities that test above the Lead Action Level were also required to issue a mailing to every local customer, with MWRA assistance as needed, and to continue to replace local lead service lines. Finally, Mr. Estes-Smargiassi advised that 31 of the 35 samples that were above the Lead Action Level for fall 2023 were taken from homes with lead service lines, and that lead levels for homes with lead service lines are three to five times higher than homes with only copper pipe and lead solder.

(Mr. Peña briefly left and returned to the meeting during the presentation.)

On behalf of the Boston Water and Sewer Commission (BWSC), Mr. Vitale thanked Mr. Laskey and Mr. Estes-Smargiassi for being tremendous resources for MWRA's customer communities. Mr. Laskey acknowledged the work and expertise of MWRA staff and advised that staff expect that an expansion of MWRA's Lead Service Line Replacement Loan Program may be necessary in the future.

Hearing no further discussion or questions from the Board, Committee Chair Vitale moved to Contract Amendments/Change Orders. (ref. VIII A.1)

Contract Amendments/Change Orders

A motion was duly made and seconded to authorize the Executive Director, on behalf of the Authority, to approve Change Order 5 to Contract 7117, Northern Intermediate High Section 89 Replacement Pipeline, with P. Gioioso & Sons, Inc. for an amount not to exceed \$2,000,000, increasing the contract amount from \$33,309,138.83 to \$35,309,138.83, with no increase in contract term.

Further, a motion was duly made and seconded to authorize the Executive Director to approve additional change orders as may be needed to Contract 7117 in an amount not to exceed the aggregate of \$1,000,000 in accordance with the Management Policies and Procedures of the Board of Directors.

Marty McGowan, MWRA Director of Construction, invited Board Members' questions regarding a proposed change order to the Northern Intermediate High Section 89 Pipeline project.

Hearing no discussion or questions from the Board, Vice Chair Pappastergion requested a roll call vote in which the members were recorded as follows:

<u>Yes</u>	<u>No</u>	<u>Abstain</u>
Flanagan		
Pappastergion		
Peña		

Taverna
Vitale
J. Walsh

P. Walsh

White-Hammond

(Mr. Patrick Walsh abstained due to Webex technical issues.) (ref. VIII B.1)

CORRESPONDENCE TO THE BOARD

There was no correspondence to the Board. (ref. IX)

OTHER BUSINESS

There was brief discussion about the schedule of the MWRA Board of Directors meetings, and potential adjustments to the meetings’ times and/or format. (ref. X)

ADJOURNMENT

A motion was duly made and seconded to adjourn the meeting.

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

<u>Yes</u>	<u>No</u>	<u>Abstain</u>
Flanagan		
Pappastergion		
Peña		
Taverna		
Vitale		
J. Walsh		
P. Walsh		
White-Hammond		

(ref. XI)

The meeting adjourned at 3:18pm.

Approved: December 13, 2023

Attest:

Brian Peña, Secretary

STAFF SUMMARY

TO: Board of Directors
FROM: Frederick A. Laskey, Executive Director
DATE: December 13, 2023
SUBJECT: Combustion Turbine Generator Maintenance, Deer Island Treatment Plant
O'Connor Corporation
Contract S616



COMMITTEE: Wastewater Policy & Oversight

 INFORMATION

 X VOTE


Michele S. Gillen

Director of Administration

David F. Duest, Director, Deer Island Treatment Plant
Richard J. Adams, Manager, Engineering Services
Phillip Szottfried, Senior Program Manager
Preparer/Title


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

RECOMMENDATION:

To approve the award of Contract S616, Combustion Turbine Generator Maintenance, Deer Island Treatment Plant, to the lowest responsible and eligible bidder, O'Connor Corporation, and to authorize the Executive Director, on behalf of the Authority, to execute said contract in the not to exceed amount of \$5,670,334 for a contract term of 1,096 calendar days from the Notice to Proceed.

DISCUSSION:

The Thermal/Power Plant on Deer Island contains two 26-megawatt combustion turbine generators, one 18-megawatt Steam Turbine Generator and one 1.1-megawatt backpressure steam turbine generator. Of these units, the two 26-megawatt combustion turbine generators provide the required back-up power for the entire Deer Island Treatment Facility.

The combustion turbine generators require scheduled inspections, along with preventive maintenance, which are essential to ensuring the units provide continued safe and reliable operation. The combustion turbine generators play a critical role in maintaining the Deer Island Treatment Plant process and the importance of the units cannot be overstated. In the event of a sustained utility power failure, the combustion turbine generators are required to ensure the plant remains in operation. A complete loss of power for an extended period of time would render the pumping stations on Deer Island inoperable, which may lead to sewage back-ups across the MWRA service area. In addition, the Deer Island Treatment plant would not be able to meet the Deer



Figure 1 CTG Engine Compartment

Island Treatment Plant National Pollution Discharge Elimination System permit issued by the Environmental Protection Agency. Part of this permit requires that the Deer Island Treatment Plant have sufficient backup power to operate the treatment plant at full operation. The combustion turbine generators are required in order to meet this backup power requirement.

Contract S616 will provide three annual inspections and maintenance services on each of the units, as well as emergency and non-emergency repair services, replacement parts, and factory authorized vendor services for the equipment associated with the combustion turbine generators for a period of 1,096 calendar days.

In addition, this scope of work includes the modernization of the combustion turbine generator control systems. The control system modernization will replace the control processors, backplanes, input and output card modules, control computers, and update controls for the critical control valves for the combustion turbine generators. The system was last updated approximately 25 years ago. Much of the equipment, such as the processor cards, backplanes and input and output modules are now obsolete and parts are very difficult to obtain.



Figure 2 CTG Controls

The total bid price also includes several allowance items and a unit price item that will be drawn down on an as-needed basis. The allowance items include \$625,000 for replacement parts, \$400,000 for authorized factory representative services from the original equipment manufacturer Mitsubishi Power Aero LLC and \$10,000 for fire department services. The Contract also includes \$240,000 on a unit price basis for emergency and non-emergency repair services. The allowances and unit price bid item services will be drawn down on an as-needed basis and are not part of the lump sum. The estimate for the allowances and unit price bid item were developed based upon previous contract usage patterns. The allowances and unit price item do not represent a firm commitment of cost or guarantee of payment to the vendor. MWRA will only pay for items and services provided and approved.

It is critical that each of the combustion turbine generators be properly maintained and inspected to ensure continued reliable operation. The work associated with the maintenance of the combustion turbines is highly technical in nature. MWRA staff do not have the required expertise to perform these tasks. As such, the bidders are required to provide skilled, well trained personnel under this contract and have previous and current contracts with similar equipment.

Procurement Process

Contract S616 was advertised in the Boston Herald, Banner Publications and the Central Register and bid in accordance Chapter 149 of Massachusetts General Laws. In addition, bid documents were available for public view and downloading on the MWRA Supplier Portal as Event 5574. Notifications were sent to firms in MWRA's vendor database. While 12 external entities became plan holders, only two companies known to have the capacity and experience for this particular

work actually obtained the specifications. Ultimately, only one firm submitted a bid. O'Connor Corporation's bid was opened on October 13, 2023. The bid results are as follows:

BIDDER	BID PRICE
O'Connor Corporation	\$5,670,334
Engineer's Estimate	\$3,737,000

O'Connor Corporation's bid price is approximately 51.2% higher than the Engineer's Estimate. After receipt of the bid results, staff reviewed the Engineer's Estimate in detail to ensure it included all aspects of the work. In their review, staff discovered the following items were inadvertently not included in the estimate that should have been. First, the increased cost of labor and materials (approximately \$340,000) were not included in the final estimate. The estimate was last updated in April 2023, approximately three months before the bid package was advertised. Several last minute changes in the scope of work were taking place due to ongoing discussions with Mitsubishi Power Aero LLC. Second, the Engineer's Estimate did not include project management and supervision of trades related to the control systems modernization component of the work (\$325,000). Finally, the Engineer's Estimate did not include the Contractor's overhead and profit for the control system modernization work (approximately \$420,000). These costs would have increased the Engineer's Estimate from \$3,737,000 to \$4,822,000. The total cost for the control system modernization level of effort was originally estimated around \$1.9 million. With the above adjustments, the costs of the Control system modernization comes to roughly \$3 million.

O'Connor Corporation staff were interviewed to confirm they understood the scope of the specifications and that the bid price was complete and as specified. Staff determined that there were two additional major items that contributed to the difference between the Engineer's Estimate and the bid price. O'Connor Corporation's labor rate was higher for the control systems modernization work as the Contractor's burden rate was not included in the estimate (approximately \$200,000). In addition, the Contractor's general conditions cost includes items such as insurance, safety, quality control, etc. (approximately \$220,000), which were not included in the Engineer's Estimate. If these two major items and the three items above, all of which were not included in the Engineer's Estimate, are taken into account O'Connor's bid is 8.2% higher than staff's adjusted estimate of \$5,242,000. The cost of the previous contract, which did not include any major upgrades, was originally awarded at \$1,343,847 million. The cost for the similar work in this contract is approximately 30% higher than the previous contract. The increase can be attributed to an increase in labor costs (18.5%) and material costs (11.5%).

MWRA staff have been very satisfied with O'Connor Corporation's past performance on the previous combustion turbine generator maintenance contracts and noted that it carries the required experienced technical staff and management. O'Connor Corporation is the incumbent on the existing combustion turbine maintenance contract and has also been the Contractor on the past three contracts. O'Connor Corporation is very familiar with the Deer Island facility and MWRA's procedures for accessing and performing work on the combustion turbine generators, which should reduce downtime of the units during the upgrade work.

O'Connor Corporation's references and OSHA records were checked and found to be favorable. Staff have reviewed O'Connor Corporation's bid, and have determined that it is reasonable and complete, and it meets all of the requirements of the specifications, including the payment of prevailing wages as required. Staff have determined that O'Connor Corporation possesses the skill, ability and integrity necessary to perform the work under this contract and is qualified to do so.

While the proposed cost to perform the control systems modernization work by O'Connor Corporation is higher than staff's estimate of the costs, even after the revised costs are taken into account due to omissions, the cost is not, in staff's view, unreasonable given the difficult bid environment and lack of competition in this area. In addition, staff considered other available options to awarding the contract, and have determined that given the critical nature of the work and lack of competition, a better outcome is not likely. Therefore, staff recommend the award of this contract to O'Connor Corporation as the lowest responsible and eligible bidder.

BUDGET/FISCAL IMPACT:

Funding is included in Deer Island's FY24 Current Expense Budget for the first year of this contract. The control system upgrade is scheduled to take place in FY25 and FY26. Appropriate funding will be included in subsequent Proposed CEB requests for the remaining term of the contract.

MBE/WBE PARTICIPATION:

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

STAFF SUMMARY



TO: Board of Directors
FROM: Frederick A. Laskey, Executive Director
DATE: December 13, 2023
SUBJECT: John J. Carroll Water Treatment Plant SCADA System Upgrade - Design, Engineering Services During Construction and Resident Engineering Services
Arcadis U.S., Inc.
Contract 7581, Amendment 4

COMMITTEE: Water Policy and Oversight

 INFORMATION
 X VOTE

Ethan Wenger, P.E., Director, SCADA
Valerie Moran, P.E., Director, Waterworks
Preparer/Title


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

RECOMMENDATION:

To authorize the Executive Director, on behalf of the Authority, to approve Amendment 4 to Contract 7581, John J. Carroll Water Treatment Plant SCADA System Improvements, Design, Engineering Services During Construction and Resident Engineering Services, with Arcadis U.S., Inc. in the amount of \$1,232,905, increasing the contract amount from \$6,010,390.04 to \$7,243,295.04 with no increase in contract term.

DISCUSSION:

On December 19, 2018, the Board of Directors approved the award of Contract 7581, John J. Carroll Water Treatment Plant SCADA System Improvements, Design, Engineering Services During Construction and Resident Engineering Services to Arcadis U.S., Inc. for a contract term of 52 months from the Notice to Proceed in an amount not to exceed \$4,652,028.07. This contract involves upgrades to critical components of the current Supervisory Control and Data Acquisition (SCADA) system at the Carroll Plant that are reaching the end of their useful life. The Carroll Plant is in operation 24 hours per day, seven days per week and the SCADA system is essential to maintaining continuous operation of the facility. This contract allows MWRA to replace legacy SCADA equipment at the Carroll Plant, implement updated control system standards to enhance redundancy, ensure future reliability, and maintain secure plant operations.



Figure 1 John J. Carroll Water Treatment Plant

This contract has been amended three times. Amendment 1 extended the design period by six months due to COVID impacts and scope changes at a cost of \$75,000, not including labor escalation.

Amendment 2 added 687 days to the design contract due to challenges procuring the construction contract and the decision to construct a parallel SCADA system. By building a parallel SCADA system, risk was reduced, but more time was required. Time was also added to the construction contract due to supply chain challenges for computer and electronics equipment leading to an expectation of longer lead times for SCADA components. The longer construction contract increased Engineering Services During Construction costs as well as Resident Engineering costs. Escalation from Amendment 1 was also included. The total cost of Amendment 2 was \$1,095,716.97.

Amendment 3 increased the pre-determined level of effort for the review of submittals and resubmittals from 2,400 hours to 4,320 hours. The complexity of the project and changes during the design phase required more submittals review hours than originally expected.

This Amendment



Figure 2 SCADA panels

This amendment (Amendment 4) would add \$1,156,098 to the programming and testing services portion of the contract. Unlike many typical MWRA construction projects, the project at the Carroll Plant has a much higher proportion of work that is the responsibility of the design engineer. This is because the SCADA programming work, several different types of testing, and preparation of testing plans and documents have been included in the engineer’s scope of work, as opposed to the contractor’s work. These highly technical tasks are more closely aligned with an engineering

firm’s skill set than a typical contractor’s, and a professional services contract provides more flexibility for MWRA in dealing with changes that may be necessary in SCADA programming as needs of the plant operation change.

As explained in previous communications to the Board, the replacement of the SCADA system at the Carroll Plant involves unique challenges, because the plant must continually supply water to the service area during the project. MWRA staff and Arcadis have found an innovative method to do this by building a second SCADA network alongside the first one, and then moving control signals one by one to the new network. However, there is still risk involved in this and staff are continually looking for ways to improve the project to reduce that risk.

The increase in funding for this amendment is necessary due to the following changes from the original scope.

Increase in Number of SCADA Screens \$653,478

The original scope included the development of 600 SCADA display screens. As the project has progressed, more screens were identified that were needed for the project, as well as the need for more partial screens, known as “pop-ups.” An additional 129 display screens were identified as being necessary for the process beyond the original 600. The project team also decided that the process could be greatly improved by increasing the amount of information available on some of the simpler

pop-up screens. These were then added to the screen count, as they require additional resources to develop. The added 163 screens to the screen count bring the total number of SCADA screens to 892 screens.

Addition of Permissives to SCADA Control Screens \$220,000

The word “permissives” refers to operational parameters that “permit” a piece of equipment to operate. By adding more information to critical control screens, plant operations staff will be able to quickly determine the source of operational problems (such as a high pressure alarm) that could stop a process from operating. This capability is not present in the existing SCADA system, and will significantly improve response time to many problems and reduce risk during the startup of the new system.

Alternative Methods of Screen Development \$96,620

The SCADA department has learned over time that certain methods of screen development make the future operation and upkeep of the SCADA system easier. The requirement for these alternative development methods adds time to screen development. The use of these methods will allow SCADA staff to more quickly troubleshoot problems and resolve operational issues related to the SCADA system.

Additional Testing \$186,000

There is risk associated with cutting over to the new SCADA system while the water plant process is running. During design, staff and Arcadis developed testing protocols, beyond those in the original scope of work, in order to reduce that risk. This additional testing will allow critical SCADA signals to be verified prior to the actual cutover.

Additional Level of Effort for Meetings \$65,207

In addition, this amendment would add \$65,207 to increase the predetermined level of effort for meetings related to the programming and testing activities. Given the complexity of the code and the necessity to closely coordinate the cutover from old code to new code, more meetings have been and will be necessary to coordinate the work.

Meal and Hotel Costs \$11,600

Finally, this amendment will raise the limits on meal and hotel costs for out of state travel to be consistent with federal GSA guidelines. To fund this adjustment, \$11,600 will be added to the budget for Resident Engineering costs.

Given the continued long lead times for critical SCADA components, the contractor’s work has begun to fall behind schedule, and it is likely that the project will extend beyond the current project end date; possibly by as much as one year. Such a delay will likely result in future additional consultant costs, including Resident Engineer, Engineering Services (Project Management), and other costs.



Figure 3 Ozone Generators

There is currently budget remaining for review of contractor requests for information, but requests from the contractor continue to be filed. Arcadis estimates that, due to the complexity of the cutover, it will need additional funds for testing and startup services. MWRA staff concur that such costs may be necessary, but at present staff is not able to identify those costs with certainty. As the project proceeds, staff will assess the remaining budget relative to the project startup requirements and may have to return to the Board for additional authorization if the requirements exceed the Executive Director’s delegated authority.

CONTRACT SUMMARY:

	<u>AMOUNT</u>	<u>TIME</u>	<u>DATED</u>
Original Contract:	\$4,652,028.07	1,581 days	12/19/2018
Amendment 1*:	\$75,000.00	184 days	03/08/2021
Amendment 2:	\$1,095,716.97	687 days	10/20/2021
Amendment 3*:	\$187,645.00	0 days	12/29/2022
Proposed Amendment 4:	<u>\$1,232,905.00</u>	<u>0 days</u>	<u>12/13/2023</u>
Adjusted Contract	\$7,243,295.04	2,452 days	

*Approved under delegated authority

BUDGET/FISCAL IMPACTS:

The FY24 CIP includes \$6,010,390 for contract 7581. Including this amendment for \$1,232,905, the adjusted contract value will be \$7,243,295.04, or \$1,232,905 over the amount in the CIP. This amount will be absorbed in the FY24-28 CIP Spending Cap.

MBE/WBE PARTICIPATION:

No minimum MBE and WBE participation requirements were established for this project. However, Arcadis has committed to 15.09% MBE participation. The contractual MBE and WBE requirements remain unchanged by this amendment.

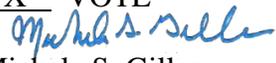
STAFF SUMMARY

TO: Board of Directors
FROM: Frederick A. Laskey, Executive Director
DATE: December 13, 2023
SUBJECT: Security Officer Services for Various MWRA Facilities
United Security, Inc.
Contract EXE-048

COMMITTEE: Administration, Finance & Audit

 INFORMATION

 X VOTE

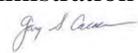


Michele S. Gillen

Director of Administration

Kathryn T. White, Manager, Security Services

Preparer/Title

Gary S. Cacace 

Director of Security

RECOMMENDATION:

To approve the recommendation of the Selection Committee to award Contract EXE-048, Security Officer Services for Various MWRA Facilities, to United Security, Inc. and to authorize the Executive Director, on behalf of the Authority, to execute said contract in an amount not to exceed \$8,694,782.87 for a period of 1,095 calendar days from the Notice to Proceed, with an option to extend the contract for two additional 365 calendar day periods, subject to further Board of Directors' approval.

DISCUSSION:

This contract will provide 24 hours per day, seven days per week, site security officers and monitoring services at the Deer Island Treatment Plant, Chelsea Facility, and the Carroll Water Treatment Plant. Security officer services include stationary coverage and mobile patrols, enforcement of site badging systems, monitoring of security surveillance system for remote locations, and reporting security and fire related incidents. This contract will replace the Authority's existing contract, EXE-041, with Universal Protection Services LLC, d/b/a Allied Universal Services, which was approved by the Board on December 19, 2018, amended twice, and expires on February 6, 2024.

At Deer Island, security services are necessary to control access to the plant site and to provide security for the treatment plant. This contract directs the contractor to provide staff monitoring of security cameras and other electronic alarms (including fire) and to support public safety operations during fires and other emergencies. Security staff at the Chelsea Facility provide onsite security, access control and protection of MWRA property. Security personnel at the Chelsea Facility are also responsible for monitoring access control alarms and video surveillance for remote critical water sites. Security personnel at the Carroll Plant enforce access control, provide onsite security of MWRA property, and assist in all security incidents and other emergencies, including supporting public safety operations during fires. The contract provides for supervisory personnel

at Deer Island, Carroll Plant and the Chelsea Facility to report directly to the Contractor's Account Manager, who has overall responsibility for security officer supervision at all properties.

Procurement Process

For this non-professional services procurement, an RFQ/P process was used. The procurement was publicly advertised in the Goods and Services Bulletin, the Boston Herald, Banner Publications, and El Mundo. MWRA procured these services using a one-step procurement process whereby interested firms were asked to submit both technical and cost proposals simultaneously. Seven firms submitted Statements of Qualification/Proposals on November 9, 2023. The proposals were then evaluated for compliance with threshold items. Upon review, the Selection Committee rejected the proposal by Darien Security Services for its failure to meet the threshold requirement of financial stability and for its incomplete responses. The proposals of the firms that met the threshold requirements were evaluated under the following criteria: Cost (35 points), Qualifications/Experience/Past Performance/Key Personnel (35 points), and Technical Approach, Capacity and Management Approach (30 points). The remaining six proposals were submitted as follows.

Proposer	Proposed Cost
Universal Protection d/b/a Allied Universal	\$8,136,879.10
Securemedy, Incorporated	\$8,140,932.26
United Security, Inc.	\$8,694,782.87
Inter-Con Security	\$8,751,259.24
PalAmerican Security	\$8,895,331.29
Alliance Detective & Security	\$9,389,305.67
<i>Staff Estimate</i>	<i>\$8,227,005.83</i>

The Selection Committee met on November 21, 2023, to evaluate the six remaining proposals. The four voting members on the Selection Committee scored and ranked the proposals as follows:

Proposer	Points	Final Ranking	Order of Preference
United Security, Inc.	324	1	4
Inter-Con Security	306	2	8
Universal Protection d/b/a Allied Universal	274	3	13
Securemedy, Incorporated	258	4	15
PalAmerican Security	220	5	19
Alliance Detective & Security	211	6	21

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

United Security, Inc. (United), a national security firm, met all minimum threshold qualification

requirements, held the highest score in total points, and was first ranked by each member of the Selection Committee. Some of United's past and existing security clients include the State of Connecticut (more than 60 state-operated properties), Massachusetts College of Art and Design, United States Marshal Service – Southern NY District (detention center and transport) and Related Beal (Life Science properties).

The Selection Committee scored United highest for its owner/operator local management focused on retention and hiring the best security officers for the MWRA, including a contractor-managed local recognition program in its proposal. United also scored high for its in-house training program for new hires that is equipped to deal with contract startups and transitions similar to the complexity of the MWRA contract, including training topics such as Terrorism Awareness, Bomb Threats, Access Control, Human Behavior and Mental Health, Legal Powers & Limitations and Workplace Violence. The Selection Committee unanimously agreed that United had the best approach in hiring practices by using in-person hiring and interviews that included a ten-step selection process. Staff have confirmed that United will pay no less than the base wage rates established in the Collective Bargaining Agreement between the Employer Group (of which United is a signing partner) and the SEIU local 32BJ; it also provides health insurance to its employees, and a competitive benefits package. The cost is 5.7% higher than MWRA's estimate and was slightly lower than the median total of \$8,668,081.74 from all bids received. Based upon the aforementioned median cost, staff believe that it may have underestimated the contract cost. When reviewing the costs, it was noted that United proposed a higher bill rate between officers and first line supervisors than all other competitors. MWRA staff believe that higher rates of pay will incentivize excellent supervisor performance and retention. United proposed monthly business reviews, frequent off-hour site audits and inspections, and presented a comprehensive and detailed transition plan to facilitate a smooth and orderly transition of security services from the current security services contractor.

In contrast, the incumbent, Universal Protection Services LLC, d/b/a Allied Universal Services ("Allied"), submitted a good proposal that the Selection Committee ranked third. Committee members noted several performance issues with Allied, including concerning incidents involving Allied's employees and a lack of sufficient engagement by its leadership. Allied's proposed project team, although good, was not as strong as United's team. The Selection Committee's consensus was, despite Allied's lower cost proposal, United provided local organizational resources that are worth the cost differential. Staff are confident United Security will retain security officers and supervisors with whom MWRA has built a relationship with over the years.

Inter-Con Security's proposal was excellent and a close second to United, but its proposal did not convey confidence to the Selection Committee that Inter-Con would have the local capacity or management support to staff MWRA facilities in the event of an emergency, such as an act of terrorism, or large scale event like Sail Boston. Inter-Con's cost proposal was slightly higher than United's cost. After carefully reviewing what Inter-Con was offering in terms of training, and some concerns about its lack of experience with critical infrastructure clients, the Selection Committee ranked the firm second.

The remaining three bidders had a strong proposals, but in the end, the Selection Committee ranked them lower due to factors such as a higher price, lack of utility and critical infrastructure experience, and local, experienced organizational and management support.

BUDGET/FISCAL IMPACTS:

The FY24 Current Expense Budget (CEB) includes \$2.7 million for Security Services. The anticipated budget shortfall for the remainder of FY24 (February through June) is approximately \$102,000. This overage will be absorbed in the FY24 CEB. Sufficient funds will be included in future CEB requests for the remainder of the contract.

MBE/WBE PARTICIPATION:

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

STAFF SUMMARY

TO: Board of Directors
FROM: Frederick A. Laskey, Executive Director
DATE: December 13, 2023
SUBJECT: Recruitment and Retention Update



COMMITTEE: Personnel and Compensation

X INFORMATION
 VOTE

Susan Carter, Manager of Employment, Human Resources
Wendy Chu, Director of Human Resources
Preparer/Title


Michele S. Gillen
Director of Administration

RECOMMENDATION:

For information only

DISCUSSION:

Staff have previously highlighted for the Board the ongoing and significant difficulty in recruiting and retaining personnel as well as the steps and initiatives that are in place or in progress to address these challenges. A number of these initiatives have required the Board's approval, including the creation of new entry level positions and the payment of retention rates. Many have also required agreements with MWRA's unions. While staffing levels remain well below the budgeted 1152 full-time equivalent employees (FTE's), staff levels have recently begun to increase in part because of multiple initiatives. This staff summary provides an update on current staffing levels and challenges, as well as an overview and update on the multi-pronged recruitment and retention strategy.

These efforts closely align and often overlap with MWRA's efforts on staff Diversity, Equity and Inclusion (DEI), many of which are mentioned today, but DEI will also be the subject of a more detailed Board update at a later meeting.

Staffing Levels

As of December 2, 2023, there are 1075.6 full-time equivalent employees (FTE's), which is about 85 positions below the budgeted FTE count of 1152. So far in FY24, there have been 23 retirements and 12 resignations; during this same time, there have been 53 external hires and 44 promotions. There are 90 positions that staff are actively working to fill and 11 vacancies that are temporarily on hold for reasons that include a lack of qualified candidates and a review of job descriptions and requirements. There are currently 230 employees who could retire at any time.

Recruitment and Retentions Efforts:

Recruitment and Retention Rates: There are recruitment and retention rates in place for 8 titles (OMC Laborer, Area Supervisor, Operator, T&T Operator, Electrician, Plumber/Pipefitter, TRAC Sampling Associate and Sr. Monitoring & Control Engineer). These rates have been in place for varying degrees of time.

In-Training Programs:

The Board approved 1 Auto Technician-in-Training position and 4 OMC Laborer-in-Training positions. These in-training programs also required agreements with the American Federation of State, County and Municipal Employees (AFSCME) Council 93, Local 1242, Unit 2. The creation of these entry-level positions in established career paths within the Authority have enhanced the diversity recruitment efforts by broadening the applicant pool because applicants are not required to possess the types of licenses required for more advanced positions within the career ladder. The Auto Technician-in-Training position will soon be filled and the 4 OMC Laborer-in-Training positions have all been filled (1 with a woman and 1 with a person of color). Two of the recently hired OMC Laborers-in-Training have already successfully obtained their Commercial Drivers Licenses (CDL), a key step to becoming an OMC Laborer.

Staff are currently negotiating with the National Association of Government Employees (NAGE), Local R1-168, Unit 3 to develop an Operator-in-Training position.

Operator Shadow Program:

Deer Island recently restarted an Operator job shadowing program, after pausing during the COVID pandemic, that provides staff (mostly Building and Grounds Workers) the opportunity for hands on and classroom training aimed towards a new career path opportunity.

Employee Referral Bonus Fee:

A one-year employee referral bonus fee pilot program has been in place since March 2023 in which employees who refer an applicant who is ultimately hired and completes their probationary period receive a \$500 referral bonus. Employees may receive up to \$2500 under this pilot program. There are a number of eligibility rules included in this program.

Signing Bonus:

The Authority recently entered into an agreement with Unit 2 to pay a \$5000 bonus (made in 2 payments) to new hires in the following hard to fill positions: HVAC Specialist, Motor Equipment Repairman, Instrumentation Specialist and OMC Laborer.

Shift Differential Pilot:

In June, 2022 MWRA and Unit 3 entered into a pilot agreement to increase the shift differential payment for Operators, Area Supervisors, Transmission and Treatment (T&T) Operators, and Senior T&T Operators working on off-shifts to \$4.50/hour. Recently, the Authority entered a similar pilot agreement with the United Steelworkers of America Local 9360, Unit 6 for Shift Operations Managers. Both agreements are intended to encourage retention and incentivize employees to work on the off-shifts, and have also served as another recruitment tool for new hires.

Changes in License Requirements and Years of Experience:

Staff have implemented changes in the licensing requirements and required years of experience for Heavy Equipment Operators (HEO's) and Area Supervisors to broaden the candidate pool. Staff are negotiating with Unit 3 to modify the license and experience requirements for Operators and T&T Operators.

Professional Development and Career Paths:

Staff professional development is a key component of staff retention. It provides employees with the skills and competencies and, in some instances, licenses that will prepare them to assume roles of increasing responsibility. It also provides MWRA with a "bench" from which to promote. Because of the large number of retirements and past success in promoting staff internally, the bench must be continuously re-built.

Related, staff have begun to map out "career paths" that show the career opportunities that may be available if certain skills, competencies and licenses are acquired.

Some examples of professional development opportunities are the MWRA Mentoring Program, the NACWA Emerging Leader Program and the creation of entry level positions in which academic training and hands on support is acquired. The Authority has also sponsored employees to participate in license exam preparation courses for a range of licenses that are not required for their current positions in order to make them competitive for future promotions.

Partnerships with Vocational Technical and Other Schools and targeted job fairs:

Staff continue to develop relationships with vocational technical and other high schools to generate interest in water and wastewater careers, and to specifically recruit a diverse pool of applicants for entry level and in-training positions.

Staff also recently held an MWRA job fair at Chelsea Public Library and a STEM event at Deer Island for Boston Green Academy students.

Staff will continue to create and look for similar opportunities.

Outcomes and Conclusions:

The efforts around recruiting and retaining staff cannot be measured in a vacuum and can be challenging to quantify, as any number of factors may influence a person's employment decisions. However, staff believe that some combination of the tools that have been implemented are contributing to the overall rising FTE count and are starting to result in hires and promotions for previously hard to fill positions.

What Works?

Some of the efforts, like the successful in-training programs, have produced positive results so far. Almost all of these positions have been filled and those employees to date are satisfying the program requirements. The operator shadow program for internal staff has been successful in the past and staff expect similar success this time.

If an agreement with Unit 3 is reached, staff believe that an Operator-In-Training position has the potential to be successful. That coupled with the Operator Shadow Program should broaden the Operator pool of candidates.

The employee referral bonus has also arguably contributed to the successful hiring of external candidates. To date, 6 eligible referral bonuses have been paid and 9 others await completion of the probationary period.

Recruitment and retention rates have been in effect for varying durations for certain positions and while they may not be the only factor that result in new hires and promotions, a few seem to have had a very positive effect on hiring and promotions. Below are some examples.

Title	Recruitment and Retention Rate Effective Date	Hires and Promotions in the Six Month Period Prior to R&R rate	Hires and Promotions Since R&R rate
OMC Laborer	September 2022	1 External Hire, 2 Promotions	15 External Hires
Area Supervisor	May 2022	1 External Hire	6 External Hires, 3 Promotions
Operators	May 2022	2 Promotions	5 External Hires, 5 Promotions

It is important to note the three internal Area Supervisor promotions were able to occur after the experience requirements were modified making certain staff qualified applicants.

Currently, there are no Area Supervisor vacancies, but there are 10 OMC Laborer and 6 Operator positions that staff are actively working to fill.

Some recruitment and retention rates for other positions do not show as much effect as the OMC Laborers, Area Supervisors and Operators. For example, 3 Sampling Associates were hired in the 6 months prior to the effective date of the recruitment and retention rate and 4 were hired since the recruitment rate went into effect.

Several staff who previously participated in MWRA’s Mentoring Program and/or the NACWA Emerging Leader Training have been promoted into positions of increasing responsibility and leadership.

Lastly, partnering with vocational technical schools has resulted in co-op student workers in Fleet Services who have and can promote into the Auto Technician in-Training position.

Too early to know:

Changes in license and experience requirements for the HEO position are only recently in place so it is too early to know if these changes will increase the candidate pool.

The signing bonus pilot agreement with Unit 2 for certain positions was recently executed and will soon be implemented. Staff will report back on whether or not this program broadens the candidate pool for those positions.

STAFF SUMMARY

TO: Board of Directors
FROM: Frederick A. Laskey, Executive Director
DATE: December 13, 2023
SUBJECT: Administration Division Proposed Organizational Changes



COMMITTEE: Personnel & Compensation

 X INFORMATION
 VOTE



Michele S. Gillen
Director of Administration

This staff summary provides an overview of a plan for proposed organizational changes in the Administration Division. Corresponding PCR amendments will be presented to the Board for approval in a separate staff summary presented at this meeting. Two appointments will also be recommended as a re-allocation of existing resources.

RECOMMENDATION: For information only.

DISCUSSION:

Staff are proposing organizational changes to the Administration Division's Human Resources, Fleet Services and MIS Departments to better meet a number of those departments' needs as well as a number of critical MWRA short and long-term goals. These proposed changes will not result in a change in the total budgeted full-time equivalents (FTE's) for the Administration Division.

Human Resources:

The MWRA Human Resources Department includes 5 groups (Employment, Labor Relations, Benefits and HRIS, HR Operations and Compensation) consisting of 17 employees. Staff are recommending the creation of one new position in the Employment Group, the downgrading of one vacant position in the HR Operations Group and a reclassification of one filled position in the Employment Group to better reflect the position's responsibilities. There will also be two appointment recommendations which are effectively a re-allocation or re-assignment of existing resources to meet staffing needs that result from a recent retirement.

MWRA continues to experience a number of retirements at every level of the agency, placing more pressure on continued succession planning and continued workforce development in order to build and maintain a strong staff "bench" from which to field competent, knowledgeable, and

experienced replacements. MWRA thinks about and anticipates various future departures, to the extent possible, and considers staff roles in future organization structures. A number of recruitment and retention initiatives are in place or in development in support of this effort. Those include the development of entry-level in-training positions, pilot agreements with MWRA bargaining unions on recruitment and retention rates, professional development training, employee referral bonuses as well as signing bonuses for certain hard to fill positions, compensation analysis and the development of career paths. This comprehensive effort to attract and promote qualified staff is led by the Employment Unit in cooperation with the Affirmative Action and Compliance Unit. Staff believe that both units and MWRA overall will benefit from an additional resource to recruit and attract a qualified and diverse applicants.

The HR Operations Unit leads all employment relations investigations, and partners with the Affirmative Action and Compliance Unit on investigations related to harassment, hostile work environment, discrimination, and retaliation. Those investigations require thoroughness and thoughtfulness and can be time-consuming. They can include a number of investigative tools and result in recommendations to senior managers on how to proceed in sometimes sensitive matters. The related documentation must be comprehensive and accurate as MWRA may need to rely heavily on such records in future arbitrations and litigations. This unit also often serves in a “utility player” role, taking on special projects such as implementation of new employment-based rules and regulations and providing support to the other HR Units as necessary.

In order to meet the demands of these groups and HR overall, staff recommend three PCR amendments in the HR Department, as well as the appointment of the current Manager, HR Operations to the Manager, Benefits and HRIS position and the current Manager of HR Support in the Operations Division to the Manager, HR Operations position. The Manager of HR Support in the Operations Division will not be backfilled.

MIS:

Staff propose changes in the MIS Department to best meet MWRA’s long-term IT needs related to network support and cyber security. Cyber security threats are constantly changing and are ever more sophisticated. MWRA employs a robust best practice defense-in-depth cyber security program that includes software and hardware security solutions as well as a third-party Managed Cyber Security Services that are monitored and managed by MWRA staff. There was a recent reallocation of resources between MIS and Security for operational reasons. MIS has evaluated its long-term staffing needs related to cyber security and staff are recommending the creation a new position, IT Security Analyst, to address the growing cyber security needs of the MWRA.

MWRA is reliant on network services for every aspect of its business operations. One example is Infor Lawson, MWRA’s Enterprise Resource Planning (ERP) system, which is set for a significant 3-year upgrade¹. The ERP application modules represent the core administrative and financial functionality for MWRA (Human Resources, Payroll, Finance, Procurement and Materials Management. In light of MWRA’s reliance on its network services and in anticipation of retirements, staff recommend the creation of a new position, Network Administrator 1.

¹ Contract 7286, Infor Lawson Upgrade was awarded by the Board on July 21, 2023 for an amount not to exceed \$8,839,400.00 for contract term of 3 years

Fleet Services:

Auto Technicians have been among the hardest to fill positions. Staff have partnered with Lynn Vocational Technical High School's Automotive Department to hire students in Co-op/Intern positions to perform basic auto service tasks like changing wiper blades, topping off fluids and jump starting vehicles. As staff continue to develop career paths in Fleet Services, these Co-op/Intern positions may serve as good entry points for possible future employees. Staff recommend the employment of the current Co-op/Intern employee for up to 12 months to continue to provide low-level, but necessary support to the Department while the careers paths are finalized and the current Auto Technician-in-Training position is filled.

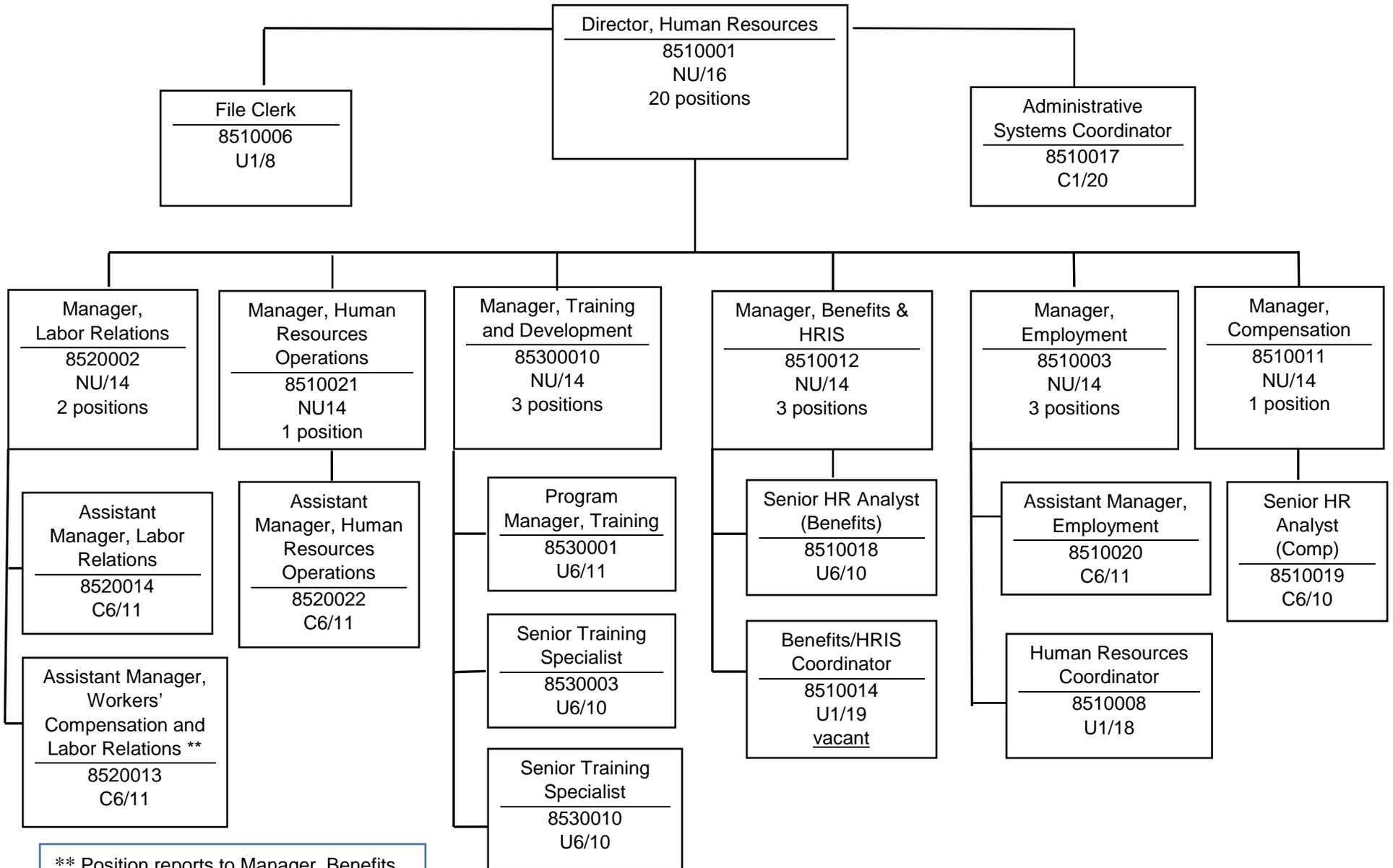
BUDGET/FISCAL IMPACTS:

There is sufficient funding in the Administration Division's FY24 Current Expense Budget (CEB) for these changes.

ATTACHMENTS:

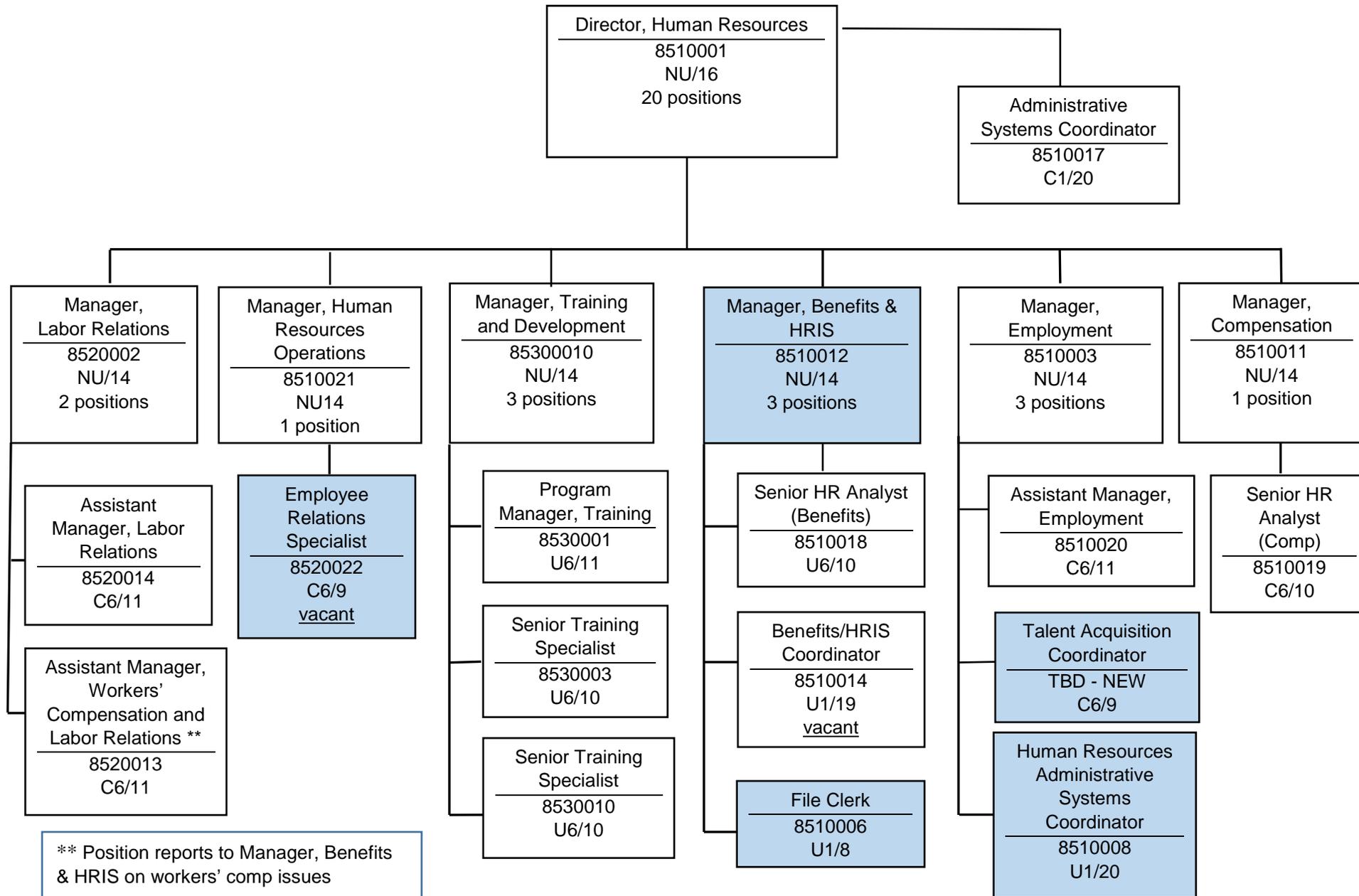
Current Human Resources Department Organization
Proposed Human Resources Department Organization
Current MIS Department Organization
Proposed MIS Department Organization

**Administration Division
Human Resources
Department
Current: November 2023**



** Position reports to Manager, Benefits & HRIS on workers' comp issues

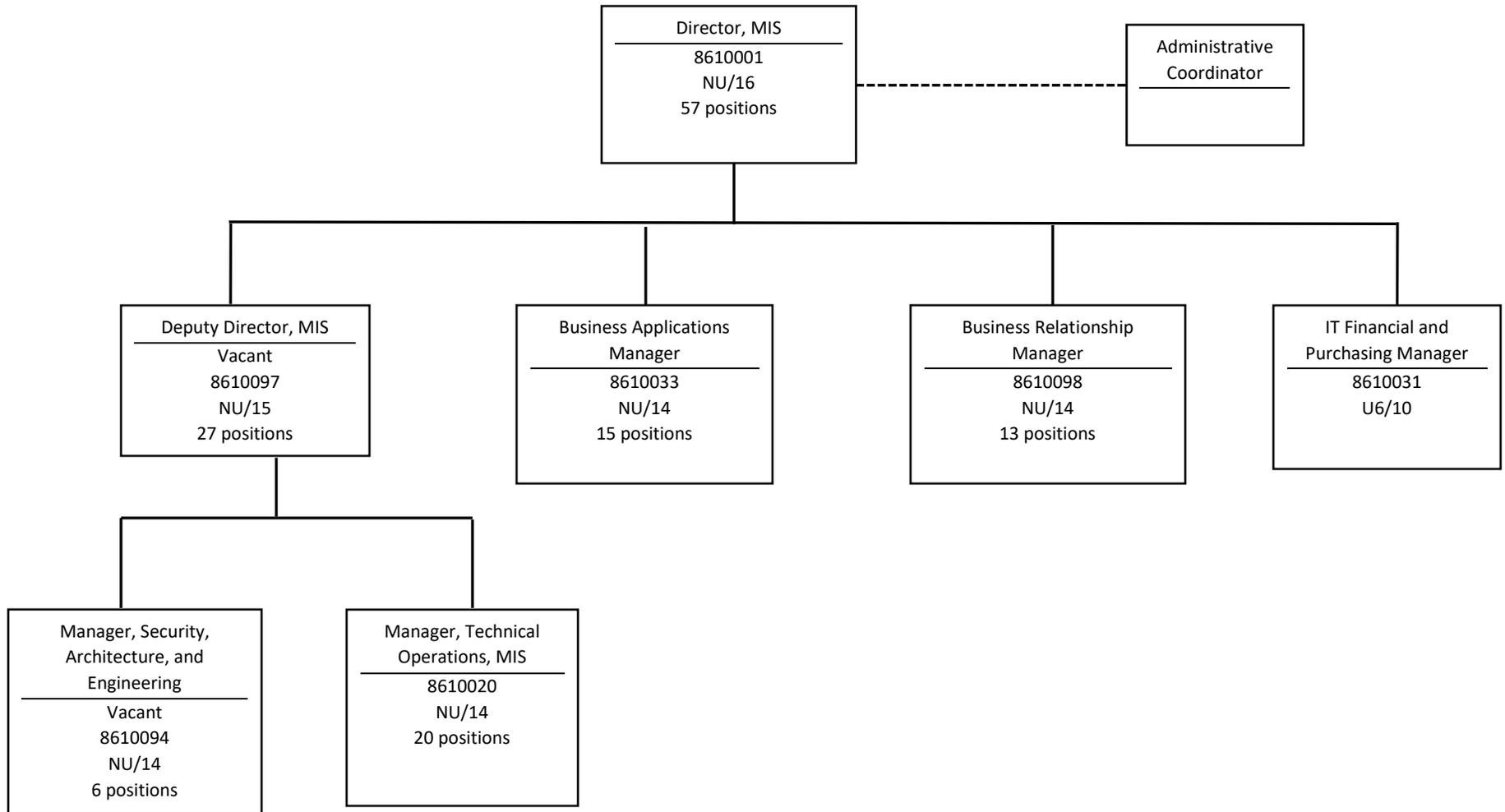
**Administration Division
Human Resources
Department
Proposed: December 2023**



Administration Division - MIS Department

Current Organization

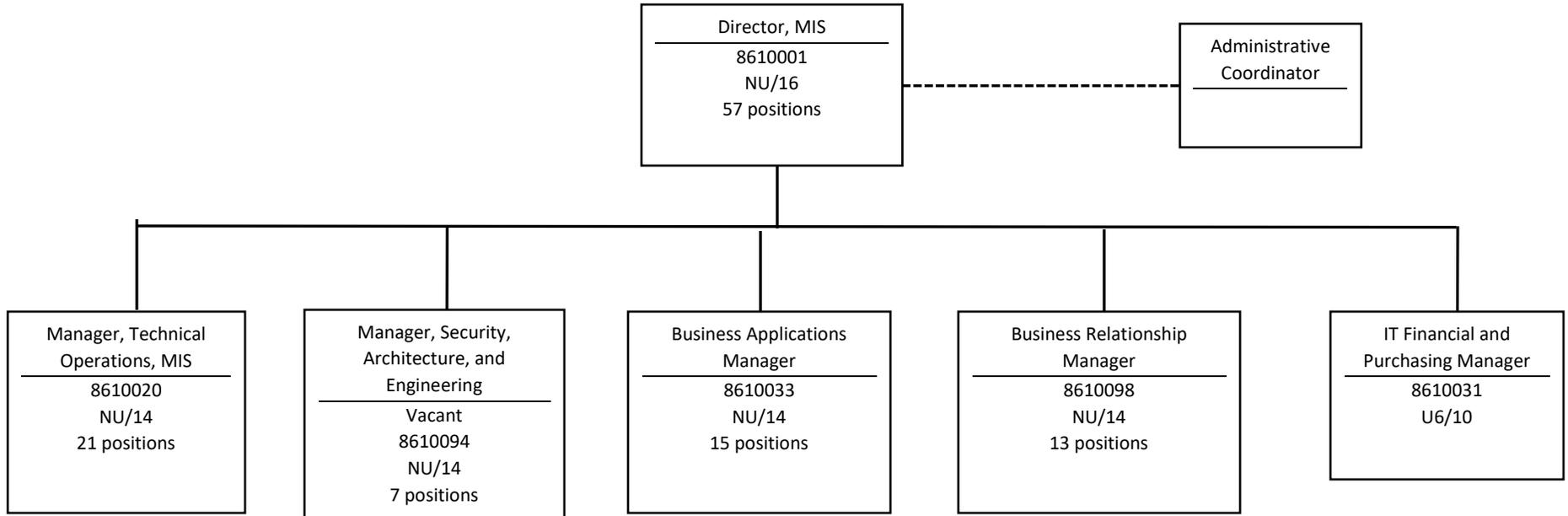
November 2023



Administration Division - MIS Department

Proposed Organization

November 2023



STAFF SUMMARY



TO: Board of Directors
FROM: Frederick A. Laskey, Executive Director
DATE: December 13, 2023
SUBJECT: Metropolitan Water Tunnel Program
Consultant and Contract Structure Update and Tunnel Department Proposed Organizational Changes

COMMITTEE: Personnel & Compensation

X INFORMATION
 VOTE

Wendy Chu, Director, Human Resources
Paul V. Savard, P.E., Director, Design and Construction
Preparer/Title


Kathleen M. Murtagh, P.E.
Director, Tunnel Redundancy

RECOMMENDATION:

For information only. This staff summary provides an update on the consultant support structure and Tunnel Department organization to support the next phase of design for the Metropolitan Water Tunnel Program (“Tunnel Program”). The proposed Department organization is an update to that presented to the Board in May 2022.

DISCUSSION:

In February 2017, the Board of Directors approved construction of northern and southern deep rock tunnels from the Hultman Aqueduct and MetroWest Water Supply Tunnel to the Weston Aqueduct Supply Main 3 and to the Southern Spine water mains for the purpose of providing redundancy for the Metropolitan Tunnel System (which consists of the City Tunnel, the City Tunnel Extension, and the Dorchester Tunnel). The Tunnel Program consists of two new deep rock tunnels, North Tunnel and South Tunnel, totaling approximately 14.8 miles and constructed between 250 to 500 feet below grade. The tunnels will connect to existing water infrastructure at 11 shaft locations. Near surface infrastructure consisting of top of shaft structures, valve chambers, isolation valve chamber, and surface pipelines (ranging from 36 to 120 inch diameter) will also be constructed.

In 2018, the Authority established the Metropolitan Tunnel Redundancy Department (“Department”) to develop and execute the Metropolitan Water Tunnel Program and lead its day-to-day management, decision-making and selection of implementation strategies. Since 2018, the Program has advanced through preliminary design and environmental reviews, conducted initial phases of geotechnical investigations, advanced required real estate acquisitions, and is nearing the beginning of final design.

Currently, three professional services contracts have been approved by the Board, executed in support of the Tunnel Program, and are being managed by the Tunnel Department. The professional services contracts include:

- Program Support Services (“PSS”), which provides general consulting, submittal review, risk management support, constructability reviews, cost estimating/validation, schedule support, staff augmentation, and Expert Review Panel engagement support. This contract was for an initial term of 5 years for \$10,247,877. The initial term will end in April 2024 and it is recommended in a related staff summary to exercise the first of two optional 2-year terms;
- Preliminary Design, which consists of the execution of initial geotechnical investigations, preparation of Environmental Impact Reports, and preparation of a Preliminary design report, drawings, schedule and cost estimate. This contract was for \$15,692,527 and will end in January 2024; and
- Geotechnical Support Services, which focusses on the collection of geotechnical/geological data to support final design, bidding and construction of the Program. This contract was for \$12,789,889 and will end in January 2026.

All three existing professional services contracts are on schedule and budget.

Additional professional services contracts are planned in support of the Tunnel Program. These include an extension to the PSS contract, Final Design Engineering Services, Engineering Services During Construction, and Construction Management. The Final Design Engineering Services contract procurement is ongoing with an anticipated recommendation for award at the June 2024 Board meeting. Construction Management contract(s) procurement is anticipated to begin in 2025. Engineering Services During Construction (“ESDC”) will begin upon the start of the first construction contract. Bidding of the first tunnel construction contract is targeted for 2027 with tunnel construction starting in 2028.

In December 2022, a ten-year real estate lease was approved by the Board for a location to process and store geotechnical samples (primarily rock core) that is needed for the Program. The space is located near the mid-point of the tunnel alignment and three of the planned shaft sites. The space will also provide critical office and meeting space for Program use through construction.

In July 2021, the Board approved the purchase of a parcel of land on School Street in Waltham for the purposes of constructing a connections shaft for the Tunnel Program. This location would allow for a connection between the new North Tunnel and MWRA’s existing Lexington Street Pump Station. The Lexington Street Pump Station is supplied by MWRA’s WASM 3 pipeline, and provides approximately 40 percent of Waltham’s water supply. A new tunnel connection to the pipelines that supply the Lexington Street Pump Station will provide redundancy for Waltham to the WASM 3 pipeline. In September 2021, the School Street parcel was purchased for \$1,850,000. Staff are in discussions with MassDOT, DCR, and other landowners for the acquisition of additional parcels.

Contract Structure:

The proposed consultant and contractor organization structure is attached. This structure is consistent with the organization of awarded professional services contracts, as described above.

One Final Design Engineering Services contract is planned. This contract will extend from mid-2024 (assuming award in June 2024) to the end of design for all construction packages (currently

targeted for 2029). ESDC is planned to be a reauthorization to the same consultant, subject to Board approval, and would begin upon notice to proceed of the first awarded construction package. ESDC will extend through all construction contracts.

At this time, it has not been determined if one or two Construction Manager (“CM”) contracts will be awarded. Provided the overall Tunnel Program schedule is maintained as indicated above, it is anticipated that one CM contract will be awarded for both tunnel construction packages. However, the final decision on the number of CM contracts to be awarded will be influenced by the actual schedule of tunnel construction packages.

At this time, two tunnel/shaft/near surface facility construction contracts are planned. In addition, a few small enabling construction contracts will be needed to facilitate the overall Program schedule. The first tunnel construction contract procurement is targeted to begin in 2027 with construction starting in 2028. Early enabling construction contract(s) are expected to begin in approximately 2026.

Based on the FY24 CIP, it is projected that in the coming years, over \$1.5 billion in professional services contracts and construction contracts will be awarded for the Tunnel Program.

Tunnel Department Organization:

The Tunnel Department has grown over the years as the Tunnel Program has progressed. The Department currently consists of 10 filled position. There are also five approved but unfilled positions, as shown on the attached Tunnel Department organization chart. The Tunnel Program is on schedule to achieve a significant milestone with the completion of preliminary design and environmental reviews in 2024. Passing this milestone will also shift the focus of the work to final designs with an emphasis on completing land acquisition, expanding outreach efforts, achieving stakeholder agreements, and preparing for tunnel construction. In order to maintain the Program schedule, the following is proposed:

- Reorganize the Department to align staff along three major efforts; geotechnical and tunneling, final design, and program management.
 - The number of staff supporting geotechnical investigations will decrease in recognition that this effort, although not complete, is underway.
 - Expand the number of staff supporting design efforts in recognition of the substantial amount of work to be done during the final design phase that will need to be managed, coordinated, and reviewed.
 - Establish staff to focus on Program management which includes aspects where the MWRA will self-perform (land acquisition, outreach, and stakeholder agreements) and expand our program controls effort (schedule, budget control, change management).
- Create a new NU16 position (Director, Program Management), which is recommended in the related PCR amendment staff summary. This position will be responsible for the growing efforts associated with program management and administration, budgeting, scheduling, individual contract budget administration, change management, land acquisition, outreach, risk management, quality management, and document control. This position will also be the main liaison between the Tunnel Program and several MWRA Departments that will have critical involvement in the Program over time (e.g., Law,

Finance, Real Property, Procurement, and Public Affairs).

- The existing NU16 position (Director, Design and Construction) along with the vacant NU15 position (Deputy Director, Design and Construction) will be responsible for the management of three very large professional services contracts; Final Design Engineering, Engineering Services During Construction, and Construction Management. Each of these professional services contracts will be substantial (~\$40M - ~\$160M) and long duration (~five to over ten years). These positions will be the main liaisons between MWRA Operations Department and the Tunnel Program.
- Increase reliance on staff from the Program Support Services consultant to provide specialized expertise and to fill roles that are intermittent and/or have proven to be difficult to fill with MWRA staff. The Tunnel Department has experienced staff losses associated with promotions, retirements, and resignation. Backfilling staff losses as well as adding staff to match the expansion of the Program has been difficult. Use of staff through the PSS contract has been an essential tool in maintaining the Program schedule. Extending the Program schedule beyond that currently planned will add costs to the overall Program. Depending on the actual rate of inflation, amount of unawarded contracts, and impact on awarded contracts at the time, a six-month schedule slippage could add between \$15M to over \$100M to the total Program cost.

An updated Tunnel Department organization chart is attached. As tunnel construction contracts are awarded in the future, the Tunnel Department will need further reorganization to reflect the then shifting focus from design to construction.

BUDGET/FISCAL IMPACTS:

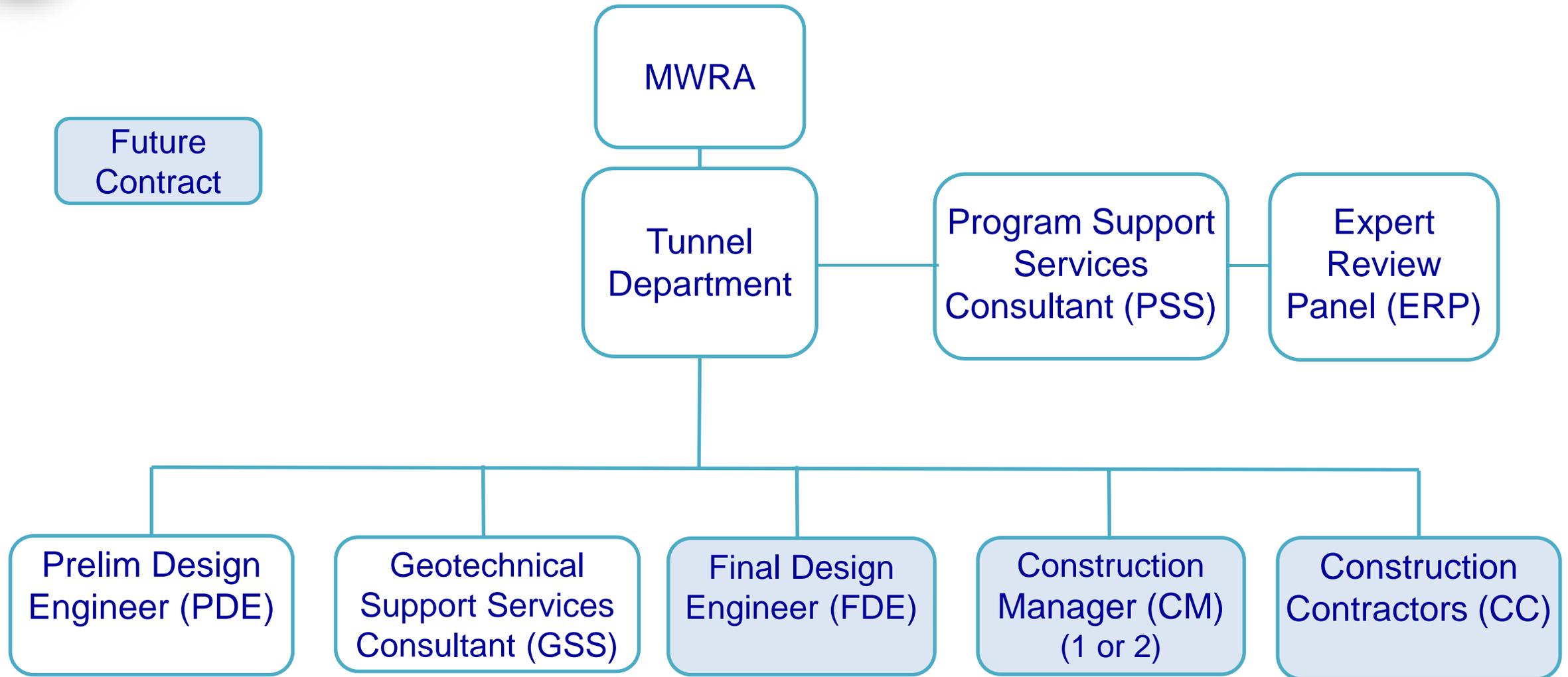
There are sufficient funds in the Tunnel Department's FY24 Current Expense Budget to fund these positions.

ATTACHMENTS:

Proposed Consultant and Construction Contract Structure, Tunnel Program
Current Tunnel Redundancy Department Organization
Proposed Tunnel Redundancy Department Organization

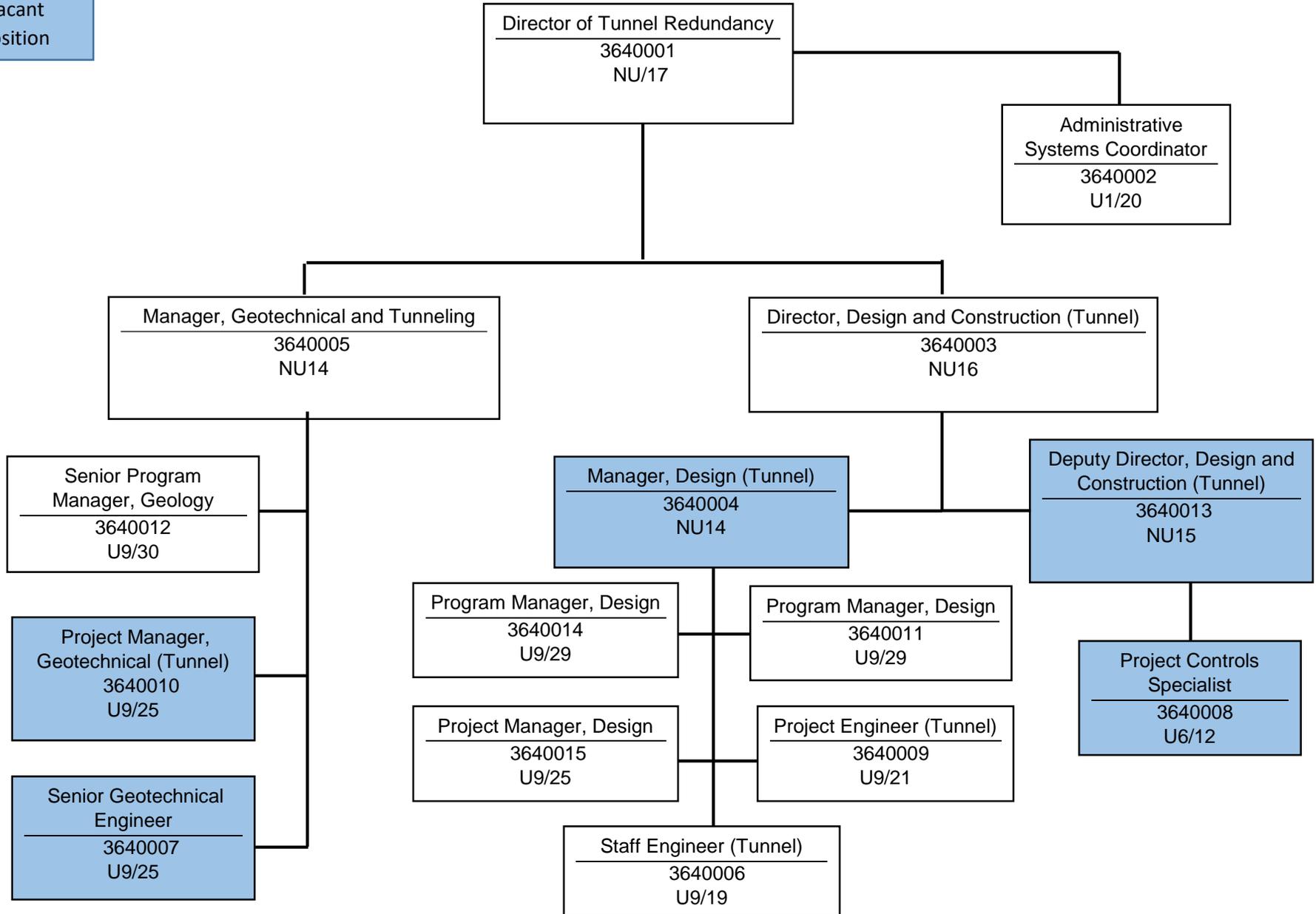


Metropolitan Water Tunnel Program – Contract Structure



Tunnel Redundancy Department - Current December 2023

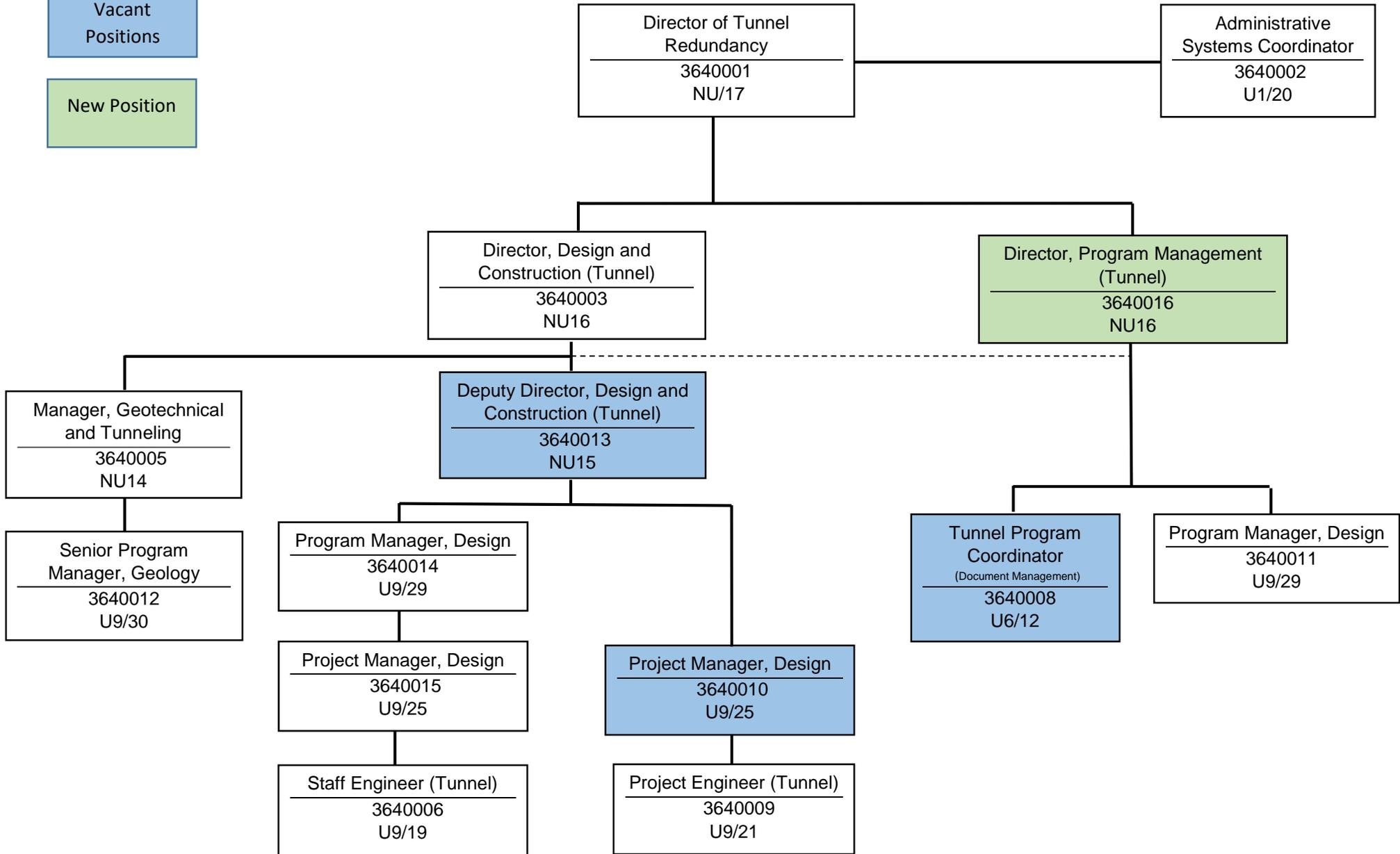
Vacant
Position



Tunnel Redundancy Department - Proposed December 2023

Vacant
Positions

New Position



STAFF SUMMARY

TO: Board of Director
FROM: Frederick A Laskey, Executive Director
DATE: December 13, 2023
SUBJECT: December 2023 PCR Amendments



COMMITTEE: Personnel and Compensation

 INFORMATION

 X VOTE



Wendy Chu, Director of Human Resources
Preparer/Title

Michele S. Gillen
Director, Administration

RECOMMENDATION:

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

DISCUSSION:

The Position Control Register lists all positions of the Authority, filled and vacant. It is updated as changes occur and it is published at the end of each month. Any changes to positions during the year are proposed as amendments to the PCR. All amendments to the PCR, except those resulting only in a change in title or cost center, 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.

December 2023 PCR Amendments

There are eleven PCR Amendments this month. Five of these changes are in the Administration Division’s Human Resources and Management Information Systems Departments and are recommended to address ongoing agency-wide recruitment and retention challenges, the increased complexity and reliance on technology and as part of the Division’s overall succession planning.

Organizational Changes:

1. Title and grade change to one filled position in the Administration Division, Human Resources Department from Human Resources Coordinator, Unit 1 Grade 18, to Human Resources Administrative Systems Coordinator, Unit 1 Grade 20, due to changes in responsibilities.
2. Creating a new position in the Administration Division, Human Resources Department for a Talent Acquisition Coordinator, Confidential Unit 6 Grade 9, to better meet department staffing needs relative to ongoing recruitment efforts as staff turnover remains steady and certain positions continue to be difficult to fill in a competitive employment market
3. Title and grade change to one vacant position in the Administration Division, Human Resources Department from Assistant Manager, Human Resource Operations, Confidential Unit 6 Grade 11, to Employee Relations Specialist, Confidential Unit 6 Grade 9, to better meet staffing needs and to enhance labor and employee relations.

4. Creating a new position in the Administration Division, MIS Department for an IT Security Analyst, Unit 6 Grade 11, to better meet staffing needs in light of increasingly sophisticated cyber threats.
5. Creating a new position in the Administration Division, MIS Department for a Network Administrator I, Unit 6 Grade 10, to better meet staffing needs and as part of the Department's succession planning.
6. Salary adjustment to one filled position in the Operations Division, Deer Island Wastewater Treatment Department, Shift Operations Manager, Unit 6, Grade 12, due to union agreement.
7. Title and grade change to one filled position in the Operations Division, Western Water Department from Program Manager, Reservoir Operations, Unit 9 Grade 29, to Senior Program Manager, Reservoir Operations, Unit 9 Grade 30, to better reflect responsibilities.
8. Creating a new position in the Operations Division, Western Water Department for a Senior Engineer, Reservoir Operations, Unit 9 Grade 23, to better meet staffing needs.
9. Salary adjustment to one filled position, Program Manager (Tunnel), Unit 9, Grade 29 in the Tunnel Division to alleviate salary collision with direct report.
10. Creating a new position in the Tunnel Division for a Director, Program Management (Tunnel), Non-Union Grade 16, to better meet staffing needs.
11. Extending an intern position in the Administration Division, Fleet Services Department for twelve months to meet staffing needs and build a career path.

BUDGET/FISCAL IMPACT:

The annualized budget impact of these PCR amendments will be a maximum cost of \$615,102. Staff will ensure that the cost associated with these PCR amendments will not result in spending over the approved FY24 Wages and Salaries budget.

ATTACHMENTS:

Job Descriptions

MASSACHUSETTS WATER RESOURCES AUTHORITY
POSITION CONTROL REGISTER AMENDMENTS
FISCAL YEAR 2024

PCR AMENDMENTS REQUIRING BOARD APPROVAL - December 13, 2023																	
Number	Current PCR #	V/F	Type	Current Title	UN	GR	Amended Title	UN	GR	Current/Budget Salary	Estimated New Salary	Estimated Annual		Reason			
												\$	Impact	For Amendment			
B55	Administration Human Resources Department 8510008	F	G	Human Resources Coordinator	1	18	Human Resources Administrative Systems Coordinator	1	20	\$75,611	\$80,277	-	\$80,277	\$4,666	-	\$4,666	Grade and title better reflect responsibilities.
B56	Administration Human Resources Department TBD	N/A	N/A	N/A	N/A	N/A	Talent Acquisition Coordinator	C6	9	\$0	\$63,809	-	\$97,639	\$63,809	-	\$97,639	New position to meet department staffing needs.
B57	Human Resources Department 8520022	V	T,G	Assistant Manager Human Resources Operations	C6	11	Employee Relations Specialist	C6	9	\$118,277	\$63,809	-	\$97,638	-\$54,468	-	-\$20,639	New position to meet department staffing needs.
B58	Administration MIS Department TBD	N/A	N/A	N/A	N/A	N/A	IT Security Analyst	6	11	\$0	\$77,296	-	\$118,277	\$77,296	-	\$118,277	New position to meet department staffing needs.
B59	Administration MIS Department TBD	N/A	N/A	N/A	N/A	N/A	Network Administrator I	6	10	\$0	\$70,231	-	\$107,467	\$70,231	-	\$107,467	New position to meet department staffing needs.
B60	Operations Deer Island 2937501	F	S	Shift Operations Manager	6F	12	Shift Operations Manager	6F	12	\$114,993	\$124,177	-	\$124,177	\$9,184	-	\$9,184	Per union agreement. Internal pay adjustment due to new recruitment rate.
B61	Operations Western Water 3391101	F	T,G	Program Manager, Reservoir Operations	9	29	Senior Program Manager, Reservoir Operations	9	30	\$143,454	\$149,348	-	\$149,348	\$5,894	-	\$5,894	Grade and title better reflect responsibilities.
B62	Operations Western Water TBD	N/A	N/A	N/A	N/A	N/A	Senior Engineer, Reservoir Operations	9	23	\$0	\$80,920	-	\$112,712	\$80,920	-	\$112,712	New position to meet department staffing needs.
B63	Tunnel Redundancy 3640014	F	S	Program Manager, Tunnel	9	29	Program Manager, Tunnel	9	29	\$112,336	\$122,238	-	\$122,238	\$9,902	-	\$9,902	To alleviate salary collision with direct report.
B64	Tunnel Redundancy TBD	N/A	N/A	N/A	N/A	N/A	Director of Program Management (Tunnel)	NU	16	\$0	\$150,000	-	\$170,000	\$150,000	-	\$170,000	New position to meet department staffing needs.
B65	Administration Fleet Services I8310001	F	T	Fleet Services Repair Student	N/A	N/A	Fleet Services Repair Intern	N/A	N/A	\$35,360	\$35,360	-	\$35,360	\$0	-	\$0	Extension of an intern position past 12 months to meet staffing needs and build a career path.
BOARD TOTAL =					11					TOTAL:				\$417,434	-	\$615,102	

**MWRA
POSITION DESCRIPTION**



POSITION: Human Resources Coordinator

DIVISION: Administration

DEPARTMENT: Human Resources

BASIC PURPOSE:

Provides administrative support within the Human Resources Department. Performs complex clerical duties according to standard procedures requiring a thorough knowledge of the department. Maintains employment correspondence, data and files. Performs department administrative tasks relating to invoicing, timekeeping, purchase orders, requisitions, and contract administration.

SUPERVISION RECEIVED:

Works under the general supervision of the Manager, Employment.

SUPERVISION EXERCISED:

None.

ESSENTIAL DUTIES AND RESPONSIBILITIES:

- Maintains all data in the Employment Applicant Tracking system and physical files. Prepares packages for new hire orientation by copying and collating all materials. Types and distributes correspondence as needed.
- Maintains all employment paperwork through final approval.
- Processes timesheets, personnel actions, and performance reviews as necessary. Supports timesheet collection and entry of information into the time entry system.
- Responsible for the processing of all department invoices. Collects and prepares information needed to process department invoices including but not limited to health and dental insurance, training vendor payments, unemployment insurance, employee assistance and workers' compensation. Processes requests for funding clothing program debit cards.
- Enters purchase orders and contract administration information into the Lawson System and produces reports needed to monitor department purchase orders and contracts. Enters Request for Material, Invoice Vouchers and Receiving entries in the accounting system. Researches and logs vendor inquiries to ensure prompt replies to vendor.

- Serves as the department timekeeper. Initiates payroll adjustments electronically as needed and advises HR Managers and Director of Human Resources of any changes.
- Greets and welcomes job applicants and visitors.
- Answers department telephone, processes information requests, records messages and routes calls, opens and distributes mail.
- Records, updates, and tracks files using databases management system or spreadsheets as required.
- Coordinates department mass mailings.
- Serves as a backup for the Administrative Systems Coordinator as needed.
- Assists with record retention activities for the department.
- Performs special projects as directed by Director, Human Resources or HR department Managers.
- Composes and edits correspondence, reports and other materials on personal computer; assists managers with the preparation of reports, logbooks, agendas and special projects.

SECONDARY DUTIES:

- Performs other related duties as required.

MINIMUM QUALIFICATIONS:

Education and Experience:

- (A) Knowledge of administrative and secretarial procedures as normally attained through a two (2) year secretarial or business school program; and
- (B) Understanding of administrative and office procedures as acquired through four (4) to seven (7) years secretarial/administrative experience; or
- (C) Any equivalent combination of education and experience.

Necessary Knowledge, Skills and Abilities:

- (A) Demonstrated proficiency in Microsoft Outlook, Word and Excel as well as the Lawson system. Some knowledge of PowerPoint is preferred.
- (B) Excellent communications and organizational skills.

SPECIAL REQUIREMENTS:

Must have successfully completed the MIS and professional development-related Administrative Certification Program (ACP) requirements for this position. If no qualified ACP certified applicant applies for the position, the selected candidate will have 6 months to complete the ACP program.

TOOLS AND EQUIPMENT USED:

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

PHYSICAL DEMANDS:

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

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

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

WORK ENVIRONMENT:

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

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

October 2018

**MWRA
POSITION DESCRIPTION**



POSITION: Human Resources Administrative Systems Coordinator

DIVISION: Administration

DEPARTMENT: Human Resources

BASIC PURPOSE:

Provides comprehensive administrative support to the Human Resources Department with a focus on Employment. Implements standard procedures requiring a thorough knowledge of the department and its policies. Maintains correspondence, data and files. Performs tasks related to invoicing, timekeeping, purchase orders, requisitions, and contract administration.

SUPERVISION RECEIVED:

Works under the general supervision of the Manager, Employment. May provide support to Director, Human Resources and other Human Resources Managers.

SUPERVISION EXERCISED:

None. Occasionally supervises File Clerk or intern(s) on specific assignments.

ESSENTIAL DUTIES AND RESPONSIBILITIES:

- Maintains all data in the Employment Applicant Tracking system and physical files. Prepares packages for new hire orientation.
- Attends new hire orientation and provides support with successful onboarding of new employees.
- Maintains all employment paperwork through final approval.
- Processes timesheets, personnel actions, and performance reviews as necessary. Supports timesheet collection and entry of information into the time entry system.
- Responsible for the processing of all department invoices. Collects and prepares information needed to process department invoices including but not limited to health and dental insurance, training vendor payments, unemployment insurance, employee assistance and workers' compensation. Processes requests for funding clothing program debit cards.

- Enters purchase orders and contract administration information into the Lawson System and produces reports needed to monitor department purchase orders and contracts. Enters Requests for Materials, Invoice Vouchers and Receiving entries in the accounting system. Researches and logs vendor inquiries to ensure prompt replies to vendor.
- Serves as department timekeeper. Initiates payroll adjustments electronically as needed and advises HR Managers and Director, Human Resources of any changes.
- Posts internal and external employment opportunities.
- Distributes job posting announcements to MWRA departments and external organizations.
- Provides support for the Internship Program. Coordinates attendance for the Internship Tour Program.
- Answers department telephone, processes information requests, distributes mail.
- Records, updates, and tracks files using databases management system or spreadsheets as required.
- Coordinates department mass mailings.
- Assists with record retention activities for the department.
- Performs special projects as directed by Director, Human Resources or HR department Managers.
- Composes and edits correspondence, reports and other materials; assists managers with the preparation of reports, logbooks, agendas and special projects.

SECONDARY DUTIES:

- Performs other related duties as required.

MINIMUM QUALIFICATIONS:

Education and Experience:

- (A) An Associate's degree or equivalent program; and
- (B) Understanding of administrative and office procedures as acquired through at least four (4) years of administrative experience; or
- (C) Any equivalent combination of education and experience.

Necessary Knowledge, Skills and Abilities:

- (A) Demonstrated proficiency in Microsoft Office Suite.
- (B) Experience with an applicant tracking or human resources information system (HRIS) preferred.
- (C) Knowledge of Adobe Acrobat Professional.
- (D) Experience using web conferencing and collaboration tools such as WebEx.
- (E) Excellent communication and organizational skills.
- (F) Ability to maintain confidential information.

SPECIAL REQUIREMENTS:

Must have successfully completed the MIS and professional development-related Administrative Certification Program (ACP) requirements for this position. If no qualified ACP certified applicant applies for the position, the selected candidate will have 6 months to complete the ACP program.

TOOLS AND EQUIPMENT USED:

Office machines as normally associated with a professional office environment, including the use of telephones, personal computers, word processing and other software, email, videoconference applications, copiers, scanners and fax machines.

PHYSICAL DEMANDS:

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

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

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

WORK ENVIRONMENT:

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

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

December 2023

**MWRA
POSITION DESCRIPTION**

NEW

POSITION: Talent Acquisition Coordinator

DIVISION: Administration

DEPARTMENT: Human Resources

BASIC PURPOSE:

Assists in all aspects of the hiring process to ensure positions are filled in a timely manner. Serves as Administrator for applicant tracking system. Conducts outreach to applicants during the application process, as needed. Performs initial screening to determine candidate qualifications. Schedules pre-employment physicals. Conducts reference checks. Serves as backup facilitator for employee orientation.

SUPERVISION RECEIVED:

Works under the general supervision of the Manager, Employment. May receive assignments from Assistant Manager, Employment.

SUPERVISION EXERCISED:

May supervise administrative staff and interns on projects.

ESSENTIAL DUTIES AND RESPONSIBILITIES:

- Serves as Administrator for applicant tracking system, including but not limited to adding and updating job descriptions, granting user access permissions, and checking accuracy of postings.
- Conducts initial screening of applicants for contract, interns and entry level positions to determine which candidates meet the entrance requirements and may be referred for interviews.
- Contacts internal and external applicants when documentation is missing from the employment application.
- Performs disciplinary review of internal applicants.
- Handles job postings, referrals, and hiring packages for interns and contract employees. Serves on interview committees for intern and contract employee positions.
- Schedules pre-employment physicals, arranges background checks and performs reference checks on finalists.

- Ensures positions are highlighted and posted on job boards and social media. When necessary, identifies specialized job boards to broaden the applicant pool for hard-to-fill positions.
- Works closely with the Affirmative Action department to ensure MWRA jobs are posted on social media sites and specialized professional and trade sites. May participate in job fairs (virtual or in-person).
- Responds to requests and inquiries relative to employment from internal candidates, managers and applicants.
- Assists with MWRA's Summer Intern program, including but not limited to coordinating the annual intern luncheon and serving as an attendant for the intern field trip program.
- Attends employee orientations, completes I-9 verification forms, and scans all hiring documents. Reviews hiring documents to ensure they are accurate and complete. Serves as back-up orientation facilitator in the absence of the Assistant Manager, Employment.

SECONDARY DUTIES:

- Performs related duties as required.

MINIMUM QUALIFICATIONS:

Education and Experience:

- (A) A Bachelor's degree in human resources, business administration, public administration or a related field; and
- (B) General understanding of human resources and hiring practices and state and federal laws and regulations governing employment as acquired through at least two (2) years of professional experience including at least one year in recruitment, career planning, job placement, or human resources; or
- (C) Any equivalent combination of education or experience.

Necessary Knowledge, Skills and Abilities:

- (A) Excellent interpersonal, oral, and written communication skills.
- (B) Understanding and knowledge of federal and state employment laws, practices, and policies.
- (C) Ability to maintain confidentiality and work in a fast-paced environment.

- (D) Strong attention to detail.
- (E) Solid knowledge and experience with Microsoft Office Suite, video-conferencing applications such as WebEx, and social media sites including LinkedIn.
- (F) Ability to use applicant tracking software.
- (G) Strong internet research skills to identify job boards and other recruitment tools.

SPECIAL REQUIREMENTS:

A valid Massachusetts Class D Motor Vehicle Operators License.

TOOLS AND EQUIPMENT USED:

Office machines as normally associated with a professional office environment, including the use of telephones, personal computers, word processing and other software, email, videoconference applications, copiers, scanners, and fax machines.

PHYSICAL DEMANDS:

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

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

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

WORK ENVIRONMENT:

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

The noise level in the work environment is usually a moderately quiet office setting. This position may be eligible for up to 50% telework.

December 2023

**MWRA
POSITION DESCRIPTION**



POSITION: Assistant Manager, Human Resources Operations

DIVISION: Administration

DEPARTMENT: Human Resources

BASIC PURPOSE:

Provides professional-level support in a variety of human resource areas as a Human Resources Generalist including HR Operations, Labor Relations, Employment, Benefits, Training, and Special Projects.

SUPERVISION RECEIVED:

Works under the general supervision of the Manager, Human Resources Operations. May receive project supervision from other Human Resources Managers.

SUPERVISION EXERCISED:

May direct administrative staff on specific assignments.

ESSENTIAL DUTIES AND RESPONSIBILITIES:

- Screens and evaluates candidates for employment or promotion. Conducts employment interviews. Performs pre-employment background and reference checks.
- Conducts orientation sessions for summer interns. Helps coordinate annual event with interns and facility tours.
- Assists with performance evaluation forms and tracks completion including probationary evaluations and annual evaluations.
- Provides support to Human Resources Department with developing and building career ladders, required training, competencies, and licenses.
- Coordinates the VISTE school volunteer program.
- Assists with tracking telework agreements and requests for telework.
- Assists each unit in Human Resources as needed during periods of peak workloads.

- Participates in collective bargaining negotiations, preparation of management proposals, and implementation of ratified contracts.
- Assists with completion and implementation of special projects such as audits, service awards, workforce planning, and move to new facility.

SECONDARY DUTIES:

- Performs other related duties as required.

MINIMUM QUALIFICATIONS:

Education and Experience:

- (A) Completion of a Bachelor's degree in human resources, public administration, business, or related field; and
- (B) A general understanding of labor relations, human resources, recruitment as acquired through four (4) to six (6) years experience preferably in the public sector; or
- (C) Any equivalent combination of education or experience.

Necessary Knowledge, Skills and Abilities:

- (A) Demonstrated analytical and time management skills.
- (B) Excellent interpersonal, written and oral communication skills.
- (C) Ability to maintain confidentiality and exercise discretion.
- (D) Knowledge of Microsoft Office.

SPECIAL REQUIREMENTS:

A valid Massachusetts Class D Motor Vehicle Operators License.

TOOLS AND EQUIPMENT USED:

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

PHYSICAL DEMANDS:

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

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

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

WORK ENVIRONMENT:

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

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

The noise level in the normal work environment is quiet.

May 2022

**MWRA
POSITION DESCRIPTION**



POSITION: Employee Relations Specialist

DIVISION: Administration

DEPARTMENT: Human Resources

BASIC PURPOSE:

Under the supervision of the Manager, Human Resources Operations, documents and tracks the status of and provides assistance on investigations into allegations or complaints of employee misconduct, rule or policy violations, and other unprofessional or inappropriate workplace behavior. May also provide support to the Associate Special Assistant, Affirmative Action on investigations alleging discrimination, harassment, and/or retaliation based on an employee's protected class (e.g., gender, race, religion, etc.)

SUPERVISION RECEIVED:

Works under the general supervision of the Manager, Human Resources Operations. May receive some guidance from Associate Special Assistant, Affirmative Action.

SUPERVISION EXERCISED:

None.

ESSENTIAL DUTIES AND RESPONSIBILITIES:

- Receives and documents initial complaints or concerns about workplace misconduct or other inappropriate behavior from Human Resources staff, managers, other employees, external parties, and unions. Consults with Manager, Human Resources Operations on next steps.
- Maintains an accurate confidential log of complaints and concerns, investigation status, and final outcome.
- Schedules initial and follow-up meetings or pre-disciplinary hearings on behalf of the Manager, Human Resources Operations.
- Serves as note taker in investigatory interviews and during pre-disciplinary hearings. Drafts questions as needed. Drafts interview summaries, witness statements, preliminary investigation reports, disciplinary notices, and other related documents.

- Immediately elevates and escalates concerns to Manager, Human Resources Operations when there are allegations of serious misconduct or complaints involving Non-Union Managers.
- Works with Manager, Training and Development or other appropriate managers to schedule training opportunities to remedy problematic behavior.
- Serves as a liaison to managers and supervisors to field inquiries on employee performance issues such as attendance, work performance, and other disciplinary issues.

SECONDARY DUTIES:

- Works on special projects as needed to support Human Resources Managers.
- Helps coordinate annual year of service awards ceremony and extraordinary service nominations.
- Performs other related duties as required.

MINIMUM QUALIFICATIONS:

Education and Experience:

- (A) Bachelor's degree in labor relations, human resources, paralegal studies, business administration, public administration or a related field; and
- (B) At least two (2) years of professional business or legal experience, including at least one year in workplace investigations, dispute resolution, case management or human resources; or
- (C) Any equivalent combination of education or experience.

Necessary Knowledge, Skills and Abilities:

- (A) Demonstrated knowledge of labor and employee relations, personnel administration, complaint resolution, workplace investigations, and disciplinary procedures.
- (B) Experience in the public sector or a unionized environment preferred.
- (C) Demonstrated analytical and research skills.
- (D) Excellent interpersonal, written and oral communication skills.
- (E) Ability to exercise tact and discretion and maintain confidentiality when dealing with

complex and highly sensitive employee relations issues.

- (F) Ability to work with all levels within an organization.
- (G) Ability to work in high pressure or time sensitive work environment.
- (H) Solid judgment to deal with parties in dispute.
- (I) Demonstrated proficiency of Microsoft Office Suite and web-based video conferencing and collaboration tools such as WebEx.
- (J) Ability to travel to MWRA work sites as needed to attend in-person meetings.

SPECIAL REQUIREMENTS:

A valid Massachusetts Class D Motor Vehicle Operators License.

TOOLS AND EQUIPMENT USED:

Office machines as normally associated with a professional office environment, including the use of telephones, personal computers, word processing and other software, email, videoconference applications, copiers, scanners, 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 feel, finger, handle or operate objects, including office equipment or controls and reach with hands and arms. The employee is occasionally required to stand and walk. The employee is regularly required to sit, and talk or hear.

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

WORK ENVIRONMENT:

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

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

The noise level in the normal work environment is quiet. This position may be eligible for up to 50% telework.

December 2023

**MWRA
POSITION DESCRIPTION**



POSITION: IT Security Analyst

DIVISION: Administration

DEPARTMENT: Management Information Systems (MIS)

BASIC PURPOSE:

Manages and supports the day-to-day operation of MWRA's cyber security infrastructure and its Managed Security Service Provider (MSSP) to protect and defend MWRA's information and computing assets. Investigates both potential and identified cyber security incidents. Reports cyclic operational statistics. Suggests, plans, and executes cyber security-based improvements, and consults on cyber security requirements for other IT-based projects. Builds and maintains a security testing lab. Documents and diagrams MWRA's cyber security policies and best practices for systems, applications, and architecture. Researches cyber security hardware and software products and their manufacturers, and recommends either purchase or development of enhancements that will improve the cyber security posture and secure operation of all MWRA computing systems and applications.

SUPERVISION RECEIVED:

Works under the general supervision of the Senior Program Manager, IS Security. On specific IT projects, might be supervised by a team lead or a project manager.

SUPERVISION EXERCISED:

Exercises supervision of assigned vendor resources and IT project teams.

ESSENTIAL DUTIES AND RESPONSIBILITIES:

Information Security Management:

- Identifies and confirms reported cyber security incidents and other related issues.
- Serves as an escalation point for potential cyber security incidents, including issues raised by the Security Monitor.
- Participates in the investigations and actions being performed by the Information Security response team led by the Senior Program Manager, IS Security.
- Works closely with service providers to resolve security issues identified by their managed systems and infrastructure, in line with MWRA's incident response plan and within contract boundaries.
- Keeps well-informed of the most current technologies, services, and controls, and provides expertise to the Senior Program Manager, IS Security, and the MIS Management Team in evaluating and selecting appropriate information security solutions.

Incident and Problem Management:

- Responds to security-related events, alerts, and reported outages to correct and resolve issues.
- Investigates root cause and determine systemic solutions for identified cyber security problems.
- Completes assigned service requests.

Monitoring, Alerting, and Event Management:

- Correlates reported events from multiple systems when a potential security incident is identified; when incident is verified, promptly initiates the incident response process.
- Configures security solutions to protect MWRA assets and information, such that all pertinent events are logged and reported.
- Establishes, configures, and maintains policies for monitoring and alerting solutions, in order to ensure timely delivery of alerts to possible cyber security incidents.

Change Management:

- Makes recommendations to the Senior Program Manager, IS Security, about changes to the MWRA computing environment that can aid in the removal of vulnerabilities and reduce the risk of exploitation that could result in cyber security incidents.

- Documents recommended changes and submits appropriately completed Request for Change (RFC) forms to MWRA Change Advisory Board with approval of the Senior Program Manager, IS Security, per MWRA policy.

Measurement & Reporting:

- Creates and maintains dashboards that allow real-time monitoring of security operations and trends.
- Assists in compiling and producing reports for multiple management levels, both ad hoc and published on various cycles.

System Administration and Performance Management:

- Supports the most secure and least risky integration and use of business applications, both internal and external, within the MWRA computing environment as required.
- Works with other MIS groups to design enhanced ticketing opportunities, in order to simplify and expedite monitoring and alerting efforts, as well as streamline incident management tasks.
- Recommends and executes ideas to improve processes based on lessons learned over time in performing assigned duties.
- Develops and executes custom scripts for administrative tasks and for easy, effective compliance with logging and alerting requirements.
- Defines and institutes necessary preventative maintenance schedules.
- Establishes and maintains a secure, isolated, and current security testing/lab environment.
- Participates in and prepares for Disaster Recovery planning and test activities.

System Documentation:

- Participates in ensuring team processes are thoroughly documented, and that all such documentation is kept up-to-date.
- Documents and maintains operating procedures to conform to MWRA standards.
- Develops, documents, and maintains system documentation for MWRA's cyber security infrastructure components.

OTHER DUTIES:

- Shares in on-call rotation and emergency response tasks as needed.
- Participates as a technical cyber security resource in implementation of new computing systems and solutions, as needed.
- Participates in occasional off-site travel, extended hours, and weekend work.
- Performs other duties as assigned.

MINIMUM QUALIFICATIONS:

Education and Experience

- (A) A Bachelor's degree in Information Security, Computer Science, Engineering, or related field, and
- (B) At least five (5) to seven (7) years of IT experience including at least three (3) years of experience responding to cyber security incidents, in addition to supporting, operating, implementing, configuring, and monitoring the cyber security solutions and their consoles/dashboards for an enterprise computing environment; or
- (C) Any equivalent combination of education or experience.

Necessary Knowledge, Skills, and Abilities:

- (A) Advanced proficiency with firewalls, intrusion detection and prevention systems, security information and event management (SIEM) systems, log configuration and collection, email security, end-to-end web filtration, virtual private networks (VPNs), cryptography, authentication mechanisms, and mobile device security.
- (B) Strong working knowledge of and demonstrated experience applying MITRE ATT&CK framework, NIST Cybersecurity Framework (CSF), and the Center for Internet Security (CIS) Benchmarks to advance cyber security protection and detection goals.
- (C) Willingness and ability to learn new skills, concepts, and cyber security-related tools on an ongoing basis, as well as to consume and comprehend daily intelligence about new cyber security threats, vulnerabilities, and attacks.
- (D) Keen attention to detail to detect possible signs of a security breach or cyber-attack.
- (E) Ingenuity and strong problem-solving skills, in order to anticipate new threats and attacks and to implement means to prevent or defend against them.

- (F) Demonstrable proficiency with 1 or more scripting languages (such as PowerShell, any Linux shell, or Python) or programming languages.
- (G) Ability to identify, analyze, and troubleshoot cyber security incidents utilizing the OSI seven-layer model.
- (H) Excellent skills in technical project management, interpersonal interactions, and written and oral communication (including presentations to management, report design, and network diagrams, and system documentation).

SPECIAL REQUIREMENTS:

Able to work evening, weekends, or other hours due to emergency assignments or as part of regular on-call rotation schedule.

At least one (1) of the following foundation certifications or equivalent

- CompTIA Security+
- GIAC Security Essentials (GSEC)

Is required to hold the following certifications, or possess the ability to obtain such within 12 months from hire:

- ITIL Foundation Certification in IT Service Management version 3 or 4; and
- At least one (1) of the following intermediate certifications:
 - Any other CompTIA cybersecurity certification (like CySA+)
 - Any other SANS GIAC certification
 - Any (ISC)2 certification
 - Any ISACA certification
 - Any EC-Council certification

TOOLS AND EQUIPMENT USED:

Computer consoles and appliances; tape and disk storage systems; various network, mobile, and peripheral devices; and standard office equipment as normally associated with the use of telephone, personal computers including word processing and other software, copy and fax machines.

PHYSICAL DEMANDS:

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

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

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

WORK ENVIRONMENT:

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

While performing the duties of this job, the employee occasionally works in computer centers, network closets, and various field settings. The employee regularly works near moving mechanical parts, and is occasionally exposed to risk of vibration and electromagnetic radiation. The employee is occasionally exposed to risk of electrical shock. The computer centers use automatically discharged chemicals to suppress fire.

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

September 2020

**MWRA
POSITION DESCRIPTION**



POSITION: Network Administrator I

DIVISION: Administration

DEPARTMENT: MIS

BASIC PURPOSE:

Ensures the stability and integrity of the MWRA's voice, data, video, and wireless network services. Assists with the installation, monitoring, maintenance, support, and optimization of all network hardware, software, and communication links. Analyzes and resolves network hardware and software problems in a timely and accurate fashion. The Network Administrator I will also maintain and troubleshoot VOIP (voice over internet protocol) related issues.

SUPERVISION RECEIVED:

Works under the general supervision of the Network and Systems Manager.

SUPERVISION EXERCISED:

Exercises project supervision of assigned vendor and contract resources, and may provide functional guidance to other MIS staff on assigned projects.

ESSENTIAL DUTIES AND RESPONSIBILITIES:

- Creates and maintains documentation as it relates to network configuration, network mapping, standard operating procedures, and service records.
- Conducts Uninterruptable Power Supply (UPS) checks at all MWRA locations.
- Maintains LANs, WANs, and Wireless, VPN and VOIP networks. This includes servers, structured cabling, routers, switches, UPS's, and other hardware.
- Conducts research on network products, services, protocols, and standards to remain abreast of developments in the networking industry.
- Oversees new and existing equipment, hardware, and software upgrades.
- Interacts and negotiates with vendors, outsourcers, and contractors to secure network products and services.

- Assists with the implementation, maintenance and support of VOIP phone system to include phone servers, phones, and faxes.
- Maintains and supports mobile phone network to ensure the smooth and reliable operation throughout the MWRA locations.
- Monitors network performance and troubleshoot problem areas as needed.
- Ensures network connectivity of all servers, workstations, telephony equipment, fax machines, and other network appliances.
- Practices network asset management, including maintenance of network component inventory and related documentation and technical specifications information.
- Monitors and tests network performance and provide network performance statistics and reports when needed.
- Participates in implementing all network security solutions. Maintains documentation of server's, ip's and server rack locations in the data centers.
- Maintains UPSs in data center and all network closets.
- Maintains data center environmental monitoring systems

SECONDARY DUTIES:

- Performs related duties as required.

MINIMUM QUALIFICATIONS:

Education and Experience:

- (A) A Bachelor's degree in computer science or related field; and
- (B) Two (2) to five (5) years of experience implementing and maintaining a large-scale enterprise network environment and supporting and troubleshooting LAN, WAN, wireless, and VOIP systems is required; or
- (C) Any equivalent combination of education and experience

Necessary Knowledge, Skills and Abilities:

- (A) Competence with testing tools and procedures for voice and data circuits.
- (B) Knowledge of applicable data privacy practices and laws.
- (C) Strong interpersonal, written, and oral communication skills.
- (D) Ability to conduct research into networking issues.
- (E) Ability to present ideas in user-friendly language.
- (F) Highly self-motivated and directed, with keen attention to detail.
- (G) Proven analytical and problem-solving abilities.
- (H) Ability to effectively prioritize tasks in a high-pressure environment.
- (I) Strong customer service orientation.
- (J) Experience working in a team-oriented, collaborative environment.
- (K) Ability to climb ladders, crawl under desks and work in cramped spaces.

SPECIAL REQUIREMENTS:

- A valid Massachusetts Class D Motor Vehicle Operators License is required to travel between MWRA sites.
- Information Technology Infrastructure Library (ITIL) Foundation Certification version 3 or 4 is required must be obtained within 12 months.
- A current Network + or CCST certification or similar certification or must be obtained within 12 months.
- May be subject to an on-call rotation pool and responds to emergencies outside regular working hours including weekend work.

TOOLS AND EQUIPMENT USED:

Computer consoles, various network and peripheral devices and office equipment as normally associated with the use and support of telephone, personal computers including word processing and other software, copy and fax machines.

PHYSICAL DEMANDS:

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

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

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

WORK ENVIRONMENT:

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

While performing the duties of this job, the employee works in a data center, network closets and occasionally works in various field settings. The employee regularly works near moving mechanical parts, and is occasionally exposed to risk of vibration and electromagnetic radiation. The employee is occasionally exposed to risk of electrical shock. The data center also uses automatically discharging chemicals to suppress fire.

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

July 2023

**MWRA
POSITION DESCRIPTION**

POSITION: Shift Operations Manager

DIVISION: Operations

DEPARTMENT: Deer Island

BASIC PURPOSE:

Manages the assigned eight (8) hour operational staff within the Deer Island Treatment Plant to ensure Permit Compliance in a cost efficient manner. Is required to provide person-to-person coverage.

SUPERVISION RECEIVED:

Works under the general supervision of the Senior Shift Manager.

SUPERVISION EXERCISED:

Exercises close supervision of the Area Supervisor.

ESSENTIAL DUTIES AND RESPONSIBILITIES:

- Manages the Deer Island Treatment Plant to ensure Permit Compliance, effective and efficient operations during an eight- (8) hour shift providing person-to-person coverage.
- Coordinates process operations with all areas of the plant, to include the remote headworks.
- Operates the PICS and OMS Systems of the treatment plant responsible for Quality Assurance/Quality Control (QA/QC) on all data gathered and entered during the shift assigned.
- Participates in developing and presenting to the Senior Shift Manager input for the current expense budget for responsible areas.
- Directs subordinates in Plant Operations for the Deer Island Treatment Plant. Serves as a coach and leader to shift personnel. Cultivates positive communications between staff and other shift members to promote a harmonious team-working environment.
- Develops rounds for Plant personnel and monitors performance with proxy pens and/or other means.

- Is responsible for assurance of work requests during shift and that equipment failures and observances are documented for the maintenance department to perform proper remedy.
- Performs administrative duties for personnel assigned to the shift and responsible for shift knowledge of plant information. Reviews and evaluates employee performance according to MWRA procedures. Responsible for enforcement of MWRA policies and procedures including discipline, code of conduct and related personnel policies.
- Directs and is responsible for shift training.
- Prepares a daily activity report to the Sr. Shift Manager on plant and personnel issues, deficiencies, and suggestions for efficient plant operations. .
- Is responsible for carrying out policy set forth by the Senior Shift Manager and Operations Director.
- Is responsible for safety orientation, policy and implementation for the shift personnel. Insures that staff is current with CPR and First Aid requirements as applicable. Provides a safe working environment for staff.

SECONDARY DUTIES:

Performs related duties as assigned.

MINIMUM QUALIFICATIONS:

Education and Experience:

- (A) Two (2) year college program in environmental/chemical engineering or related field; and
- (B) Eight (8) to ten (10) years experience in wastewater field with a process control background, of which a minimum of three (3) years of applicable supervisory experience is required; or
- (C) Any equivalent combination of education or experience.

Necessary Knowledge, Skills and Abilities:

- (A) Proficient in the use of personal computers and software applications packages for financial analysis and management, such as Excel and Word, and computerized maintenance management systems, such as MAXIMO
- (B) Demonstrated ability to plan, organize, direct and assign duties to subordinates is required.
- (C) Excellent analytical, written and oral communications skills.
- (D) Knowledge of Wastewater Treatment Operation and Process Control theory, practices and principles.
- (E) Ability to read and interpret technical drawings and process and instrumentation diagrams. Ability to learn and operate PICS system.

SPECIAL REQUIREMENTS:

A valid Massachusetts Wastewater Treatment Plant Operator Grade 7 certification.

A valid Massachusetts Class D Motor Vehicle Operators License.

TOOLS AND EQUIPMENT USED:

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

PHYSICAL DEMANDS:

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

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

The employee must frequently lift and/or move up to 25 pounds and occasionally lift and/or move more than 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 regularly works in outside weather conditions. The employee occasionally works near moving mechanic 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.

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

February 2010

**MWRA
POSITION DESCRIPTION**

OLD

POSITION: Program Manager, Reservoir Operations

DIVISION: Operations

DEPARTMENT: Field Operations

SUMMARY OF RESPONSIBILITIES:

Responsible for representing MWRA interests and coordinating with Department of Conservation and Recreation (DCR) on watershed protection issues. Responsible for oversight of flood control of MWRA controlled reservoirs.

RESPONSIBILITIES:

- Works with the DCR to monitor watershed protection progress, and develops recommendations for improvement. Work with DCR in joint preparation and review of watershed Annual Work Plan, including annual operations plan, annual budgets, annual staffing plan/organization charts and projected annual revenues.
- Represent MWRA interests in the DCR watershed Land Acquisition Panel (LAP) in evaluating parcels of land in which to acquire in fee simple, conservation restriction, or other interests.
- Coordinate and facilitate DCR/MWRA Reservoir Operations Group meetings, including development of meeting agendas and distribution of minutes.
- Responsible for oversight of invasive species control, including management and procurement of specialty contractors. Shall coordinate DCR supervision of specialty contractors as needed.
- Coordinates development and tracking of dam and dike capital maintenance and capital improvement.
- Oversee MWRA component of joint Hazardous Chemical Spill/Release Containment and Response preparedness. Includes maintenance of emergency response booms, coordination and provision of spill containment training and drills for DCR and watershed fire department personnel.
- Supervise staff, as needed who are working on watershed protection or DCR coordination issues.

- Represent MWRA interests on the DCR's Watershed Protection Act Working Group.
- Responsible for flood control of MWRA controlled reservoirs. Evaluates reservoir and river levels daily and, coupled with long and short-term weather forecasts makes decisions on reservoir release, transfer, and diversion rates. Notifies local and state authorities as required.
- Coordinates projects with communities, government agencies and other MWRA departments. Provides technical information and assistance. May address professional and community groups and initiate outreach projects. Represents MWRA in public hearings, meetings, and workshops on watershed protection issues.
- Provides technical assistance to other staff in the development of innovative programs that may include legislative initiatives, regulatory changes and other institutional methods to protect water resources and manage demands and plans for conservation and demand management.
- Performs other duties as required.

MINIMUM QUALIFICATIONS:

Education and Experience:

- Completion of a four- (4) year college program in civil engineering, planning or related field. Masters degree preferred.
- Seven (7) to nine- (9) year's experience in water supply planning, policy analysis or development, watershed protection planning, or resource conservation.

Necessary Knowledge, Skills and Abilities:

- Knowledge of principles and practices of engineering.
- Excellent oral and written communication skills.

SPECIAL REQUIREMENTS:

- A valid Massachusetts Drivers License required.
- Registered Professional Engineer or American Institute of Certified Planners 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, talk or hear. The employee is frequently required to stand and walk.

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

WORK ENVIRONMENT:

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

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

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

May 2004

**MWRA
POSITION DESCRIPTION**



POSITION: Senior Program Manager, Reservoir Operations

DIVISION: Operations

DEPARTMENT: Waterworks, Western Operations

BASIC PURPOSE:

Manages and oversees the Reservoir Operations Program including the management and implementation of the Invasive Species Control Program. Responsible for the management and care of MWRA controlled dams. Responsible for representing MWRA interests and coordinating with the Massachusetts Department of Conservation and Recreation (DCR) on watershed protection issues.

SUPERVISION RECEIVED:

Works under the general supervision of the Director, Western Operations.

SUPERVISION EXERCISED:

Exercises general supervision of Reservoir Operations Staff.

ESSENTIAL DUTIES AND RESPONSIBILITIES:

- Works with the DCR to monitor watershed protection progress, and develops recommendations for improvement. Works with DCR in joint preparation and review of watershed Annual Work Plan, including annual operations plan, annual budgets, annual staffing plan/organization charts and projected annual revenues.
- Represents MWRA interests in the DCR watershed Land Acquisition Panel (LAP) in evaluating parcels of land in which to acquire in fee simple, conservation restriction, or other interests. Presents information to the Board of Directors.
- Coordinates and facilitates DCR/MWRA Reservoir Operations Group meetings, including development of meeting agendas and distribution of minutes.

- Manages the planning, direction, and implementation of a comprehensive and integrated invasive species prevention and management program. Works in conjunction with DCR Division of Water Supply Protection Watershed staff.
- Manages the development and implementation of dam and dike capital maintenance and capital improvement projects to comply with all regulations of the Massachusetts Office of Dam Safety and the Federal Energy Regulatory Agency.
- Manages consultant contracts for the design, necessary repairs, and maintenance concerning reservoir operations, Dam maintenance, and Rutland Holden Sewer maintenance.
- Oversees MWRA component of joint Hazardous Chemical Spill/Release Containment and Response preparedness. Includes maintenance of emergency response booms, coordination and provision of spill containment training and drills for DCR and watershed fire department personnel.
- Supervises staff, as needed who are working on watershed protection or DCR coordination issues.
- Represents MWRA interests on the DCR's Watershed Protection Act Working Group.
- Responsible for flood control of MWRA controlled reservoirs. Evaluates reservoir and river levels daily and, coupled with long and short-term weather forecasts makes decisions on reservoir release, transfer, and diversion rates. Notifies local and state authorities as required.
- Coordinates projects with communities, government agencies and other MWRA departments. Provides technical information and assistance. May address professional and community groups and initiate outreach projects. Represents MWRA in public hearings, meetings, and workshops on watershed protection issues.
- Provides technical assistance to other staff in the development of innovative programs that may include legislative initiatives, regulatory changes and other institutional methods to protect water resources and manage demands and plans for conservation and demand management.
- Represents the MWRA on the State Drought Management Task Force.
- Coordinates with DCR and Wastewater Operations on the operation and maintenance of the Rutland Holden Sewer including coordination of maintenance, repairs and billing for MWRA O&M (operations and maintenance).
- Responsible for the Reservoir Operations Budget.

- Coordinates all MWRA response to Massachusetts Emergency Management Agency (MEMA) designated emergency response. Trains MWRA team to be able to staff MEMA control center during emergencies.
- Performs other duties as required.

MINIMUM QUALIFICATIONS:

Education and Experience:

- (A) A Bachelor's degree in civil engineering, planning, or related field. Master's degree in related field preferred.
- (B) At least eight (8) years' experience in water supply planning, policy analysis or development, watershed protection planning, or resource conservation, of which at least four (4) years should be in a managerial or supervisory capacity; or
- (C) Any equivalent combination of education or experience.

Necessary Knowledge, Skills and Abilities:

- Knowledge of principles and practices of engineering.
- Familiarity with state and federal regulations and laws relating to dams.
- Proficiency in use of Microsoft Office required. Experience with database computer programs, AUTOCAD, SCADA, TELOG, and hydraulic modeling software desired.
- Demonstrated abilities to work as part of a project team and to develop and maintain productive working relationships with external parties.
- Strong project management skills.
- Excellent oral and written communication skills.

SPECIAL REQUIREMENTS:

- A valid Massachusetts Driver's License.
- Massachusetts Registered Professional Engineer (P.E.) or certification by American Institute of Certified Planners (AICP) 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, talk or hear. The employee is frequently required to stand and walk.

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

WORK ENVIRONMENT:

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

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

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

December 2023

**MWRA
POSITION DESCRIPTION**



POSITION: Senior Engineer, Reservoir Operations

DIVISION: Operations

DEPARTMENT: Waterworks, Western Operations

BASIC PURPOSE:

Provides engineering support for all Reservoir Operations, flood control, dam safety compliance, watershed protection oversight, and Rutland-Holden Sewer operations and management.

SUPERVISION RECEIVED:

Works under the general supervision of the Sr. Program Manager, Reservoir Operations.

SUPERVISION EXERCISED:

May provide some functional supervision of Reservoir Operations staff on projects.

ESSENTIAL DUTIES AND RESPONSIBILITIES:

- Provides engineering support for the operation and maintenance of the Rutland Holden Sewer. Coordinates with DCR on MWRA maintenance and other activities concerning this sewer system
- Assists with the review of construction documents and specifications for dam/dike capital and major improvement projects and all O&M activities. Assists with coordination of construction activities and acts as the Resident Engineer on minor dam and dike projects.
- Serves as member of MWRA Massachusetts Emergency Management Agency (MEMA) response team. Assists Sr. Program Manager coordinating all MWRA activities related to MEMA designated emergency responses and acts as Back-up Coordinator when Sr. Program Manager is unavailable.
- Assists Sr. Program Manager with reservoirs' aquatic invasive species control project, including notifications and field coordination of contractors.
- Participates in Watershed Spill Response Training.
- Responsible for maintaining inventory supply of emergencies spill response trailers and equipment at all watersheds, reservoirs and spill response locations.
- Performs 8(m) Permit and design reviews as assigned.

- Performs daily engineering assessment of reservoir and river levels and reports on reservoir release, transfer and diversion rates.
- Assists Sr. Program Manager to monitor watershed programs with DCR, Division of Water Supply Protection.
- Assists with the coordination and facilitation of the DCR/MWRA Reservoir Operations Group, including taking meeting minutes.
- Assists in coordination with other MWRA departments, communities, public interest groups and government agencies.
- Assists in the preparation of Operations Plans for Reservoir Operations activities. Works with DCR, Engineering and Construction Department, Metropolitan Water, and Western Operations and Maintenance staff as needed to develop plan steps and constraints. Works with GIS staff to develop mapping and detail notes. Coordinates review and execution of plans.
- Acts as Responsible Person for execution of Operations Plans including directing planned activities and monitoring for potential impacts.
- Participates in emergency response to any/all Reservoir Operations emergencies.
- Assists with updating and maintaining Reservoir Operations databases, including Aqueduct Transfer, Reservoir Elevation, and USGS gage sites.

SECONDARY DUTIES:

- Performs related duties as required.

MINIMUM QUALIFICATIONS:

Education and Experience:

- (A) A Bachelor's Degree in, civil, or environmental engineering, or a related field; and
- (B) At least four (4) years of experience in water or wastewater infrastructure maintenance management or design or another environmental field; or
- (C) Any equivalent combination of education and experience.

Necessary Knowledge, Skills, and Abilities:

- (A) Demonstrated knowledge of water supply engineering including reservoir operations.
- (B) Demonstrated abilities to work as part of a project team, to develop and maintain productive working relationships with external parties, and to function independently with minimal supervision.
- (C) Proficiency with personal computers, handheld computer devices, and knowledge of Microsoft Office Suite is required.
- (D) Excellent interpersonal, verbal and written communications skills.

SPECIAL REQUIREMENTS:

A valid Massachusetts Class D Motor Vehicle Operator's License.

A valid Massachusetts Grade II Water Treatment Operator's 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, tools or controls and reach with hands and arms. The employee frequently is required to sit, talk or hear. The employee is frequently required to stand and walk.

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

WORK ENVIRONMENT:

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

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

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

December 2023

MWRA
POSITION DESCRIPTION

POSITION: Program Manager, Design (Tunnel Redundancy)
DIVISION: Tunnel Redundancy
DEPARTMENT: Tunnel Redundancy

BASIC PURPOSE:

Manages engineering and design projects related to the Metropolitan Tunnel Redundancy Program.

SUPERVISION RECEIVED:

Works under the general supervision of the Manager, Design (Tunnel Redundancy).

SUPERVISION EXERCISED:

Exercises close supervision of a small group of professional staff and directly manages consultants.

ESSENTIAL DUTIES AND RESPONSIBILITIES:

- Manages the planning and design phases of projects under the Tunnel Redundancy Program, including feasibility and environmental impact reports, detailed plans and specifications, permitting, project schedules, technical assistance, progress review and evaluation.
- Supervises professional multi-disciplinary design work of large and complex projects applying professional engineering principles and exercising independent judgment.
- Performs engineering analysis, prepares engineering documents, and writes project reports.
- Reviews work of professional engineering consultants related to hydraulic analysis, groundwater treatment and discharge, connections to existing MWRA systems, long-term operations, design reports, and contract documents (plans and specifications).
- Ensures projects are implemented using comprehensive work plans and resources by selecting consultant services groups that deliver a technically sound, controlled project on budget and on time.

- Participates in consultant selection procedures and contract negotiations for projects. Additionally, participates in applicable phases of consultant selection for assigned projects including developing scope of services, cost estimates, work schedules, and preparing contract award recommendations. Ensures compliance with contract budgets, schedules, and terms.
- Oversees the work of professional engineering consultants for large tunneling projects, including all work products for quality of work, budget, schedule, and compliance with contractual terms and MWRA objectives and policies.
- Assists in the development of design schedules and design budgets ensuring fundamental management controls, techniques, accountability for projects related to the Tunnel Redundancy Program.
- Assists with implementation of the Program Management Plan (PMP) to ensure timely and cost-effective delivery of assigned projects within the Tunnel Redundancy Program. Administers control and tracking methods and procedures to ensure project compliance with approved budgets and schedules. Reports the status of projects to senior management including any issues that impact schedules and budgets. Develops and provides proposals to address budget or schedule non-compliance issues.
- Assists with implementation and administration of project controls, such as scope, schedule and cost management.
- Administers quality management during design and construction process. Ensures that fundamentals and recommended practices and procedures for QA/QC are followed and managed by staff.
- Coordinates cooperative project development with other MWRA divisions and departments to ensure complete and coordinated projects. Coordinates projects with communities, government agencies, and other MWRA departments. Provides technical information and assistance. Addresses professional and community groups and initiates outreach projects as required.
- Provides technical and administrative assistance to staff in the development and management of projects which include design and engineering services during construction of the Tunnel Redundancy Program.
- Supports annual and supplementary budget requests for the Tunnel Redundancy Program in the Capital Improvement Program (CIP). Reviews projects' budgets and schedules for compliance with established department, division, and MWRA program goals.
- Assists in implementing the goals and commitments of MWRA in the areas of customer services, diversity and affirmative action, economy and efficiency, health and safety, emergency response and security, integrity, and public trust.

- Assists with compliance with MWRA procedures and policies, local, state, and federal environmental regulatory requirements and applicable engineering standards.

SECONDARY DUTIES:

Performs related duties as required.

MINIMUM QUALIFICATIONS:

Education and Experience:

- (A) A Bachelor's degree in civil engineering, geotechnical engineering, or related engineering field required (an advanced degree or other post-graduate study in civil engineering is preferred); and
- (B) Seven (7) to nine (9) years of civil engineering design, project management and/or construction; and
- (C) At least three (3) years' experience in a supervisory capacity; or
- (D) Any equivalent combination of education or experience.

NECESSARY KNOWLEDGE, SKILLS AND ABILITIES:

Knowledge of principles and practices of civil engineering.

Knowledge of Massachusetts bidding laws, including M.G.L Chapter 30 and Chapter 149 construction bidding regulations preferred

Understanding of issues related to design, construction and operation of large and complex water and wastewater facilities and infrastructure preferred.

Experience with major water/wastewater facilities or water systems preferred.

Excellent interpersonal, written, and oral communication skills.

Demonstrated ability to work effectively as part of a collaborative project team and also to function independently with minimal supervision.

Experience with project scheduling software such as Microsoft Project or Oracle Primavera P6 preferred.

SPECIAL REQUIREMENTS:

A valid Massachusetts Class D Motor Vehicle Operators License.

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

Certification by the Project Management Institute as a Project Management Professional (PMP) preferred.

TOOLS AND EQUIPMENT USED:

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

PHYSICAL DEMANDS:

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

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

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

WORK ENVIRONMENT:

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

While performing the duties of this job, the employee regularly works in an office environment. 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 or underground 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.

July 2020

**MWRA
POSITION DESCRIPTION**



POSITION: Director, Program Management (Tunnel)

DIVISION: Tunnel Redundancy

DEPARTMENT: Tunnel Redundancy

BASIC PURPOSE:

Directs and manages the program management aspects for large and complex projects such as the Tunnel Program as and rehabilitation and capital improvement of other water and wastewater facilities and infrastructure Applies program management principles and exercises independent judgment. Manages professional staff in the Tunnel Program.

SUPERVISION RECEIVED:

Works under the general supervision of the Director of Tunnel Redundancy.

SUPERVISION EXERCISED:

Directly manages Program Manager, Design and Tunnel Program Coordinator (Document Management) as well as other Tunnel Program professional staff and consultants.

ESSENTIAL DUTIES AND RESPONSIBILITIES:

- Develops, implements, manages, coordinates, controls, and performs quality assurance/quality control (QA/QC) on policies and procedures from planning through construction to ensure projects comply with approved schedules and budgets.
- Directs the incorporation of project specific construction cost estimates and schedules into the program schedule and Capital Improvement Program (CIP).
- Oversees the professional engineering consultants' efforts to identify and mitigate potential sources of project delays during the design and construction phases.
- Develops and implements control and tracking methods and procedures to ensure project compliance with approved budgets and schedules. Provides timely reporting to senior management of the status of all projects and associated issues that impact schedules and budgets.

- Ensures all projects are implemented using comprehensive work plans and resources by selecting consultant services groups that deliver a technically sound, controlled project on budget and on time. Ensures compliance with contract budgets, schedules and terms.
- Manages the efficient and cost effective execution of capital investment programs and projects.
- Establishes design schedules and budgets to ensure fundamental management controls, techniques, and accountability for projects related to the Tunnel Program.
- Oversees the monitoring, control, schedule and budget for all projects using scope controls, performance reports, change requests and cost management and controls using integrated time/cost management controls.
- Reviews project change orders and cost estimates. Drafts proposals to address budget/schedule non-compliance issues.
- Develops annual and supplementary budgets for the Tunnel Redundancy Program in the CIP. Oversees and reviews projects' budgets and schedules for compliance with established goals.
- Manages annual development of current expense and capital budgets and directs variance reporting, analysis and reallocation of budget resources. Develops, updates, and maintains cash flow projections, including cost at completion. Directs program performance monitoring and analysis and monitors performance against the CIP.
- Develops safety procedures working closely with MWRA Occupational Health and Safety staff.
- Develops and implements a Quality Assurance/Quality Control (QA/QC) plan for the Program to ensure contract document preparation that will result in technical, effective and constructible projects.
- Directs quality management during design and construction process. Ensures that fundamentals and recommended practices and procedures for QA/QC are followed and managed by staff.
- Directs development and implementation of risk management plans for the Program. Integrates the risk management process for all aspects of the Program. Conducts assessments to define and analyze program risks. Oversees the development and management of a risk register. Develops processes to eliminate or mitigate potential risks.

- Directs all aspects of land acquisition required for the Program including those required for construction easement, subterranean easements, pipeline easements, surface easements, and all land purchases. Coordinates with the design team to determine the correct limits of and duration for all land acquisitions. Ensures land acquisitions are in compliance with the final contract documents.
- Develops and manages budgets for all land acquisitions required for the Program. Coordinates with MWRA departments to secure land purchases. Ensures all land needed is acquired such that construction is not delayed.
- Oversees compliance with the EEA Article 97 Land Disposition Policy, Article 97 land disposition, and Article 97 legislation.
- Coordinates with communities and government agencies by providing technical information and assistance and addressing professional and community groups. Initiates community outreach as required.
- Oversees the implementation of affirmative action standards set for each contract award for the Program.
- Participates in consultant selection procedures and contract negotiations for projects.
- Manages professional staff including assigning projects, evaluating performance, and planning staff development. Oversees professional engineering consultants working on the Tunnel Program.
- Works effectively with and coordinates with other departments such as Procurement, Law, Real Property, Public Affairs, Internal Audit, Environmental and Regulatory Affairs, Operations and Administration divisions. Oversees and facilitates with other departments to ensure complete and coordinated projects.
- Implements MWRA goals and commitments outlined in the MWRA business plan such as customer service, economy, efficiency, health, safety, emergency response, security, integrity, and public trust.
- Manages the department in a manner that is consistent with MWRA's goals of Diversity, Equity, and Inclusion.

SECONDARY DUTIES:

- Performs related duties as required.

MINIMUM QUALIFICATIONS:

Education and Experience:

- (A) A bachelor's degree in civil engineering, construction management, or associated field is required; an advanced degree or other post-graduate study in civil engineering or construction management is preferred; and
- (B) At least twelve (12) years demonstrated success in progressively responsible positions in engineering design, engineering project management, and/or construction management functions relating to large water distribution systems, large wastewater collections systems and/or other large civil works systems including least five (5) years of experience must be in a managerial capacity; or
- (C) Any equivalent combination of education or experience.

Necessary Knowledge, Skills and Abilities:

- (A) Experience using alternative delivery methods on large complex underground projects preferred. Design or construction experience on a megaproject(s) (i.e., projects over \$1B) preferred.
- (B) Knowledge of principles and practices of program management, quality management, risk management, and project controls.
- (C) Advanced understanding of issues related to design, construction and operation of large and complex facilities and infrastructure.
- (D) Demonstrated ability to work effectively in a senior leadership position of a collaborative project team and to function independently with minimal supervision.
- (E) Demonstrated understanding of Massachusetts bidding laws, including M.G.L Chapter 30 and Chapter 149 construction bidding regulations.
- (F) Demonstrated experience in construction project dispute resolution procedures such as partnering, dispute resolution boards and other equivalent dispute resolution procedures.
- (G) Proficiency with Microsoft Office Suite.
- (H) Exceptional leadership and project management skills.
- (I) Excellent interpersonal, written, and oral and communications skills.

SPECIAL REQUIREMENTS:

- A valid Massachusetts Class D Motor Vehicle Operators License.
- Massachusetts license as a Registered Professional Engineer. (P.E.)
- Project Management Institute certification as a Project Management Professional (PMP) preferred.
- Ability to provide evening or weekend coverage as needed.

TOOLS AND EQUIPMENT USED:

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

PHYSICAL DEMANDS:

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

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

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

WORK ENVIRONMENT:

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

While performing the duties of this job, the employee regularly works in an office environment. 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 or underground 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.

December 2023

Fleet Services Motor Equipment Repair Intern

Purpose:

Provide support to MWRA's Vehicle Maintenance program.

Works directly 1-1 with maintenance or supervisory staff and will receive on-the-job training.

Responsibilities:

- Under supervision, completes minor repairs on Authority vehicles and equipment such as tire repair and replacement, wiper blade replacement, topping off fluids, changing lamps and bulbs.
- Assists maintenance staff with some or all of the following tasks:
 - Lube/oil/filter change
 - Chassis greasing
 - Charging batteries
 - Replacing brake components
- Serves as a second set of hands to hold tools or assist in more complex repairs.
- Stocks inventory, retrieves inventory from Warehouse, cleans, disinfects, and details interior of vehicles.
- Cleans shop floor and remove trash daily.

Qualifications:

- Attending/Enrolled in high school or GED program and/or a recent high school graduate or GED recipient.
- Formal high school, Vocational/technical school, or other training in basic automotive repair and/or experience at an automotive repair facility.
- Basic reading, writing, mathematical and oral communication skills.
- Mechanical ability and interest in learning repair skills.
- Ability to perform duties for extended periods of time in variable climate conditions. Knowledge of occupational hazards and safety practices common to the trade.
- For applicants younger than 18 years of age, a Youth Employment Permit may be required prior to starting the position.

STAFF SUMMARY

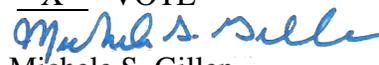
TO: Board of Director
FROM: Frederick A Laskey, Executive Director
DATE: December 13, 2023
SUBJECT: Appointment of Ivana McGrail, Manager, Benefits & HRIS



COMMITTEE: Personnel and Compensation

 INFORMATION
 X VOTE

Wendy Chu, Director of Human Resources
Preparer/Title


Michele S. Gillen
Director, Administration

RECOMMENDATION:

To approve the appointment of Ms. Ivana McGrail as Manager, Benefits & HRIS (Grade 14, Non-Union) in the Administration Division at an annual salary of \$135,854.00 commencing on a date to be determined by the Executive Director.

DISCUSSION:

The position of Manager, Benefits and HRIS became vacant upon the retirement of the long-term incumbent, Emily Dallman. The position reports to the Director of Human Resources and oversees and administers the MWRA Benefits Program including medical, dental, life, and disability insurance. The position also handles administration of workers' compensation, unemployment compensation, and leave benefits. Additionally the Manager, Benefits and HRIS is responsible for procurement of benefits-related contracts such as dental insurance, employee assistance program (EAP), and third party workers' compensation administration.

Selection Process

As was described in the related Administration Division proposed organizational changes, staff are recommending a re-assignment of existing resources that includes the recommendation to appoint Ms. McGrail as the Manager, Benefits and HRIS in Human Resources. Ms. McGrail has fully demonstrated she has the knowledge, skills, and directly related experience necessary to perform in this role.

Ms. McGrail has been serving as the Manager, Human Resources Operations (Non-Union Grade 14) since January 2021 handling workers' compensation and employee discipline, participating on interview panels, and serving on working groups reviewing personnel matters including reasonable accommodation requests. During this time, she also stepped in to assume several of the responsibilities of the Manager, Benefits and HRIS position when the incumbent was on leave.

In September 2019, Ms. McGrail was hired as the Assistant Manager, Workers' Compensation and Labor Relations to oversee the workers' compensation program, assist with investigations of misconduct, and participate in labor relations matters such as grievance hearings, disciplinary

hearings and arbitrations. When the COVID-19 pandemic hit, Ms. McGrail managed the monitoring of employees who became ill, were exposed to COVID-19, and/or were required to test following out-of-state travel.

Prior to joining the MWRA, she worked for 11 years at the Commonwealth of Massachusetts Human Resources Division and served as the Deputy Director of Workers' Compensation where she was responsible for workers' compensation claims management and litigation strategy for all state agencies. Ms. McGrail supervised 18 employees, including 10 claims adjusters, a medical case manager, and a medical director.

Ms. McGrail also has 7 years of workers' compensation experience working for private insurance companies, having worked for ALM Mutual Insurance for five years and Utica National Insurance for two years where she represented clients at the Division of Industrial Accidents.

Ms. McGrail previously worked as an Attorney for 3 years at Daniels Law Office and American Student Assistance in Boston.

Ms. McGrail has a Bachelor's degree in Psychology/English from UMass Boston and a Juris Doctor from the New England School of Law.

BUDGET/FISCAL IMPACT:

There are sufficient funds for this position in the FY24 CEB.

ATTACHMENTS:

Resume of Ivana McGrail
Position Description
Organization Chart

IVANA MCGRAIL

EDUCATION:

New England School of Law, Boston

Graduation Date: June 1999 Class Ranking: Top fifty percent of the class G.P.A: 3.4

Activities: President and Auction Co-Chair of PILA, Participant in the Rwandan War Crime Project
Mock Trial Competitor

University of Massachusetts, Boston

Bachelor of Arts in Psychology/English, May 1994

G.P.A. 3.25

WORK EXPERIENCE:

Massachusetts Water Resources Authority, September 2019 to present

Manager of HR Operations January 2021 to present

Lead investigator in reports of employee misconduct by performing interviews, gathering evidence and documenting through investigative notes. Work cooperatively with the Director of Human Resources, Assistant General Counsel and Senior Managers to determine appropriate discipline. Work closely with Affirmative Action to investigate any issues of harassment, performance concerns and medical accommodation requests. Serve as a witness on behalf of the MWRA for arbitrations as well as Unemployment hearings. Assist with Collective Bargaining process as well as other negotiations and communications with the Unions. Manage the internal Workers' Compensation program for the Authority including procuring a new Third Party Administrator as well as renewing the contract with our Workers' Compensation Counsel. Primary contact for management of our COVID contact tracing program. Review leave requests for approval under FMLA or PFML and respond to requests for information by the Department of Unemployment Assistance. Special projects including, but not limited to, implementation of Union Contracts, participation in review of potential IT systems to replace our current Human Resources/payroll system, organization of Intern tours of facilities.

Assistant Manager of Workers' Compensation and Labor Relations September 2019 to January 2021

Managed the internal Workers' Compensation Program including filing claims, partnering with our Third Party Administrator and Litigation provider, communicating with our injured workers in an effort to assist in getting treatment, return to work in a safe and timely manner and resolution through settlement any cases where return to work is not possible. Worked with the Manager of Workers' Compensation and Labor Relations to investigate reports of employee misconduct. Prepared pre-disciplinary reports and management presentations and participated in pre-disciplinary hearings. Participated in personnel meetings to decide appropriate discipline when required. Managed the COVID-19 contact tracing program; including contacting employees who have been out ill and interviewing them to determine whether there are any close contacts, following up for test results and later clearance to return to work. Assisted in the decision making regarding clearance as well as the need for quarantine. Provided daily updates and reporting to senior management and assisted in developing COVID protocols.

Commonwealth of Massachusetts, Boston January 2008 to September 2019

Deputy Director of Workers' Compensation September 2016 to September 2019

Supervised 10 adjusters, 1 medical case manager, 1 medical directors and 6 operations/clerical employees. Responsibilities included being primary point of contact with our agency partners, vendor, addressing personnel issues or discipline, auditing claims to ensure compliance with department and statutory protocols, providing training and guidance, and assisting in claims handling/strategy. Primary point of contact with our Systems Development Department to enhance our Workers' Compensation software as well as to perform User Acceptance testing. Worked with the Director of Workers' Compensation and the Director of Human Resources to post open employment opportunities, developed hiring criteria, developed interview questions and completed the hiring process. Provided on boarding, and assisted with developing a Best Practices Manual for staff. Procured and managed vendors for the UR Outsourcing as well as the prescription Management system with Express Scripts. Worked with the Medical Director to propose new rates and "Center of Excellence in Health Care" planning as well as reduction in opioid use plans for our Injured employees. Communicated with a variety of agency contacts, medical providers, internal and plaintiff legal representatives and injured state employees and their Union Representatives. Assisted defense counsel in developing claims and litigation strategy as well preparing claims for litigation purposes. Presented at all Agency meetings and provided Workers' Compensation training to agency contacts and representatives.

Supervisor, of Workers Compensation May 2012 to September 2016

Co-supervised 10 adjusters, 2 medical case managers and 1 operations/clerical employee. Monitoring of adjusters work to ensure compliance with department and statutory standards and protocols. Provided customer service to our Partner Agencies and addressed any complaint calls from injured workers, Union Representatives, or legal representation. Prepared Performance Evaluations on staff. Worked on special projects including user testing on system enhancements, development of on line filing of claims with the Department of Industrial Accidents, managed the process of transitioning six new Sheriff's Departments to our system for claims handling. Also served on the HRD Inclusion and Diversity Team and worked on a Reclassification Project for the Commonwealth that included working with Subject Matter Experts to obtain information through interviews and reclassification of positions performed based on our interviews.

Sr. Claims Adjuster January 2008 to May 2012

A.I.M Mutual Insurance, Burlington April 2003 to January 2008

Workers' Compensation Sr. Claims Adjuster

Investigate and evaluate workers' compensation claims, review files for compensation, setting reserves, termination of benefits and negotiation of settlements. Communicate with claimants, legal representatives and medical professionals via phone and written correspondence. Negotiate surgery fees. Prepare files for litigation and/or settlement, negotiate appropriate settlements and correspond with defense counsel on legal strategies on a variety of different levels of claims. Provide customer service, claims reviews and training for our customer companies.

Utica National Insurance, Wakefield April 2001 to April 2003

Hearing Representative/WC Claims Adjuster

Research State and Federal Regulations regarding Workers' Compensation. Investigate claims and compensate claimants for lost work time and medical bills. Provide strong Customer service, negotiate settlements and surgical prices, arrange medical procedures and handle complaint calls. Attend Department of Industrial Accident hearings and training courses. Lead all subrogation investigation and recovery attempts. As the Hearing Officer, represent Utica Mutual clients at the DIA in both Conciliation and Conference proceedings.

Daniels Law Offices, Boston January 2001 to April 2001

Litigation Attorney

Draft pleadings, discovery, motions and memorandum and research a variety of collections and bankruptcy issues. Attend Small Claims Hearings, Supplementary Process Sessions and Motion Hearings three to four times per week on behalf of our clients. Perform coverage work for other attorneys involved in the coverage group. Perform extensive file and document reviews in order to bring cases current. Work with collections and paralegal staff to ensure compliance with court as well as client regulations and specifications. Negotiate settlement and payment arrangements with debtors and their counsel.

American Student Assistance, Boston 1993 to 2001

Collections and Legal Department Supervisor/Attorney

Supervise a staff of collections representatives/wage garnishment processors, clerical and paralegal. Total of 15 employees. Also attended small claims hearings on issues of defaulted Student Loans. Responded to any complaint calls, 93A and Attorney General Complaints. Assist in Reorganization of the Collections, clerical, and Skip Tracing Unit.

SPECIAL SKILLS: Member of the Massachusetts Bar Association, Graduate of the Commonwealth Supervisor Certificate Program, Participant in the Worcester County Bar Association Opioid Diversion Task Force

**MWRA
POSITION DESCRIPTION**

POSITION: Manager, Benefits & HRIS

DIVISION: Administration

DEPARTMENT: Human Resources

BASIC PURPOSE:

Oversees and administers the MWRA Benefits Program. Develops and maintains personnel systems relative to employee records, personnel actions and benefits administration. Oversees the development, maintenance and use of information and tracking systems used by the department. Manages the workers' compensation program and works in conjunction with the Manager of Occupational Health & Safety to ensure the health and safety of employees.

SUPERVISION RECEIVED:

Works under the general supervision of the Director of Human Resources.

SUPERVISION EXERCISED:

Exercises general supervision over File Clerk and Senior HR Analyst (Benefits). Functionally supervises the Assistant Manager, Workers' Compensation and Labor Relations on workers' compensation issues

ESSENTIAL DUTIES AND RESPONSIBILITIES:

- Manages the MWRA Benefits Program including health, life, disability and dental insurances.
- Formulates, recommends and manages the implementation of benefits and data collection and maintenance programs, policies and procedures.
- Evaluates the adequacy and appropriateness of existing levels and types of benefits and recommends adjustments as may be required.
- Researches, develops and recommends proposals for new or improved benefits.

- Manages the workers' compensation program. Serves as liaison to payroll and MWRA Retirement Board on issues and reporting related to employees who have been on workers' compensation leave. Handles inquiries from employees about workers' compensation benefits.
- Maintains strong working relationship and communication with third party workers' compensation administrator and workers' compensation legal counsel to ensure an assertive claims management approach.
- Manages procurement of benefit providers including Employee Assistance Program (EAP), dental insurance, flu shot clinics, workers' compensation third-party administrator, and workers' compensation legal counsel.
- Participates in negotiations with benefits carriers and consultants to ensure maximum coverage with available resources as may be required.
- Manages employee information programs on benefits policies and procedures.
- Assesses long-range compensation and benefits objectives along with the Manager of Compensation and makes recommendations as may be required.
- Manages employee leave programs, including FMLA, PFML, mutual aid, and other collectively bargained leave benefits. Serves as liaison to Massachusetts Group Insurance Commission and Massachusetts Department of Family and Medical Leave.
- Monitors personnel data collection and maintenance programs and recommends improvements as may be required.
- Represents the department in all Management Information Systems (MIS) development projects and serves as the primary liaison in the development of specifications and in planning the implementation of a new Human Resources/Payroll system.
- Oversees the maintenance of all electronic and hard copy personnel files for the MWRA in compliance with applicable state and federal laws. Prepares responses to public records and legal requests related to personnel files, benefits, and leave.
- Manages the MWRA unemployment program, including participation in unemployment proceedings as may be required.
- Manages the department in a manner that is consistent with MWRA's goals of Diversity, Equity, and Inclusion.

SECONDARY DUTIES:

- Oversees and prepares the department's current expense budget and variance reporting relative to benefits programs.
- Supervises department procurement functions and oversees expenditure tracking and cost code system relative to benefits programs.
- Participates in collective bargaining negotiations, prepares costing information and analysis as may be required.
- Secures data for annual years of service awards ceremony and works closely with the Executive Office on the awards ceremony.
- Performs other related duties as required.

MINIMUM QUALIFICATIONS:

Education and Experience:

- (A) Analytical and writing skills as normally attained through a Bachelor's degree in business, human resources or a related field; and
- (B) Understanding of benefits management, personnel administration, workers' compensation, and records maintenance as acquired by a minimum of seven (7) years' experience, with at least three (3) years in a supervisory and/or managerial capacity. Public sector experience preferred; or
- (C) Any equivalent combination of education or experience.

Necessary Knowledge, Skills and Abilities:

- (A) Excellent interpersonal, written and oral communication skills are required.
- (B) Strong knowledge of state and federal employee leave benefits, including but not limited to FMLA, PFML, Parental, and Military leaves.
- (C) Knowledge of unemployment benefits and experience with Department of Unemployment Assistance (DUA) appeal process.

- (D) Knowledge of workers' compensation law, policies, and procedures.
- (E) Knowledge of the public sector procurement process.
- (F) Demonstrated proficiency in Microsoft Office Suite.
- (G) Demonstrated proficiency with Lawson HRIS System preferred.
- (H) Ability to handle highly confidential information including medical records.
- (I) Absence management/case management experience a plus.

SPECIAL REQUIREMENTS:

A valid Massachusetts Class D Motor Vehicle Operators license is required.

Must be available for on-call nights and weekends on a rotating basis.

TOOLS AND EQUIPMENT USED:

Office machines as normally associated with professional administrative settings, including but not limited to the use of telephone, personal computer, word processing and other software, videoconferencing applications, copier, scanner, 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 the job. Reasonable accommodations may be made to enable individuals with disabilities to perform the essential functions.

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

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

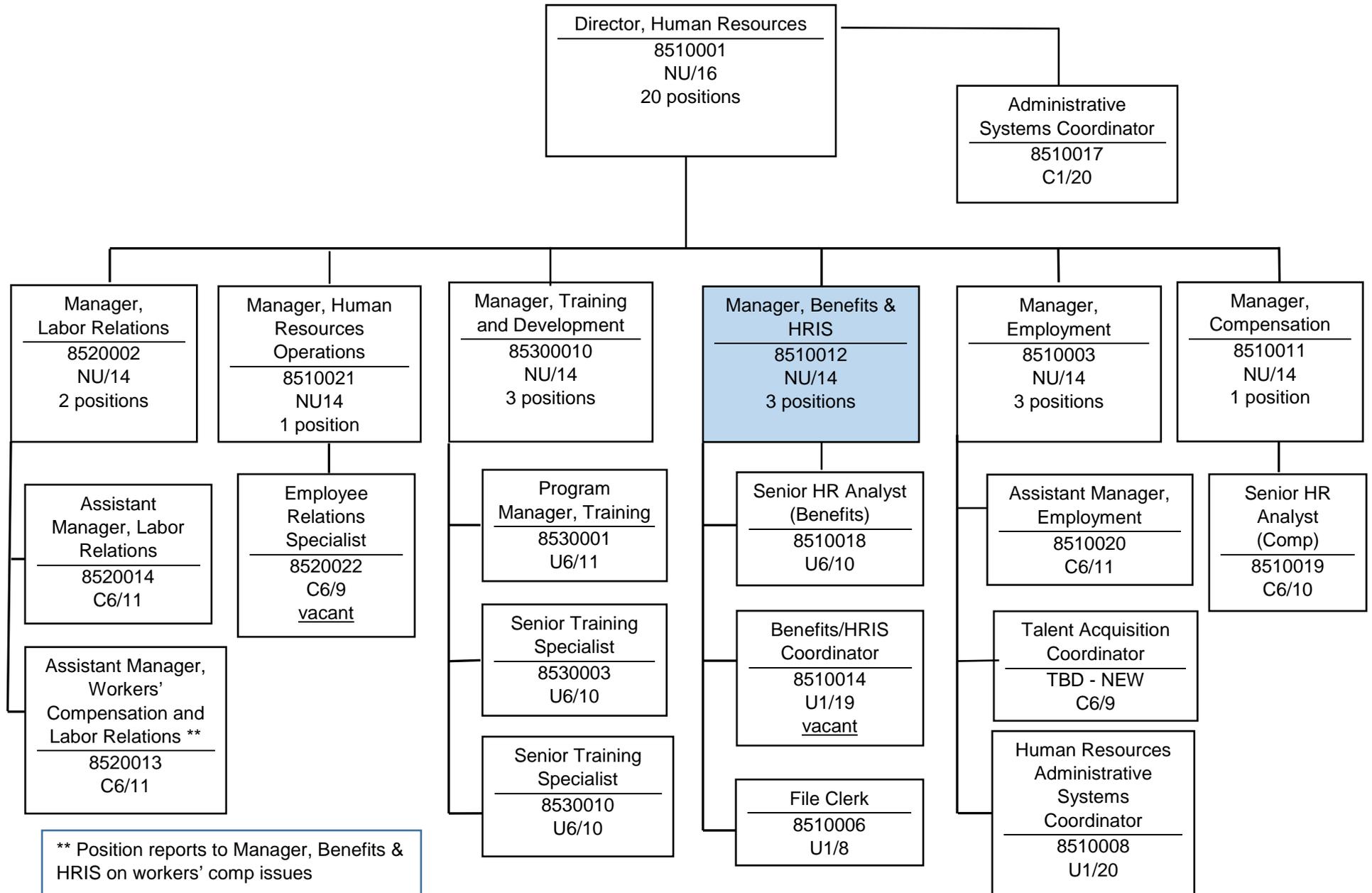
WORK ENVIRONMENT:

The work environment characteristics described herein are representative of those an employee encounters while performing the essential functions of this job. While performing the duties of this job the employees regularly works in an office environment. The noise level in the work environment is a moderately quiet office setting.

The noise level in the work environment is a moderately quiet office setting. This position may be eligible for up to 50% telework.

December 2023

**Administration Division
Human Resources Department
December 2023**



** Position reports to Manager, Benefits & HRIS on workers' comp issues

STAFF SUMMARY



TO: Board of Director
FROM: Frederick A Laskey, Executive Director
DATE: December 13, 2023
SUBJECT: Appointment of Jeannie Teixeira, Manager, Human Resources Operations

COMMITTEE: Personnel and Compensation

 INFORMATION
 X VOTE

Wendy Chu, Director of Human Resources
Preparer/Title


Michele S. Gillen
Director, Administration

RECOMMENDATION:

To approve the appointment of Ms. Jeannie Teixeira to the position of Manager, Human Resources Operations (Non-Union, Grade 14), in the Administration Division, Human Resources Department at the recommended annual salary of \$133,989, commencing on a date to be determined by the Executive Director.

DISCUSSION:

The position of Manager, Human Resources Operations will become vacant upon the transfer of the incumbent, Ivana McGrail, to the Manager, Benefits & HRIS position. The Manager, Human Resources Operations reports to the Director, Human Resources while working closely with the Affirmative Action & Compliance Unit (AACU). This position is primarily responsible for managing workplace investigations of allegations or complaints of employee misconduct, rule or policy violations, and other unprofessional or inappropriate workplace behavior, as well as partnering with AACU on investigations into allegations or complaints of discrimination, harassment, and retaliation. Other responsibilities include managing the planning and implementation of major Human Resources initiatives, projects and programs including those related to new statutes and regulations, policy and procedure initiatives, and operational efficiencies. In addition, the role works in conjunction with the Law Division to review, revise, and create employment-related policies.

Selection Process

As was described in the related Administration Division proposed organizational changes, staff are recommending a re-assignment of existing resources that includes the recommendation to appoint Ms. Teixeira as the Manager, Human Resources Operations. Ms. Teixeira has fully demonstrated she has the knowledge, skills, and directly related experience necessary to perform in this role.

Ms. Teixeira has served as Manager, Operations Support (HR) at MWRA since January 2022. In this role, she has been responsible for managing the planning and implementation of human resources-related initiatives within the Operations Division, including projects and programs

associated with organizational restructuring, staffing, and employee development. Additionally she has served on interview committees for a wide range of positions and manages hiring and promotion packages for the Operations Division. She has advised Operations managers on labor relations matters, hiring, labor policy, and other employee relations matters. In addition she has been an active member of the working groups on staffing and diversity, equity & inclusion. She has developed strong working relationships with Non-Union managers and staff across the Authority.

Before the MWRA, Ms. Teixeira had nearly 10 years of human resources experience working at the Massachusetts State Lottery Commission where she was charged with carrying out major personnel initiatives, as well as the day-to-day HR operations of the Lottery Commission. Similar to the MWRA, the Lottery Commission includes a unionized workforce and Ms. Teixeira participated in union/management meetings and grievance hearings during her time with the Lottery. She was also involved in all aspects of the hiring process and conducted extensive outreach to promote diversity while at the Lottery Commission. Ms. Teixeira was also responsible for conducting trainings on preventing workplace violence and sexual harassment and has experience conducting personnel-related investigations.

Prior to working at the Massachusetts State Lottery Commission, Ms. Teixeira held various positions in the insurance industry, including three years at Aon Risk Services and four years at Liberty Mutual Insurance and worked for more than three years at a small private company.

Ms. Teixeira has acquired an excellent foundation for success in the position of Manager, Human Resources Operations based on her years of professional human resources experience with the MWRA and in prior roles. She possesses advanced knowledge of human resources-related laws and regulations, an ability to treat others in a highly professional and respectful manner, particularly in adverse situations, and demonstrated communications skills.

Ms. Teixeira has an Associates of Science in Business Administration from Massasoit Community College, a Bachelor of Science in Management from Bridgewater State University, and a Masters of Business Administration with a concentration in Human Resources Management from Fitchburg State University.

BUDGET/FISCAL IMPACT:

There are sufficient funds for this position in the FY24 CEB.

ATTACHMENTS:

- Resume of Jeannie Teixeira
- Position Description
- Organization Chart

Jeannie Teixeira

EDUCATION

- **Massasoit Community College**
Associates of Science -Business Administration
Spring 2015
- **Bridgewater State University**
Bachelor of Science in Management
Fall 2019
- **Fitchburg State University**
Masters of Business Administration
Concentration: Human Resources Management
Spring 2022

PROFESSIONAL DEVELOPMENT

- **SHRM Essentials of HR – 2014**
- **National Seminars Training**
The Family and Medical Leave Act – 2012
- **The Essentials of HR Law**
- **Anti-Discrimination Training** - Annually
- **MCAD – Preventing Harassment in the Workplace**
- **MCAD – Preventing Discrimination in the Workplace**
- **MCAD – Preventing and Addressing Public Accommodations Discrimination**
- **MCAD – Train the Trainer Responding to Accommodations Request**

PROFESSIONAL EXPERIENCE

Massachusetts Water Resources Authority, Chelsea, MA

January 2022 – Present

Manager, Operations Support

- Develops and communicates division-wide procedures for human resources and operations support issues. Meets regularly with Operations directors and managers to solicit input and communicate procedures.
- Prepares staffing analyses and advises the Deputy Chief Operating Officer on human resources issues, projects, and programs to resolve issues.
- Collaborates with Operations managers on employment-related activities, including participating in interviews, working with hiring managers to develop interview questions, and assisting in preparing documentation for hiring decisions.
- Coordinates Labor Relations matters for the Operations Division. Administers policies and procedures designed to increase the effectiveness of employee relations and support positive working relations.
- Manages the sick leave review process for the Operations Division. Prepares and distributes sick leave management reports to Operations Managers. Meets regularly with managers and staff to review sick leave usage and recommend appropriate action to address specific issues or situations.
- Works closely with Human Resources to monitor the use of sick time by employees and ensures employees provide sufficient medical documentation. Prepares reports by gathering other information needed to review usage patterns and other pertinent data. Recommends appropriate next steps to Deputy Chief Operating Officer.
- Audits written time sheet submissions from all staff including all off hour shifts in order to ensure that staff are applying time appropriate to use such as leave time, meal breaks, compensatory time, overtime and stand-bypay.
- Prepares analyses, provides suggestions and makes recommendations to senior management on ways to improve business processes and operational effectiveness.
- Assists with editing and writing of Staff Summaries for monthly Board meetings as needed.

Massachusetts State Lottery Commission, Braintree, MA

March 2012 – January 2022

Assistant Director Talent Acquisition/Employee Relations Specialist

- Assist the Director of Human Resources in the day-to-day operation of the Human Resources Department.

- Administration of the Performance Appraisal System for the Lottery, following the established H.R. and Lottery policies and procedures.
- Responsible for all screening of the resumes and scheduling interviews with potential candidates.
- Arrange interviews by coordinating schedules with hiring managers.
- Participate on the interview team for many internal interviews for promotional opportunities.
- Works with department managers and supervisors in creating and updating comprehensive job descriptions.
- Process 1-9 Documentations and CORI for new employees.
- Development and implementation of the new employee orientation process; guide employees through the process.
- Understanding of all benefits available to employees and assist them in inquiries regarding all facets of this area.
- Responsible for transcribing, and involved in meetings with HR Director and employees regarding HR Issues, employee Investigations.
- Responsible for maintaining and updating Lottery organizational charts.
- Responsible for the implementation of directives from the Assistant Executive Director/Human Resources that improve the operation of the department and overall administration of the Lottery.
- Reorganizing and maintaining the personnel, medical, and investigator files.
- Implements special projects such as Children's Hospital Blood Drive, Red Cross Blood Drive, and the Lottery's Employee recognition Program.
- Cross training on specific Payroll projects utilizing the HRCMS process.
- Administers and approves requests for Family Medical Leave, Parental Leave, and PFML.
- Responsible for approving or denying FMLA and non-FMLA Medical leave cases based on legislative guidelines.
- Manages Summer Interns 'time approval and records.
- Prepares status sheet for the Payroll Department of all hires, promotions, transfers, suspensions, etc.
- Conducts interviews with potential external candidates.
- Attends Union/Management Labor Meetings and Grievance Hearings and is responsible for taking, transcribing, and distributing minutes of meetings.
- Conducts training classes on the prevention of workplace violence, sexual harassment, and domestic violence.
- Attends Seminars pertaining to my job to gain more knowledge such as Family Medical Leave Act Training, and Massachusetts Commission against Discrimination Training.
- Recommends new approaches, policies, and procedures to effect continual improvements in the efficiency of the department and services performed.

STRONG BUSINESS COMPETENCIES

- Proficient with Microsoft Office suite (i.e. Outlook, Word, Excel, PowerPoint, Access, and Visio).
- PeopleSoft - HRCMS
- Strong analytical skills and detail-oriented.
- Advanced organizational and communication skills.
- Able to effectively manage change.
- Outstanding interpersonal and presentation skills.
- Experience managing confidential and sensitive information.
- Able to multi-task and achieve deadlines.
- Motivated self-starter with the ability to work well under pressure.

AREAS OF EXPERTISE

- HR Best Practices
- Process Improvement
- HR Compliance
- Benefits Management
- Change Management
- Talent Acquisition & Recruitment
- Employee Personnel Management & Retention
- HR Policy, Process & Systems Design
- Employee Relations & Diversity
- Employee Performance Improvement & Development
- ADA Compliance & Accommodations

**MWRA
POSITION DESCRIPTION**

POSITION: Manager, Human Resources Operations

DIVISION: Administration

DEPARTMENT: Human Resources

BASIC PURPOSE:

Manages investigations of allegations or complaints of employee misconduct, rule or policy violations, and other unprofessional or inappropriate workplace behavior. Manages planning and implementation of major Human Resources' initiatives, projects and programs including those related to new statutes and regulations, policy and procedure initiatives, and operational efficiencies. Works in conjunction with the Law Division on reviewing, revising, and creating employment-related policies.

SUPERVISION RECEIVED:

Works under the general supervision of the Director of Human Resources.

SUPERVISION EXERCISED:

Supervises the Employee Relations Specialist. May functionally supervise other Human Resources staff as required for projects or initiatives.

ESSENTIAL DUTIES AND RESPONSIBILITIES:

- Serves as primary investigator and hearing officer on matters involving alleged inappropriate behavior which may result in discipline. Partners with the Affirmative Action department including the Associate Special Assistant, Affirmative Action, on workplace investigations alleging discrimination, harassment, and/or retaliation based on an employee's protected class (e.g., gender, race, religion, etc.).
- Oversees workplace investigations conducted by other HR staff.
- Prepares and maintains documentation related to workplace investigations, including but not limited to witness statements, interview summaries, and investigation reports.
- Issues recommendations to senior management regarding disciplinary action and other steps to resolve complaints and issues.
- Under the direction of the Director, Human Resources, develops and implements HR goals, objectives and long-term strategies.

- Manages Human Resources' response to cultural, health, and political climate changes.
- Manages the communication and implementation of new employment-based rules, regulations, and guidance with HR staff as assigned.
- Conducts regular reviews of MWRA employment policies and drafts revisions and new policies as needed.
- Identifies the need for improved efficiency in HR systems and processes in conjunction with HR managers.
- Develops HR requirements for new systems and processes with HR managers.
- Manages the implementation of new systems and processes.
- Oversees the department budget, contracts, and financial transactions.
- Assists in labor relations, employment, and benefits matters as needed.
- Assists with the development and writing of Staff Summaries as needed.
- Assists Law Division with litigation as needed.
- Manages the department in a manner that is consistent with MWRA's goals of Diversity, Equity, and Inclusion.

SECONDARY DUTIES:

Performs other duties as required.

MINIMUM QUALIFICATIONS:

Education and Experience:

- (A) A Bachelor's degree in public administration, human resources, business administration or a related field; and
- (B) Understanding of labor and employee relations, workplace investigations, personnel administration, and grievance administration as acquired through at least seven (7) years of related experience, a minimum of which 3 years are supervisory or managerial; or
- (C) Any equivalent combination of education or experience.

SPECIAL REQUIREMENTS:

Ability to provide evening or weekend coverage on a rotating basis.

A valid Massachusetts Class D Motor Vehicle Operators' License.

NECESARY KNOWLEDGE, SKILLS AND ABILITIES:

- (A) Demonstrated ability to work effectively as part of a project team and to function independently with minimal supervision.
- (B) Knowledge of state and federal laws relating to HR functions.
- (C) Familiarity with computer software, such as MS Office Suite.
- (D) Excellent interpersonal, managerial, oral and written communication skills.
- (E) Ability to maintain confidentiality and exercise discretion while handling highly sensitive matters.
- (F) Demonstrated ability to conduct workplace investigations, preferably in a unionized work environment.
- (G) Knowledge of state and federal non-discrimination laws.

TOOLS AND EQUIPMENT USED:

Office equipment as normally associated with a professional office environment, including the use of telephones, personal computers, word processing and other software, email, videoconference applications, copiers, scanners, and fax machines.

PHYSICAL DEMANDS:

The physical demands described here are representative of those that must be met by an employee to successfully perform the essential functions of this job. Reasonable accommodations may be made to enable individuals with disabilities to perform the essential 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 frequently required to reach with hands and arms. The employee regularly is required to talk or hear. The employee is occasionally required to walk; stand; climb or balance; stoop, kneel, crouch, or crawl; or sit.

Specific vision abilities required by this job include close vision, distance vision, color vision, peripheral vision, depth perception and the ability to adjust focus.

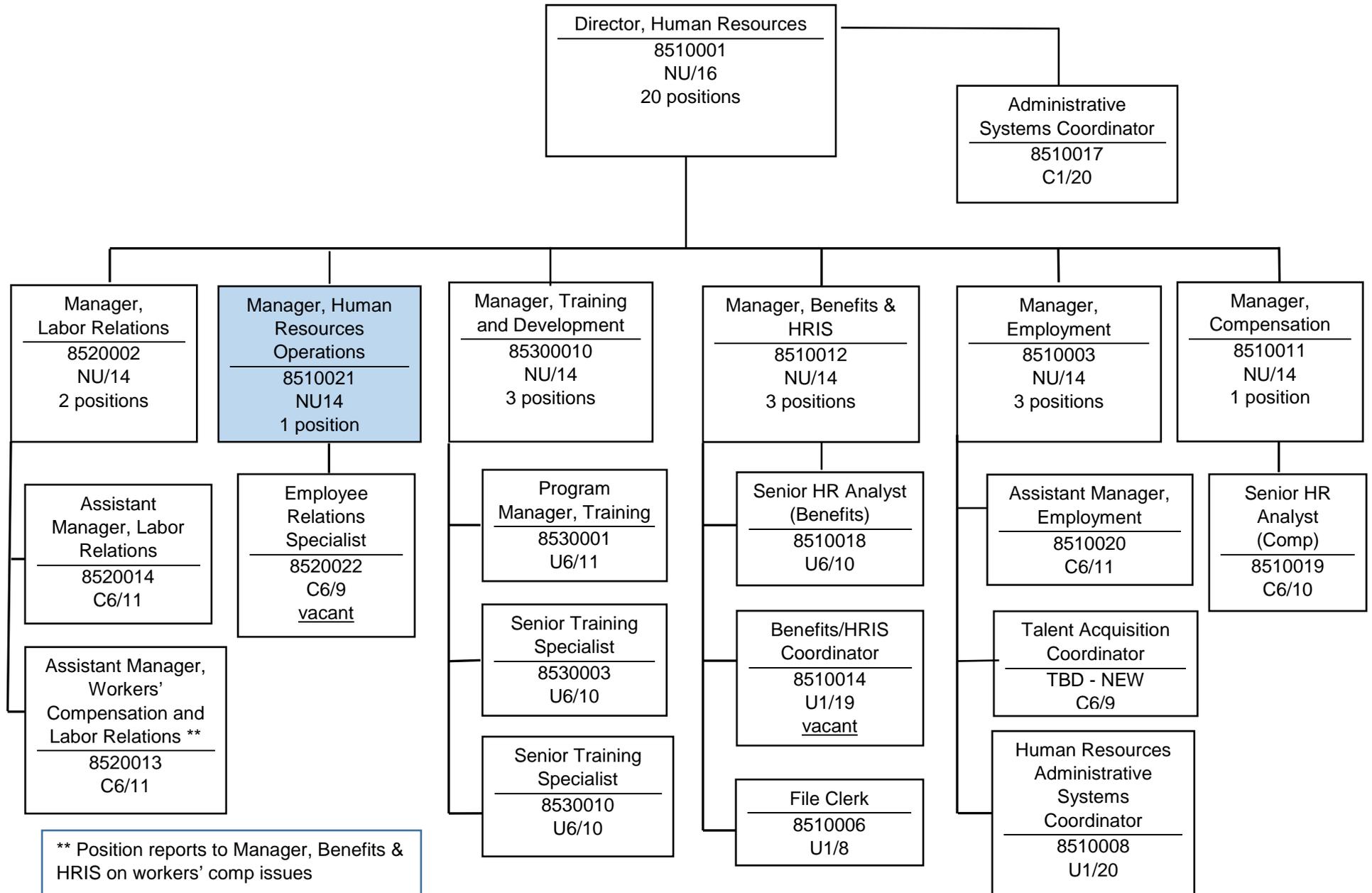
WORK ENVIRONMENT:

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

The noise level in the work environment is usually a moderately quiet office setting. This position may be eligible for up to 50% telework.

December 2023

**Administration Division
Human Resources Department
December 2023**



STAFF SUMMARY



TO: Board of Directors
FROM: Frederick A. Laskey, Executive Director
DATE: December 13, 2023
SUBJECT: Metropolitan Water Tunnel Program
Program Support Services, JCK Underground, Inc.
Contract 7655, Amendment 2 – First Optional 24-Month Renewal

COMMITTEE: Water Policy and Oversight

 INFORMATION
 X VOTE

Paul V. Savard, P.E., Director, Design and Construction
Preparer/Title


Kathleen M. Murtagh, P.E.
Director, Tunnel Redundancy

The current Program Support Services Contract expires on April 1, 2024. The contract with JCK Underground, Inc., approved by the Board of Directors in March 2019, included two additional 24-month terms subject to further approval by the Board of Directors. This staff summary requests approval to exercise the first of two options to renew the contract for 24 months.

RECOMMENDATION:

To authorize the Executive Director, on behalf of the Authority, to approve Amendment 2 to Contract 7655, Program Support Services for the Metropolitan Tunnel Redundancy Program, with JCK Underground, Inc., to exercise the first optional 24-month renewal, increasing the contract amount by \$7,000,000, from \$10,247,877 to \$17,247,877, and extending the contract term by 24 months, from April 1 2024 to April 1 2026.

DISCUSSION:

The Program Support Services (PSS) contract has provided assistance with program-wide activities such as risk management, quality management, design criteria and standardization, design and construction package planning, independent technical reviews, field investigation oversight, document management, contract practices review, independent cost estimating, critical path scheduling, and budget planning. This consultant provided advice on early engineering activities and prepared early work products in advance of MWRA procuring the Preliminary Design Engineering Contract. The Program’s five member Expert Review Panel (ERP), as well as several Subject Matter Experts (SMEs) in the fields of geology and risk management are engaged through this contract.

Engagement of a program-wide, independent consultant to support very large, long duration, complex projects is a common practice in the industry and generally consistent with past MWRA programs, such as: (1) the Lead Design Engineer and Program Manager/Construction Manager on the Boston Harbor Project; (2) Design Management Support on the John J. Carroll Water Treatment Plant project; and the (3) Owner’s Representative on the Norumbega, Blue Hills, and

Spot Pond Covered Storage projects. In addition, most ongoing, very large tunnel projects being conducted by other agencies and authorities across the country include an independent consultant(s) in the form of an Owner's Representative, Owner's Advisor, Program Manager, Geotechnical Consultant, Tunnel Consultant, or Program Support Services consultant.

The PSS consultant was selected in 2019 in a competitive procurement process in which cost was a key selection criterion. Financial terms (overhead, profit, and rate cap) of the existing contract will carry forward as part of the renewal. The initial contract term provided approximately 48,000 hours of effort over five years (ranging from 6,000 to 12,500 hours per year). An allowance for the cost of two optional 24-month renewal periods was estimated by MWRA staff in 2019 at \$3,500,000 and \$3,750,000 for the first and second renewals, respectively, with the actual costs to be determined at the time of renewal. The PSS consultant and its team members are precluded from participating in either the design or the construction phase of the project. Precluding the consultant from other phases of the project provides independence from the interests of other program participants, and encourages long-term commitment to MWRA.

The Tunnel Program is on schedule to achieve a significant milestone with the completion of preliminary design and environmental reviews in 2024. Passing this milestone will shift the focus of work to final designs with additional emphasis on completing land acquisition, expanding outreach efforts, achieving stakeholder agreements, and preparing for tunnel construction.

Based on the FY24 Capital Improvement Plan (CIP), it is projected that in the coming years, over \$1.5 billion in professional services contracts and construction contracts will be awarded. This significant increase in contract awards will require an increased level of effort from the Tunnel Department, other MWRA departments, and the PSS consultant in order to maintain the Program schedule.

The Tunnel Department has experienced staff losses associated with promotions, retirements, and resignations. Backfilling staff losses, as well as adding staff to match the expansion of the Tunnel Program has been difficult. The PSS consultant has provided skilled professionals on an as needed basis, which has been instrumental in maintaining the Program schedule to date. All current contracts for the Tunnel Program, including the initial PSS contract, are on schedule and on budget. It is anticipated that continued reliance on the PSS staff will be required to maintain the Program schedule.

The 24 month renewal of the PSS contract would provide the following services, with approximate budgets:

1. Continued core assistance to program-wide activities such as risk management, quality management, design and construction package planning, independent technical reviews, contract practices review and implementation, independent cost estimating, critical path scheduling, and budget tracking. (~\$3,150,000)
2. Continued ERP engagements over the next two years. All or portions of the five member panel will be asked to review program documents or attend workshops over the next two years on a variety of topics including program schedule, geology, final design basis, and initial tunnel design submittals. (~\$350,000)

3. Provide additional staff experienced in tunnel design and tunnel construction to support the final design. It is anticipated that both the North and South Tunnel contract packages will be in the final design phase during this two-year renewal period. (~\$1,300,000)
4. Provide staff to fill roles that are intermittent and/or have proven difficult to fill with MWRA staff (e.g., field investigation oversight and project controls). (~\$600,000)
5. Provide SME support in the areas of geology, tunnel engineering, and risk management. (~\$600,000)
6. If needed, assist the Tunnel Department and/or provide supplemental staff for MWRA lead initiatives that are time sensitive (e.g., land acquisition, outreach, and stakeholder agreements) and, if not completed in alignment with the overall Program schedule, would result in Program delays and added costs. Also, if needed, provide supplemental staff to support the Program in the event that the MWRA is not able to hire new staff into the Tunnel Department in a timely manner (i.e., design managers and document control). (~\$1,000,000)

The recommended first renewal for the PSS contract is for \$7,000,000, which will provide the Tunnel Program with approximately 28,000 hours of labor, plus cover expenses, costs for the ERP, and costs for SMEs over two years. The continuation of core support, along with the above described supplemental support, results in an approximately 20% higher level of effort (hours) per year than the level of effort provided by the PSS during the last 2 years of the initial five-year term of this contract. The original estimate for the renewals did not contemplate the need for continuing the PSS level of support at (or above) the level of the original contract. However, this level of support is recommended to maintain the Program schedule.

CONTRACT SUMMARY:

	<u>AMOUNT</u>	<u>TIME</u>	<u>DATED</u>
Contract Award:	\$10,247,877	60 months	04/20/2019
*Amendment 1:	\$0	0 months	04/05/2022
Proposed Amendment 2:	<u>\$ 7,000,000</u>	<u>24 months</u>	Pending
Adjusted Contract Amount:	\$17,247,877	84 months	

*Approved under delegated authority

BUDGET/FISCAL IMPACTS:

The FY24 CIP includes \$17,497,877 for Contract 7655. The current CIP has sufficient funds allocated to Contract 7655 for this first contract renewal. Funds for a second renewal, if approved by the Board of Directors, would require reallocation from the Administration, Legal and Public Outreach subphase for the Tunnel Program.

MBE/WBE PARTICIPATION:

Due to the specialized nature of this work, no minimum MBE or WBE participation requirements were established for the initial contract term. However, JCK Underground, Inc. identified a commitment of 5% MBE during the 24-month contract renewal term.

STAFF SUMMARY



TO: Board of Directors
FROM: Frederick A. Laskey, Executive Director
DATE: December 13, 2023
SUBJECT: First Amendments to Both the Memorandum of Understanding and Financial Assistance Agreement with the Boston Water and Sewer Commission for Implementation of the Fort Point Channel and Mystic/Chelsea Confluence Combined Sewer Overflow Control Projects

COMMITTEE: Wastewater Policy & Oversight

Brian L. Kubaska, P.E., Chief Engineer
Jeremy R. Hall, Program Manager
Preparer/Title

 INFORMATION
 X VOTE

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

RECOMMENDATION:

To authorize the Executive Director, on behalf of the Authority, to execute the First Amendment to the Memorandum of Understanding and the First Amendment to the Financial Assistance Agreement by and between Massachusetts Water Resources Authority and Boston Water and Sewer Commission for the Implementation of Fort Point Channel and Mystic/Chelsea Confluence Combined Sewer Overflow Control, substantially in the form attached hereto, with no increase to not-to-exceed amount of \$10,000,000 or change in term of 32 months, from November 1, 2022, through June 30, 2025.

DISCUSSION:

On October 19, 2022, the Board approved a Memorandum of Understanding (MOU) and Financial Assistance Agreement (FAA) with the Boston Water and Sewer Commission (BWSC) for the implementation of Fort Point Channel and Mystic/Chelsea Confluence combined sewer overflow (CSO) control work. BWSC agreed to design and construct certain CSO abatement projects for four CSO outfalls - BOS017, BOS062, BOS065, BOS070/DBC – that did not meet the MWRA long-term control plan (LTCP) typical year goals for those outfalls in connection with the Boston Harbor case.¹ MWRA agreed to provide funding for eligible design and construction work, for a total of \$10,000,000. During the last year, BWSC has designed CSO abatement projects at the four CSO outfalls and released the resultant contract documents for competitive bid on November 15, 2023.

The parties seek to amend the MOU and FAA to add certain improvement work at an additional outfall - BOS013. As of the end of 2022, the LTCP typical year goal was materially met, at BOS013. Further system adjustment, as constructed at similar CSO systems in East Boston, are forecasted to further reduce activations at BOS013 from eight to four in a typical year, which is expected to bring the activations in-line with the LTCP goal while providing further volume reductions from 0.27 MG to 0.11 MG in a typical year, well below the LTCP goal of 0.54 MG.

¹ United States v. Metropolitan District Commission, et al., CA No. 85-0489-MA

System adjustments include removal of obsolete structures within BWSC's system, which is expected to improve conveyance capacity to MWRA's interceptor thereby reducing CSO activations and volume at BOS013. As mentioned above, BWSC has developed and recently bid a contract to construct CSO abatement improvements for the four original CSO outfalls included in the MOU/FAA. Operating at its own risk, BWSC has included the BOS013 modifications within these contract documents, with agreement that MWRA would seek Board approval for their expended design services and future construction costs. At this time, there is no change to either the total funding amount or duration of the MOU/FAA, as previously authorized by the Board.

Staff support this effort by BWSC and recommend Board approval of the first amendments to the MOU and FAA, substantially in the form attached hereto. MWRA staff will continue to work cooperatively with BWSC staff and hold regular coordination meetings to review the progress of BWSC's work and expenditures.

BUDGET/FISCAL IMPACT:

The FY24 Capital Improvement Program (CIP) includes \$10,000,000 for contract number 8054.

MBE/WBE PARTICIPATION:

For BWSC-implemented projects funded by MWRA, MBE/WBE participation requirements are included in compliance with DEP requirements and in accordance with BWSC policy.

ATTACHMENTS:

Attachment 1 – First Amendment to the Memorandum of Understanding by and between Massachusetts Water Resources Authority and Boston Water and Sewer Commission for Implementation of Fort Point Channel and Mystic/Chelsea Confluence Combined Sewer Overflow Control

Attachment 2 – First Amendment to the Financial Assistance Agreement by and between Massachusetts Water Resources Authority and Boston Water and Sewer Commission for *Implementation of Fort Point Channel and Mystic/Chelsea Confluence Combined Sewer Overflow Control*

**FIRST AMENDMENT TO THE
MEMORANDUM OF UNDERSTANDING
BETWEEN THE MASSACHUSETTS WATER
RESOURCES AUTHORITY AND THE BOSTON WATER
AND SEWER COMMISSION FOR THE IMPLEMENTATION OF
FORT POINT CHANNEL AND MYSTIC/CHELSEA CONFLUENCE
COMBINED SEWER OVERFLOW CONTROL PROJECTS**

WHEREAS, on November 14, 2022, the Massachusetts Water Resources Authority (“MWRA”) and the Boston Water and Sewer Commission (“BWSC”) executed a *Memorandum of Understanding For The Implementation Of Fort Point Channel And Mystic/Chelsea Confluence Combined Sewer Overflow Control Projects* (“MOU”), whereby the BWSC agreed to implement assigned Combined Sewer Overflow (“CSO”) Projects (“Projects”) and MWRA agreed to provide the BWSC financial assistance for project design and construction costs;

WHEREAS, the MWRA and the BWSC subsequently identified an additional project for outfall BOS013 (Regulator 013-1), which is anticipated to result in further reductions in CSO discharges to Chelsea Creek;

WHEREAS, the MWRA and the BWSC now wish to amend the MOU to include the project for outfall BOS013, by incorporating certain revisions Sections I. and III. of the MOU, whereby the BWSC agrees to also implement the additional project for outfall BOS013 and the MWRA agrees to provide the BWSC financial assistance for project design and construction costs; and

WHEREAS, Section VII. of the MOU provides that the MOU may be amended from time-to-time by mutual agreement in writing.

NOW THEREFORE, in consideration of the foregoing and the promises contained herein, the MWRA and the BWSC agree to amend the MOU, as follows:

1. Delete Section I.a.-b. of the MOU in its entirety and replace it with the following:

I. INTRODUCTION

a. Parties

This Memorandum of Understanding (“MOU”) is entered into by the Massachusetts Water Resources Authority, a body politic and corporate and public instrumentality, existing under Chapter 372 of the Acts of 1984, with its principal place of business at Deer Island, 33 Tafts Avenue, Boston, MA 02128, (the “Authority” or “MWRA”) and Boston Water and Sewer Commission, an independent body politic and corporate and political subdivision of the Commonwealth established pursuant to Chapter 436 of the Acts of 1977, with its principal place of business at 980 Harrison Avenue, Boston, MA 02119, (“BWSC”) (the Authority and BWSC are collectively known as the “Parties” and each

individually as a “Party”). The goal of the Parties in entering into this MOU is the improvement of water quality and protection of designated uses in Boston Harbor and its tributary waters by controlling combined sewer overflows (“CSOs”).

b. Background

On December 30, 2021, the Authority filed with the Court in the Boston Harbor Case, United States v. Metropolitan District Commission, et al., CA No. 85-0489-MA, its *Final Combined Sewer Overflow Post Construction Monitoring Program and Performance Assessment Report* (“Final Assessment Report”). Among other key findings, the Authority reported that as of the end of 2021, the CSO Long-Term Control Plan (“LTCP”) goals for average annual CSO activation and volume were met, or materially met, at 70 of the 86 CSO outfalls for which performance targets were defined. The Authority reported that of the 16 remaining CSO outfalls that did not meet the LTCP goals for activation frequency and/or volume by the end of 2021, the Authority developed plans to enable six CSO outfalls to meet LTCP goals after 2021.¹ As part of a negotiated framework, the Court subsequently approved three-years of additional time to perform certain system improvements at these six CSO outfalls, which are predicted to meet the LTCP goals, once the improvements are performed.

In the Final Assessment Report, the Authority also noted that with respect to the remaining 10 CSO outfalls, it had identified potentially feasible alternatives that may enable four CSO outfalls (“BOS CSO Outfalls”) to achieve the applicable CSO LTCP volume and activation goals.² Further, with respect to these four outfalls, Section 4.2.1 of the Final Assessment Report offers the Authority’s conceptual designs, which are predicted to meet the applicable LTCP goals, if implemented. Lastly, the Final Assessment Report explains that the Authority is working with BWSC to evaluate the constructability and cost for these projects.

Additionally, the Final Assessment Report identified certain outfalls that materially met MWRA’s LTCP goal, including CSO outfall BOS013. Further system adjustment, as constructed at similar CSO systems in East Boston, are forecasted to further reduce activations at BOS013 from eight to four in a typical year, which is expected to bring the activations in-line with the LTCP goal while providing further volume reductions from 0.27 MG to 0.11 MG in a typical year.

2. Delete Section III.a. of the MOU in its entirety and replace it with the following:

III. BWSC-IMPLEMENTED CSO PROJECTS

¹ The six CSO outfalls are: SOM007A/MWR205A; MWR205; BOS014; CHE008; BOS009; and BOS003.

² The four CSO outfalls are: BOS017, BOS062, BOS065, and BOS070/DBC.

a. Scope of Work

BWSC will provide, through in-house staff resources and/or outside consultant/contractor services, the administration, planning, engineering, and construction services necessary to design and construct the CSO control projects for which BWSC is made responsible by this MOU (“Projects”). These Projects are:

- i. Mystic/Chelsea Confluence BOS017 Siphon Structure Modification;
- ii. Fort Point Channel Outfalls BOS062 and BOS065 (with additional modifications to BOS064 resulting from BOS062 and BOS065 modifications);
- iii. Fort Point Channel Outfall BOS070/DBC; and
- iv. Mystic/Chelsea Confluence Outfall BOS013 (RE013-1).

The scope and performance objectives for the Projects are defined in the Financial Assistance Agreement. BWSC agrees to design and construct the projects in accordance with the Projects' scopes, schedule requirements (see Section III.b. of this MOU), and applicable laws, regulations, codes, and requirements as well as in a manner that will ensure that the performance objectives are met. BWSC will also obtain all required construction permits including, but not limited to, environmental permits, in order to implement the Projects.

- 3. All other terms and conditions of the MOU shall remain the same.

IN WITNESS WHEREOF, the Parties hereto have caused this First Amendment to the MOU to be executed as a sealed instrument and signed in duplicate by their duly authorized representatives.

MASSACHUSETTS WATER RESOURCES AUTHORITY

BY: _____ Date: _____
Frederick A. Laskey
Executive Director

BY: _____ Date: _____
Matthew R. Horan
Treasurer

BOSTON WATER AND SEWER COMMISSION

BY: _____ Date: _____
Henry F. Vitale
Executive Director

Approved as to Form

BY: _____

Office of General Counsel

**FIRST AMENDMENT TO THE
FINANCIAL ASSISTANCE AGREEMENT
BETWEEN THE MASSACHUSETTS WATER
RESOURCES AUTHORITY AND THE BOSTON WATER
AND SEWER COMMISSION FOR THE IMPLEMENTATION OF
FORT POINT CHANNEL AND MYSTIC/CHELSEA CONFLUENCE
COMBINED SEWER OVERFLOW CONTROL PROJECTS**

This First Amendment to the Financial Assistance Agreement for the Implementation of Fort Point Channel and Mystic/Chelsea Confluence Combined Sewer Overflow Control Projects (“Financial Assistance Agreement”) is made by and between the Massachusetts Water Resources Authority, a body politic and corporate and public instrumentality, existing under Chapter 372 of the Acts of 1984, with its principal place of business at Deer Island, 33 Tafts Avenue, Boston, MA 02128, (“Authority” or “MWRA”) and the Boston Water and Sewer Commission, an independent body politic and corporate and political subdivision of the Commonwealth established pursuant to Chapter 436 of the Acts of 1977, with its principal place of business at 980 Harrison Avenue, Boston, MA 02119 (“Awardee”) (the Authority and the Awardee are collectively referred to as the “Parties”).

WHEREAS, on November 14, 2022, the Parties concurrently executed the initial Financial Assistance Agreement and a *Memorandum of Understanding For The Implementation Of Fort Point Channel And Mystic/Chelsea Confluence Combined Sewer Overflow Control Projects* (“MOU”), which is hereby incorporated by reference, whereby the Awardee agreed to implement assigned Combined Sewer Overflow (“CSO”) Projects (“Projects”) and MWRA agreed to provide Awardee financial assistance for project design and construction costs;

WHEREAS, the Parties subsequently identified an additional project for outfall BOS013 (Regulator 013-1), which is anticipated to result in further reductions in CSO discharges to Chelsea Creek;

WHEREAS, the Parties now wish to amend the Financial Assistance Agreement Projects to include the project for outfall BOS013, by incorporating certain revisions to: Attachment A (“Scope of Services”); Attachment C (“Project Schedule”); and Attachment E (“Form of Certification of Awardee”);

WHEREAS, Section XVII. of the Financial Assistance Agreement provides that the Parties may mutually agree to revisions to the Scope of Services or Project Schedule and that such changes shall be incorporated into the Financial Assistance Agreement by written amendment;

WHEREAS, on _____, 2023, the Parties concurrently executed a *First Amendment to the MOU*, which is hereby incorporated by reference, whereby the Awardee agreed to also implement the additional project for outfall BOS013 and MWRA agreed to provide Awardee financial assistance for project design and construction costs;

WHEREAS, the MWRA will provide financial assistance (“Award”) to the Awardee for its Projects, including under certain terms and conditions, hereinafter provided; and

WHEREAS, the MWRA may finance the Award from the proceeds of an issue of its tax-exempt Revenue Bonds (“MWRA Bonds”), which proceeds are subject to certain limitations as to

investment and application.

NOW THEREFORE, in consideration of the foregoing and the promises contained herein, the Parties agree to amend the Financial Assistance Agreement, as follows:

1. Delete Attachment A (“Scope of Services”); Attachment C (“Project Schedule”); and Attachment E (“Form of Certification of Awardee”) to the Financial Assistance Agreement and replace them with Attachments A, C, and E, hereto.
2. All other terms and conditions of the Financial Assistance Agreement shall remain the same.

IN WITNESS WHEREOF, the Parties have executed this First Amendment to the Financial Assistance Agreement under seal.

MASSACHUSETTS WATER RESOURCES AUTHORITY

BY: _____ Date: _____
Frederick A. Laskey
Executive Director

BY: _____ Date: _____
Matthew R. Horan
Treasurer

AWARDEE: Boston Water and Sewer Commission

BY: _____ Date: _____
Henry F. Vitale
Executive Director

Approved as to Form

BY: _____
Office of General Counsel

ATTACHMENT A
SCOPE OF SERVICES

A. General Requirements

1. The following activities are considered to be part of the scope of the Projects, as applicable:

a. Field investigations to gather data necessary to properly design the Projects. Field investigations may include subsurface explorations to characterize soils or assess the presence of oils and hazardous material contamination; other environmental surveys to support compliance with regulatory requirements; topographic surveys; internal sewer system and drain system inspections, including television inspections; and other field reconnaissance efforts. Activities that may be necessary to facilitate a field investigation include but may not be limited to acquisition of police details, public notification and acquisition of permits or other approvals from property owners.

b. Oils and hazardous material (“OHM”) contamination in soil and groundwater may be encountered during construction of the CSO projects. Assessment of OHM contamination in the planning and design phases shall be conducted by Awardee in conformance with the MWRA White Paper, Property Acquisition: MWRA Site Assessment for Identifying Hazardous Material. A copy of the White Paper is included in Attachment D.

Provisions for handling OHM during construction will be incorporated into the plans/and specifications addressing procedures for identifying OHM and conducting URAMs (Utility-related Abatement Measures), guidelines for stoppage of work to control costs and/or prevent exacerbating existing conditions, and notification of URAM activities.

c. Relocation of utilities and other subsurface structures that conflict with the alignment of the proposed facilities. Relocation of existing structures should be avoided where possible by evaluating appropriate alternatives.

d. Acquisition of temporary or permanent property rights to facilitate construction work, construction staging and long-term facility operation, maintenance and/or access. All land for easement or taking shall be appraised by a qualified appraiser, unless the value is less than \$5,000.

e. Acquisition of construction permits, including regulatory approvals.

f. Work necessary to comply with federal, state and local law and permit conditions, including full compliance with Americans with Disabilities Act.

g. Acquisition of necessary police details.

- h. Acquisition of sewer connection permits, including MWRA connection permits, for new connections to public sewer systems.
 - i. Reconstruction and/or replacement of surface features disturbed by the construction activities.
 - j. Cleaning of other sewers and storm drains if demonstrated by Awardee to be necessary for the completion of the project scope and/or achievement of Project performance objectives and approved in writing by MWRA.
2. The scope does not include:
- a. Improvements outside the work limits described below and work that is not necessary to achieve the performance objectives for the Projects.
 - b. Cleaning, rehabilitation or other work to improve combined sewers, sanitary sewers or storm drains located downstream or upstream of the work limits discussed below, unless such work is demonstrated by Awardee to be necessary to meet project performance objectives and is approved by MWRA in advance.
 - c. Cleaning and/or rehabilitation of existing conduits and structures solely to improve hydraulic capacity and/or structural integrity, unless demonstrated in writing by Awardee as necessary to accomplish performance objectives and approved by MWRA.
 - d. Removal of illegal sanitary connections to existing, public storm drain systems.

B. Description of the Projects to be implemented by Awardee:

1. Mystic/Chelsea Confluence BOS017 Siphon Structure Modification

CSO outfall BOS017 discharges to the Mystic River. Regulator RE017-3 is the sole regulator tributary to this CSO discharge located on Medford Street. As part of the CSO LTCP, the Authority funded a \$1.2M hydraulic relief project within the Awardee's upstream system, which was predicted to achieve LTCP goal. This work included installing 190 feet of 36-inch diameter pipe in Sullivan Square, Charlestown, to divert two local combined sewers through a direct connection to the 78X86-inch Cambridge Branch Sewer. This work was completed in 2000. Current model predictions with the updated and calibrated hydraulic model indicate that the LTCP goals have not been met, and now predict six activations and 0.34 MG of CSO discharged during the Typical Year, in comparison to the goals of one activation and 0.02 MG of CSO discharged during the Typical Year.

Evaluations have determined that optimizing the Sullivan Square siphon chamber upstream of regulator BOS017 and at the connection point of the 36-inch sewer installed in 2000, would achieve the LTCP goals at outfall BOS017 for the Typical Year. Final design and

construction by the Awardee will include removal of exiting stop planks and installation of adjustable stop logs upstream of each siphon barrel. The new stop plank system will be constructed with an offset from the start of the siphon barrels to allow water to flow over the stop planks without creating a restriction in the openings to the siphon barrels, allowing flow to pass through the siphon under storm events, which may require system relief. The final stop planks will be set at elevations to prevent combined flows from entering the siphons during the Typical Year, which is predicted to reduce CSO activation and volume levels at BOS017 to meet LTCP goals. Accordingly, the performance objectives of this portion of the Project include meeting the volume and activation goals at BOS017 (*i.e.*, no more than one activation and 0.02 MG of CSO discharged in the Typical Year).

2. Fort Point Channel Outfalls BOS062 and BOS065

CSO outfall BOS062 discharges to the Fort Point Channel. The outfall is located between the Northern Avenue Bridge and the Commercial Street Bridge. Dry weather flow from the 72-inch combined sewer located along Purchase Street and Atlantic Avenue enters the New East Side Interceptor at the intersection of Atlantic Avenue and Essex Street through an existing 18-inch drop connection. When wet weather flow exceeds the capacity of the drop connection, the weir at RE062-4 is overtopped and CSO enters the 72x54-inch discharge to outfall BOS062. Outfall BOS065 also discharges to the Fort Point Channel. The outfall is located near the intersection of Atlantic Avenue and Kneeland Street (adjacent to Dorchester Avenue). Combined sewer from Kneeland Street is conveyed to the East Side Interceptor via a 10-inch connection that turns into an 18-inch connection from RE-065-2. When the capacity of this connection is exceeded, or if the level in the East Side Interceptor exceeds the regulator weir elevation, wet weather flow is diverted through the 66x102-inch conduit tributary to the BOS065 outfall. Current model predictions with the updated and calibrated hydraulic model indicate that the LTCP goals have not been met, and now predict the following: (a) five activations and 1.25 MG of CSO discharged in the Typical Year versus the LTCP goals of one activation and 0.01 MG of CSO discharged in the Typical Year at BOS062; and (b) one activation and 0.60 MG of CSO discharged in the Typical Year versus the LTCP goals of one activation and 0.06 MG of CSO discharged in the Typical Year at BOS065.

The Authority's updated hydraulic model results, as-shown in Semiannual Report No. 7 dated October 2021, indicated that interceptor relief, including the addition of a second dry weather flow connection at RE062-4, will result in meeting LTCP goals. However, the additional flow entering the East Side Interceptor results in the need to raise the weir at regulators RE064-5 and RE065-4 in order to reduce CSOs during the Typical Year to meet LTCP goals. The following system modifications will be further refined during the design process and constructed by the Awardee:

- Constructing a second DWF connection at regulator RE062-4
- Raising the weir at regulator RE064-5 by 3 inches from El. 104.32 to El.104.57
- Raising the weir at regulator RE065-2 by 2.8 feet (approximate 6 inches over the Peak HGL predicted in the NESI in a Typical Year) from El. 102.83 to El.105.60.

The performance objectives for this aspect of the Project include meeting the volume and activation goals at: (a) BOS062 (*i.e.*, no more than one activation and 0.01 MG of CSO

discharged in a Typical Year); BOS064 (*i.e.*, zero activations and 0.0 MG of CSO discharged in a Typical Year); and (c) BOS065 (*i.e.*, no more than one activation and 0.06 MG of CSO discharged in a Typical Year).

3. Fort Point Channel Outfall BOS070/DBC

Combined flow can discharge to the BOS070/DBC outfall through nine active regulators within this large tributary system. Under current conditions, model predictions show activation volumes at RE070/7-2 and activation frequencies at RE070/8-3 and RE070/9-4, which would preclude meeting LTCP goals of no more than three activations and 2.19MG in the Typical Year. With the completion of ongoing sewer separation projects in South Boston, the high activation frequency at regulators RE070/8-3 and RE070/9-4 are predicted to be reduced to once in the Typical Year. This sewer separation work, however, will have no significant benefit toward addressing the high volumes from RE070/7-2.

At RE070/7-2, dry weather flow passes through a short segment of 120"x36" box sewer, which then transitions to a 72" pipe prior to the connection to the Boston Main Interceptor. Hydraulic modeling has determined that hydraulic restrictions in the Boston Main Interceptor due to a 540-foot section of 60" pipe, versus the upstream and downstream size of 108" is contributing to the frequency and volume of CSO discharge at regulator RE070/7-2. This results in overflows that exceed the LTCP activation and volume goals. Hydraulic modeling has shown that providing parallel relief of the 60-inch, 540-foot section of reduced capacity Boston Main Interceptor will reduce the CSO discharge volume at regulator RE070/7-2 to 2.06 MG, which would bring the total BOS070/DBC CSO discharge volume within the LTCP goals. With assistance from MWRA, the Awardee will determine the appropriate size of this parallel pipe, as well as design and construct this proposed relief line. The performance objectives of this part of the Project include meeting the volume and activation goals at BOS070/DBC (*i.e.*, no more than three activations and 2.19 MG of CSO discharged in the Typical Year).

4. Mystic/Chelsea Confluence Outfall BOS013 (RE013-1)

Regulator RE013-1 is located at the intersection of Meridian Street and Condor Street in the northwest corner of the City's East Boston neighborhood and discharges CSO via BOS003 into the Mystic/Chelsea confluence. As part of the CSO LTCP, the MWRA funded a \$85M relief project where the MWRA upgraded its 115 year-old interceptor system serving most of East Boston using a combination of construction methods including micro-tunneling, pipe-bursting, open-cut excavation and pipe relining. Current hydraulic model predictions with the updated calibrated model indicated eight activations and 0.27 MG of CSO discharged during the Typical Year, in comparison to the LTCP goals of four activations and a volume of 0.54 MG. After further evaluation, it is expected that additional system modifications to RE013-1 would realize no more than four activations and a discharge volume of 0.11 MG in a typical year, meeting the LTCP goals.

Regulator RE013-1 dry weather flows are conveyed to the regulator and are discharged to the MWRA's East Boston Branch Sewer (EBBS). During wet weather events, wastewater flows can overtop a weir located within the regulator and discharge to Chelsea Creek via Outfall BOS013.

Three (3) BWSC-owned combined sewers connect and discharge flow to RE013-1. This includes a 16"x20" rehabilitated brick pipe from the east in Condor Street, 15"x18" brick combined sewer in Meridian Street and 15" rehabilitated vitrified clay (VC) sewer from the west in Condor Street. Wet weather flows from these combined sewers can overtop a weir with a crest elevation of 116.81' (16.84' BCB) and enter a 24" PVC pipe that conveys to the outfall. Dry weather flows are discharged from the regulator via a 12" CI outlet pipe with an invert elevation of 114.87' (14.90' BCB).

The regulator outlet pipe connects to a large monolithic structure consisting of two separate chambers immediately downstream of the regulator manhole. The upstream chamber includes an 18" sump and was constructed with grooves to allow for stop logs to be installed to regulate flow. The downstream chamber also includes a sump and remnants of a tank device originally used to control water levels within the chamber. The two chambers are connected by a 12" cast iron pipe fitted with a nozzle on the downstream end. Two (2) cast iron pipes (6" and 15" in diameter) exit the downstream chamber and connect to an MWRA manhole less than 10 feet away.

The proposed work at this location consists of the demolition and removal of the existing regulator manhole, downstream structure and associated piping and the installation of new 18" PVC pipes and a 4-foot diameter precast manhole to replace the facilities being removed. This will eliminate hydraulic restrictions associated with the nozzle, tank device and inlet and outlet openings. The performance objectives of this part of the Project include meeting the volume and activation goals at BOS013 (*i.e.*, no more than four activations and 0.54 MG of CSO discharged in the Typical Year).

ATTACHMENT C

PROJECT SCHEDULE

1. Mystic/Chelsea Confluence BOS017 Siphon Structure Modification

<u>Item</u>	<u>Date</u>
Commence Design	Complete
30% Design	Complete
60% Design	Complete
Final Design	Complete
Advertisement for Construction Bids	Complete
Contract Award / Notice to Proceed	March 6, 2024
Commence Construction	April 15, 2024
Construction Completion	December 2024

2. Fort Point Channel Outfalls BOS062 and BOS065

<u>Item</u>	<u>Date</u>
Commence Design	Complete
30% Design	Complete
60% Design	Complete
Final Design	Complete
Advertisement for Construction Bids	Complete
Contract Award / Notice to Proceed	March 6, 2024
Commence Construction	April 15, 2024
Construction Completion	December 2024

3. Fort Point Channel Outfall BOS070/DBC

<u>Item</u>	<u>Date</u>
Commence Design	Complete
30% Design	Complete
60% Design	Complete
Final Design	Complete
Advertisement for Construction Bids	Complete
Contract Award / Notice to Proceed	March 6, 2024
Commence Construction	April 15, 2024
Construction Completion	December 2024
Complete Permanent Paving	June 2025

4. Mystic/Chelsea Confluence Outfall BOS013 (RE013-1)

<u>Item</u>	<u>Date</u>
Commence Design	Complete
30% Design	Complete
60% Design	Complete
Final Design	Complete
Advertisement for Construction Bids	Complete
Contract Award / Notice to Proceed	March 6, 2024
Commence Construction	April 15, 2024
Construction Completion	December 2024
Complete Permanent Paving	June 2025

ATTACHMENT E

MASSACHUSETTS WATER RESOURCES AUTHORITY
MEMORANDUM OF UNDERSTANDING AND FINANCIAL ASSISTANCE AGREEMENT
FOR THE IMPLEMENTATION OF
FORT POINT CHANNEL AND MYSTIC/CHELSEA CONFLUENCE
COMBINED SEWER OVERFLOW CONTROL PROJECTS

CERTIFICATION OF THE AWARDEE
AS TO THE COMPLETION AND ACCEPTANCE OF PROJECT WORK

**Boston Water and Sewer Commission Contracts Closeout Documentation
Certification of Final Cost and Release and Waiver of Liens and Claims**

To: Massachusetts Water Resources Authority
2 Griffin Way
Chelsea MA 02150

The Boston Water and Sewer Commission (“BWSC”) has completed the combined sewer overflow (“CSO”) control projects and associated contracts listed in Table 1 attached hereto and related engineering contracts, pursuant to the terms and conditions detailed within the Memorandum of Understanding and Financial Assistance Agreement (“MOU/FAA”) with Massachusetts Water Resources Authority (the “Authority”) dated _____, 2022, and in accordance with the approved Scope of Services, Project Schedule, plans and specifications. The Projects and contracts are complete, are operating satisfactorily, and have been accepted by BWSC. The total eligible cost of the Projects and contracts under the terms and conditions of the MOU/FAA is \$_____. The Authority and BWSC have determined that the total of funds provided by the Authority together with interest earned through _____, 202_, were available and utilized by BWSC to cover Project eligible costs and exceed the total eligible cost of \$_____ by \$_____. BWSC will reimburse the Authority \$_____ (which includes any accumulated interest) at its earliest convenience.

BWSC: 1) accepts the eligible amount of \$_____ as full, final and complete payment of all compensation payable under the provisions of the MOU/FAA referred to above, including all amendments executed thereto; 2) fully releases and discharges without condition the Authority and its Consultants, and any representative, agent, or servant thereof from any and all claims, demands, causes of action of every kind and nature arising directly or indirectly out of said Contract; certifies that its Contractors/subcontractors and all parties who have furnished material, equipment or labor in connection with any work covered by the aforementioned contract documents, have been paid in full, and; 3) for themselves and on behalf of their agents, assigns, servants, employees, subcontractors or subconsultants, forever waives and relinquishes any and all liens, stop notices, levies or attachments and any and all rights to claim or file for the same that any of them may now or hereafter have against the Authority or the property thereof. The undersigned acknowledges that all payments it has received are subject to audit by the Authority. No additional funding for the contracts listed in Attachment 1 will be provided by the Authority.

IN WITNESS WHEREOF, the parties have accepted this certification of completion this _____ day of _____, 202_.

Boston Water and Sewer Commission

Authorized Signature

(Print Name and Title)

Date

Massachusetts Water Resources Authority

Authorized Representative

(Print Name and Title)

Date

BWSC Contracts Closeout Documentation
Certification of Final Cost and Release and Waiver of Liens and Claims

TABLE 1

CSO CONTROL PROJECT	BWSC CONTRACT
Mystic/Chelsea Confluence BOS017 Siphon Structure Modification	
Fort Point Channel Outfalls BOS062 and BOS065 (with additional modifications to BOS064 resulting from BOS062 and BOS065 modifications)	
Fort Point Channel Outfall BOS070/DBC	
Mystic/Chelsea Confluence Outfall BOS013 (RE013-1)	

STAFF SUMMARY

TO: Board of Directors
FROM: Frederick A. Laskey, Executive Director
DATE: December 13, 2023
SUBJECT: Electrical Equipment Testing, Deer Island Treatment Plant
Infra-Red Building and Power Services, Inc.
Contract S618



COMMITTEE: Wastewater Policy & Oversight

 INFORMATION

VOTE



Michele S. Gillen
Director of Administration

David F. Duest, Director, Deer Island Treatment Plant
Richard J. Adams, Manager, Engineering Services
Preparer/Title



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

RECOMMENDATION:

To approve the award of Contract S618, Electrical Equipment Testing, Deer Island Treatment Plant, to the lowest responsible and eligible bidder, Infra-Red Building and Power Services, Inc., and to authorize the Executive Director, on behalf of the Authority, to execute said contract in an amount not to exceed \$2,339,858 for a contract term of 1,095 calendar days from the Notice to Proceed.

DISCUSSION:

The electrical distribution system at Deer Island consists of 43 medium- and low-voltage substations, which either distribute power directly or transform (step-down or reduce voltage) and then distribute power to low-voltage process equipment critical for maintaining the overall operation of the wastewater treatment plant. A typical substation is comprised of several components including a transformer, a load-break switch, switchgear and either a bus duct or cable bus. The electrical distribution system is one of the most critical systems on Deer Island. To ensure proper operation and reliability of this equipment, each substation requires extensive preventive maintenance and frequent testing because of the combination of salt-laden air and the presence of hydrogen sulfide inherent in a coastal wastewater treatment plant.

MWRA staff have developed a comprehensive maintenance and testing program built upon nationally recognized industry recommendations and standards. An important component of this maintenance program is a separate electrical testing contract with a firm possessing the necessary expertise to test, diagnose, troubleshoot, and recommend corrective measures for all of Deer Island's electrical distribution equipment.

Many of the testing methods employed under this contract are similar to the ones used during commissioning of the equipment to ensure that it is operating as designed and specified. Several examples of testing to be performed include: Polarization-Index, Hi-Potential (AC and DC),

primary and secondary current injection for current transformers and relays and Medium Voltage Vacuum bottle contact resistance. Other tests include oil analysis, including Dielectric Breakdown Voltage, Dissolved Gas Analysis and Total Combustible Gas testing, to identify overheating issues, infrared scanning for signs of equipment deterioration, or use of other specialized equipment. Visual inspection includes checking for damaged or loose components or signs of corrosion.



Figure 1 Switchgear

MWRA has contracted these specialized electrical testing services since 1999. These services are performed by specially trained electrical test technicians who are required to be certified in accordance with ANSI/NETA EIT, Standard for Certification of Electrical Testing Technicians. All test technicians are required to hold a current certification, Level III or higher. The requirement for certification is attained through a rigorous training and testing program. Each technician is required to have extensive experience in the testing of electrical equipment supplied by 15 different manufacturers to ensure they are qualified to perform the required testing in this Contract. In addition, there is a requirement to have specialized test equipment to perform the work. This equipment must be sent out to a testing laboratory to be calibrated every six months to

verify that the equipment is performing correctly. It is not practical for staff to perform this work, as it would be difficult to maintain the skill set necessary because the work is not performed on a full time basis. In addition, a large number of staff would be required when major processes such as the Thermal Power Plant generators are shutdown to perform the tests. The contractor is required to provide up to eight technicians during these critical plant shutdowns.

The scope of work under this contract includes electrical and mechanical inspection, replacement parts, if required, and regular testing of all 43 electrical substations. MWRA staff developed the testing schedule based upon a number of factors, including nationally recognized industry standards; results attained from years of previous electrical testing, which have shown that equipment in certain areas of the plant, particularly exterior locations, require more testing and attention than others; and the age and type of equipment. The contract also includes technical assistance on an as-needed basis.

Procurement Process

Contract S618 was advertised and competitively bid as a non-professional services contract and advertised in the Boston Herald, Banner Publications, Goods and Services, and El Mundo. In addition, bid documents were made available for public view and downloading on the MWRA Supplier Portal as Event (5663-0). A remote pre-bid conference was held on September 7, 2023.

Bids were opened on September 21, 2023 with the following bid results:

BIDDER	BID PRICE
Infra-Red Building and Power Services, Inc.	\$2,339,858
<i>Engineer's Estimate</i>	\$2,400,000
American Electrical Testing, Co	\$2,497,399
MP Predictive Technologies Inc.	\$7,709,846

Infra-Red Building and Power Services, Inc.'s ("Infra-Red") bid price is approximately 2.5% lower than the Engineer's Estimate. Infra-Red staff were interviewed to confirm they understood the scope of the specifications and that the bid price was complete and as specified. As a result of the interview, MWRA staff feel comfortable that Infra-Red's bid price includes all aspects of the scope of work required in the bid documents. The bid price for Contract S618 is approximately 21% higher than the previous electrical testing contract (Contract S596), which was awarded at \$1,928,700. Of that amount, approximately 13% can be attributed to labor costs, 5% for increased material costs and 3% for an increase in the scope of work.

Infra-Red's references and OSHA records were checked and found to be favorable. Infra-Red Building and Power Services, Inc. has performed similar services for several other MWRA facilities over the past several years and staff have reported that they have been very satisfied with the services provided. Staff have reviewed Infra-Red's bid, and have determined that it is reasonable and complete, and meets all of the requirements of the specifications. Staff have determined that Infra-Red possesses the skill, ability and integrity necessary to perform the work under this contract and is qualified to do so. Therefore, staff recommend the award of this contract to Infra-Red Building and Power Services, Inc. as the lowest responsible and eligible bidder.

BUDGET/FISCAL IMPACT:

The Operations Division's FY24 Current Expense Budget (CEB) has sufficient funds for the first year of this contract. Appropriate funding will be included in future CEB requests.

MBE/WBE PARTICIPATION:

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

STAFF SUMMARY



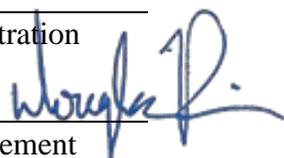
TO: Board of Directors
FROM: Frederick A. Laskey, Executive Director
DATE: December 13, 2023
SUBJECT: Delegated Authority Report – November 2023

COMMITTEE: Administration, Finance & Audit

INFORMATION
 VOTE

Barbara Aylward, Administrator A & F
Karen Smith, Administrative Systems Coor.
Preparer/Title


Michele S. Gillen
Director, Administration


Douglas J. Rice
Director of Procurement

RECOMMENDATION:

For information only. Attached is a listing of actions taken by the Executive Director under delegated authority for the period November 1 - 30, 2023.

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 16, 2022, delegate authority to the Executive Director to approve the following:

Construction Contract Awards:

Up to \$3.5 million if the award is to the lowest bidder.

Change Orders:

Up to 25% of the original contract amount or \$1,000,000.00, 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 \$1,000,000 and three years with a firm; or up to \$200,000 and two years with an individual.

Non-Professional Service Contract Awards:

Up to \$1,000,000 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 \$3.5 million if the award is to the lowest bidder.

Amendments:

Up to 25% of the original contract amount or \$500,000, 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 November 1 – 30, 2023

No.	Date of Award	Title and Explanation	Contract	Amend/CO	Company	Value
C-1	11/02/23	CSO Post-Construction Monitoring and Performance Assessment Increase level of effort to develop a flow metering program to support recalibration of the CAM401A CSO System; continue development of the Unified Model, including additional engineering effort as required to import system data, confirm the model is providing consistent results.	7572	4	AECOM Tech Services, Inc,	\$299,300.00
C-2	11/09/23	Wachusett Lower Gate House Window and Door Replacement Furnish and install additional blockings at each window to ensure a proper fit and obtain a weather-tight seal; Furnish and install conduit and wiring for the existing card reader.	7788	4	J.J. Cardosi, Inc.	\$71,130.00
C-3	11/13/23	Embankment Raising, North Dike at Leominster Pumping Station Award of a contract to the lowest responsive bidder for the Embankment Raising North Dike at Leominster Pumping Station for a term of 120 calendar days.	7615	Award	SumCo Eco Contracting, Inc.	\$278,500.00
C-4	11/16/23	Wachusett Dam Bastion Improvements Final balancing change order to decrease the following bid items: Price Adjustment Allowances and Fire Watch Services Allowance.	7697	3	MAS Building & Bridge, Inc.	(\$29,385.78)
C-5	11/20/23	Overhead Door Maintenance, Deer Island Treatment Plant Award of a contract to the lowest responsive bidder for Overhead Door Maintenance at the Deer Island Treatment Plant for a term of 1,095 calendar days.	S617	Award	Safeway Overhead Crane Services, Inc.	\$241,000.00

Purchasing Delegated Authority Items November 1-30, 2023

No.	Date of Award	Title and Explanation	Company	Value
P-1	11/2/23	<p>Sole Source Purchase Order One Muffin Monster Grinder for the Braintree Weymouth Pump Station</p> <p>MWRA has been purchasing “Muffin Monster” sewage grinders for more than 18 years for use in its wastewater treatment plants and pumping stations. Grinders are installed in these facilities to macerate solids such as bricks, wood, plastics, and light metal, which can commonly find their way into the wastewater system. Grinding of these solids prevents impedance of flow through the facility, which, in turn, decreases the chances of equipment damage, ensures optimum facility performance, and minimizes maintenance costs. Almost all of MWRA’s Muffin Monster purchases have been procured on a sole source basis from the manufacturer, JWC Environmental, LLC dating back to the completion of the Boston Harbor Project.</p>	JWC Environmental, LLC	\$53,464.00
P-2	11/7/2023	<p>Sole Source Purchase Order Contract Water Operator Training</p> <p>MWRA staff who hold water distribution and/or treatment operator licenses are required by statute to obtain a requisite number of training hours to renew such licenses. Staff have two years to obtain the required training contact hours. The MWRA has provided access to individual courses in the past at the New England Water Works Association (NEWWA) location, on-line, and at MWRA facilities. This purchase order covers the staff’s renewal cycle through December 31, 2025.</p>	New England Water Works Association	\$75,000
P-3	11/9/2023	<p>Sole Source Purchase Order for One year of Maintenance and Support for the Pretreatment Information Management System</p> <p>MWRA’s Toxic Reduction and Control Unit (TRAC) operates an EPA-approved pretreatment program pursuant to MWRA’s National Pollutant Discharge Elimination System (NPDES) permit and EPA regulations. PIMS allows TRAC staff needed access to carry out their pretreatment program responsibilities on a daily basis. The system automatically sends notifications to staff of violations, various due dates, and other significant activities. This maintenance renewal will provide MIS and Operations staff the time needed to make an informed determination on how to proceed with its current PIMS application.</p>	Inflection Point Solutions, LLC	\$115,000

No.	Date of Award	Title and Explanation	Company	Value
P-4	11/9/2023	<p>Nine-Month Purchase Order Contract for the Supply and Delivery of Biodiesel Fuel State Contract ENE47</p> <p>Biodiesel is a liquid fuel produced from renewable, biodegradable fuel, which is manufactured domestically from vegetable oils, animal fats, soybean oil and recycled restaurant grease. Biodiesel is a cleaner burning alternative to straight petroleum based diesel fuel, which helps reduce greenhouse gas emissions, and has been proven to extend engine life. During the summer season, Chelsea Vehicle Management Maintenance will use B-20 biodiesel and in the winter B-5 biodiesel. The B-5 blend is used during the cold winter months to prevent gelling of the fuel; in contrast, during the warmer months the B-20 blend is not impacted by the weather.</p>	Dennis K. Burke, Inc.	\$200,000
P-5	11/14/2023	<p>One-Year Purchase Order Contract for Temporary Flow Monitoring and Data Collection State Contract ITS75</p> <p>One-year purchase order contract for temporary flow monitoring and data collection to the lowest responsive bidder under Bid WRA-5367, EST Associates, Inc., Since MWRA began installing wastewater flow meters in 1988, an integral component of its Quality Assurance and Quality Control efforts has been the utilization of a separate monitoring and data collection contract to run comparative tests at key meter locations using temporary wastewater flow meters. Included in the scope of services for this contract is the collection of short-term flow measurements and instantaneous, one-time flow measurements at up to 40 key locations over the period of the contract. Staff will interpret and analyze all data generated by the temporary flow meters.</p>	EST Associates, Inc.	\$181,075
P-6	11/14/2023	<p>One-Year Purchase Order Contract for Maximo Software Maintenance and Support State Contract ITS75</p> <p>One-year purchase order contract for Maximo software maintenance and support to the lowest responsive bidder under Bid WRA-5374Q. Maximo is MWRA's Computerized Maintenance Management System and Enterprise Asset Management System used for managing asset life cycles and maintenance activities, materials management, work orders, overall costs, and prioritization of work schedules. The current maintenance renewal includes Maximo's Control Desk, Asset Management, Scheduler, Calibration, Spatial and Transportation modules. The modules are used to calibrate tools and equipment, view complex GIS information, view work orders and preventive maintenance schedules graphically on Gantt charts, locate and track field resources on a map, and manage emergency work.</p>	Insight Public Sector, Inc.	\$445,969.17

No.	Date of Award	Title and Explanation	Company	Value
P-7	11/16/2023	<p>Purchase Order for One Submersible Motor</p> <p>That the Director of Procurement, on behalf of the Authority, approve the award of a purchase order for one submersible motor. The Intermediate Pump Station receives wastewater from Braintree, Holbrook, Randolph, Quincy, and Weymouth and provides screenings and grit removal before pumping into a 42-inch force main that is then conveyed in the Braintree-Weymouth Tunnel and Inter-Island Tunnel to the Deer Island Treatment Plant. Screenings at the facility are removed by three parallel climber screens that are driven by a five horsepower submersible electric brake motor. This purchase will provide a spare motor to be stored in the Chelsea Warehouse in the event there is a motor failure.</p>	Bearing Distributors, Inc.	\$31,258.85
P-8	11/16/23	<p>Purchase Order for Six Months of Maintenance and Support for Ivanti Enterprise Management Suite Licenses</p> <p>State Contract ITS75</p> <p>Approve the award six-month purchase order contract for maintenance and support for Ivanti Enterprise Management Suite licenses to the lowest responsive bidder. MWRA has been utilizing the Ivanti Management Suite to manage all MIS deployed IT assets running the Windows operating system such as PCs, laptops and Surface tablets for several years. PC software inventory, remote control, software distribution and security patches deployment are leveraged through this application suite. MIS is in the process of replacing Ivanti with the new Vmware solution procured. The intention was to implement Vmware Workspace ONE for Windows devices before the current Ivanti support agreement expired on May 19, 2023. Unfortunately, implementation has encountered delays and was not be done by the expiration date. Therefore, on May 30, 2023, staff issued a six-month support extension to allow staff to continue to use Ivanti for managing and maintaining MWRA's environment, particularly security updates. Due to additional delays, another six-month extension is required at this time.</p>	Insight Public Sector, Inc.	\$37,766.82
P-9	11/16/23	<p>Sole Source Purchase for One Flowserve Waste Sludge Pump Rotating Assembly for the Deer Island Treatment Plant</p> <p>Sole source purchase order for one Flowserve waste sludge pump rotating assembly for the Deer Island Treatment Plant to Aqua Solutions, Inc. Deer Island's Maintenance staff perform scheduled preventative maintenance tasks on the WSL pumps that include inspecting and lubricating the rotating assembly and pump components. The WSL pumps were installed under the Boston Harbor Project and have been in service for over 20 years. It has been determined that due to normal wear over its operating life; the rotating assembly is at the end of its useful life and requires replacement.</p>	Aqua Solutions, Inc.	\$49,235.00

No.	Date of Award	Title and Explanation	Company	Value
P-10	11/20/23	Sole Source Purchase Order One Muffin Monster Grinder for the Alewife Pump Station Muffin Monster grinder for the Alewife Pump Station and to execute said purchase order for \$36,484. The Alewife Pump Station, which was rehabilitated in 2019, uses these “Muffin Monster” sewage grinders to protect the pumps at the station. The solids are captured at the two bar screens at the pump station and then passed through the grinders and returned to the flow stream to prevent damage to the pumps. This purchase will provide a spare.	JWC Environmental, LLC	\$36,484.00

Position Control Register (PCR) Location Changes November 2023

<u>DATE OF CHANGE</u>	<u>POSITION TITLE</u>	<u>CURRENT PCR#</u>	<u>CURRENT COST CENTER</u>	<u>NEW PCR #</u>	<u>NEW COST CENTER</u>	<u>REASON FOR CHANGE</u>
11/4/2023	Workforce Recruitment Coordinator	8410005	Affirmative Action	8410005	Affirmative Action	To meet department staffing needs.
11/4/2023	Tunnel Program Coordinator (Document Management)	3640008	Tunnel Redundancy	3640008	Tunnel Redundancy	To meet department staffing needs.

STAFF SUMMARY



TO: Board of Directors
FROM: Frederick A. Laskey, Executive Director
DATE: December 13, 2023
SUBJECT: FY21-FY25 Strategic Business Plan: Annual Update for FY23

COMMITTEE: Administration, Finance and Audit

INFORMATION
 VOTE

Rebecca Weidman, Deputy Chief Operating Officer
Denise Breiteneicher, Program Manager, Energy and
Environmental Management
Preparer/Title



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

MWRA's five-year Business Plan, covering FY21 through FY25, was presented to the Board in December 2020. The plan described MWRA's mission, identified values, and outlined six key strategic priorities and 20 goals, as well as specific initiatives associated with these goals, which provide a framework for MWRA's business initiatives over the five-year period. This staff summary presents a review of the third year of the current five-year business plan, including accomplishments and progress made on initiatives.

RECOMMENDATION:

For information only.

DISCUSSION:

The fiscal year FY21 through FY25 MWRA Business Plan is a strategic blueprint that articulates the mission statement, values, and goals of the agency, as well as specific initiatives associated with these goals to be achieved or evaluated over the five-year period. The document was developed as a tool to guide staff in prioritizing projects and programs within the broader framework of MWRA goals and mandates, and to evaluate system-wide performance.

Six strategic themes integral to MWRA's mission form the basis of the Plan:

- I. Drinking Water Quality and System Performance
- II. Wastewater Management and System Performance
- III. Infrastructure Management and Resilience
- IV. Finance and Management
- V. Diversity, Equity, Inclusion, and Workforce Development
- VI. Environmental Sustainability

MWRA identified a series of goals to help it achieve its stated priorities, as well as core and special initiatives that describe the specific projects and direction MWRA plans to undertake over this five-year period. Core Initiatives address the activities that MWRA must do to meet its

performance goals, regulatory requirements and financial commitments. Special Initiatives address activities, projects and emerging issues that staff will be assessing or undertaking in order to improve MWRA's performance of its core responsibilities. Existing reporting mechanisms, such as the Orange and Yellow Notebooks, continue to be used to track monthly and quarterly performance.

The annual update allows MWRA staff to assess progress toward achievement of its goals as well as to assess progress made on individual projects within Core Initiatives and on Special Initiatives. It also provides an opportunity for managers to review projects at a high level and decide whether the priority status of the project has changed since the development of the current Business Plan, and whether the level of resources devoted to the project should remain the same or be increased or reduced.

The attached document presents all the goals by priority areas with the associated initiatives. Symbols included show progress made in FY23, and an associated list of highlights for each initiative. Completed items are identified. Arrows identify many initiatives related to ongoing requirements.

Some of the highlights for FY23 listed by strategic theme are:

Drinking Water Quality and System Performance

- Recognized by the Massachusetts Department of Environmental Protection in May 2023, with a large public water system award for continued outstanding performance delivered during 2022.
- Continue to assist member communities to improve local water distribution systems including:
 - completed 248 lead and copper tests from 66 schools and childcare facilities in 31 communities;
 - performed follow-up sampling at 18 locations in which a residence was over the Action Level within three days as required by the new Lead and Copper Rule; and
 - provided technical and sampling assistance for 16 water quality sampling events, six water quality complaints, 11 drinking water sampler training events, and 39 additional community requests.
- Completed the Annual Water Quality Report in June with additional focus for FY23 on MWRA's inclusive approach to water quality for all customers.

Wastewater Management and System Performance

- Received the Platinum award for Deer Island Treatment Plant from the National Association of Clean Water Agencies for 16 consecutive years without a NPDES permit violation.
- Issued a Notice to Proceed for the Braintree-Weymouth Pump Station Improvements construction contract, #7366, in September 2022.



- Initiated extensive coordination with metropolitan Boston CSO communities and regional Boards of Health, posting signs at public access areas affected by CSOs as required by the new Sewage Notification Law.

Infrastructure Management, Resilience, and Redundancy

- Incorporated components of Crime Prevention Through Environmental Design into the MWRA’s Physical Security Policy in an effort to enhance MWRA’s physical security. MWRA is also working with its telecommunications provider to upgrade traditional telephone lines to fiber optic cables capable of transmitting alarm and CCTV camera images at faster speeds with better reliability and resolution.
- Submitted the Environmental Impact Report (EIR) for the Metropolitan Water Tunnel Program in October 2022 and received a certificate from the Secretary of Energy and Environmental Affairs on the draft EIR (DEIR). The certificate required the submittal of a Supplemental EIR (SDEIR), and staff began work on the SDEIR in FY23.
- Staff provided training on reservoirs flood control to a large number of Western and Metro Operations staff for succession planning.

Financial and Management

- Assessments for the Water and Sewer utilities continue to be “smoothed” reducing the volatility of year-to-year assessment changes thereby improving the sustainability and predictability for member communities.
- Staff sold \$234.3 million of bonds comprised of \$100.3 million in refunding bonds and \$134.0 million in tax-exempt new money bonds. The refunding resulted in \$12.9 million in present value debt service savings applied between FY2023 and FY2037.
- The move to Deer Island and Chelsea for staff from the Charlestown Navy Yard was successfully completed by the end of FY23.

Diversity, Equity, Inclusion and Workforce Development

- Partnered with Core Consulting to design, implement and manage a mentoring program for MWRA staff in FY23.
- Continued to engage with Vocational Technical Schools, expanding efforts to promote co-operative education opportunities and careers at the MWRA through partnerships with Quincy High School and the Boston Green Academy.
- Subcommittees have been created to advance several initiatives and enhance employee engagement. Efforts include Heritage Month Celebrations and a Lunchtime Speakers Series.
- MWRA expanded the use of the Safety Reports application to include safety observations and job safety analysis, allowing more efficient tracking of potential hazards and making it easier to create reports of findings and provide them to stakeholders to continue to ensure a safe working environment for all staff.
- Finalized MWRA’s Environmental Justice Strategy and submitted it to the Executive Office of Energy and Environmental Affairs.

Environmental Sustainability

- Staff continued to incorporate decarbonization elements into major facility rehabilitations. Currently, Hayes Pump Station and Braintree-Weymouth Pump Station are undergoing rehab and include such energy efficiency elements as HVAC and pump upgrades, the installation of heat pumps to reduce oil use at the facility, ventilation setbacks, LED lighting, and the installation of a jockey pump at Braintree-Weymouth Pump Station to increase pumping efficiency.
- MWRA was awarded a grant for \$96,053 from MassDEP to assist with the installation of heat pumps at a water and a wastewater pump station to replace oil fired boilers.
- Received approval from Eversource to participate in its Make Ready Program that provides the majority of the funding for electric vehicle charging infrastructure installation. An additional 30 spaces have been approved under this program for Chelsea. Deer Island and Southborough have also been approved to participate in the program.

BUDGET/FISCAL IMPACT:

Any budgetary impacts of the initiatives in the Business Plan are accounted for in the CEB and CIP.

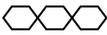
ATTACHMENTS:

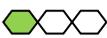
Attachment 1: MWRA Five Year Strategic Business Plan, FY21-FY25 (link below)

<https://www.mwra.com/publications/businessplan/2021-2025finalmwrabp.pdf>

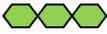
Attachment 2: Review of MWRA Five Year Strategic Business Plan, FY21-FY25, with FY23 updates

KEY:

Not started 

Initiated 

In progress 

Achieved 

On-going Core Activities 

I. Drinking Water Quality and System Performance

Goal #1: Maintain drinking water quality to protect public health, and continue to ensure that MWRA water meets all applicable regulations.		
Objective	FY2023	Highlights/ Progress Updates
A. Optimize operation of water treatment facilities to produce high quality, safe drinking water while maximizing water aesthetics (e.g., taste, clarity, and odor).		<ul style="list-style-type: none"> • MWRA met all regulatory requirements for safe drinking water. • In May 2023, the Massachusetts Department of Environmental Protection (MassDEP) recognized MWRA with a large public water system award for continued outstanding performance during 2022. • Along with MassDEP and Chicopee Valley Aqueduct (CVA) contiguous community representatives, MWRA ran a desktop drill associated with a loss of disinfection at Brutsch Water Treatment Facility (BWTF) in October 2022.
B. Monitor drinking water quality in collaboration with member communities and the Massachusetts Department of Conservation and Recreation (DCR) in order to verify high quality water and provide guidance for operating decisions.		<ul style="list-style-type: none"> • MWRA continues to coordinate monitoring efforts with DCR for both routine algae and algal toxin monitoring as well as reservoir emergency response planning. • MWRA continued weekly inspections to monitor for cyanobacteria blooms in standby and active reservoirs during May-September using a GIS Environmental Systems Research Institute application. • MWRA continued to coordinate field and laboratory resources to aid local water departments and in-house staff in the

	<p>resolution of water quality complaints, low chlorine residuals or coliform detections, and water storage tank cleaning projects or activations. In FY23, staff assisted communities with sampling on 16 occasions and with water quality complaint sampling on six occasions. and with offline pipeline or tank clearance sampling on 39 occasions.</p> <ul style="list-style-type: none">• Data regarding key water quality parameters and reservoir conditions (during summer months) were distributed electronically every morning to key decision makers at MWRA. A monthly reports is submitted to each community with their water systems performance compared to historical data. Annually, a total of 528 reports are sent.• Continued MWRA research projects with UMass Amherst under new Interdepartmental Service Agreement to investigate strategies to minimize contaminants of concern such as disinfection by-products, algae and algal toxins in MWRA’s finished water.• Continue to assist communities with sampling plan updates, level assessments, water quality complaint reporting, MWRA’s Emergency Response Plan (ERP) training sessions, and data requests.• Performed training in various capacities including 11 training sessions for drinking water sampling.• Updated the source reservoir spill contamination response Standard Operating Procedure (SOP).• As part of the new Lead and Copper Rule, any residence that is over the Action Level needs a follow-up sample at a nearby total coliform site within three days. MWRA’s Environmental Quality Department (ENQUAL) performed this task in 2023 at 18
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		locations, all within the required MassDEP timeline.
C. Ensure reliability of data presented in required regulatory compliance reports.	→	<ul style="list-style-type: none"> • Increased the number of processes that are currently automated, replacing some older applications and making others more robust. Overall, there have 16 processes have been automated and six more are underway. • First draft of the Consumer Confidence Report (CCR) automation script/business rules was completed for calendar year 2022. However, this process is ongoing as new requirements are incorporated.
D. Work cooperatively with DCR on various water quality initiatives including chloride, nutrients, algae and disinfection byproduct precursor monitoring programs. Jointly develop operational response plans for nuisance and harmful algal blooms, algal toxin detections, and taste and odor events.	→	<ul style="list-style-type: none"> • Staff reviewed and commented on the update of the Quabbin, Ware, and Wachusett Watersheds Protection Plans. • Staff met with DCR and UMass Amherst to review seasonal increases in total coliform counts in the Quabbin Reservoir. Investigative research studies to determine cause of seasonal coliform bloom were initiated under DCR's existing Interdepartmental Service Agreement with UMass Amherst. • Staff participated in an MWRA/DCR work group to help both agencies work together on monitoring programs. MWRA staff also met with an algal treatment vendor to assess copper-based treatment efficacy on <i>Chryso-sphaerella</i> algae for use at Quabbin.
E. Continue to encourage DCR to meet its obligations under its Watershed Protection Plan overseen by the Water Supply Protection Trust, and monitor progress toward achieving those obligations.	→	<ul style="list-style-type: none"> • Conducted regular senior manager coordination, reservoir operations, and water quality monitoring/laboratory meetings. • Reviewed and commented on DCR Land Management Plans and updates to Public Access Plans. • Facilitated annual DEP inspection visits at Quabbin/Ware watersheds and Wachusett watershed under the filtration avoidance determination.

		<ul style="list-style-type: none"> • Continued active involvement on DCR Land Acquisition Panel, and presented proposed land acquisitions to MWRA's Board of Directors. From MWRA's creation in 1985 through 2023, a total of 27,454 acres have been protected at a total cost of \$143.7 million. This amount includes MWRA's commitment of \$29.0 million to date for watershed land acquisitions, of which \$27.4 million has been spent through September 2022. Furthermore, MWRA has proposed another \$5 million (or \$1 million per year) in the next 5-year Capital Improvement Plan (CIP).
<p>F. Operate the reservoir system to optimize both quality and quantity of water available for water supply purposes and to meet statutory and regulatory requirements for downstream releases.</p>		<ul style="list-style-type: none"> • Met all statutory requirements for downstream releases. • MWRA manages the timing and amount of water transferred from Quabbin to Wachusett Reservoir to maximize raw water quality while minimizing potential downstream flood impacts and safeguarding supply reliability, using data from multiple water quality monitoring stations and reservoir management models. • MWRA completed annual standby reservoir monitoring during annual water quality sonde profiling and grab sample analysis. • Installed Nitrate sensor (Buoy #2) and fluorescent dissolved organic matter (FDOM) sensor (Buoy #4) to monitor tributary loadings of nitrogen and organic components into Wachusett Reservoir. • Installed secondary batteries on all four profiling buoys for increased electrical storage to avoid missing profiles during low sunlight periods. • Sudbury Reservoir, Foss Reservoir, Chestnut Hill Reservoir, Fells Reservoir, and Spot Pond are all kept within their normal operating ranges. Level control has been maintained through the removal of excess water when

		<p>the elevation has been above the normal operating range.</p> <ul style="list-style-type: none"> • Continue to deploy annual monitoring and control efforts for aquatic invasive species (AIS) at source and emergency reservoirs.
<p>G. Implement database management systems for handling data, and incorporating web-based technologies for reporting near real time water quality metrics and provide easy access to data to the MWRA community.</p>		<ul style="list-style-type: none"> • In fiscal year (FY) 2023, staff continued to develop automated applications accessible on the Data Management Group’s internal web site. Staff continue web page development with links to reports, applications, SOPs, regulations and administrative content. • Working with MIS and a contract vendor, staff facilitated the upgrade of Aquarius 3.10 to Aquarius NG for regulatory disinfection compliance reporting. Aquarius NG is now in use.
<p>H. Enhance the safety and security of the water supply and watershed system against accidental or intentional threats and hazards.</p>		<ul style="list-style-type: none"> • Continued implementation of consequence management practices to guide alarm response at contaminant monitoring locations. In FY23, 15 actionable alarm events were responded to across MWRA contaminant monitoring system locations. • Successfully installed new generation of online contaminant monitoring systems at Carroll Water Treatment Plant. • Continued seasonal deployment of water quality profiling buoys and sondes for monitoring source water quality and collecting profiling data in Wachusett and Quabbin Reservoirs. Three buoys were deployed in Wachusett Reservoir at Basin South, Basin North and the intake locations and one buoy was deployed in Quabbin Reservoir near the intake. Data is processed in real-time, and can be viewed through the Buoy App found on the Data Management Group Homepage as well as from the daily emails. • Continue to provide professional training to MWRA and DCR watershed operations staff on spill response in the watersheds and

		reservoirs. Continue to maintain prepositioned spill response trailers and equipment in the watersheds.
I. Maintain water quality sampling from treatment to throughout the distribution system, including monitoring for emerging contaminants.	→	<ul style="list-style-type: none"> • Purchased instrumentation to add the capability to monitor per- and polyfluoroalkyl substances (PFAS) in-house in FY21 and were certified by MassDEP to do drinking water testing in FY22; we are expect to start performing wastewater testing for PFAS in FY24. • Commenced sampling for Unregulated Contaminant Monitoring Rule (UCMR) 5 in 12 consecutive communities on a quarterly basis.
J. Identify and evaluate the impact of different treatment strategies and scenarios on the mitigation of transportation related contaminants into the source water. COMPLETED		<ul style="list-style-type: none"> • Completed UMass Amherst research project to evaluate strategies for minimizing impacts of an oil spill and cyanotoxins in Wachusett Reservoir using treatment scenarios at the Carroll Water Treatment Plant in December 2020. Findings from the final report were presented to MWRA and DCR staff at the Reservoir Operations meeting.
K. Evaluate new water quality monitoring equipment and testing techniques to monitor and maintain high quality water all the way to the ends of the community systems.		<ul style="list-style-type: none"> • In FY21 and FY22, staff developed a draft report for multi-year review of water quality data for all standby reservoirs. That draft report was finalized in FY23 and will be disseminated by the end of CY23. • Nine communities borrowed field water quality monitoring equipment in FY23 to help monitor low chlorine residuals and other trouble spots in their distribution systems.
L. Participate with other water utilities nationwide in Water Research Foundation studies, specifically researching opportunities pertaining to algae monitoring and mitigation strategies in source water.		<ul style="list-style-type: none"> • In FY23, participated in Water Research Foundation studies on energy efficiency, PFAS, Lead Pipe Rig design, and other distribution system water quality issues. • Continued collaboration with New York City on watershed programs, following publication of the National Academy of Sciences (NAS) review.
M. Collaborate with CVA communities to modify chlorine dosing strategy to minimize the		<ul style="list-style-type: none"> • New chlorine dosing strategy and residual targets continues to be implemented in BWTF-CVA system in collaboration with CVA

formation of disinfection byproducts. COMPLETED		community Superintendents to minimize disinfection by-products.
N. Evaluate data from UCMR4 2018-2020 monitoring and compare against nationwide occurrence data. COMPLETED		<ul style="list-style-type: none"> Completed UCMR4 monitoring on behalf of the communities and posted all data on MWRA's website, responded to public questions on the data, and used the data to demonstrate MWRA's excellent source water quality.
O. Advocate for responsible and reasonable new and revised state and federal drinking water regulations, and provide training and technical support to communities for new regulations.		<ul style="list-style-type: none"> MWRA staff continue to be active in state and federal review of the Lead and Copper Rule, and microbial and disinfection byproducts rules, as well as other proposed rule and guidance changes. Continued to participate in MassDEP/ U.S. Environmental Protection Agency (EPA) work group on lead public notice and public education templates, and MassDEP/Massachusetts Department of Public Health (DPH) work group on Disinfection Byproducts public notice template. MWRA staff are closely tracking EPA's efforts to regulate PFAS. In June 2022, EPA issued new Health Advisories (HAs) for four PFAS compounds, including new HAs for PFOS (perfluorooctanesulfonic acid) and (perfluorooctanoic acid) PFOA. EPA proposed drinking water limits for six PFAS compounds in March 2023; MWRA provided comments to EPA in April. Final PFAS rules will likely be issued in late 2023 or early 2024. EPA proposed revisions to the Consumer Confidence Rule (CCR) in April 2023, including a requirement for twice annual reports. MWRA provided comments in May. MassDEP issued changes to the state Water Management Act that added conditions to registration renewals. MWRA provided comments. Staff are working on required changes to MWRA's drought management plan.

		<ul style="list-style-type: none"> • Conducted training session on Lead and Copper Rule revisions for all MWRA communities.
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Goal #2: Continue to effectively report and communicate water quality information to our customers and public officials.		
Objective	FY2023	Highlights/ Progress Updates
A. Distribute the federally required annual water quality report, the Consumer Confidence Report (CCR), to all households.	→	<ul style="list-style-type: none"> • Completed Annual Water Quality report in June and distributed to homes, as well as posted on MWRA website. Additional focus in FY23 was on MWRA's inclusive approach to water quality for all customers as well as lead-related issues.
B. Maintain and improve water quality and public health information on MWRA's web page, www.MWRA.com , and through widely distributed weekly and monthly reports.	→	<ul style="list-style-type: none"> • During FY23, MWRA continued to update and add water quality information to its website. • In FY23, the Annual Water Quality Report was prominently featured at the top of the home page and was publicized through Twitter and other news outlets. The monthly water quality reports were posted regularly and sent directly to subscribers through the Everbridge application. • MWRA again participated in the Association of Metropolitan Water Agency's (AMWA) "Imagine A Day Without Water" in October 2022 and American Water Works Association's (AWWA's) "Drinking Water Week" in May 2023 with relevant postings on MWRA.com and Twitter.
C. Regularly communicate routine Total Coliform Rule (TCR) monitoring data to Water Departments and assist with water quality sampling or training, as needed	→	<ul style="list-style-type: none"> • Developed and distributed monthly reports to member communities with data from their TCR sampling events. • Continue to install, develop, and upload monitoring data in Excel and Microsoft Access databases. The automation of CCR and Weekly report has been completed. • In coordination with MIS, developed a community-Operations Management Monitoring System (OMMS) web-portal to enable community access to latest water quality data.

<p>D. Continue to strengthen planning and emergency response documents for Boil Water Order (BWO) events. Create, disseminate, and train staff on materials that can be used during a BWO event or at a public information call center.</p>		<ul style="list-style-type: none"> • A SOP and training materials have been developed for use in training volunteers staffing a public information call center. Staff included examples during community ERP trainings.
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Goal #3: Assist member communities to improve local water distribution systems through ongoing financial, technical and operational support programs to maximize long-term water quality benefits.

Objective	FY2023	Highlights/ Progress Updates
<p>A. Provide technical and operational support through training, on-call contracts, and targeted assistance, as needed.</p>		<ul style="list-style-type: none"> • During FY23, MWRA’s lab completed 248 lead and copper tests from 66 schools and childcare facilities in 31 communities. Since 2016, MWRA’s Laboratory has conducted over 40,000 tests from 560 schools and daycares in 44 communities. We have also completed 864 home lead tests under the DPH sampling program since 2017. Overall, MWRA’s lab has completed 2,629 drinking water lead and copper tests in FY23. • Provided technical and sampling assistance to communities for the following initiatives: <ul style="list-style-type: none"> ○ Sixteen water quality sampling events; ○ Six water quality complaint assistance events; ○ Thirty-nine offline pipeline or tank clearance sampling events; and ○ Eleven drinking water sampler training events. • Provided assistance to 9 communities for leak detection and 9 communities for valve operations. • Conducted virtual MWRA community ERP training sessions and discussed various water quality subjects including coliform, E.coli and potential boil water orders, PFAS, pandemic response, cyber security, and changes to the lead rules.

<p>B. Promote and manage MWRA's Local Water System Assistance Program to help facilitate improvements in local community infrastructure.</p>		<ul style="list-style-type: none"> • In FY23, \$29 million in MWRA interest-free loans were distributed to member water communities. In total, more than \$527 million in loans have been distributed to fund 519 local projects, with 43 of the 45 eligible water communities participating. Since 1998, 603 miles of local water main have been replaced or cleaned & lined (about 8 percent of the regional system) via projects funded by MWRA financial assistance. • In FY17, the \$100 million lead service line replacement loan program began. In FY23, \$4 million was distributed to member water communities through this Program. In total, \$36 million in loans, targeting full removal of lead water services, have been distributed. • Conducted significant outreach associated with the Lead Service Line Replacement program, as well as additional outreach on other local lead issues.
<p>C. Enhance outreach and technical assistance within the existing Lead Service Line Replacement program to support communities as they respond to EPA's revisions to the Lead and Copper Rule.</p>		<ul style="list-style-type: none"> • Coordination with the Advisory Board on development of Phase 3 Local Water System Assistance Program was completed in FY17. Beginning with the Final FY18 CIP, a new \$293 million Phase 3 of the community water loan program was approved by the Board of Directors and has been made available to member communities. As of FY23, some communities have little or no funds available. Staff and the Advisory Board will evaluate the timing and scale of funding in the coming year for the next phase. • Continued to conduct outreach and training on lead service line replacement and the requirements of the Revised Lead and Copper Rule, including segments in community ERP training in the fall and spring of FY23. Assisted communities in preparation for EPA audits of community lead programs.
<p>D. Develop the capability to evaluate potential changes to corrosion control treatment</p>		<ul style="list-style-type: none"> • Continued to work with a stakeholder panel of national lead corrosion experts, community and regulatory staff to provide

<p>using a pipe loop system constructed using “harvested” lead service lines.</p>		<p>guidance on the set up and operation of a lead pipe rig to evaluate corrosion control options.</p> <ul style="list-style-type: none">• Continuing in FY23, staff conducted biweekly sampling from a lead pipe rig system at CWTP as the system continued to acclimate. This project involves multiple departments across the Authority.• Procured a consultant to assist in designing and analyzing the corrosion control evaluation. Completed the acclimation phase, and received expert panel advice on beginning the experiments.
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II. Wastewater Quality and System Performance

Goal #4: Meet or surpass environmental compliance standards at both MWRA treatment facilities and throughout the wastewater collection system.		
Objective	FY2023	Highlights/ Progress Updates
A. Continue to carry out the Pretreatment Program to protect receiving water quality, maximize the beneficial reuse of wastewater residuals, and protect workers, MWRA's wastewater treatment plants, and receiving waters.	→	<ul style="list-style-type: none"> • Conducted a total of 1,158 industrial waste inspections (Significant Industrial Users (SIUs) and non-SIUs), 1,046 gas/oil separator inspections, and 121 septage and septage hauler inspections. • Responded to all discharge violations for both SIUs and Non-SIUs by taking the appropriate action in accordance with its EPA approved Enforcement Response Plan (ERP) and federal regulations. TRAC issued a total of 201 Notices of Violations and 70 higher-level enforcement actions (66 Notices of Noncompliance, two Administrative Orders and two Penalty Assessment Notice) to industrial and commercial facilities. Link to the Pretreatment Program's annual report: https://www.mwra.com/annual/tracindustrialwastereport/iwr-2023.pdf • Conducted a total of 2,415 sampling events for the following activities: <ul style="list-style-type: none"> ○ 1,262 industrial; ○ 166 National Pollutant Discharge Elimination System (NPDES) permit related; ○ 15 for emergency response; ○ 248 for local limits; and ○ 724 for special projects. • Sampled 160 permitted SIUs with a discharge at least once in FY23. • Issued or renewed 514 permits.
B. Continue to monitor Deer Island Treatment Plant (DITP) processes to ensure high quality treated effluent optimizing plant performance to ensure all applicable NPDES permit limits continue to be attained.	→	<ul style="list-style-type: none"> • Deer Island was awarded a Platinum award from the National Association of Clean Water Agencies (NACWA) for 16 consecutive years without a NPDES permit violation.
C. Operate the enhanced phosphorus control system at the Clinton Wastewater Treatment Plant to ensure	→	<ul style="list-style-type: none"> • The seasonal effluent phosphorus limit of 150 micrograms per liter (ug/L) and 3.8 pounds per day loading limit became effective starting April 1, 2019. The effluent through the end of the fiscal year has met these limits.

compliance with its NPDES permit.		
Goal #5: Continue to initiate plans and studies to prepare for regulatory changes; identify opportunities to refine monitoring requirements; and improve effluent quality.		
Objective	FY2023	Highlights/ Progress Updates
A. Prepare updated Local Limits Studies for Clinton and Deer Island in accordance with EPA guidelines to confirm appropriate discharge limits from industries.		<ul style="list-style-type: none"> • Awaiting EPA’s issuance of new NPDES permit for DITP. A draft permit was issued on May 31, 2023. • MWRA received a final NPDES permit for the Clinton Plant from EPA that went into effect on April 1, 2023. EPA also issued a new General Permit for all Medium Wastewater Treatment Facilities in September 2022 that became effective on November 1, 2022.
B. Continue to review all Ambient Monitoring Plan questions and conduct evaluations to ensure they address MWRA needs and public concerns.		<ul style="list-style-type: none"> • MWRA continued to update the Outfall Monitoring Science Advisory Panel and the public on MWRA’s monitoring program, including Contingency Plan exceedances of <i>Alexandrium</i> and dissolved oxygen.
C. Continue to closely follow developing permit issues such as the impact of changes in bacterial and nutrient water quality standards, effluent loading limits, emerging contaminants and PFAS regulations, stormwater permitting, endangered species designations, co-permittees, and phosphorus and PFAS in biosolids.		<ul style="list-style-type: none"> • Key issues in FY23 were emerging contaminants including PFAS compounds and pharmaceuticals, rapid notification of combined sewer overflow (CSO) discharges, industrial stormwater permitting, microplastics, and nitrogen limits. In FY23, MWRA provided comments on draft NPDES permits in the region including: Holyoke, Montague, Amherst and Billerica, particularly on a “major storm plan” requirement that was later included in the draft DITP permit. • A draft permit for DITP/metro Boston was issued on May 31, 2023. Like all recent permits including that for Clinton, the new DITP permit will require sampling of PFAS in influent, effluent, biosolids, and industrial wastewater. • A new Approval of Suitability (AOS) permit for the beneficial use of the biosolids pellets for the Biosolids Processing Facility went into effect November 2020. This AOS requires the pellets to be tested on a quarterly basis for 16 perfluorinated compounds.

<p>D. Develop a plan to address emerging contaminants (e.g., PFAS and microplastics) as they are identified and frame an approach to respond to the public’s concerns about these constituents.</p>		<ul style="list-style-type: none"> • In FY23, MWRA continued to provide support to a Water Research Foundation project to study PFAS compounds in wastewater. • MWRA has provided effluent samples for a study with the University of Rhode Island, the Woods Hole Oceanographic Institution (WHOI), and the National Oceanic and Atmospheric Administration to measure the presence of PFAS and other contaminants of emerging concern, in wastewater and the ambient Massachusetts Bay receiving waters. The report has been drafted but not released. • MWRA is supporting academic researchers from WHOI on a research project investigating microplastics in wastewater influent, effluent, and Massachusetts Bay receiving waters. Sampling continued in early FY23 with the researchers hosted on a routine MWRA oceanographic survey of the bay. A final report on findings has not been issued. • Conducted a total of 28 sampling events at industrial users; 75 sampling events for Local Limits and two sampling events for NPDES permit compliance to better understand where PFAS could be entering the sewer system.
<p>E. Assess thresholds for annual nitrogen loading, including evaluating the existing thresholds and the environmental impact of nitrogen, as well as, whether these thresholds developed over 20 years ago are valid or should be modified.</p>		<ul style="list-style-type: none"> • In FY23, runs of the Bay Eutrophication Model continued to show minimal impacts of effluent nitrogen on Massachusetts Bay. DITP met the total nitrogen Contingency Plan threshold in 2022.
<p>F. Review new waste treatment technologies, as they arise, to continuously improve treatment performance and efficiency.</p>		<ul style="list-style-type: none"> • In FY23 ENQUAL and DITP Process Control collaborated to update evaluations of an expanded list of technologies for nitrogen removal and the design criteria used for evaluating nitrogen removal technologies at Deer Island, should it be required.
<p>G. Continue to work with researchers investigating the use of wastewater as an indicator of the presence of the COVID-19-19 virus.</p>		<p>MWRA continues to support wastewater based epidemiology (WBE) research for tracking the spread of COVID-19. MWRA has provided in-kind samples to research groups from the Massachusetts Institute of Technology, Northeastern, Tufts and UMass Amherst as well as the national program run by the Massachusetts Department of Health and Human Services (HHS). MWRA continued the wastewater monitoring</p>

		<p>throughout FY23 by submitting samples from DITP to Biobot Analytics, Inc. for the analysis of the genetic signal for the SARS-CoV-2 virus that causes COVID-19. The results of these analyses are shared with the state COVID-19 Command Center as they are received and shared with the public on MWRA.com. At DPH's request we also submitted samples to the WastewaterSCAN project from December 2022 onwards. These samples are tested for SARS-CoV-2 virus ribonucleic acid (RNA) and 10 other pathogens. Results are reported publicly on the WastewaterSCAN Dashboard, https://data.wastewaterscan.org.</p>
<p>Goal #6: Move forward with design and construction of major wastewater infrastructure rehabilitation and renewal projects.</p>		
<p>Objective</p>	<p>FY2023</p>	<p>Highlights/Progress Updates</p>
<p>A. Continue to design and implement facility rehabilitation projects for various pump stations, headworks, CSO facilities and the Deer Island Treatment Plant.</p>	<p style="text-align: center;">→</p>	<ul style="list-style-type: none"> • Specific rehabilitation projects include: <ul style="list-style-type: none"> ○ Design of Prison Point CSO Facility Improvements, Contract 7462 to upgrade, replace and add major facility components (gates, screens, conveyors, pump engines, mixers, etc.) was completed, competitively bid and awarded. However, construction was terminated shortly after starting due to contract disagreements. Staff are carving out a few project components which require more immediate attention (discharge header rehabilitation and installing a manual transfer switch) for bid and will work to advance the full facility rehabilitation in future procurements. ○ Nut Island Headworks Odor Control & HVAC Systems Improvements construction contract, #7548, is nearing completion with substantial completion expected in September 2023. ○ Braintree-Weymouth Pump Station improvements construction contract #7366 notice to proceed (NTP) was issued in September 2022 with completion anticipated in 2024. ○ Ward Street & Columbus Park Headworks Design (Design/ESDC Contract 7429) began in January 2021. Incorporating lessons learned from the Chelsea Headworks (CCHW) Construction project, the will include a new above-grade structure on both sites instead of rehabilitating the existing facility superstructures. Final design is expected to be complete in January 2024. ○ Hayes Pump Station Rehab design (7162) is nearing completion with construction (7357) expected to begin in spring 2024.

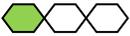
		<ul style="list-style-type: none"> ○ Prison Point Discharge Piping Rehab (8013) NTP will be in September 2023 with anticipated completion in 2024. ○ CHE008 CSO Rehab (7915) NTP was in December 2022 and substantially complete in June 2023. ○ Somerville Marginal CSO Pipe Connection design (7691) is nearing completion with an anticipated construction (7985) to begin in spring 2024. ○ Phase 1 of the Siphon Headhouse rehabilitation project is near design completion. The project will improve flood protection, site access, structural conditions, operational requirements, and odor control at 41 structures throughout the MWRA's service area. The anticipate construction NTP is expected in 2024. ○ Various wastewater facility improvements are underway through in-house and consultant Technical Assistance task order design efforts to support facility and system reliability, including but not limited to: Nut Island Fire Pump Replacement, Phase 2 & 3 Fuel Tank Replacements, Braintree-Weymouth Intermediate Pump Station Transformer Replacement, Somerville Tide Gate Replacement, CCHW Microwave Radio Link, Cottage Farm CSO Engine Silencers Replacement, Belle Isle Sandcatcher Rehab, Phase 3 Duct Cleaning. ○ Deer Island Odor Control Damper Replacement Contract 7913 was substantially complete in January 2023. ○ Deer Island Clarifier rehabilitation Phase II construction contract was issued in February 2023. Construction contract focus on tank concrete and coating systems, gate replacements and other critical work within the primary and secondary treatment sections of the DITP (construction contract 7395).
<p>B. Continue to implement an ongoing program to review, prioritize and accelerate interceptor renewal projects.</p>		<ul style="list-style-type: none"> ● Evaluated wastewater interceptors and prioritized them for rehabilitation. ● The design of Interceptor Renewal No. 7 (Malden/Melrose) sections 41/42/49/54/65), to line 26,400 linear feet of sewer was awarded in June 2020. Design was completed at the end of CY2022. ● The West Roxbury Tunnel (Sections 637 & 637A) requires an inspection to evaluate its condition and identify any repairs. Design contract (7991) is

		<p>currently preparing a contract to inspect the tunnel in 2024.</p> <ul style="list-style-type: none"> • Siphon and Junction Structure Rehab design (6224) is evaluating 40 structures in 17 communities as part of Phase 1 rehab. Construction (6225) is scheduled to begin in 2024.
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Goal #7: Complete all CSO milestones by 2024 and demonstrate that the CSO Plan meets its performance objectives.

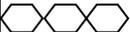
Objective	FY2023	Highlights/ Progress Updates
<p>A. Implement CSO performance assessment through ongoing contract with AECOM that will culminate in a report to MassDEP/EPA in December 2021 and a supplemental report in December 2024 verifying whether the approved long-term CSO control plan goals are attained.</p>		<ul style="list-style-type: none"> • In December 2021 MWRA submitted the Final CSO Post Construction Monitoring Program and Performance Assessment Report. MWRA has completed the last of seven semi-annual reports documenting the progress of the performance assessment. • The performance assessment results indicated that although substantial improvements were made, 16 of the 86 CSOs fell short of meeting the Long Term Control Plan (LTCP) volume and/or activation goals. The report further defined the limited impact remaining CSOs have on water quality. The MWRA and the court parties have agreed and the court has approved a 3-year extension to the court order, for MWRA to implement additional identified projects and perform additional investigations to determine what can be done to further reduce CSO at the 16 sites. A supplemental report will be submitted in December 2024, documenting final performance and conclusion for the 16 outfalls. • MWRA has advanced projects that will allow 10 outfalls to materially attain the LTCP activation and volume goals by December 2024. This includes: Sewer Separation Work in East Boston partially funded through a financial assistance agreement (FAA) with Boston Water and Sewer Commission (BWSC) Project under construction with substantial completion expected in spring 2024, this project already resulted in the closure of BOS003 and BO009. Installation of connection relief for CHE008 (Construction completed summer 2023); and installation of a new pipe connection upstream of Somerville Marginal CSO (in design with construction going to bid in January 2024 and an NTP expected March 2024).

		<ul style="list-style-type: none"> • MWRA has a Memorandum of Understanding (MOU)/FAA with BWSC to design and construct modifications to BOS017, BOS062, BOS065 and BOS070. • MWRA continues to investigate alternatives and develop costs for possible projects to address CSO compliance issues for the remaining 10 of 16 difficult sites and will document its findings and recommendation in the supplemental performance assessment report to be submitted in December 2024.
<p>B. Comply with the CSO Variances for the Alewife Brook/Upper Mystic River Basin and the Lower Charles River/Charles Basin issued to MWRA and CSO communities for the term of 9/1/19 through 8/31/24.</p>		<ul style="list-style-type: none"> • MWRA continues to use the CSO public notification system implemented in July 2020 to make required notifications to regulatory agencies, boards of health, and subscribers. (Also see Objective D below). • Staff have commenced and completed project evaluations required by the CSO variances, including completion of the CSO System Optimization for Alewife Brook and Lower Charles River Basins Project in December 2022. Further studies to minimize discharges from CSO regulators that contribute CSO to the variance waters continue. • A significant variance requirement includes the development of an Updated CSO Control Plan for MWRA’s discharges to the Variance Waters. Work towards complying with this requirement has included the development and MassDEP/EPA approval of a scope of services, work towards development of a new Typical Year, and close coordination with Cambridge and Somerville in obtaining public and watershed input, and developing a unified hydraulic model for each entity’s use in analyzing alternatives. Further efforts will include alternative development and evaluation, preparation of an affordability analysis, and development of draft and final Updated CSO Control Plans. • Due to the complexity of the coordination and public input required for the Updated CSO Control Plan, MWRA, Cambridge, and Somerville requested an extension of the Variance. MassDEP expects to hold a public hearing in the fall of 2023, and issue new Variances in approximately the winter of 2024, extending the completion timeline by 36 months. • Staff continue to comply with all other variance conditions to minimize CSO impacts.

		<ul style="list-style-type: none"> • Variance-required monitoring of receiving waters continued throughout FY23. The monitoring results were used to prepare the annual water quality report as required by the variances. The report on 2021 conditions was issued in July 2022.
<p>C. Conduct an evaluation of the CSO treatment processes to determine potential opportunities to better meet permit limits. Confirm or reassess treatment processes as part of the CSO facility rehabilitation projects.</p>		<ul style="list-style-type: none"> • As part of the scope of the CSO performance assessment noted above, staff and the consultant are investigating site-specific measures that can further reduce CSO discharges where needed to help meet the CSO LTCP. MWRA's consultant generated a technical memo for Cottage Farm CSO Treatment Facility which evaluated facility optimization and reviewed adding chemical enhanced primary treatment as a means to improve effluent water quality.
<p>D. Implement a subscriber based CSO Public Notification Program. Provide notification of a CSO overflow within four hours of the start of a discharge. COMPLETED</p>		<ul style="list-style-type: none"> • As of January 2023, notifications are being sent to over 200 external subscribers within two hours of the start of a CSO discharge, including the required notifications to regulatory agencies and boards of health. • The new Sewage Notification Law and the implementing regulation 314 CMR 16.00 required continuing improvements to the notification program during FY23. Extensive coordination efforts with metropolitan Boston CSO communities and regional Boards of Health were initiated in FY22 and continues into FY24. MWRA issued the required expanded public notifications starting in July 2022. Signs at public access areas potentially affected by CSOs were produced by MWRA and installed by MWRA and CSO communities around metropolitan Boston. The final Notification Plan was submitted on January 6, 2023 as required, with an opportunity for public comment; MassDEP requested some revisions which were completed on June 23, 2023.

III. Infrastructure Management and Resilience

Goal #9: Maintain and enhance water and wastewater system assets over the long term at the lowest possible life cycle cost and acceptable risk, consistent with customer, community, and regulatory support service levels.		
Objective	FY2023	Highlights/ Progress Updates
<p>A. Continue to ensure proper operations and maintenance of the water and wastewater systems and minimize system downtime by performing Preventative, Predictive, and Corrective maintenance on equipment and linear assets, water system leak surveys, valve inspections and exercise, and performing inspections and cleaning of wastewater pipelines, structures, water storage tanks, and inverted siphons inspections, and cleaning.</p>		<ul style="list-style-type: none"> • Replaced 15 water blow-off retrofits and two main line valves, entailing excavating and isolating the main from the valve, cutting out the old valve and installing a new one. • Inspected 166.86 miles of MWRA water mains and repaired 13 leaks. • Performed independent water meter testing to confirm the accuracy of the meters supplying the municipalities in MWRA Service Area. • Inspected 33.62 miles of MWRA wastewater interceptors and 652 sewer manholes and other sewer structures such as diversion chambers, tidegates, etc. • Cleaned approximately 37.85 miles of wastewater interceptors and 46 siphon barrels. • Replaced 38 wastewater manhole frames and covers and repaired 45 sewer manhole structures.
<p>B. Inspect, maintain, and improve the dams, dikes, and other facilities constituting the infrastructure of the reservoir system through ongoing maintenance and an adequate multi-year capital improvement program in order to ensure dams' regulatory compliance, long-term operational viability and spillway operation and maintenance to limit potential flood hazards.</p>		<ul style="list-style-type: none"> • Since 2005, over \$25 million has been invested in capital and major maintenance of source and distribution water supply dams across the system, with over \$7 million committed in current CIP projects. • Contracts underway for needed dam repairs design, bid document production and engineering services during construction (ESDC) for Sudbury Dam spillway masonry and vent repairs, Wachusett North Dike earthen berm restoration for overtopping protection, Foss Dam overtopping protection. FY23 award of most recent dam

		<p>safety inspection contract and instrumentation design underway. The calendar 2023 biennial Phase 1 Dam Safety Inspections were completed on schedule. Additional dam instrumentation design and repair efforts are underway. Chapter 30 construction on the Chestnut Hill Reservoir Dam and Weston Reservoir Dam instrumentation was completed in FY23.</p>
<p>C. Expand Condition Monitoring techniques to provide earlier indication of asset degradation. COMPLETED</p>		<ul style="list-style-type: none"> • Condition Monitoring techniques continue to be utilized in normal business practices at DITP. Deer Island is now expanding its lube oil program. Staff are able to perform basic oil testing in lieu of sending samples out. This provides immediate results about MWRA's assets and reduces downtime. • Condition Monitoring techniques continue to be utilized in normal business practices in the Field Operations Department (FOD), including all the headworks, pump stations, and CSO facilities. Actions include oil sampling to determine the remaining life expectancy of the oil, ultrasonic testing of the grit pipes in the headworks, and vibration analysis. Staff continue to implement infrared thermography and utilize laser alignment of pumps and fans. Initial staff training has been completed, and training will continue with new staff when brought on board, specifically on vibration analysis and laser alignment.
<p>D. Conduct an updated benchmarking analysis in order to identify gaps and sustain the goal of maximizing asset protection while potentially identifying new best practices in the industry.</p>		<ul style="list-style-type: none"> • No work on this initiative to date.

<p>E. Update the wastewater metering system and evaluate new technologies to ensure continued accurate flow accounting and to enhance its usefulness for operational and evaluation purposes.</p> <p>COMPLETED</p>		<ul style="list-style-type: none"> • The new wastewater meter system was installed and tested on schedule by the end of CY2021. The new meters are now being used for billing of communities as of January 2022.
<p>F. Continue to research and develop Key Performance Indicators (KPI) to compare our performance internally and against the industry.</p>		<ul style="list-style-type: none"> • The MAXIMO upgrade was completed in FY19. The updated MAXIMO continues assisting MWRA in making KPI's easy to track, display and compare with other public utilities.
<p>G. Enhance and monitor water pipeline protection to maximize pipeline lifetime.</p>		<ul style="list-style-type: none"> • In FY16, MWRA began the process of replacing old cathodic protection on MWRA water mains. In FY23, this work continued in force, with the following activities: <ul style="list-style-type: none"> ○ Capital program has added design and construction phases to replace and upgrade cathodic protection systems based upon testing results. ○ Designed 11 replacement cathodic protection systems for Section 57, an 80 year old 48-inch diameter steel water main in the northern low service area. In-house construction staff are working to replace these systems. Nine of these systems were completed in FY17-FY18, and work continues on the remaining two. ○ A scope is being developed for the Beacon Street Line Rehabilitation Project which includes the evaluation/replacement of 54 test stations in Boston and Brookline. ○ The Shafts E, L, N & W Cathodic Protection Improvements Project (Contract 6439) is currently at the 100 percent R1 design phase.

		<ul style="list-style-type: none"> ○ Testing was completed for Contract OP-393 – Cathodic Protection System Testing, which included inspection/testing of 182 existing test stations. A final report was submitted in July 2023.
<p>H. Expand integration between MWRA’s Authority-wide Enterprise Asset Management System (MAXIMO) with Lawson, Process Information (PI) and Automated Vehicle Location systems to expand the use of predicative Management tasks increasing functionality, asset tracking and improved workflow to reduce equipment and downtime ad control budget spikes. Utilize updated MAXIMO to increase opportunities for more paperless work.</p> <p>COMPLETED</p>		<ul style="list-style-type: none"> ● MAXIMO now tracks life-cycle costs for Clinton, DITP, FOD, IT and Lab assets. End of Life asset values are now captured in the Property Pass site. ● MAXIMO Spatial (GIS) interface updates the mapping features giving staff easier access to buried assets history for the Water Distribution and Wastewater Collection systems. ● MAXIMO Anywhere (mobile solution) allows staff to receive work and update work orders and asset history in the field.
<p>I. Continue to upgrade and improve upon the Supervisory Control and Data Acquisition (SCADA) hardware and software to meet the current industry standard and to address cyber security concerns.</p>		<ul style="list-style-type: none"> ● PLC upgrade was completed at Comm. Ave West Pump Station; Comm. Ave East has been upgraded under the recent redundancy project. A new PLC Panel was designed, purchased and installed at BWTF, with the system programmed in-house. A design contract for the JJCWTP SCADA Improvement was finalized in January 2019 and construction began in September 2021 with substantial completion anticipated in September 2025. PLC upgrades for BOS019 and Framingham PS are have been initiated but will be postponed until the work at JJCWTP is completed due to staffing constraints. Additional PLC replacements are being performed as part of facility rehabilitation projects (Nut Island Headworks, Wachusett Dam Lower Gate House, Braintree-Weymouth, and Water Tank Improvements, etc.), and will be developed in future PLC upgrade projects for water and wastewater facilities.

		<ul style="list-style-type: none"> • Standards templates and guidelines were developed for MWRA Human Machine Interface (HMI) Graphics. New graphics will be implemented to improve operator situational awareness through ongoing design and construction projects and MWRA staff implementation. • Continued to improve the SCADA network architecture to enhance security. • Established internal committees to review MWRA’s physical resilience, and identify deficiencies and subsequently safety systems to provide multiple levels of protection from cyber attacks on MWRA’s assets.
Goal #10: Prepare for catastrophic events that could affect the water and wastewater delivery systems.		
Objective	FY2023	Highlights/ Progress Updates
<p>A. Continue to improve and incorporate redundancy and operational flexibility within the water system to ensure uninterrupted service.</p>	<p style="text-align: center;">→</p>	<ul style="list-style-type: none"> • Northern Intermediate High, Sections 89/29 Replacement was awarded in June 2021 with an NTP issued in August 2021 and an anticipated construction completion date of August 2025. • Sections 23, 24, and 47 Rehabilitation Construction Contract 6392 NTP was issued in November 2021 with an anticipated substantial completion date in May 2024. When constructed, it will provide redundancy to Boston and Watertown. • Intermediate High Improvements Design Contract 6955 was awarded January 2019 and will, when complete (expected in CY 2026), interconnect two Intermediate High Service Areas to provide redundancy and operational flexibility in the event of pipe failures.
<p>B. Design and implement projects including those that eliminate or mitigate single points of failure within MWRA’s water transmission and distribution.</p>		<ul style="list-style-type: none"> • Design Contract 6539 for the replacement of WASM3 was awarded in 2013 and amended in 2018 for rehabilitation only. Construction contract #6544, for sections W11, W12, W16/51 in Medford, Somerville, and Arlington was approved by the Board at the September 2020 Board meeting. Work

		<p>is expected to be completed by August 2024, however, construction is currently progressing ahead of schedule.</p> <ul style="list-style-type: none"> • CP1 Construction Contract 6544 NTP was issued in October 2020 and includes rehabilitation of approximately 13,800 feet of 56-inch and 60-inch diameter water main in Arlington, Somerville and Medford. Construction achieved substantial completion in May 2023, more than one year ahead of schedule. CP2 Construction Contract 6543 is currently in design with construction scheduled to start in 2024. • Low Service Pressure Reducing Valve Improvements Construction Contract 7563 was awarded May 2021 and will provide additional operational flexibility to provide water service during emergencies. A construction NTP was issued in July 2021 with substantial completion anticipated in November 2023. • Improvements to the top of shafts are being implemented to provide strengthening of pipes directly connected to the tunnel system, waterproofing of underground vaults and replacement of nuts on valve connections. Performing interim improvements at the top of shafts consists of three Construction Packages (CP). CP1 - Top of Shafts 6, 8 and 9A (construction achieved substantial completion in April 2022); CP2 - Top of Shafts 5 (construction to begin in 2024); and CP3 - Top of Shafts 7, 7B, 7C and 7D (in design). • Waltham Water Pipeline Design, Technical Allowance Contract 7692 Task Order 3, includes a new water main extension to provide redundancy for the Lexington Street Pump Station. Construction Contract 7457 had an NTP in July 2022 with an anticipated substantial completion date in 2025.
<p>C. Continue to train staff on various potential emergency scenarios and participate in broader</p>		<ul style="list-style-type: none"> • Internal trainings and exercises included the following: site characterization, reservoir spill response, Deer Island emergency

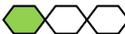
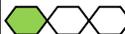
<p>training exercises including with the Massachusetts Emergency Management Agency (MEMA).</p>	<p>→</p>	<p>response team drills, boom deployment, terrestrial spills, severe weather response, mobile disinfection, communications, and MWRA has also conducted community Emergency Response Plan training and coliform sampler training to support our service communities. A number of community coordination/training sessions were held relating to work on Section 89.</p> <ul style="list-style-type: none"> • All MWRA staff continued training in cybersecurity awareness; and IT and OT staff continued training in advanced technical cyber security topics. • Western Operations staff provided training on reservoirs flood control to a large number of Western and Metro Operations staff for succession planning.
<p>D. Work with Departments throughout MWRA to continue to implement a comprehensive security and emergency preparedness program including an analysis of lessons learned (ongoing) during the COVID-19-State of Emergency.</p>	<p>→</p>	<ul style="list-style-type: none"> • Lessons learned during the COVID-19 State of Emergency was compiled into a preliminary “after-action” report on MWRA’s response and recovery efforts to COVID-19. Staff continued to work on a more comprehensive report in FY23 which will also include recommended corrective actions to address goals and areas of need. • Several facility Emergency Action Plans were updated to include implementation of flood protection measures and a comprehensive update to all plans commenced. • Dams Emergency Action Plans are reviewed and updated annually. • Staff continue to upgrade and expand the MWRA security system. Components and cameras were added and /or replaced. • The MWRA has invested in an enterprise-class Video Management System that is integrated with the access-control and intrusion detection system to drastically improve responsiveness to critical alarms in the water distribution infrastructure in both staffed and remote locations.

		<ul style="list-style-type: none"> • Our efforts to improve our technology and security program have greatly improved our relationships between Security and Emergency response agencies across the Commonwealth of Massachusetts. • Continued providing information to the state auditor’s office on MWRA’s compliance with the requirements of AWIA, particularly those related to physical security, use of treatment chemicals, and security training. • The MWRA utilizes extensive liaison contacts within the Intelligence Community, Law Enforcement Organizations and the Private Sector in an effort to identify present and future potential threats to its employees and assets.
<p>E. Develop and implement an Information Security Plan (ISP) to increase the resiliency and sustainability of the MWRA’s data security practices.</p>		<ul style="list-style-type: none"> • MWRA’s ISP includes both approved and drafted cybersecurity policies, standards, and procedures. These drafts continue to be revised to correspond with the latest version of the NIST Cyber Security Framework and to be integrated into both MWRA Information Technology (“IT” – <i>i.e.</i> MIS) and Operational Technology (“OT” -- <i>i.e.</i> SCADA, PICS, I&C, and Physical Security) areas. Approved policies are reviewed on an annual basis. • Staff continue to apply current cyber security standards, controls, and best practices when appropriate to MWRA computer systems and network.

<p>F. Redesign Cyber Security Network perimeter defense in-depth strategy to mitigate the new and evolving threats by taking advantage of next generation technologies.</p>		<ul style="list-style-type: none"> • MWRA initiated a cybersecurity planning effort that will encompass the next 5 years and will inform the scope of the next Managed Security Services contract. • MWRA staff continue remediation of identified vulnerabilities from the risk and resiliency assessment of key IT network components required by the America’s Water Infrastructure Improvement Act (AWIA). • Staff continue to update the internal cyber security incident response plan.
<p>G. Develop and implement an updated Physical Security Plan including Crime Prevention Through Design (CPTED) to decrease vulnerabilities and increase capacities so that threats are reduced, thereby reducing risk.</p>		<ul style="list-style-type: none"> • The MWRA Physical Security Policy, which incorporated CPTED components, was approved. Additionally, drafts of other Physical Security Policies, programs and plans are being finalized in an effort to enhance MWRA’s physical security. All Physical and Cybersecurity policies are reviewed annually.

<p>H. Assess current communication technology and implement communication redundancies where needed within the security network.</p>		<ul style="list-style-type: none">• Staff continue to upgrade and expand the MWRA security system. The security team identifies perceived areas of exposure to the MWRA's critical water distribution infrastructure and plan ways of executing improvements and advancements to our existing system. The MWRA is currently using some of the highest rated cameras in the industry that are able to withstand the environmental and communication challenges facing MWRA facilities. Our network is limited by strict security protocols and is not internet facing. The security program includes standard operating procedures that are updated annually and specifically include daily tests of both our alarm and video system for response time, clarity and quality of video and alarm response.• The MWRA is working with its telecommunications provider to upgrade traditional telephone lines to fiber optic cables capable of transmitting alarm and CCTV camera images at faster speeds with better reliability and resolution.• As cameras age in our system we assess new products and look for cameras that provide the best technology currently available. Eighteen cameras were replaced and/or added in FY23.
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<p>I. Complete the Preliminary Design and Environmental Impact Report for the Metropolitan Water Tunnel Program and initiate final design.</p>		<ul style="list-style-type: none"> • In May 2020, a contract was awarded for Preliminary Design, Geotechnical Investigation and Environmental Impact Report. • In March 2021, an Environmental Notification Form (ENF) for the Metropolitan Water Tunnel Program was submitted to the Massachusetts Environmental Policy Act (MEPA) office to initiate the public environmental review process. • A certificate from the Secretary of Energy and Environmental Affairs on the ENF was received in May 2021. The Environmental Impact Report (EIR) was developed in FY22 and submitted in October 2022. • In June 2021, a geotechnical field investigation program was initiated to support the preliminary design of the proposed tunnels. A second phase geotechnical field investigation program was completed in the summer/fall of 2022. An additional phase was initiated in May 2023 and is on-going. • A certificate from the Secretary of Energy and Environmental Affairs on the draft EIR (DEIR) was received in December 2022 requiring a Supplemental DEIR (SDEIR) be filed with MEPA. The SDEIR was filed in July 2023 and MWRA received the Secretary's Certificate in September 2023. A Final EIR (FEIR) is anticipated to be filed by the end of 2023. • Property for construction of a connection shaft was purchased in Waltham in September 2021. • Preliminary design work is expected to be complete by January 2024. • Procurement for a final design consultant has begun and is expected to be awarded in late 2024.
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		<ul style="list-style-type: none"> • Outreach to key communities, property owners, relevant state agencies, and key stakeholders has been initiated and is ongoing.
<p>J. Update MWRA's earthquake preparedness to bring our facilities up to current standards, as they are rehabilitated.</p> <p>COMPLETED</p>		<ul style="list-style-type: none"> • As part of the review under the AWIA, staff developed an assessment of each water facility's earthquake design standard and created an SOP to ensure earthquake stability is included in all rehabilitation projects. • MWRA dams have had seismic conditions and factors of safety assessed as part of Seepage and Stability Analyses.
<p>K. Move forward Wastewater Facility Emergency Response Planning to identify potential measures to minimize disruptions from failures of facilities, including development of a comprehensive Emergency Response Plan for each facility.</p>		<ul style="list-style-type: none"> • A team of staff have developed an approach to conduct these reviews, but implementation will be overseen by MWRA's new emergency planner. Staff are evaluating how this objective interacts with the newly proposed similar requirements in the NPDES permit for Deer Island. Elements of this effort related to climate change related future flooding and its impact on wastewater facilities have been include in the draft Deer Island NPDES permit.
<p>L. Create and implement a predetermined schedule of review for facility risk assessments.</p>		<ul style="list-style-type: none"> • The AWIA process will require a regular five-year cycle for review of all water facilities. Staff are working on a similar process for wastewater facilities. MWRA hired a new Manager for Emergency Planning who is participating in preparations for the next AWIA submission.
<p>M. Participate in Lower Mystic Resiliency Planning as an abutter to the Lower Mystic.</p>		<ul style="list-style-type: none"> • MWRA staff continue to participate in Resilient Mystic Collaborative meetings, specifically to provide facility insight, maps, and guidance regarding Lower Mystic climate resiliency planning. In FY23, MWRA partnered with members of the Resilient Mystic collaborative to form a taskforce focused on upcoming waterfront development.

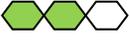
IV. Finance and Management

Goal #11: Ensure Financial Sustainability, Integrity, and Transparency.		
Objective	FY2023	Highlights/ Progress Updates
A. Continue the long-term strategic budgeting practice to ensure sustainable and predictable sewer and water assessments to our member communities.	→	<ul style="list-style-type: none"> Community Assessments increased by 2.85% for FY23, a reduction from the proposed 3.4 percent due to revised budgetary estimates and assumptions. Assessments are projected to increase no more than 3.4 percent annually through FY2027. Assessments for the Water and Sewer utilities continue to be “smoothed” reducing the volatility of year-to-year assessment changes thereby improving the sustainability and predictability for member communities.
B. Continue to implement MWRA’s approach to rate increases while accounting for the pandemic’s effects on its communities’ revenue. COMPLETED	●●●	<ul style="list-style-type: none"> MWRA offered to allow communities to restructure their Community Loan repayments, due in FY20-FY22, to mitigate the impact of COVID-19. Five communities took advantage of the offer and restructured their loans.
C. Manage debt and investment portfolios to maximize savings/returns in compliance with all applicable rules and regulations.	→	<ul style="list-style-type: none"> Staff again took advantage of the low interest rate environment and sold \$234.3 million of bonds comprised of \$100.3 million in refunding bonds and \$134.0 million in tax-exempt new money bonds. The refunding resulted in \$12.9 million in present value debt service savings applied between FY2023 and FY2037. MWRA accepted \$120.1 million of tendered bonds. The tender process is not often used but was advantageous due to market conditions. The All-In True Interest Cost for the transaction was 3.35 percent, with an average life of 10.4 years. Staff continue to explore opportunities for refunding for interest rate savings.
D. Continue diversification strategy to insulate against overexposure and promote resiliency to changing market conditions.	→	<ul style="list-style-type: none"> Staff continue to seek prudent diversification.
E. Maintain a system of internal controls to best protect the organization’s resources.	→	<ul style="list-style-type: none"> Staff continue to review and monitor key controls and limit physical and electronic access to assets.

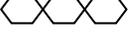
<p>F. Continue to employ budget and expense control practices to manage expenses.</p>		<ul style="list-style-type: none"> Continued to drive cost improvement and containment measures throughout FY23 that allowed MWRA to set a 2.89 percent rate of increase to the combined Rate Revenue Requirement and a 2.4 percent for FY24.
<p>G. Identify and pursue optimization in all aspects of MWRA financial operations.</p>		<ul style="list-style-type: none"> Continued the effort of reducing the use of paper by publishing documents on-line. Staff are actively evaluating the electronic financial system's existing and possible additional software modules to optimize operations. MWRA again received the Distinguished Budget Presentation Award from the Government Finance Officers Association for FY23 and plan to apply again for FY24. MWRA has submitted the paperwork for the Government Finance Officers Association Certificate for Achievement in Financial Reporting for FY22. Additionally, MWRA is preparing the paperwork for FY23. The Budget Department continues to explore a software solution to replace existing obsolete software. The Accounts Payable and Payroll units of the Controllers department continue to record transactional work with electronic documents, having removed all paper from the processing. By employing an additional monitor to assist in data entry, paper was replaced by electronic files archived securely on the network.
<p>H. Continue to conduct strategic energy procurements.</p>		<ul style="list-style-type: none"> Continued to procure electricity based on competitive bid process and review of other procurement options including purchasing collaboratives and state programs.
<p>I. Continue to fund the pension fund at the annual required contribution level and to develop strategies to address the growing Other Post- Employment Benefits (OPEB).</p>		<ul style="list-style-type: none"> The pension fund's funding ratio slipped slightly from 89.05 percent to 88.36 percent in the Actuarial Valuation Study as of 1/1/2023. The cost of living adjustment (COLA) was 5 percent. The Retirement Board further increased the COLA calculation base from \$17,000 to \$18,000 adding some additional pressure on

		<p>the annual Required Contribution. Staff will explore possible ways to minimize the amortization of the Unfunded Liability</p> <ul style="list-style-type: none"> The June 30, 2023 OPEB Trust balance (Net position) increased again to \$72.4 million up from \$63.9 million for the prior year reflecting a Plan net position of 61.46 percent up from 56.20 percent for the prior year. The annual funding practice has been and is projected to be half the annual determined contribution. Retiree health Insurance premiums are paid from the MWRA Current Expense Budget. This practice will be evaluated annually and may be changed according to overall budgetary conditions.
Goal #12: Promote Effective Business Operations and Resource Management.		
Objective	FY2023	Highlights/ Progress Updates
A. Maintain and expand MWRA-wide recycling efforts. COMPLETED		<ul style="list-style-type: none"> As of July 1, 2021, the MWRA implemented a single stream recycling program at the Chelsea Facility in conjunction with existing paper, cardboard, and metal recycling efforts.
B. Pursue, and administer any Federal and or State infrastructure, stimulus or COVID-19 related grants. COMPLETED		<ul style="list-style-type: none"> Staff are actively monitoring the various COVID-19 related stimulus and/or grants that might be available. Staff have applied for reimbursement from the Federal Emergency Management Agency for costs incurred during the disaster. MWRA will be receiving American Rescue Plan Act (ARPA) funding from the Massachusetts Clean Water Trust as part of its next borrowing. MWRA received \$247,100 from the Commonwealth for the FY22 costs associated with the Biobot Sampling. The FY21 and FY22 payments from the Commonwealth totaling \$689,765 fully reimbursed MWRA for all of the Biobot costs.
C. Evaluate office footprint and needs in light of pandemic lessons learned. Make changes where practical. COMPLETED		<ul style="list-style-type: none"> At the June 22, 2022 Board of Directors' meeting, the Board approved a contract with a general contractor to upgrade the office space at both Deer Island and Chelsea to accommodate hybrid work spaces, including updates to office spaces, the electrical

		<p>system and MIS services to accommodate staff previously working in the Charlestown Navy Yard (CNY). The office upgrade work is substantially complete. CNY staff have been relocated to Deer Island or Chelsea and CNY was vacated and left “broom clean” prior to the May 2023 lease expiration.</p>
<p>Goal #13: Leverage Information Technology to Improve Organizational Effectiveness.</p>		
<p>Objective</p>	<p>FY2023</p>	<p>Highlights/Progress Updates</p>
<p>A. Deliver secure Information Technology (IT) services and solutions efficiently and effectively.</p>	<p>→</p>	<ul style="list-style-type: none"> • Completed migration to CrowdStrike for endpoint protection and response with managed services for all workstations and mobile devices. • Completed engagement with design consultant for the evaluation and gap analysis used to assist in the development of the scope for the next Managed Security Services Contract. Scope of Work for RFQ/P underway. • Implemented Single Sign-on solution and migrated five applications to it. • Additional highlights under specific initiatives below.
<p>B. Provide Information Technology solutions to streamline work processes while ensuring the security and integrity of MWRA data by leveraging the use of existing or emerging technologies.</p>	<p>→</p>	<ul style="list-style-type: none"> • Expanded use of secure remote access technologies in support of teleworkers in response to the COVID-19 pandemic. These technologies remain in place for teleworking staff post-pandemic and are continuously evaluated. • Expanded use of WebEx application for collaboration and virtual meetings in support of teleworking. <p>Designed and built new Board Room on DITP and implemented similar technology in all conference rooms.</p> <ul style="list-style-type: none"> • Expanded wireless network within Deer Island Treatment Plant, Southborough and Carroll Water Treatment Plant.

		<ul style="list-style-type: none"> •MWRA.com website re-design: Kick-off held and mockups received and approved for a new mwra.com website. •Records Management: Continued scanning initiative to digitize active records and potentially records to be archived in support of the workplace consolidation.
C. Obtain feedback from users on satisfaction levels and desired new services and implement changes accordingly.	→	<ul style="list-style-type: none"> •Continued monthly meeting with ENQUAL and Lab Services.
D. Maintain current technology hardware, software, and network infrastructure.	→	<ul style="list-style-type: none"> •Deployed over 19,000 updates to existing hardware and software throughout the year to ensure currency and mitigate vulnerabilities. •Upgraded Vmware infrastructure supporting 450 virtual servers. •Upgraded circuit bandwidth at five locations in support of the new phone system rollout. •Upgrade 75 percent of all SQL and Oracle databases was completed.
E. Enhance Information Technology workforce capabilities through new certification and license requirements.	→	<ul style="list-style-type: none"> • Training for the IT Department staff was online/virtual during FY23. Fifty-two online IT classes were taken by 20 staff. • MIS delivered four courses attended by 104 staff.
F. Implement an Application Improvement Program that will continue MWRA's efforts to update and enhance the multitude of applications used in the MWRA to improve efficiencies of business processes, mobile devices, and effectiveness of staff.		<p>The following is a list of applications that were either updated or had functionality changes throughout FY23:</p> <ul style="list-style-type: none"> ○ SAP Business Objects: The system supports reporting functions for MAXIMO. Following a successful proof of concept migrating Discoverer reports, the remaining Discoverer reports are being migrated to SAP Business Objects Webi. 75 percent of the Discoverer reports have been migrated to SAP Business Objects. ○ Community OMMS: MWRA started upgrade of existing community OMMS application. Two towns were selected

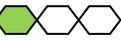
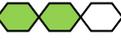
		<p>for pilot and have been submitted for User Acceptance Testing based on initial scope. Scope expanded to includes GIS integration.</p> <ul style="list-style-type: none"> ○ Harbor and Outfall Monitoring Loading (HOML): Used by contracted labs to submit sample data. ○ Pretreatment Information Management System (PIMS): Used in the management of the pretreatment program. Implementation of dental fees and first round of invoicing was processed, WebSMR Cross-Media Electronic Reporting Rule (CROMERR) implementation completed along with system updates. Phase 1 of PIMS infrastructure upgrades completed.
<p>G. Implement an archive and purge system that will provide an automated and integrated solution for archiving electronic content that will allow the Authority to intelligently store, manage and discover e-mail and all critical business information sources, while providing easy and intuitive access for end users.</p>		<ul style="list-style-type: none"> ● Began implementation of an archiving solution as an add-on to existing backup technology. Personal folders ingested into PST archiving solutions.
<p>H. Execute a Technology Infrastructure Improvement Program that will assess and implement consolidated and optimized versions of MWRA's core IT infrastructure elements and improve data management practices.</p>		<ul style="list-style-type: none"> ● Implemented new Phone System. Unified Communications in the form of calling, instant messaging, virtual meetings and presence was consolidated into one application. ● Exploring new technologies to provide redundancy, resiliency and network traffic optimizations. Began the implementation of SD-WAN technology. SD-WAN technology allows MWRA to leverage any combination of information transport services to securely connect users to applications.
<p>I. Upgrade and enhance MWRA's Enterprise Resource Planning system leveraging out-of-the-box functionality</p>		<ul style="list-style-type: none"> ● Learning Management System (LMS): Completed implementation of a new Infor/Lawson product for managing all training including on-line training developed

<p>while striving to eliminate customizations and adoption of technology standards.</p>		<p>in house and from third parties including LinkedIn Learning. Installation and configuration is underway.</p> <ul style="list-style-type: none"> • Legacy Contract Management System Contracts: All Open contracts were migrated to Infor Lawson. Reporting capabilities have been developed for closed contracts that were not be migrated to Infor Lawson. • Lawson MAXIMO Integration: Project underway to enhance existing interfaces to improve data flow between Lawson and MAXIMO systems.
<p>J. Implement Enterprise Content Management for e-Construction, e-Engineering and Records Management.</p>		<ul style="list-style-type: none"> • The Enterprise Content Management System will initially support selected Construction and Engineering processes, replace the legacy document/records management system and provide the infrastructure for expansion and integrations with other systems. Phase 1 of this project completed with the rollout of Records Management.
<p>K. Implement a unified communication (UC) collaboration platform to improve business processes, team communication and collaboration and distributed work force.</p>		<ul style="list-style-type: none"> • Implementation and configuration of new UC VOIP phone system began. The UC system will integrate with WebEx virtual meetings and provide call capabilities to teleworking staff. UC deployed to Chelsea, Southboro, CWTP, Nut Island, Clinton and DITP impacted by the construction. • Cabling and circuit upgrades started in support of new UC system. • Implemented digital message boards at four facilities to provide unified messaging and improved communications to all staff.
<p>L. Move towards the use of AI and Machine Learning technology to address computational and process problems.</p>		<ul style="list-style-type: none"> • No progress on this objective in FY23.
<p>M. COVID-19 Employee Reporting Systems COMPLETED</p>		<ul style="list-style-type: none"> • COVID-19 Self Certification Applications: Two applications were implemented to allow staff to self-certify they do not have COVID-19 symptoms prior to coming to work. One is an in-house developed web application with COVID-19 screening

		<p>questions and the other is a telephone call in number. Both systems write to the same database for Human Resources and management reporting.</p> <ul style="list-style-type: none">• Employee Availability Tracking Application: Tested, updated and activated an existing in-house developed employee availability application designed for managing staff availability in emergencies such as pandemic outbreaks.• Completed custom application developed for employee vaccination attestation.
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V. Diversity, Equity, Inclusion & Workforce Development

Goal #14: Foster and Sustain an Excellent Workforce		
Objective	FY2023	Highlights/ Progress Updates
<p>A. Prioritize Succession Planning in anticipation of critical retirements over the next five years.</p>	<p>→</p>	<ul style="list-style-type: none"> • Continue to identify succession planning initiatives including training programs, leadership programs, career path development, and expedited replacement hiring processes in advance of critical retirements. • The comprehensive exit procedure developed in FY19 for use when employees leave the MWRA, documenting knowledge and information on projects, contacts, and location of files, continued to be implemented and updated. • Staff negotiated a number of recruitment and retention programs with affected unions relative to certain critical positions, including class recruitment rates, development of entry-level positions, and employee referral fees.
<p>B. Provide effective training necessary for employees to obtain and maintain required licenses and certifications to ensure a highly skilled workforce.</p>	<p>→</p>	<ul style="list-style-type: none"> • Wastewater and Water license prep courses as well as collection system certification classes provided at least twice per year on a virtual platform, or at approved vendor locations. Additional classes were brought to Deer Island for Water Distribution exam prep and Wastewater exam prep. • Employees may be sent to approved vendor locations throughout the year for prep training to obtain Water Distribution or Treatment licenses. Virtual, in-person, and hybrid classes are regularly offered to employees to meet continuing education requirements for license renewals and required hours. • Training staff worked to redesign all in-house training to a virtual format in response to COVID-19. Post pandemic training remains a combination of on-line and in-person training.

<p>C. Continue MWRA's in-house job shadowing, career development training programs and explore a pilot program for job rotation of certain titles.</p>		<ul style="list-style-type: none"> Continued the on-the-job training programs on an as-needed basis. DITP continued with its M&O shadowing program. This has been an on-going program for several years. Continued to offer supervisory development programs. Implemented a formal MWRA Mentoring program with Core Consulting through NACWA.
<p>D. Continue to improve MWRA's teleworking capabilities and productivity incorporating lessons learned during the COVID-19 pandemic.</p>		<ul style="list-style-type: none"> Staff negotiated a new, more permanent Telework Policy with the unions which includes a new performance evaluation process to ensure productivity. Staff have modified the Policy as needed.
<p>E. Institute programs with a focus on professional and leadership development.</p>		<ul style="list-style-type: none"> Due to COVID-19, the Leadership Development Program for non-union managers through Bentley University was put on hold in FY21. Several employees participated in an Emerging Leaders training offered through NACWA.
<p>F. Expand intern initiative.</p>		<ul style="list-style-type: none"> Continued the summer intern program in 2023. As of June 2023 we had 28 interns.
<p>G. Continue to ensure compliance with new state and federal regulations and labor.</p>		<ul style="list-style-type: none"> Staff reviewed all non-union and bargaining unit positions and the incumbents as required by the Massachusetts Equal Pay Act. The Massachusetts paid family and medical leave benefits began in 2021. Staff process claims, as needed, and, where applicable, run such leave concurrent with FMLA leave benefits. MWRA continued to meet ongoing notice requirements relative to maximum benefit allowances and employee contribution rates. Staff reviewed all reasonable accommodation requests consistent with post-COVID changes in federal and state law.

Goal #15: Foster a diverse and inclusive workplace.		
Objective	FY2023	Highlights/ Progress Updates
A. Cultivate a safe work environment for all employees that is free from harassment and encourages respect.	→	<ul style="list-style-type: none"> • Staff are working on a procurement for Respect in the Workplace training to be delivered in early FY24.
B. Provide training to all employees on diversity, inclusion, equity, respect, and harassment prevention in the workplace.	→	<ul style="list-style-type: none"> • Along with the bi-annual harassment prevention training, we have added off-year training on unconscious bias and respect in the workplace.

<p>C. Continue MWRA's efforts to develop new recruitment and retention strategies to foster diversity, including traditionally underrepresented categories, people with disabilities, and veterans.</p>		<ul style="list-style-type: none"> • A variety of job fairs, such as Veteran Career Fair Recruit Military and College Job Fairs, were attended by staff, including Mass Maritime, Merrimack College, and Benjamin Franklin Institute of Technology. • In addition to increasing access to diverse pools of candidates, staff continue to promote MWRA as an organization with excellent benefits and employee relations through social media. LinkedIn has been incorporated to expand networking efforts for FY23 along with other professional associations and websites. • Staff continue to conduct outreach and foster networking partnerships with Mass Hire Central Mass, City of Cambridge Workforce Development Program, X-Cel Education, Community Teamwork in Lowell and Boston Veteran Collaborative. • Continued the use of The Local Job Network, a web-based recruiting site where entry, mid-level and senior level positions are posted to expand outreach to diverse protected classes. Continued utilizing Handshake to post job openings on college and professional association job boards. • Continued to add to the existing 258 recruitment sources for minorities, women, individuals with disabilities, and veterans in addition to its existing 53 recruitment sources identified in the Affirmative Action Plan. • Hired 96 new employees including 27 (28 percent) females and 22 (23 percent) minorities. • Promoted 111 employees including 27 (24 percent) females and 30 (27 percent) minorities. • Staff continue to engage with Vocational Technical Schools, and have expanded their
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		efforts to promote co-operative education opportunities and careers at the MWRA through partnerships with Quincy High School and Boston Green Academy.
D. Develop leadership skills at every level to increase opportunities for staff advancement and ownership.	→	<ul style="list-style-type: none"> • Implemented a formal MWRA Mentoring program with Core Consulting through NACWA.
E. Pursue an inclusive leadership approach that considers innovation and diverse points of view to respond to the evolving needs of the Authority.	→	<ul style="list-style-type: none"> • DEI workgroup was expanded to include more staff. • Established a speaker series to highlight important initiatives and programs (e.g., environmental justice). • Working on an employee survey on engagement and inclusion.
F. Create and maintain a work group whose mission is to improve diversity, inclusion, equity and respect in the workplace. Implement workgroup recommendations with measurable goals.	→	<ul style="list-style-type: none"> • The Diversity, Equity, and Inclusion (DEI) workgroup was established in FY21. The purpose of the DEI workgroup is to ensure that the MWRA creates an inclusive environment that promotes equity in the workplace. This leads to a culture that leverages diversity to its fullest potential so that every employee can have a sense of belonging regardless of his or her background. • The DEI workgroup is developing several sub-working groups to further several initiatives and to enhance employee engagement. • The DEI workgroup progress in FY23 toward achieving our goals include the following: <ul style="list-style-type: none"> ○ Staff continue to celebrate and embrace the diversity of our staff and regularly post widely recognized awareness month(s)/day(s) for a specific group, culture, or cause on the DEI pipeline page. The purpose of these awareness months and day(s) is to raise awareness and understanding for the group, culture, or cause.

		<ul style="list-style-type: none"> ○ In collaboration with the Environmental Justice task force, the DEI working group has created subcommittees to focus on efforts across the Authority. We have formed subcommittees to support heritage month recognitions, as well as a subcommittee to support employer engagement. ○ Staff celebrated LGBTQ+ pride month by hosting the 2nd annual voluntary Pride walk and luncheon. This year’s event expanded to celebrate Caribbean celebration month. <ul style="list-style-type: none"> ● The DEI workgroup is preparing to launch a follow-up survey to the original staff survey distributed in 2021 to collect feedback regarding Professional Development including mentoring, educational training, team-building, etc.
<p>G. Implement an Environmental Justice Strategy (EJ) which outlines MWRA’s actions and visions for promoting EJ considerations across MWRAs programs, policies and activities.</p>		<ul style="list-style-type: none"> ● Deliver services equitably across a diverse service area. ● The Executive Office of Energy & Environmental Affairs (EEA) 2017 Environmental Justice Policy (EJ) has directed all EEA agencies to develop their own EJ Strategies. The MWRA is committed to this mission articulated in Article 97 of the Massachusetts Constitution for all residents of the Commonwealth and has joined the EEA’s Environmental Justice (EJ) Task Force. Tomeka Cribb, Associate Special Assistant, Affirmative Action and Compliance serves as the EJ point of contact representing MWRA. ● MWRA responded to comments on a draft MWRA EJ Strategy submitted to EEA in FY23. MWRA’s EJ Strategy was subsequently finalized in August 2023. ● Progress on the following objectives were made in FY23:

		<ul style="list-style-type: none"> ○ Established the MWRA lunchtime speaker series, with guest speakers discussing a variety of industry topics. Dr. Mariana Matus, CEO and Cofounder of Biobot Analytics, Green Roots, and Working for Environmental Justice and Improved Quality of life have been among the speakers. ○ Continued to Promote Public Awareness of Sewage Pollution of any combined sewer overflows (CSOs) or certain sanitary sewer overflows (SSOs) MWRA is using Google Translate to translate all notifications into 14 identified EJ languages, and is issuing notices through email and text via Everbridge. ○ To Promote Public Awareness of Sewage Pollution of any combined sewer overflows (CSOs) MWRA created signs for public access area that include warnings about health risks in 11 identified EJ languages. ○ The MWRA continues to update the public-facing EJ web page. There are a number of resources available on this new page, including links to other MWRA web pages, such as summaries of construction projects, job postings, CSO and SSO notifications.
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Goal #16: Ensure a safe and healthful work place for all employees, contractors and visitors free of recognized hazards

Objective	FY2023	Highlights/ Progress Updates
<p>A. Continue to identify hazards and assess associated risks. Provide training on programs and procedures to prevent or control incidents and ensure employee safety.</p>		<ul style="list-style-type: none"> ● Continued to develop the Occupational Health and Safety Department including program and policy review and development, facility audits and by participating in training classes. Expanding use of safety software to aid in reducing workplace injuries and preparing

		<p>Occupational Safety and Health Administration (OSHA) regulatory reports.</p> <ul style="list-style-type: none"> Continued to develop and identify safety training for employees. Utilize leading and lagging safety metrics to identify areas of concern to address through training or hazard mitigation strategies. Continued to improve safety culture through communication and leading by example. Continued to assess the risks associated with tasks and provide the appropriate training, procedures and equipment to eliminate the risks. Worked with training department to secure safety training that will address identified safety concerns.
<p>B. Continue to review and implement best safety practices during the COVID-19 pandemic to protect the safety of all employees and ensure continuity of critical services.</p> <p>COMPLETED</p>		<ul style="list-style-type: none"> Discontinued many COVID protocols consistent with the end of the COVID emergency declaration. Continue to follow guidance on isolation and quarantine. Continue to stock COVID tests and masks for use if necessary
<p>C. Maintain compliance with Massachusetts Occupational Safety and Health for State Workers regulation (454 CMR 25.00) by meeting the requirements set forth under the Occupational Safety and Health Act of 1970.</p>		<ul style="list-style-type: none"> Safety and training staff continue certificate training in safety disciplines, which improves the overall safety knowledge of the Authority as it relates to OSHA regulations. Expanded the use of the Safety Reports application to include safety observations and job safety analysis. This expansion now allows in addition to performing formal OSHA inspections of facilities, to conduct walk-through observations on a frequent basis to identify hazards and track them efficiently. Staff can create reports of findings and provide them to stakeholders. Filled one Safety position to maintain safety support to all areas of the Authority.

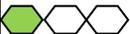
<p>D. Maintain records concerning occupational injuries, illnesses, deaths, and exposure to toxic materials in compliance with regulations.</p>		<ul style="list-style-type: none">• All injuries are reported to the Safety Department and reviewed per OSHA recordkeeping regulations to determine if the injury is recorded. Injuries that meet the recordkeeping requirements are recorded on the OSHA 300 and 300A log. Injured employees complete the OSHA 301 form at the time of injury.
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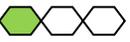
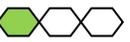
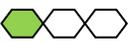
VI. Environmental Sustainability

Goal #17: Continue to maximize energy efficiency of MWRA operations, renewable energy production, and revenue generation opportunities using MWRA's energy assets.		
Objective	FY2023	Highlights/ Progress Updates
<p>A. Assist the Commonwealth in meeting its Greenhouse Reductions Goals set forth in the Global Warming Solutions Act.</p>	<p>→</p>	<ul style="list-style-type: none"> • Through continued implementation of energy efficiency projects, use of renewable energy generation, and low emission technologies, such as electric vehicles and battery powered landscaping equipment, MWRA continues to reduce its greenhouse gas (GHG) emissions. From 2006 through 2022, MWRA has reduced its GHG emissions by about 41 percent. Staff is currently working on the update to the GHG report through 2022. MWRA joined ICLEI (Local Governments for Sustainability) and now utilize their GHG inventory platform to improve our tracking and projection of emissions. • Staff continue to follow Governor Baker's Executive Order 594, "Decarbonizing and Minimizing Environmental Impacts of State Government" signed Earth Day 2021 – which provides goals and guidelines to reduce fossil fuel use. MWRA has already met the 2025 goals of 33 percent reductions in GHG emissions.
<p>B. Continue to conduct energy audits at all facilities as needed.</p>	<p>→</p>	<ul style="list-style-type: none"> • Staff are working with utilities to identify and audit facilities for replacement of delivered fuel heating systems with heat pumps. • Conducted an energy audit at Clinton in FY20 that resulted in a series of recommendations for the operations building. Work began on planning for influent pumping upgrade and adding variable frequency drives (VFDs) to the screw pumps at Clinton. This work is currently underway and is expected to be completed in FY24. • A contract is currently under development by Deer Island Electrical Staff for the replacement of exterior and interior building light fixtures.

C. Optimize processes to save energy.	→	<ul style="list-style-type: none"> • Work continues on identifying processes that can be optimized to save energy.
D. Continue to incorporate cost efficient energy efficiency, non-fossil fuel heating, electric vehicle (EV) charging capabilities, and renewable energy projects into new construction, rehabilitation projects, and equipment replacement.	→	<ul style="list-style-type: none"> • The rehabilitation of the odor control and HVAC at Nut Island which contains several energy efficient components, began construction in February 2020 and is scheduled to be completed in September 2023. • Hayes Pumping Station rehabilitation project contains several energy efficiency elements including HVAC and pump upgrades as well as the installation of a heat pump to reduce the facilities use of diesel fuel for heating. Rehab design (7162) is nearing completion with construction (7357) expected to begin in spring 2024. • Braintree-Weymouth Pump Station improvements Design Contract is complete with a construction NTP issued in September 2022. This project includes several energy efficiency components including jockey pumps for increased pumping efficiency, ventilation setbacks, and LED lighting. Construction expected to be completed in late CY2024.
E. Continue to invest in new stand-alone renewable energy projects at MWRA facilities.	→	<ul style="list-style-type: none"> • Staff are currently working on repackaging of a previous bid that was not executed for a 1-2 MW solar canopy with energy storage at Deer Island. Construction is expected to begin in FY25. • Staff are also working through the approval process for solar arrays over underground water storage tanks. Preliminary approvals have been given by MassDEP. If allowed, the work is expected to begin in FY25.
F. Continue to maximize revenue from generation assets including additional Demand Response opportunities.	→	<ul style="list-style-type: none"> • FOD hydro assets were in operation between 92 and 100 percent of the time, with the exception of Loring Road, which was in operation 83 percent of the time due to maintenance and operational issues over a two month span. Deer Island wind turbine experienced a significant failure and the other turbine was taken out of service for

		<p>evaluation and repair. Charlestown wind maintained its normal operations.</p> <ul style="list-style-type: none"> • Deer Island and the Carroll Water Treatment Plant used backup generators in FY23 in order to: Participate in Independent Systems Operator – New England (ISO-NE) and Eversource Demand Response programs, cutting load when dispatched, with Deer Island earning under \$500,000 and Carroll earning approximately \$53,000 in incentives; and, to reduce load during ISO-NE system – side one-hour peak to avoid installed capacity charges of over \$1 million per year. As of the summer of 2023, neither Carroll nor DITP can use diesel generators to participate in the Eversource Connected Solutions Program as fossil-fueled generation is no longer eligible. However, DITP has deferred Cryo operation to curtail 2 MW of power demand during these events • Staff applied for and received grant funding from the Mass. Clean Energy Center for an assessment of the hydro turbines at Deer Island project. The feasibility study, which will look at replacing or refurbishing the existing two 1.1 MW hydro turbine to optimize their generation, will begin in late FY24.
<p>G. Take full advantage of utility energy efficiency rebate opportunities.</p>	<p>→</p>	<ul style="list-style-type: none"> • Staff are working with National Grid and Eversource to update the existing Memorandum of Understandings (MOUs). The MOUs are non-binding, but commit MWRA to continue to implement energy efficiency projects, while obtaining a higher incentive amount from the utilities. For example, replacement of three single-speed 50-HP water booster pumps with energy-efficient variable speed pumps at DITP resulted in qualifying for \$70,000 in Eversource incentives at the higher than typical rate of \$0.325/kWh. • Participating in an Eversource Demand Reduction project that utilizes battery storage technology to reduce electricity demand costs at Brattle Ct. Pumping Station

		<p>and the Chelsea Admin. Building in which Eversource provided the batteries at no cost to the MWRA. Batteries began operating in February/March of CY21. Demand savings from the batteries in FY23 totaled \$17,367. The batteries were also enrolled in the Eversource Targeted Demand Dispatch program beginning in FY23 resulting in direct payments from Eversource for discharging the batteries at peak load times, totaling approximately \$16,100.</p> <ul style="list-style-type: none"> • Staff continue to access any available rebates from utilities pertaining to installation and utilization of more efficient equipment.
H. Incorporate employee education on energy efficiency in MWRA training outlets, e.g. tool box talks and HR training classes.		<ul style="list-style-type: none"> • Staff developed an outline of tool box talks for Metro and Western Ops staff. They had been scheduled for FY20, but they were postponed due to the pandemic. Staff are planning on outreach to staff on several energy topics in FY24.
I. Design new gas turbine combined heat and power equipment to take advantage of the higher power and thermal efficiencies of new equipment, maximizing the production of additional electric power for on-site use at Deer Island as well as cost savings while reducing maintenance spending on aging equipment.		<ul style="list-style-type: none"> • A project to evaluate DITP's comprehensive energy programs relative to Heat and Power was completed in FY21. Staff are developing specs for a design project for a new CHP system and expect to bid in FY24.
J. Evaluate and implement, where feasible, combined heat and power technology in plant operations to improve energy efficiency (e.g. pellet plant, Clinton). COMPLETE		<ul style="list-style-type: none"> • Staff completed Combined Heat and Power (CHP) evaluations for the Pellet Plant and Clinton Treatment Plants. Currently these technologies are not recommended for these facilities given unfavorable life cycle cost analyses.
K. Continue to develop the battery storage projects and work with the utility and its contractor to optimize demand savings. Evaluate opportunities for future battery storage projects.		<ul style="list-style-type: none"> • In FY21, staff discussed possible large scale battery projects at Deer Island and property on the Mystic River with vendors and state representatives and examined potential revenue streams. Staff applied for grant funding from the Lead by Example Program under Massachusetts Dept. of Energy Resources for the Deer Island project and

		have received preliminary approval pending an award of a contract. The procurement of professional services to evaluate the potential for a large-scale battery installation at Deer Island is currently in process.
L. Explore community solar opportunities that will stimulate large-scale remote solar installations and save money on MWRA's electric bills. COMPLETE		<ul style="list-style-type: none"> Staff investigated the possibility of MWRA's participation in community solar and after much discussion determined that at this time, MWRA is best positioned to prioritize on developing its own solar arrays though may be interested in community solar or other opportunities to support large-scale renewable energy.
M. Expand our fleet of electric vehicles and charging stations.		<ul style="list-style-type: none"> In FY23, staff purchased an additional five all-electric Chevy Bolts and 15 Level II and five level III chargers. There are now a total of 15 Bolts and three Volts in MWRA's fleet. MWRA received approval for funding of \$50,000 from MassDEP through its MasseVIP program, for EV charging equipment for the Chelsea facility. Eversource also approved MWRA's Chelsea, Southborough and Deer Island applications to its EV Make Ready program that would provide MWRA with electric vehicle charging infrastructure. Work in Chelsea is expected to begin late in CY 2023 or early in CY2024.
N. Explore a new MWRA-wide building/plant information management system that includes a comprehensive energy management system.		<ul style="list-style-type: none"> In FY21, staff began to examine artificial intelligence/ machine learning platforms to optimize plant operations and save energy at Deer Island. This effort is on-going.
O. Explore and implement building electrification to reduce MWRA's reliance on fuel oil for heating. NEW		<ul style="list-style-type: none"> Staff have incorporated the requirement to review the feasibility of using heat pumps into the designs of new construction or facility rehabs. MWRA was awarded a grant from MassDEP's Clean Energy Program to do a pilot installation of heat pumps at two pump stations, one water and one wastewater. This comes after an evaluation was done of these facilities to determine the feasibility of using heat pumps to replace fossil fuel boilers.

		<ul style="list-style-type: none"> Audits of facilities using fuel oil or with old gas-fired boilers are also being conducted to determine the feasibility of installing heat pumps at these facilities.
Goal #18: Continue to monitor climate change research and move forward with plans to reduce impacts of projected sea level rise and storm surge events on MWRA infrastructure.		
Objective	FY2023	Highlights/ Progress Updates
A. Continue to incorporate design modifications into facility renovations and maintenance activities to address sea level rise and storm surge.	→	<ul style="list-style-type: none"> Continued to update flood elevations as the Federal Emergency Management Agency (FEMA) revised its projections. Now regularly including these design parameters in all renovation and new construction projects.
B. Plan and install flood protection barriers at water and wastewater sites which fall below expected elevations of flood waters under condition of a FEMA 100 year storm plus 2.5 feet to minimize damage and still provide service.		<ul style="list-style-type: none"> Flood protection barriers have been installed at Chelsea Administration Building, Chelsea Maintenance Building, South Boston CSO, Squantum Pump Station, Quincy Pump Station, Braintree Weymouth Relief Pump Station and Chelsea Screen House. The update to flood protection at Hough's Neck Pump Station will be completed by the end of September 2023. Staff have developed SOPs and are in the process of performing installation drills. Flood protection procedures have been developed utilizing sand bags for the former pump station facility at Alford Street and for the Delauri Pump Station. Flood protection for the MWRA/BWSC jointly owned Union Park CSO/Pump Station is in final planning stage. MWRA utilized new data from the Massachusetts Coastal Flood Risk Model, to update expected flood levels for a 100-year storm in 2030, 2040, and 2050. We will incorporate the new levels, which closely align with the 100 year 2.5 ft of sea level rise standard, in future resiliency efforts. Continued coordination with Boston on development of Moakley Park adaptation planning so that MWRA's CSO Tunnel vent structure and Columbus Park headworks are protected from sea level rise flooding.

		<ul style="list-style-type: none"> Flood protection was incorporated into the rehabilitation of the Chelsea Headworks. Flood protection is being incorporated in the rehabilitation of the Columbus Park Headworks. As facility rehabilitation projects arise, flood protection will be included if the facility is located in an identified flood zone.
C. Work with State and regional organizations and academic institutions to identify how MWRA's existing long-term environmental data sets can be used to help assess and project impacts of climate change.		<ul style="list-style-type: none"> Distinguishing climate change impacts from potential effects of MWRA's outfall in Massachusetts Bay, and how to best leverage the long-term environmental monitoring data set, is the subject of discussions internally and with the Outfall Monitoring Science Advisory Panel.
Goal #19: Advance reasonable water system expansion.		
Objective	FY2023	Highlights/ Progress Updates
A. Continue to provide assistance to communities seeking admission to the MWRA's water system or seeking emergency withdrawals.		<ul style="list-style-type: none"> Provided guidance on the Water System Admission process to prospective communities and developments including: Hopkinton, the Former Naval Air Station, Lynnfield Center Water District, Natick, Walpole, Wayland, Wellesley, and Weymouth. Completed three system expansion studies, one for the South Shore, one for the Ipswich River Basin Communities, and one for 21 Metro West communities. These studies were all completed in FY23.
B. Work with prospective communities to inform them of the benefits of admission.		<ul style="list-style-type: none"> Work continues on this initiative through outreach to communities, watershed groups, and associations and through requests from consultants representing the communities.
C. Work with MWRA's Advisory Board on legislative initiatives to pursue funding for connection assistance for new communities connecting to the water system.		<ul style="list-style-type: none"> In September 2022, the MWRA Board of Directors voted to approve a recommendation by the MWRA Advisory Board to waive the Entrance Fee. To be eligible for the Entrance Fee waiver, new communities seeking admission to MWRA must show that they have water quality issues, water quantity issues, or are unable to meet existing or future demands due to potential economic development opportunities. This waiver only applies to the

		<p>first 20 mgd of water sold to new communities, and any community wishing to claim the waiver must be approved for admission to MWRA’s water system by the MWRA Advisory Board and Board of Directors by the end of December 2027.</p> <ul style="list-style-type: none"> • MWRA staff will continue to work with the MWRA Advisory Board to seek additional sources of funding to cover the infrastructure costs associated with connecting to MWRA’s water system.
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Goal #20: Continue to recognize the environmental, cultural, historical, and recreational importance of the watershed lands, the aqueduct system, and the unique location on Boston Harbor of the Deer Island Treatment Plant and Nut Island Headworks, to the citizens of the Commonwealth.

Objective	FY2023	Highlights/ Progress Updates
<p>A. Continue to work cooperatively with DCR and cities and towns to ensure that these lands are available for appropriate public access.</p>	<p style="text-align: center;">→</p>	<ul style="list-style-type: none"> • Staff have participated in the DCR Land Acquisition Panel (LAP) offering guidance since 1995. The MWRA Board has had approval oversight of watershed land purchases under the CIP since FY07. Staff continue to be active in the LAP attending quarterly meetings and offering MWRA viewpoints on land purchases, preservation restrictions and disposition. <i>This update also supports Goal #1, assisting MWRA to maintain drinking water quality.</i> The Executive Director is chairing the Boston Harbor Islands Partnership, a federally sanctioned group that maintains stewardship responsibilities of the Harbor Island National Park.
<p>B. Continue to work with cities and towns to implement the Public Access Initiative on the Wachusett, Weston, Sudbury, and Cochituate Aqueducts.</p> <p>This program creates a partnership between MWRA and communities that host each piece of infrastructure, granting access to applicant communities to use MWRA controlled</p>	<p style="text-align: center;">→</p>	<ul style="list-style-type: none"> • The MWRA Aqueduct Trails Program is an innovative initiative that has opened up new recreational opportunities in communities across Metro West on appropriate MWRA aqueduct infrastructure. • Since 2011, MWRA staff have been working with aqueduct communities to provide technical assistance through the 8(m) permit process and have had great success opening access to these resources for the first time.

<p>aqueduct right-of-ways of the Cochituate, Sudbury, Wachusett, and Weston Aqueducts, along with the lands surrounding the Weston and Norumbega distribution reservoirs.</p>		<ul style="list-style-type: none"> • To date, MWRA staff have issued many Section 8 (m) Permits as part of the Aqueducts Trails Program authorizing approximately 30 miles of Aqueduct Trails. MWRA estimates that approximately 23 miles are currently open to the public. • MWRA staff have worked with a local historian to develop a web page on the history of the Metropolitan Water System, utilizing historic State archive reports and Digital Commonwealth photos. Website “beforetherwasadam.com” creator has won the 2023 New England Water Works Association “Distinguished Public Involvement Award” for this work.
<p>C. Continue to provide public access to Boston Harbor at Deer and Nut Islands, while ensuring appropriate security for MWRA’s operations.</p>		<ul style="list-style-type: none"> • MWRA, state and local officials, and fishing advocates cut the ribbon on the new Deer Island Recreational Fishing Pier on June 24, 2021 for its official grand opening. The fishing pier was constructed by the Division of Marine Fisheries (DMF) and the MWRA. MWRA participates in an annual “Reel Fun Fishing Day” at the Pier.

STAFF SUMMARY

TO: Board of Directors
FROM: Frederick A. Laskey, Executive Director
DATE: December 13, 2023
SUBJECT: FY24 Financial Update and Summary through November 2023



COMMITTEE: Administration, Finance & Audit

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

INFORMATION
 VOTE



Thomas J. Durkin
Director, Finance

RECOMMENDATION:

For information only. This staff summary provides the financial results and variance highlights for Fiscal Year 2024 through November 2023, comparing actual spending to the budget.

DISCUSSION:

The total Year-to-Date variance for the FY24 CEB is \$14.5 million, due to lower direct expenses of \$9.0 million, indirect expenses of \$1.0 million, debt service costs of \$1.1 million, and higher revenue of \$3.5 million.

FY24 Current Expense Budget

The CEB expense variances through November 2023 by major budget category were:

- Lower Direct Expenses of \$9.0 million or 7.2% under budget. Spending was lower for Wages & Salaries, Chemicals, Other Services, Professional Services, Fringe Benefits, Utilities, and Training & Meetings. Spending was higher than budget for Maintenance, Other Materials, Workers' Compensation, and Overtime.
- Lower Indirect Expenses of \$1.0 million or 3.1% under budget due primarily to lower Watershed Reimbursements.
- Debt Service expenses were \$1.1 million or 0.6% under budget driven by lower than expected variable interest expense.
- Revenue was \$3.5 million or 0.9% over budget driven by higher Investment Income of \$3.2 million due to higher than budgeted interest rates.

**FY24 Budget and FY24 Actual Variance by Expenditure Category
(in millions)**

	FY24 Budget	FY24 Actual	\$ Variance	% Variance
Direct Expenses	\$125.4	\$116.4	-\$9.0	-7.2%
Indirect Expenses	\$33.1	\$32.0	-\$1.0	-3.1%
Capital Financing	\$186.5	\$185.4	-\$1.1	-0.6%
Total	\$345.0	\$333.9	-\$11.1	-3.2%

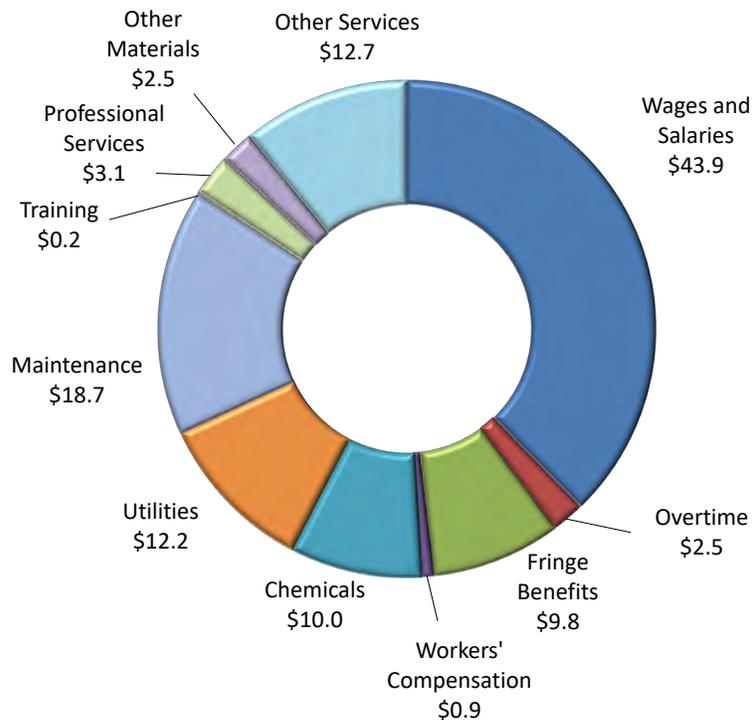
Totals may not add due to rounding

Please refer to Attachment 1 for a more detailed comparison by line item of the budget variances for FY24.

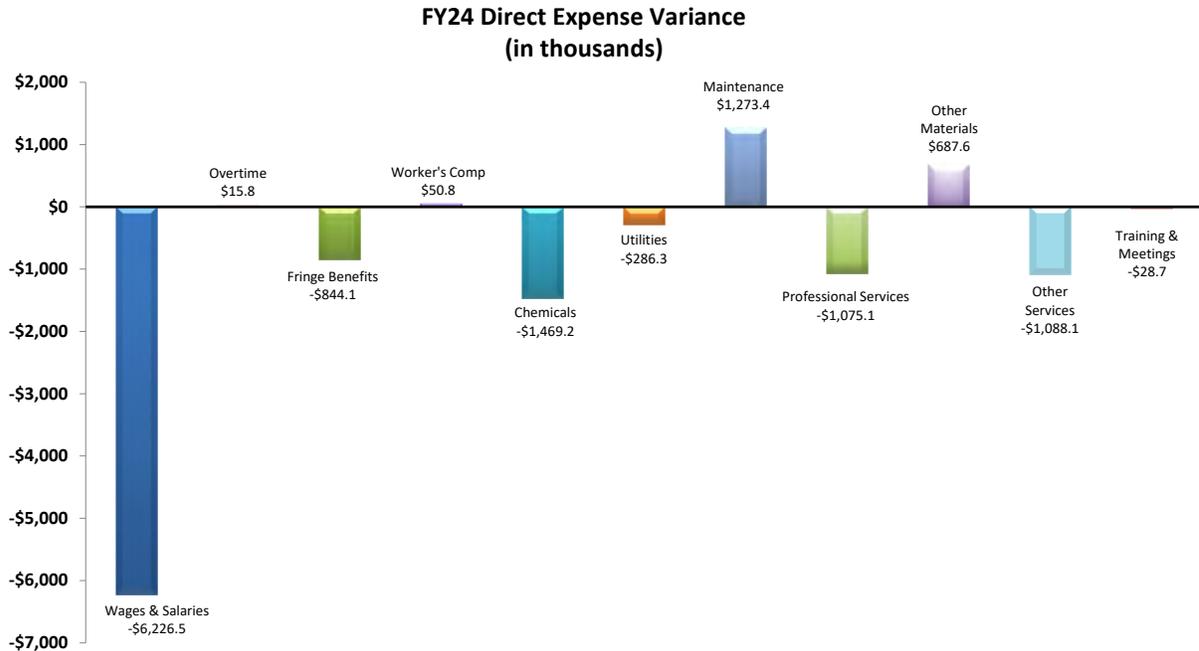
Direct Expenses

FY24 Direct Expenses through November totaled \$116.4 million, which was \$9.0 million or 7.2% less than budgeted.

**FY24 Direct Expenses
(in millions)**

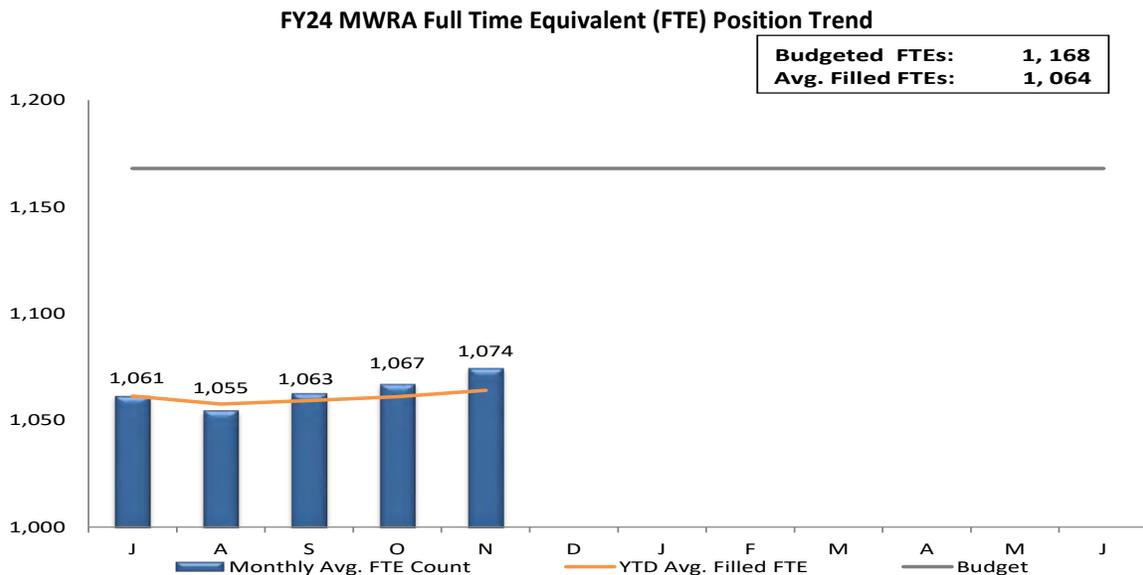


Spending was lower than budget for Wages & Salaries, Chemicals, Other Services, Professional Services, Fringe Benefits, Utilities, and Training & Meetings. These were partially offset by higher than budgeted spending for Maintenance, Other Materials, Workers' Compensation, and Overtime.



Wages and Salaries

Wages and Salaries was under budget by \$6.2 million or 12.4%. Through November, there were 104 fewer average FTEs (1,064 versus 1,168 budget) or 8.9% and lower average salaries for new hires versus retirees. The timing of backfilling vacant positions also contributed to Regular Pay being under budget.



Chemicals

Chemicals were lower than budget by \$1.5 million or 12.8%. Lower than budgeted spending on Sodium Hypochlorite of \$673,000 driven by Water Operations of \$940,000 and Wastewater Operations of \$150,000 due to contract pricing, partially offset by higher spending at Deer Island of \$432,000 due to additional usage for disinfection and odor control due to higher flows. Carbon Dioxide was lower than budget by \$277,000 primarily due to lower dosage needed, Sodium Bisulfite of \$149,000 primarily driven by Deer Island due to lower quantities to dechlorinate the effluent, Aqua Ammonia of \$116,000 due to lower usage and deliveries due to lower flow, Other Oxidizers (Bioxide) at Framingham PS was lower than budget by \$114,000 due to less deliveries and lower price, and Polymer of \$102,000 due to less than anticipated target use as staff monitor the centrifuge thickening process and to adjust the polymer usage to effectively balance polymer use with centrifuge operation, partially offset by Hydrogen Peroxide of \$89,000 which is added to the Deer Island influent to reduce elevated H₂S levels for odor pretreatment and corrosion control, and allows staff to perform maintenance activities more safely within the tanks, and Ferric Chloride of \$79,000, driven by Deer Island to keep the orthophosphate levels in the digesters at the desired target level. Deer Island flows are 4.8% greater than the budget and the Carroll Plant preliminary flows are 5.0% less than the budget through November. 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 Services

Other Services were lower than budget by \$1.1 million or 7.9% driven by lower Telecommunication costs of \$440,000, Grit & Screenings Removal of \$234,000 and Sludge Pelletization of \$121,000 both due to lower quantities, Police Details of \$101,000 due to less than anticipated needs, and Memberships/Dues/Subscriptions of \$95,000 due to timing.

Professional Services

Professional Services were less than budget by \$1.1 million or 25.9% driven by lower Other Services of \$511,000 due to timing of services including the Disparity Study, Legal Services of \$176,000, and Computer Systems Consultant of \$189,000, all due to timing of spending.

Maintenance

Maintenance was greater than budget by \$1.3 million or 7.3%, largely driven by the timing of projects. Maintenance Materials are over budget by \$769,000 driven by higher Plant & Machinery Materials of \$625,000 due to timing and higher spending for glass lined pipe/fittings, seals, and grinder cartridges, Warehouse Inventory of \$402,000 due to need for spare parts as well as purchasing of materials early due to supply chain issues, and Electrical Materials of \$86,000 due to timing. These are partially offset by lower Special Equipment Materials of \$263,000, Building and Grounds Materials of \$107,000, and Pipeline Materials of \$103,000 also due to timing. Maintenance Services were greater than budget by \$504,000 driven by higher Computer Software-Licenses/Upgrades of \$1.4 million primarily due to timing, partially offset by lower Electrical Services of \$209,000, Computer Services of \$165,000, Pipeline Services of \$126,000, Building and Grounds Services of \$95,000, HVAC Services of \$94,000 all due to timing of work, and Plant

and Machinery Services of \$91,000 million primarily due to timing of work for the Norumbega Cell #3 tank cleaning, partially offset by higher spending for gearbox rebuilds at Deer Island.

Fringe Benefits

Fringe Benefit spending was lower than budget by \$844,000 or 7.9%. Spending was lower than budget for Health Insurance of \$870,000, 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.

Other Materials

Other Materials were greater than budget by \$688,000 or 37.6% driven by higher Computer Hardware of \$449,000 primarily due to timing of equipment purchases, Vehicle Expense of \$140,000 due to timing of vehicle expenses including the electrical vehicle charging stations originally anticipated to be completed by FY23, and Health/Safety of \$67,000 due to timing of purchases.

Utilities

Utilities were lower than budget by \$286,000 or 2.3%. Underspending on Diesel Fuel of \$1.4 million is primarily due to timing of purchasing at Deer Island. The purchase is expected later in the fiscal year. Overspending in Electricity of \$1.1 million, of which \$572,000 at Deer Island is driven by new pass through cost associated with the Mystic Power Station and higher demand usage charges due to the many rain events. Electricity in Field Operations was greater than budget by \$457,000 due to higher use, partially offset by lower pricing than budget.

Worker's Compensation

Worker's Compensation expenses were greater than budget by \$51,000 or 5.7% driven by higher Medical Payments of \$81,000, partially offset by lower Compensation Payments of \$18,000 and Administrative Expenses of \$12,000. Due to uncertainties of when spending will happen, the budget is spread evenly throughout the year.

Training & Meetings

Training & Meetings was lower than budget by \$29,000 or 14.4% primarily due to timing of spending.

Overtime

Overtime expenses were greater than budget by \$16,000 or 0.6%. Greater than budget spending at Deer Island of \$159,000 is due to shift coverage, partially offset by lower spending in Field Operations of \$93,000 due to less emergency and planned overtime due to existing vacancies, and Engineering & Construction of \$33,000. Year-to-date rainfall was a major contributor for the increased overtime.

Indirect Expenses

Indirect Expenses totaled \$32.0 million, which is \$1.0 million or 3.1% lower than budget. The variance is driven by lower Watershed Reimbursements.

Based on FY24 operating activity only, the Watershed Division is \$948,000 or 12.4% under budget. Lower spending on Wages and Salaries, Fringe Benefits, and Maintenance are driving the variance. When factoring in the FY23 balance forward of \$156,000 which was a credit towards FY24, Watershed Reimbursement is \$1.1 million or 14.5% below budget through November 2023.

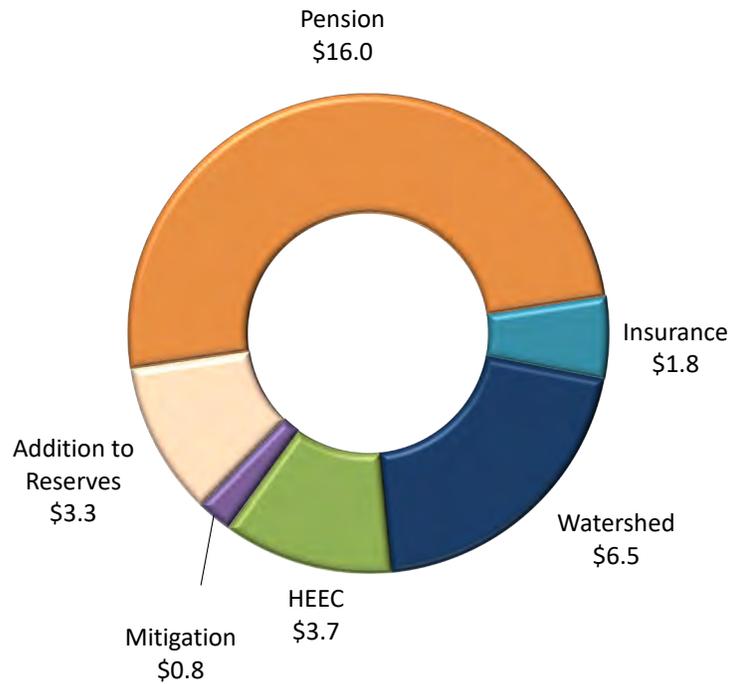
FY24 Watershed Protection Variance

\$ in millions	YTD Budget	YTD Actual	YTD \$ Variance	YTD % Variance
Operating Expenses	8.2	7.1	-1.1	-13.3%
Operating Revenues - Offset	0.6	0.4	-0.1	-24.0%
FY24 Operating Totals	7.6	6.7	-0.9	-12.4%
DCR Balance Forward (FY23 year-end accrual true-up)	0.0	-0.2	-0.2	
FY24 Adjusted Operating Totals	7.6	6.5	-1.1	-14.5%
PILOT	0.0	0.0	0.0	0.0%
Total Watershed Reimbursement	7.6	6.5	-1.1	-14.5%

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 monthly in arrears. Accruals are being made monthly based on estimated expenses provided by DCR and trued-up monthly based on the monthly invoice. MWRA’s budget is based on the annual Fiscal Year Work Plan approved by the Massachusetts Water Supply Protection Trust (with a vacancy adjustment applied). The FTE count at the end of November was 147 (and 143.6 on a year-to-date basis) vs. a budget of 150.

**FY24 Indirect Expenses
(in millions)**

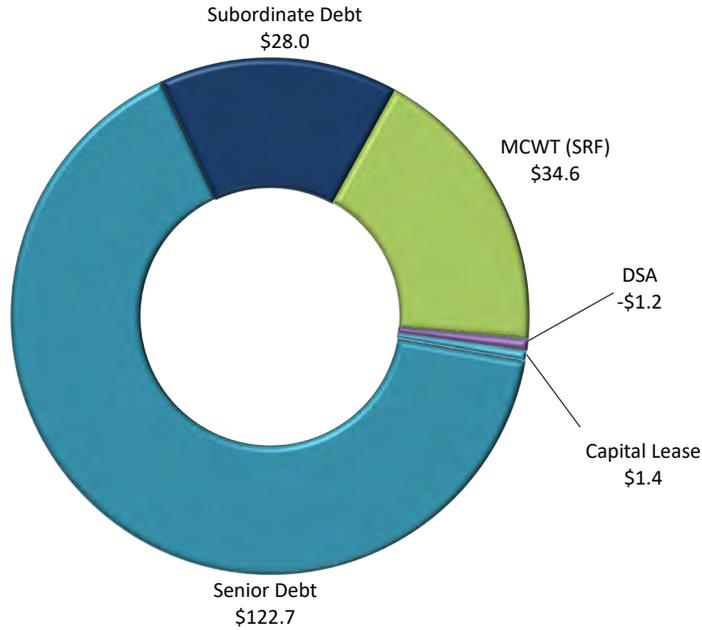


Capital Financing

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.

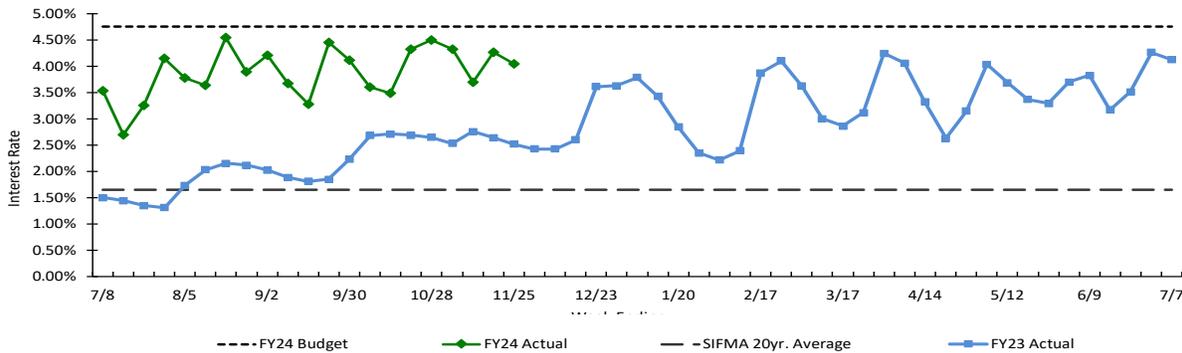
Capital Financing expenses for FY24 through November totaled \$185.4 million, which is \$1.1 million or 0.6% less than budget. This favorable variance is the result of lower than budgeted variable interest rates.

**FY24 Capital Finance
(\$ in millions)**



The graph below reflects the FY24 actual variable rate trend by week against the FY24 Budget.

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



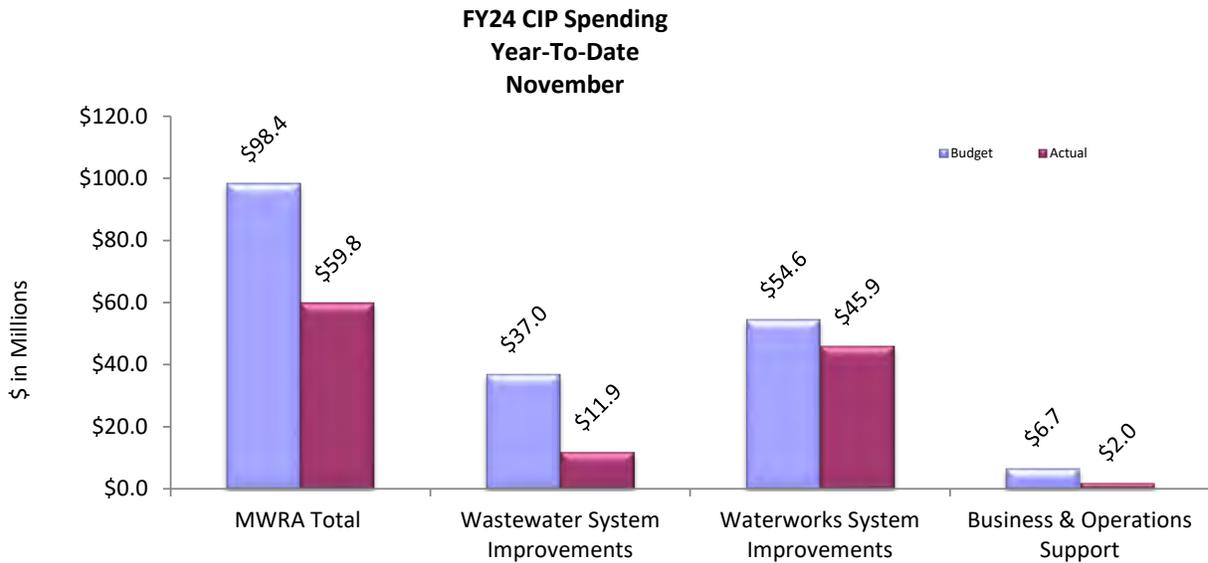
Revenue & Income

Revenues of \$374.1 million were \$3.5 million or 0.9% over the estimate. Investment Income was \$3.2 million or 36.7% over the estimate due to higher than anticipated interest rates and higher average balances. Other User Charges was above the estimate by \$196,000 primarily due to timing of entrance fee payments. Other Revenue was greater than the estimate by \$40,000 or 1.0% due to higher penalties of \$120,000, Permit Fees of \$51,000, Miscellaneous Revenue of \$26,000, partially offset by lower Profit and Loss on Disposal of Equipment of \$101,000 and Energy Revenue of \$63,000.

FY24 Capital Improvement Program

Capital expenditures in Fiscal Year 2024 through November total \$59.8 million, \$38.6 million or 39.2% under planned spending.

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 \$43.5 million, \$21.3 million or 32.9% under planned spending.



Overall, CIP spending reflects the underspending in Wastewater Improvements (\$25.2 million), Waterworks (\$8.7 million) and Business and Operations Support (\$4.7 million). Major variances in Wastewater are primarily due to timing of community grants and loans for the I/I Local Financial Assistance Program, timing of work and construction delays for Braintree/Weymouth Improvements – Construction, delay in performing shaft inspections and issuing NTP for Final Design for the Ward Street & Columbus Park Headworks Upgrades - Design/CA contract, and lower than projected task order work for Deer Island As-Needed Design contracts. This was partially offset by work scheduled for FY24 that was completed in FY23 for Chelsea 008 Pipe Replacement, timing of work for Clinton Screw Pumps Replacement Phase 1 – Construction, and contractor progress for Deer Island Radio Repeater System Upgrade.

Waterworks variances are primarily due to timing of work for Section 89/29 Replacement – Construction, timing of consultant’s work for Tunnel Redundancy Preliminary Design and Massachusetts Environmental Policy Act (MEPA) Review, and timing of services for Geotechnical Support. This was partially offset by timing of work for Waltham Water Pipeline

and contractor progress for CP-2, Sections 25 & 24 – Construction contracts, timing of community loan distributions for the Water Loan Program, and work scheduled in FY23 that was completed in FY24 for the Carroll Plant Chemical Feed System Improvements – Construction.

\$ in Millions	Budget	Actuals	\$ Var.	% Var.
Wastewater System Improvements				
Interception & Pumping	11.4	6.3	(5.1)	-44.5%
Treatment	2.8	3.0	0.2	8.5%
Residuals	0.0	0.0	0.0	0.0%
CSO	1.7	0.5	(1.3)	-71.5%
Other	21.1	2.0	(19.1)	-90.3%
Total Wastewater System Improvements	\$37.0	\$11.9	(\$25.2)	-67.9%
Waterworks System Improvements				
Drinking Water Quality Improvements	1.4	1.1	(0.3)	-23.1%
Transmission	20.6	17.1	(3.4)	-16.7%
Distribution & Pumping	17.4	10.8	(6.6)	-38.1%
Other	15.3	16.9	1.7	10.9%
Total Waterworks System Improvements	\$54.6	\$45.9	(\$8.7)	-15.9%
Business & Operations Support	\$6.7	\$2.0	(\$4.7)	-69.9%
Total MWRA	\$98.4	\$59.8	(\$38.6)	-39.2%

FY24 Spending by Program:

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

Other Wastewater: Net underspending of \$19.1 million

- \$19.1 million for Community I/I due to timing of community distributions of grants and loans.

Water Distribution and Pumping: Net underspending of \$6.6 million

- \$3.8 million for Section 89/29 Replacement – Construction, \$2.3 million for CP-1 NEH Improvements, and \$0.5 million for CP3-Sections 23, 24 & 47 Rehabilitation all due to timing of work.

Interception & Pumping: Net underspending of \$5.1 million

- \$3.0 million for Braintree/Weymouth Improvements – Construction due to timing and long lead time for equipment and delay in fabrication of structural steel.
\$0.6 million for Ward Street & Columbus Park Headworks Upgrades - Design/CA due to delay in performing shaft inspections and issuing NTP for Final Design.

Business & Operations Support: Net underspending of \$4.7 million

- \$1.7 million for As-Needed Design Contracts due to lower than projected task order work.
- \$0.8 million for Security Equipment & Installation due to timing of security initiatives.
- \$0.8 million for Lawson Upgrade, \$0.5 million for MAXIMO Interface Enhancements, \$0.4 million for Oracle Database Appliance, and \$0.3 for Core Switches due to timing and scheduling of work.

Waterworks Transmission: Net underspending of \$3.4 million

- \$2.4 million for Tunnel Redundancy Preliminary Design & MEPA Review due to timing of consultant work.
- \$1.1 million for Geotechnical Support Services due to timing of support services.
- \$0.7 million for WASM 3 Rehabilitation CP-1 due to work scheduled for FY24 performed in FY23.
- This underspending was partially offset by overspending of \$2.7 million for Waltham Water Pipeline due to work scheduled in FY23 that was performed in FY24.

Other Waterworks: Net overspending of \$1.7 million

- \$2.2 million for Local Financial Assistance due to timing of community loan distributions.
- This overspending was partially offset by less than planned spending of \$0.3 million for Electrical Distribution Upgrades at Southborough due to timing of work.

Combined Sewer Overflow: Net underspending of \$1.3 million

- \$0.8 million for Chelsea 008 CSO Pipe Replacement due to work scheduled for FY24 performed in FY23, and \$0.3 million for Fort Point Channel & Mystic due to timing of community work.

Wastewater Treatment: Net overspending of \$0.2 million

- \$0.4 million for Clinton Screw Pumps Replacement Phase 1 – Construction due to timing of work.
- \$0.3 million for Radio Repeater System Upgrade 2 due to contractor progress.
- This overspending was partially offset by underspending of \$0.5 million for Deer Island As-Needed Design contracts due to lower than projected task order work.

Construction Fund Balance

The construction fund balance was \$112.4 million as of the end of November. Commercial Paper/Revolving Loan available capacity was \$170 million.

ATTACHMENTS:

Attachment 1 – Variance Summary November 2023

Attachment 2 – Current Expense Variance Explanations

Attachment 3 – Capital Improvement Program Variance Explanations

ATTACHMENT 1
FY24 Actuals vs. FY24 Budget

	Nov 2023 Year-to-Date				
	Period 5 YTD Budget	Period 5 YTD Actual	Period 5 YTD Variance	%	FY24 Approved
<u>EXPENSES</u>					
WAGES AND SALARIES	\$ 50,100,788	\$ 43,874,243	\$ (6,226,545)	-12.4%	\$ 127,828,242
OVERTIME	2,479,653	2,495,422	15,769	0.6%	5,727,593
FRINGE BENEFITS	10,634,586	9,790,505	(844,081)	-7.9%	25,823,383
WORKERS' COMPENSATION	893,498	944,322	50,824	5.7%	2,144,395
CHEMICALS	11,440,672	9,971,462	(1,469,210)	-12.8%	28,269,124
ENERGY AND UTILITIES	12,515,335	12,228,993	(286,342)	-2.3%	31,064,890
MAINTENANCE	17,427,524	18,700,961	1,273,437	7.3%	38,574,256
TRAINING AND MEETINGS	200,009	171,268	(28,741)	-14.4%	498,597
PROFESSIONAL SERVICES	4,155,680	3,080,538	(1,075,142)	-25.9%	10,410,484
OTHER MATERIALS	1,829,761	2,517,347	687,586	37.6%	7,167,400
OTHER SERVICES	13,744,379	12,656,262	(1,088,117)	-7.9%	38,494,660
TOTAL DIRECT EXPENSES	\$ 125,421,885	\$ 116,431,323	\$ (8,990,561)	-7.2%	\$ 316,003,024
INSURANCE	\$ 1,719,969	\$ 1,790,387	\$ 70,418	4.1%	\$ 4,065,380
WATERSHED/PILOT	7,620,024	6,515,401	(1,104,623)	-14.5%	30,358,187
HEEC PAYMENT	3,687,415	3,685,959	(1,456)	0.0%	7,500,650
MITIGATION	752,691	752,691	-	0.0%	1,779,086
ADDITIONS TO RESERVES	3,325,822	3,325,822	-	0.0%	7,861,035
RETIREMENT FUND	15,972,804	15,972,804	-	0.0%	15,972,804
POST EMPLOYEE BENEFITS	-	-	-	---	2,849,365
TOTAL INDIRECT EXPENSES	\$ 33,078,725	\$ 32,043,063	\$ (1,035,662)	-3.1%	\$ 70,386,507
STATE REVOLVING FUND	\$ 34,625,006	\$ 34,625,006	\$ -	0.0%	\$ 90,798,263
SENIOR DEBT	122,684,599	122,684,599	-	0.0%	294,055,644
DEBT SERVICE ASSISTANCE	(1,187,297)	(1,187,297)	-	0.0%	(1,187,297)
CURRENT REVENUE/CAPITAL	-	-	-	---	19,200,000
SUBORDINATE MWRA DEBT	29,030,570	29,030,570	-	0.0%	69,931,072
LOCAL WATER PIPELINE CP	-	-	-	---	7,744,625
CAPITAL LEASE	1,361,064	1,361,064	-	0.0%	3,217,060
VARIABLE DEBT	-	(1,068,251)	(1,068,251)	---	-
DEFEASANCE ACCOUNT	-	-	-	---	-
DEBT PREPAYMENT	-	-	-	---	4,000,000
TOTAL CAPITAL FINANCE EXPENSE	\$ 186,513,942	\$ 185,445,691	\$ (1,068,251)	-0.6%	\$ 487,759,367
TOTAL EXPENSES	\$ 345,014,552	\$ 333,920,077	\$ (11,094,474)	-3.2%	\$ 874,148,898
<u>REVENUE & INCOME</u>					
RATE REVENUE	\$ 352,959,539	\$ 352,959,539	\$ -	0.0%	\$ 834,268,000
OTHER USER CHARGES	4,851,020	5,047,339	196,319	4.0%	10,390,434
OTHER REVENUE	3,951,527	3,991,104	39,577	1.0%	5,838,903
RATE STABILIZATION	129,242	129,242	-	0.0%	305,482
INVESTMENT INCOME	8,769,024	11,985,032	3,216,008	36.7%	23,346,079
TOTAL REVENUE & INCOME	\$ 370,660,352	\$ 374,112,255	\$ 3,451,903	0.9%	\$ 874,148,898

ATTACHMENT 2
Current Expense Variance Explanations

Total MWRA	FY24 Budget YTD November	FY24 Actuals November	FY24 YTD Actual vs. FY24 Budget		Explanations
			\$	%	
Direct Expenses					
Wages & Salaries	50,100,788	43,874,243	(6,226,545)	-12.4%	Wages and Salaries are under budget by \$6.2 million or 12.4%. Year to date, there have been 104 fewer average FTEs (1,064 versus 1,168 budget), lower average new hire salaries versus retirees, the timing of backfilling vacant positions.
Overtime	2,479,653	2,495,422	15,769	0.6%	Overtime expenses were greater than budget by \$16,000 or 0.6%. Greater than budget spending at Deer Island of \$159,000 due to shift coverage, partially offset by Field Operations of \$93,000 due to less than planned emergency, and planned overtime due to existing vacancies and Engineering & Construction of \$93,000. Year-to-date rainfall was a major contributor for the increased overtime.
Fringe Benefits	10,634,586	9,790,505	(844,081)	-7.9%	Fringe Benefit spending was lower than budget by \$844,000 or 7.9%. Spending was lower than budget in Health Insurance of \$870,000, 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	893,498	944,322	50,824	5.7%	Worker's Compensation expenses were greater than budget by \$51,000 or 5.7%. The higher than budgeted expenses were due to Medical Payments of \$81,000, partially offset by Compensation Payments of \$18,000 and Administrative Expenses of \$12,000. Due to uncertainties of when spending will happen, the budget is spread evenly throughout the year.
Chemicals	11,440,672	9,971,462	(1,469,210)	-12.8%	Chemicals were lower than budget by \$1.5 million or 12.8%. Lower than budget spending on Sodium Hypochlorite of \$673,000 driven by Water Operations of \$940,000 and Wastewater Operations of \$150,000 due to contract pricing, partially offset by DITP of \$432,000 due to additional usage for disinfection and odor control due to higher flows. Carbon Dioxide was lower than budget by \$277,000 primarily due to lower dosage needed, Sodium Bisulfite of \$149,000 primarily driven by Deer Island due to lower quantities to dechlorinate the effluent, Aqua Ammonia of \$116,000 due to lower usage and deliveries due to lower flow, Other Oxidizers (Bioxide) at Framingham PS was lower than budget by \$114,000 due to less deliveries and lower price, and Polymer of \$102,000 due to less than anticipated target use as staff monitor the centrifuge thickening process and to adjust the polymer usage to effectively balance polymer use with centrifuge operation, partially offset by Hydrogen Peroxide of \$89,000 which is added to the DITP influent to reduce elevated H2S levels for odor pretreatment and corrosion control, and allows staff to perform maintenance activities more safely within the tanks, and Ferric Chloride of \$79,000, driven by DITP to keep the orthophosphate levels in the digesters at the desired target level. DITP flows are 4.8% greater than the budget and the CWTP preliminary flows are 5.0% less than the budget through November. 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.

ATTACHMENT 2
Current Expense Variance Explanations

Total MWRA	FY24 Budget YTD November	FY24 Actuals November	FY24 YTD Actual vs. FY24 Budget		Explanations
			\$	%	
Utilities	12,515,335	12,228,993	(286,342)	-2.3%	Utilities were lower than budget by \$286,000 or 2.3%. Underspending in Diesel Fuel of \$1.4 million primarily due to timing of purchasing at Deer Island Treatment Plant (DITP). Purchase is expected later in the fiscal year. Overspending in Electricity of \$1.1 million primarily at DITP of 572,000 driven by new pass through cost associated with the Mystic Power Station and higher demand usage charges due to the many rain events. Electricity in Field Operations was greater than budget by \$457,000 due to higher use, partially offset by lower pricing than budget.
Maintenance	17,427,524	18,700,961	1,273,437	7.3%	Maintenance was greater than budget by \$1.3 million or 7.3%, largely driven by the timing of projects. <i>Maintenance Materials</i> are over budget by \$769,000 million driven by Plant & Machinery Materials of \$625,000 due to timing and higher spending for glass lined pipe/fittings, seals, and grinder cartridges and Electrical Materials of \$86,000 due to timing, and Warehouse Inventory of \$402,000 due to need for spare parts as well as purchasing of materials early due to supply chain issues, partially offset by Special Equipment Materials of \$263,000, Building and Grounds Materials of \$107,000, and Pipeline Materials of \$103,000 also due to timing. <i>Maintenance Services</i> were greater than budget by \$504,000 driven by Computer Software Licenses/Upgrades of \$1.4 million primarily due to timing, partially offset by Electrical Services of \$209,000, Pipeline Services of \$126,000, and Computer Services of \$165,000 due to timing of work, Plant and Machinery Services of \$91,000 million primarily due to timing of work for the Norumbega Cell #3 tank cleaning, partially offset by higher spending for gearbox rebuilds at DITP.
Training & Meetings	200,009	171,268	(28,741)	-14.4%	Training & Meetings was lower than budget by \$29,000 or 14.4% is primarily due to timing driven by MIS (\$17,000), Procurement (\$9,000), Water Redundancy (\$13,000), and Engineering & Construction (\$7,000), partially offset by higher spending in Field Operations \$20,000.
Professional Services	4,155,680	3,080,538	(1,075,142)	-25.9%	Professional Services were less than budget by \$1.1 million or 25.9% driven by lower Other Services of \$511,000 due to timing of services including the Disparity Study, Legal Services of \$176,000 and Computer Systems Consultant of \$189,000, all due to timing.
Other Materials	1,829,761	2,517,347	687,586	37.6%	Other Materials were greater than budget by \$688,000 or 37.6% driven by Computer Hardware of \$449,000 primarily due to timing of equipment purchases, Vehicle Expense of \$140,000 due to timing of vehicle expenses including the electrical vehicle charging stations originally anticipated to be completed by FY23, and Health/Safety of \$67,000 and Vehicle Purchases/Replacements of \$26,000 due to timing of purchases.
Other Services	13,744,379	12,656,262	(1,088,117)	-7.9%	Other Services were lower than budget by \$1.1 million or 7.9% driven by Telecommunications of \$440,000 due to less than anticipated costs, Grit & Screenings Removal of \$234,000 and Sludge Pelletization of \$121,000 due to lower quantities, Police Details of \$101,000 due to less than anticipated need, and Memberships/Dues/Subscriptions of \$95,000 due to timing.
Total Direct Expenses	125,421,885	116,431,323	(8,990,562)	-7.2%	

ATTACHMENT 2
Current Expense Variance Explanations

Total MWRA	FY24 Budget YTD November	FY24 Actuals November	FY24 YTD Actual vs. FY24 Budget		Explanations
			\$	%	
Indirect Expenses					
Insurance	1,719,969	1,790,387	70,418	4.1%	Higher Payments/Claims of \$30,000 and higher Premiums of \$26,000 than budgeted
Watershed/PILOT	7,620,024	6,515,401	(1,104,623)	-14.5%	Lower Watershed Reimbursement of \$1.1 million driven by lower spending on Wages & Salaries, Fringe Benefits, and Equipment/Maintenance.
HEEC Payment	3,687,415	3,685,959	(1,456)	0.0%	HEEC True Up of \$1,456.
Mitigation	752,691	752,690	(1)	0.0%	
Addition to Reserves	3,325,822	3,325,822	-	0.0%	
Pension Expense	15,972,804	15,972,804	-	0.0%	
Post Employee Benefits	-	-	-		
Total Indirect Expenses	33,078,725	32,043,063	(1,035,662)	-3.1%	
Debt Service					
Debt Service	187,701,239	186,632,988	(1,068,251)	-0.6%	Lower than budget debt service was a result of lower than budget variable interest expense of \$1,068,000 due to lower interest rates.
Debt Service Assistance	(1,187,297)	(1,187,297)	-	0.0%	
Total Debt Service Expenses	186,513,942	185,445,691	(1,068,251)	-0.6%	
Total Expenses					
Total Expenses	345,014,552	333,920,077	(11,094,474)	-3.2%	

ATTACHMENT 2
Current Expense Variance Explanations

Total MWRA	FY24 Budget YTD November	FY24 Actuals November	FY24 YTD Actual vs. FY24 Budget		Explanations
			\$	%	
Revenue & Income					
Rate Revenue	352,959,539	352,959,538	(1)	0.0%	
Other User Charges	4,851,020	5,047,339	196,319	4.0%	Other User Charges were \$196,000 or 4.0% greater than budget due to the timing of entrance fee payments.
Other Revenue	3,951,527	3,991,104	39,577	1.0%	Other Revenue was \$40,000 or 1.0% greater than budget due to Penalties of \$120,000, Permit Fees of \$51,000, and Miscellaneous Revenue of \$26,000, partially offset by Profit and Loss on Disposal of Equipment of \$101,000 and Energy Revenue of \$63,000.
Rate Stabilization	129,242	129,242	-	0.0%	HEEC Reserve.
Investment Income	8,769,024	11,985,032	3,216,008	36.7%	Investment Income is over budget due to higher than budgeted interest rates.
Total Revenue	370,660,352	374,112,255	3,451,903	0.9%	
Net Revenue in Excess of Expenses	25,645,800	40,192,178	14,546,377		

**ATTACHMENT 3
FY24 CIP Variance Report (\$000s)**

	FY24 Budget November	FY24 Actuals November	Actuals vs. Budget		Explanations
			\$	%	
Wastewater					
Interception & Pumping (I&P)	\$11,417	\$6,335	(\$5,082)	-44.5%	<u>Underspending</u> Braintree/Weymouth Improvements - Construction: \$3.0M (timing of work and long lead time for equipment and delay in fabrication of structural steel) Ward Street & Columbus Park Headworks Upgrades - Design/CA: \$614k (delay in performing shaft inspections and issuing NTP for Final Design) Chelsea Creek Upgrades - Design/CA: \$400k (claim settlement)
Treatment	\$2,765	\$3,001	\$236	8.5%	<u>Overspending</u> Clinton Screw Pumps Replacement Phase 1 - Construction: \$390k (timing of work) Radio Repeater System Upgrade 2: \$305k (contractor progress) <u>Offset Underspending</u> As-Needed Design: \$511k (lower than projected task order work)
Residuals	\$0	\$0	\$0	0.0%	
CSO	\$1,750	\$498	(\$1,252)	-71.5%	<u>Underspending</u> Chelsea 008 Pipe Replacement: \$764k (work scheduled for FY24 performed in FY23) Fort Point Channel & Mystic: \$347k (timing of community work)
Other Wastewater	\$21,099	\$2,039	(\$19,060)	-90.3%	<u>Underspending</u> I/I Local Financial Assistance: \$19.1M (timing of community distributions of grants and loans)
Total Wastewater	\$37,031	\$11,874	(\$25,157)	-67.9%	
Waterworks					
Drinking Water Quality Improvements	\$1,372	\$1,055	(\$317)	-23.1%	<u>Underspending</u> CWTP Technical Assistance: \$897k (lower than projected task order work) <u>Offset Overspending</u> CWTP Chemical Feed System Improvements - Construction: \$565k (work scheduled for FY23 performed in FY24)

ATTACHMENT 3
FY24 CIP Variance Report (\$000s)

	FY24 Budget November	FY24 Actuals November	Actuals vs. Budget		Explanations
			\$	%	
Transmission	\$20,588	\$17,142	(\$3,446)	-16.7%	<u>Underspending</u> Tunnel Redundancy Preliminary Design & MEPA Review: \$2.4M (timing of consultant work) Geotechnical Support Services: \$1.1M (timing of support services) WASM 3 Rehabilitation CP-1: \$742k (work scheduled for FY24 performed in FY23) WASM 3 - MEPA/Design/CA/RI: \$548k (timing of consultant work) <u>Offset Overspending</u> Waltham Water Pipeline - Construction and REI: \$2.7M (work scheduled in FY23 peerformed in FY24)
Distribution & Pumping	\$17,368	\$10,759	(\$6,609)	-38.1%	<u>Underspending</u> Section 89/29 Replacement - Construction: \$3.8M, CP-1 NEH Improvements: \$2.3M, and CP3-Sections 23, 24 & 47 Rehabilitation: \$472k (timing of work) <u>Offset Overspending</u> CP-2, Sections 25 & 24 - Construction: \$736k (contractor progress)
Other Waterworks	\$15,257	\$16,927	\$1,670	10.9%	<u>Overspending</u> Local Water Pipeline Financial Assistance Program: \$2.2M (timing of community loan distributions) <u>Offset Underspending</u> Electrical Distribution Upgrades at Southborough: \$305k (timing of work)
Total Waterworks	\$54,585	\$45,882	(\$8,703)	-15.9%	
Business & Operations Support					
Total Business & Operations Support	\$6,736	\$2,025	(\$4,712)	-69.9%	<u>Underspending</u> As-Needed Design Contracts: \$1.7M (lower than projected task order work) Security Equipment & Installation: \$842k (timing of security initiatives) Lawson Upgrade: \$779k, MAXIMO Interface Enhancements: \$500k, Oracle Database Appliance: \$388k, and Core Switches: \$320k (timing of work) <u>Offset Overspending</u> Office Space Modifications: \$821k (FY23 planned work completed in FY24)
Total MWRA	\$98,352	\$59,780	\$38,572	39.2%	