



# MASSACHUSETTS WATER RESOURCES AUTHORITY

Deer Island  
33 Tafts Avenue  
Boston, MA 02128

## **BOARD OF DIRECTORS' MEETING**

Telephone: (617) 242-6000  
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**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

**Date:** Wednesday, July 19, 2023  
**Time:** 1:00pm  
**Location:** Deer Island Reception/Training Building, 1<sup>st</sup> Floor  
33 Tafts Avenue  
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 for Board Members and Panelists:

<https://mwra.webex.com/mwra/j.php?MTID=mb40d6ea8974ced78313f8f1de109037d>

Panelist Password (if prompted): 987654

## **REVISED AGENDA**

- I. **APPROVAL OF MINUTES**
- II. **REPORT OF THE CHAIR**
- III. **REPORT OF THE EXECUTIVE DIRECTOR**
- IV. **EXECUTIVE SESSION**
  - i. Approval of June 21, 2023 Executive Session Minutes
  - A. **Litigation**
    - 1. G.L. c. 21E, Sec. 4A notice from Massachusetts Natural Fertilizer Co., Inc., Otter Farm and The Newark Group (verbal)
- V. **ADMINISTRATION, FINANCE & AUDIT**
  - A. **Information**
    - 1. Delegated Authority Report – June 2023
    - 2. MWRA Energy and Sustainability Program Overview
  - B. **Contract Amendments/Change Orders**
    - 1. Security Equipment Maintenance and Repair Services: Viscom Systems, Inc., Contract EXE-043, Change Order 2

**VI. WASTEWATER POLICY & OVERSIGHT**

**A. Contract Awards**

1. Deer Island Treatment Plant Residuals Facility Rehabilitation – Design, Bidding and Engineering Services During Construction: CDM Smith, Inc., Contract 7052

**B. Contract Amendments/Change Orders**

1. Nut Island Headworks Odor Control and HVAC System Improvements: Walsh Construction Co. II, LLC, Contract 7548, Change Order 15

**VII. WATER POLICY & OVERSIGHT**

**A. Information**

1. Update on Contract 7457, Section 101 Pipeline Extension, Waltham

**VIII. PERSONNEL & COMPENSATION**

**A. Approvals**

1. PCR Amendments – July 2023
2. Appointment of Rita Mercado, Deputy Director, Procurement, Administration Division

**IX. CORRESPONDENCE TO THE BOARD**

**X. OTHER BUSINESS**

**XI. ADJOURNMENT**

## MASSACHUSETTS WATER RESOURCES AUTHORITY

Meeting of the Board of Directors

June 21, 2023

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A meeting of the Massachusetts Water Resources Authority (“MWRA”) Board of Directors was held on June 21, 2023 at MWRA’s headquarters at Deer Island in Boston, and also via remote participation.

Chair Tepper presided at MWRA headquarters. Also present at MWRA headquarters were Board Members Flanagan, Pappastergion, Peña, Taverna, Jack Walsh and Patrick Walsh. Board Members Foti, Vitale, White-Hammond and Wolowicz attended via remote participation.

MWRA Executive Director Frederick Laskey, General Counsel Carolyn Francisco Murphy, Chief Operating Officer David Coppes, Deputy Chief Operating Officer Carolyn Fiore, Director of Finance Thomas Durkin, Director of Administration Michele Gillen, Special Assistant for Affirmative Action Patterson Riley, Human Resources Director Wendy Chu, Deputy Director of Finance/Treasurer Matthew Horan, Business Applications Manager Paul Fentross, MIS Director Paula Weadick, Deer Island Treatment Plant Director David Duest, ENQUAL Director Betsy Reilley, Director of Intergovernmental Affairs Sean Navin, Environmental Permitting Project Manager Katherine Ronan, and Assistant Secretaries Ria Convery and Kristin MacDougall participated at MWRA headquarters.

Vandana Rao, Executive Office of Environmental Affairs (EEA) attended via remote participation. Joseph Favaloro, Matthew Romero, and James Guiod, MWRA Advisory Board, participated from MWRA headquarters.

Chair Tepper called the meeting to order at 1:02pm.

### ROLL CALL

MWRA General Counsel Francisco Murphy took roll call of Board Members in attendance and announced that Board Members Foti, Vitale and Wolowicz were participating remotely. The Chair announced that except for Executive Session, the meeting was being held at MWRA 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. Chair Tepper announced that the meeting would move into Executive Session after the Report of the Executive Director, and that the Open Session would resume after the adjournment of Executive Session. She also announced that individual roll call votes would be conducted after each motion was made and given an opportunity for discussion.

### APPROVAL OF MAY 24, 2023 MINUTES

**A motion was duly made and seconded to approve the minutes of the Board of Directors’ meeting of May 24, 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>
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Tepper  
Flanagan  
Foti  
Pappastergion  
Peña

Taverna

Vitale  
J. Walsh  
P. Walsh  
Wolowicz

(ref. I)

#### REPORT OF THE EXECUTIVE DIRECTOR

Fred Laskey, MWRA Executive Director, offered MWRA LGBTQ+ Pride lanyards to Board Members and invited them to join staff at MWRA's second annual LBTTQ+ Pride Walk at Deer Island, followed by a lunch in celebration of Caribbean American Heritage month, on June 23, 2023. He then reported that Waltham had issued a street opening permit for the Section 101 Extension – Waltham project, and that night work began during the week of June 12. Next, Mr. Laskey advised that MWRA had received a Draft Security Audit from the State Auditor's Office; he advised that staff were preparing comments on the findings, and would keep Board Members updated. He then noted that staff were working with the State Police on security for the annual July 4<sup>th</sup> Boston Pops Fireworks Spectacular by inspecting and welding hatch covers near the Charles River Esplanade.

Mr. Laskey then announced the forthcoming retirements of Joseph Favaloro, Executive Director, MWRA Advisory Board, Carolyn Fiore, MWRA Deputy Chief Operating Officer, and, John Colbert, MWRA Chief Engineer. Board Members and Mr. Laskey thanked and congratulated the retirees, who offered brief remarks in return. During this discussion Vice Chair Pappastergion recounted his experiences working with Mr. Favaloro, and announced that the new Board Room at Deer Island would be named in Mr. Favaloro's honor. On behalf of MWRA customer communities, Mr. Favaloro thanked MWRA Board Members for their support and hard work. Finally, Mr. Favaloro introduced his successor, Matthew Romero.

There was brief, general discussion about the City of Waltham street opening permit and Section 101 construction activities. (ref. III)

#### EXECUTIVE SESSION

Chair Tepper requested that the Board move into Executive Session to discuss Collective Bargaining, since Open Session may have a detrimental effect on the bargaining position of the Authority. She announced that the planned topic of discussion in Executive Session was Collective Bargaining – Units 1, 2, 3, 6 and 9. 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		
Foti		
Pappastergion		
Peña		
Taverna		
Vitale		
J. Walsh		
P. Walsh		
Wolowicz		

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

The Board moved to Executive Session to discuss Collective Bargaining since discussing such in Open Session could have a detrimental effect on the bargaining position of the Authority.

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

The meeting entered Executive Session at 1:17pm and adjourned at 1:25pm.

(Rev. White-Hammond joined the meeting during Executive Session.)

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

Collective Bargaining Announcement

Chair Tepper announced that during Executive Session the Board voted to approve and ratify one-year collective bargaining agreements with United Steelworkers Local 9358 Unit 1 and United Steelworkers Local 9360 Unit 6, for the period July 1, 2023 to June 30, 2024, which includes across-the-board

increases of 4% in July 2023 and January 2024 and increases to longevity pay at each milestone and, for Unit 1, an increase to the top step of the salary chart.

The Chair further announced that the Board also voted in Executive Session to approve and ratify one-year collective bargaining agreements with NAGE Unit 3 and MOSES Unit 9, for the period July 1, 2023 to June 30, 2024, which includes increases to the top step of the respective salary charts, across-the-board increases of 4% in July 2023 and January 2024, and increases to the Authority's contributions to the respective Health & Welfare funds.

Lastly, Chair Tepper announced that the Board voted in Executive Session to approve and ratify a one-year collective bargaining agreement with AFSCME Unit 2, for the period April 1, 2023 to March 31, 2024, which includes across-the-board increases of 4% in April 2023 and October 2023, as well as increases to longevity pay at each milestone.

## PERSONNEL AND COMPENSATION

### Approvals

#### PCR Amendments – June 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, summarized the six proposed PCR Amendments, including a title and grade change to one filled position in the Affirmative Action Division; the creation of a new position in the Administration Division - MIS Department; title and grade changes to two vacant positions in the Operations Division - Laboratory Services Department; and, two salary adjustments to alleviate salary collision with direct reports in the Administration Division - MIS Department and in the Operations Division - Deer Island Treatment Plant Department.

Mr. Pappastergion asked if staff expected to propose more PCR Amendments to alleviate salary collisions in the future. Ms. Chu explained that the PCR Amendments proposed in this agenda item addressed the only current salary collisions for non-union managers. She advised that the matter of potential salary compression would be discussed in the agenda item for non-union manager compensation.

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		
Foti		
Pappastergion		
Peña		
Taverna		
Vitale		

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

(ref. V A.1)

Appointment of Billy J. Krukowski, Manager of Western Maintenance

**A motion was duly made and seconded to approve the appointment of Mr. Billy Krukowski to the position of Manager, Western Maintenance, Operations Division (Non-Union Grade 14) at an annual salary of \$145,000 commencing on a date to be determined by the Executive Director.**

Ms. Chu described the candidate selection process, and the proposed 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		
Foti		
Pappastergion		
Peña		
Taverna		
Vitale		
J. Walsh		
P. Walsh		
White-Hammond		
Wolowicz		

(ref. V A.2)

Appointment of Andrew W. Chung, Assistant Director, Internal Audit

**A motion was duly made and seconded to approve the appointment of Andrew Chung to the position of Assistant Director, Internal Audit (Non-Union, Grade 13), at an annual salary of \$115,000 commencing on a date to be determined by the Executive Director.**

Ms. Chu described the candidate selection process, and the proposed 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:





Appointment of Rebecca M. Weidman, Deputy Chief Operating Officer

**A motion was duly made and seconded to approve the appointment of Ms. Rebecca Weidman to the position of Deputy Chief Operating Officer, Operations Division (Non-Union Grade 17) at an annual salary of \$182,808 commencing on a date to be determined by the Executive Director.**

Ms. Chu described the candidate selection process, and the proposed candidate's work experience and qualifications.

Mr. Pappastergion asked if the MWRA planned to expeditiously backfill the positions vacated by the internal candidates recommended for promotions at this meeting. Mr. Laskey responded in the affirmative. There was brief, general discussion about the internal candidates interviewed for the Deputy Chief Operating Officer position.

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		
Foti		
Pappastergion		
Peña		
Taverna		
Vitale		
J. Walsh		
P. Walsh		
White-Hammond		
Wolowicz		

(ref. V A.5)

FY2024 Non-Union Compensation and Extension of Employment Contract for Kathleen Murtagh, Director of Tunnel Redundancy

**A motion was duly made and seconded that the Board of Directors take the following actions relative to the MWRA's FY24 non-union compensation review: authorize the Executive Director to implement a 4% across-the-board compensation adjustment for eligible non-union managers effective July 1, 2023; authorize the Executive Director to implement a 4% across-the-board compensation adjustment for non-union managers effective January 6, 2024; and, approve a revision to the non-union salary ranges for FY24 as set forth in Attachment A of the June 21, 2023 Staff Summary, and presented filed with the records of this meeting.**

**Further, a motion was made and seconded that Board of Directors adopt the Executive Director's performance rating of Excellent for Kathleen M. Murtagh, Director of the Tunnel Redundancy Program for FY23 and extend the term of her employment agreement to June 3, 2026 and adjust her salary**

**consistent with other nonunion managers.**

Mr. Laskey noted that MWRA has a very strong management team, and added that in his view, it is important for non-union staff to be recognized and paid commensurately with pay increases that align with those of union employees. Mr. Laskey also recognized the contributions of MWRA's union staff. He explained that the proposed pay increases for non-union managers and Ms. Murtagh were equivalent to those approved for collective bargaining staff. Mr. Laskey further explained that the proposed non-union management pay increases were needed to avoid salary compression and collision. He then advised that 27 non-union managers would be paid less than their reports if the proposed salary increases were not approved.

Mr. Pappastergion asked if the proposed increases would eliminate all potential salary collisions with the exception of the two PCR Amendments that were approved in the earlier agenda item. Mr. Laskey and Michele Gillen, MWRA Director of Administration, responded in the affirmative. Mr. Laskey briefly noted that Kathleen Murtagh, Director of Tunnel Redundancy, is a contract employee, and explained that the proposed salary increases for Ms. Murtagh and non-union managers were intended to maintain parity.

Board Member Foti asked if he should abstain from voting on the proposed motion because Ms. Murtagh is a member of the Board of Directors of MassDOT. General Counsel Francisco Murphy advised that Mr. Foti could choose to abstain from voting to avoid the appearance of a conflict of interest. Mr. Foti noted for the record that he supported the motion, but would abstain from the vote to avoid the appearance of a conflict of interest.

Chair Tepper expressed her support for the proposed pay rate increases for non-union managers and Ms. Murtagh.

Board Member Vitale agreed with the Chair, and requested more information about the performance evaluation process for Ms. Murtagh. Mr. Laskey briefly described the performance evaluation process, and noted that Ms. Murtagh's performance is phenomenal. Mr. Vitale agreed with Mr. Laskey's assessment.

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		
		Foti
Pappastergion		
Peña		
Taverna		

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

Mr. Foti reiterated his support of the motion. (ref. V A.6)

#### ADMINISTRATION, FINANCE AND AUDIT

##### Information

##### Delegated Authority Report – May 2023

Ms. Gillen invited Board Members' questions on the report.

Board Member Jack Walsh requested clarification about the cost difference of Delegated Authority Report items P-16 (Purchase of Twelve Grit Screws, Chelsea Warehouse) and P-19 (Purchase of Four Grit Screws, Deer Island). David Coppes, MWRA Chief Operating Officer, explained that the grit crews for items P-16 and P19 were different in size, and briefly described their functions. There was brief, general discussion about the cost of grit screws.

Mr. Vitale asked for more information about the M/WBE status of the service provider for item P-11 (Janitorial Services at the Core Storage Facility). Ms. Gillen advised that staff would provide that information as soon as possible.

Mr. Vitale requested the average price per gallon for item P-20 (Supply and Delivery of Diesel Fuel). Mr. Coppes explained that the cost was \$2.38 per gallon. Ms. Gillen added that the cost of item P-20 was approximately \$1.20 per gallon lower than MWRA's previous diesel fuel purchase.

Chair Tepper asked if there was further discussion or questions from the Board. Hearing none, she moved to the next Information item. (ref. VI A.1)

##### FY2023 Financial Update and Summary through May 2023

Thomas Durkin, MWRA Director of Finance, reported that the financial trends observed throughout FY2023, including underspending for wages and salaries and increasing costs of chemicals, continued through May 2023. He advised that staff were monitoring the issue of variable rate interest volatility very closely and explained that in staff's view, MWRA was well positioned with respect to FY2024 budget assumptions. Finally, Mr. Durkin noted that the FY2023 Fiscal Year and payroll period would end on June 30, 2023.

There was general discussion about inflation and the cost of chemicals, their impacts on MWRA's budgets, and potential drivers for materials cost increases, such as rising costs for labor and transportation.

Mr. Vitale asked how the Total FY2023 budget variance (-42.4%) compared to those of previous years. Mr. Durkin advised that the FY2023 variance was higher than those seen in previous years (ranging from approximately -25% to -27%). He explained that factors contributing to the FY2023 variance included costs for labor and supply chain issues. He further explained that FY23's budget bore the cumulative burden of the past five years' variances, because FY23 was the final year of the Capital Improvement Program five-year spending Cap. Finally, Mr. Durkin briefly described the five-year spending Cap cycle.

Committee Chair Foti asked if there was further discussion or questions from the Board. Hearing none, he moved to Approvals. (ref. V A.2)

### Approvals

#### Final FY2024 Capital Improvement Program

**A motion was duly made and seconded to approve the FY24 Final Capital Improvement Program with planned spending of \$302.6 million, including \$245.6 million in project spending and \$57.0 million in community assistance loan programs.**

**Further, a motion was duly made and seconded to approve the 5-year spending Cap of \$1.4 billion for the FY24-28 period.**

Mr. Durkin described the FY2024 CIP development and review process, and requested Board approval for the proposed Final FY2024 CIP and FY2024-2028 spending Cap.

Mr. Pappastergion asked if MWRA's Final FY2024 CIP and the spending Cap aligned with the recommendations of the MWRA Advisory Board ("Advisory Board"). Mr. Durkin responded in the affirmative. Mr. Pappastergion then asked if any Advisory Board recommendations were not reflected in the Final FY2024 CIP. Mr. Durkin explained that all Advisory Board recommendations regarding projects and costs were reflected in the CIP; however, some general observations and comments were not. He further explained that staff have introduced a new spending adjustment element into the CIP for 2024 to address variances and promote transparency regarding anticipated spending. He advised that the Advisory Board will monitor the FY2024 spending adjustment and assess its efficacy.

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

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		
Foti		
Pappastergion		
Peña		
Taverna		
Vitale		
J. Walsh		

<u>Yes</u>	<u>No</u>	<u>Abstain</u>
P. Walsh		
White-Hammond		
Wolowicz		

(ref. VI B.1)

Final FY2024 Current Expense Budget

**A motion was duly made and seconded to adopt the Final FY24 Current Expense Budget (CEB) set forth in Attachment A of the June 21, 2023 Staff Summary presented and filed with the records of this meeting, with current revenue and expense of \$874,148,898. Further, a motion was duly made and seconded to adopt the Final FY24 Operating Budget (Trustee’s Budget) set forth in Attachment B of the June 21, 2023 Staff Summary presented and filed with the records of this meeting.**

Mr. Durkin noted that the Final FY2024 Current Expense Budget (“CEB”), meets the Advisory Board’s “2.4% by ‘24” challenge (a 2.4% threshold for overall, combined water and sewer rate assessment increases by FY2024), and “4, no more” challenge (a 4% threshold for assessment increases) for the next several years.

Mr. Pappastergion congratulated MWRA and Advisory Board staff for successfully preparing a CEB that addresses Advisory Board recommendations and meets the “2.4 by ‘24 and 4, no more” challenges. Matthew Romero, MWRA Advisory Board Deputy Executive Director, thanked MWRA staff for their continued cooperation and engagement. Mr. Durkin congratulated MWRA Advisory Board Executive Director Joseph Favaloro on his upcoming retirement and thanked him for his contributions to MWRA’s budgets.

Mr. Vitale thanked and congratulated MWRA and Advisory Board staff for a job well done and requested clarification on the budgeted Current Revenue/Capital line item amount (\$18,200,000) in Attachment B of the Staff Summary for this agenda item vs. the 11-month amount (\$0.00 cited in Attachment C in the Staff Summary for agenda item VI A.2: *Financial Update and Summary through May 2023*. Matthew Horan, MWRA Deputy Director of Finance/Treasurer, explained that the Current Revenue/Capital line item is only recognized at the end Fiscal Year for bond resolution compliance purposes.

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		
Foti		
Pappastergion		
Peña		
Taverna		
Vitale		

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

(ref. VI B.2)

#### Final FY2024 Water and Sewer Assessments

**A motion was duly made and seconded to adopt, effective July 1, 2023, the water and sewer assessments, rates and charges as set forth in the June 21, 2023 Staff Summary as presented and filed with the records of this meeting, including as further detailed in Attachments 1, 2 and 3 of said Staff Summary.**

Mr. Durkin summarized the proposed Final FY2024 Water and Sewer Assessments and requested the Board of Directors' approval.

Mr. Vitale requested more information about the annual household water usage amounts cited in Table 3 of the Staff Summary. Mr. Durkin explained that staff generally present two water usage amounts (61,000 gallons and 90,000 gallons) for discussion to help readers more easily estimate their own households' water costs on a realistic scale. Mr. Durkin noted that the 61,000 gallon figure is more commonly used in water industry literature.

Board Member Taverna advised that it is critical for MWRA's Final Water and Sewer Assessments to be equal to or less than Preliminary Water and Sewer assessments to facilitate municipal budgeting.

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		
Foti		
Pappastergion		
Peña		
Taverna		
Vitale		
J. Walsh		
P. Walsh		
White-Hammond		
Wolowicz		

(ref. VI B.3)

Contract AwardsInfor Lawson CloudSuite Upgrade

**A motion was duly made and seconded to approve the recommendation of the Consultant Selection Committee to award Contract 7286, Infor Lawson Upgrade, to RPI Consultants, LLC, and to authorize the Executive Director, on behalf of the Authority, to execute said contract in an amount not to exceed \$8,849,440.00 for a contract term of 3 years from the Notice to Proceed.**

Mr. Jack Walsh asked how many employees worked for RPI Consultants, LLC (“RPI”), and where the company was located. Paul Fentross, MWRA Business Applications Manager, advised that RPI employed approximately 350 staff and was headquartered in the Baltimore/Washington DC area. Mr. Fentross added that RPI are known specialists in enterprise migrations and implementations. Mr. Jack Walsh asked how many customers RPI had. Mr. Fentross explained that he would provide more detailed information as soon as possible, and noted that RPI had provided a list of past projects in their proposal. Paula Weadick, MWRA Director of MIS, added that RPI’s references were very strong, and that the selection committee process included a financial review of the bidding firms.

Mr. Vitale asked who currently maintains MWRA’s Infor Lawson (“Lawson”) application, and requested a brief overview of the project’s scope. Ms. Weadick explained that MWRA’s Lawson application is two versions behind the current version (Infor Software-as-a-Service platform Infor CloudSuite, “Infor CloudSuite”), and that if approved, RPI would manage the migration of MWRA’s existing, on premise Lawson solution to Infor CloudSuite. She then described MWRA’s uses for Lawson, including financial management, workforce management, e-procurement, supply chain and inventory management and budgeting. Finally, Ms. Weadick explained that the Infor CloudSuite upgrade would provide greater functionality, accessibility and stability for Lawson, and briefly summarized the scope of the proposed contract, including training and maintenance.

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		
Foti		
Pappastergion		
Peña		
Taverna		
Vitale		
J. Walsh		
P. Walsh		
White-Hammond		
Wolowicz		

(ref. VI C.1)

## WASTEWATER POLICY AND OVERSIGHT

### Information

#### Deer Island Wind Turbine Generator 1 Failure

David Duest, Deer Island Treatment Plant Director, made a presentation on the May 29, 2023 failure of Deer Island Wind Turbine Generator 1 ("WTG-1"). He began with a brief overview of MWRA's Deer Island Diversified Green Energy Program, which includes two wind turbines. He then summarized the turbines' specifications, procurement, installation and cost. Mr. Duest then discussed an April 2022 WTG-1 main bearing failure, and steps taken by the maintenance contractor to place the nacelle in a locked position (to prevent the nacelle from rotating) and place the control system into an emergency mode (the safest location to allow the blades to feather and turn out of the wind if needed) while the replacement bearing was ordered, with the expectation that the turbine would be back to full operation by late July 2023.

Next, Mr. Duest presented the timeline of WTG-1's Generator 1 failure on May 29, 2023, including a report by a citizen walking on the Deer Island Public Access trail at approximately 10:00am on May 29 that the turbine appeared to be spinning faster than normal, making loud noises and parts were starting to fly off the turbine; the activation of the MWRA Command Center on Deer Island with the cooperation of police, fire and EMS personnel; the immediate issuance of notifications to stakeholders; the securing of the site, including public access restrictions; harbor patrols to prevent boat traffic nearby; notifications to the Federal Aviation Administration and engagement with the media.

Mr. Duest then discussed the timeline of securing WTG-1. A video clip of the local news coverage was played. Mr. Duest reported that MWRA's wind turbine maintenance contractor (Baldwin) made several unsuccessful attempts to engage the braking system through the control system at the base of the WTG-1 tower. He noted that at MWRA staff's recommendation, Baldwin then moved the controller from the second turbine ("WTG-2") to WTG-1. He explained that moving the controller allowed the contractor to establish communication with the equipment in the WTG-1 nacelle; however, the braking system would not engage, indicating a failure in the hydraulic system. Mr. Duest added that because of WTG-1's unsafe conditions, contractor technicians could not climb its tower until the winds died down or the rotors stopped.

Next, Mr. Duest described actions taken after WTG-1's blades stopped rotating at approximately 2:20pm. He reported that once it was safe to do so, turbine maintenance contractors climbed the tower, mechanically locked the blades, and assessed the damage, which included failures of the hydraulic breaking system, the main shaft between the hub and rotor, and, the gearbox generator. Next, Mr. Duest reported, the area remained secured while staff made preparations for making WTG-1 safe. He noted that that debris from the WTG-1 failure was pitched in a direction away from MWRA facilities, and that there were no injuries.

Mr. Duest then discussed efforts to secure the site and make WTG-1 safe. He reported that staff obtained a DCAMM waiver for emergency work, and described the process of soliciting a contractor. He noted that the selected contractor, O'Connor Constructors, was the lowest bidder, and was authorized



to begin the work on May 31, 2023. Mr. Duest reported that work to make WTG-1 safe began on June 1, 2023 and was substantially complete during the week of June 7, 2023.

Finally, Mr. Duest described the next steps, including the proactive pause of WTG-2 out of an abundance of caution; third-party safety inspections and any necessary repairs for WTG-2 and the Charlestown Wind Turbine; and the engagement of a wind turbine expert to perform a full failure analysis of WTG-1. Committee Chair Jack Walsh asked if there was any discussion or questions from the Board. Hearing none, he moved to the next Information item. (ref. VII A.1)

Deer Island Wastewater Treatment Plant Draft National Pollutant Discharge Elimination System (NPDES) Permit and Draft State Surface Water Discharge Permit

Betsy Reilley, MWRA ENQUAL Director, presented an overview of draft National Pollutant Discharge Elimination System (NPDES) permit (“Draft Permit”) requirements for the Deer Island Wastewater Treatment Plant and Combined Sewer Overflow outfalls, issued on May 31, 2023. She advised that the Draft Permit names 43 MWRA wastewater communities as co-permittees.

Next, Ms. Reilley presented a brief summary of the Draft Permit comment process. She explained that the public comment period for the Draft Permit extends through August 30, 2023. Ms. Reilley advised that staff are reviewing the impacts of the Draft Permit requirements with regards to costs and MWRA’s operations and ability to comply. She further advised that staff would submit comments on the Draft Permit for EPA’s consideration and stressed the importance of doing so, noting that by submitting comments, MWRA preserves the right to appeal elements of the permit.

Ms. Reilley then discussed key elements of the Draft Permit for co-permittees, including federal requirements for matters such as Sanitary Sewer Overflow (“SSO”) reporting; backup power; infiltration/inflow reduction programs and Operations and Maintenance plan updates; and, annual reporting. She highlighted the Draft Permit’s requirement for co-permittees to develop “Major Storm Event Plans,” and report on the progress of their implementation. She advised that staff would review that section carefully.

Next, Ms. Reilley described elements of the Draft Permit that MWRA staff have been tracking closely with regards to Deer Island effluent plant limits, including a seasonal *Enterococcus* limit that takes into account MWRA’s uniquely designed outfall; requirements for continued monitoring and reporting of nitrogen, but with no limits; additional limits for TSS and cBOD; the elimination of Contingency Plan requirements; modifications to ambient monitoring; and, a stricter acute toxicity limit. She noted that staff were concerned about the stricter acute toxicity limit because it doesn’t take Deer Island effluent dilution into account.

Ms. Reilley continued to discuss elements of the Draft Permit being tracked by staff, such as PFAS monitoring requirements for influent, effluent, biosolids and industrial discharges; Combined Sewer Overflow (CSO) monitoring requirements, which staff will review carefully to ensure consistency with MWRA’s evolving CSO Control Program; and Environmental Justice requirements. Ms. Reilley noted

staff's concerns regarding new Draft Permit requirements for blending, which do not adopt language in an order entered into the Boston Harbor court case that allows MWRA blending at a 700 MGD rate to minimize CSO impacts.

Ms. Reilley then explained that staff were assessing the cost implications of the Draft Permit, and advised that they were expected to be significant. She described some Draft Permit requirements projected to effect MWRA costs such as Major Storm Planning; algal bloom monitoring; expanded PFAS monitoring; disinfection and dechlorination for seasonal *Enterococcus*; dye studies for CSO outfalls; video inspections of the Deer Island Outfall; and, costs for co-permittees.

Finally, Ms. Reilley discussed next steps in the Draft Permit process. She explained that staff will provide a briefing to the MWRA Advisory Board Operations Committee, and submit written comments on the Draft Permit by the August 30, 2023 deadline. Finally, Ms. Reilley noted that EPA must develop a written response to every comment received, advising that there is no timeline for EPA to finalize the permit, and that the finalization process could take months or even years.

Mr. Pappastergion asked for clarification on the potential costs and responsibilities for MWRA's community co-permittees. Ms. Reilley explained that the NPDES Permit requirements would apply to each community co-permittee on an individual basis. Mr. Pappastergion asked if community co-permits could negatively impact MWRA. Ms. Reilley explained that EPA has stated that each co-permittee would be responsible for its own-compliance, and that an individual community's non-compliance would not reflect on the other co-permittees. She further explained that staff are reviewing the co-permitting matter carefully to avoid any potential vulnerabilities for MWRA.

Mr. Taverna asked if EPA had defined "Major Storm Event," with regards to the Draft Permit's requirement. Ms. Reilley responded in the affirmative, and explained that "Major Storm Event" was expected to be defined as a 20-30 year storm, but also specifies 80-100 year projections. She noted that EPA has provided some guidance documents on Major Storm Events, which staff are reviewing. Mr. Taverna asked if EPA had defined "Backup Power." Ms. Reilley explained that she would provide that information at a later date. Mr. Taverna asked if the Draft Permit's changes to MWRA's Ambient Monitoring Plan would result in the dissolution of MWRA's Outfall Monitoring Science Advisory Panel ("OMSAP"). Ms. Reilley responded in the affirmative, noting that another, similar group outside the NPDES Permit's purview could potentially be formed.

(During the presentation, Ms. Wolowicz temporarily left the meeting, and Rev. White-Hammond left the meeting.)

Committee Chair Jack Walsh asked if there was further discussion or questions from the Board. Hearing none, he moved to Approvals. (ref. VII A.2)

ApprovalsAnnual Renewal of the Wastewater Advisory Committee (WAC) Contract

**A motion was duly made and seconded to authorize the Executive Director, on behalf of the Authority, to execute a contract, substantially in the form attached to the June 21, 2023 Staff Summary presented and filed with the records of this meeting, with the Wastewater Advisory Committee for a term of one year, from July 1, 2023 to June 30, 2024, for a total contract cost of \$85,813.**

Sean Navin, MWRA Director of Intergovernmental Affairs, summarized the terms and costs of the proposed Wastewater Advisory Committee (WAC) contract for FY2024. He explained that the FY2024 contract cost is 2.93% higher than the FY23 contract, and includes increases for hourly salaries and health insurance.

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		
Foti		
Pappastergion		
Peña		
		Taverna
Vitale		
J. Walsh		
P. Walsh		

(ref. VII B.1)

Contract AwardsJanitorial Services at the Deer Island Treatment Plant Facilities Management and Maintenance Inc., Bid WRA-5317

**A motion was duly made and seconded to approve the award of Contract WRA-5317, Janitorial Services at the Deer Island Treatment Plant, to Facilities Management and Maintenance Inc., and to authorize the Executive Director, on behalf of the Authority, to execute said contract in an amount not to exceed \$1,860,832.92, for a contract term of three years.**

Mr. Duest summarized the scope and terms of the proposed three-year contract for janitorial services at the Deer Island Treatment Plant.

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		
Foti		
Pappastergion		
Peña		
Taverna		
Vitale		
J. Walsh		
P. Walsh		

(ref. VII C.1)

#### WATER POLICY AND OVERSIGHT

On behalf of Mayor Wu and the Boston Water and Sewer Commission, Committee Chair Vitale congratulated Mr. Colbert, Mr. Favaloro and Ms. Fiore on their upcoming retirements, and thanked them for their service to MWRA and its customer communities.

#### Approvals

Town of Burlington First Amendment to the Water Supply Continuation Agreement and Waiver of Entrance Fee; and Dedham-Westwood Water District First Amendment to Water Supply Continuation Agreement and Waiver of Entrance Fee

**A motion was duly made and seconded to approve the Town of Burlington’s request to increase its withdrawal volume limits to up to 1,278 million gallons per year, or 3.5 mgd average daily use, and up to 6.5 mgd maximum day use and to waive the entrance fee associated with such increased withdrawal volume.**

**Further, a motion was duly made and seconded to authorize the Executive Director, on behalf of the Authority, to execute the First Amendment to the Water Supply Continuation Agreement with the Town of Burlington, substantially in the form included as Attachment A to the June 21, 2023 Staff Summary and presented and filed with the records of this meeting, to effectuate the increased withdrawal volume limits.**

**Further, a motion was duly made and seconded to approve the Dedham-Westwood Water District’s request to increase its withdrawal volume limits to up to 565.75 million gallons per year, or 1.55 mgd average daily use and up to 3.1 mgd maximum daily use and to waive the entrance fee associated with such increased withdrawal volume.**

**Further, a motion was duly made and seconded to authorize the Executive Director, on behalf of the Authority, to execute the First Amendment to the Water Supply Continuation Agreement with the Dedham-Westwood Water District, substantially in the form included as Attachment C to the June 21, 2023 Staff Summary and presented and filed with the records of this meeting, to effectuate the increased withdrawal volume limits.**

Katherine Ronan, MWRA Project Manager, Environmental Permitting, invited questions from Board Members.

(Ms. Wolowicz returned to the meeting)

Board Member Peña requested clarification on the proposed amended withdrawal limits for the Town of Burlington and the Dedham-Westwood Water District. Ms. Ronan explained that both communities maintained their own water sources, and that the proposed amendments would increase their MWRA water system withdrawal limits.

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		
Foti		
Pappastergion		
Peña		
Taverna		
Vitale		
J. Walsh		
P. Walsh		
Wolowicz		

(ref. VIII A.1)

Annual Renewal of Water Supply Citizens Advisory Committee (WSCAC) Contract

**A motion was duly made and seconded to authorize the Executive Director, on behalf of the Authority, to execute a contract, substantially in the form attached to the June 21, 2023 Staff Summary presented and filed with the records of this meeting, with the Water Supply Citizens Advisory Committee for a one-year period beginning July 1, 2023 to June 30, 2024, with a total contract cost of \$123,482.**

Mr. Navin briefly advised that the proposed annual Water Supply Citizens Advisory Committee (WSCAC) FY2024 contract's structure was similar to that of the Wastewater Advisory Committee, presented in Agenda Item VII A.1. He then invited questions from Board Members.

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		
Foti		

Yes                                      No                                      Abstain

Pappastergion

Peña

Taverna

Vitale

J. Walsh

P. Walsh

Wolowicz

(ref. VIII A.2)

#### CORRESPONDENCE TO THE BOARD

There was no Correspondence to the Board. (ref. VIII)

#### Other Business

##### Review and Extension of Contract for MWRA's Executive Director

Chair Tepper announced that the next order of business was for the Board to conduct the annual review of MWRA Executive Director Fred Laskey's performance and contract extension.

Mr. Laskey temporarily left the meeting.

Chair Tepper advised that her experience working with Mr. Laskey has been terrific, and noted his effective response and communications during the Deer Island Wind Turbine Generator 1 failure incident. She remarked on the value of Mr. Laskey's experience, knowledge, and leadership.

Mr. Pappastergion noted that in his view, Mr. Laskey's experience should be rated as "Excellent," and suggested that Mr. Laskey's employment contract be extended by more than one year. There was discussion about potential parameters for Mr. Laskey's contract extension. General Counsel Francisco Murphy advised that per the MWRA Enabling Act, the Executive Director's contract cannot be more than five years.

Mr. Pappastergion then recommended that Mr. Laskey's salary be increased by the same percentage or higher as the increases that the Board had approved for non-union managers (ref. VA.6).

Members of the Board agreed with Mr. Pappastergion's recommendations. The Chair and Board Members further discussed Mr. Laskey's longstanding record of excellent job performance, and his contributions to MWRA and its customer and host communities. There was brief discussion about extending Mr. Laskey's current contract by three years, for a total of a five-year contract. Mr. Pappastergion then recommended that Mr. Laskey's contract be extended by three years, to 2028.

**A motion was duly made and seconded that the performance of Frederick A. Laskey, MWRA Executive Director, for Fiscal Year 2023 be rated as Excellent;**

**Further, a motion was duly made and seconded to extend the term of the Executive Director's employment agreement and his appointment as the Executive Director by 3 years through June 30, 2028; and,**

**Further, a motion was duly made and seconded to increase the Executive Director's current salary consistent with the compensation adjustments for eligible non-union managers that were approved by the Board of Directors at the June 21, 2023 MWRA Board of Directors meeting (a 4% increase effective July 1, 2023, and a 4% increase effective January 6, 2024 [ref. V A.6]).**

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		
Foti		
Pappastergion		
Peña		
Taverna		
Vitale		
J. Walsh		
P. Walsh		
Wolowicz		

(ref. IX)

Mr. Laskey was invited to return to the meeting after the roll call vote.

Upon Mr. Laskey's return, Chair Tepper thanked Mr. Laskey for his excellent work performance. She briefly summarized Board Members' discussion regarding his annual performance review and contract, and announced Board's final approved recommendations (ref. IX).

Mr. Laskey thanked Board Members, and acknowledged the contributions of Board Members and MWRA staff.

(Ms. Wolowicz left the meeting after the discussion.)

#### 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>
Tepper		
Flanagan		

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

The meeting adjourned at 3:02pm.

Approved: July 19, 2023

Attest:

\_\_\_\_\_  
Brian Peña, Secretary



## STAFF SUMMARY

**TO:** Board of Directors  
**FROM:** Frederick A. Laskey, Executive Director  
**DATE:** July 19, 2023  
**SUBJECT:** Delegated Authority Report – June 2023




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**COMMITTEE:** Administration, Finance & Audit

INFORMATION  
 VOTE

Betty Hill, Acting Admin. Systems Coordinator  
Barbara Aylward, Administrator A & F  
Preparer/Title

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

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### RECOMMENDATION:

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

NO.	DATE OF AWARD	TITLE AND EXPLANATION	CONTRACT	AMEND/CO	COMPANY	FINANCIAL IMPACT
C-1.	06/02/23	<b>GROUNDSKEEPING SERVICES - DEER ISLAND TREATMENT PLANT</b> EXTEND CONTRACT TERM FOR 90 CALENDAR DAYS FROM MAY 26, 2023 TO AUGUST 24, 2023.	S586	1	LEAHY LANDSCAPING COMPANY, INC.	\$27,000.00
C-2.	06/06/23	<b>13.8kv ELECTRICAL SYSTEMS MAINTENANCE</b> FINAL BALANCING CHANGE ORDER TO DECREASE THE FOLLOWING BID ITEMS: UNSPECIFIED MAINTENANCE AND REPAIR, REPLACEMENT PARTS, AUTHORIZED MANUFACTURER'S REPRESENTATIVE SERVICES.	OP-411	1	INFRA-RED BUILDING & POWER SERVICE, INC.	(\$47,947.82)
C-3.	06/07/23	<b>ELECTRICAL TESTING AND TECHNICAL SERVICES - METROPOLITAN BOSTON</b> AWARD OF A CONTRACT TO THE LOWEST RESPONSIVE BIDDER FOR THE ELECTRICAL TESTING AND TECHNICAL SERVICES AT 32 METROPOLITAN SEWER AND WASTEWATER FACILITIES FOR A TERM OF 1,095 CALENDAR DAYS.	OP-458	AWARD	INFRA-RED BUILDING & POWER SERVICE, INC.	\$833,475.00
C-4.	06/22/23	<b>PHASE 12 SEWER MANHOLE REHABILITATION</b> AWARD OF A CONTRACT TO THE LOWEST RESPONSIVE BIDDER FOR THE PHASE 12 SEWER MANHOLE REHABILITATION AT VARIOUS LOCATIONS IN THE TOWNS OF ARLINGTON, MALDEN, MEDFORD AND MELROSE FOR A TERM OF 180 CALENDAR DAYS.	OP-457	AWARD	NATIONAL WATER MAIN CLEANING COMPANY	\$205,450.00
C-5.	06/22/23	<b>REVENUE BOND CONSULTING ENGINEER SERVICES</b> AWARD OF A CONTRACT TO THE HIGHEST RANKED PROPOSER FOR REVENUE BOND ENGINEER SERVICES FOR A TERM OF 36 MONTHS.	F270	AWARD	CDM SMITH, INC,	\$337,940.00
C-6.	06/26/23	<b>SECTION 101 WALTHAM PIPELINE EXTENSION</b> COMPENSATE THE CONTRACTOR FOR CHANGE OF WORK HOURS TO ACCOMMODATE A REDUCTION IN ALLOWABLE WORK HOURS IMPOSED BY THE CITY.	7457	1	BALTAZAR CONTRACTORS, INC.	\$500,000.00

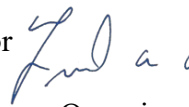
## PURCHASING DELEGATED AUTHORITY ITEMS MAY 1 - 31, 2023

NO.	DATE OF AWARD	TITLE AND EXPLANATION	CONTRACT	COMPANY	
P-1	06/01/23	<b>PURCHASE OF THREE FORTIMAIL APPLIANCES</b> AWARD OF A PURCHASE ORDER FOR A FOUR-YEAR SERVICE CONTRACT FOR THREE FORTIMAIL APPLIANCES UNDER MA STATE CONTACT ITT72 TO THE LOWEST RESPONSIVE BIDDER FOR THE PERIOD JUNE 21, 2023 THROUGH JUNE 21, 2027. MWRA USES THREE FORTIMAIL APPLIANCES AS MAIL GATEWAY. A MAIL GATEWAY IS A DEVICE THAT SENDS AND RECEIVES EMAIL TRAFFIC TO THE INTERNET WITHOUT EXPOSING THE EMAIL SERVER TO THE INTERNET.	WRA-5323Q	EPLUS TECHNOLOGY, INC.	\$31,860.00
P-2	06/01/23	<b>PURCHASE OF SIX DELL POWEREDGE SERVERS</b> AWARD OF A PURCHASE ORDER FOR A FIVE-YEAR CONTRACT FOR SUPPORT AND INSTALLATION FOR SIX DELL POWEREDGE SERVERS TO THE LOWEST RESPONSIVE BIDDER UNDER MA STATE CONTRACT ITC73 AT THE CHELSEA FACILITY, DEER ISLAND TREATMENT PLANT AND JOHN CARROLL WATER TREATMENT PLANT AND SOUTHBOROUGH FACILITY.	WRA-5314Q	DATAPIVOT TECHNOLOGIES, INC.	\$61,999.81
P-3	06/01/23	<b>MAINTENANCE AND TECHNICAL ASSISTANCE AND SUPPORT OF ARC GEOGRAPHIC INFORMATION SYSTEM</b> AWARD OF A SOLE SOURCE PURCHASE ORDER FOR ONE-YEAR MAINTENANCE AND TECHNICAL ASSISTANCE AND SUPPORT OF THE ARC GEOGRAPHIC INFORMATION SYSTEM FOR THE PERIOD JULY 1, 2023 THROUGH JUNE 30, 2024. THE MWRA USES ENVIRONMENTAL SYSTEMS RESEARCH INSTITUTE GEOGRAPHIC INFORMATION SYSTEMS SOFTWARE FOR THE GEOSPATIAL NEEDS OF THE OPERATIONS DIVISION.		ENVIROMENTAL SYSTEM RESEARCH INSTITUTE, INC.	\$69,765.00
P-4	06/01/23	<b>RENEWAL OF HEWLETT PACKARD ENTERPRISE</b> AWARD OF A ONE-YEAR PURCHASE ORDER UNDER MA STATE CONTRACT ITC73 FOR RENEWAL OF MAINTANCE AND SUPPORT FOR HEWLETT PACKARD ENTERPRISE EQUIPMENT. THE MWRA USES HEWLETT PACKARD SERVER HARDWARE TO HOST ENTERPRISE AND DEPARTMENTAL APPLICATIONS, INTERNET/INTRANET COMPUTING, FILE SHARES AND PRINT QUEUES.	WRA-5316Q	HEWLETT PACKARD ENTERPRISE COMPANY	\$82,709.26
P-5	06/06/23	<b>WIRELESS EXPANSION AT THE ROCK CORE STORAGE FACILITY AND DITP</b> AWARD OF A PURCHASE ORDER UNDER MA STATE CONTRACT ITC68 TO THE LOWEST RESPONSIVE BIDDER FOR THE WIRELESS EXPANSION AT THE NEEDHAM ROCK CORE STORAGE FACILITY AND DEER ISLAND TREATMENT PLANT.	WRA-5293Q	FUTURE TECHNOLOGIES GROUP, LLC	\$34,090.98
P-6	06/09/23	<b>RENEWAL OF CONTRACT WITH BOWDOIN COLLEGE FOR CONTINUOUS MONITORING OF CHLOROPHYLL</b> AWARD OF A SOLE SOURCE PURCHASE ORDER CONTRACT TO BOWDOIN COLLEGE FOR CONTINUOUS MONITORING OF CHLOROPHYLL FROM THE CAPE ANN BUOY FOR THE PERIOD JULY 1, 2023 THROUGH JUNE 30, 2024.		BOWDOIN COLLEGE	\$35,000.00
P-7	06/09/23	<b>RENEWAL OF CONTRACT WITH THE UNIVERSITY OF MAINE FOR CONTINUOUS MONITORING OF THE CAPE ANN BUOY</b> AWARD OF A SOLE SOURCE PURCHASE ORDER CONTRACT FOR THE UNIVERSITY OF MAINE FOR CONTINUOUS OCEANOGRAPHIC MONITORING AT THE CAPE ANN BUOY FOR THE PERIOD JULY 1, 2023 THROUGH JUNE 30, 2024.		UNIVERSITY OF MAINE	\$50,000.00
P-8	6/9/2023	<b>PEST CONTROL</b> AWARD OF A TWO-YEAR PURCHASE ORDER UNDER MA STATE CONTRACT FAC117 TO THE LOWEST RESPONSIVE BIDDER FOR PEST CONTROL AT MWRA FACILITIES.	WRA-5319	A-1 EXTERMINATORS	\$78,856.00
P-9	06/15/23	<b>PURCHASE ONE MUFFIN MONSTER GRINDER</b> AWARD OF A SOLE SOURCE PURCHASE ORDER FOR ONE MUFFIN MONSTER GRINDER FOR QUINCY PUMP STATION.		JWC ENVIRONMENTAL, LLC	\$46,380.00
P-10	06/16/23	<b>PROCESS INFORMATION SOFTWARE MAINTENANCE AND SUPPORT</b> AWARD OF A SOLE SOURCE PURCHASE ORDER FOR ONE-YEAR MAINTENANCE AND SUPPORT FOR PROCESS INFORMATION SOFTWARE FOR THE PERIOD JULY 1, 2023 THROUGH JUNE 30, 2024.		OSI SOFTWARE, INC.	\$102,184.51
P-11	06/16/23	<b>PURCHASE FOR TRASH REMOVAL/RECYCLING SERVICES FOR METRO-BOSTON AND WESTERN SITES</b> AWARD OF TWO SEPARATE TWO-YEAR PURCHASE ORDER CONTRACTS TO THE LOWEST RESPONSIVE BIDDERS FOR TRASH AND SINGLE STREAM RECYCLING SERVICES FOR THE TEAM JULY 1, 2023 THROUGH JUNE 30, 2025 TO MWRA FACILITIES. BECAUSE THE FACILITIES COVERED UNDER THIS BID ARE WIDELY SPREAD ACROSS A LARGE GEOGRAPHIC AREA VENDORS WERE PERMITTED TO SUBMIT BID ON AS MANY FACILITIES AS THEY CHOSE BASED ON THIS PROXIMITY TO EACH.	WRA-5280	DBI WASTE SYSTEMS, INC. JAW WASTE SERVICES, LLC	\$262,440.00 \$22,594.52
P-12	06/21/23	<b>PURCHASE OF ACTIVATED CARBON</b> AWARD OF A PURCHASE ORDER TO THE LOWEST RESPONSIVE BIDDER FOR VIRIGIN ACTIVATED CARBON FOR THE HOUGHS NECK PUMPING STATION.	WRA-5331Q	CARBON ACTIVATED CORPORATION	\$26,400.00
P-13	06/21/23	<b>PURCHASE OF TEN SWING CHECK VALVES</b> AWARD OF A PURCHASE ORDER TO THE LOWEST RESPONSIVE BIDDER FOR TEN SWING CHECK VALVES FOR DEER ISLAND TREATMENT PLANT.	WRA-5581	JOHN HOADLEY AND SONS, INC.	\$27,740.00
P-14	06/21/23	<b>PURCHASE OF THREE MUFFIN MONSTER GRINDER</b> AWARD OF A SOLE SOURCE PURCHASE ORDER FOR THREE REPLACEMENTS MUFFIN MONSTER GRINDER CARTIDGES FOR THE DEER ISLAND TREATMENT PLANT.		JWC ENVIROMENTAL, LLC	\$38,556.00

PURCHASING DELEGATED AUTHORITY ITEMS MAY 1 - 31, 2023

NO.	DATE OF AWARD	TITLE AND EXPLANATION	CONTRACT	COMPANY	
P-15	06/21/23	<b>PURCHASE OF UNINTERRUPTIBLE POWER SUPPLY BATTERY REPLACEMENTS</b> AWARD OF A PURCHASE ORDER TO THE LOWEST RESPONSIVE BIDDER FOR 1,308 REPLACEMENT UNINTERRUPTIBLE POWER SUPPLY BATTERIES FOR THE DEER ISLAND TREATMENT PLANT.	WRA-5312	UNITED POWER & BATTERY CORORATION	\$54,164.00
P-16	06/22/23	<b>GARTNER SUBSCRIPTION RENEWAL</b> AWARD OF A PURCHASE ORDER PURCHASE ORDER UNDER MA STATE CONTRACT ITS80 FOR GARTNER IT EXECUTIVE + DELEGATE SUBSCRIPTION RENEWAL FOR THE PERIOD OF JULY 1, 2023 THROUGH JUNE 30, 2024. MWRA USES THIS ANNUAL SUBSCRIPTION TO CONDUCT IT RESEARCH.		GARTNER, INC.	\$123,241.00
P-17	06/22/23	<b>PURCHASE FOR SCADA SOFTWARE MAINTENANCE</b> AWARD OF A SOLE SOUCE PURCHASE ORDER FOR ONE-YEAR OF SCADA SOFTWARE MAINTENANCE FOR THE PERIOD JULY 14, 2023 THROUGH JULY 13, 2024		GE DIGITAL, LLC	\$216,095.40

## STAFF SUMMARY


**TO:** Board of Directors  
**FROM:** Frederick A. Laskey, Executive Director   
**DATE:** July 19, 2023  
**SUBJECT:** MWRA Energy and Sustainability Program Overview

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**COMMITTEE:** Administration, Finance and Audit

X  INFORMATION  
  VOTE

Rebecca Weidman, Deputy Chief Operating Officer  
Kristen Patneau, Manager, Energy  
Michael O'Keefe, Senior Manager, Master Planning  
Preparer/Title

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

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*MWRA has a long standing and successful commitment to energy savings initiatives with attention to fiscal responsibility and environmental protection. In support of the Commonwealth's leadership and the establishment of net zero greenhouse gas emissions targets in 2050, MWRA continues to take measures to mitigate and reduce greenhouse gas emissions across its operations. This staff summary provides an overview of MWRA's considerable progress with energy and sustainability efforts, and future plans to improve efficiencies and reduce greenhouse gas emissions. Since 2008, MWRA's net electricity usage has decreased by 15%, and greenhouse gas emissions have dropped 38%.*

### RECOMMENDATION:

For information only.

### DISCUSSION:

MWRA is an industry leader and has built a solid foundation in energy management and innovation. Over the past 15 years, MWRA has implemented a system-wide program to utilize more renewable energy sources, reduce dependence on the electric grid, identify energy and cost saving initiatives throughout the organization, and reduce our carbon footprint. These initiatives have been launched and completed without compromising MWRA's core mission of providing reliable and high quality water and wastewater services. Highlights of MWRA's energy program are described in the sections below.

### Drivers

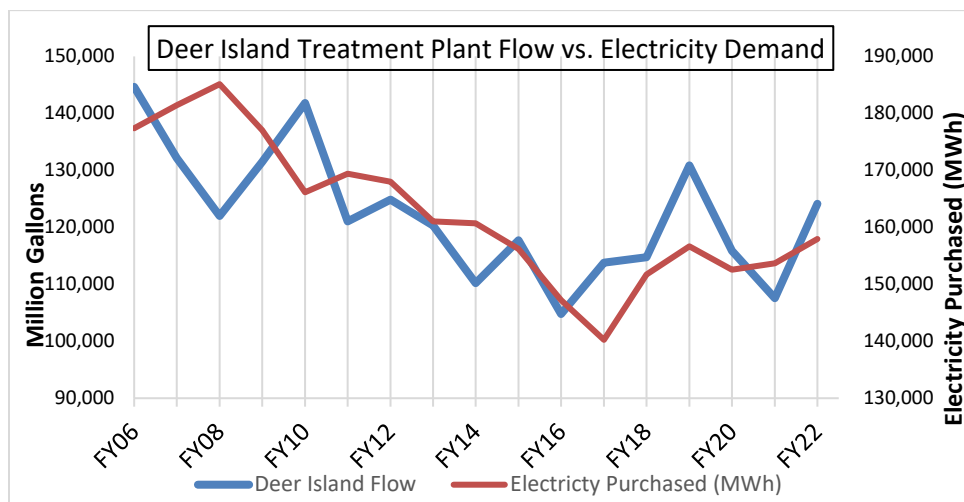
As an environmental agency committed to sustainability and mitigating the impacts of climate change, it is important that MWRA follow the Commonwealth's lead. MWRA has worked to meet or exceed the goals of Massachusetts Executive Orders 484 and 594, which seek to accelerate the state's decarbonization efforts by setting goals and establishing emissions reduction targets for state agencies.

MWRA also has a fiscal responsibility to its ratepayers to manage costs by operating as efficiently as possible and optimizing the utilization of third-party funding whenever possible.

## Managing Energy Use

### Process and Energy Characteristics

Wastewater transport and treatment involves energy intensive processes, such as pumping, odor control, and pure oxygen generation. MWRA's wastewater energy demands are impacted by weather. Wet weather events increase the treatment plant flows due to increased inflow and infiltration, and flow from the remaining combined sewers in some MWRA communities. The graph below shows how MWRA's annual average electricity purchased demand varies with Deer Island's plant flow.

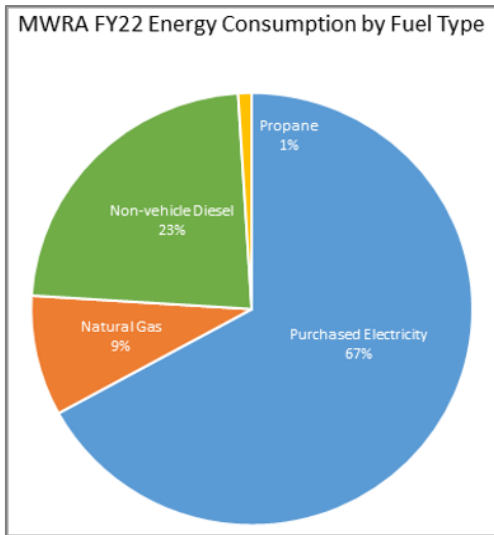


For drinking water, the largest energy use is the treatment process for the 200 million gallons per day (mgd) that comes from Quabbin and Wachusett Reservoirs to 51 communities in Metropolitan Boston, MetroWest and Central Massachusetts. The Carroll Water Treatment Plant involves energy intensive applications, including disinfection by ozone and ultraviolet light, to ensure that the drinking water is free of any pathogens. Although over 75% of water in MWRA's drinking water system flows by gravity, several pumping stations are used to move water to high service areas.

With continued improvements to water use efficiency through water delivery system leak reductions and customer water use reductions, there has been a decrease in the volume of water treated and pumped, and therefore a related reduction in energy demand. Wastewater treatment energy demand is also positively influenced by these water use reductions, in addition to successful efforts to reduce inflow and infiltration. However, the energy use related to the treatment and delivery of wastewater is also impacted by increases in flow as MWRA seeks to capture and treat more wastewater rather than allow it to overflow to the environment.

### Energy Consumption

MWRA owns and operates over 100 facilities that consume approximately 159 million kWh of electricity, 700,000 therms of natural gas, and 1.26 M gals of non-vehicle fuel annually. Approximately 84% is attributable to wastewater transport and treatment, 13% is used for water



treatment and transmission, and 3% for administrative and support functions. The Deer Island Treatment Plant represents over 66% of the total electricity consumption, and 67% of MWRA’s fuel oil usage.

Utility spending accounts for 12.2% of operating expenses, approximately \$29.4 million per year. Electricity is the primary purchased energy source, representing over 76% of utility spending. Two of MWRA’s facilities, Deer Island and Carroll Water Treatment Plants, account for almost 75% of purchased electricity. MWRA energy expenses also include \$984,000 on natural gas primarily for heating. Although MWRA’s pellet plant utilizes a significant amount of gas for biosolids drying, the utilities are paid through the

third-party operations contract. MWRA also uses fuel oil at a number of facilities, for backup generation, and some process and building heating. MWRA also utilizes gasoline and diesel for fleet vehicles.

### Energy Procurement

MWRA has been competitively procuring electricity supply since 2001. Since electricity restructuring in 1998, it has been economically beneficial for commercial and industrial customers like MWRA to buy electricity from a third party supplier in the competitive market, as opposed to paying for basic service from the utilities.

Total Energy Used in FY22	
• <b>Electricity</b>	– 158.7 million kWh, and \$29.4 million
• <b>Fuel Oil</b>	– 1.26 million gal, and \$3.5 million
• <b>Natural Gas</b>	– 700,000 therms, and \$984,000
This is the equivalent of over 16,000 homes’ energy use for one year.	

Based on account load profiles and a strategy to diversify the contract structures and terms of its energy portfolio, MWRA currently has three distinct electricity contracts. The largest contract is the Deer Island account, representing approximately 66% of MWRA's total purchased electricity load. The Interval Accounts include larger facilities (e.g., Carroll Water Treatment Plant, headworks, Clinton Treatment Plant, and large pump stations) and are approximately 30% of MWRA's total purchased load. The Profile Accounts include smaller facilities (e.g., CSOs and small pump stations) and represent the remaining 4% of MWRA's total purchased load.

Staff monitor market conditions and electricity price forecasts to quantify price impacts of the various contract structures, which is important for determining the ideal structure to execute at that time. While staff have historically conducted competitive procurements on a specific set of dates, the changing and limited supplier market and increased market volatility may lead to alternative procurement options in the future, such as purchasing electricity through collaboratives available to state agencies and authorities.



## Decarbonizing Energy Supply

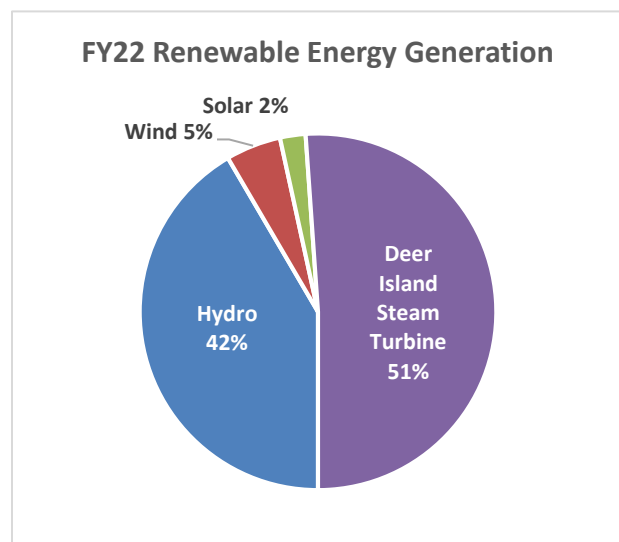
As required by the Massachusetts Renewable Portfolio Standard (RPS), retail electricity suppliers must obtain a percentage of the electricity they serve to their customers from qualifying renewable resources by acquiring a sufficient quantity of RPS-qualified renewable energy certificates (RECs). As MWRA continues to expand its sustainability efforts, MWRA has voluntarily purchased additional New England sourced RECs to meet 100 percent of its purchased electricity. As the regional grid becomes greener, staff will evaluate this practice and the focus of decarbonization efforts.

## **Renewable Energy**

MWRA has sought opportunities to minimize its environmental footprint while maximizing value to its ratepayers. The development of clean energy projects brings together these principles in a way that provides lasting value. MWRA has been on the forefront of energy efficiency and renewable energy since its creation, and over the years has built up a significant portfolio of renewable energy.

### Bio-gas

The Deer Island plant was designed to meet a portion of its energy needs by using the methane gas generated from the sludge digestion process as fuel for an onsite combined heat and power system. This system has worked effectively by meeting the plant thermal demand and being the largest source of renewable electricity for MWRA. Planned work to increase the efficiency of the methane usage and generate additional green power is discussed below.



*Renewable Energy Generation by Source*

### Hydropower

MWRA moves large quantities of water on a daily basis, making hydropower an abundant resource to use to its advantage. Two hydro facilities, Oakdale and Cosgrove, brought on line by MWRA and DCR's predecessor, the Metropolitan District Commission, are still in operation today. These hydroelectric generators capture energy where water enters and leaves the reservoirs and moves eastward and downhill into the metropolitan area.



MWRA has developed three additional hydropower sites at: Deer Island Treatment Plant as wastewater enters the outfall tunnel; Loring Road as water flows from the high service Norumbega Reservoir into the Loring Road low service tanks; and Brutsch Treatment Facility supplying water

*MWRA's hydroelectric facility using the energy as water is transferred from the Quabbin to the Wachusett Reservoir*

to the McLaughlin Fish Hatchery. The Brutsch Treatment Facility hydro turbine provides clean energy to the grid in western Massachusetts, provides monetary payments to MWRA to offset operational costs, and delivers clear cold water to the hatchery without the energy use and the cost of pumping.



*William A. Brutsch Hydroelectric Facility and the McLaughlin Fish Hatchery Pipeline*

### Wind

MWRA has optimized siting and installed wind turbines at two locations, with two turbines at Deer Island and one at the DeLauri Pump Station in Charlestown. There is limited opportunity for additional large scale wind turbines due to development high density, height restrictions, and lower wind resources surrounding many MWRA facilities.



*Figure 4: From left to right: Solar and Wind at Deer Island Wastewater Treatment Plant; Wind at DeLauri Pump Station*

The recent Deer Island wind turbine failure was the subject of a staff summary and presentation at the Board's June 21, 2023 meeting.

### Solar

As a low maintenance energy source, solar photovoltaics are an excellent renewable energy technology. The state and recently improved federal incentives also support the economics of these projects. MWRA currently has multiple solar arrays; a ground mounted 496 kW system at the Carroll Water Treatment Plant and four arrays totaling 736 kW at Deer Island.

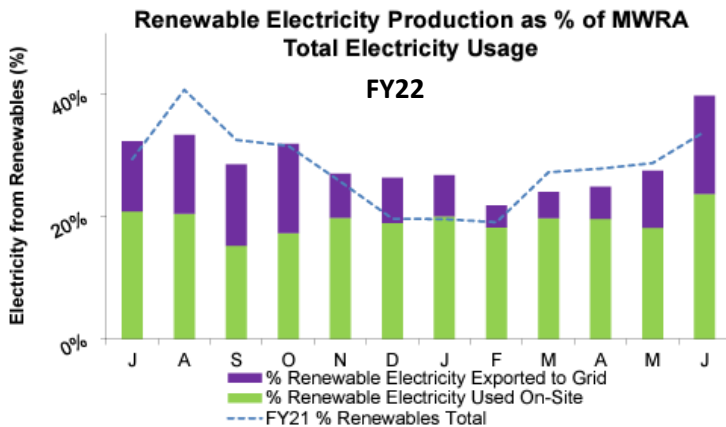
MWRA also has a combined ground/roof mounted system totaling 76kW at the Wachusett Aqueduct Pumping Station. Additional sites are currently in the planning stage, including parking canopy solar and ground mount on top of underground water storage tanks.



*Solar at Carroll Water Treatment Plant*

## Portfolio

The graph on below shows the total amount of electricity generated by renewable energy assets as a percentage of the total electricity consumed by MWRA in FY2022. The total renewable electricity generated by MWRA assets was 57,000 MWh, or approximately 26% of total electricity demand in FY2022.



### Renewable Energy Statistics

Using biomass, wind, solar, and hydroelectric, MWRA generated about 57 million kWh in FY22, at a value of nearly **\$8 million** in avoided purchased energy

## Energy Efficiency

Reducing overall energy use by increasing efficiency continues to be MWRA's most effective strategy for reducing greenhouse gas emissions. With over 60 energy audits completed, the implementation of audit recommendations and other optimization efforts have resulted in an estimated annual savings of over 25 million kWh or about \$2.5 million annually.

Efficiency measures implemented include installation of variable frequency drives, energy efficient lighting, more efficient heating and cooling systems, piping insulation, and other customized applications. Energy Management Systems have been installed in several MWRA buildings, providing staff the ability to actively manage heating, ventilation and air conditioning energy use.

Some of the greatest savings can be achieved through process changes. For example, improvements to the Deer Island Treatment Plant's secondary treatment oxygen system, which included the addition of variable frequency drives, instrumentation modifications, and turning off unneeded equipment, resulted in savings of 10 million kWh per year.

Internal standard operating procedures have been established to ensure that energy efficiency and costs are considered whenever facilities are rehabilitated or newly constructed. Major investments for furthering efficiency are planned in coming years, and staff continue to explore opportunities to reduce MWRA's reliance on purchased power.

To further support these efforts, MWRA works closely with its vendors and the utilities to ensure all available incentives are applied to these projects. MWRA strengthened its relationship with the utilities through Memoranda of Understanding (MOU) with both Eversource and National Grid. These MOUs establish mutual energy efficiency goals with a commitment by the utility to provide incentives and technical support above the traditional Mass Save offerings. The Energy team meets regularly with the utilities to review progress and to address any challenges.



## The Road To Net Zero

To achieve long-term emission reduction goals aligned with the Commonwealth, MWRA is undertaking a planning process to identify cost effective and equitable strategies to ensure MWRA reduces greenhouse gas emissions from its operations and business practices, with an eye toward a carbon-free future.

### Building Electrification

In Massachusetts, and most other states, the building sector is second only to transportation in greenhouse gas emissions. Working toward fossil-fuel-free heating in the future, MWRA's focus has shifted to electrification, and studying the feasibility of replacing fuel oil heat with air source or water source heat pumps. MWRA has already installed a geothermal heat pump system at the Wachusett Aqueduct Pump Station and several water source heat pumps at Spot Pond Pump Station.



*Wachusett Aqueduct Pumping Station Geothermal Heat Pump Installation*

MWRA completed audits in conjunction with the Industrial Assessment Center at the University of Massachusetts Amherst, looking at the feasibility of using heat pumps to heat two of its medium size pump stations (New Neponset and Newton Street). The audit showed that it would be possible to heat these facilities primarily using heat pumps, and therefore MWRA is moving forward with a heat pump design at these two facilities, and also at the Wachusett Lower Gatehouse. These projects will also serve as a guide for a widespread implementation at other facilities in the future. MWRA also includes an analysis of heat pump applications for every new construction, rehab, or HVAC replacement or upgrade, including the ongoing rehab design of Ward Street and Columbus Park Headworks. However, due to the critical nature of its operations, MWRA must continue to use fossil fuel-powered, emergency generators as needed until a better long-term solution is found.

## Clean Transportation

### Fleet Electrification

Transportation is the leading source of greenhouse gas emissions in the Commonwealth (>40%). Therefore, transitioning MWRA's fleet from fossil fuel-powered vehicles to electric plays a key

role in reducing the environmental and health impacts in the region. While vehicles comprise only 2% percent of MWRA’s total greenhouse gas emissions, progress in this sector is necessary to meet our climate goals and improve public health, both in the near and long term. Low or no emission vehicles (electric vehicles or EVs) provide a host of health and environmental benefits, and as regional power grids integrate more renewable energy, the electricity that fuels these vehicles gets cleaner. These technologies also reduce maintenance and fuel costs, benefitting the lifetime ownership costs of the vehicles.

MWRA has a fleet of over 500 vehicles ranging from sedans, SUVs, pickups and vans, to other heavy duty specialized vehicles such as vactor trucks, lifts, bucket trucks, backhoes, and landscaping equipment. MWRA has been procuring hybrid and electric vehicles over the past decade, and there are currently 24 alternative fuel vehicles in MWRA’s fleet (5% of total). MWRA also utilizes over 100 electric carts in operations, primarily at Deer Island, and uses a blend of B20 biodiesel for all diesel powered equipment. As more vehicles suitable for MWRA use are available in the future, MWRA will increase replacement schedules with electric vehicles accordingly; working toward the Commonwealth’s goal of 100% zero emission vehicles by 2050.



*EV charging at MWRA Chelsea Facility*

### Electrical Vehicle Charging Infrastructure

In order to ensure these EVs are adequately fueled, MWRA is concurrently installing and planning for additional electric vehicle chargers. Chargers will also be made available to staff for personal use, at cost, in support of greater widespread adoption of EVs.

There are currently 15 chargers across major facilities, providing sufficient charging capacity for the existing electric vehicles. Staff are working with Eversource and National Grid to design and install more significant infrastructure through the utilities’ EV Make-Ready<sup>1</sup> Programs. Three priority sites – Chelsea, Southborough, and Deer Island - where the majority of fleet vehicles are garaged and staff are headquartered, have been approved for program funding. Construction of an additional 35 smart charging stations (both Level 2 and Level 3 DC Fast Chargers) are planned for these facilities.

Staff continue to evaluate other MWRA sites, prioritizing them based on vehicle garage locations, Environmental Justice Communities, and geographical distribution throughout MWRA staff travel corridors. MWRA has also implemented a policy requirement for the installation of a minimum of one dual port



*Rendering of proposed DC charging stations at MWRA Chelsea Facility*

<sup>1</sup> The term “Make-Ready” refers to a type of program where the electric utility pays for work needed on the utility side of the electric meter.

charger for any facility undergoing major renovations. Chargers will also be incorporated into any future solar carport installations.

### Combined Heat and Power Optimization

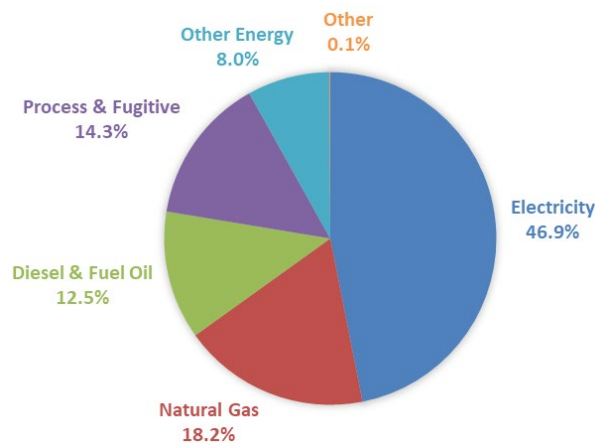
MWRA is currently working toward the design and construction of a new combined heat and power (CHP) plant at the Deer Island Treatment Facility, as a more efficient replacement to the existing aging system. The current CHP system consists of a steam boiler and steam turbine based system with limited fuel to electricity efficiency. Based on a recently completed conceptual analysis, as reported to the Board in September 2022, the new system would eliminate the steam system and replace it with water-based boilers and an array of reciprocating engine generators. Simulations predict the new system will more than double the electricity generated by the existing system while consuming less fuel. It is expected that the contract for detailed design of this facility will go out to bid in FY2024.

	Existing CHP	Proposed CHP
Electricity from CHP	21%	48%
CHP Efficiency	52%	68%
Energy from On-site Resources	~60%	~75%

*Energy Performance Metrics for New and Existing CHP*

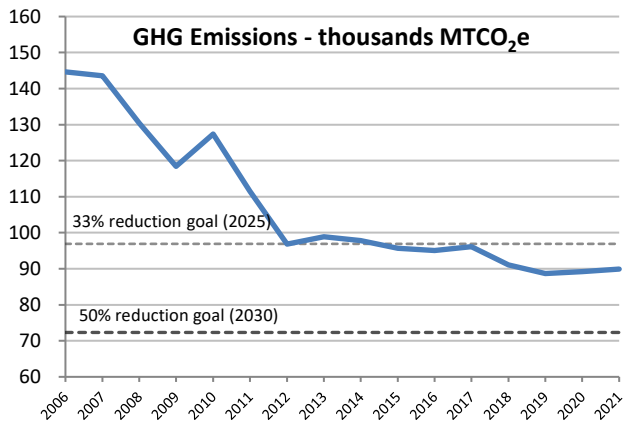
### Greenhouse Gas Emissions

MWRA has been tracking greenhouse gas emissions as part of its ongoing mission to identify major sources and reveal trends, highlight successes to date regarding emission reductions, and identify emission reduction opportunities.



*MWRA Greenhouse Gas Emission Sources, 2022*

Treating and transporting water and wastewater are energy intensive services that emit several greenhouse gases. Burning of fossil fuels emits carbon dioxide, wastewater treatment produces methane, and sewage itself is a contributor of nitrous oxide. Electricity purchases are the largest source of emissions, accounting for just under half of the total. Other major sources of emissions include treatment processes and fugitive gases, natural gas, and diesel and fuel oil combustion.



*MWRA Greenhouse Gas Emissions, Metric Tons of CO<sub>2</sub> Equivalents (2006 – 2022)*

The Commonwealth has committed to net zero greenhouse gas emissions by 2050, with intermediate targets of 33% and 50% reductions by 2025 and 2030, respectively. Since MWRA started collecting data in 2006, its greenhouse gas emissions have dropped 38%. This reduction is mainly driven by a 50% decrease in emissions from purchased electricity due to energy efficiency measures, MWRA’s renewable energy installations, and a cleaner regional electric grid.

While MWRA pursues projects that will continue to reduce emissions in the Commonwealth in the coming years (such as combined heat and power at Deer Island, expanding solar and electric vehicle usage, and exploring heat pumps to replace boilers at its facilities), the recent slowdown in emissions reductions reflects that many of the easier methods of mitigation have been implemented, in addition to recent increases to the regional electricity grid emission factors.<sup>2</sup> In order to continue MWRA’s push toward the state’s ambitious carbon reduction goals, staff are developing a more strategic and targeted greenhouse gas management plan.

To ensure that energy saving and greenhouse gas emission reducing efforts are considered in capital planning, MWRA has adopted a social cost of carbon of \$125 per metric ton of CO<sub>2</sub> for use when evaluating the life cycle costs of new projects. The social cost of carbon is an estimate of the economic costs, or damages, of emitting one additional metric ton of carbon dioxide into the atmosphere.<sup>3</sup>

### **Resiliency/Innovation**

While MWRA works toward implementing more traditional energy efficiency projects and renewable installations, in order to meet decarbonization goals while ensuring resiliency in the face of future climate challenges, MWRA must also evaluate more innovative approaches.

#### Battery Storage

MWRA entered into battery storage demand demonstration pilot projects with Eversource at the Chelsea Administration Building and Brattle Court Pumping Station. These demonstration projects included no upfront cost to MWRA and an annual performance savings guarantee.

<sup>2</sup> As noted above, MWRA purchases voluntary locally sourced renewable energy credits (RECs). Because there is no existing definitive guidance from the State on applying these REC purchases to our greenhouse gas emission inventory, we are not currently using these RECs to offset our greenhouse gas emissions. However, we are in discussions with several state entities on this issue as best practices are determined. We do believe that participating in the REC market encourages the development of renewable energy, which will lead to a cleaner regional electrical grid and reduce related emissions.

<sup>3</sup> Based on the Interagency Working Group methodology, using a 2% discount rate.



The 250kW battery at each facility targets Eversource demand charges and ISO-NE Installed Capacity savings, and earn revenue through participation in the utility demand reduction program. The demonstration period is 10 years (2021-2031), and staff will apply the results to other MWRA facilities.

### Large-scale Battery Assessment

MWRA is planning a large-scale battery storage assessment for Deer Island to examine the costs and benefits of different sized large-scale battery energy storage systems. The analyses will consider a battery's ability to address issues including power resiliency, backup power diesel fuel use reduction and revenue opportunities. Although this study is specific to Deer Island, staff expect that many of the findings may be applicable to other MWRA facilities. Staff anticipate that this study will be partially funded through a state clean energy grant.



*250kW Battery Demonstration Project at Chelsea Administration Facility*

### Heat Recovery

Because of the advancement of heat pump technology and the greening of the regional electrical grid, electrification is a critical component of MWRA's decarbonization efforts. Staff are actively exploring the technical feasibility and policy related potential to utilize heat recovery from its wastewater both for internal applications and on a community development basis.

### **Results**

While annual energy use is significantly influenced by the amount of water use and particularly wastewater transported and treated and, thus, dependent on variability in weather as discussed above, MWRA has made significant reductions in electrical demand achieved through a number of no cost and low cost process optimization efforts (e.g. pump station shaft level adjustments, secondary aeration/cryogenic oxygen production optimization), energy-efficient equipment installation and lighting improvements, and incorporation of onsite renewables. Since 2008, MWRA's net electricity usage has decreased by 15 percent. This decrease is a result of a combination of flow reductions, conservation and renewables.

MWRA incorporates the goal of reducing its greenhouse gas emissions and energy costs into all of its planning processes. Because it is easiest and most cost effective to include energy improvements in significant rehabilitation projects or new construction, MWRA explicitly includes energy efficiency and renewable energy considerations in its design process. MWRA plans to continue maximizing energy value for its ratepayers as well as reducing the climate impacts of its operations.



## **BUDGET/FISCAL IMPACTS:**

MWRA pursues grants, rebates, and other incentives to improve project economics and reduce budget impacts. MWRA also focuses on optimization of non-rate revenue through various revenue streams as described below.

### **Clean Transportation**

There are several clean transportation related incentive programs available to MWRA. The MassDEP Workplace and Fleet Charging Electric Vehicle Incentive Program (MassEVIP) rolling grant program is aimed at making EVs and EV charging stations more widely available across Massachusetts, by providing incentives for the acquisition and installation of EV charging stations. MassEVIP Fleets is another MassDEP program that provides incentives for public entities to buy or lease EVs. The state also offers incentives for medium and heavy duty vehicles through the MOR-EV Trucks Program. MWRA seeks funding from these programs for all eligible projects, and has been awarded \$87,500 to date.

Eversource and National Grid, offer complementary EV Make-Ready Programs where funding can be combined with the MassEVIP programs, for additional financial support toward EV charging equipment and installation. As described above, three MWRA facilities have received initial approval under the Eversource EV Make-Ready Program (total installation costs have not been developed yet).

### **Energy Efficiency**

MWRA works with the utilities to optimize all available incentives through the state's Mass Save energy efficiency programs. In the last three years, alone, MWRA has been awarded over \$860,000 in utility incentives.

In 2022, MWRA was awarded a grant of \$96,000 through the MassDEP GAP III Clean Energy Results Program, for the installation of air source heat pumps at the Newton and New Neponset Street Pump Stations described above. The grant is designed to fill the last "gap" in project financing, enabling and encouraging facilities to use energy utility incentives as well as funding from other sources to install selected energy efficiency and clean energy generation projects.

### **Renewable Energy**

#### Renewable Portfolio Standard

Retail electricity suppliers in Massachusetts are required to provide a portion of their power from renewable energy sources. Qualified facilities generating renewable energy earn Renewable Energy Certificates (RECs), which may be sold to retail electricity suppliers to satisfy their obligations. Renewable energy generators (like MWRA) can sell credits to electricity suppliers to help them meet the regulatory requirements. With a diverse renewable energy portfolio of qualified wind, solar, hydro, and digester gas facilities, MWRA has generated and traded RECs since 2002. The sale of these RECs is a reliable source of revenue, generating over \$16.6 million in non-rate revenue to date, at an average of approximately \$750,000 annually.

## Energy Policy Act of 2005

The Energy Policy Act of 2005 includes a Hydroelectric Production Incentive Program to support the expansion of hydropower development through incentive payments for operators to maximize generation from small hydro facilities developed after 2005. The payments can be applied for ten calendar years from the first year of operation. MWRA receives payments for the Loring Road and Brutsch hydro facilities, at an average of \$12,000 per year.

### **Capacity and Demand Management**

Since 2006, MWRA has participated in demand response programs by reducing the electrical load during capacity shortages to ensure electric grid reliability and resiliency. Both the Deer Island Wastewater Treatment Plant and Carroll Water Treatment Plant are able to start up onsite standby generators in 30 minutes when dispatched by the local electric utility or regional transmission organizations. This also reduces the risk of MWRA plant shutdowns if the grid has failures during these stress events.

Over the years, Deer Island and the Carroll Water Treatment Plant have participated in the ISO-NE Demand Response Program, by having generators available to respond to grid demand events. Demand Response reduces the need to call upon expensive peaking plants during high usage hours. This in turn, helps reduce the aggregate cost of power. Through this Program, MWRA receives capacity payments for having demand resources ready to respond during these peak energy demand spikes, when supply shortages are likely. This also allows MWRA to avoid the high market prices that typically occur during such events. The Loring Road and Brutsch Treatment Facility hydro facilities also participate in the ISO-NE On-Peak Hours Demand Response Program, operating as non-dispatchable, passive assets that are not required to respond to any specific activation during peak event hours. Instead, payments are made for the generation during these periods. On average, current program participation generates about \$790,000 in revenue each year.

### **Grid Exported Electricity Production**

In cases where the renewable generation exceeds the facility demand,<sup>4</sup> power is exported to the grid and MWRA is compensated for the sale of this electricity, either through on-bill net metering credits, or direct payments from the utilities, for an average of \$630,000 annually.

### **Federal**

There are also federal grant programs that have been created or expanded through the Infrastructure Investment and Jobs Act and Inflation Reduction Act, offering tax credits to non-tax paying public entities. MWRA is tracking these programs and will apply for incentives following guidance issued by the IRS, and based on applicability to MWRA projects.

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<sup>4</sup> All Deer Island renewable generation is consumed on site, while other MWRA assets export some or all of their generation.

**STAFF SUMMARY**

**TO:** Board of Directors  
**FROM:** Frederick A. Laskey, Executive Director  
**DATE:** July 19, 2023  
**SUBJECT:** Security Equipment Maintenance and Repair Services  
Viscom Systems, Inc.  
Contract EXE-043, Change Order 2




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**COMMITTEE:** Administration, Finance & Audit

INFORMATION  
 VOTE

Kathryn T. White, Manager, Security Services  
Preparer/Title



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Gary S. Cacace  
Director of Security

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**RECOMMENDATION:**

To authorize the Executive Director, on behalf of the Authority, to approve Change Order 2 to Contract EXE-043, Security Equipment Maintenance and Repair Services, with Viscom Systems, Inc. for an amount not to exceed \$372,122.30, increasing the contract amount from \$2,570,803.30 to \$2,942,925.60, and extending the contract term by 180 calendar days from September 28, 2023 to March 26, 2024.

**DISCUSSION:**

Contract EXE-043 is a three-year contract that provides preventive and scheduled maintenance as well as-needed repair services for all components of MWRA's extensive security system. Provisions for software integration and response to unforeseen emergencies are also included in the contract. Staff have developed an appropriate preventive maintenance schedule for each piece of equipment and determine on a case-by-case basis when to call the Contractor to repair critical equipment outside of normal business hours. In March 2023, the duration of Contract EXE-043 was extended by Change Order 1 under delegated authority and currently expires on September 28, 2023. The Authority sought the 180-day time extension, which included an increase in unit hours and an increase in the spare and replacement parts allowance, due to delays in performing preventative maintenance, overall repairs and software upgrades during the original contract term as a result of the COVID-19 pandemic.

A procurement process for a successor contract was started in June 2023. Historically, there has been very little competition with the incumbent having been awarded the past several contracts. Early in re-procurement process, the incumbent notified the Authority that it no longer had the required DCAMM certification necessary to bid on the next contract. This additional time will give the vendor time to get the certification restored and also give the Authority the ability to review the existing contract scope and conduct further outreach to other potential bidders.

**This Change Order**

Change Order 2 consists of the following two items:

Extend the Contract Time by 180 Calendar Days

\$0.00

MWRA is seeking an additional 180-day time extension to complete a number of ongoing projects. This included assistance during the MWRA move and renovation projects at Deer Island, Chelsea and the Charlestown Navy Yard, the addition of the core storage facility in Needham, and multiple MWRA construction projects that required integration and maintenance support from the Contractor. Additionally, telecommunication upgrades and replacement of T1 communication lines made by Verizon require installation and integration support by the existing Contractor to retain current performance. The additional 180-day time extension will allow for the completion of critical projects and the continuity of this important security related service. The 180-day time extension will also allow the MWRA Security Department the opportunity to review the security equipment maintenance and repair service responsibilities, and previous contract specifications in relation to network and integration administration, which may lead to modifications in the scope of work for future contracts with the goal of maximizing competition in upcoming bids.

Increases in Unit Price Items and Allowances

\$372,122.30

This item is comprised of seven increases in the estimated quantities of individual bid items and one increase in an allowance item required to cover the work expected during this proposed 180-day contract extension. The unit prices for the line items remain unchanged and include preventative maintenance. These items have been identified by MWRA staff as an unforeseen condition. MWRA staff and the Contractor have agreed to an amount not to exceed \$372,122.30 and to extend the contract term by 180 calendar days from September 28, 2023 to March 26, 2024.

**CONTRACT SUMMARY:**

	<u>Amount</u>	<u>Time</u>	<u>Dated</u>
Original Contract:	\$2,198,681.00	1,095 Days	4/01/20
Change Orders:			
Change Order 1*	\$372,122.30	180 Days	03/31/23
Change Order 2	<u>\$372,122.30</u>	<u>180 Days</u>	Pending
Total Change Orders:	\$744,244.60	360 Days	
Adjusted Contract:	\$2,942,925.60	1,455 Days	

\*Approved under delegated authority

If Change Order 2 is approved, the cumulative total value of all change orders to this contract will be \$744,244.60 or 33.85% of the original contract amount.

**BUDGET/FISCAL IMPACT:**

The FY24 Current Expense Budget includes sufficient funds for this change order.

**MBE/WBE PARTICIPATION:**

There were no MBE or WBE participation requirements established for this contract due to the specialized nature of the work and limited opportunities for subcontracting.

**STAFF SUMMARY**

**TO:** Board of Directors  
**FROM:** Frederick A. Laskey, Executive Director *Frederick A. Laskey*  
**DATE:** July 19, 2023  
**SUBJECT:** Deer Island Treatment Plant Residuals Facility Rehabilitation  
Design, Bidding and Engineering Services During Construction  
CDM Smith Inc.  
Contract 7052

**COMMITTEE:** Wastewater Policy and Oversight

       INFORMATION

  X   VOTE

*Michele S. Gillen*  
Michele S. Gillen

Director of Administration

David F. Duest, Director, Deer Island Treatment Plant  
Richard Adams, Manager, Engineering Services  
Brian Driscoll, P.E., Senior Program Manager  
Preparer/Title

*David W. Coppes*

David W. Coppes, P.E.

Chief Operating Officer

**RECOMMENDATION:**

To approve the recommendation of the Consultant Selection Committee to award Contract 7052, Deer Island Treatment Plant Residuals Facility Rehabilitation – Design, Bidding and Engineering Services During Construction, to CDM Smith Inc. and to authorize the Executive Director, on behalf of the Authority, to execute said contract in an amount not to exceed \$9,985,050, for a contract term of 99 months from the Notice to Proceed.

**DISCUSSION:**

Deer Island was built in several phases between 1988 and 2001 and provides wastewater treatment services for 43 Greater Boston communities. The plant is designed to treat an average of 361 million gallons per day with peak flows of 1.3 billion gallons per day.



*Residuals Facility*

Deer Island’s Residuals Facility consists of thickening, digestion, and biogas utilization processes with dewatering and thermal drying processes located at the pelletizing plant in Quincy. The digester complex within the Residuals Facility has three modules, each consisting of four digesters. Each digester module has an equipment building in the center that contains sludge heat exchangers, sludge recirculation pumps, piping and ancillary equipment. Much of this equipment is original and has been in service since the facility started operating in the mid-1990s. In some cases, equipment is

nearing the end of its useful life or has become obsolete. In other cases, the Authority seeks to implement operational improvements. As a result, a rehabilitation of the Residuals Facility is required.

Contract 7052 includes preliminary design, final design, bidding assistance and engineering services during construction for the rehabilitation of Deer Island’s Residuals Facility. The preliminary design will evaluate over 40 discrete items covering the following categories:

- digester internal inspection, coating and pipe replacement;
- pipe and valve replacement;
- pump replacement;
- sludge heating system modifications; and
- instrumentation and control modifications.



*Sludge Heat Exchanger*

The final design will include preparation of construction contract plans, specifications, cost estimates and bidding assistance.

**Procurement Process**

On April 26, 2023, MWRA issued a one-step Request for Qualifications/Proposals (RFQ/P) that was publically advertised in the Central Register, the Boston Herald, Banner Publications, El Mundo and on the MWRA Supplier Portal. The RFQ/P included the following evaluation criteria and points: Cost (25 points); Qualifications and Key Personnel (25 points), Experience/Past Performance on Similar Non-Authority Projects and on Authority Projects (25 points), Technical Approach/Capacity/Organization and Management Approach (20 points); and Minority and Women-Owned Business Enterprise Participation (5 points).

On June 2, 2023, MWRA received proposals from AECOM, Brown and Caldwell, and CDM Smith. The following table represents the cost and level of effort proposed.

<b>Proposer</b>	<b>Proposed Cost</b>	<b>Proposed Hours</b>
AECOM	\$9,348,153	51,939
CDM Smith	\$9,985,050	47,489
Brown and Caldwell	\$10,588,434	54,845
<i>Engineer's Estimate</i>	<i>\$6,942,446</i>	<i>34,737</i>

The Selection Committee met on June 12, 2023 to evaluate and rank the proposals. The results of the Selection Committee’s evaluation and ranking are presented below.

<b>Proposer</b>	<b>Total Final Score</b>	<b>Order of Preference* Points</b>	<b>Ranking</b>
CDM Smith	352	6	1
AECOM	344	9	2
Brown and Caldwell	304	15	3

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

The Engineer's Estimate was \$6.94 million. Staff formulated the Engineer's Estimate during the development phase of the RFQ/P using standard metrics for other smaller design projects. While staff attempted to account for the complexity of the scope of services, it was very difficult to factor all the elements required to complete the scope into the Engineer's Estimate. Items in the Engineer's Estimate that contributed to the large discrepancy with CDM Smith's proposal include the level of effort required for inspections of the digesters and existing pipe supports, gravity thickener overflow pipe and pump replacement, scum screening modifications, and record drawing preparation. CDM Smith's proposed level of effort was within 9.4% and 15.5% of Brown and Caldwell and AECOM, respectively, which indicates that each firm has a good understanding of the scope of services. Given these factors, the Selection Committee concluded that the Engineer's Estimate did not accurately reflect the required level of effort to successfully complete the scope of services.

CDM Smith's proposal included highly qualified personnel who have the required experience in residuals facility rehabilitation projects. CDM Smith presented a multi-disciplinary team, including subconsultants with whom the firm has successfully worked in the past. In addition to positive references for performance on past MWRA projects and external projects, all references indicated that they would rehire the firm. CDM Smith demonstrated a full understanding of the project requirements as evidenced by the site-specific challenges it presented in its Technical Approach and the manner in which it will achieve the project goals. Even though CDM Smith proposed 4,450 fewer hours than AECOM, the firm had more hours distributed to senior staff than AECOM, which is necessary for a project of this complexity. The proposal was well presented and the proposed project team has the capacity to successfully perform the work.

AECOM also submitted a good proposal that included qualified and experienced personnel, many with prior experience on Deer Island rehabilitation projects. However, its lead mechanical engineer was not licensed as a mechanical professional engineer as required by the RFQ/P. The role of this position is crucial for the successful completion of this project, as the majority of the work involves complex mechanical equipment and processes. In addition, AECOM's Technical Approach did not provide specific details into its overall design approach, and did not include any new ideas involving the improvement of the existing process, equipment or material selection. The proposed cost was approximately \$637,000 lower than CDM Smith primarily due to its lower indirect cost rate (123.50% vs. 161.26%).

Brown and Caldwell's proposal included qualified personnel, although they have very little experience on Deer Island. Brown and Caldwell's Technical Approach was very good and

demonstrated a good understanding of the project requirements. This firm proposed the highest level of effort and total cost.

Four of the five Selection Committee members ranked CDM Smith first, and the fifth member ranked the firm second. Based on the overall ranking, staff recommend the award of Contract 7052 to CDM Smith Inc. in an amount not to exceed \$9,985,050.

**BUDGET/FISCAL IMPACTS:**

The FY24 Capital Improvement Program includes a budget of \$6,000,000 for Contract 7052; the recommended contract amount is \$9,985,050 or \$3,985,050 over the CIP amount. This amount will be absorbed within the five-year CIP spending cap.

**MBE/WBE PARTICIPATION:**

The minimum MBE and WBE participation requirements for this project established at 7.18% and 5.77%, respectively. CDM Smith has committed 8.15% MBE and 5.80% WBE participation.




## STAFF SUMMARY

**TO:** Board of Directors  
**FROM:** Frederick A. Laskey, Executive Director  
**DATE:** July 19, 2023  
**SUBJECT:** Nut Island Headworks Odor Control and HVAC Improvements  
Walsh Construction Company II, LLC  
Contract 7548, Change Order 15

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Martin E. McGowan, Director, Construction  
Jeffrey Bina, P.E., Construction Coordinator  
Preparer/Title

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

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### RECOMMENDATION:

To authorize the Executive Director, on behalf of the Authority, to approve Change Order 15 to Contract 7548, Nut Island Headworks Odor Control and HVAC Improvements, with Walsh Construction Company II, LLC, extending the contract term by 90 calendar days from June 10, 2023 to September 8, 2023, with no increase in contract amount.

Further, to authorize the Executive Director to approve additional change orders as may be needed to Contract 7548 in an amount not to exceed the aggregate of \$1,000,000 and 180 days in accordance with the Management Policies and Procedures of the Board of Directors.

### DISCUSSION:

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

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

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

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

## **This Change Order**

Change Order 15 consists of the following item:

<u>Extend Contract Time by 90 Calendar Days</u>	\$0.00
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Change Order 13 was executed on January 10, 2023 to extend the contract term by 180 calendar days due to delays caused by global shortages and supply chain interruptions of raw materials used in the fabrication of fiberglass reinforced plastic, including glass and resins. Two large overseas chemical manufacturers had catastrophic events in November 2020, including the Guodu Chemical explosion in China and the LG Chemical fire in South Korea, which required unexpected shutdowns in chemical production for these key resins. The situation was further compounded by severe weather in Texas in February 2021 and Hurricane Ida in August 2021 that impeded domestic supplies. Fiberglass reinforced plastic is the primary component that comprises the ten carbon adsorbers, interconnecting ductwork, dampers and accessories in the new odor control system. Lingering effects of these delays continue to affect the progress of the contract work. At the time Change Order 13 was executed, it was anticipated that all remaining fiberglass components would be delivered to the site in January 2023, with the carbon adsorbers being placed into service in April 2023. Instead, the final 48-inch fiberglass duct sections were delivered to the site in April 2023 with final fit-up accomplished in June 2023. Because these critical path activities are further delayed, the commissioning of the new carbon adsorbers is now scheduled for July 2023, three months later than scheduled. Following the odor control system acceptance, there remains a number of successor activities to restore the site and complete work in the odor control room. Because the fiberglass reinforced plastic supply chain shortage was beyond the reasonable control of the Contractor, the contract time must now be extended by an additional 90 calendar days from June 10, 2023 to September 8, 2023 at no additional cost to the Authority.

In addition to the delays resulting from the fabrication and delivery of the fiberglass reinforced plastic components, the Contractor has also been delayed by unfavorable weather conditions for restoring the odor control roofing system as well as several unexpected change orders increasing the Contractor's scope of work. The Contractor will prepare and submit the impacts of these additional delays for staff to evaluate if additional time is warranted beyond this 90-day time extension. At this time, staff anticipate the Contractor will achieve Substantial Completion on or before September 8, 2023.

This item was identified by MWRA staff as an unforeseen condition. The Consultant and the Contractor have agreed to extend the contract term by 90 calendar days from June 10, 2023 to September 8 2023, with no increase in contract amount. Staff recommend the Board's approval of this Change Order 15.

Although the project is nearing completion, staff are requesting an additional \$1,000,000 for future change orders based on acknowledged changes in the work. The Contractor, Consultant and Authority are continuing to negotiate these additional costs.

**CONTRACT SUMMARY:**

	<b>Amount</b>	<b>Time</b>	<b>Date</b>
Original Contract:	\$57,565,399.00	1,034 Days	2/12/20
<b>CHANGE ORDERS</b>			
Change Order 1*	\$24,995.58	0 Days	12/08/20
Change Order 2*	\$126,224.03	0 Days	1/08/21
Change Order 3	\$376,355.91	0 Days	3/10/21
Change Order 4*	\$22,320.58	0 Days	3/10/21
Change Order 5*	\$203,986.91	0 Days	09/22/21
Change Order 6	\$222,179.61	0 Days	09/22/21
Change Order 7*	\$23,871.28	0 Days	11/29/21
Change Order 8*	\$161,181.94	0 Days	02/25/22
Change Order 9	\$187,410.85	0 Days	02/25/22
Change Order 10*	\$25,000.00	0 Days	10/06/22
Change Order 11*	\$662,554.51	0 Days	11/30/22
Change Order 12	\$318,164.42	0 Days	11/30/22
Change Order 13*	\$0.00	180 Days	01/10/23
Change Order 14*	\$524,892.66	0 Days	03/31/23
Change Order 15	<u>\$ 0.00</u>	<u>90 Days</u>	Pending
Total Change Orders	\$2,879,138.28	270 Days	
Adjusted Contract:	\$60,444,537.28	1,304 Days	

\*Approved under delegated authority

If Change Order 15 is approved, the cumulative value of all change orders will be \$2,879,138.28 or 5% of the original contract. Work on this contract is 96% complete.

**BUDGET/FISCAL IMPACT:**

Change Order 15 is for a time extension only and will have no budgetary impact.

**MBE/WBE PARTICIPATION:**

The MBE/WBE participation requirements for this project were established at 1.1% and 1.2%, respectively. The Contractor has been notified that it is still expected to meet these requirements.

## STAFF SUMMARY

**TO:** Board of Directors  
**FROM:** Frederick A. Laskey, Executive Director  
**DATE:** July 19, 2023  
**SUBJECT:** Update on Section 101 Extension in Waltham  
Contract 7457




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**COMMITTEE:** Water Policy & Oversight

Martin E. McGowan, Director, Construction  
Terrance Flynn, P.E., Construction Coordinator  
Preparer/Title

X  INFORMATION  
  VOTE



David Coppes, P.E.  
Chief Operating Officer

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*MWRA's Contract 7457 to extend Section 101 in Waltham has encountered a number of challenges as a result of the community's requirement to change the work hours of the contract. This staff summary will provide a project update and MWRA's plan to address the revised work hours to complete this critical project.*

### RECOMMENDATION:

For information only.

### DISCUSSION:

Contract 7457 for the Section 101 Pipeline project was awarded to Baltazar Contractors, Inc. in the amount of \$31,900,000 at the May 25, 2022 Board of Directors' meeting. The Notice to Proceed was issued on July 12, 2022 with a 22-month contract duration. The project consists of a new 36-inch diameter water main and appurtenances extending from MWRA's Meter 182 at the Waltham/Lexington town line down Lexington Street to Totten Pond Road, where it will connect to Waltham's water system. (See attached Figure 1.) This connection will provide a new redundant water supply to Waltham's Prospect Hill Service area from the Northern Extra High (NEH) pressure zone and to MWRA's Lexington Street Pumping Station. In an emergency, the pipeline will provide a partial water supply to MWRA's NEH pressure zone from the Lexington Pumping Station. This new water main will provide sufficient capacity to maintain water service to Waltham during the anticipated shutdown of MWRA's WASM 3 pipeline and the Lexington Street Pumping Station for future rehabilitation. WASM 3 is a ten-mile steel pipe, installed in the 1920s and 1930s, which is a critical supply line to over 250,000 customers in the Northern High, Northern Extra High, and Intermediate High supply systems. In the event of a loss of the City Tunnel or City Tunnel Extension, this large pipeline can provide emergency flow to the Gillis Pump Station, which would serve the Northern High and Northern Intermediate High communities.

The contract also includes water, sewer and drain utility replacement work in the project area for the City of Waltham that needs to be completed concurrently with the MWRA work and prior to completion of construction of the City's new high school anticipated in 2024. Reimbursement to MWRA for the design and construction of the City's portions of the work is expected to be made under a Memorandum of Agreement (MOA) with Waltham. To cover the costs of the Waltham

work, the City appropriated \$5,000,000 for construction, as well as for construction administration, police details and contingencies. The MOA with Waltham, however, has not yet been executed. Staff negotiated the terms of the MOA with Waltham to address concerns raised by the City, including with respect to the approval of change orders relating to the Waltham work. Staff will work to ensure that the MOA is executed prior to the contractor commencing installation of Waltham's pipe, which is currently scheduled to begin in late summer or early fall 2023.

### **Project Constraints and Work Hours:**

The contract documents specify that the majority of work shall be performed between 7:00 a.m. and 3:30 p.m. Monday through Friday, with some select portions, mostly at intersections, to be performed at night from 9:00 p.m. to 5:00 a.m. Sunday through Thursday. After commencement of the contract and prior to the start of construction, meetings were held with multiple City departments and officials, including the City Engineer, the Department of Public Works and the Police Department. Due to concerns raised regarding community impacts during construction, MWRA was informed that work could not be performed according to the work hours listed in the contract. Given that Lexington Street is a major roadway, the new requirements are to limit work hours to 9:00 a.m. to 3:30 p.m. Monday through Friday to avoid excessive traffic during the morning rush hour and for additional intersections, not identified during design, to be done at night. Staff met with Waltham officials during design to review the scope of work with established work hours. These concerns did not surface until construction was imminent. Therefore, these restrictions were not included in the contract documents.

These new restrictions will affect the progress of the work by reducing the work day by two hours, as well as requiring certain work to be performed at night instead of during the day. In addition, numerous revisions to the temporary water bypass piping alignment were required to satisfy requests from residents and businesses along the route. While the exact impacts have yet to be determined, losing two hours at the start of the day shift will reduce the contractor's work shift by 25%, which will affect the progress of the work. Additionally, due to existing contract constraints and the importance of timely completing water, sewer and drain connections to the new high school, a contract time extension cannot be provided. Therefore, the contractor will be required to perform the same amount of work within the original contract duration, but with restrictions not included in the contract.

### **Change Orders:**

Change Order 1 was executed under delegated authority on June 30, 2023 for an amount not to exceed \$500,000 with no increase in contract time to reimburse the contractor for compensable costs pursuant to the contract documents directly related to MWRA's work resulting from these new restrictions. Change Order 1 is for MWRA work only and not for the upcoming Waltham work. Payment will be made only for compensable costs pursuant to the contract documents that are approved by the Authority after review of supporting materials provided by the contractor. Furthermore, all contract terms and conditions remain in effect.

This change order was issued to allow work to continue and maintain the project schedule while actual compensable costs for the shorter work hours and night work can be determined. Additional change orders are expected if these work restrictions continue in order to timely complete the project work. Since work has just started, staff expect to have a better estimate on these additional costs to present to the Board at a future date.

MWRA anticipates similar restrictions will be in place while performing the Waltham work later this year. Any separate change order issued to the contractor will clearly delineate MWRA and Waltham's costs resulting from the revised work hours.

**Work Completed to Date:**

Given the long lead time for fabrication of critical pipe materials, staff worked with the contractor to expedite the submittal review process to ensure these materials were delivered to meet the tight contract schedule. All key materials were released for fabrication in the summer and fall 2022 and will be available for the current construction season.

While waiting for pipe deliveries, the contractor also completed a number of activities in advance of pipe replacement work. Starting in December 2022, the contractor excavated numerous test pits to locate and identify existing utilities along the pipe alignment. In addition, the contractor installed cured-in-place-pipe lining to reinforce existing sewers that are not scheduled for replacement under this contract. These activities were completed during the day shift with reduced work hours and compensable costs will be included in Change Order 1.

On March 28, 2023, a public meeting was held to inform residents of the importance of this project, the sequence of work, revised work hours, expected impacts and anticipated schedule. Staff continue to work closely with residents to address their concerns, via weekly project updates and notifications that are posted to MWRA's website. In addition, residents can sign up to receive electronic updates and notifications through MWRA's Everbridge service.

In April 2023, the contractor began installing a temporary water bypass on the southern portion of the project, starting at the intersection of Lexington Street and Totten Pond Road. This bypass is necessary because the City's existing water main must be relocated prior to installing MWRA's new 36-inch pipe. The temporary water bypass was activated in June 2023. This work was also performed on the day shift, with reduced hours, and compensable costs will be included in Change Order 1.



*Installing Temporary Water Bypass Piping on Lexington Street*



*Storage of Pipe Materials with Temporary Water Bypass Piping*



On June 13, 2023, work on Lexington Street between Totten Pond Road and Lincoln Street began on the night shift. These intersections were not identified as requiring night work during design and compensable costs for working during the night will be included in Change Order 1.



*Night Work at the Intersection of Lexington Street and Totten Pond Road*



*Replacement of Municipal Sewer and Drain Lines on Lexington Street*

**BUDGET/FISCAL IMPACTS:**

The FY24 CIP includes \$27,552,619 for Contract 7457, which includes the expected reimbursement by Waltham to MWRA of \$4,347,381 under a MOA. The additional MWRA costs resulting from the revised work hours will be absorbed within the five-year CIP spending cap.

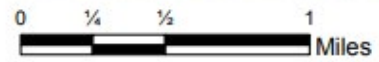
**MBE/WBE PARTICIPATION:**

Contract 7457 includes 7.24% and 3.6% participation for MBE and WBE respectively.

# Section 101 Ext. Waltham Project Map



Figure 1





**STAFF SUMMARY**

**TO:** Board of Director  
**FROM:** Frederick A Laskey, Executive Director  
**DATE:** July 19, 2023  
**SUBJECT:** PCR Amendments - July 2023




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**COMMITTEE:** Personnel and Compensation

         INFORMATION  
  X   VOTE

Wendy Chu, Director of Human Resources  
Preparer/Title

  
Michele S. Gillen  
Director, Administration

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**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.

**July 2023 PCR Amendments**

There are six PCR Amendments this month.

Organizational Changes:

1. Creation of a new position in the Administration Division, Procurement Department of a Deputy Director of Procurement, Non-Union Grade 15, to provide management support for the department.
2. Title and grade change to one vacant position in the Administration Division, MIS Department from Security Monitor, Unit 6 Grade 9, to Network Administrator I, Unit 6 Grade 10, to better meet staffing needs.
3. Grade change to one filled position in the Executive Division, Public Affairs Department from Project Manager, Media and Design, Unit 6 Grade 10, to Project Manager, Media and Design, Unit 6 Grade 11, to better reflect responsibility level.
4. Grade change to one vacant position in the Operations Division, TRAC Department from General Construction Inspector, Unit 9 Grade 18, to Field Inspector, Water and Wastewater, Unit 9 Grade 19, to better meet staffing needs.

5. Title and grade change to one filled position in the Operations Division, Metro Water - Pipeline Department from Supervisor, Inspection, Unit 9 Grade 25, to Cross Connection Coordinator, Unit 9 Grade 23, per union agreement.
6. Salary adjustment in the Operations Division, Deer Island Process Control Department for an Assets Manager, Unit 6 Grade 13, to alleviate salary collision with a direct report.

**BUDGET/FISCAL IMPACT:**

The annualized budget impact of these PCR amendments will be a maximum cost of \$188,948. 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**

<b>PCR AMENDMENTS REQUIRING BOARD APPROVAL - July 19, 2023</b>																		
Number	Current PCR #	V/F	Type	Current Title	UN	GR	Amended Title	UN	GR	Current/Budget Salary	Estimated New Salary		Estimated Annual \$ Impact		Reason For Amendment			
B38	Administration Procurement TBD	N/A	N/A	N/A	N/A	N/A	Deputy Director of Procurement	NU	15	\$0	\$155,500	-	\$155,500	\$155,500	-	\$155,500	New position to provide management support to the department.	
B39	Administration MIS 8610032	V	T,G	Security Monitor	6	9	Network Administrator I	6	10	\$97,639	\$70,231	-	\$107,467	-\$27,408	-	\$9,828	To better meet staffing needs.	
B40	Executive Public Affairs 5710049	F	G	Project Manager, Media and Design	6	10	Project Manager, Media and Design	6	11	\$90,851	\$99,911	-	\$99,911	\$9,060	-	\$9,060	The grade better reflects responsibility level.	
B41	Operations TRAC 5710049	V	T, G	General Construction Inspector	9	18	Field Inspector, Water and Wastewater	9	19	\$88,701	\$66,949	-	\$93,486	-\$21,752	-	\$4,785	To better meet staffing needs.	
B42	Operations Metro Water 3384048	F	T, G	Supervisor, Inspection	9	25	Cross Connection Coordinator	9	23	\$100,560	\$99,725	-	\$99,725	-\$835	-	-\$835	Per union agreement.	
B43	Operations Deer Island Process Control 2988005	F	S	Assets Manager	6	13	Assets Manager	6	13	\$128,719	\$139,329	-	\$139,329	\$10,610	-	\$10,610	To alleviate salary collision with direct report.	
<b>BOARD TOTAL=</b>					6													
										<b>TOTAL:</b>				\$125,175	-	\$188,948		

**MWRA  
POSITION DESCRIPTION**

**POSITION:** Deputy Director of Procurement

**DIVISION:** Administration

**DEPARTMENT:** Procurement

**BASIC PURPOSE:**

Assists in the overall direction of the operations of the contract office and manages all aspects of construction, professional and non-professional services contracts from pre-bidding or pre-solicitation to close-out. Establishes and implements policies and procedures related to the drafting, bidding, negotiating, and awarding of contracts. Provides guidance to the Purchasing Unit as necessary. Acts as the Director of Procurement in the absence of the Director.

**SUPERVISION RECEIVED:**

Works under the general supervision of the Director of Procurement.

**SUPERVISION EXERCISED:**

Exercises close supervision of Deputy Contract Managers. Oversees the entire Procurement Department in the absence of the Procurement Director. Provides functional guidance to Manager, Purchasing and purchasing staff.

**ESSENTIAL DUTIES AND RESPONSIBILITIES:**

- Provides oversight and direction to the employees in the contracts and purchasing units in accordance with the organization's policies and procedures and applicable statutes and as directed by the Director of Procurement.
- Drafts, recommends, and implements of Authority-wide policies and procedures for all elements of the contract function, including creation, review and/or evaluation of RFQs, RFPs, proposals, bids and contracts as well as the negotiation of contracts and terms and the review of contract amendments, change orders, contract close out and final payment.
- Directs the review of contract processes and documents for format and substance as well as compliance with Authority standards and applicable law, especially MGL Chapters 149 and 30.
- Provides guidance and direction as needed to staff on vendor and contract diversity.

- Advises Law Division as required and Senior Authority staff regularly on contract matters; represents Authority before Massachusetts Department of Labor; directs Deputy and Assistant Contract Managers in performance of these functions.
- Manages advertising programs and systems to open bids and award and execute contracts in compliance with Authority standards and Commonwealth law.
- Participates in the defense of contract claims and the dispute resolution process.
- Oversees maintenance of a contract database that tracks progress through the advertising, bidding and award stages as well as through the life of the contract.
- Directs the Deputy and Assistant Contract Managers in the performance of their responsibilities for reviewing, drafting and negotiating contracts; reviewing and evaluation of proposals, including compensation analysis and cost control; and the provision of assistance and direction to Authority staff in the preparation of contract documents.
- In coordination with the Director of Procurement or in the Director's absence, reviews and approves Procurement and other staff summaries prior to submission to the Board of Directors; may appear before the Board on procurement matters.
- In coordination with the Director of Procurement or in the Director's absence, approves all contracts prior to execution by the Executive Director.
- Directs and participates in Consultant /Contractor Selection Committees as needed.
- Prepares and monitors adherence to the Contract Office budget.
- 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 business administration, public administration or a related field; and a JD in Law; and

- (B) Understanding of procurement and contract management as acquired through a minimum of eight (8) years' experience, preferably in a large public sector agency, of which at least three (3) years should be in a management or supervisory capacity; or
- (C) Any equivalent combination of education or experience.

Necessary Knowledge, Skills and Abilities:

- (A) Knowledge of contract law.
- (B) Knowledge and experience with MGL Chapters 149 and 30, construction contracts and construction procedures required.
- (C) Excellent written and oral communication skills are required.
- (D) Experience with the full Microsoft Office Suite and proficiency in meeting software such as WebEx.

**SPECIAL REQUIREMENTS:**

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

**TOOLS AND EQUIPMENT USED:**

Office machines such as phones, mobile devices, laptop, etc and associated software programs, copy and fax machines.

**PHYSICAL DEMANDS:**

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

**July 2023**

**MWRA  
POSITION DESCRIPTION**



**POSITION:** Security Monitor

**DIVISION:** Administration & Finance

**DEPARTMENT:** Management Information Systems (MIS)

**BASIC PURPOSE:**

Provides senior computer operator coverage and ensures applications, data and files on shared resources including microcomputers and servers are secured from unauthorized, accidental and/or inappropriate access.

**SUPERVISION RECEIVED:**

Works under the general supervision of the Data Center Manager.

**SUPERVISION EXERCISED:**

None.

**ESSENTIAL DUTIES AND RESPONSIBILITIES:**

- Performs, as required, all operator duties on all systems including peripheral device services, backups, print runs, system recovery and production events in accordance with established standards and procedures.
- Assists system managers with patches, bug fixes, software upgrades and installs as required.
- Oversees, as required, the work performed by junior operators.
- Configures new users and removes/modifies existing users from shared resources upon transfer, job change and termination in accordance with security business practices and procedures.
- Manages all software and tools used to facilitate security monitoring and control. Reviews security reports, console logs, etc. and takes appropriate action in compliance with business practices and procedures, and audit requirements.
- Coordinates with application staff the movement of changed programs from test to production to reduce risks of programmer write access to production programs and data.



- Monitors vendor access to shared resources by establishing temporary passwords and reviews log reports to ensure work performed is as authorized.
- Ensures passwords to all shared resources change at least every ninety (90) days and inactive accounts are removed from systems.
- Develops training/other user materials and procedural documentation as required for security monitoring, sensitivity and control.
- Provides immediate supervisor and department head with reports of security violations and related issues.

**SECONDARY DUTIES:**

- Performs related duties as assigned but not those, which may be in conflict with required segregation of duties.

**MINIMUM QUALIFICATIONS:**

Education and Experience:

- (A) A four (4) year college or technical program in computer science or related field; and
- (B) Four (4) to seven (7) years of related experience in computer operations and console management; and
- (C) Technical knowledge and demonstrated experience with MPE/ix, VMS, ALPHA/AXP and UNIX systems operation and management; and
- (D) Prior supervisory or lead operator experience preferred. Experience with PCs and server administration preferred; or
- (E) Any equivalent combination of education and/or experience.

Necessary Knowledge, Skills and Abilities:

- (A) Knowledge of HP, DEC and UNIX computer operations and console management.
- (B) Proficiency and/or knowledge with: (a) Security 3000 and/or other similar security software; (b) MPE/ix, VMS, ALPHA/AXP and UNIX console operating systems commands; (c) LaserRX, Glance, DEC PS and/or WBA monitoring software packages; (d) TAPES and/or similar automated tape media software; (e) Maestro and/or other similar job schedulers; and (f) Spoolmate and/or other similar spooling software.
- (C) Excellent analytical, interpersonal, written and oral communications skills required.

### **SPECIAL REQUIREMENTS:**

None.

### **TOOLS AND EQUIPMENT USED:**

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

### **PHYSICAL DEMANDS:**

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

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

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

### **WORK ENVIRONMENT:**

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

While performing the duties of this job, the employee works in a computer center 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 Computer Center also uses automatically discharging chemicals to suppress fire.

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

**November, 2000**

**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**

**OLD**

**POSITION:** Project Manager, Media and Design

**DIVISION:** Executive

**DEPARTMENT:** Public Affairs

**BASIC PURPOSE:**

Designs, produces and oversees graphic design and video editing services. Creates visual content through photography and videography.

**SUPERVISION RECEIVED:**

Works under the general supervision of the Special Assistant to the Executive Director.

**SUPERVISION EXERCISED:**

None.

**ESSENTIAL DUTIES AND RESPONSIBILITIES:**

- Plans, designs, and produces a wide variety of graphics design products such as illustrations, brochures and displays, including the Annual Water Quality Report, and manages the processes from conceptualization to final production.
- Determines project priorities, allocates resources accordingly and develops appropriate schedules. Prepares contract specifications and evaluates bids.
- Oversees production of printed and digital materials for internal and external distribution, including educational materials for MWRA customer communities.
- Coordinates with divisions to develop and produce informational pamphlets, brochures, videos and other multi-media presentations to educate the public on MWRA programs.
- Creates and manages photo and video files, using still and video cameras as well as aerial drones.
- Documents training exercises, public events, tours and visiting VIPs through the use of video, still photography and digital imaging.



## **SECONDARY DUTIES:**

- Provides back-up web administration for Internet and Intranet sites.
- Performs related duties as required.

## **MINIMUM QUALIFICATIONS:**

### Education and Experience:

- (A) Knowledge of the principles and practices of graphic arts and photography/videography as normally attained through a Bachelor's degree in graphic design, fine arts, communications, or a related field; and
- (B) Graphic design skills as acquired through a minimum of four (4) years of experience in the communications or design field; and
- (C) Experience using digital and video cameras, as well as drones; and
- (D) Any equivalent combination of education or experience.

### Necessary Knowledge, Skills and Abilities:

- (A) Ability to use a wide variety of Apple and PC graphics software including desktop publishing, such as Adobe Creative Suite.
- (B) Proficiency with digital photo and video editing software such as Adobe Premiere, iMovie, etc.
- (C) Excellent organizational, oral and written communications skills.
- (D) Ability to meet deadlines and work under time constraints.

## **SPECIAL REQUIREMENTS:**

A valid Massachusetts Class D Motor Vehicle Operators License.

Ability to work occasional nights and weekends.

**TOOLS AND EQUIPMENT USED:**

Office machines as normally associated with the use of telephone, personal computer including word processing and graphics software, cameras and drones, and copiers.

**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 I 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, but is required to work in the field on occasion.

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

**December 2021**

**MWRA  
POSITION DESCRIPTION**

**NEW**

**POSITION:** Project Manager, Media and Design

**DIVISION:** Executive

**DEPARTMENT:** Public Affairs

**BASIC PURPOSE:**

Designs, produces and oversees graphic design and video editing services. Creates visual content through photography and videography. Manages the MWRA drone program.

**SUPERVISION RECEIVED:**

Works under the general supervision of the Special Assistant to the Executive Director.

**SUPERVISION EXERCISED:**

May provide functional supervision to colleagues and interns as needed.

**ESSENTIAL DUTIES AND RESPONSIBILITIES:**

- Plans, designs, and produces a wide variety of graphics design products such as illustrations, brochures and displays, including the Annual Water Quality Report, and manages the processes from conceptualization to final production.
- Designs, implements and maintains the MWRA Intranet (Pipeline) site through the use of Hypertext Markup Language (HTML), Internet technologies and Web development software packages.
- Manages the MWRA drone program and maintains appropriate licenses.
- Determines project priorities, allocates resources accordingly and develops appropriate schedules. Prepares contract specifications and evaluates bids.
- Oversees production of printed and digital materials for internal and external distribution, including educational materials for MWRA customer communities.
- Coordinates with divisions to develop and produce informational pamphlets, brochures, videos and other multi-media presentations to educate the public on MWRA programs.
- Creates and manages photo and video files, using still and video cameras as well as aerial drones.

- Documents training exercises, public events, tours and visiting VIPs through the use of video, still photography and digital imaging.

**SECONDARY DUTIES:**

- Provides back-up web administration for Internet sites.
- Performs related duties as required.

**MINIMUM QUALIFICATIONS:**

Education and Experience:

- (A) Knowledge of the principles and practices of graphic arts and photography/videography as normally attained through a Bachelor's degree in graphic design, fine arts, communications, or a related field; and
- (B) Graphic design skills as acquired through a minimum of four (4) years of experience in the communications or design field; and
- (C) Experience using digital and video cameras, as well as drones; and
- (D) Any equivalent combination of education or experience.

Necessary Knowledge, Skills and Abilities:

- (A) Ability to use a wide variety of Apple and PC graphics software including desktop publishing, such as Adobe Creative Suite.
- (B) Proficiency with digital photo and video editing software such as Adobe Premiere, iMovie, etc.
- (C) Excellent organizational, oral and written communications skills.
- (D) Ability to meet deadlines and work under time constraints.

**SPECIAL REQUIREMENTS:**

A valid Massachusetts Class D Motor Vehicle Operators License.

Ability to work occasional nights and weekends.

Federal Aviation Administration (FCC) license as a Drone Pilot.

**TOOLS AND EQUIPMENT USED:**

Office machines as normally associated with the use of telephone, personal computer including word processing and graphics software, cameras and drones, and copiers.

**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 I 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, but is required to work in the field on occasion.

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

**July 2023**

**MWRA  
POSITION DESCRIPTION**

**OLD**

**POSITION:** General Construction Inspector

**DIVISION:** Operations

**DEPARTMENT:** TRAC

**BASIC PURPOSE:**

Provides general inspection services on construction contracts performed by outside agencies affecting Division projects. Surveys pipeline and appurtenances to update record plans and detail records. Provides a range of duties, but will not necessarily perform all duties listed below.

**SUPERVISION RECEIVED:**

Works under the general supervision of the Senior General Construction Inspector, a Project Manager, and the Senior Program Manager Field Operations & Permitting.

**SUPERVISION EXERCISED:**

None.

**ESSENTIAL DUTIES AND RESPONSIBILITIES:**

- Inspects the work of contractors to ensure conformance to plans and MWRA, specifications and standards on work performed for any project for which it is responsible.
- Records completed work, maintains records of the cost of changes and additional work.
- Coordinates with Senior General Construction Inspector and Project Manager to ensure that conditions of 8(m) Permit are enforced.
- Reviews designs and construction of projects of medium complexity and assists senior engineering personnel on major projects for completion and conformance to specifications.
- Inspects materials for conformance to specifications, maintain records of progress, completed work and document changes and additional work.

- Surveys and calculates specifications along with other engineering methodology in determining areas of reconnaissance locations and layouts in the field.
- Survey existing Water pipelines and appurtenances to update record drawings and detail records.
- Conducts and inspects Backflow device tests and conduct Cross Connection Control Surveys.
- Documents daily work completed within work order system including all field notes from job site.

**SECONDARY DUTIES:**

- Performs related duties as required.

**MINIMUM QUALIFICATIONS:**

Education and Experience:

- (A) A two (2) year college program in civil engineering or related field. (Pipeline construction a plus); and
- (B) Knowledge of engineering practices in building and civil works construction; or
- (C) Any equivalent combination of education and experience.

Necessary Knowledge, Skills and Abilities:

- (A) Ability to use Theodolite, Total Station for updating Record Plans and Detail Records.
- (B) Skill in operation of the listed tools and equipment.

### **SPECIAL REQUIREMENTS:**

A valid Backflow Inspectors Certificate and Cross Connection Control Certificate or obtain the same within six months.

A valid Massachusetts Class D Motor Vehicle Operators License.

A Grade I Distribution Water Operators License is required with the ability to obtain a Grade II Distribution Water Operators License within one year.

### **TOOLS AND EQUIPMENT USED:**

Laboratory equipment and instruments, telephone, personal computer including word processing and other software, copy and fax machine.

### **PHYSICAL DEMANDS:**

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

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

### **WORK ENVIRONMENT:**

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

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



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

**January 2017**

**MWRA  
POSITION DESCRIPTION**



**POSITION:** Field Inspector, Water & Wastewater

**DIVISION:** Operations

**DEPARTMENT:** TRAC

**BASIC PURPOSE:**

Provides inspection services on construction contracts performed by outside agencies affecting the Authority's wastewater transport system and water distribution system. Performs 8 M Permitting and Dig Safe inspection and markout activities.

**SUPERVISION RECEIVED:**

Works under the general supervision of the Senior Field Inspector. May receive functional supervision on projects from a Senior Program Manager, Field Operations & Permitting or TRAC Project Manager.

**SUPERVISION EXERCISED:**

None.

**ESSENTIAL DUTIES AND RESPONSIBILITIES:**

- Inspects the work of contractors to ensure conformance to plans, specifications and standards. Maintains record of labor, costs of changes and extra work.
- Coordinates with Senior Field Inspectors and Project Managers to ensure that conditions of applicable 8(M) and other permits are enforced.
- Inspects materials for conformance to specifications, maintain records of progress, completed work and document changes and additional work.
- Surveys and calculates specifications along with using other engineering methodology to determine areas of reconnaissance locations and layouts in the field.
- Reviews designs and construction of projects of medium complexity and assists senior field inspector and engineering personnel on major projects for completion and conformance to specifications.

- Participates in Dig Safe inspection and markout activities both during work hours and on-call.
- Records completed work, maintains records of the cost of changes and additional work.
- Surveys existing water and wastewater appurtenances to update record drawings and detail records.
- Documents daily work completed within work order system including all field notes from job site.
- Performs mark out of MWRA water mains and sewers.
- Investigates dry weather wastewater discharges and various wet weather overflows.
- Supports wet weather operations as needed.
- Participates in emergency response to any/all MWRA emergencies as necessary.
- Provides On-Call inspection services as needed.
- Follows all MWRA safety policies and procedures to ensure a safe work environment.

**SECONDARY DUTIES:**

- Performs related duties as required.

**MINIMUM QUALIFICATIONS:**

Education and Experience:

- (A) Knowledge of basic engineering practices in building and civil works construction as normally attained through a Bachelor's degree in civil engineering, construction management, or a related field; and
- (B) Working knowledge of engineering, surveying, construction and civil works as acquired through one (1) to two (2) years of technical or professional experience in engineering, construction or a related field; or
- (C) Any equivalent combination of education and experience.

Necessary Knowledge, Skills and Abilities:

- (A) Demonstrated proficiency in field location techniques such as GPS.

- (B) Ability to read blueprints, detail records and record drawings.
- (C) Ability to carry out detailed instructions accurately.
- (D) Ability to develop and maintain productive working relationships with outside parties and to work effectively as part of a team.
- (E) Ability to maintain accurate records of work performed.
- (F) Knowledge of computers with experience in Microsoft Office Suite, computer- based drafting and design systems, and MAXIMO.
  
- (G) Excellent interpersonal, oral and written communication skills.

**SPECIAL REQUIREMENTS:**

Mandatory On Call work for after-hours inspection services in a rotation with other inspection staff.

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

A valid Grade 1 Water Distribution Operator-in-Training License and a Collections System 1 Certification is preferred.

**TOOLS AND EQUIPMENT USED:**

Power and hand tools, telephone, personal computer, 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, stand and walk. The employee is occasionally required to talk or hear; climb or balance; stoop, kneel, crouch, or crawl.

The employee must frequently lift and/or move up to 10 pounds and occasionally lift and/or

move up to 50 pounds. Specific vision abilities required by this job include close vision, distance, 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 outside weather conditions.

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

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

**July 2020**

**MWRA  
POSITION DESCRIPTION**



**POSITION:** Supervisor, Inspection

**DIVISION:** Operations

**DEPARTMENT:** Metropolitan Operations

**BASIC PURPOSE:**

Supervises leak detection surveys, flow tests, meter tests and regulator tests. Oversees field training in leak detection for municipal employees of MWRA-supplied communities and supervises pipeline and valve connection surveys. Serves as certified operator for Deer Island water system and manages MWRA Cross Connection Control Program.

**SUPERVISION RECEIVED:**

Works under the supervision of the Senior Program Manager, Water Pipeline Program.

**SUPERVISION EXERCISED:**

Exercises close supervision over leak detection and inspection staff.

**ESSENTIAL DUTIES AND RESPONSIBILITIES:**

- Supervises all phases of leak-detection, meter testing and cross-connection control surveys of the distribution system including operation of sonic leak-detection apparatus, leak correlators preparation of progress reports, leakage site reports, and other relevant survey documents.
- Supervises and performs other related activities including pitot-type flow tests for meter accuracy, fire flow tests, pressure tests, inspection of emergency connections and bypasses, preparation and updating of record plans of new connections and waterline changes, and surveys of pipeline and valve connections for updating records drawings.
- Coordinates with metering and water accountability staff regarding the meter testing contract.
- Assists customer communities with leak detection services, if requested.
- Coordinates the inspection schedule with scheduled construction/valve operators' works as needed.
- Supervises field training for municipal employees of MWRA supplied communities in leak detection methods.

- Operates the Deer Island water system and serves as a certified operator.
- Manages the MWRA Cross Connection Control Program.

**SECONDARY DUTIES:**

- Performs related duties as required.

**MINIMUM QUALIFICATIONS:**

Education and Experience:

- (A) Knowledge of waterworks construction as normally attained through a two (2) year college program in engineering or a related field; and
- (B) Practical knowledge of water leakage surveys, reading and interpreting plans and drawings, and pitot-type flow testing as acquired by seven (7) to nine (9) years experience in the water industry of which at least two (2) years is in a supervisory capacity; or
- (C) Any equivalent combination of education and experience.

Necessary Knowledge, Skills and Abilities:

- (A) Excellent administrative, interpersonal, management and written and oral communication skills required.
- (B) Demonstrated knowledge of roadway safety practices, including night operations.

**SPECIAL REQUIREMENTS:**

Massachusetts Grade 2D Operators of Drinking Water Supply Facility License required, with ability to obtain Grade 3D license within 1 year required.

Massachusetts Class D Driver's license required.

**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.

Leak detection, meter testing equipment and associated field equipment.

**PHYSICAL DEMANDS:**

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

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

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

### **WORK ENVIRONMENT:**

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

The employee will also regularly be performing duties in the field and will be subject to varying weather conditions.

The noise level in the work environment can be very loud in some field settings and moderately loud in other work locations.

January 2019

U9 Grade 25



**MWRA  
POSITION DESCRIPTION**



**POSITION:** Cross Connection Coordinator

**DIVISION:** Operations

**DEPARTMENT:** Metropolitan Operations

**BASIC PURPOSE:**

Manages MWRA Cross Connection Control Program and performs required sanitary surveys. Acts as the MWRA Community Leak Detection Liaison. Coordinates field training in leak detection for municipal employees of MWRA-supplied communities. Provides input on projects that concern Metropolitan Operations Pipeline group.

**SUPERVISION RECEIVED:**

Works under the supervision of the Senior Program Manager Pipelines (Water).

**SUPERVISION EXERCISED:**

None.

**ESSENTIAL DUTIES AND RESPONSIBILITIES:**

- Manages the MWRA Cross Connection Control Program. Coordinates sanitary surveys to confirm the presence or need for backflow prevention devices. Coordinates with MWRA maintenance personnel to ensure back flow testing is properly completed.
- Performs cross-connection control surveys of the distribution system and prepares progress reports and relevant survey documents.
  - Assists customer communities with leak detection services, if requested.
  - Provides support and technical assistance both internally and to communities in issues related to leak detection and flow testing.
- Assists with the collection of field data from in-house valve replacements and leak sites including sketches with distance ties to newly installed equipment and leaks.
  - Coordinates field training for MWRA employees and MWRA Community employees in leak detection methods.

- Assists the Senior Program Manager Pipeline with design and submittal reviews on MWRA water pipeline projects concerning Metropolitan Operations pipeline.
- As directed, coordinates with Operations Engineering on pavement maintenance contract field activities to ensure compliance with contract.
- Assists the Primary Operator of Deer Island Water system to ensure that the system complies with all DEP regulations.

**SECONDARY DUTIES:**

- Performs related duties as required.

**MINIMUM QUALIFICATIONS:**

Education and Experience:

- (A) Knowledge of waterworks construction as normally attained through a Bachelor’s degree in engineering or management field; and
- (B) Practical knowledge of water distribution system operation, leakage surveys, reading and interpreting plans and drawings, and cross connection control as acquired by three (3) to five (5) years of experience in the water industry; or
- (C) Any equivalent combination of education and experience.

Necessary Knowledge, Skills and Abilities:

- (A) Excellent administrative, interpersonal, written and oral communication skills.
- (B) Demonstrated knowledge of roadway safety practices.
- (C) Ability to read and interpret plans, maps, and drawings.
- (D) Demonstrated proficiency in the use of field location techniques such as GPS.
- (E) Ability to develop and maintain productive working relationships with outside parties.

**SPECIAL REQUIREMENTS:**

- Massachusetts Class D Driver’s license.

- Massachusetts Grade 2D Operators of Drinking Water Supply Facility License.
- Must obtain Grade 3D license Drinking Water Supply Facility License within 12 months.
- Certification by the Massachusetts Department of Environmental Protection (MassDEP) as a Cross Connection Surveyor within 12 months required. Must maintain active certification.

### **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. Leak detection, meter testing equipment and associated field equipment.

### **PHYSICAL DEMANDS:**

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

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

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

### **WORK ENVIRONMENT:**

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

The employee will also regularly be performing duties in the field and will be subject to varying weather conditions.

The noise level in the work environment can be very loud in some field settings and moderately loud in other work locations.

July 2023

**MWRA  
POSITION DESCRIPTION**

**POSITION:** Assets Manager  
**DIVISION:** Operations  
**DEPARTMENT:** Maintenance, Deer Island

**BASIC PURPOSE:**

Oversees the development and implementation of long-range maintenance and equipment replacement program for the Deer Island Treatment Plant (DITP) and subsequently for MWRA. Manages the development of materials and maintenance services and administers the contracts for these services. Develops maintenance performance measures, benchmarks against industry standards and track/audits performance against established measures.

**SUPERVISION RECEIVED:**

Works under the general supervision of the Deputy Director, Maintenance.

**SUPERVISION EXERCISED:**

Exercises close supervision of the Work Coordination and Construction Coordination Groups.

**ESSENTIAL DUTIES AND RESPONSIBILITIES:**

- Manages personnel in development and implementation of a long-term vision and strategy for the plant maintenance function.
- Directs senior Deer Island maintenance staff in the successful execution of established maintenance strategies and plans to continually improve the plant maintenance group function.
- In conjunction with the Maintenance Manager and the Manager of Work Coordination Group, ensures that the MAXIMO system and Work Coordination Group staff are delivering the necessary information and services required to meet day-to-day maintenance planning and work needs.
- Responsible for all Maximo upgrades, consider Maximo enhancement to better manage assets, ensure interfaces with other software's are meeting maintenance needs, and update all maintenance procedures to reflect upgrade or enhancements. All Maximo upgrades or enhancements must be documented on a project plan, monitor implementation and document return on investment.

- Working with senior Deer Island management staff, Human Resources staff and bargaining unit representatives, develops and implements more flexible and productive work practices within the Maintenance and Operations groups.
- In conjunction with the Deputy Director, implements the new maintenance plan and meets the milestones identified in the Authority's business plan.
- Develops and manages all maintenance-related audit and budget programs.
- Works with department maintenance managers and plant operations managers to develop specific staffing plans by trade.
- Works with senior MWRA management to develop and implement an agency-wide maintenance plan.

**SECONDARY DUTIES:**

- Performs related duties as required.

**MINIMUM QUALIFICATIONS:**

Education and Experience:

- (A) A four year college program in mechanical engineering, facilities management or a related field. Masters in Science or an advanced degree in a related field preferred: and
- (B) Required eight (8) to ten (10) years experience in support of facility operation and maintenance functions and five (5) years at a senior management level; or
- (C) Any equivalent combination of education or experience.

Necessary Knowledge, Skills and Abilities:

- (A) Proven ability for establishing and implementing efficient organizational practices, business area plans and business systems benchmarks.
- (B) Ability to effectively organize, direct, mentor and motivate personnel at both the supervisory and line level.
- (C) Knowledge of Wastewater Treatment, Operations and Process Control theory, practices and principles.
- (D) Strong communication and interpersonal skills necessary to interact at all levels of the

organization are required.

(E) Demonstrated organizational and systems management skills.

**SPECIAL REQUIREMENTS:**

None.

**TOOLS AND EQUIPMENT USED:**

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

**PHYSICAL DEMANDS:**

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

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

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

**WORK ENVIRONMENT:**

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

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

**April 2015**

**STAFF SUMMARY**

**TO:** Board of Directors  
**FROM:** Frederick A. Laskey, Executive Director  
**DATE:** July 19, 2023  
**SUBJECT:** Appointment of Deputy Director of Procurement

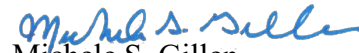


**COMMITTEE:** Personnel & Compensation

           INFORMATION

  X   VOTE

Douglas Rice, Director of Procurement  
Wendy Chu, Director of Human Resources  
Preparer/Title

  
Michele S. Gillen  
Director, Administration

*Staff are recommending organizational changes to the Procurement Department in the PCR amendment staff summary being presented at this meeting. If the Board approves the creation of the new position (Deputy Director of Procurement), staff recommend that it be filled with an internal, highly qualified candidate.*

**RECOMMENDATION:**

To approve the appointment of Ms. Rita Mercado to the position of Deputy Director of Procurement (Non-Union, Grade 15) in the Administration Division, at the annual salary of \$155,500 commencing on a date to be determined by the Executive Director.

**DISCUSSION:**

MWRA’s Procurement Department is managed by the Director of Procurement and is organized into three units: contracts, purchasing and materials management. The Deputy Director is a new position that that will provide direct oversight to the contracts group and will manage the procurement of more complex projects such as a disparity study to assure that the MWRA contracting process is equitable for minority and women owned businesses (MBEs and WBEs). The Deputy will serve as a key advisor to the project team throughout the multi-year diversity study process. The Deputy will also oversee all Tunnel Redundancy Program professional services and construction procurements as well as any related amendments and change orders. This position will serve as the Director of Procurement in the absence of the Director and will provide a long-term succession path in the Procurement Department.

Ms. Mercado recently served as the MWRA Acting Director of Procurement for approximately 11 months. In that capacity, she demonstrated her skills and leadership abilities. She provided thoughtful and valuable guidance and input to the Board of Directors, the Executive Director and Senior Managers on contract matters, and policy and procedure updates. Ms. Mercado recently returned to her Deputy Contracts Manager position. In this position, Ms. Mercado often oversaw the procurement of MWRA’s larger, more complex projects and also served as a valued advisor to the Director of Procurement.

Prior to the MWRA, Ms. Mercado was the Deputy General Counsel at the Massachusetts Division of Capital Asset Management and Maintenance (DCAMM) where she provided legal advice and guidance on procurement and contracting. She also represented DCAMM in change order appeals before the Division of Administrative Law Appeals. She managed and coordinated litigation with Massachusetts Attorney General's Office. Prior to DCAMM she was a Senior Claims Consultant/Litigation Specialist for Liberty Mutual Insurance, an Associate in the Claims Management Department at Donovan, Hatem LLP and a partner at Hogan & Mercado LLC. She was also an associate at Curtin, Murphy & O'Reilly and Boyle, Cassidy and Campo.

Ms. Mercado has a Juris Doctorate from Suffolk University, graduating cum laude, and a Bachelor of Arts from Tufts University. She is well respected by staff across MWRA for her expertise, responsiveness and thoughtful guidance and advice.

**BUDGET/FISCAL IMPACTS:**

There are sufficient funds in the Administration Division's FY24 Current Expense Budget to fund this position.

**ATTACHMENTS:**

- Resume of Rita Mercado
- Position Description
- Procurement Organizational Chart



# RITA C. MERCADO

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## **BAR INFORMATION:**

Admitted to Practice in Massachusetts and the United States District Court for the District of Massachusetts.

## **COMMUNITY INVOLVEMENT:**

Chair of Board of Appeals for the City of Melrose  
Member of Board of Appeals for the City of Melrose

Fall 2010 - Present  
Fall 2007 – Fall 2010

## **LEGAL EXPERIENCE:**

### **MASSACHUSETTS WATER RESOURCES AUTHORITY**

September 2018– Present

#### *Deputy Contracts Manager*

- Reviews, drafts and negotiates contract terms and conditions for construction and professional services.
- Facilitates the procurement of construction, professional and non-professional service contracts.
- Prepares and updates standard bid and contract forms.
- Analyzes contract amendments, change orders and contract close-out documents.
- Implements policies and procedures, and applicable laws, for all elements of contracting, including, but not limited to the creation, review and evaluation of contract documents, Request for Qualifications, Requests for Proposals, and bids.
- Supports the management of the electronic bidding platform.
- Directs Assistant Contract Managers in the performance of similar duties and functions.

#### *Acting Director of Procurement*

June 2022 – May 2023

- Managed the day-to-day operations of the Procurement department, and provided guidance and direction on procurement related matters to Operations, Finance and Law Divisions.
- Oversaw the contracts, purchasing and materials management (warehouse) unit to monitor compliance with all applicable state and federal laws and regulations as well as MWRA's Policies and Procedures.
- Reviewed staff summaries recommending award of purchase order, construction or professional services contracts prior to submission to the Executive Director or Board of Directors for approval.
- Authorized purchase order contracts within the Procurement Director's delegated authority.
- Reviewed and approved sole source or proprietary specifications requests related to goods, non-professional services, professional services, and construction materials or equipment.
- Represented the Procurement Department at monthly Board of Directors' meetings.

### **COMMONWEALTH OF MASSACHUSETTS – DIVISION OF CAPITAL ASSET MANAGEMENT AND MAINTENANCE**

February 2013 – September 2018

#### *Deputy General Counsel*

- Updated standard contract forms for construction, energy management services and design and engineering services.
- Prepared and negotiated energy service agreements procured under M.G.L. 25A, and design contracts.
- Provided advice related to procurement issues involving construction manager at risk, and design-bid-build projects.
- Provided pre-claim advice to project managers related to onsite conflicts and construction defect issues.
- Managed and coordinated litigation with the Attorney Generals' Office.
- Conducted mediations and settlement negotiations related to construction contract disputes.
- Represented DCAMM in Change Order Appeals before the Division of Administrative Law Appeals.

### **LIBERTY MUTUAL INSURANCE, Weston, MA**

July 2012 – January 2013

#### *Senior Claims Consultant / Litigation Specialist*

- Handled commercial general liability and automobile claims in litigation in the Northeast region.
- Analyzed relevant documents including but not limited to lease agreements, and service contracts to establish the insured's potential exposure and indemnity and defense obligations.
- Managed all aspects of litigation and coordinate strategy with local counsel.
- Analyzed and afforded coverage based on relevant insurance policy and identified any potential coverage issues.
- Conducted direct settlement negotiations with Plaintiff/Claimant.
- Established initial reserves and monitored adequacy of reserves.

**DONOVAN HATEM LLP**, Boston, MA

July 2009- June 2012

*Associate - Claims Management Department*

- Evaluated and monitored complex professional liability claims nationally and engage in risk management of potential claims on behalf of architects, engineers and other design professionals.
- Analyzed design professionals' potential exposure through the detailed analysis of all relevant project documents including but not limited to the identification of relevant contract provisions (indemnity, dispute resolution, waiver of subrogation, waiver of consequential damages, choice of law and limitation of liability provisions).
- Managed all aspects of litigation including attendance of mediation with settlement authority provided by insurer, and coordination of strategy with local counsel.

**HOGAN & MERCADO, P.C.**, Boston, MA

October 2008- July 2009

*Partner*

- Handled construction law and litigation cases, on behalf of general contractors and subcontractors, involving contract performance issues, surety bonds, and mechanic liens.
- Advised clients regarding contract issues.
- Drafted pleadings and discovery.
- Researched and prepared dispositive motions.
- Attended hearings, and mediations.

**CURTIN, MURPHY, & O'REILLY, P.C.**, Boston, MA

October 2006- September 2008

*Associate*

- Handled the defense of premises liability cases.
- Drafted pleadings and discovery.
- Researched and wrote dispositive motions.
- Attended hearings for motions.
- Drafted pre-trial memoranda and trial motions.
- Conducted and defended depositions.
- Negotiated settlements with opposing counsel. Participated in civil trials.

**BOYLE, MORRISSEY, & CAMPO**, Boston, MA

September 2005- October 2006

*Associate*

- Handled the defense of construction defect and accident cases.
- Drafted and answered complaints and discovery.
- Researched and wrote dispositive motions.
- Analyzed and applied case law and statutes regarding contract indemnification and additional insured issues.
- Conducted depositions.
- Assisted in trial preparation.
- Communicated with client and insurance claims representative regarding case strategy.

## **EDUCATION:**

**SUFFOLK UNIVERSITY LAW SCHOOL**, Boston, MA, Juris Doctor, *cum laude*

May 2005

*Class Rank:* Top 25%

*Honors:* Dean's List, 2003-2005

Honorable Mention, Best Brief Section Competition, 2003

Distinguished Oral Advocate, Best Oral Advocate Section Competition, 2003

Jessup International Law Moot Court Competition, 3<sup>rd</sup> Place Regional Memorial Ranking, 2005

*Activities:* International Law Student Association (ILSA), co-vice president

Rehnquist Inn, Phi Delta Phi International Legal Fraternity, member

**TUFTS UNIVERSITY**, Medford, MA, Bachelor of Arts

May 2002

*Double Major:* International Relations / Peace and Justice Studies

*Honors:* Dean's List (3/8 semesters)

*Awards:* Recipient of the *Anne E. Borghesani Memorial Prize* to research the role of non-governmental organizations in conflict resolution in the Philippines.

*Community Service:* Leonard Carmichael Society, service organization

**MWRA  
POSITION DESCRIPTION**

**POSITION:** Deputy Director of Procurement

**DIVISION:** Administration

**DEPARTMENT:** Procurement

**BASIC PURPOSE:**

Assists in the overall direction of the operations of the contract office and manages all aspects of construction, professional and non-professional services contracts from pre-bidding or pre-solicitation to close-out. Establishes and implements policies and procedures related to the drafting, bidding, negotiating, and awarding of contracts. Provides guidance to the Purchasing Unit as necessary. Acts as the Director of Procurement in the absence of the Director.

**SUPERVISION RECEIVED:**

Works under the general supervision of the Director of Procurement.

**SUPERVISION EXERCISED:**

Exercises close supervision of Deputy Contract Managers. Oversees the entire Procurement Department in the absence of the Procurement Director. Provides functional guidance to Manager, Purchasing and purchasing staff.

**ESSENTIAL DUTIES AND RESPONSIBILITIES:**

- Provides oversight and direction to the employees in the contracts and purchasing units in accordance with the organization's policies and procedures and applicable statutes and as directed by the Director of Procurement.
- Drafts, recommends, and implements of Authority-wide policies and procedures for all elements of the contract function, including creation, review and/or evaluation of RFQs, RFPs, proposals, bids and contracts as well as the negotiation of contracts and terms and the review of contract amendments, change orders, contract close out and final payment.
- Directs the review of contract processes and documents for format and substance as well as compliance with Authority standards and applicable law, especially MGL Chapters 149 and 30.
- Provides guidance and direction as needed to staff on vendor and contract diversity.

- Advises Law Division as required and Senior Authority staff regularly on contract matters; represents Authority before Massachusetts Department of Labor; directs Deputy and Assistant Contract Managers in performance of these functions.
- Manages advertising programs and systems to open bids and award and execute contracts in compliance with Authority standards and Commonwealth law.
- Participates in the defense of contract claims and the dispute resolution process.
- Oversees maintenance of a contract database that tracks progress through the advertising, bidding and award stages as well as through the life of the contract.
- Directs the Deputy and Assistant Contract Managers in the performance of their responsibilities for reviewing, drafting and negotiating contracts; reviewing and evaluation of proposals, including compensation analysis and cost control; and the provision of assistance and direction to Authority staff in the preparation of contract documents.
- In coordination with the Director of Procurement or in the Director's absence, reviews and approves Procurement and other staff summaries prior to submission to the Board of Directors; may appear before the Board on procurement matters.
- In coordination with the Director of Procurement or in the Director's absence, approves all contracts prior to execution by the Executive Director.
- Directs and participates in Consultant /Contractor Selection Committees as needed.
- Prepares and monitors adherence to the Contract Office budget.
- 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 business administration, public administration or a related field; and a JD in Law; and

- (B) Understanding of procurement and contract management as acquired through a minimum of eight (8) years' experience, preferably in a large public sector agency, of which at least three (3) years should be in a management or supervisory capacity; or
- (C) Any equivalent combination of education or experience.

Necessary Knowledge, Skills and Abilities:

- (A) Knowledge of contract law.
- (B) Knowledge and experience with MGL Chapters 149 and 30, construction contracts and construction procedures required.
- (C) Excellent written and oral communication skills are required.
- (D) Experience with the full Microsoft Office Suite and proficiency in meeting software such as WebEx.

**SPECIAL REQUIREMENTS:**

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

**TOOLS AND EQUIPMENT USED:**

Office machines such as phones, mobile devices, laptop, etc and associated software programs, copy and fax machines.

**PHYSICAL DEMANDS:**

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

**July 2023**

# Administration Division, Procurement

July 2023

