



# MASSACHUSETTS WATER RESOURCES AUTHORITY

Deer Island  
33 Tafts Avenue  
Boston, MA 02128

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

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## **BOARD OF DIRECTORS' MEETING**

Date: Wednesday, June 21, 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 (Registration Required):

<https://mwra.webex.com/weblink/register/r70d9c715e59925cc58559c536bdc023e>

Event Number: 2346 410 3617      Password: 61523

## **AGENDA**

- I. **APPROVAL OF MINUTES**
- II. **REPORT OF THE CHAIR**
- III. **REPORT OF THE EXECUTIVE DIRECTOR**
- IV. **EXECUTIVE SESSION**
  - i. Approval of May 24 2023 Executive Session Minutes
  - A. **Collective Bargaining**
    - 1. Approval and Ratification of Collective Bargaining Agreements: Units 1, 2, 3, 6 and 9 (verbal)
- V. **PERSONNEL & COMPENSATION**
  - A. **Approvals**
    - 1. PCR Amendments – June 2023
    - 2. Appointment of Billy J. Krukowski, Manager of Western Maintenance
    - 3. Appointment of Andrew W. Chung, Assistant Director, Internal Audit

**V. PERSONNEL & COMPENSATION**

**A. Approvals (continued)**

4. Appointment of Brian L. Kubaska, Chief Engineer
5. Appointment of Rebecca M. Weidman, Deputy Chief Operating Officer
6. FY2024 Non-Union Compensation and Extension of Employment Contract for Kathleen Murtagh, Director of Tunnel Redundancy

**VI. ADMINISTRATION, FINANCE & AUDIT**

**A. Information**

1. Delegated Authority Report – May 2023
2. FY2023 Financial Update and Summary as of May 2023

**B. Approvals**

1. Final FY2024 Capital Improvement Program
2. Final FY2024 Current Expense Budget
3. Final FY2024 Water and Sewer Assessments

**C. Contract Awards**

1. Infor Lawson CloudSuite Upgrade: RPI Consultants, LLC, Contract 7286

**VII. WASTEWATER POLICY & OVERSIGHT**

**A. Information**

1. Deer Island Wind Turbine Generator 1 Failure
2. Deer Island Wastewater Treatment Plant Draft National Pollutant Discharge Elimination System (NPDES) Permit and Draft State Surface Water Discharge Permit

**B. Approvals**

1. Annual Renewal of Wastewater Advisory Committee (WAC) Contract

**C. Contract Awards**

1. Janitorial Services at the Deer Island Treatment Plant: Facilities Management and Maintenance Inc., Contract WRA-5317

**VIII. WATER POLICY & OVERSIGHT**

**A. Approvals**

1. Town of Burlington First Amendment to the Water Supply Continuation Agreement and Waiver of Entrance Fee; Dedham-Westwood Water District First Amendment to Water Supply Continuation Agreement and Waiver of Entrance Fee
2. Annual Renewal of Water Supply Citizens Committee (WSCAC) Contract

**IX. CORRESPONDENCE TO THE BOARD**

**X. OTHER BUSINESS**

- A. Review and Extension of Contract for Frederick A. Laskey, Executive Director

**XI. ADJOURNMENT**

## MASSACHUSETTS WATER RESOURCES AUTHORITY

Meeting of the Board of Directors

May 24, 2023

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A meeting of the Massachusetts Water Resources Authority (“MWRA”) Board of Directors was held on May 24, 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, Foti, Pappastergion, Peña, Jack Walsh, Patrick Walsh, and White-Hammond. Board Members Vitale 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, Director of Tunnel Redundancy Kathy Murtagh, Special Assistant for Affirmative Action Patterson Riley, Deputy Director of Finance/Treasurer Matthew Horan, Budget Director Mike Cole, and Assistant Secretaries Ria Convery and Kristin MacDougall participated at MWRA headquarters.

MWRA staff in attendance remotely included Stephen Estes-Smargiassi, MWRA Director of Planning and Sustainability, John Colbert, MWRA Chief Engineer, Ester Lwebuga, Senior Program Manager for Engineering and Construction, David Duest, Deer Island Treatment Plant Director, and Patricia Mallett Senior Program Manager for Engineering and Construction.

Vandana Rao, Executive Office of Environmental Affairs (EEA), and Joseph Favaloro, Louis Taverna, Matthew Romero, and James Guiod, MWRA Advisory Board, also participated from MWRA headquarters.

Chair Tepper called the meeting to order at 1:03pm.

### ROLL CALL

MWRA General Counsel Francisco Murphy took roll call of Board Members in attendance and announced that Board Members 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.

(Ms. Wolowicz joined the meeting remotely after Roll Call.)

APPROVAL OF APRIL 12, 2023 MINUTES

A motion was duly made and seconded to approve the minutes of the Board of Directors' meeting of April 12, 2023.

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

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

(ref. I)

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		
Pappastergion		

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

(Mr. Foti joined the meeting during Executive Session)

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

The meeting entered Executive Session at 1:07pm and adjourned at 1:41pm.

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

#### REPORT OF THE EXECUTIVE DIRECTOR

Fred Laskey, MWRA Executive Director, welcomed Board Members and other meeting participants to the first Board of Directors Meeting held in MWRA's new Board Room at Deer Island. He reported that MWRA had vacated its Charlestown offices and relocated staff to the Chelsea and Deer Island facilities. He thanked staff for their flexibility and congratulated Ria Convery, Special Assistant to the Executive Director, and team for effectively managing the move and office renovation project. He then reported that he and staff had attended a Town Meeting in Weymouth to discuss water system expansion. He noted that the Town was interested in potentially joining the MWRA system, as a fully- or partially-supplied community. He added that the recently-approved MWRA Entrance Fee Waiver appeared to be well-received by Weymouth and other municipalities. Next, Mr. Laskey reported that a recent bond refunding had saved MWRA \$12.9 million. Finally, Mr. Laskey advised that the City of Waltham had not issued a street opening permit for an important, difficult MWRA project and that MWRA's project contractor had advised that it would demobilize if the permit was not received. He added that such demobilization could be an expense for them, MWRA and the City. Chair Tepper requested more information about the issue. Mr. Laskey advised that traffic disruption in the community on a very busy street and perhaps other issues was possible. There was general discussion about the steps taken by MWRA and Advisory Board staff to resolve the matter, and possible approaches to reaching a resolution. Mr. Laskey noted that it is a difficult project. David Coppes, MWRA Chief Operating Officer, added that the contractor is mobilized and ready to start. Mr. Pappastergion asked if staff had discussed the benefits of the project with the City of Waltham. Mr. Laskey responded in the affirmative and noted that

the contract included work for the City's new high school, the costs for such work reimbursed by the City. There was further discussion about potential communication and mediation strategies. (ref. III)

#### ADMINISTRATION, FINANCE AND AUDIT

##### Information

##### FY2023 Third Quarter Orange Notebook

Stephen Estes-Smargiassi, MWRA Director of Planning and Sustainability, invited Board Members' questions about the Orange Notebook.

Committee Chair Foti asked if there was any discussion or questions from the Board. Hearing none, he moved to the next Information item. (ref. VA.1)

##### Delegated Authority Report – April 2023

Michele Gillen, MWRA Director of Administration, introduced Director of Procurement Douglas Rice and invited Board Members' questions about the Delegated Authority Report.

Mr. Foti asked if there was any discussion or questions from the Board. Hearing none, he moved to the next Information item. (ref. V A.2)

##### FY23 Financial Update and Summary through April 2023

Thomas Durkin, MWRA Director of Finance, summarized financial results and variance highlights for the fiscal year through April, 2023. He advised that FY23 patterns such as underspending for wages and salaries due to hiring challenges and rising costs for chemicals and utilities, continued through April, and were expected to continue in FY24. Mr. Durkin then discussed the impact of rising interest rates on variable rate bonds. He noted that in the month of April, MWRA's budget estimate for variable rate bonds was \$6 million and very close to the actual rate (within \$14,000), and briefly described how staff estimate interest rates. He added that overall, MWRA is currently in a favorable position with regards to variable rate interest and that staff would work to continue that trend. Next, Mr. Durkin discussed interest income. He advised that MWRA's interest income for FY23 was much higher than estimated (+168%), primarily due to federal funds rate increases. Finally, Mr. Durkin reported that the FY23 budget was progressing well overall.

Mr. Foti asked if there was any discussion or questions from the Board. Hearing none, he moved to the next Information item. (ref. V A.3)

##### Update on Pension Funding Status

Staff provided an update on the status of MWRA's pension funding. Mr. Durkin advised that MWRA's annual contribution to the pension system is a significant expense for the Current Expense Budget (CEB) that requires monitoring. He noted that the MWRA Retirement Board engages an actuarial firm to perform annual valuations of liabilities, changes and losses, and that those valuation reports are used to determine the Retirement System's annual required contribution for each fiscal year.

Next, Matthew Horan, MWRA Deputy Director of Finance/Treasurer, reviewed the results of the most recent Pension Fund valuation, for CY2022. He advised that challenging market conditions had resulted in a -12.3% reduction in fund assets, with an overall -19% change over projections for 2022. Mr. Horan explained that because the actuarial valuation uses a smoothing methodology on assets, the impact to the funding schedule was reduced. He further explained that as result of the increased pension liability, the Retirement Board asked the actuary to complete four new actuarial funding schedules that fully fund the Retirement System by 2030, 2031 and 2032. He advised that Retirement Board review of the new funding schedules and their potential regulatory impacts determined that the 2031 and 2032 schedules increased the overall cost of the Pension System; therefore, the Retirement Board voted to retain the existing 2030 funding schedule to minimize potential impacts to community rate assessments. Mr. Horan noted that the Retirement Board had acknowledged that in the future the full funding date may need to be extended past 2030 if challenging market conditions persisted, or if there is a significant impact to MWRA's budget and rate increase.

Mr. Foti asked if there was any discussion or questions from the Board.

Mr. Vitale asked if it could have been more advantageous if MWRA had participated in the State Retirement System rather than an independent retirement system. Mr. Durkin explained that there were benefits to operating an independent retirement system such as local control, closer familiarity with employees and efficient administration. Mr. Durkin then noted that in retrospect, and according to his own analysis, it could have been more advantageous if MWRA had participated in the Massachusetts Pension Reserves Investment Management (PRIT) system. He added that the MWRA Retirement System does very well and advised that in his view, investment strategy should be linked to the time of full funding. Finally, Mr. Durkin noted that the MWRA Retirement System is closer to full funding than the PRIT system, and that while both retirement systems' asset allocations were similar, MWRA employees and retirees may have seen larger returns if they had participated in the PRIT system.

Hearing no further discussion or questions from the Board, Mr. Foti moved to Approvals. (ref. V A.4)

#### Approvals

##### Bond Defeasance of Future Debt Service

**A motion was duly made and seconded to authorize the Executive Director or his designee, on behalf of the Authority, to enter into, execute and deliver all necessary agreements and other instruments and to take such other actions necessary to effectuate the redemption and defeasance of an aggregate principal amount of \$28,785,000 of outstanding MWRA senior bonds including to cause the escrow of cash and/or securities in an amount necessary to fund such redemption and defeasance, in order to reduce the debt service requirement by \$32,981,250 in the FY24 through FY28 timeframe.**

Mr. Durkin explained that staff have found that historically, defeasance is the most beneficial use of positive budget variances, because defeasances reduce future debt and help to control rate assessments.



Next, Mr. Horan briefly described MWRA's historically successful strategy of using defeasance to reduce long-term debt and mitigate shorter-term rate increases. He advised that staff were recommending an approximately \$17 million increase in MWRA's FY2024 defeasance budget. Finally, Mr. Horan explained that the proposed defeasance included approximately \$1 million in interest savings from paying some of the bonds on their call dates. He added that this year staff accounted for higher than estimated escrow earnings (\$1.3 million) due to recent, steep interest rate increases, in addition to a projected FY23 positive budget variance, debt repayment, and the remaining FY22 budget surplus when developing the defeasance.

There was brief discussion about the interest savings figure in the Staff Summary for this agenda item. Board Member Jack Walsh requested more information about the benefits of applying interest savings to defeasances vs. reinvestment in interest-earning accounts. Mr. Horan explained that managing community assessments in the near-term is a top priority for MWRA, and that defeasances are a more efficient strategy for rate control than reinvestment because they can be applied for rate relief relatively quickly.

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		
Vitale		
J. Walsh		
P. Walsh		
White-Hammond		
Wolowicz		

(ref. V B.1)

#### MWRA FY24 Insurance Program Renewal

**A motion was duly made and seconded to approve awards to the lowest eligible and responsive proposers for insurance policies, bonds, and related broker services for MWRA's FY24 Insurance Program, and to authorize the Executive Director, on behalf of the Authority, to execute contracts for broker services, for the terms, premiums, and fees, all as described in the May 24, 2023 Staff Summary presented and filed with the records of the meeting, and incorporated by reference for the record, including as detailed in the recommendation section of said Staff Summary, resulting in a total program amount not to exceed \$3,810,045 for FY24.**

Mr. Durkin advised that staff had recently completed a competitive bid process for the annual renewal of MWRA's Insurance Program. Paul Whelan, MWRA Risk Manager, summarized the procurement process for the Insurance Program renewal for FY24, and noted that the Staff Summary includes details of all proposals received, including a comparison of the expiring Insurance Program's historical premium costs from FY23. He then noted that MWRA had received multiple proposals for several lines of coverage, and that the bid results were consistent with staff's estimates. He then advised that the proposed FY24 Insurance Program showed premium increases ranging from 1%-10%, noting that coverage for General Liability had the highest increase. He explained that the increases were mostly attributable to inflation, rising interest rates and overall market conditions, and reported that the FY24 Program represents an overall cost increase of 5.7% over the FY23 program. Finally, Mr. Whelan noted that MWRA had received a membership credit from FM Global that entitles the Authority to a property insurance premium credit of approximately \$300,000 for FY24.

Mr. Vitale complimented staff for preparing an informative Staff Summary and for a successful procurement.

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		
Vitale		
J. Walsh		
P. Walsh		
White-Hammond		
Wolowicz		

(ref. V B.2)

Mr. Laskey briefly followed up on a Board Member's question regarding the number of MWRA Union employees who were at their top pay step. He reported that 72.4% of MWRA's Union staff are currently at their top step. There was very brief general discussion.

## WATER POLICY AND OVERSIGHT

### Information

#### Metropolitan Water Tunnel Program Update

Staff presented some background and an update on the Metropolitan Water Tunnel Program. Mr. Coppes began with a brief history of MWRA's existing Metropolitan Tunnel system, which serves over 60% of MWRA's water customers. He then discussed the importance of the Tunnel Program, which will

provide much-needed redundancy for the aging, current system. He discussed the 2010 failure of the MetroWest Water Supply Tunnel's Shaft 5, which resulted in the emergency activation of the Chestnut Hill Reservoir and a two-day boil water order. Next, Mr. Coppes presented an overview of the Metropolitan Tunnel System's existing conditions, noting that its tunnels, valves, chambers and pipelines are 50-75 years old. He explained that due to age and constant use, portions of the system are inoperable and/or irreparable without a shutdown for rehabilitation, which is not possible without the addition of a redundant system. Mr. Coppes then advised that if it were necessary to perform an emergency shutdown of the City Tunnel, all of the MWRA's High Service area would lose their water supply; further, pumped service areas would lose water as tanks emptied, and the entire region would be placed under a boil order. He then advised that a 2016 analysis showed that the regional economic impact of a prolonged Metropolitan Tunnel System shutdown would be approximately \$300 million per day. Next, Mr. Coppes explained that the factors he outlined led to the development and 2017 Board approval of the Metropolitan Water Tunnel Program. He described the Tunnel Program's public health and operational benefits.

Mr. Coppes then discussed recent and ongoing interim improvements to reduce the risk of a failure of the current Metropolitan Water Tunnel system, and to improve response capabilities in the event of a failure, including the WASM 3 Pipeline Rehabilitation Project. There was brief discussion about the WASM 3 project. Mr. Coppes continued to describe interim improvement projects, such as the installation of new pressure-reducing valves for MWRA's WASM 3 and WASM 4 pipelines, the installation of new pumps at the Commonwealth Avenue Pump Station, and Top of Shaft construction projects.

Next, Kathy Murtagh, MWRA Director of Tunnel Redundancy, presented a progress update on the Metropolitan Water Tunnel Program. She described the current scope of the Program to construct two, deep rock pressure tunnels (14-15 miles in total) that will provide redundancy for the existing Metropolitan Water Tunnel system. She noted that the tunnels, one to the North and one to the South, will be located approximately 250-450 feet below grade under seven communities and will operate independently. She then presented an overview of the tunnels' preferred alignments as submitted in the Program's Draft Environmental Impact Report (DEIR) in October, 2022. Next, Ms. Murtagh presented the tunnels' planned shaft locations, where most ground-level construction activity would take place, and described the functions of launching shafts, receiving shafts, and connection shafts. She noted that MWRA owns three of the properties where shaft sites are planned to be located: School Street (Waltham), St. Mary's Street (Needham), and Newton Street (Brookline).

Ms. Murtagh then presented an overview of the Program schedule. She noted that the Preliminary Design phase was underway and was expected to be complete in January, 2024, with Final Design targeted to begin in mid-2024. She reported that a large geotechnical investigation had started on May 22, 2023 and was expected to continue through 2025. She noted that the first Metropolitan Water Tunnel Program construction package was planned to be advertised in 2027, and that the Program was expected to be complete by 2040. Next, she discussed the Tunnel Program's current design status. She described processes for upcoming construction package development and Program cost and schedule

refinement.

Next, Ms. Murtagh presented an overview of awarded and future Metropolitan Water Tunnel Program contracts and their dollar values, duration and planned start/end dates. She briefly described the scopes of the contracts, highlighting awarded contracts for Program Support Services, Preliminary Design, Geotechnical Support Services and the Rock Core Storage Facility. She then discussed upcoming procurements for Final Design and Engineering Services During Construction, and for Construction Management. She then described the scope of enabling construction contracts for advance tasks such as supplying power at launching shaft sites and providing tunnel shaft site drainage. Ms. Murtagh also discussed planned tunnel construction contracts, which will be broken up into two or three smaller packages, pending the results of staff analysis.

There was discussion about the function and cost of the Program's Rock Core Storage Facility, and rock core storage requirements under Massachusetts law. There was also general discussion about rock core processing and logging, and the storage facility's location.

Chair Tepper asked if there were opportunities for potential synergies with regards to the electric grid. Ms. Murtagh explained that the power supplies to be installed at the Tunnel Program sites would remain in place after construction and eventually become assets to the grid.

Ms. Murtagh continued her presentation with an update on design status. She reported that the first Draft Preliminary Design Report and Drawings are complete and under review for design optimization. She further reported that the Bottom-Up Preliminary Design cost estimate is pending (expected in late 2023), and described the bottom-up estimation process. She noted that Final Design is scheduled to start in 2024, and advised that staff planned to engage a single Final Design Consultant team, in keeping with past practices for the MetroWest Water Supply Tunnel project, and to maintain design consistency between construction packages.

Next, Ms. Murtagh discussed the status of the Environmental Impact Reports. She noted that MWRA had received the MEPA Certificate for the Program ENF in 2021. She further noted that MWRA submitted the DEIR in 2022, and that the DEIR Certificate directed MWRA to prepare a Supplemental DEIR (SDEIR), which is expected to be ready for submittal in the Summer of 2023.

Ms. Murtagh then discussed an alternate North Tunnel Endpoint. She explained that staff had identified a suitable receiving shaft site at the Fernald Property in Waltham, and, in response to City of Waltham concerns, staff have identified two new suitable site alternatives, including staff's preferred alternative, which is owned by UMass.

Next, Ms. Murtagh presented an overview of community and stakeholder outreach for the Metropolitan Water Tunnel Program, including Working Group meetings and a large number of meetings with a diverse range of stakeholders including community officials and municipal departments; key state agencies such as EEA, MassDOT, DCR, and the Department of Public Health; and, local businesses and

private property owners. Finally, Ms. Murtagh noted that the Tunnel Program's public outreach program included a Program website and fact sheets that are translated into multiple languages, and advised that outreach efforts would continue throughout the Program's duration.

Next, Mr. Durkin discussed the Metropolitan Water Tunnel Program's finances. He described staff's process for developing and updating and refining the Program budget, and for the incorporation of the updates into the CIP. Mr. Durkin explained that the CIP data is integrated into the CEB computer model, which generates borrowings and debt service schedules. He further explained that the CEB schedules are then used to develop estimated rate increases that would be sufficient to fund the CIP budget. Mr. Durkin noted that MWRA has used this modelling process, in conjunction with direct staff analysis, for over 30 years to estimate the affordability of projects. He reported that the models show that MWRA can afford the Tunnel Program's projected costs, and advised that current rate projections include the Metropolitan Water Tunnel Program. He further advised that while the original base costs and scope for the Tunnel Program have remained consistent, the Program's cost estimate has increased for the Final Draft FY24 CIP due to inflation. Finally, Mr. Durkin noted that staff expected to make further adjustments to the Metropolitan Water Tunnel Program budget when the Preliminary Design is complete.

(Mr. Foti and Ms. Wolowicz left and returned to the meeting; and Mr. Pappastergion and Rev. White-Hammond temporarily left the meeting during the presentation.)

Mr. Foti asked how the CIP budgeting process had changed since 2016. Mr. Durkin explained that the primary change was due to inflation.

Mr. Jack Walsh asked if there were geological faults within the preliminary design alignment. Ms. Murtagh responded in the affirmative and described several known faults. There was general discussion about the challenge of geological faults with regards to tunnel construction. Mr. Walsh asked about the water flow schematic that will be in place once the Tunnel Program is complete. Mr. Coppes provided a general overview of the new schematic, and described how the new tunnels will facilitate the rehabilitation and operation of the existing system. There was general discussion about expected Metropolitan Water Tunnel rehabilitation activities. Board Member Peña asked if there were any considerations that should be incorporated into the Metropolitan Water Tunnel Program design with regards to Water System Expansion. Mr. Coppes explained that the Tunnel Program design includes assumptions for water system expansion, with a future maximum day demand through 2060. Mr. Peña noted the Metropolitan Water Tunnel Program's extensive community outreach activities, and requested more information about how MWRA executed agreements with project host communities. Ms. Murtagh explained that all agreements would be executed through Memorandums of Agreements and Memorandums of Understanding. Mr. Peña suggested that staff consider changing the Metropolitan Water Tunnel Program's website's URL so that it is more easily remembered. Ms. Convery explained that the URL could be updated after the launch of MWRA's new website, which is currently in development under contract.

(Mr. Pappastergion and Rev. White-Hammond returned to the meeting during the discussion.)

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

#### 2022 Annual Water Quality Report (Consumer Confidence Report)

Stephen Estes-Smargiassi, MWRA Director of Planning and Sustainability, updated Board Members on MWRA's Annual Drinking Water Report ("CCR") for CY2022. He briefly described the in-house process for developing and publishing the CCR, which is prepared and distributed annually, in cooperation with MWRA's customer communities, as required by the EPA. He noted that each CCR includes a full page of local water quality information provided by the respective customer communities. He added that the CCR is a key part of MWRA's overall water quality outreach efforts, which include a detailed Monthly Water Quality Report, an online data archive, and updates for community officials, concerned constituents, and the media about any water quality topics that may arise, such as proposed changes to PFAS rules. He briefly described the schedule for mailing out the CCR to approximately 900,000 households, and noted highlights of this year's report, including discussions on the 2022 drought and MWRA's high-quality, well-protected water sources, reassurance regarding test results for PFAS, and a two-page informational section about lead. He further noted that the CCR also includes a page dedicated to local water test results and programs.

Next, Mr. Estes-Smargiassi advised that the EPA is in the process of revising its CCR Rule. He described some key expected changes, such as a requirement to issue the CCR twice a year, rather than annually, and the inclusion of more detailed information on required topics. He explained that meeting the EPA's expected new CCR requirements could pose a challenge with regards to the report's printed space constraints and the coordination of local data reporting. Mr. Estes-Smargiassi then advised that staff were considering a pilot to distribute the annual CCR electronically in 2024, in preparation for the twice-annual reporting requirement, which is expected in 2025. He noted that the pilot would likely consist of a mailed postcard that summarizes the CCR and provides links to the online version, adding that printed copies would be available upon customer request. Finally, Mr. Estes-Smargiassi explained that staff anticipate working with the MWRA Advisory Board Operations Committee and local customer communities to develop an efficient process for preparing and distributing the CCR twice a year under the new Rule. He advised that the current process for preparing the annual CCR takes approximately seven months, and explained that a producing biannual report in a timely fashion would require markedly increased coordination with communities.

Mr. Vitale asked if there was any discussion or questions from the Board. Hearing none, he moved to Contract Awards. (ref. VI A.2)

#### Contract Awards

Intermediate High Pipeline Improvements CP2, Rehabilitation of Sections 24 and 25 Water Mains: Albanese D&S, Inc., Contract 6956

**A motion was duly made and seconded to approve the award of Contract 6956, Intermediate High**

**Pipeline Improvements CP2, Rehabilitation of Sections 24 and 25 Water Mains, to the lowest responsible and eligible bidder, Albanese D&S, Inc., and to authorize the Executive Director, on behalf of the Authority, to execute said contract in the bid amount of \$18,673,000 for a contract term of 912 calendar days from the Notice to Proceed.**

Ester Lwebuga, MWRA Senior Program Manager, E&C, presented an overview of proposed Contract 6956, which is the first of three contracts to interconnect two geographically distinct Intermediate High water pressure zones. She explained that this project would provide additional redundancy and operational flexibility for the Intermediate High service area. She then noted that the CP2 contract was advertised before CP1 in order to accommodate MassDOT and City of Watertown paving schedules. Next Ms. Lwebuga presented the scope of the project, which includes a replacement and hydraulic pipe size increase for 5,900 linear feet of Section 25 pipeline, the cleaning and lining rehabilitation of 3,300 linear feet of Section 24, and the replacement of two revenue meters in Watertown. She then provided a brief overview of the contract's bid and award process. She reported that the lowest bid proposal, from Albanese D&S, Inc., was 12.2% below the Engineer's Estimate. Finally, Ms. Lwebuga advised that Albanese has successfully completed several water and sewer projects for MWRA, and that staff recommended this award.

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		
Vitale		
J. Walsh		
P. Walsh		
White-Hammond		
Wolowicz		

(ref. VI B.1)

Intermediate High Pipeline Improvements CP2 Sections 24 and 25 Resident Engineering and Inspection Services: CDM Smith Inc., Contract 7680

**A motion was duly made and seconded to approve the recommendation of the Consultant Selection Committee to award Contract 7680, Intermediate High Pipeline Improvements CP2 Sections 24 and 25 Resident Engineering and Inspection Services, to CDM Smith Inc. and to authorize the Executive Director, on behalf of the Authority, to execute said contract in an amount not to exceed \$1,902,278.71 for a contract term of 33 months from the Notice to Proceed.**

Ms. Lwebuga explained that the proposed contract 7680 was for Resident Engineering and Inspection Services to support the construction of the Intermediate High Pipeline Improvements CP2, Rehabilitation of Sections 24 and 25 Water Mains project. She reported that the recommended proposer, CDM Smith, Inc., had submitted the lowest cost proposal. Finally, Mr. Lwebuga advised that the proposed Resident Engineer has over 25 years of experience in construction and was rated as excellent by MWRA staff on previous projects.

(Ms. Wolowicz temporarily left the meeting during the presentation.)

There was brief, general discussion that CDM Smith's proposed hours were the same as the Engineer's Estimate proposed hours.

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		
Vitale		
J. Walsh		
P. Walsh		
White-Hammond		

(ref. VI B.2)

## WASTEWATER POLICY AND OVERSIGHT

### Contract Awards

Grit and Screenings Hauling and Disposal: W. L. French Excavating Corporation, Contract S612

**A motion was duly made and seconded to approve the award of Contract S612, Grit and Screenings Hauling and Disposal, to W. L. French Excavating Corporation, and to authorize the Executive Director, on behalf of the Authority, to execute said contract in the bid amount of \$4,902,019.25, for a contract term of 731 calendar days from the Notice to Proceed.**

David Duest, MWRA Deer Island Treatment Plant Director, briefly described the scope and terms of the proposed two-year contract to haul and dispose of grit and screenings from MWRA's wastewater facilities. He explained that the contract is recurring, and that staff had limited this proposed contract to two years (vs. the typical three-year contract), because of a volatile market for landfilling due to high costs and regional restrictions. Mr. Duest advised the contract was competitively bid, and that only one bid was received, at 27% over the Engineer's Estimate. He explained that staff are confident that W.L. French's bid was competitive; a comparison of MWRA's bid results with those of another wastewater



treatment plant in Massachusetts showed that MWRA's contract cost (approximately \$320/wet ton) was nearly half of the other plant's low bid (\$610/wet ton).

Board Member Patrick Walsh noted that the high costs for hauling and landfilling were being seen across the construction industry. He asked for more information about the proposed contract's landfill site. Mr. Duest explained that materials will be hauled to Fitchburg, Massachusetts. He further explained that the previous contract's landfill site in Turnkey, New Hampshire had raised its prices significantly. There was general discussion about rising landfill prices and the challenges of finding landfill locations.

Board Member White-Hammond advised that current landfilling practices may become non-viable in the near future. She asked about task forces and opportunities to discuss this issue long-term. Mr. Laskey agreed with Rev. White-Hammond, and acknowledged the urgency of landfilling challenges. Chair Tepper advised that the Administration shared these concerns about landfilling. She noted that she was scheduled to attend a briefing on the matter, and that convening to discuss waste disposal solutions was being considered. Rev. White-Hammond offered the City of Boston's support and participation. Mr. Laskey also offered MWRA's support and participation.

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		
Vitale		
J. Walsh		
P. Walsh		
White-Hammond		

(ref. VII A.1)

Extended Warranty, Service and Maintenance Sole Source Contract for the Process Instrumentation and Control System at the Deer Island Treatment Plant: ABB, Inc.

**A motion was duly made and seconded to approve the award of a sole source extended warranty, service and maintenance contract for the Process Instrumentation and Control System at the Deer Island Treatment Plant with ABB, Inc., and to authorize the Executive Director, on behalf of the Authority, to execute said contract in the amount of \$1,370,722 for a contract term of three years, from July 1, 2023 through June 30, 2026.**

(Chair Tepper left the meeting after the motion was made and seconded and noted that Mr. Pappastergion would serve as Chair for the remainder of the meeting.)

Mr. Duest, joined by Lisa Wong, Manager of Process Control for Deer Island, briefly presented the scope and terms of a proposed sole source, extended warranty, service and maintenance contract for the Process Instrumentation and Control System (PICS) at the Deer Island Treatment Plant (DITP). He explained that ICS is an industrial control system that provides plant-wide monitoring, automated control and alarming. He noted that the Deer Island Treatment Plant's PICS is one of the most expansive control systems in the United States, and presented an overview of its large inventory of input/output points, distributed processing unit cabinets and control modules. He briefly described the function of control modules. Mr. Duest advised that the estimated value of the PICS system is \$52 million in today's dollars, noting that it was installed when Deer Island was constructed. He further noted that portions of the PICS system had been upgraded over time. Next, Mr. Duest presented the automation capabilities of the PICS system, which allows MWRA to minimize staffing requirements. He then discussed the functions and operations of the PICS system's human-machine interface (HMI), provided by Emerson. Mr. Duest explained that the proposed PICS contract was sole sourced because PICS is a proprietary system. Next, Mr. Duest reported that the total cost of the proposed contract with ABB, Inc. is a 12% increase over the prior contract. He noted that staff had added project services to this proposed contract to address component upgrades, including security updates. Mr. Duest then highlighted key components of the proposed contract, including an extended warranty service that will provide a 30% discount on parts, and 600 hours of on-site service for preventative maintenance, including 96 hours for 24-7, on-call emergencies.

(Ms. Wolowicz returned to the meeting during the presentation.)

Mr. Jack Walsh asked if Bailey still produces the PICS equipment. Mr. Duest responded in the affirmative and explained that one of the reasons why MWRA proposed to engage ABB as a sole source contractor is because ABB (previously Bailey) is one of the few contractors that manufactures its own parts. He further explained that staff considered newly-manufactured parts to be more up-to-date and reliable than reconditioned parts, adding that reliability is important for this critical operating equipment. Mr. Walsh asked if the contract's project services costs were paid up front. Mr. Duest explained that project services would be used as needed, similar to task order contract. Mr. Walsh asked how old the PICS software was. Mr. Duest explained that the software is up to date, and noted that ABB is committed to updating and maintaining the software over the long-term. There was brief, general discussion about recent system software updates.

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

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

Yes                      No                      Abstain

P. Walsh

White-Hammond

Wolowicz

(ref. VII A.2)

Hayes Pump Station Rehabilitation Design and Engineering Services During Construction: Hazen and Sawyer, P.C., Contract 7162, Amendment 2 and Technical Assistance Consulting Services: Hazen and Sawyer, P.C., Contract No. 7497, Settlement of Claim, Weston Aqueduct Sluice Gates Construction Project

**A motion was duly made and seconded to approve Amendment 2 to Contract 7162, Hayes Pump Station Rehabilitation, Design and Engineering Services During Construction, with Hazen and Sawyer, P.C. to increase the contract amount by \$143,875, from \$2,099,924 to \$2,243,799, and increase the contract term by 23 months from October 22, 2025 to September 22, 2027. Further, to authorize the Executive Director, on behalf of the Authority, to execute a settlement agreement with Hazen and Sawyer, P.C. to settle the Authority's claim of a design deficiency under Contract No. 7497, Technical Assistance Consulting Services, for \$36,475 relating to the Weston Aqueduct Sluice Gates Construction project, subject to terms and conditions that are satisfactory to the Authority.**

Patricia Mallett, MWRA Senior Program Manager, Engineering and Construction, summarized the reasons for a proposed amendment to a Rehabilitation, Design and Engineering Services During Construction (ESDC) contract for the Hayes Pump Station Rehabilitation project. She explained that the design phase for the project has taken 12 months longer than originally scheduled due to the design of out of scope items, and delays in the permitting support process required for project construction. She further explained that an access permit to the MassDOT storm water system is required for project site overflow and construction dewatering. She advised that modeling of the MassDOT drainage system was required prior to permit approval and noted that staff were currently working with MassDOT on the review and approval process. Ms. Mallett then explained that additional time was needed for the application and review processes for a required plumbing variance for the installation of a unisex restroom at the Hayes Station, and for a required egress variance. She then advised that the construction phase has been extended by 11 months due to Covid-related materials delivery delays and supply chain issues. Next, Ms. Mallett advised that staff were requesting an increase of the contract amount for the costs of the time extension and to provide project management for the efforts she had outlined. She explained that the additional costs include approximately \$36,000 for the escalation of labor for work that will take place later than originally planned. Ms. Mallett then advised that staff were also requesting Board approval to enter a settlement agreement with Hazen and Sawyer, PC for a design error on the Weston Aqueduct Sluice Gates Construction Project (MWRA Contract 7369).

Mr. Jack Walsh requested more information about the reasons for the requested time extension. John Colbert, MWRA Chief Engineer, explained that the time extension was needed to obtain the required permits, and for delays caused by supply chain issues, which in turn, caused construction delays. He

noted that in staff's view, the additional costs requested by the consultant were reasonable, and that the consultant has been working diligently to control the budget.

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

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

(ref. VII B.1)

#### CORRESPONDENCE TO THE BOARD

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

#### Other Business

Vice Chair Pappastergion reminded Board Members and meeting participants that the Annual Meeting of the Personnel and Compensation Committee Independent of Management, Chaired by Committee Chair Wolowicz, would immediately follow the adjournment of the MWRA Board of Directors meeting. (ref. IX)

#### ADJOURNMENT

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

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

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

The meeting adjourned at 3:17pm.

Approved: June 21, 2023

Attest:

\_\_\_\_\_  
Brian Peña, Secretary

## MASSACHUSETTS WATER RESOURCES AUTHORITY

Annual Meeting of the Personnel and Compensation Committee Independent of Management  
Authority Accountability and Transparency Act Compliance  
May 24, 2023

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The Annual Meeting of the Personnel and Compensation Committee Independent of Management was held on May 24, 2023 at MWRA's headquarters at Deer Island in Boston, and also via remote participation, in accordance with Massachusetts General Law Chapter 29, Section 29K (the Authority Accountability and Transparency Act), for the purpose of generally reviewing and comparing salaries and benefits of private sector companies, charitable institutions and state agencies with those of MWRA's "executives," which include the Executive Director, Chief Operating Officer, Director of Finance, Director of Administration and General Counsel.

Personnel and Compensation Committee Chair Wolowicz presided via remote participation. Board Members Flanagan, Foti, Pappastergion, Peña, J. Walsh, P. Walsh and Rev. White Hammond participated at MWRA headquarters. Mr. Vitale participated remotely. Board Chair Tepper was absent.

Kristin MacDougall, MWRA Assistant to the Board of Directors, participated at MWRA headquarters and Michael Curtis, MWRA IT Asset Management Analyst, MIS, participated remotely. No MWRA management staff were present or participated remotely. The meeting remained open to the public.

The meeting was called to order at 2:17pm.

### Authority Accountability and Transparency Act Compliance

MWRA General Counsel Francisco Murphy gave a brief explanation of the Authority Accountability and Transparency Act. There was brief discussion about the purpose of the meeting. There was also brief discussion about a meeting to review the Executive Director's performance, would will be held at a later date, at the Board's discretion.

Ms. Francisco Murphy then asked MWRA non-union managers to leave the meeting. Ms. Francisco Murphy took roll call of Board Members in attendance and announced that Board Members Vitale and Wolowicz were participating remotely. Ms. Francisco Murphy then left the meeting. In accordance with the Act, no Authority employee with management responsibilities was present to advise, participate in or influence any discussions which the Board undertook.

Board members reviewed and discussed the Staff Summary materials. They discussed executive compensation at comparable state and US water and sewer utilities, non-for-profit agencies, and private entities. There was also discussion about inflation and collective bargaining agreements. There was also brief discussion about Mr. Laskey's work performance and upcoming performance review.

A motion was duly made and seconded that the Board had met to review and discuss executive compensation in compliance with the Authority Accountability and Transparency Act, and that the Board would discuss the Executive Director's performance review at a future meeting.

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

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

ADJOURNMENT

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

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

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

The meeting adjourned at 2:28pm.

## STAFF SUMMARY

**TO:** Board of Director  
**FROM:** Frederick A Laskey, Executive Director  
**DATE:** June 21, 2023  
**SUBJECT:** PCR Amendments - June 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.

### June 2023 PCR Amendments

There are six PCR Amendments this month.

#### Organizational Changes:

1. Title and grade change to one filled position in the Affirmative Action Division, from Project Manager, Monitoring and Compliance Unit 6 Grade 11 to Program Manager, Monitoring and Compliance Unit 6 Grade 12 due to increased job responsibilities.
2. Creation of a new position in the Administration Division, MIS Department of an IT Project Manager III, Unit 6 Grade 12 to support multi-year project for upgrade and implementation of Infor/Lawson enterprise resource planning software.
3. Title and grade change to two vacant positions in the Operations Division, Laboratory Services Department from Senior Laboratory Technician, Unit 9 Grade 15 to Chemist I, Unit 9 Grade 18 to provide staffing to conduct additional lab testing for PFAS, lead, and copper.
4. Salary adjustment in the Administration Division, MIS Department for a Technical Operations Manager, Non-Union Grade 14 to alleviate salary collision with a direct report.



5. Salary adjustment in the Operations Division, Deer Island Treatment Plant for a Deputy Director, Deer Island Treatment Plant, Non-Union Grade 15 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 \$170,697. Staff will ensure that the cost associated with these PCR amendments will not result in spending over the approved FY23 Wages and Salaries budget.

**ATTACHMENTS:**

Job Descriptions

**MASSACHUSETTS WATER RESOURCES AUTHORITY  
POSITION CONTROL REGISTER AMENDMENTS  
FISCAL YEAR 2023**

<b>PCR AMENDMENTS REQUIRING BOARD APPROVAL - June 21, 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		
B32	Affirmative Action 8410008	F	T,G	Project Manager, Monitoring and Compliance	6	11	Program Manager, Monitoring and Compliance	6	12	\$83,701	\$93,899	-	\$93,899	\$10,198	-	\$10,198	Title and grade adjustment due to increased job responsibilities.
B33	Administration MIS TBD	N/A	N/A	N/A	N/A	N/A	IT Project Manager III	6	12	\$0	\$81,735	-	\$125,069	\$81,735	-	\$125,069	To better meet staffing needs for multi-year upgrade project.
B34	Operations Lab Services 5710049	V	T, G	Senior Laboratory Technician	9	15	Chemist I	9	18	\$72,018	\$61,337	-	\$84,876	-\$10,681	-	\$12,858	To better meet staffing needs to conduct increased lab testing.
B35	Operations Lab Services 5710051	V	T, G	Senior Laboratory Technician	9	15	Chemist I	9	18	\$72,018	\$61,337	-	\$84,876	-\$10,681	-	\$12,858	To better meet staffing needs to conduct increased lab testing.
B36	Administration MIS 8610020	F	S	Technical Operations Manager	NU	14	Technical Operations Manager	NU	14	\$140,801	\$146,000	-	\$146,000	\$5,199	-	\$5,199	To alleviate salary collision with direct report.
B37	Operations Deer Island 2915016	F	S	Deputy Director, Deer Island Wastewater TreatmentPlant	NU	15	Deputy Director, Deer Island Wastewater Treatment Plant	NU	15	\$151,000	\$155,515	-	\$155,515	\$4,515	-	\$4,515	To alleviate salary collision with direct report.
<b>BOARD TOTAL=</b>					6						<b>TOTAL:</b>		\$80,285	-	\$170,697		

**MWRA  
POSITION DESCRIPTION**



**POSITION:** Project Manager, Monitoring & Compliance

**DIVISION:** Affirmative Action

**DEPARTMENT:** Affirmative Action and Compliance Unit

**BASIC PURPOSE:**

Implements and coordinates the Affirmative Action and Compliance Unit's monitoring and compliance program including the specialized recruitment of protected class candidates to ensure equal opportunity and compliance in employment for all MWRA Divisions and Units.

**SUPERVISION RECEIVED:**

Works under the general supervision of the Special Assistant and functional supervision of the Associate Special Assistant

**SUPERVISION EXERCISED:**

Provides direct supervision of the Workforce Development Coordinator.

**ESSENTIAL DUTIES AND RESPONSIBILITIES:**

- Coordinates the development and implementation of the MWRA's Monitoring and Compliance Program policies and procedures; monitors Authority-wide compliance to ensure equal employment opportunity for both MWRA employees and all applicants.
- Monitors the effectiveness of the affirmative action program.
- Assists in preparing Authority's Affirmative Action Plan and monitors progress toward achieving affirmative action program(s) and staffing goals set forth by the Plan.
- Implements audit systems to effectively monitor and measure the Affirmative Action Plan.
- Coordinates development of the annual Affirmative Action Unit's action oriented programs, data collection and staffing analysis of the MWRA workforce.
- Monitors and evaluates staffing plans according to the Authority's Affirmative Action goals to ensure compliance.

- Maintains systems to monitor Affirmative Action workforce compliance and oversee preparation of internal quarterly and annual divisional reports regarding progress towards affirmative action goals as required by the MWRA.
- Reviews all proposed changes of personnel policies and practices to determine their impact upon the achievement of the goals set forth by the Affirmative Action Plan.
- In conjunction with the Special Assistant and Associate Special Assistant, assists in processing and timely completion of all discrimination and sexual harassment investigations based on complaints filed or information provided to the Affirmative Action & Compliance Unit.
- Maintains reporting system to monitor Affirmative Action workforce compliance and oversee preparation of Authority-wide Annual and Quarterly Statistical Reports as required by State and Federal legislative compliance.
- Maintains working relationships and affiliations with external state and federal agencies, professional organizations, community organizations and groups as appropriate.
- Serves as secondary Unit liaison with Federal and State agencies with regard to quarterly and annual utilization analysis, including relevant workforce analysis and availability data.
- Along with the Associate Special Assistant, meets regularly with Division Directors, Department and Unit Heads to determine and negotiate affirmative action staffing goals with regard to their impact on achieving the Authority-wide goal.
- Monitors and tracks recruitment efforts to ensure compliance of protected class representation and makes recommendations with regard to protected class applicant sourcing when necessary.
- Assists Unit management in forecasting and developing the Unit's current expense budget.
- Assists Unit management in preparing various reports related to monitoring and tracking the Current Expense Budget including but not limited to Management Indicators, Program Descriptions and Goals & Initiatives.

### **SECONDARY DUTIES:**

- Performs related duties as required.

**MINIMUM QUALIFICATIONS:**

Education and Experience:

- (A) A four (4) year college program in personnel management, business or related field; and
- (B) Five (5) to seven (7) years of EEO/AA experience, including one (1) year experience preparing Affirmative Action plans; or
- (C) Any equivalent combination of education or experience.

Necessary Knowledge, Skills and Abilities:

- (A) Knowledge of the principles and practices of EEO/AA report preparation and computerized systems, statistical report analysis and Affirmative Action Planning.
- (B) Demonstrated analytical, written and oral communication skills.
- (C) Demonstrated skills in the operation of the listed tools and equipment.
- (D) Organizational development experience.
- (E) Excellent analytical, interpersonal, oral and written communication 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.

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

**WORK ENVIRONMENT:**

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

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

**December 2018**

**MWRA  
POSITION DESCRIPTION**

**NEW**

**POSITION:** Program Manager, Monitoring & Compliance

**DIVISION:** Affirmative Action

**DEPARTMENT:** Affirmative Action and Compliance Unit

**BASIC PURPOSE:**

Develops, implements and manages the Affirmative Action and Compliance Unit's monitoring and compliance program including the specialized recruitment of protected class candidates to ensure equal opportunity and compliance in employment for all MWRA Divisions and Departments.

**SUPERVISION RECEIVED:**

Works under the general supervision of the Special Assistant and the Associate Special Assistant

**SUPERVISION EXERCISED:**

Provides direct supervision of the Workforce Development Coordinator. May functionally supervise Administrative Systems Coordinator.

**ESSENTIAL DUTIES AND RESPONSIBILITIES:**

- Manages and implements monitoring systems to track personnel transactions in compliance with MWRA policies and procedures and monitors Authority-wide compliance to ensure equal employment opportunity goals are addressed
- Develops Authority's Affirmative Action Plan including but not limited to workforce and availability analyses, and workforce goals by minority and female job group. Also monitors progress made toward MWRA goal attainment through the Workforce Report by Job Group as set forth in the Plan.
- Implements and manages audit systems to effectively monitor and measure achievement of the Affirmative Action Plan goals.
- Oversees and monitors the effectiveness of the Affirmative Action Plan.
- Coordinates development of the annual Affirmative Action Unit's action oriented programs, data collection and staffing analysis of the MWRA workforce.

- Manages the monitoring of workforce goals according to the Authority's annual Affirmative Action Plan to achieve compliance.
- Maintains systems to monitor Affirmative Action workforce compliance and oversee preparation of internal quarterly and annual divisional reports regarding progress towards affirmative action goals as required by the MWRA.
- Reviews all proposed changes of personnel policies and practices to determine their impact upon the achievement of the goals set forth by the Affirmative Action Plan.
- Under the supervision of the Special Assistant and the Associate Special Assistant, assists in the data collection and compilation of internal reports for all completed discrimination and harassment complaints filed or provided to the Affirmative Action Compliance Unit.
- Manages and maintains reporting systems to monitor Affirmative Action workforce reports such as the Authority-wide biennial EEO-4 report and the annual Veterans- 4212 contractors report as required by Federal legislative compliance.
- Maintains working relationships and affiliations with external state and federal agencies, professional organizations, community organizations and groups as appropriate.
- In conjunction with the Associate Special Assistant serves as Department liaison with Federal and state agencies regarding quarterly and annual utilization analysis, including workforce analysis and availability data.
- Meets regularly with Division Directors, Department and Unit Heads to determine affirmative action staffing goals with regard to their impact on achieving the Authority-wide goal.
- Manages the monitoring and tracking of recruitment efforts to ensure compliance of protected class representation and makes recommendations with regard to improvements to sourcing strategies to attract qualified protected class candidates when necessary.
- Serves on selection committees for the hiring of bargaining unit personnel.
- Represents MWRA when attending in-person or virtual recruitment events, job fairs, etc.
- Monitors the Department Current Expense Budget at the direction of the Special Assistant or Associate Special Assistant, which includes the forecasting of expenditures and tracking variance reports.



**SECONDARY DUTIES:**

- Performs related duties as required.

**MINIMUM QUALIFICATIONS:**

Education and Experience:

- (A) A Bachelor's degree in Human Resources, business management or related field. A Master's degree is preferred; and
- (B) Six (6) to eight (8) years of EEO/AA experience, including one (1) year experience preparing Affirmative Action plans and one year of supervisory experience; or
- (C) Any equivalent combination of education or experience.

Necessary Knowledge, Skills and Abilities:

- (A) Knowledge of the principles and practices of EEO/AA report preparation and computerized systems, statistical report analysis and Affirmative Action Planning.
- (B) Demonstrated skills in the operation of the listed tools and equipment.
- (C) Organizational development experience.
- (D) Excellent analytical, interpersonal, oral and written communication skills.
- (E) Ability to plan, organize, direct, train and assign duties to subordinates.

**SPECIAL REQUIREMENTS:**

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

**TOOLS AND EQUIPMENT USED:**

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

**PHYSICAL DEMANDS:**

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

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

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

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

**WORK ENVIRONMENT:**

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

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

**June 2023**

**MWRA  
POSITION DESCRIPTION**



**POSITION:** IT Project Manager III  
**DIVISION:** Administration  
**DEPARTMENT:** Management Information Systems (MIS)

**BASIC PURPOSE:**

The IT Project Manager III supports information technology programs/projects during the full project lifecycle providing project schedule, resource and expense tracking and guidance to help ensure projects are scoped, designed and delivered on schedule and within budget. The position serves as the point-of-contact and centralized management point for all members of the project team throughout the assigned project or project phase lifecycle, interfaces with the user community, and identifies and defines all scheduling and resource risks and issues, and remediation activities.

The focus is on all project management components such as time, scope, cost, resource, and risk management from project initiation through closing phases, using standardized tools and techniques such as Gantt charts, work breakdown structures, resource loading and leveling. The position will also be actively involved with stakeholder management. In addition, the IT Project Manager III serves as the Project Management team lead and updates and maintains Project Management specific project plans and schedules with a focus on project integration.

**SUPERVISION RECEIVED:**

Works under the general supervision of the Business Relationship Manager.

**SUPERVISION EXERCISED:**

Exercises supervision of assigned vendor resources and IT project teams as assigned.

**ESSENTIAL DUTIES AND RESPONSIBILITIES:**

- Develops scope, budget and schedule for information technology programs and projects.
- Develops and manages project plan schedules/timelines, assigned resources, and associated costs.
- Optimizes scheduled activities within business and time constraints.
- Supports the preparation of analyses, estimates, and plans necessary to support the program/project approval process.
- Monitors, evaluates, and provides feedback on the status and performance of all projects.

- Attends meetings with project team to assess status and resolve issues as they come up.
- Communicates orally and in writing to IT Management throughout all phases of a program or project as appropriate.
- Develops and maintains Project Management functional unit's business continuity documentation as appropriate.
- Plans, schedules and leads project team review meetings as required.
- Monitors compliance with project management standards, policies, procedures and templates.
- Develops and manages project policies, procedures, templates and other shared documentation.
- Documents and communicates risks, issues and changes with stakeholders.

**SECONDARY DUTIES:**

- Performs related duties as required.

**MINIMUM QUALIFICATIONS:**

**Education and Experience:**

- (A) A four (4) year college program in management science, engineering management, computer science or related field; and
- (B) Five (5) to seven (7) years experience in time, scope, cost, resource, and risk management from project initiation through closing phases, using standardized tools and techniques such as Gantt charts, work breakdown structures, resource loading and leveling; or
- (C) Any equivalent combination of education or experience.

**Necessary Knowledge, Skills and Abilities:**

- (A) Formal training or certification on methodologies/frameworks for project management, business systems analysis, software development and IT Service Management such as:
  - Rapid Application Development SDLC methodologies such as Agile.
  - Business Systems Analysis concepts and tools
- (B) Analytical and interpersonal skills;

- (C) Written and oral communication skills;
- D) Knowledge of the following is desirable: MS Project, MS Visio, MS.Net, J2EE, Crystal Reporting, ORACLE, SQL Server and PL/SQL.

**SPECIAL REQUIREMENTS:**

- A) Information Technology Infrastructure Library (ITIL) Foundation Certification is required or the ability to obtain within 12 months.
- B) Project Management Professional (PMP) Certification is required or the ability to obtain within 12 months.

**TOOLS AND EQUIPMENT USED:**

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

**PHYSICAL DEMANDS:**

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

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

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

**WORK ENVIRONMENT:**

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

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

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

May 2022

**MWRA  
POSITION DESCRIPTION**

**OLD**

**POSITION:** Senior Laboratory Technician

**DIVISION:** Operations

**DEPARTMENT:** Laboratory Services

**BASIC PURPOSE:**

Performs routine tests, using prescribed procedures, on water, air, and wastewater. Performs routine duties to assist scientists, including the compilation and preparation of data and the operation and maintenance of laboratory equipment.

**SUPERVISION RECEIVED:**

Works under the general supervision of the Laboratory Supervisor II or Laboratory Supervisor III.

**SUPERVISION EXERCISED:**

None.

**ESSENTIAL DUTIES AND RESPONSIBILITIES:**

- Performs routine chemical and microbiological analyses and tests and operates all related equipment, assuring adherence to Standard Operating Procedures (SOPs). Performs set-ups of more complex analytical equipment and instrumentation, also in accordance with Standard Operating Procedures (SOPs).
- Operates equipment to perform established testing procedures in accordance with SOPs.
- Assists higher level staff in chemical or biological analyses.
- Prepares standard solution reagents, media, and related materials to use in testing.
- Monitors the performance of, and performs routine calibration and maintenance duties, on laboratory instruments and equipment. Performs minor adjustments or repairs. Reports equipment malfunctions or other problems to supervisor.
- Performs checks to assure that the gathering of samples is in accordance with SOPs.
- Performs checks/edits to assure the accuracy to test data.

- Reviews reports, identifies discrepancies, and suggests or takes corrective action.
- Operates computer data terminal/personal computers to enter data into the LIMS system.
- Assures the accurate calculations, computation, compilation, summarization/tabulation of test data. Utilizes standard applications software summarization/tabulation of test data. Utilizes standard applications software package to prepare accurate statistical and graphic reports and displays as instructed. Modifies report formats using software as instructed.
- Monitors the supply of materials and supplies against established quantities, and informs supervisor of low levels as necessary to maintain adequate stock. Performs duties to take inventories of supplies and equipment.

**SECONDARY DUTIES:**

- Cleans and maintains assigned work area and follows procedures to ensure safety and avoid accidents and injuries.
- Performs related duties as required.

**MINIMUM QUALIFICATIONS:**

Education and Experience:

- (A) Bachelor's degree in chemistry, biology, environmental science or a related field, including eight college credits in Chemistry or
- (B) An Associate's degree in chemistry, biology, environmental science or related field including eight college credits in Chemistry and two (2) years experience of related environmental laboratory experience;
- (C) Any equivalent combination of education and experience.

Necessary Knowledge, Skills and Abilities:

- (A) Familiarity with basic laboratory testing procedures, the operations, calibration and maintenance of basic laboratory equipment and instrumentation.
- (B) Knowledge of techniques used for the accurate handling of data.
- (C) Skill in the use of special application software.

**SPECIAL REQUIREMENTS:**

A valid Massachusetts Motor Vehicle Operators License.

Required to be available for standby duty and in an on call rotation pool.

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

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

### **PHYSICAL DEMANDS:**

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

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

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 a laboratory environment. The employee regularly works near moving mechanical parts, is frequently exposed to outdoor weather conditions, and occasionally works in high, precarious places and is exposed to fumes and airborne particles, toxic or caustic chemicals and the risk of electric shock.

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

**May 2023**



**MWRA  
POSITION DESCRIPTION**

**NEW**

**POSITION:** Chemist I  
**DIVISION:** Operations  
**DEPARTMENT:** Laboratory Services, Quality Assurance

**BASIC PURPOSE:**

Performs a variety of moderately complex chemical analyses on water, wastewater and air, using prescribed procedures.

**SUPERVISION RECEIVED:**

Works under the general supervision of a Laboratory Supervisor, WQCHM, I, II, III.

**SUPERVISION EXERCISED:**

None.

**ESSENTIAL DUTIES AND RESPONSIBILITIES:**

- Performs a wide range of moderately complex chemical analyses and tests and operates all related equipment, assuring adherence to Standard Operating Procedures (SOPs).
- Assists in research studies and in the investigations of alternative procedures and equipment by performing analyses and tests, and the appropriate preparation data.
- Provides technical direction to technicians and laboratory support personnel by reviewing and confirming the results of routine tests, and providing instruction to assure conformity to SOPs.
- Performs minor troubleshooting, maintenance and calibration duties on a variety of standard instrumentation and instructs or oversees technicians in their performance of routine equipment maintenance duties.
- Maintains current knowledge of analytical procedures and equipment.
- Follows SOPs to maintain accurate reliable data, and to affect the efficient transfer of the data to the LIMS and or other data management systems.

- Utilizes standard applications software and prepares accurate statistical and graphics displays, as instructed.
- Prepares purchase requisitions to reorder standard supplies and materials, and may lead or perform duties to take inventory of supplies and equipment parts.
- Provides instruction to technicians in laboratory safety, assures that safety procedures are followed, and maintains clean and safe work areas.

**SECONDARY DUTIES:**

- Performs related duties as required.

**MINIMUM QUALIFICATIONS:**

Education and Experience:

- (A) A Bachelor's degree in chemistry or a related field is required; and
- (B) One (1) year of experience in chemical analysis, quality control and statistical techniques;  
or
- (C) Any equivalent combination of education and experience.

Necessary Knowledge, Skills and Abilities:

- (A) Thorough knowledge of state of the art modern chemical laboratory methods, procedures, materials and equipment.
- (B) Thorough knowledge and experience in proper sampling techniques and analytical procedures.
- (C) Skill in the operation of the listed tools and equipment.

**SPECIAL REQUIREMENTS:**

- A valid Massachusetts Class D Motor Vehicle Operators License.

**TOOLS AND EQUIPMENT USED:**

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

### **PHYSICAL DEMANDS:**

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

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

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 a laboratory environment. The employee regularly works near moving mechanical parts, is frequently exposed to outdoor weather conditions, and occasionally works in high, precarious places and is exposed to fumes and airborne particles, toxic or caustic chemicals and the risk of electric shock.

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

**December 2022**

**MWRA  
POSITION DESCRIPTION**

**POSITION:** Technical Operations Manager  
**PCR#:** 8610020  
**DIVISION:** Administration  
**DEPARTMENT:** Management Information Systems (MIS)

**BASIC PURPOSE:**

Manages the cost-effective and reliable operation of the MWRA's management information systems infrastructure. Manages the design and control of technical processes to ensure the operational integrity of services provided by the department. Oversees the development and implementation of computer policies, standards, and service levels for a large, diverse and multi-site customer base.

**SUPERVISION RECEIVED:**

Reports to the Deputy Director, Management Information Systems.

**SUPERVISION EXERCISED:**

Exercises close supervision of three (3) technical managers with a total staffing complement of approximately 20.

**ESSENTIAL DUTIES AND RESPONSIBILITIES:**

- Represents the Director and/or Deputy Director of Management Information Systems, as required, before internal and external groups; serves on the Steering and Selection Committee.
- Provides rotational 24-hour by 7-day MIS management on-call coverage services.
- Oversees day-to-day operations of the System Administration, Network & Systems, and Desktop support groups
- Oversees the development, maintenance and application of monitoring tools and industry standards for inventory, configuration and utilization of all hardware, operating system/utility software and peripheral devices.
- Establishes and maintains all operational service level agreements, production schedules, security updates, and backup/recovery standards and procedures. Produces monthly reports on progress of operations.

- Sets objectives for technical operations as well as implements action plans necessary for achieving set targets and the establishment of metrics to assess performance.
- Oversees the hiring, training and monitoring of operations staff. Ensures compliance with all company policies and procedures when performing job duties.
- Ensures compliance with contingency plans to recover operating capability in the event of emergencies, both natural (i.e. flood or fire) or man-made (i.e. Terrorist or cyber-attacks).
- Oversees the appropriate administration and budget control of all vendor hardware/software, network, peripheral device, telecommunications, training, and related service contracts.
- Participates with other members of the department management team and senior user management in forecasting and planning for information technology requirements.
- Collaborates with other MWRA managers on physical and cyber security, Operations Control Center (OCC) and Emergency Operations Center (EOC) operations, Supervisory Control and Data Acquisition (SCADA), Process Instrumentation and Control System (PICS), Security networks, and wireless technology.
- Ensures the coordination of activities and provision of services to meet departmental and organizational priorities.
- Manages the Department in a manner that is consistent with MWRA's goals of Diversity, Equity, and Inclusion.
- Mentors staff and develops training plans and strategies which provide staff development opportunities and ensure appropriate coverage of critical functions/services.
- Provides technical advice on hardware, software, network and telecommunications evaluation, selection and installation, which is consistent with information system strategic plans.
- Addresses professional organizations and user groups from time-to-time and acts as liaison to various vendors.
- Stays current and facilitates the move to new technologies.

**SECONDARY DUTIES:**

Perform related duties as required.

## **MINIMUM QUALIFICATIONS:**

Education and Experience:

- (A) A Bachelor's degree in computer science or related field. An advanced degree is preferred; and
- (B) Eight (8) to ten (10) years professional Information Technology Operations experience in a large multi-user environment, of which at least 4 years must be in a supervisory or managerial capacity; or
- (C) Any equivalent combination of education and/or experience.

Necessary Knowledge, Skills and Abilities:

- (A) Knowledge of, and an in-depth understanding of the tools and techniques required to manage effectively in a large integrated, multi-platform, multi-site WAN/LAN technical services operation.
- (B) Demonstrated knowledge of and ability to hands-on apply industry standards for telecommunications, network, computer center operations, and desktop support.
- (C) Ability to manage and prioritize multiple issues, projects and urgent requests. Familiarity with various network topologies.
- (D) Excellent analytical, interpersonal, written and oral communication skills.

## **SPECIAL REQUIREMENTS:**

Able to respond to emergency situations 24 hours per day, seven days per week.

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

ITIL Foundations Certification v4 or ability to obtain within six months.

At least one from the following list or ability to obtain within six months:

- Master Project Manager or equivalent
- ITIL 4 Specialist Create, Deliver and Support

## **TOOLS AND EQUIPMENT USED:**

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

## **PHYSICAL DEMANDS:**

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

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

The employee must occasionally lift and/or move up to 10 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 an office environment.

The noise level in the work environment is moderately quiet.

**August 2021**

**MWRA  
POSITION DESCRIPTION**

**Position:** Deputy Director, DIWWTP (Deer Island Wastewater Treatment Plant)

**Division:** Operations

**Department:** Wastewater Treatment

**BASIC PURPOSE:**

Directs the efficient and effective operation of the Deer Island Treatment Plant's (DITP) processes and equipment to meet regulatory requirements and provide operations personnel with necessary resources and support. Directs the shift operations activities of assigned personnel to ensure efficient operation of all plant areas to enable the plant to meet optimized performance and permit requirements.

**SUPERVISION RECEIVED:**

Works under the general supervision of the Director, DIWWTP (Deer Island Wastewater Treatment Plant).

**SUPERVISION EXERCISED:**

Exercises general supervision of the Senior Shift Manager, Manager of Power Generation, Program Manager of Energy Management, Program Manager of Energy and the Manager of Process Control.

**ESSENTIAL DUTIES AND RESPONSIBILITIES:**

- Directs the 24 - hour operations of the Deer Island Wastewater Treatment Plant and Onsite Thermal Power Plant. Advises the Director on all operational aspects of the facility. Responds to emergency situations 24 hours per day, seven days per week.
- Provides advice/assistance, on all issues, to the Director, DIWWTP and acts in place of Director in his/her absence.
- Oversees plant process evaluations to ensure optimization of plant processes. Has overall responsibility for enhancement of all plant process systems to reduce chemical and utility costs without sacrifice to permit compliance. Establishes and updates operational procedures in accordance with process control strategies.



- Reviews, analyzes and prepares managerial reports for operational, process control, fiscal and personnel matters. Develops recommendations for ongoing improvements in facility operations.
- Manages the preparation of annual operations budgets and participates in the Authority budgetary process.
- Coordinates with the Maintenance Department, the Thermal Power Plant, and Laboratory Services to establish priorities to ensure successful facility operation.
- Represents plant operations and is an active participant in plant and/or Authority-wide initiatives.
- Directs the Process Control Department including Process Engineering, Process Monitoring/Data Management, and the PICS support functions.
- Directs Process Control Department in the implementation of new control strategy and/or process control modifications to improve plant performance or provide energy savings.
- Provides management input and technical review of plant wide or individual area energy initiatives including consultant studies and engineering projects.
- Works with the Process Control Manager to maintain and update the current inventory of all PICs hardware spare parts.
- Works with the Program Manager, Energy to coordinate CTG outages and plant notifications, monitor the electrical grid pricing and operate CTGs for peak days, demand response, or high electrical pricing to reduce energy costs.
- Manages the development and updating of Operation Manuals and Systems/Station Operating procedures and works with the Program Manager – Technical Information to ensure timely production of updates.
- Works with all Deer Island Department Managers to ensure the success of plant organization, including the development of staffing requirements and oversight of staff selection.
- Partners with the Manager, Training and Development to oversee and provide technical, supervisory and managerial training and education opportunities for all operations employees. Works with Human Resources on the continued implementation of the Wastewater Operator Shadowing Program.

- Oversees staff productivity monitoring and continual improvement through staff skills development, strategic planning, standard operating procedures (SOP) improvements and research and implementation of technology advances.
- Collaborate with Manager of Occupational Health and Safety to oversee and ensure Deer Island Operations Department's compliance with safety programs, maximize employee involvement, and support Deer Island and Authority-wide safety programs. Acts as liaison to the Manager, Occupational Health Safety and Health.
- Works closely with Occupational Health and Safety and Training departments to establish, emergency response procedures, and oversees training via scheduled drills, audits and inspections.
- Establishes and administers operational records and procedures required for a 24 - hour facility.
- Ensures consistency and uniformity of work rules in accordance with established policies and procedures.
- Reviews assigned employees' performance per MWRA procedures. Provides feedback and coaching to managers to maximize successful performance.
- Reviews, analyzes and prepares managerial reports for operational, maintenance, budget, and personnel matters.
- Oversees successful administration of collective bargaining agreement provisions. Participates in grievance resolution, collective bargaining and contract negotiations. Serves as Step I hearing officer. Hears disciplinary actions.
- 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 of Science degree in Chemical or Environmental Engineering or a related field. Master's degree preferred; and
- (B) Ten (10) to twelve (12) years of progressive experience in wastewater treatment and/or in a large utility, regional agency or equivalent, of which at least six (6) years should be in a managerial capacity; or
- (C) Any equivalent combination of education or experience.

### Necessary Knowledge, Skills and Abilities:

- (A) Knowledge of engineering principles and practices with a special emphasis on wastewater treatment theory, process instrumentation, control and automation.
- (B) Proven expertise in the commissioning and operation of large-scale process plant equipment/systems to include a solid understanding of mechanical operating characteristics and their relationship to process performance variables.
- (C) Demonstrated managerial capability in a multi-disciplinary technical environment. Knowledge of operational procedures and techniques.
- (D) Knowledge of standard business management practices to include labor relations, budgeting and job cost accounting techniques.
- (E) Demonstrated computer skills to include proficiency in MS Office software package as well as MS Project. Familiarity with Operations reporting systems, distributed control systems, and Maximo maintenance management systems a plus.
- (F) Excellent oral, analytical and written communication skills.
- (G) Demonstrated successful experience managing in a union environment with a diverse workforce preferred.
- (H) Demonstrated knowledge and understanding of water and sewer infrastructure issues.

### **SPECIAL REQUIREMENTS:**

A valid Massachusetts Class D driver's license.

A valid Massachusetts Wastewater Treatment Plant Operator Grade VII certification (or ability to obtain one within 12 months from date of hire).

Ability to respond to emergency situations 24 hours per day, seven days per week.

### **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 machines.

### **PHYSICAL DEMANDS:**

The physical demands described herein 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 is lifted or force is 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 outside weather conditions. The employee occasionally works near moving mechanical parts, is exposed to wet and/or humid conditions and vibration. The employee occasionally works in high, precarious places and occasionally is exposed to fumes or airborne particles, toxic and/or caustic chemicals.

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

**October 2021**

## STAFF SUMMARY


**TO:** Board of Directors  
**FROM:** Frederick A. Laskey, Executive Director   
**DATE:** June 21, 2023  
**SUBJECT:** Appointment of Manager of Western Maintenance, Operations Division

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**COMMITTEE:** Personnel and Compensation

Wendy Chu, Director, Human Resources  
Eben Nash, Director, Western Operation  
Valerie Moran, P.E., Director, Waterworks  
Preparer/Title

       INFORMATION  
  X   VOTE

  
David W. Coppes  
Chief Operating Officer

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### RECOMMENDATION:

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.

### DISCUSSION:

The Manager, Western Maintenance position reports to the Director, Western Operations and Maintenance and is responsible for directing and managing all of the staff and maintenance programs for Western Operations' facilities, grounds, equipment, intakes, aqueducts and other water supply related structures spanning a large portion of Massachusetts from Quabbin Reservoir to Route 128.

Prominent facilities maintained by the group include the John J. Carroll Water Treatment Plant, the William A. Brutsch Treatment Facility, Cosgrove intake and hydroelectric facility, Oakdale hydroelectric facility, MetroWest Water Supply Tunnel, Norumbega Covered Storage Facility, and the Wachusett Aqueduct Pumping Station and a large number of facilities associated with back up water supply system; the Wachusett, Sudbury and Weston Aqueducts and appurtenant facilities.

The position supervises a staff of over 75, comprised of licensed and unlicensed trade groups, including Electrical, Mechanical, Plumbers, Facilities Specialists and Grounds and Aqueduct personnel, and a team of maintenance engineers. Responsibilities also include budget management for assigned units, development of procedures and improvement programs, condition assessments of facilities, labor management and maintenance contract management.

### Selection Process

The position of Manager, Western Maintenance was posted internally and externally. Six candidates – four internal and two external – were referred to the Operations Division as meeting the minimum qualifications of the job description. The Director of Waterworks, Director of Western Operations and Maintenance and a representative from MWRA's Affirmative Action and Compliance unit interviewed the candidates. Upon completion of the interviews, Mr. Billy

Krukowski was determined to be well qualified to fill the position based on a combination of experience, abilities, knowledge, skills and education.

Mr. Krukowski possesses a Bachelor of Science in Civil Engineering from The University of Massachusetts at Lowell and an Associate Degree in Basic Engineering from Quinsigamond Community College. He is a Registered Professional Engineer in Massachusetts and Connecticut and has the ability to obtain the required drinking water licenses within the allocated time. Mr. Krukowski has approximately 17 years of experience in the water industry in progressively more responsible positions. He worked for 12 years for the Metropolitan District Commission in Hartford, Connecticut (MDC) starting as a Project Engineer and progressing to a Project Manager in the engineering group serving the water and sewer divisions. He then worked for the Town of Spencer, Massachusetts as Superintendent of Utilities and Facilities for three years overseeing the operation of the highway department, water department and solid waste transfer station. In this role, Mr. Krukowski was responsible for managing multiple sites with several unions handling grievances, as well as collective bargaining issues. This position was also responsible for budgeting and making presentations to various town boards and fulfilled the role of Town Engineer at town meetings. He then worked for the consulting firm of Mott MacDonald in West Springfield for two years prior to joining MWRA in 2021. At MWRA, Mr. Krukowski has been a Project Manager, was recently promoted to Program Manager in the engineering group, and has been involved in projects in water and wastewater engineering. Prior to his experience in the engineering field, Mr. Krukowski was a supervisor of a family residential construction company in Charlton, Massachusetts.

Mr. Krukowski demonstrated a solid commitment to safety, DEI, project management and has completed the MWRA Supervisory Development Program. He has also worked with a computerized maintenance management system in previous positions at the MDC. Mr. Krukowski is a proactive leader that demonstrates in depth knowledge and experience in the management of water system operation and maintenance systems.

**BUDGET/FISCAL IMPACTS:**

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

**ATTACHMENTS:**

- Resume of Billy Krukowski
- Position Description
- Western Operations and Maintenance Organization Chart

# Billy J. Krukowski

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## Education –

University of Massachusetts at Lowell, BS Civil Environmental Engineering  
Quinsigamond Community College, AS Basic Engineering

## Experience

### **MASSACHUSETTS WATER RESOURCES AUTHORITY (MWRA) (2021-Current)** **Project Manager/Wastewater**

Manage projects and related tasks related to Capital Improvement at various wastewater facilities. Manage the preparation of reports, memoranda, work plans, designs, cost estimating and other professional services. Review consultants prepared reports and design projects, for facility rehabilitation projects. Develop scope of services for rehabilitation design and construction projects. Work with other MWRA departments to deliver projects. Provide support to other MWRA departments.

### **MOTT MACDONALD ENGINEERING, (West Springfield, MA) (2019-2021)**

#### **Senior Project Manager**

Develop proposals and responses to RFP/Q's for professional services related to water, wastewater and, storm water utilities. Provide NPDES (MS4) compliance services for Ludlow Ma. Perform Dam Inspections for "High Hazzard" Dam in Great Barrington Ma, develop maintenance plans and estimates for customer (Great Barrington Fire District). Manage design services and associated subcontracted services, hold progress meetings, obtain permits from other agencies (MaDOT, Local ConsComs, DPWs), and coordinate with public utility companies (Electric, Communication, Gas, etc.). Provide MA & CT signed & stamped bid documents.

#### **Projects:**

##### West Springfield

- Piper Road Water & Sewer Main Replacement, CWSRF & DWSRF
- Morgan Road Sewer Main Replacement

##### Ludlow

- 2020-2021 NPDES (MS4) Services
- Tower Rd., Motyka St., & Grimard St Sanitary Sewer Expansion

##### Holyoke

- CSO-023 Phase II Separation

##### Great Barrington

- GBFD Water Storage Tank Maintenance
- GBFD High Hazzard Dam Inspection

# Billy J. Krukowski

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Metropolitan District Commission – Hartford MDC  
Day Hill Road, Water Storage Tank Improvements

## **TOWN OF SPENCER, MASSACHUSETTS SUPERINTENDENT OF UTILITIES AND FACILITIES 2018-2020**

Perform complex and highly responsible duties in the planning, execution, and administration of Town programs and services. Oversee all day to day operations of the Highway, Water, Facilities, and Solid Waste Transfer Station. Coordinate engineering support to other town departments including; Sewer, Parks, Library, and Senior Center. Manage and Administer Highway Department programs, services, and personnel. (2.3M Operational Budget, 25M Capital Improvement Budget (Roads, Bridges, Drainage Improvements), Staff of 14. Manage and Administer Water Department programs, services, and personnel, prepare and attend monthly meeting with Water Board (1.4M Operational Budget, 4M Capital (DWSRF) Water Main Replacement, 2M CIP Funded Replacements (Water Mains, Filter Plant Improvements, Well Field Improvements) Staff of 6. Manage and Administer the Solid Waste programs, services, and personnel: Pay As you Throw, Paper/Plastic Recycling, Electronic Recycling, Bulk Item Disposal, Metals Recycling, Coordinate fundraising “toll both”, and House Hold Hazardous Waste Days. Disposal contracts with Wheelabrator Industries (Trash to Energy Facility, Millbury Ma), Clean Harbors/Safety Clean, Excel Recycling, Casella Inc., and Northeast Electronic Recyclers. Staffed by 4 part-time employees, with support from 2 Highway Administrative Assistants.

## **METROPOLITAN DISTRICT COMMISSION (MDC), HARTFORD CT ENGINEER/PROJECT MANAGER 2006-2018**

Worked as a Project Engineer for the Metropolitan District since February of 2008 and have served multiple departments during this time. Beginning in February of 2008 worked with the Development Services Department as a project engineer. The District experienced a reorganization in 2012 upon which was transferred to the Technical Services Department due to his highly motivated work ethic and ability to think critically about difficult challenges in serving the public with water and sewer. Then in 2013 was assigned the Paving Program and transferred to Engineering Services. Though working in multiple departments, many of thre roles and responsibilities were kept with him as he was transferred.

## **METROPOLITAN DISTRICT DEVELOPMENT SERVICES –**

Serve as the District Representative on Developer Projects originating from Public and Private Developers. Work includes ensuring plans adhered to MDC and AWWA standards and specifications. Preform Availability and Capacity Analysis for sanitary sewer collection system. Make recommendations to the Board of Directors for accepting new water and sewer mains. Create budgets



# Billy J. Krukowski

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and estimates for internal billing. Work with other departments to coordinate all aspects of work by MDC personal. Review shop drawings and product specifications. Serve as District construction representative and resolve any discrepancies in the field. Review as-built documents; create record plans of installed work. Draft agreements between parties MDC and Developer to take ownership of asset upon completion of required maintenance period.

Review Petitions for Public Water and or Sewer Services. Work includes reviewing requests for water and sewer service by existing residents in member and non-member towns. Develop plans to serve the petitioners home and nearby homes to maximize service area. Prepare for and hold public hearings on the proposed project, public hears are also used to levy assessments on homeowners. Review comments from public hearing and adjust plans as needed or proceed to Board recommendation. Create project estimates for funding requirements. Recommend the creation of petitioned projects to the appropriate bureau and full board of directors. Design new water and or sewer mains. Bring project through the bidding phase with the assistance of Procurement. Manage the construction on behalf of the District. Upon completion of construction, work with Real Estate and Accounting to bill assessments established at public hearing.

Coordinate Upgrades and Replacements. Work with Town officials to coordinate the construction of water and sewer main replacements and water service/sewer lateral pipe replacements as they are related to town road reconstruction projects. Recommend projects for upgrade or replacement based on meeting with town.

## METROPOLITAN DISTRICT TECHNICAL SERVICES –

Perform Availability and Capacity Analysis for Water and Sewer Systems. Review requests for service in existing areas. Confirm water and sewer demands based on MDC historic usage, TR-16 flow rates and peak hour factors, and State Standards is estimating water and sewer usage. With confirmed proposed flows, determine if sufficient capacity is available in sewer mains and at sewer pump stations, review changes in efficiency of pump stations based on new flow rates. With proposed flows create demand at junctions in H2Omap and run simulations on flows (peak hour, peak hour extended, fire flow, normal flow). Make final recommendation based on analysis results to allow connections, require upgrading to collection systems, require storage tanks for fire flows, and propose alternatives to connect propose pump station upgrades or expansions.

Review Asset Management System Output to replace ageing infrastructure. Work with multiple departments including, GIS, Engineering and Planning, Operations to review and recommend water assets to replace. Create priority list for water main replacements to maximize available Capital

# Billy J. Krukowski

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Improvement Project Funds (CIP). Collect and review CCTV footage of sanitary sewer mains through the CMOM Program. Prepare work plans for on-call construction services. Review proposed work with contractor. Meet with Town officials to preform high priority sewer repairs (imminent collapse or surcharging conditions). Make field decisions for repair work, these projects are blind dig projects no construction plans or utility plans are provided.

Review Encroachment requests and Make Recommendations. Review proposed drawing for easement encroachments. Establish limits of encroachment, establish terms of encroachment. Present easement encroachment and recommendations to the Bureau and the full Board of Directors. Draft Encroachment language and execute with developer and MDC. Calculate District costs associated with encroachment and collect funds from developer. Resolve any disagreements about the requirements to encroach.

## METROPOLITAN DISTRICT ENGINEERING AND PLANNING-

Paving Program Manager/ Paving Coordinator. Develop a new method to coordinate the restoration of approximately 1500 yearly patches in roads, driveways, sidewalks and parking lots. Ensure the District adheres to CT Public Act 11-80 regarding the permanent restoration of pavement cuts. Manage three contractors to complete the required patching work. Develop new contracts as needed (3-year duration for new contracts), review bids and recommend to award. Manage a five million dollar fund to complete the required patches and restoration work.

On-call Repair Project Engineer. Continue to review CCTV footage of Sewer mains and laterals. Recommend replacement segments or full replacement. Recommend if the project shall be open bid or assigned to the on-call contractor. Develop work plan for on-call contractor. Review billing data and make payments to contractor.

## METROPOLITAN DISTRICT CROSS DEPARTMENT WORK

Design Water and Sewer Main Replacement Projects. Coordinate with Survey and drafting to develop a base map of project area. Mark up base map with proposed asset (water or sewer) and establish test pit locations, soil boring locations, soil sampling locations (environmental), ground water monitoring wells as needed per design criteria. Attend design meeting with MDC staff, town and other utility owners to prevent construction conflicts. Work with drafting to develop a construction drawing of the proposed asset. Prepare project specifications and bid documents, move project to procurement for public bid. Hold pre-bid meetings and answer questions received. Review bid results and make recommendation to award. Review shop drawings, testing results, and product manuals; approve or reject same. Coordinate and lead pre-construction conference. Manage job during construction and resolve issues in the field.

# Billy J. Krukowski

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Hire a consultant engineer for design services. Review scope of services and price for proposed work. Manage the design consultant to ensure timely delivery of project features. Attend meetings, ensure standard or practices is being followed. Manage construction of project for District.

Business Transformation/ Project Systems. Work with all team members to implement SAP project systems, materials management and plant maintenance modules. Identify key performance indicators and recommend methods to measure KPI's. Review system ability and recommend custom development points needed to adjust SAP to MDC needs and business practices. Recommend project builder configurations to include unfunded projects for 5 year project outlay. Review and oversee the implementation of SAP Fiori mobile applications and create new screen views with Screen Personas for Desktop applications related to Materials Management, Project Systems, and Plant Maintenance.

## SKILLS AND TRAITS

Highly knowledgeable on all MS Office products, (Word, Excel, Power Point, Publisher)

Skilled at creating Macros and User Forms in Excel VBA

Skilled at Operating ESRI ArcMap and Webmap

Skilled at SAP Software Suites

Exposed to PI, Process Book, Telog Enterprise

Proficient at using H2OMap to create demands and run simulations

Proficient at using AutoCAD [Last version used was 2005, learned on AutoCAD R-12]

I am a quick learner especially with regards to computer programs and am highly confident in my ability to pick up any new software quickly.

I enjoy a challenging and high paced environment that keeps me moving and thinking on my feet and am very capable at dealing with stress and pressure.

## Previous Related Work –

Metropolitan District Commission, Hartford CT, Project Manager 2008-2018

Utilities & Facilities Superintendent, Spencer Ma

CFL, Inc., Sanrico Drive, Manchester CT, Construction Manager/Estimator – Utility Construction

# Billy J. Krukowski

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**2006-2008**

BK Builders Inc, Charlton MA, Frammer, Foreman, Project Coordinator - Residential Homes (BK Builders is a family company)

**2002-2005**

**MWRA  
POSITION DESCRIPTION**

**POSITION:** Manager, Western Maintenance

**PCR#:** 3391011

**DIVISION:** Operations

**DEPARTMENT:** Western Operations

**BASIC PURPOSE:**

Directs and manages the maintenance programs for Western Operations facilities; equipment; and grounds including intakes, aqueducts, treatment facilities, hydroelectric facilities and other water supply related structures. Required to be on-call for emergencies 24 hours per day, seven days a week.

**SUPERVISION RECEIVED:**

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

**SUPERVISION EXERCISED:**

Exercises direct supervision of Senior Program Manager, Western Maintenance, Work Order Coordinator, Program Manager Electrical, Project Managers for Mechanical, Process Engineering, and Facilities as well as other maintenance program and project management staff.

**ESSENTIAL DUTIES AND RESPONSIBILITIES:**

- Manages all aspects of Western Operations maintenance program. Oversees emergency and preventative maintenance of facilities, equipment and grounds to ensure adequate and reliable water supply service and safe operations.
- Manages maintenance staff to ensure proper assignment and functioning of the work unit.
- Reviews, monitors and evaluates work performed in facilities and recommends appropriate improvements in equipment, techniques and procedures.
- Develops long-term maintenance strategies, implements new maintenance initiatives, capital projects, and required maintenance programs.

- Oversees the periodic assessment of buildings, facilities and equipment to define rehabilitation requirements including in-house and contractor supplemented projects as appropriate.
- Coordinates with Operations groups to assure that maintenance work is properly prioritized.
- Participates in capital project design, construction and start-up as needed to ensure that MWRA standards are met and ensure smooth transition to facility maintenance.
- Oversees planning and implementation of appropriate in-house or consultant-led training program.
- Oversees development, training, periodic review and updating of Standard Operating Procedures (SOPs), facility manuals and MWRA safety policies and procedures.
- Oversees budget management for assigned units. Ensures that budget resources are allocated appropriately between units. Monitors spending and ensures budget compliance.
- Oversees personnel management. Ensures that major initiatives and policy changes are properly communicated to all staff. Identifies organizational needs and proposes re-organization plans to address changing needs.
- Oversees staff productivity monitoring and continual improvement through staff skills development, strategic planning, SOPs improvements and research and implementation of technology advances. Maximizes effective use of the Maximo maintenance software and related computer programs.
- Manages the department safety programs, maximizing employee involvement, supporting the Authority-wide safety program, and making inspections. Acts as liaison to the Manager, Occupational Safety and Health. Immediately notifies Occupational Safety and Health of any safety issues or risks that need attention.
- Reviews assigned employees' performance per MWRA procedures.
- Establishes emergency response procedures and oversees training and practice drills.
- Ensures consistency and uniformity of work rules in accordance with established policies and procedures. Identifies needed improvements to work.
- Manages successful administration of collective bargaining agreement provisions to maintain harmonious labor management relations. Participates in grievance resolution,

collective bargaining and contract negotiations. Serves as Step I hearing officer. Hears disciplinary actions.

**SECONDARY DUTIES:**

- Provides emergency coverage as required.
- Performs related duties as required.

**MINIMUM QUALIFICATIONS:**

Education and Experience:

- (A) Knowledge of engineering principles and practices as normally attained through a Bachelor's degree in Engineering, Facilities Management, or a related technical discipline; and
- (B) Eight (8) to ten (10) years experience in the water or wastewater industry, including at least 5 years of management/supervisory experience, preferably in maintenance or large scale project management; or
- (C) Any equivalent combination of education or experience.

Necessary Knowledge, Skills and Abilities:

- (A) Understanding of planning, supervising and implementing the operation and maintenance of all aspects of water treatment and/or water transmission.
- (B) Excellent working knowledge of the maintenance, repair, and replacement of equipment within a large water system.
- (C) Excellent interpersonal, written and oral communication skills.
- (D) Demonstrated ability to plan, organize, direct, train and assign duties to subordinates.
- (E) Working knowledge of maintenance management systems and procedures and computerized maintenance management systems.
- (F) Demonstrated successful experience managing in a union environment with a diverse workforce.
- (G) Knowledge, experience and understanding of Reliability Centered Maintenance methodology. Familiar with its principles, application, and outcomes to increase

maintenance effectiveness and productivity.

- (H) Proficiency in use of PC software for word processing, spreadsheets and databases is required.

**SPECIAL REQUIREMENTS:**

A valid Massachusetts Class D Motor Vehicle License.

A valid Grade 2D OIT and a 1T OIT Drinking Water Supply Facilities Operators license is required, or the ability to obtain them within 1 year.

A Certified Maintenance and Reliability Professionals (CMRP) certification preferred.

Is required to be part of an on-call rotation for emergencies 24 hours a day, 7 days a week.

**TOOLS AND EQUIPMENT USED:**

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

**PHYSICAL DEMANDS:**

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

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

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



## **WORK ENVIRONMENT:**

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

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

The noise level in the work environment is a moderately quiet in office setting and occasionally in a noisier industrial plant or field environment.

**March 2023**

# Western Maintenance

June 2023

Director, Western Operations  
3391001  
NU/15  
116 Positions

Reservoir Ops & Admin Posiitions  
4 positions

**Manager., Western Maintenance**  
**3391011**  
NU/14  
78 Positions

Manager, Transmission & Treatment  
3392021  
NU/14  
32 Positions

Work Order Coordinator  
3391023  
1/17

Sr. Prog. Mgr., Western Maint.  
3391014  
9/30  
72 Positions

Program Manager, Electrical  
3391015  
9/29

Supv., Facility Maintenance  
3393001  
1/26  
44 Positions

Supv., Equipment Maintenance  
3396015  
1/26  
26 Positions

Project Manager, Mechanical  
3391016  
9/25

Project Manager, Facilities  
3391017  
9/25

Jr. Civil Engineer  
3391021  
9/19

## STAFF SUMMARY

**TO:** Board of Directors  
**FROM:** Frederick A. Laskey, Executive Director  
**DATE:** June 21, 2023  
**SUBJECT:** Appointment of Assistant Director of Internal Audit



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**COMMITTEE:** Personnel and Compensation

       INFORMATION  
  X   VOTE

Claude Cormier, Director, Internal Audit  
Wendy Chu, Director, Human Resources  
Preparer/Title

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### RECOMMENDATION:

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.

### DISCUSSION:

The position of Assistant Director, Internal Audit became vacant in September 2022 upon the retirement of a former employee. The position reports to the Director, Internal Audit and manages, reviews and assists in independent reviews of the Authority's internal audits, which include operations and related management systems, and financial and performance audits encompassing these operations. The position assists with establishing an independent internal audit program designed to evaluate the effectiveness of internal controls and procedures and monitoring the quality, efficiency and integrity of the Authority's operating and capital programs.

This position will lead and oversee audits, special projects, investigations and other management requests. The Assistant Director, Internal Audit supervises a staff of two and monitors audit staff adherence to established audit policies and procedures, including preparation of work papers, reporting audit findings and follow-up on audit recommendations.

### Selection Process:

The position was posted internally and one candidate applied. The Director of Internal Audit, Director of Finance, and Assistant Manager of Employment interviewed Andrew Chung. Upon completion of the interview, the panel concluded Mr. Chung was qualified, recommending him for the role based on his education, certification, experience and knowledge of the requirements of the position.

Mr. Chung has more than nine years of auditing experience, including five years performing internal audits from beginning to end. He has worked as a Senior Auditor for the Authority since January 2021, during which he managed audits resulting in \$310,000 in financial recoveries, cost avoidance and cost savings. Prior to joining the Authority, Mr. Chung held several positions with increasing responsibilities at the Massachusetts Port Authority, including serving as its Manager, Internal Audit. He was also employed as an Auditor I for 2.5 years at the Massachusetts Department of Transportation.

Mr. Chung possesses a Bachelor of Science degree, majoring in Accounting and Corporate Finance, from University of Massachusetts/Lowell, and is currently pursuing a Master of Public Administration and Affairs from Merrimack College. He is also a Certified Internal Auditor and Certified Fraud Examiner.

**BUDGET/FISCAL IMPACTS:**

There are sufficient funds available in the FY24 Draft Final Current Expense Budget to fund this position.

**ATTACHMENTS:**

Resume of Andrew Chung  
Position Description  
Internal Audit Organization Chart

# Andrew Chung

## PROFESSIONAL EXPERIENCE

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**Massachusetts Water Resources Authority**  
Chelsea, MA

January 2021- Present

Senior Auditor

- Identify audit issues, develop audit recommendations, and prepare draft audit reports and recommendations for Director approval.
- Lead and perform fieldwork testing depending on project requirements, including analyzing financial data, records, reports and statements.
- Prioritize project workloads and monitor audit progress and efficiency; escalate project roadblocks and issues timely.
- Conduct financial audits of the Authority's contracts and agreements to assure the allowability, allocability and reasonableness of proposed or incurred costs.
- Ensure that all audit work products are properly documented and performed in compliance with established methodology and IIA documentation standards.
- Present audit findings and recommendations to auditees and adjust draft reports as required.
- Coordinate with vendors and MWRA Finance to finalize audit finding recoveries.
- Managed audits have saved \$310,000 in financial recoveries, cost avoidance, and goods to date.

**Massachusetts Port Authority**  
East Boston, MA

August 2016 - December 2020

Audit Manager                  June 2020 – December 2020

- Managed audit engagements for multiple projects simultaneously, including developing audit planning documents, supervised the scheduling and utilization of staff and senior auditors and worked with management and auditees to resolve issues
- Performed qualitative and quantitative field work to conduct the annual risk assessment and formulate the annual Audit Plan.
- Managed the audit finding follow-up process; ensured management implementation of recommendations, documented remediation activities, provided metrics to the Director, implemented new tracking methodology, and reduced backlog of open findings by 60%.
- Prepared presentations and reporting for the Director's monthly meetings with the CEO and Audit & Finance Committee; monitored audit status, KPIs, and risk assessment activities.
- Managed the department's annual budget, wrote justification memorandum for new expenses/positions, administered ongoing IT software/licenses, created annual training plan for department staff and presented to Audit Director for approval.
- Provided technical support to the Internal Audit department with Authority's systems/databases

**Massachusetts Port Authority (Cont.)**

Senior Auditor January 2019 - June 2020  
Staff Auditor II January 2018 – December 2019  
Staff Auditor August 2016 – December 2017

**Massachusetts Department of Transportation**  
Boston, MA

Auditor I January 2014-August 2016

**EDUCATION**

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**Merrimack College** North Andover, MA  
Master of Public Administration and Affairs  
2023-Present  
Anticipated Graduation – Spring 2024

**University of Massachusetts Lowell** Lowell, MA  
Bachelor of Science in Business Administration  
Spring 2013  
Accounting and Corporate Finance, Cum Laude

**CERTIFICATIONS**

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**Certified Internal Auditor (Institute of Internal Auditors-IIA):** October 2018, #1883637,

**Certified Fraud Examiner (Association of Certified Fraud Examiners - ACFE):** August 2017,  
#825011

**COMPUTER SKILLS**

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Microsoft Excel (Proficient), Word, PowerPoint, Outlook, Visio, SharePoint, Wolters Kluwer  
Teammate, Oracle, Maximo

**MWRA  
POSITION DESCRIPTION**

**POSITION:** Assistant Director, Internal Audit

**PCR#:** **8210007**

**DIVISION:** Internal Audit

**DEPARTMENT:** Internal Audit

**BASIC PURPOSE:**

Manages and assists with establishing an independent internal audit program designed to monitor the quality, efficiency and integrity of the Authority's operating and capital programs as defined in Section 7(h) of the Authority's enabling legislation. Assists Director, Internal Audit with assessing the integrity, reliability, efficiency and effectiveness of established policies and procedures, internal controls, systems, and contracts.

**SUPERVISION RECEIVED:**

Works under the general supervision of the Director, Internal Audit.

**SUPERVISION EXERCISED:**

Provides direct supervision of Senior Auditor working on internal audits of MWRA operations. May functionally supervise or provide guidance to the Internal Audit Manager, other Senior Auditors, and the Internal Audit Specialist working on contract audits.

**ESSENTIAL DUTIES AND RESPONSIBILITIES:**

- Provides input and analysis to the Director, Internal Audit who conducts an Authority-wide risk assessment which informs the Internal Audit Plan.
- Performs preliminary planning, defines scope and objectives, and establishes direction for audits while providing leadership and project management principles to assigned audit staff.
- Leads audits (financial, operational and compliance), develops audit strategies and testing procedures needed to achieve audit objective for Director Internal Audit approval.
- Performs and directs fieldwork and prepares work papers consistent with Internal Audit department policy and in conformance with Standards for the Professional Practice of Internal Auditing and Generally Accepted Government Auditing Standards.

- Leads research on internal audit best practices and makes recommendations to the Director, Internal Audit.
- Assists Director, Internal Audit and counsels all levels of management. Develops meaningful, practical audit recommendations that are representative of policies and procedures and best practices.
- Leads special projects, investigations and other management requests.
- Oversees and reviews open recommendation log on a periodic basis, tracks status relative to target dates and identifies next steps for resolution.
- Develops, mentors, and cross-trains department staff.
- Assists the Director, Internal Audit with establishing universal performance goals for the Internal Audit staff and providing feedback to Director on employees' performance.

**SECONDARY DUTIES:**

- Acts as Director, Internal Audit in his/ her absence.
- Performs related duties as required.

**MINIMUM QUALIFICATIONS:**

Education and Experience:

- A Bachelor's degree degree in business, public administration or a related field required; Graduate degree in related field preferred; and
- Seven (7) to ten (10) years of auditing experience, including at least five (5) years independently completing audits start to finish; and at least one (1) year of direct supervisory experience; or
- Any equivalent combination of education or experience.



### Necessary Knowledge, Skills and Abilities:

- Demonstrated big picture perspective through an auditor's lens, business acumen, and ability to focus on relevant information while performing an audit.
- Demonstrated critical thinking and logical reasoning skills.
- Experience in auditing financial and business information systems (enterprise resource planning) controls and procedures.
- Demonstrated understanding of IT Computer Control concepts (including general computer controls, physical security, application controls, automated controls, cyber security, network security, user account management, privileged account management, and IT change management).
- Demonstrated experience auditing financial and operational business processes, identifying risks related to lack of internal controls, lack of proper segregation of duties, insufficient management oversight, incomplete data, un-documented policies and procedures.
- Experience in implementing recognized auditing practices for example Standards for the Professional Practice of Internal Auditing and Generally Accepted Government Auditing Standards.
- Experience completing audits start to finish (including planning, performing, conducting field work, issuing reports and performing follow-up on recommendations).
- Project management skills and ability to direct the work of others.
- Excellent verbal and written communication skills and interpersonal skills.
- Demonstrated skills and experience with Microsoft Office (such as pivot tables, charts, conditional formatting, filters, and general use of function commands), comfortable handling large data sets and preparing data analytics.
- Ability to use technology to successfully analyze data (Excel, ACL, etc.) and work remotely (WebEx, share screen, etc.)
- Ability to use Adobe Acrobat Pro to successfully prepare electronic work papers.
- Ability to use PowerPoint to convey information succinctly.
- Ability to use Visio to present visual representation of internal controls and procedures.
- Overnight travel may be required. Local daytime travel is required.

### **SPECIAL REQUIREMENTS:**

- A valid Massachusetts Class D Motor Vehicle Operators License.
- One of the following certifications is strongly preferred: Certified Public Accountant (CPA), Certified Internal Auditor (CIA), or Certified Systems Auditor (CISA).

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

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

### **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 and talk or hear, to use hands to feel, finger, handle or operate objects, including office equipment or controls and reach with hands and arms. The employee is frequently required to stand and walk; and occasionally climb or balance; stoop, kneel, crouch, crawl, or smell.

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

### **WORK ENVIRONMENT:**

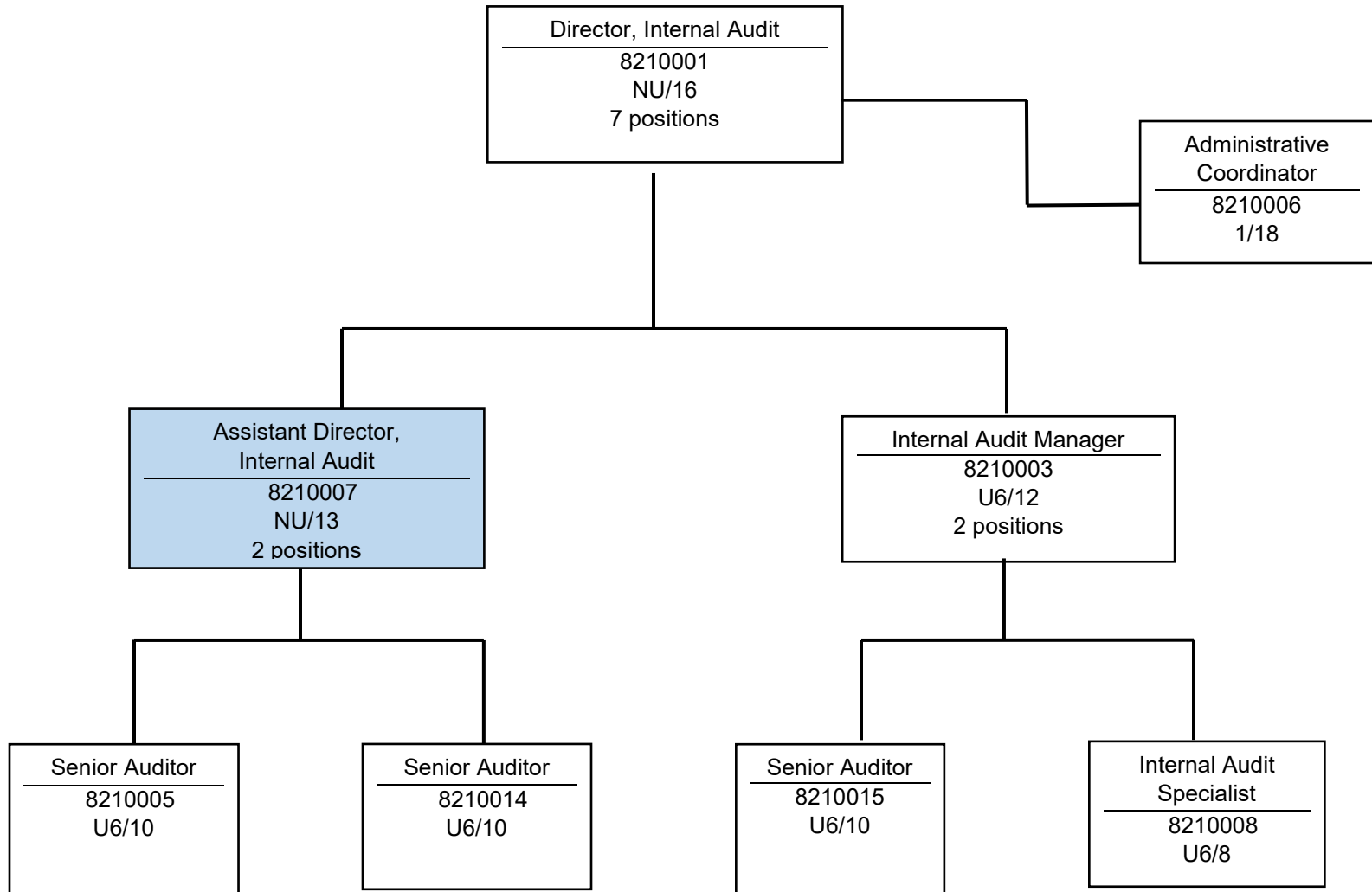
The work environment characteristics described here are representative of those an employee encounters while performing the essential functions of this job.

While performing the duties of this job, the employee regularly works in an office environment. The employee occasionally makes visits to operating facilities and construction sites. In these situations the employee is occasionally exposed to outdoor weather conditions, extreme heat or cold and wet, humid conditions (non-weather) and vibration. The employee occasionally works near moving mechanical parts, and in high precarious places. The employee is occasionally exposed to fumes, toxic or caustic chemicals and airborne particles. The employee occasionally exposed to risk of electrical shock and radiation.


The noise level in the normal work environment is a moderately quiet office setting. Visits made to operating facilities and construction sites include noise levels at the site that could range from loud to very loud.

**April 2023**

**Internal Audit Division  
June 2023**



## STAFF SUMMARY

**TO:** Board of Directors  
**FROM:** Frederick A. Laskey, Executive Director   
**DATE:** June 21, 2023  
**SUBJECT:** Appointment of Chief Engineer, Operations Division

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**COMMITTEE:** Personnel and Compensation

       INFORMATION  
  X   VOTE

Wendy Chu, Director, Human Resources  
Preparer/Title

  
David W. Coppes  
Chief Operating Officer

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### RECOMMENDATION:

To approve the appointment of Mr. Brian Kubaska to the position of Chief Engineer, Operations Division (Non-Union Grade 16) at an annual salary of \$174,000 commencing on a date to be determined by the Executive Director

### DISCUSSION:

The Chief Engineer reports directly to the Chief Operating Officer and manages 52 in-house engineering staff and 29 construction management staff, and directs numerous consultant contracts. This position oversees all water and wastewater (non-Deer Island) engineering design and construction projects.

The Chief Engineer directs the engineering, construction and startup of water supply and wastewater facilities, ensures adequate allocation of staff and financial resources for successful implementation of capital and maintenance project delivery, and manages the engineering and construction transition from capital delivery to operations startup and maintenance.

The Chief Engineer also oversees the department's capital improvement budget, and manages the evaluation of alternatives and solutions to complex engineering problems and the development of environmentally sound solutions.

### Selection Process

The position of Chief Engineer was posted internally and externally. A total of seven candidates applied for the position, including three internal applicants. Two external and three internal candidates were determined to be qualified and were referred for an interview. The Chief Operating Officer, Special Assistant for Affirmative Action, and General Counsel interviewed the candidates. Upon completion of the interviews, Mr. Kubaska was determined to be the best qualified to fill the position based on a combination of experience, abilities, knowledge skills and education.

Mr. Kubaska has 33 years of engineering experience and has been employed at MWRA since 1994. He started as a Project Manager in wastewater planning, and has had a series of promotions into positions of increasing responsibility. He has been the Assistant Director of Engineering since 2017. Prior to working at MWRA, Mr. Kubaska worked at Metcalf and Eddy as a consulting engineer on MWRA projects. While there, he performed hydraulic modeling of the MWRA wastewater system, receiving water quality modeling, and helped develop the statistical rainfall “typical year,” all of which served as the basis of MWRA’s CSO master plan and facility plan.

Mr. Kubaska’s experiences at MWRA give him valuable perspective on many aspects of MWRA’s mission. While in planning, he developed the wastewater SCADA implementation plan, worked on the CSO control plan and provided guidance on wastewater system expansion and permit activities. He then moved into Operations Engineering, where he managed the design and programming of the wastewater SCADA system. Following that successful implementation, he headed up Process Control and Project Support managing a team of engineers and field inspection staff for six years until he was promoted to manage that program, along with the 32 SCADA engineers and technicians and the entire MWRA SCADA water and wastewater network.

In his current position, Mr. Kubaska has excellent relevant experience with managing MWRA’s capital improvement program and its many projects. He currently manages and supervises approximately half of Engineering and Construction’s engineering staff for both water and wastewater projects and successfully tracks their budgets and schedules. In addition, he is the lead manager of the MWRA CSO program and effectively navigates the various and difficult project requirements, including development of court submittals and interfacing with regulatory and watershed stakeholders.

During his interview, Mr. Kubaska was enthusiastic about identifying opportunities to foster mentoring and cross training between junior and senior staff in the Engineering and Construction Department, and expressed interest in increasing staff participation at professional organizations and conducting increased outreach to universities to recruit new staff. He works collegially with other departments and represents MWRA well to outside entities. He holds a Bachelor of Science in Civil Engineering from UMass Amherst. He has a Grade 6-C Wastewater Operator License and is a Massachusetts registered professional civil engineer.

**BUDGET/FISCAL IMPACTS:**

There are sufficient funds in the Operations Division’s Draft Final FY24 Current Expense Budget to fund this position.

**ATTACHMENTS:**

- Resume of Brian Kubaska
- Position Description
- Deputy Chief Operating Officer Organizational Chart

# Brian L. Kubaska, P.E.

## Education/Certifications:

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

## Professional Summary:

Professional Engineer with 33 years of diverse experience supporting the mission of the Massachusetts Water Resources Authority (MWRA), providing exceptional water and sewer services. Over 15 years in progressively responsible management roles involving the planning, design, construction, operation, and maintenance of MWRA's water and wastewater systems.

- Assisted in directing MWRA's capital improvement program to prioritize, budget, design, and construct new and rehabilitated water and wastewater system components.
- Managed MWRA's Combined Sewer Overflow (CSO) program over the past 6 years, meeting all court orders and regulatory requirements during the performance assessment phase.
- Experienced in all aspects of MWRA's SCADA systems, including communications, instrumentation, security, and maintenance.
- Developed a detailed understanding of MWRA's wastewater system through hydraulic modeling, data analysis, managing storm events and system shutdowns, and supporting facility maintenance.
- Skilled in providing comprehensive presentations and written documents to MWRA's Board of Directors and committees, member communities, regulatory agencies, and senior managers.

## Professional Experience:

### **Massachusetts Water Resources Authority (MWRA), Assistant Director of Engineering, Engineering & Construction (July 2017 – Present)**

- Directed a team of approximately 20 engineering professionals responsible for designing water and wastewater capital improvement projects and operations and maintenance projects.
- Oversaw engineering staff and guided project activities, including design and construction procurements, design developments and reviews, construction support, and amendment negotiations.
- Expanded the engineering staff's knowledge of MWRA's systems, policies, and procedures and improved working relations with other MWRA departments.
- Ensured the implementation of engineering solutions in support of MWRA's environmental and energy reduction goals.
- Successfully directed work to meet MWRA's court-ordered and regulatory CSO requirements.

- Managed the hiring, performance reviews, assignments, and workloads of the Wastewater engineering group.
- Collaborated with senior staff to set department priorities and goals, ensuring efficient use of MWRA staff and resources.

**Massachusetts Water Resources Authority (MWRA), Manager, SCADA & Process Control (April 2014 – July 2017)**

- Managed the SCADA group consisting of 32 SCADA engineers and technicians, and the Process Control & Project Support group, consisting of six engineering professionals.
- Oversaw the development, maintenance, and implementation of SCADA & Process Control systems for all metropolitan wastewater facilities and water transmission and storage facilities.
- Managed the procurement and contract administration of various capital improvement designs, in-house designs, and maintenance service contracts.
- Reviewed and provided guidance on multiple water and wastewater designs, construction projects, and permit applications.
- Worked with operations to successfully start up and test new equipment and facilities.

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

- Managed a team of eight engineers and field inspection staff, performing diverse responsibilities.
- Initiated and directed in-house and consultant design and evaluation efforts.
- Led the problem assessment of process control systems and supported modifications to MWRA's wastewater pumping, headworks, and CSO storage and treatment facilities.
- Managed staff responsible for 8(m) permit application reviews, processing, documentation, and field monitoring.
- Managed the development, procurement, and administration of service and purchase order contracts.
- Oversaw design reviews and provided technical support for wastewater planning, engineering studies, and design projects.

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

- Managed the design and supported the implementation of the wastewater SCADA implementation program.
- Prepared scopes of service, procured consultant and construction contracts, and managed consultants.
- Developed control strategies, coordinated SCADA programming efforts, and participated in system testing.
- Served as the Field Operations Department liaison on several facility design and construction projects.

- Managed the Wastewater Hydraulic Optimization project to update MWRA's hydrologic and hydraulic model and assess possible performance improvements of the Wastewater collection system.

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

- Managed the Master Planning phase of the Wastewater SCADA Implementation Program.
- Assisted in the planning, design, and implementation of MWRA's CSO control program.
- Performed hydrologic and hydraulic modeling efforts to support wastewater system analysis, sewer rehabilitation and relief projects, and CSO reduction efforts.
- Developed reports documenting MWRA's wastewater facility components.
- Coordinated with member communities and regulatory agencies on wastewater collection system flows, hydraulics, and operations.
- Provided guidance on wastewater system expansion and permit applications.

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

- Worked on the Boston Harbor Project's Deer Island Treatment Plant design, including developing standard and non-standard specifications and preparing conceptual designs.
- Performed hydraulic and receiving water modeling to contribute to the development of the MWRA's CSO system master and facilities plan.
- Utilized diffuser models and water quality models for the design of effluent discharges.
- Conducted sampling for NPDES permit applications and evaluation of hazardous waste sites and contaminated streams.
- Assisted in the design of stormwater drainage channels, culverts, detention ponds, leachate collection systems, roadways, and berms for landfills and transfer stations.

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

- Assisted the field engineer in the construction of the Connecticut River Fish Research Laboratory.
- Supervised construction and assisted personnel in adhering to the location, dimension, and specification of contract documents.



**MWRA  
POSITION DESCRIPTION**

**POSITION:** Chief Engineer  
**PCR#:** 55250113  
**DIVISION:** Operations  
**DEPARTMENT:** Engineering & Construction

**BASIC PURPOSE:**

Directs the engineering and construction functions of the Authority.

**SUPERVISION RECEIVED:**

Reports directly to and acts under the supervision of the Chief Operating Officer.

**SUPERVISION EXERCISED:**

Exercises direct supervision of the Engineering and Construction functions through the Director, Construction; Assistant Director, Engineering (Wastewater); and Assistant Director, Engineering (Water).

**ESSENTIAL DUTIES AND RESPONSIBILITIES:**

- Acts as Authority's Chief Engineer.
- Works with the Chief Operating Officer to oversee the engineering, construction and start-up of water supply and wastewater facilities, ensure adequate allocation of staff and financial resources for successful implementation of capital and maintenance project delivery and manage the engineering and construction transition from capital delivery to operations start-up and maintenance.
- Supervises the project support functions (budget/schedule management, environmental compliance, safety, grants management support and progress reporting) for the Operations Division's capital project delivery Program.
- Responsible for the efficient and cost-effective execution of capital investment programs and projects to maintain and improve MWRA facilities. Working with Procurement and Law, propose methods to streamline the Authority's capital delivery system.

- Manages the responsibility for stewardship of MWRA physical and plant assets.
- Assumes the responsibility for providing safe MWRA operations for the MWRA workforce, its customers and the general public and provides input into security and emergency preparedness and response regarding the system. Works closely with Manager, Occupational Health and Safety on safety issues.
- Manages the impacts of MWRA construction on community water/sewer systems, through coordination with community system managers and the Advisory Board Operations Committee.
- Works collegially with and ensures coordination with other MWRA divisions and departments and advances the goals, objectives and strategies of the MWRA business plan.
- Assists in implementing the goals and commitments of MWRA in the areas of customer service, economy and efficiency, health and safety, emergency response and security, and integrity and public trust.
- Manages the Department in a manner that is consistent with MWRA's goals of Diversity, Equity, and Inclusion.
- Working with the law department and the risk management group reviews all construction contractor claims and provides Engineer's Decision.
- Reviews all in house designs and if required provides professional engineer stamp on drawings, specifications, and construction control documents.
- Works collaboratively with the MIS department on the design and implementation of the Enterprise Content Management software for both construction, engineering, and records management.
- Ensures the engineering and construction group supports all requirements for the State Revolving Fund.

**SECONDARY DUTIES:**

- Performs related duties as required.

## **MINIMUM QUALIFICATIONS:**

### Education and Experience:

- (A) A Bachelor's degree in sanitary, civil or mechanical engineering or associated field required. Graduate degree or graduate courses in an engineering discipline is preferred; and
- (B) Fifteen (15) years of experience in operations, maintenance, engineering design, engineering project management and/or construction functions relating to water/wastewater service delivery and major water/wastewater facilities including at least eight (8) to ten (10) years demonstrated success in progressively responsible management positions; or
- (A) (C) Any equivalent combination of education and experience.

### Necessary Knowledge, Skills and Abilities:

- (A) Knowledge of principles and practices of engineering.
- (B) Expert familiarity and management competence in the operation, maintenance and construction of water and wastewater facilities and systems.
- (C) Ability to provide technical leadership to subordinate employees in the areas under supervision and inspire confidence in customers and the general public.
- (D) Excellent interpersonal, oral and written communications skills required.

## **SPECIAL REQUIREMENTS:**

Registered Massachusetts Professional Engineer license required.

A valid Massachusetts Class D Motor Vehicle Operators License.

Must be available for on-call assignments and to respond to emergencies on a 24/7 basis using a MWRA domicile vehicle.

## **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:**

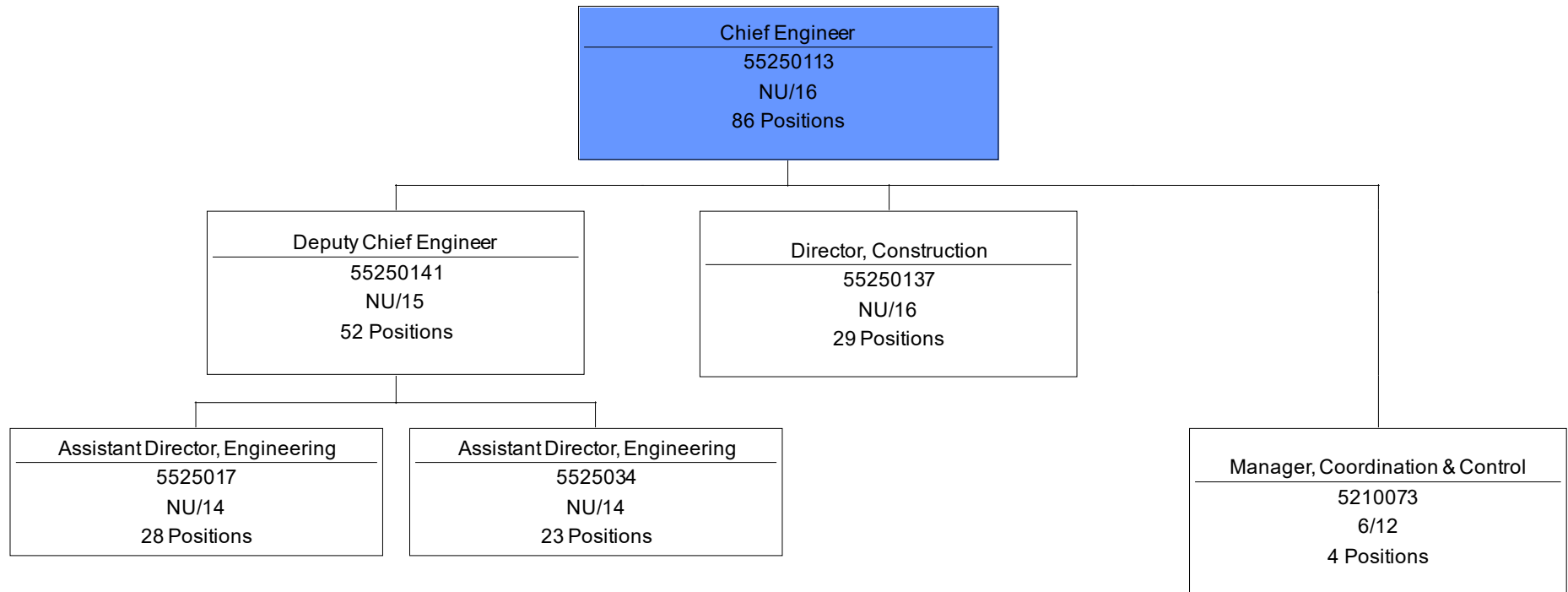
The work environment characteristics described here are representative of those an employee encounters while performing the essential functions of this job. While performing the duties of this job, the employee regularly works in an office environment.

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


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

**April 2023**

# Engineering & Construction



## STAFF SUMMARY


**TO:** Board of Directors  
**FROM:** Frederick A. Laskey, Executive Director   
**DATE:** June 21, 2023  
**SUBJECT:** Appointment of Deputy Chief Operating Officer, Operations Division

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**COMMITTEE:** Personnel and Compensation

INFORMATION  
 VOTE

Wendy Chu, Director, Human Resources  
Preparer/Title

  
David W. Coppes  
Chief Operating Officer

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### RECOMMENDATION:

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

### DISCUSSION:

The Deputy Chief Operating Officer reports to the Chief Operating Officer in the Operations Division. This position oversees the Planning Department, Environmental Quality Water and Wastewater Department, the Toxic Reduction and Control Department, the Department of Laboratory Services, and various administration and finance staff within the Operations Division.

Among the major focuses of these units are: master planning, strategic initiatives (such as system expansion), sustainability, environmental programs and regulatory coordination, water and wastewater quality testing and reporting, industrial pretreatment, and Operations budget/fiscal development and management.

The position reports to, and provides support to, the Chief Operating Officer on key MWRA operations, technical, policy, community coordination, permitting, and public constituency matters.

### Selection Process

The position of Deputy Chief Operating Officer was posted internally. Four MWRA management staff applied for this senior non-union position and were deemed qualified and were referred to the Operations Division for interviews. The Chief Operating Officer, Special Assistant for Affirmative Action, and Director of Administration interviewed the candidates. Upon completion of the interviews, Ms. Rebecca Weidman was determined to be best qualified to fill the position based on a combination of experience, abilities, knowledge, skills and education.

Ms. Weidman has been employed at MWRA since April 2018. She managed the TRAC department for three years before being promoted to the Director of Environmental and Regulatory Affairs. Both programs are under the management of the Deputy Chief Operating Officer, the position for which she is being recommended.

Prior to working at MWRA, Ms. Weidman worked for 15 years and held a number of positions directing and working on environmental and water policy and regulatory programs, including: five years as the Director of MassDEP's Division of Watershed Management; seven years at the New England Interstate Water Pollution Control Commission, three years of which she was the Director of Water Resource Protection; and worked at the National Estuarine Research Reserve Association. At MassDEP, she played a major role in the development of the Commonwealth's program for drinking water testing for lead in schools, and oversaw drinking water surface water quality standards, receiving water total maximum daily load, watershed monitoring, climate change, and Water Management Act programs.

Since coming to MWRA, Ms. Weidman has worked on a variety of programs and projects, including several high profile initiatives. Ms. Weidman is one of the key principals evaluating the impacts of PFAS occurrence on MWRA's drinking water and wastewater programs and was MWRA's designee on the Commonwealth's PFAS Interagency Task Force. She managed the Ipswich River Basin and South Shore System Expansion studies on a very tight timetable and is currently managing the Metrowest Community Study. In addition, she is a member of MWRA's Diversity, Equity, and Inclusion Workgroup and co-chairs MWRA's Environmental Justice Task Force.

Ms. Weidman has excellent analytical, writing and organizational skills. Her broad policy and regulatory experience and her understanding of both drinking water and wastewater issues makes her well qualified to lead all of MWRA's planning and regulatory programs.

She has a Bachelor of Arts degree in Biology from Carleton College and a Master of Environmental Management from the Yale School of the Environment. In 2017, Ms. Weidman was a recipient of the Manuel Carballo Governor's Award for Excellence in Public Service.

**BUDGET/FISCAL IMPACTS:**

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

**ATTACHMENTS:**

- Resume of Rebecca Weidman
- Position Description
- Deputy Chief Operating Officer Organization Chart

## Rebecca M. Weidman

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### PROFESSIONAL EXPERIENCE

**Massachusetts Water Resources Authority (MWRA)**, Chelsea, Massachusetts, April 2018 - Present

**Director, Environmental and Regulatory Affairs**, June 2021- Present

*Develops and oversees implementation of environmental policy on behalf of the MWRA. Represents MWRA at meetings with environmental regulatory agencies and other constituencies to support MWRA programs and objectives. Oversees MWRA's environmental review and permitting efforts for all MWRA projects and all system expansion activities.*

Key Accomplishments:

- Completed two Water Supply System Expansion Feasibility Studies, one for the South Shore and one for the Ipswich River Basin communities. A third study for 21 Metro West area communities will be published in June 2023.
- Co-chair of MWRA's Environmental Justice Task Force; the Task Force is responsible for making recommendations related to the implementation of MWRA's Environmental Justice Strategic Plan.

**Director, Toxic Reduction and Control Department**, April 2018 – June 2021

*Managed all MWRA's permitting programs, including: the Industrial Pre-Treatment Program, consisting of approximately 2,000 permitted industries throughout MWRA's sewerage service area; Municipal permitting, each of MWRA's 45 communities has a permit for utilizing MWRA's sewerage system; and, the 8(M) permitting program for work conducted by outside parties within MWRA's easements.*

Key Accomplishments:

- Oversaw the revision of MWRA's Sewer Use (360 CMR 10.000), Adjudicatory Proceedings (360 CMR 1.00), and Enforcement and Administrative Penalties (360 CMR 2.00) regulations.
- Lead the development and implementation of a new permitting program for over 700 Dental Dischargers.

**Massachusetts Department of Environmental Protection**, Boston, Massachusetts, April 2013 – March 2018

**Director, Division of Watershed Management**

*Managed three complex regulatory programs intended to protect public health and the environment. Responsible for program implementation, including the engagement key stakeholders, iteratively assessing programmatic tools and processes, determining required regulatory revisions, and ensuring the timely delivery of policies and permits.*

Key Accomplishments

- Lead four programs (three regulatory and one technical assistance), including the Massachusetts' Drinking Water, Water Management, Watershed Planning (included Surface Water Quality Monitoring and Assessment, Surface Water Quality Standards, Total Maximum Daily Loads), and Water Utility Resilience Programs with a staff of 40.
- Lead the development of new statewide regulatory and non-regulatory programs within my division, including revisions to Massachusetts' Surface Water Quality Standards and Drink Water Regulations. Determine staffing needs, funding requirements and sources, and programmatic goals and processes.
- Leadership role in the implementation of the Commonwealth of Massachusetts' Lead in School Drinking Water Assistance Program. The goal of this program is to identify elevated lead and copper levels in school drinking water and remediate the causes of the elevated lead and copper levels.
- Chaired external advisory committees tasked with providing guidance to the Department's Commissioner.
- Lead a multi-agency working group to develop a guidance document to support water allocation regulations. Ensured appropriate technical experts participate and materials are easily understandable to the public.
- Developed and implemented a spending plan for over \$3 million in state capital funding annually. Projects focused on enhancing statewide water quality monitoring; reviewing existing and developing revised surface water quality standards; and mapping water utility infrastructure statewide.
- Lead efforts to evaluate new database options for the Watershed Planning Program.
- Provided technical assistance to the regulated community and interested stakeholders.



Rebecca M. Weidman

**The Cadmus Group, Inc.,** Waltham, Massachusetts, January 2011 - March 2013

**Associate**

*Managed dynamic water related technical assistance projects and their associated budgets. Assisted with training initiatives to support the issuance of new federal Safe Drinking Water Act regulations. Supported business development activities for Cadmus' Water Group.*

Key Accomplishments:

- Developed training materials and guidance documents to support implementation activities associated with federal Safe Drinking Water Act regulations.
- Developed tools to assist with the completion a utility management self-assessment program (Effective Utility Management) for 47 water and wastewater utilities throughout New England. Provided technical assistance to a sub-set of utilities visited. Managed project staff, budget, facilitated site visits, and oversaw development of reports.

**New England Interstate Water Pollution Control Commission,** Lowell, Massachusetts, 2003 - January 2011

**Director of Water Resource Protection,** 2008 - January 2011

**Watershed Program Manager,** 2007 – 2008; **Environmental Analyst,** 2003 - 2007

*Project and grant management for a myriad of national, regional, and place-based programs. Promoted collaboration across the New England states, New York State, and federal environmental agencies. Planned technical workshops and program-specific conferences; chaired multi-agency working groups.*

Key Accomplishments:

- As the director of water resource protection, managed a \$4.5 million annual budget that supported several programs and dozens of staff. Responsible for the development and implementation of all program work plans, ensuring that all deliverables were completed on time and within budget.
- Worked collaboratively with a range of stakeholders, including state governments, the federal government, academic institutions, and not-for-profit organizations to achieve program goals.
- Throughout tenure, worked in a variety of program areas including: drinking water; groundwater and source water protection; climate change; cyanobacteria; underground storage tanks (UST), and nonpoint source pollution. Supported key initiatives and partners including: the Long Island Sound Study, the Narragansett Bay Estuary Program, the Hudson River National Estuarine Research Reserve, and the Hudson River Estuary Program.
- Planned several conferences, the largest being a national conference attended by more than 750 individuals and included an exhibition hall with 37 vendors. Responsible for all aspects of event planning – from promoting the event to setting the budget for the event and agenda development.
- Conceptualized and developed new training programs and tools for a wide-range of audiences.

**National Estuarine Research Reserve Association,** Watertown, Massachusetts, 2003 - 2009

**National Estuaries Day Coordinator**

*Lead a national effort to educate the public about estuaries. Planned, produced, and promoted EstuaryLive, an interactive field trip through estuaries over the Internet. Over the course of seven years, reached tens of thousands of students of all ages across the country.*

**Awards and Honors:** 2017 Manuel Carballo Governor's Award for Excellence in Public Service

**EDUCATION:**

**Master of Environmental Management** ♦ **YALE SCHOOL OF THE ENVIRONMENT,** New Haven, Connecticut

**Bachelor of Arts, Biology** ♦ **CARLETON COLLEGE,** Northfield, Minnesota

**MWRA  
POSITION DESCRIPTION**

**POSITION:** Deputy Chief Operating Officer

**DIVISION:** Operations

**DEPARTMENT:** Operations Administration

**BASIC PURPOSE:**

Directs the key operational programs and planning functions of the Authority including Planning, TRAC, Laboratory Services, ENQUAL, Environmental and Regulatory Affairs, Energy Management, and Operations Administration. Directs operational units responsible for environmental monitoring, environmental compliance, energy efficiency and innovation, water quality, industrial pretreatment, enforcement of MWRA regulations and reduction and control of contamination inflow. Supports the development and establishment of Authority policy.

**SUPERVISION RECEIVED:**

Works under the general supervision of the Chief Operating Officer (COO).

**SUPERVISION EXERCISED:**

Exercises general supervision of Director, Planning and Sustainability; Director, Lab Services; Director, ENQUAL; Director, TRAC; Director, Environmental and Regulatory Affairs; Manager, Energy; Manager, Operations Support; and Manager, Coordination and Control. Exercises close supervision of administrative staff.

**ESSENTIAL DUTIES AND RESPONSIBILITIES:**

- Directs operational and regulatory program activities including but not limited to Planning, TRAC, Laboratory Services; ENQUAL, Environmental and Regulatory Affairs, and Energy Management. Supervises department heads and managers assigned to these program functions.
- Directs the Operations Division's administration, procurement and personnel functions.

- Directs the Energy Management Unit in the development and implementation of a comprehensive Energy Management Plan. Oversees MWRA's renewable energy portfolio, energy efficiency initiatives, and cost reduction programs and contracts related to the operations of MWRA facilities.
- Directs the development and oversees implementation of environmental policy and attainment of environmental compliance on behalf of the Authority.
- Directs the planning and sustainability functions including the development of the MWRA master plan and a five-year strategic business plan to address the changing focus of the organization, to optimize utilization of staff and resources, to identify and prioritize capital projects and to reduce costs and to improve services.
- Manages a systematic review of program management reports and controls, which are currently used to inform the Board of Directors, Executive Director and senior management of agency operations and effectiveness. Recommends improvements and/or consolidations.
- Assists in the operations, administrative, environmental quality, and planning activities, as directed by the COO, to meet the MWRA service mission: provision of reliable, cost-effective, high quality water and wastewater treatment services that protects the public health, promotes environmental stewardship, maintains customer confidence and supports a vital economy.
- Develops and implements program and policy recommendations and undertakes special assignments and projects within the operations area under the supervision and guidance of the Chief Operating Officer and/or Executive Director.
- Directs the development of agency-wide planning parameters. Manages the process to build interdivisional consensus on key planning assumptions and data in order to standardize the basis for future system needs and use estimates.
- Coordinates program and planning activities throughout the Authority to assure that program management and planning are consistent with Authority policies and priorities. Directs key agency wide strategic initiatives related to water and wastewater service area, capacity, and permitting.
- Assists in handling the responsibility for providing safe MWRA operations for the MWRA workforce, its customers and the general public and provides input into security

and emergency preparedness and response regarding the system.

- Participates in the review and approval of Task Orders issued under Operations Division contracts.
- Responsible for Division authorization and approval of permits under the 8m permit program.
- Manages the Department in a manner that is consistent with MWRA's goals of Diversity, Equity, and Inclusion.
- Act as Chief Operating Officer in his/her absence.

**SECONDARY DUTIES:**

- Performs related duties as required.

**MINIMUM QUALIFICATIONS:**

Education and Experience:

- (A) A Bachelor's degree in sanitary, civil or mechanical engineering, business, management or related field is required. Graduate degree or graduate coursework in an engineering discipline is preferred; and
- (B) A thorough understanding of water and/or wastewater operations and programs, program management objectives, and operations planning as acquired through ten (10) to twelve (12) years of demonstrated success in progressively responsible management positions in operations, maintenance, engineering design, or technical planning relating to water/wastewater service delivery and major water/wastewater facilities; or
- (C) Any equivalent combination of education or experience.

Necessary Knowledge, Skills and Abilities:

- (A) Knowledge of principles and practices of engineering.

- (B) Expert familiarity and management competence in the planning, regulation and operation of water and wastewater facilities and systems.
- (C) Demonstrated analytical, writing and organizational skills.
- (D) Ability to work with personnel at various organizational levels, to balance competing priorities and to manage personnel and resources as required.
- (E) Ability to provide technical leadership to subordinate employees in the areas under supervision and inspire confidence in customers and the general public.
- (F) Excellent oral, written and verbal communication skills required.

**SPECIAL REQUIREMENTS:**

A valid Massachusetts Class D Motor Vehicle Operators License.  
Must be available to respond to emergencies on a 24/7 basis using a MWRA domicile vehicle.

**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.

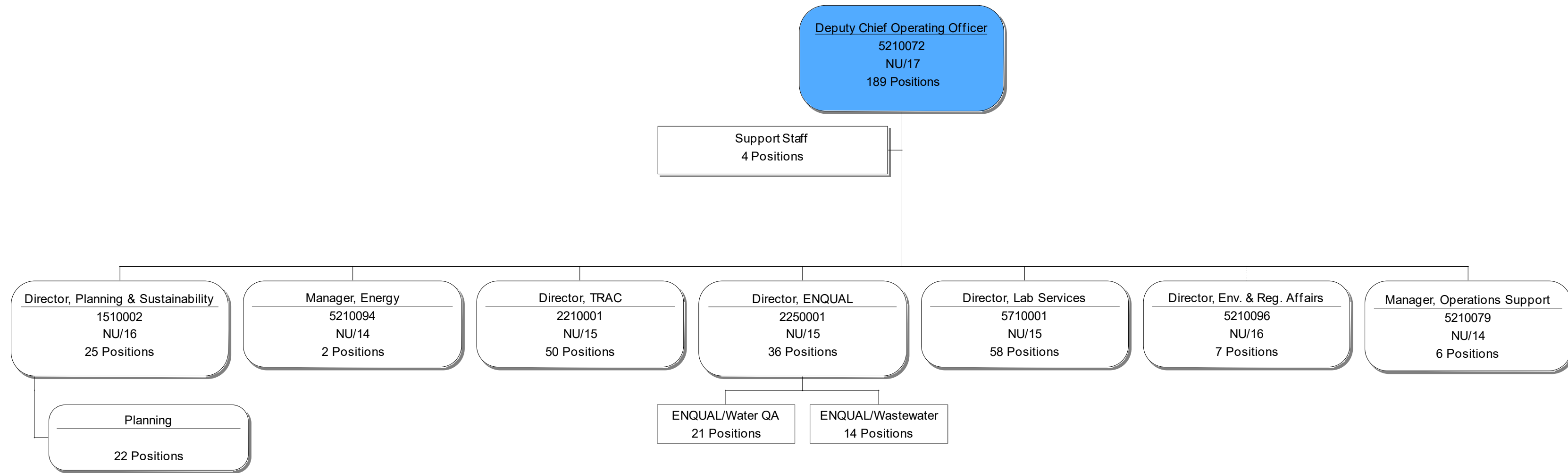
**WORK ENVIRONMENT:**

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 employee occasionally works in outside weather conditions.


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

**April 2023**

# Deputy Chief Operating Officer Org Chart June 2023



## STAFF SUMMARY

**TO:** Board of Directors  
**FROM:** Frederick A. Laskey, Executive Director   
**DATE:** June 21, 2023  
**SUBJECT:** FY24 Non-Union Compensation and Extension of Employment Contract of the Director of the Tunnel Redundancy Program

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**COMMITTEE:** Personnel and Compensation

X  VOTE  
    INFORMATION

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### RECOMMENDATION:

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 presented in Attachment A and filed with the records of the meeting.

Further, that the 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 non-union managers.

### DISCUSSION:

Under this proposal, MWRA non-union managers will receive an adjustment of 8% in FY24, which is consistent with the adjustments for MWRA's bargaining unit employees. Eligible personnel for the FY24 adjustments are current employees in a non-union manager role. There is no retroactive payment associated with this adjustment as the effective dates will be July 1, 2023 and January 6, 2024. These adjustments do not apply to the Executive Director with whom the Authority maintains an individual employment contract.

The recommended adjustments are intended to provide appropriate compensation to non-union managers who receive fewer benefits than those provided to union employees, which include annual step increases, longevity payments, and sick leave buy back. In addition, the recommended adjustments will avoid salary collision between non-union managers and bargaining unit staff. If non-union compensation is not adjusted as proposed, 20% of the MWRA's non-union managers



will earn less than bargaining unit staff they supervise in July 2023. This percentage would increase to nearly 40% in January 2024.

Kathleen M. Murtagh serves as the Director of the Tunnel Redundancy Program under a three-year employment agreement with the Authority that commenced in 2018. The Executive Director has conducted annual reviews of Ms. Murtagh's performance, which he has rated as "Excellent" for each year of her employment, including for FY23. This rating entitles Ms. Murtagh to the amount of any Board-approved salary increase for non-union managers, unless otherwise provided by the Board. Further, the Executive Director recommends that the term of Ms. Murtagh's contract be extended one year, to June 3, 2026.

### **BUDGET/FISCAL IMPACT**

These adjustments for non-union managers result in a total annual cost of approximately \$632,937 for FY24.

### **ATTACHMENTS:**

Attachment A: FY24 Proposed Non-Union Salary Ranges

**Attachment A**

**FY23 Proposed Non-Union Salary Ranges effective July 1, 2023**

<b>Grade</b>	<b>Minimum</b>	<b>Maximum</b>
13	\$94,659.51	\$147,220.81
14	\$106,522.69	\$161,887.72
15	\$119,916.56	\$179,200.68
16	\$134,895.25	\$197,794.91
17	\$151,819.95	\$212,920.66
18	\$144,012.03	\$274,371.99
20	\$141,182.85	\$282,363.41

**FY23 Proposed Non-Union Salary Ranges effective January 6, 2024**

<b>Grade</b>	<b>Minimum</b>	<b>Maximum</b>
13	\$98,445.89	\$153,109.65
14	\$110,783.59	\$168,363.22
15	\$124,713.22	\$186,368.71
16	\$140,291.06	\$205,706.70
17	\$157,892.75	\$221,437.49
18	\$149,772.51	\$285,346.87
20	\$146,830.16	\$293,657.94

## STAFF SUMMARY

**TO:** Board of Directors  
**FROM:** Frederick A. Laskey, Executive Director  
**DATE:** June 21, 2023  
**SUBJECT:** Delegated Authority Report – May 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 May 1 – 31, 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 MAY 1 - 31, 2023

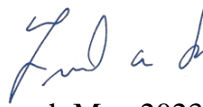
NO.	DATE OF AWARD	TITLE AND EXPLANATION	CONTRACT	AMEND/CO	COMPANY	FINANCIAL IMPACT
C-1.	05/01/23	<b>WACHUSETT DAM LOWER GATEHOUSE BRIDGE CRANE DEMOLITION</b> FINAL BALANCING CHANGE ORDER TO DECREASE THE FOLLOWING BID ITEMS: COVID-19 ALLOWANCE, FIRE WATCH SERVICES ALLOWANCE, REQUIREMENT TO PROVIDE AN MWRA FIELD OFFICE TRAILER.	7780	2	COSTELLO DISMANTLING, CO., INC.	(\$56,464.40)
C-2.	05/01/23	<b>69kV 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-410	1	INFRA-RED BUILDING & POWER SERVICE, INC.	(\$75,230.09)
C-3.	05/02/23	<b>LOW SERVICE PRESSURE REDUCING VALVE IMPROVEMENTS - BOSTON/MEDFORD</b> TRANSPORT AND DISPOSE CONTAMINATED SOILS AND CONCRETE; ACCELERATE CONSTRUCTION AT MYSTIC VALLEY PARKWAY SITE; ADD TWO ADDITIONAL LINEAR FEET OF 48-INCH STEEL PIPE AT NONANTUM ROAD.	7563	2	RJV CONSTRUCTION CORP.	\$507,307.89
C-4.	05/12/23	<b>FIRE ALARM SERVICE METRO BOSTON</b> AWARD OF A CONTRACT TO THE LOWEST RESPONSIVE BIDDER TO PROVIDE FIRE ALARM SYSTEM TESTING AND MONITORING SERVICES, NON-EMERGENCY AND EMERGENCY REPAIR SERVICES AND REPLACEMENT PARTS FOR EQUIPMENT LOCATED AT VARIOUS MWRA FACILITIES FOR A TERM OF 1,095 CALENDAR DAYS.	OP-455	AWARD	SULLIVAN & McLAUGHLIN COMPANIES, INC.	\$437,820.00
C-5.	05/24/23	<b>REMOTE HEADWORKS SHAFT ACCESS IMPROVEMENTS</b> REVISE THE PROTECTIVE COATING FOR SHAFT COVERS; FURNISH AND INSTALL A CONTINUOUS PAD AROUND CAP PERIMETER; EXTEND CONTRACT TERM BY 106 CALENDAR DAYS FROM APRIL 18, 2023 TO AUGUST 2, 2023.	7550	1	WES CONSTRUCTION CORP.	\$34,548.00
C-6.	05/31/23	<b>RIVER ROAD REHABILITATION</b> FINAL BALANCING CHANGE ORDER TO DECREASE THE FOLLOWING BID ITEMS: FURNISH AND INSTALL RIP RAP AND FILTER FABRIC FOR SLOPE, RIP RAP AND FABRIC FOR DRAINAGE SWALE, REMOVE AND DISPOSE OF SOIL CLASSIFICATION B-5; REMOVE AND DISPOSE OF ROCK; REMOVE AND DISPOSE OF CLASS A, B-1, B-2, B-5, B-6, C-1 SOIL; DIESEL FUEL, GASOLINE, LIQUID ASPHALT AND PORTLAND CEMENT CONTAINED IN CAST IN PLACE CONCRETE; COVID-19 ALLOWANCE.	7701	3	E. T. & L. CORP.	(\$395,218.80)
C-7.	05/31/23	<b>KEY PROJECT</b> AWARD OF CONTRACT TO A NON-PROFIT, DEPARTMENT OF CHILDREN AND FAMILIES APPROVED ORGANIZATION TO PERFORM ADDITIONAL LANDSCAPING AND PUBLIC ACCESS AREA CLEANING SERVICES AT DEER ISLAND AND NUT ISLAND FOR A TERM OF SEVEN MONTHS.	OP-461	AWARD	ROCA, INC.	\$50,000.00

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

NO.	DATE OF AWARD	TITLE AND EXPLANATION	CONTRACT	COMPANY	
P-1	05/01/23	<b>PURCHASE OF 68 MICROSOFT WINDOWS SERVER DATACENTER</b> AWARD OF A PURCHASE ORDER UNDER MA STATE CONTACT ITS75 TO THE LOWEST RESPONSIVE BIDDER FOR 68 MICROSOFT WINDOWS SERVER DATACENTER AND 1,500 USER CLIENT ACCESS LICENSES. MWRA CURRENTLY USES MICROSOFT WINDOWS SERVER AS ITS STANDARD OPERATING SYSTEM FOR SERVERS.	WRA-5268Q	DELL MARKETING LP	\$311,387.36
P-2	05/01/23	<b>CLEANING AND DISPOSAL OF PCB-CONTAMINATED MATERIAL</b> AWARD OF A CRITICAL NEEDED PURCHASE ORDER TO THE LOWEST RESPONSIVE BIDDER FOR CLEANING AND DISPOSAL OF PCB-CONTAMINATED MATERIAL FROM THE COTTAGE FARM COMBINED SEWER OUTFALL FACILITY.		CYN OIL CORPORATION dba CYN ENVIROMENTAL SERVICES, INC.	\$398,114.35
P-3	05/02/23	<b>MOVING SERVICES</b> AWARD OF A PURCHASE ORDER TO THE LOWEST RESPONSIVE BIDDER UNDER MA STATE CONTRACT FAC96 TO PROVIDE MOVING SERRVICES FROM THE CHARLESTOWN NAVY YARD TO THE CHELSEA AND DEER ISLAND FACILITIES.	WRA-5295	WAKEFIELD MOVING AND STORAGE, INC.	\$69,820.00
P-4	05/03/23	<b>STEEL PIPE AND BUTT STRAPS</b> AWARD OF A PURCHASE ORDER TO THE LOWEST RESPONSIVE BIDDER FOR STEEL PIPE AND BUTT STRAPS.	WRA-5244	NORTHWEST PIPE COMPANY	\$97,000.00
P-5	05/04/23	<b>RENEWAL OF EVERBRIDGE SUBSCRIPTIONS</b> AWARD OF A PURCHASE ORDER CONTRACT TO THE LOWEST RESPONSIVE BIDDER FOR ONE YEAR RENEWAL OF EVERBRIDGE SUBSCRIPTIONS UNDER UNDER MA STATE CONTRACT ITS75. EVERBRIDGE ALLOWS STAFF TO COMMUNICATE PRESSING INFORMATION TO EMPLOYEES AND COMMUNITY REPRESENTATIVES.	WRA-5292Q	INSIGHT PUBLIC SECTOR, INC.	\$28,486.28
P-6	05/04/23	<b>RENEWAL OF PROOFPOINT ENTERPRISE SUBSCRIPTIONS</b> AWARD OF A ONE-YEAR PURCHASE ORDER UNDER MA STATE CONTRACT ITS75 FOR RENEWAL OF 1200 PROOFPOINT PI PLUS ENTERRISE SUBSCRIPTIONS. PROOFPOINT IS THE FIRST LINE OF DEFENSE AGAINST EMAIL-BASED ATTACKS AGAINST THE MWRA.	WRA-5289-Q	INSIGHT PUBLIC SECTOR, INC.	\$70,884.00
P-7	05/04/23	<b>PURCHASE OF 16 PROGRESSIVE CAVITY POLYMER PUMPS</b> AWARD OF A PURCHASE ORDER TO THE LOWEST RESPONSIVE BIDDER FOR 16 PROGRESSIVE CAVITY POLYMER PUMPS FOR THE CENTRIFUGE FACILITY AT THE DEER ISLAND TREATMENT.	WRA-5260	AQUA SOLUTIONS, INC,	\$80,000.00
P-8	05/04/23	<b>AQUATIC INVASIVE SURVEY AND WATER QUALITY ANALYSIS</b> AWARD OF A PURCHASE ORDER CONTRACT TO THE LOWEST RESPONSIVE BIDDER FOR AQUATIC INVASIVE MACROPHYTE SURVEY AND WATER QUALITY ANALYSIS FOR WARE RIVER, SPOT POND AND THE QUABBILN, WACHUSETT, SUDBURY, FOSS, NORUMBEGA, WESTON, CHESTNUT HILL AND FELLS RESERVOIRS.	WRA-5084	GEI CONSULTANTS INC.	\$85,439.00
P-9	05/10/23	<b>PURCHASE OF 38 SHELVING UNITS</b> AWARD OF A PURCHASE ORDER TO THE LOWEST RESPONSIVE BIDDER FOR 38 SHELVING UNITS FOR THE CORE STORAGE FACILITY.	WRA-5287	AMERICAN MATERIAL HANDLING CORPORATION	\$38,092.72
P-10	05/10/23	<b>PURCHASE OF TWO AIR HANDLING UNITS</b> AWARD OF A PURCHASE ORDER TO THE LOWEST RESPONSIVE BIDDER FOR THE SUPPLY AND INSTALLATION OF TWO AIR HANDLING UNITS FOR UNION PARK PUMP STATION /CSO FACILITY.	WRA-5251	COOLING & HEATING SPECIALISTS, INC.	\$94,322.00
P-11	05/11/23	<b>JANITORIAL SERVICES</b> AWARD OF A THREE-YEAR PURCHASE ORDER CONTRACT UNDER MASS STATE CONTRACT FAC114 TO THE LOWEST RESPONSIVE BIDDER FOR JANITORIAL SERVICES AT THE CORE STORAGE FACILITY.	WRA-5300	FACILITIES MANAGEMENT AND MAINTENANCE, INC	\$40,436.45
P-12	05/11/23	<b>PURCHASE OF ARUBA WIRELESS HARDWARE</b> AWARD OF A PURCHASE ORDER UNDER MASS STATE CONTRACT ITC73 TO THE LOWEST RESPONSIVE BIDDER FOR ARULBA WIRELESS HARDWARE AND IMPLEMENTATION SERVICES FOR NEEDHAM AND COSGROVE INTAKE FACILLIES.	WRA-5277Q	WORLDCOM EXCHANGE, INC.	\$45,480.24
P-13	05/12/23	<b>PURCHASE OF EIGHT FORTIGATE FIREWALL</b> AWARD OF A PURCHASE ORDER UNDER MASS STATE CONTRACT ITT72 TO THE LOWEST RESPONSIVE BIDDER FOR EIGHT FORTIGATE 81F FIREWALLS FOR DEPLOYMENT AT VARIOUS LOCATIONS INCLUDING BARRE, COLUMBUS PARK, CHELSEA CREEK, NORUMBEGA , WARE AND WARD STREET.	WRA-5302Q	EPLUS TECHNOLOGY, INC.	\$27,960.00
P-14	05/12/23	<b>PURCHASE OF CRUSHED STONE</b> AWARD OF A ONE-YEAR PURCHASE ORDER TO THE LOWEST RESPONSIVE BIDDER FOR SUPPLY AND DELIVERY OF 3/4 INCH CRUSHED STONE FOR ON AN AS-NEEDED BASIS TO THE CHELSEA FACILITY.	WRA-5301Q	LORUSSO CORPORATION	\$42,750.00
P-15	05/17/23	<b>PURCHASE FOR LUCIDEA SAAS UPGRADE</b>  AWARD OF A PURCHASE ORDER UNDER MASS STATE CONTRACT ITTS75 TO THE LOWEST RESPONSIVE BIDDER FOR LUCIDEA SAAS UPGRADE, PROFESSNAL SERVICES AND THREE YEARS OF MAINTENANCE AND SUPPORT. LUCIDEA PROVIDES THE KNOWLEDGE MANAGEMENT SYSTEM FOR THE LIBRARY RESOURCES PORTAL.	WRA-5310Q	INSIGHT PUBLIC SECTOR, INC.	\$44,539.26
P-16	05/24/23	<b>PURCHASE OF TWELVE GRIT SCREWS</b> AWARD OF A PURCHASE ORDER TO THE LOWEST RESPONSIVE BIDDER FOR TWELVE GRIT SCREWS FOR THE CHELSEA WAREHOUSE.	WRA-5520	BEARING DISTRIBUTORS, INC.	\$70,858.98

P-17	05/17/23	<b>PURCHASE OF ONE UNINTERRUPTIBLE POWER SUPPLY</b> AWARD OF A PURCHASE ORDER TO THE LOWEST RESPONSIVE BIDDER FOR ONE REPLACEMENT UNINTERRUPTIBLE POWER SUPPLY FOR THE DEER ISLAND TREATMENT PLANT.	WRA-5261	FGC EQUIPMENT, LLC	\$61,317.17
P-18	05/17/23	<b>PURCHASE OF FIVE MUFFIN MONSTER GRINDER CARTRIDGES</b> AWARD OF A SOLE SOURCE PURCHASE ORDER FOR FIVE REPLACEMENTS MUFFIN MONSTER GRINDER CARTRIDGES FOR THE DEER ISLAND TREATMENT PLANT.		JWC ENVIRONMENTAL, LLC	\$67,687.00
P-19	05/17/23	<b>PURCHASE OF FOUR GRIT SCREWS</b>  AWARD OF A PURCHASE ORDER TO THE LOWEST RESPONSIVE BIDDER FOR FOUR GRIT SCREWS FOR THE GRIT CLASSIFIERS AT THE DEER ISLAND TREATMENT PLANT.	WRA-5266	VALVE INDUSTRIES, INC.	\$72,760.00
P-20	05/18/23	<b>SUPPLY AND DELIVERY DIESEL FUEL</b> AWARD OF A PURCHASE ORDER CONTRACT UNDER MASS STATE CONTRACT ENE47 TO THE LOWEST RESPONSIVE BIDDER FOR THE SUPPLY AND DELIVERY OF 320,000 GALLONS OF ULTRA-LOW SULFUR #2 DIESEL FUEL TO DEER ISLAND TREATMENT PLANT.	WRA-5304	GLOBAL MONTELLO GROUP CORPORATION	\$760,256.00
P-21	05/19/23	<b>MAINTENANCE AND SUPPORT FOR QUEST SUITE</b> AWARD OF A ONE-YEAR PURCHASE ORDER CONTRACT UNDER MASS STATE CONTRACT ITS75 TO THE LOWEST RESPONSIVE BIDDER FOR THE MAINTENANCE AND SUPPORT FOR THE QUEST SUITE OF PRODUCT LICENSES. MIS USES A SUITE OF QUEST PRODUCTS TO MONITOR AND MAINTAIN MICROSOFT ACTIVE DIRECTORY NETWORK ACCOUNTS.	WRA-5299	DELL MARKETING, LP	\$27,213.19
P-22	05/19/23	<b>ANALYSIS OF CYANOBACTERIA</b> AWARD OF A ONE-YEAR PURCHASE ORDER CONTRACT TO THE LOWEST RESPONSIVE BIDDER FOR ANALYSIS OF CYANOBACTERIA IN RESERVOIR AND FINISHED DRINKING WATER SAMPLES FROM CARROLL WATER TREATMENT PLANT, COSGROVE INTAKE, BRUTSCH WATER TREATMENT FACILITY, AND LUDLOW MONITORING STATION	WRA-5298Q	EUROFINS EATON ANALYTICAL, INC.	\$38,610.00
P-23	05/22/23	<b>PURCHASE OF TWO CHESTERTON MECHANICAL SEALS</b> AWARD OF A SOLE SOURCE PURCHASE ORDER FOR TWO CHESTERTON MECHANICAL SEALS FOR THE DEER ISLAND TREATMENT PLANT.		CORRISON PRODUCTS & EQUIPMENTS, INC.	\$29,838.00
P-24	05/25/23	<b>MAINTENANCE AND SUPPORT FOR VMWARE VSPHERE</b> AWARD OF A SOLE SOURCE PURCHASE ORDER UNDER MASS STATE CONTRACT ITS75 FOR ONE YEAR MAINTANCE AND SUPPORT FOR VMWARE LICENSES FOR THE PERIOD JUNE 22, 2023 THURGH JUNE 21, 2024. MIS UTILIZES SERVER VIRTUALIZATION TECHNOLOGY TO REDUCE CAPITAL AND OPERATING COSTS AND MINIMIZE OF ELIMINATE DOWNTIME.	WRA-5313Q	DELL MARKETING, LP	\$79,344.96
P-25	05/25/23	<b>SUPPLY AND DELIVERY OF SODIUM HYDROXIDE</b> AWARD OF A ONE-YEAR PURCHASE ORDER CONTRACT TO THE LOWEST RESPONSIVE BIDDER FOR SUPPLY AND DELIVERY OF SODIUM HYDROXIDE.	WRA-5286	BORDEN & REMINGTON CORPORATION	\$311,800.50
P-26	05/25/23	<b>DIVER ASSISTED SUCTION HVESTING</b> AWARD OF A PURCHASE ORDER TO THE LOWEST RESPONSIVE BIDDER FOR DIVER ASSISTED SUCTION HARVESTING OF INVASIVE AQUATIC PLANTS FOR THE WACHUSETT RESERVOIR LOWER BASINS AND COVES.	WRA-5273	AE COMMERCIAL DIVING SERVICES, INC.	\$386,750.00
P-27	05/30/23	<b>MAINTENANCE AND SUPPORT FOR IVANTI ENTERPRISE</b> AWARD OF A SIX MONTHS PURCHASE ORDER CONTRACT UNDER MASS STATE CONTRACT ITS75 TO THE LOWEST RESPONSIVE BIDDER FOR MAINTENANCE AND SUPPORT FOR IVANTI ENTERPRISE MANAGEMENT SUITE LICENSES. THE MWRA USES IVANTI MANAGEMENT SUITE TO MAMAGE ALL MIS DEPLOYED IT ASSETS RUNNING THE WINDOWS OPERATING SYSTEM.	WRA-5325Q	INSIGHT PUBLIC SECTOR, INC.	\$35,349.13
P-28	05/31/23	<b>PURCHASE OF A METERING CALIBRATION SYSTEM</b> AWARD OF A SOLE SOURCE PURCHASE ORDER FOR A METERING CALIBRATION SYSTEM FOR THE METERING DEPARTMENT.		BEAMEX, INC.	\$99,540.00
P-29	5/31/2023	<b>TRAINING AND SUPPORT SERVICES</b> AWARD OF A THREE-YEAR PURCHASE ORDER CONTRACT TO THE LOWEST RESPONSIVE BIDDER TO PROVIDE LASER AND BELT ALIGNMENT TRAINING AND SUPPORT SERVICES.	WRA-5275	ACOEM USA, INC.	\$127,102.38
P-30	5/31/2023	<b>INVASIVE PLANT CONTROL</b> AWARD OF A PURCHASE ORDER TO THE LOWEST RESPONSIVE BIDDER FOR AQUATIC INVASIVE PLANT MOINTORING AND CONTROL AT CHESTNUT HILL RESERVOIR	WRA-5270	SOLITUDE LAKE MANAGEMENT, LLC	\$145,180.00
P-31	5/31/2023	<b>PURCHASE FOR SIX ACCESS HATCHES</b> AWARD OF A PURCHASE ORDER TO THE LOWEST RESPONSIVE BIDDER FOR THE SUPPLY AND DELIVERY OF SIX REPLACEMENT TANK ACCESS HATCHES.	WRA-5250	MARKHAN METALS, INC.	\$186,857.10

**STAFF SUMMARY**


**TO:** Board of Directors  
**FROM:** Frederick A. Laskey, Executive Director   
**DATE:** June 21, 2023  
**SUBJECT:** FY23 Financial Update and Summary through May 2023

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**COMMITTEE:** Administration, Finance & Audit

INFORMATION  
 VOTE

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

  
Thomas J. Durkin  
Director, Finance

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**RECOMMENDATION:**

For information only. This staff summary provides the financial results and variance highlights for Fiscal Year 2023 through May 2023, comparing actual spending to the budget, and includes a projection to June 30, 2023.

**DISCUSSION:**

MWRA is continuing the practice of setting aside favorable Capital Finance variances into the Defeasance Account with the intention of recommending Board approval to use these funds to defease debt and provide rate relief in future years. Targeted defeasances are a critical component of the Authority's multi-year rate management strategy. As such, in May the year-to-date debt related savings of \$16.8 million was transferred to the Defeasance Account. This variance is primarily due to lower than budgeted senior debt spending, SRF spending, and variable interest expense.

The total Year-to-Date variance for the FY23 Current Expense Budget (CEB) is \$32.1 million, due to lower direct expenses of \$8.4 million and indirect expenses of \$2.5 million, as well as higher revenue of \$21.2 million. The year-end favorable variance is projected at \$52.0 million, of which \$22.1 million is related to debt service. Beyond debt service savings, staff project a favorable variance of approximately \$29.9 million at year-end of which \$7.4 million would be from lower direct expenses, \$1.0 million from lower indirect expenses, and \$21.6 million from greater than budgeted revenues.



**FY23 Current Expense Budget**

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

- Lower Direct Expenses of \$8.4 million or 3.4% under budget. Spending was lower for Wages & Salaries, Other Services, Fringe Benefits, Professional Services, Other Materials, Workers Compensation, Overtime, and Training & Meetings. Spending was higher than budget for Maintenance, Chemicals, and Utilities.
- Lower Indirect Expenses of \$2.5 million or 4.7% under budget due primarily to lower Watershed Reimbursements and PILOT payment.
- Debt Service expenses were right on budget after the transfer to the defeasance account, driven by lower senior debt spending as a result of the refunding and new money transactions, lower than budgeted SRF transactions and variable interest expense.
- Revenue was \$21.2 million or 2.6% greater than estimate driven by Investment Income, Other User Charges, and the receipt of Debt Service Assistance from the Commonwealth.

**FY23 Budget and FY23 Actual Variance by Expenditure Category  
(in millions)**

	<b>FY23 Budget</b>	<b>FY23 Actual</b>	<b>\$ Variance</b>	<b>% Variance</b>
Direct Expenses	\$245.0	\$236.6	-\$8.4	-3.4%
Indirect Expenses	\$51.9	\$49.5	-\$2.5	-4.7%
Capital Financing	\$436.5	\$436.5	\$0.0	0.0%
<b>Total</b>	<b>\$733.4</b>	<b>\$722.6</b>	<b>-\$10.8</b>	<b>-1.5%</b>

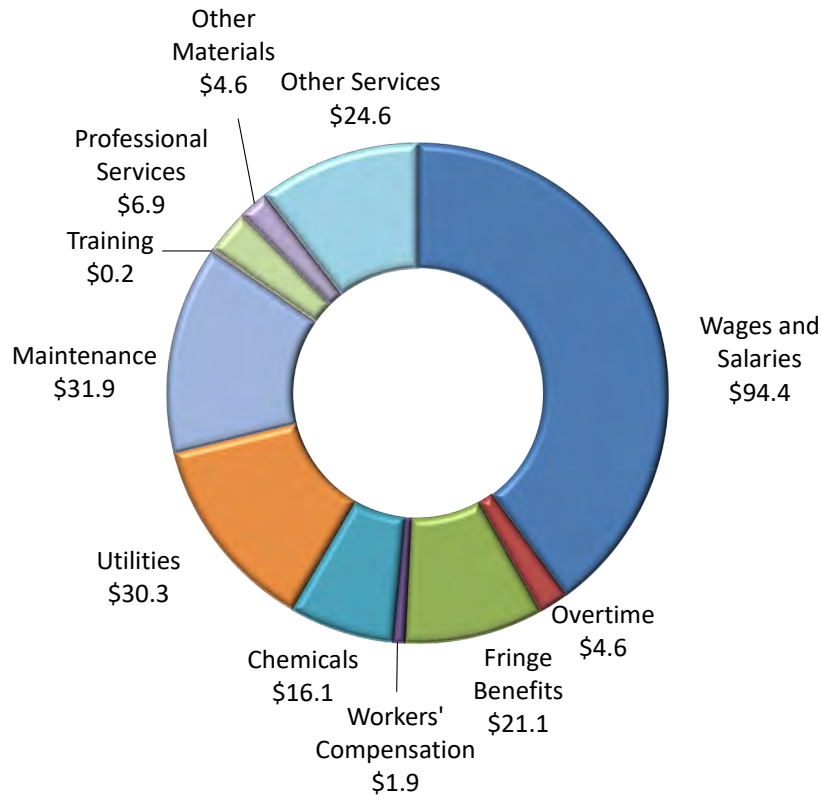
*Totals may not add due to rounding*

*Please refer to Attachment 1 for a more detailed comparison by line item of the budget variances for FY23.*

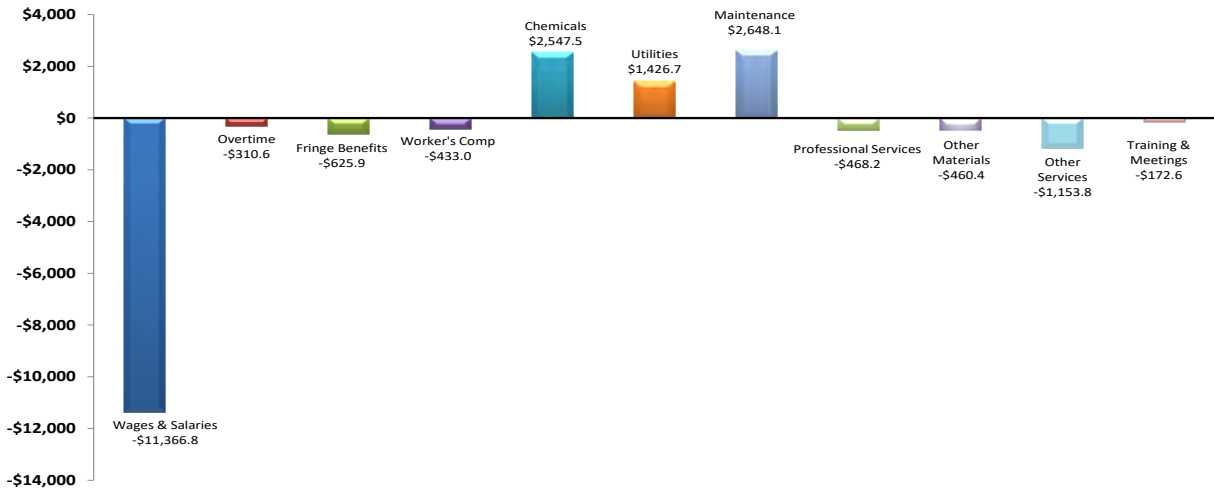
**Direct Expenses**

FY23 direct expenses through April totaled \$236.6 million, which was \$8.4 million or 3.4% less than budgeted.

**FY23 Direct Expenses  
(in millions)**

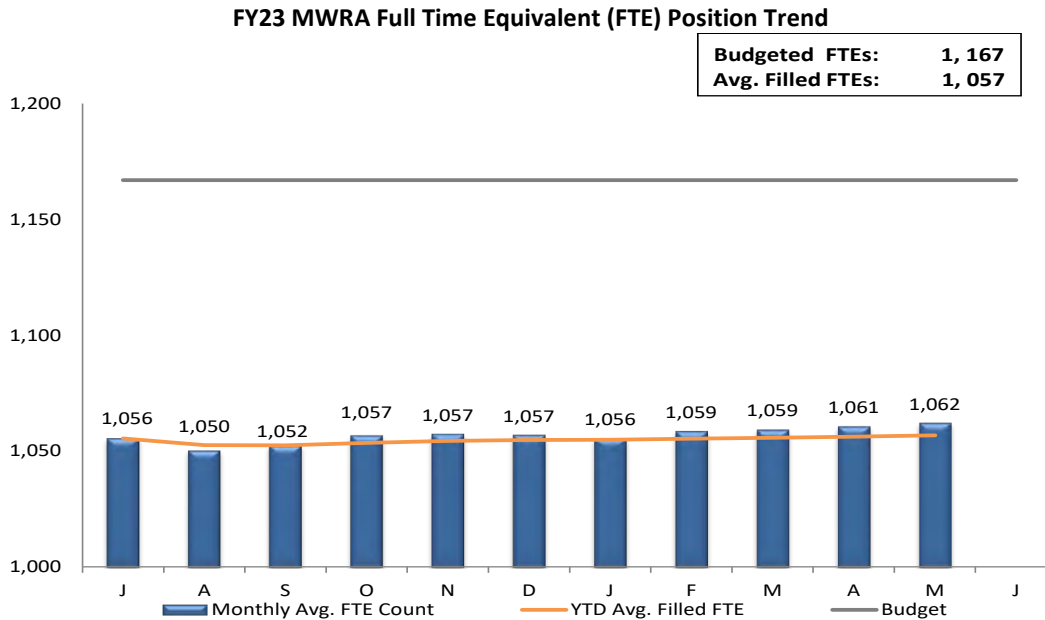


**FY23 Direct Expense Variance  
(in thousands)**



## Wages and Salaries

Wages and Salaries was under budget by \$11.4 million or 10.7%. Through May, there were 110 fewer average FTEs (1,057 versus 1,167 budget) or 9.4% and lower average salaries for new hires versus retirees. The timing of backfilling vacant positions also contributed to Regular Pay being under budget.



## Maintenance

Maintenance was greater than budget by \$2.6 million or \$9.0%, largely driven by the timing of projects. Maintenance Materials are over budget by \$1.9 million driven by Warehouse Inventory of \$842,000 due to need for spare parts as well as purchasing of materials early due to supply chain issues, Special Equipment Materials of \$531,000 for additional SCADA materials needed, and Plant & Machinery Materials of \$461,000 due to timing. Maintenance Services are over budget by \$752,000 due to higher Plant & Machinery Services of \$1.9 million due to timing of some service contracts, the Norumbega Tank Cleaning award being greater than budgeted, Deer Island boiler, thermal and hydro contract spending was greater than budget due to corrective maintenance on the thermal and hydro systems, and cleaning of surfaces and equipment at the Cottage Farm CSO facility that was unbudgeted, Computer Software Licenses of \$600,000 due to timing (and includes Windows Exchange renewal and the multi-factor authentication software support renewal that was greater than budgeted), and Pipeline Services of \$226,000 for interceptor sewer line leak in South Boston. These are partially offset by lower Building and Grounds Services of \$918,000 due to timing and includes the Eastern Ave Traffic Light and Shaft 8 Retaining Wall work, and lower Computer Services of \$442,000 and Electrical Services of \$393,000, both due to timing.

## **Chemicals**

Chemicals were greater than budget by \$2.5 million or 18.8%. Higher than budget spending on Sodium Hypochlorite of \$1.5 million driven by Deer Island of \$1.3 million due to additional usage for disinfection and odor control due to lower flows and higher pricing, \$127,000 in Wastewater Operations primarily at Nut Island Headworks. Ferric Chloride of \$895,000 driven by Deer Island to keep the orthophosphate levels in the digesters at the desired target level and higher pricing, and Carbon Dioxide of \$201,000 primarily due to increased contract price. Deer Island flows are 9.4% lower than the budget and Carroll flows are 4.4% greater than the budget through May. It is important to note that Chemical variances are also based on deliveries which in general reflect the usage patterns. However, the timing of deliveries is an important factor.

## **Utilities**

Utilities were greater than budget by \$1.4 million or 5.0%. Overspending in Electricity of \$1.9 million primarily at Deer Island of \$1.3 million driven by higher real time pricing as well as higher usage and peak demand charges. Electricity in Field Operations was greater than budget by \$648,000 due to T&D and Generation costs were greater than budget. Also, higher than budgeted spending on Natural Gas of \$179,000 driven by Field Operations primarily due to price, which was offset by decrease of \$531,000 in Diesel Fuel primarily due to timing of deliveries. The final Deer Island Diesel Fuel delivery for FY23 was completed at the end of May.

## **Other Services**

Other Services were lower than budget by \$1.2 million or 4.5% driven by lower Telecommunications of \$707,000 due to less than anticipated costs, Other Services of \$183,000 due to timing, Space/Lease Rentals \$145,000 primarily for rock core storage and shelving & furniture due to timing, and Grit & Screenings Removal of \$133,000 due to lower quantities.

## **Fringe Benefits**

Fringe Benefit spending was lower than budget by \$626,000 or 2.9%. Lower than budget in Health Insurance of \$330,000, due to fewer than budgeted participants in health insurance plans, increased contribution by external new hires vs. lower contribution rates of staff retiring, and the shift from family to individual plans which are less expensive. In addition, there was lower spending on Paid Family Medical Leave of \$93,000, Unemployment Insurance of \$86,000, Medicare of \$54,000 and Tuition Reimbursement of \$51,000.

## **Professional Services**

Professional Services were less than budget by \$468,000 or 6.4% driven by lower Other Services of \$238,000, Engineering Services of \$228,000, Lab & Testing and Analysis of \$125,000, both primarily due to timing, partially offset by higher Computer Systems Consultant of \$151,000 also primarily due to timing and updated costs.

## **Other Materials**

Other Materials were less than budget by \$460,000 or 9.1% driven by lower Vehicle Expense of \$295,000 primarily due to delay in installation of electrical vehicle chargers, Equipment and Furniture of \$262,000 and Computer Software of \$92,000 due to timing. This underspending is partially offset by higher Computer Hardware of \$379,000 also due to timing for additional hardware purchases.

## **Worker's Compensation**

Worker's Compensation expenses were lower than budget by \$433,000 or 18.7%. The lower expenses were due to favorable variances in Compensation Payments of \$413,000 and Administrative Expenses of \$45,000. Due to uncertainties of when spending will happen, the budget is spread evenly throughout the year.

## **Overtime**

Overtime expenses were less than budget by \$311,000 or 6.3%. Lower spending mainly in Field Operations of \$538,000 primarily for planned overtime (due to vacancies), emergency overtime being under budget due to minimal bad weather conditions, and Engineering & Construction of \$79,000. These are partially offset by higher spending at Deer Island of \$332,000 for shift coverage due to vacancies for Deer Island operations positions.

## **Training & Meetings**

Training & Meetings expenses were lower than budget by \$173,000 or 42.6% driven by the timing of spending.

## **Indirect Expenses**

Indirect Expenses totaled \$49.5 million, which is \$2.5 million or 4.7% lower than budget. The variance is driven by lower Watershed reimbursements and PILOT payment.

Based on FY23 operating activity only, Watershed Reimbursement is \$2.6 million or 15.2% under budget. Lower spending on Wages and Salaries, Fringe Benefits and Equipment and Maintenance due to timing are slightly offset by higher spending on Utilities/Fuel. When factoring in the FY22 balance forward of \$273,000 which was paid during Q1 of FY23, Watershed Reimbursement is \$2.3 million or 13.6% below budget through May 2023. The PILOT payment in the amount of \$8.5 million was paid in February, and was \$424,000 under budget.

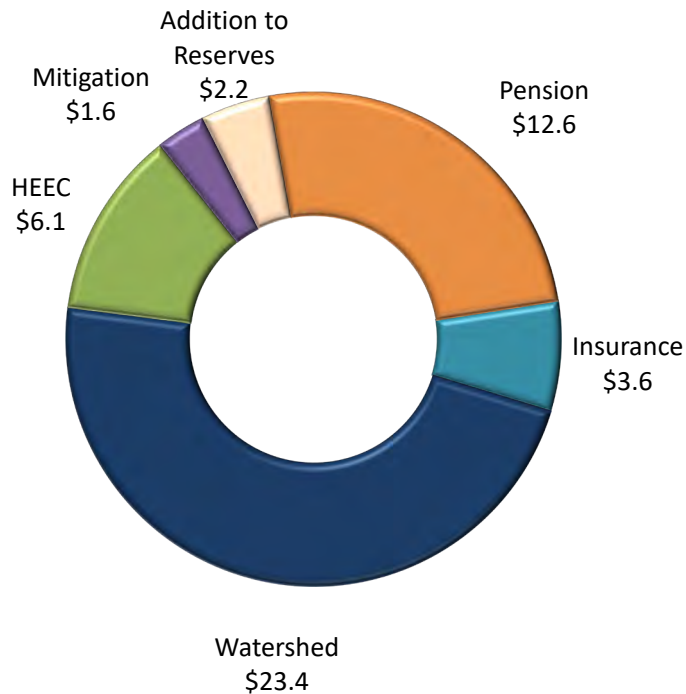
**FY23 Watershed Protection Variance**

<b>\$ in millions</b>	<b>YTD Budget</b>	<b>YTD Actual</b>	<b>YTD \$ Variance</b>	<b>YTD % Variance</b>
Operating Expenses	18.1	16.1	-2.1	-11.3%
Operating Revenues - Offset	0.9	1.4	0.6	65.7%
<b>FY23 Operating Totals</b>	<b>17.3</b>	<b>14.7</b>	<b>-2.6</b>	<b>-15.2%</b>
DCR Balance Forward (FY22 year-end accrual true-up)	0.0	0.3	0.3	
<b>FY23 Adjusted Operating Totals</b>	<b>17.3</b>	<b>14.9</b>	<b>-2.3</b>	<b>-13.6%</b>
PILOT	8.9	8.5	-0.4	-4.8%
<b>Total Watershed Reimbursement</b>	<b>26.2</b>	<b>23.4</b>	<b>-2.8</b>	<b>-10.6%</b>

*Totals may not add due to rounding*

MWRA reimburses the Commonwealth of Massachusetts Department of Conservation (DCR) and Recreation - Division of Water Supply Protection – Office of Watershed Management for expenses. The reimbursements are presented for payment monthly in arrears. Accruals are being made monthly based on estimated expenses provided by DCR and trued-up monthly based on the monthly invoice. MWRA’s budget is based on the annual Fiscal Year Work Plan approved by the Massachusetts Water Supply Protection Trust (with a vacancy adjustment applied). The FTE count at the end of May was 140 (and 140.7 on a year-to-date basis) vs. a budget of 150.

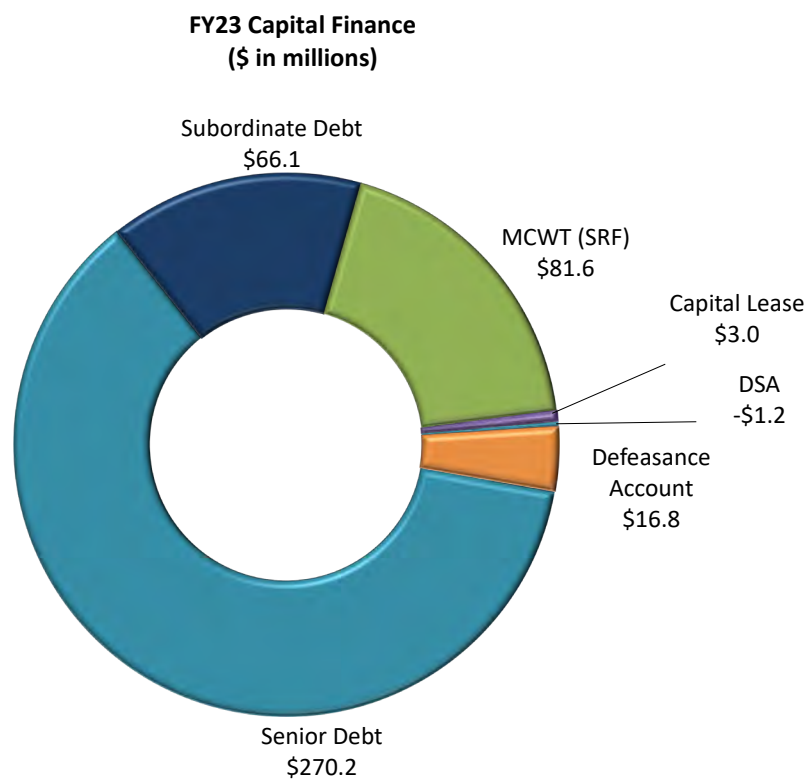
**FY23 Indirect Expenses  
(in millions)**



## Capital Financing

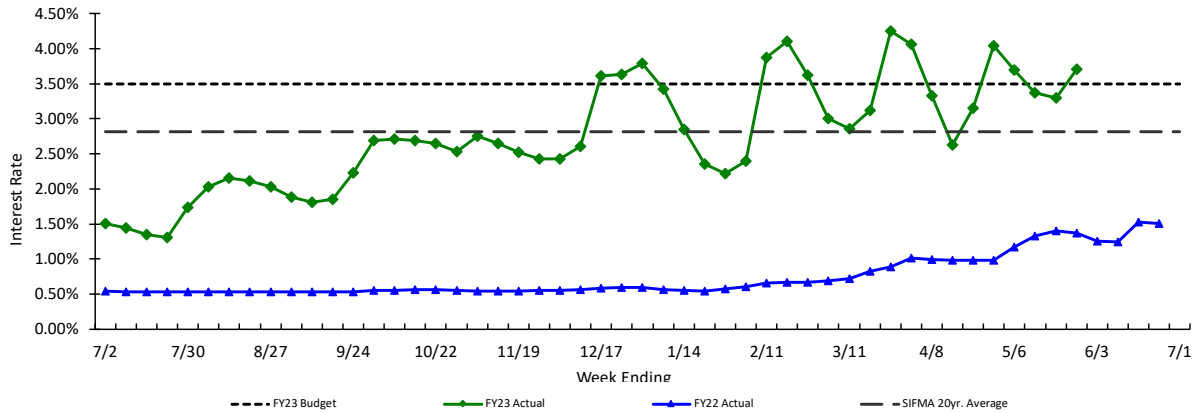
Capital Financing expenses include the principal and interest payments for fixed senior debt, the variable subordinate debt, the Massachusetts Clean Water Trust (SRF) obligation, the commercial paper program for the local water pipeline projects, current revenue for capital, Optional Debt Prepayment,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

Capital Financing expenses for FY23 through May totaled \$436.5 million which matches the budget after the transfer of \$16.8 million to the Defeasance account. The positive year-to-date variance of \$16.8 million is driven by lower Senior Debt spending of \$7.8 million as a result of timing of the new money transaction and the refunding, lower SRF spending of \$5.9 million based on timing, and lower than budgeted variable interest expense of \$3.0 million



The following graph reflects the FY23 actual variable rate trend by week against the FY23 Budget.

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



**Revenue & Income**

Revenues of \$796.7 million were \$21.2 million or 2.6% greater than estimate. Investment Income was \$13.9 million greater than estimate due to higher than anticipated interest rates. Other User Charges were \$4.7 million higher primarily due to water usage by the City of Cambridge. Other Revenue was \$2.7 million or 25.8% greater than estimate due to the receipt of \$1.2 million from the Commonwealth for Debt Service Assistance, Energy Revenue of \$566,000, Miscellaneous Revenue of \$444,000, and Operating Grants of \$184,000 primarily for a COVID-19 grant from FEMA.

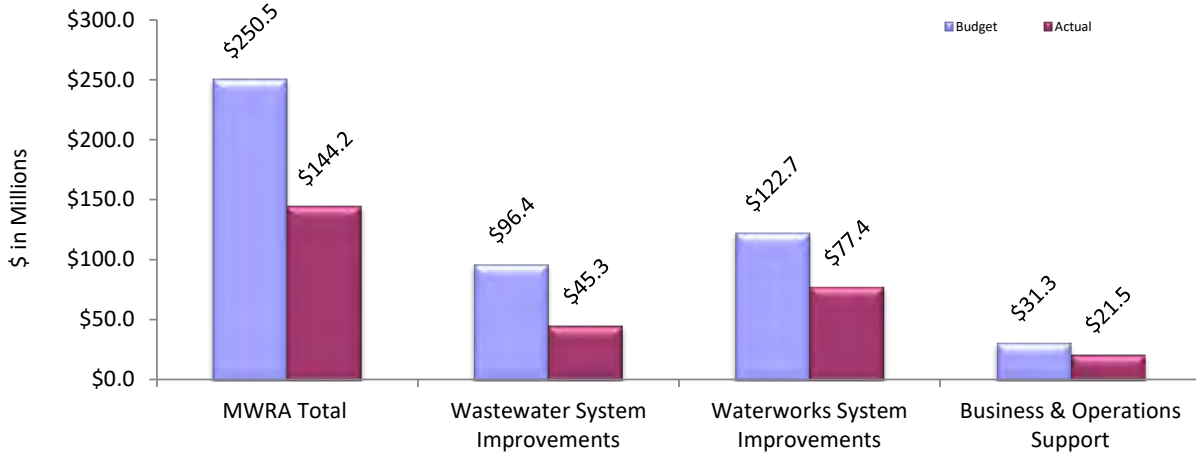
**FY23 Capital Improvement Program**

Capital expenditures in Fiscal Year 2023 through May total \$144.2 million, \$106.3 million or 42.4% under planned spending.

After accounting for programs which are not directly under MWRA’s control, most notably the Inflow and Infiltration (I/I) grant/loan program, the Local Water System Assistance loan program, and the community managed Combined Sewer Overflow (CSOs) projects, capital spending totaled \$133.2 million, \$68.9 million or 34.1% under planned spending.



**FY23 CIP Spending  
Year-To-Date  
May**



Overall, CIP spending reflects the underspending in Wastewater Improvements (\$51.1 million), Waterworks (\$45.3 million) and Business and Operations Support (\$9.8 million). Major variances in Wastewater are primarily due to timing of community grants and loans for the I/I Local Financial Assistance Program, schedule changes for the Deer Island Clarifier Rehab Phase 2, completion of some design and inspection tasks later than anticipated for Ward Street and Columbus Park Headworks Upgrades Design/ESDC, contractor behind schedule on Nut Island Odor Control and HVAC Improvements, schedule changes for Deer Island Roofing Replacement, South System Pump Station Variable Frequency Drive (VFD) Replacement Design/ESDC, Deer Island Motor Control Center and Switchgear Replacement - Construction and Design/ESDC/REI, Deer Island Dystor Membrane Replacements, and Clinton Digester Cover Replacement, and Deer Island Fire Alarm System Replacement.

Waterworks variances are primarily due to timing of community loan distributions for the Water Loan Program, long lead-time for piping material for Waltham Water Pipeline, timing of work for Carroll Chemical Feed System Improvements – Construction and CP3-Sections 23, 24, 47 Rehabilitation and Final Design/CA/RI, longer than anticipated equipment lead time and updated Notice to Proceed for Wachusett Lower Gatehouse Pipe & Boiler Replacement – Construction, schedule changes for Quabbin Maintenance Garage/Wash Bay/Storage Building - Construction and CP-2 Shaft 5 Construction, timing of services for Geotechnical Support, and scope changes for Cathodic Protection Shafts N & W. This was partially offset by contractor progress for Section 89/29 Replacement and CP-1 Norther Extra High (NEH) Improvements, and timing of consultants work for Tunnel Redundancy Preliminary Design and Massachusetts Environmental Policy Act (MEPA) Review, Section 53 and 99 Improvements - Design/CA, and NEH Improvements Design – ESDC.

**FY23 Budget and FY23 Actual Variance by Program  
(in millions)**

\$ in Millions	Budget	Actuals	\$ Var.	% Var.
<b>Wastewater System Improvements</b>				
Interception & Pumping	35.6	22.8	(12.8)	-36.1%
Treatment	33.5	9.2	(24.2)	-72.4%
Residuals	0.0	0.0	0.0	0.0%
CSO	2.3	1.9	(0.5)	-19.5%
Other	25.1	11.4	(13.6)	-54.4%
<b>Total Wastewater System Improvements</b>	<b>\$96.4</b>	<b>\$45.3</b>	<b>(\$51.1)</b>	<b>-53.0%</b>
<b>Waterworks System Improvements</b>				
Drinking Water Quality Improvements	3.9	2.3	(1.6)	-40.5%
Transmission	53.3	31.1	(22.1)	-41.5%
Distribution & Pumping	32.0	35.4	3.4	10.7%
Other	33.6	8.5	(25.0)	-74.5%
<b>Total Waterworks System Improvements</b>	<b>\$122.7</b>	<b>\$77.4</b>	<b>(\$45.3)</b>	<b>-36.9%</b>
<b>Business &amp; Operations Support</b>	<b>\$31.3</b>	<b>\$21.5</b>	<b>(\$9.8)</b>	<b>-31.4%</b>
<b>Total MWRA</b>	<b>\$250.5</b>	<b>\$144.2</b>	<b>(\$106.3)</b>	<b>-42.4%</b>

*Totals may not add due to rounding*

**FY23 Spending by Program:**

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

**Other Waterworks:** Net underspending of \$25.0 million

- \$24.5 million for Local Financial Assistance due to timing of community loan distributions.

This underspending was partially offset by overspending of \$0.4 million for New Roofs at Water Pumping Stations – Construction due to timing of work.

**Wastewater Treatment:** Net underspending of \$24.2 million

- \$7.3 million for Clarifier Rehab Phase 2 Construction and REI, \$2.5 million for Deer Island Roofing Replacement, \$2.4 million for Deer Island Motor Control Center & Switchgear Replacement - Construction & Design/ESDC/REI, \$2.0 million for Dystor Membrane Replacement, \$1.6 million for Clinton Digester Cover Replacement, and \$1.3 million for Fire Alarm System Replacement – Construction due to schedule changes.
- \$2.4 million for South System Pump Station VFD Design/ESDC due to updated construction schedule.
- \$1.3 million for Deer Island As-needed Design due to lower than projected task order work.
- \$1.0 million for Chelsea 008 Pipe Replacement due to updated schedule and long lead time for materials.

**Waterworks Transmission:** Net underspending of \$22.1 million

- \$12.7 million for Waltham Water Pipeline due to long lead time for piping material.
- \$2.5 million for Wachusett Lower Gatehouse Pipe and Boiler Replacement - Construction due to longer than anticipated equipment lead time and updated Notice to Proceed.
- \$2.4 million for Maintenance Garage/Wash Bay/Storage Building - Construction due to schedule change.
- \$2.1 million for Geotechnical Support Services due to timing of services.
- \$1.9 million for CP-2 Shaft 5 Construction due to updated schedule.
- \$1.8 million for Cathodic Protection Shafts N & W due to scope changes.

This underspending was partially offset by overspending of \$5.0 million for Section 89/29 Replacement – Construction and \$1.0 million for CP-1 NEH Improvements due to contractors progress, and \$1.3 million for Tunnel Redundancy Preliminary Design & MEPA Review due to timing of consultant work.

**Other Wastewater:** Net underspending of \$13.6 million

- \$13.6 million for Community I/I due to timing of community distributions of grants and loans.

**Interception & Pumping:** Net underspending of \$12.8 million

- \$3.6 million for Ward Street & Columbus Park Headworks Upgrades - Design/CA due to completion of some design and inspection tasks later than anticipated.
- \$3.3 million for Nut Island Odor Control & HVAC Improvements Phase 2 – Construction and CA/REI due to contractor behind schedule.
- \$1.5 million for Siphon Structure Rehab Construction and \$0.7 million for Interceptor Renewal 7 Malden/Melrose Construction due to updated schedules.

**Business & Operations Support:** Net underspending of \$9.8 million

- \$1.5 million for FY19-23 Vehicle Purchases due to timing of purchases and supply chain issues.
- \$3.9 million for Cabling, \$1.3 million for Lawson Upgrade, \$0.9 million for MAXIMO Interface Enhancements, and \$0.8 million for Oracle Database Appliance due to timing and scheduling of work.
- \$1.2 million for Security Equipment & Installation due to timing of security initiatives.

**Water Distribution and Pumping:** Net overspending of \$3.4 million

- \$5.0 million for Section 89/29 Replacement – Construction and \$1.0 million for CP-1 NEH Improvements due to contractor progress.
- \$0.8 million for Section 53 and 99 Improvements - Design/CA due to timing of consultants work.
- This overspending was partially offset by underspending of \$1.8 million for Cathodic Protection Shafts N & W due to scope changes, \$0.9 million for Section 56 Replacement/Saugus River - Design/CA due to permitting delays, and \$0.7 million for CP3-Sections 23, 24, 47 Rehabilitation due to timing of work.

**Drinking Water Quality Improvements:** Net underspending of \$1.6 million

- \$0.7 million for Carroll Chemical Feed System Improvements – Construction due to timing of work.
- \$0.6 million for Carroll Technical Assistance for lower than projected task order work.

**Combined Sewer Overflow:** Net underspending of \$0.5 million

- \$1.0 million for Chelsea 008 Pipe Replacement due to schedule change and long lead time for materials, partially offset by \$0.8 million for unplanned Fort Point Channel Sewer Separation work.

**Construction Fund Balance**

The construction fund balance was \$159.9 million as of the end of May. Commercial Paper/Revolving Loan available capacity was \$195 million.

**ATTACHMENTS:**

Attachment 1 – Variance Summary May 2023

Attachment 2 – Current Expense Variance Explanations

Attachment 3 – Capital Improvement Program Variance Explanations

Attachment 4 – Year-End Current Expense Projections vs. Budget

ATTACHMENT 1

FY23 Actuals vs. FY23 Budget

	May 2023				
	Year-to-Date				
	Period 11 YTD Budget	Period 11 YTD Actual	Period 11 YTD Variance	%	FY23 Approved
<b>EXPENSES</b>					
WAGES AND SALARIES	\$ 105,816,624	\$ 94,449,867	\$ (11,366,757)	-10.7%	\$ 118,980,689
OVERTIME	4,929,186	4,618,580	(310,606)	-6.3%	5,337,896
FRINGE BENEFITS	21,712,446	21,086,541	(625,905)	-2.9%	23,961,641
WORKERS' COMPENSATION	2,309,772	1,876,789	(432,983)	-18.7%	2,519,751
CHEMICALS	13,553,665	16,101,152	2,547,487	18.8%	14,994,036
ENERGY AND UTILITIES	28,824,261	30,250,994	1,426,733	4.9%	30,896,365
MAINTENANCE	29,277,033	31,925,098	2,648,065	9.0%	33,241,023
TRAINING AND MEETINGS	405,133	232,545	(172,588)	-42.6%	492,197
PROFESSIONAL SERVICES	7,331,608	6,863,360	(468,248)	-6.4%	8,197,575
OTHER MATERIALS	5,047,265	4,586,906	(460,359)	-9.1%	6,728,862
OTHER SERVICES	25,798,203	24,644,393	(1,153,810)	-4.5%	28,372,237
<b>TOTAL DIRECT EXPENSES</b>	<b>\$ 245,005,196</b>	<b>\$ 236,636,225</b>	<b>\$ (8,368,971)</b>	<b>-3.4%</b>	<b>\$ 273,722,272</b>
INSURANCE	\$ 3,614,771	\$ 3,556,874	\$ (57,897)	-1.6%	\$ 3,916,002
WATERSHED/PILOT	26,191,560	23,420,141	(2,771,419)	-10.6%	28,890,762
HEEC PAYMENT	5,715,642	6,091,661	376,019	6.6%	6,225,566
MITIGATION	1,602,180	1,602,180	-	0.0%	1,735,694
ADDITIONS TO RESERVES	2,232,418	2,232,418	-	0.0%	2,418,453
RETIREMENT FUND	12,555,203	12,555,203	-	0.0%	12,555,203
POST EMPLOYEE BENEFITS	-	-	-	---	4,754,061
<b>TOTAL INDIRECT EXPENSES</b>	<b>\$ 51,911,774</b>	<b>\$ 49,458,475</b>	<b>\$ (2,453,299)</b>	<b>-4.7%</b>	<b>\$ 60,495,741</b>
STATE REVOLVING FUND	\$ 87,544,625	\$ 81,640,143	\$ (5,904,482)	-6.7%	\$ 96,342,495
SENIOR DEBT	278,037,637	270,192,775	(7,844,862)	-2.8%	302,169,940
DEBT SERVICE ASSISTANCE	(1,182,494)	(1,182,494)	-	0.0%	(1,182,494)
CURRENT REVENUE/CAPITAL	-	-	-	---	18,200,000
SUBORDINATE MWRA DEBT	69,115,704	69,115,704	-	0.0%	75,491,975
LOCAL WATER PIPELINE CP	-	-	-	---	6,233,882
CAPITAL LEASE	2,969,594	2,969,594	-	0.0%	3,217,060
VARIABLE DEBT	-	(3,034,248)	(3,034,248)	---	-
DEFEASANCE ACCOUNT	-	16,783,591	16,783,591	---	-
DEBT PREPAYMENT	-	-	-	---	5,500,000
<b>TOTAL CAPITAL FINANCE EXPENSE</b>	<b>\$ 436,485,066</b>	<b>\$ 436,485,066</b>	<b>\$ -</b>	<b>0.0%</b>	<b>\$ 505,972,858</b>
<b>TOTAL EXPENSES</b>	<b>\$ 733,402,036</b>	<b>\$ 722,579,766</b>	<b>\$ (10,822,270)</b>	<b>-1.5%</b>	<b>\$ 840,190,871</b>
<b>REVENUE &amp; INCOME</b>					
RATE REVENUE	\$ 751,982,770	\$ 751,982,770	\$ -	0.0%	\$ 814,648,000
OTHER USER CHARGES	9,087,468	13,754,200	4,666,732	51.4%	9,836,507
OTHER REVENUE	5,714,462	8,378,819	2,664,357	46.6%	6,139,104
RATE STABILIZATION	904,615	904,615	-	0.0%	980,000
INVESTMENT INCOME	7,744,381	21,649,537	13,905,156	179.6%	8,587,260
<b>TOTAL REVENUE &amp; INCOME</b>	<b>\$ 775,433,696</b>	<b>\$ 796,669,940</b>	<b>\$ 21,236,246</b>	<b>2.7%</b>	<b>\$ 840,190,871</b>

**ATTACHMENT 2  
Current Expense Variance Explanations**

Total MWRA	FY23 Budget YTD May	FY23 Actuals May	FY23 YTD Actual vs. FY23 Budget		Explanations
			\$	%	
<b>Direct Expenses</b>					
Wages & Salaries	105,816,624	94,449,867	(11,366,757)	-10.7%	Wages and Salaries are under budget by \$11.4 million or 10.7%. Year to date, there have been 110 fewer average FTEs (1,057 versus 1,167 budget), lower average new hire salaries versus retirees, the timing of backfilling vacant positions.
Overtime	4,929,186	4,618,580	(310,606)	-6.3%	Overtime expenses were less than budget by \$311,000 or 6.3%. Lower spending mainly in Field Operations of \$538,000 primarily for planned overtime (due to vacancies), emergency overtime being under budget and minimal bad weather conditions, and Engineering & Construction of \$79,000, are partially offset by higher spending at Deer Island of \$332,000 for shift coverage due to vacancies for DITP Operations positions.
Fringe Benefits	21,712,446	21,086,541	(625,905)	-2.9%	Fringe Benefit spending was lower than budget by \$626,000 or 2.9%. Lower than budget in <b>Health Insurance</b> of \$330,000, due to fewer than budgeted participants in health insurance plans, increased contribution by external new hires vs. lower contribution rates of staff retiring, and the shift from family to individual plans which are less expensive. In addition, there was lower spending on <b>Paid Family Medical Leave</b> of \$93,000, <b>Unemployment Insurance</b> of \$86,000, <b>Medicare</b> of \$54,000 and <b>Tuition Reimbursement</b> of \$51,000.
Worker's Compensation	2,309,772	1,876,789	(432,983)	-18.7%	Worker's Compensation expenses were lower than budget by \$433,000 or 18.7%. The lower expenses were due to favorable variances in <b>Compensation Payments</b> of \$413,000, and <b>Administrative Expenses</b> of \$45,000. Due to uncertainties of when spending will happen, the budget is spread evenly throughout the year.
Chemicals	13,553,665	16,101,152	2,547,487	18.8%	Chemicals were greater than budget by 2.5 million or 18.8%. Higher than budget spending on <b>Sodium Hypochlorite</b> of \$1.5 million driven by DITP of \$1.3 million due to additional usage for disinfection and odor control due to lower flows and higher pricing, \$127,000 in Wastewater Operations primarily at Nut Island Headworks. <b>Ferric Chloride</b> of \$895,000 driven by DITP to keep the orthophosphate levels in the digesters at the desired target level and higher pricing, <b>Carbon Dioxide</b> of \$201,000 primarily due to increased contract price, <b>Hydrogen Peroxide</b> of \$141,000 driven by DITP to reduce elevated Hydrogen Sulfide (H2S) levels for pretreatment and odor control and provide maintenance safely, <b>Activated Carbon</b> of \$75,000 driven by DITP of \$36,000 and wastewater operations of \$35,000 due to timing of replacements, partially offset by <b>Hydrofluosilicic Acid</b> of \$97,000 due to chemical feeded and piping project in the Spring and <b>Sodium Bisulfite</b> of \$132,000 primarily in Wastewater and Water Operations. DITP flows are 9.4% lower than the budget and CWTP flows are 4.4% greater than the budget through May. It is important to note that Chemical variances are also based on deliveries which in general reflect the usage patterns. However, the timing of deliveries is an important factor.

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

Total MWRA	FY23 Budget YTD May	FY23 Actuals May	FY23 YTD Actual vs. FY23 Budget		Explanations
			\$	%	
Utilities	28,824,261	30,250,994	1,426,733	4.9%	Utilities were greater than budget by \$1.4 million or 4.9%. Overspending in <b>Electricity</b> of \$1.9 million primarily at DITP of \$1.3 million driven by higher real time pricing as well as higher usage and peak demand charges. Electricity in Field Operations was greater than budget by \$648,000 due to T&D and Generation costs were greater than budget. Also, higher than budgeted spending on Natural Gas of \$179,000 driven by Field Operations primarily due to price, which was offset by decrease of \$531,000 in Diesel primarily due to timing of deliveries and price. Final DITP delivery completed at the end of May.
Maintenance	29,277,033	31,925,098	2,648,065	9.0%	Maintenance was greater than budget by \$2.6 million or 9.0%, largely driven by the timing of projects. Maintenance Materials are over budget by \$1.9 million driven by <b>Warehouse Inventory</b> of \$842,000 due to need for spare parts as well as purchasing of materials early due to supply chain issues, <b>Special Equipment Materials</b> of \$531,000 for additional SCADA materials needed, <b>Plant &amp; Machinery Materials</b> of \$461,000 and <b>HVAC Materials</b> of \$179,000 due to timing, higher <b>Computer Materials</b> of \$127,000, partially offset by <b>Electrical Materials</b> of \$360,00 and <b>Pipeline Materials</b> of \$79,000 also due to timing. <i>Maintenance Services</i> are over budget by \$752,000 million due to higher <b>Plant &amp; Machinery Services</b> of 1.9 million due to timing of some service contracts, the Norumbega Tank Cleaning award being greater than budgeted, DITP boiler, thermal and hydro contract was greater than budget due to corrective maintenance on the thermal and hydro systems, and cleaning of surfaces and equipment at the Cottage Farm CSO facility that was unbudgeted, <b>Computer Software Licenses</b> of \$600,000 due to timing (and includes Windows Exchange renewal and the multi-factor authentication software support renewal that was greater than budgeted), and <b>Pipeline Services</b> of \$226,000 for interceptor sewer line leak in South Boston. These are partially offset by lower <b>Building &amp; Grounds Services</b> of \$918,000 due to timing and includes the Eastern Ave Traffic Light and Shaft 8 Retaining Wall work and lower <b>Computer Services</b> of \$442,000 and <b>Electrical Services</b> of \$393,000 also due to timing.
Training & Meetings	405,133	232,545	(172,588)	-42.6%	Training & Meetings was lower than budget by \$173,000 or 42.6% is primarily due to timing driven by MIS (\$97,000), DITP (\$27,000), Water Redundancy (\$21,000), Engineering & Construction (\$13,000), and Procurement (\$9,000), partially offset by higher spending in Field Operations \$29,000.
Professional Services	7,331,608	6,863,360	(468,248)	-6.4%	Professional Services were less than budget by \$468,000 or 6.4% driven by lower <b>Other Services</b> of \$238,000, <b>Engineering Services</b> of \$228,000, <b>Lab &amp; Testing and Analysis</b> of \$125,000, primarily due to timing, partially offset by <b>Computer Systems Consultant</b> of \$151,000 also primarily due to timing and updated costs.
Other Materials	5,047,265	4,586,906	(460,359)	-9.1%	Other Materials were less than budget by \$460,000 or 9.1% driven by <b>Vehicle Expense</b> of \$295,000 primarily due to delay in installation of electrical vehicle chargers, <b>Equipment Furniture</b> of \$262,000 and <b>Computer Software</b> of \$92,000 due to timing. This underspending is partially offset by <b>Computer Hardware</b> of \$379,000 also due to timing for additional hardware purchases.

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

Total MWRA	FY23 Budget YTD May	FY23 Actuals May	FY23 YTD Actual vs. FY23 Budget		Explanations
			\$	%	
Other Services	25,798,203	24,644,393	(1,153,810)	-4.5%	Other Services were lower than budget by \$1.2 million or 4.5% driven by <b>Telecommunications</b> of \$707,000 due to less than anticipated costs, <b>Other Services</b> of \$183,000 due to timing, <b>Space/Lease Rentals</b> \$145,000 primarily for Rock Core Storage and shelving & furniture due to timing, and <b>Grit &amp; Screenings Removal</b> \$133,000 due to lower quantities.
<b>Total Direct Expenses</b>	<b>245,005,196</b>	<b>236,636,225</b>	<b>(8,368,971)</b>	<b>-3.4%</b>	



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

Total MWRA	FY23 Budget YTD May	FY23 Actuals May	FY23 YTD Actual vs. FY23 Budget		Explanations
			\$	%	
<b>Indirect Expenses</b>					
Insurance	3,614,771	3,556,874	(57,897)	-1.6%	Lower Payments/Claims of \$79,000 and higher Premiums of \$21,000 than budgeted
Watershed/PILOT	26,191,560	23,420,141	(2,771,419)	-10.6%	Lower Watershed Reimbursement of \$2.8 million favorable variance to budget driven by lower spending on Wages & Salaries, Fringe Benefits and Equipment and maintenance, partially offset by higher spending on Utilities and Fuel.
HEEC Payment	5,715,642	6,091,661	376,019	6.6%	HEEC Revenue Requirement of \$268,000, HEEC True Up of \$93,000, and O&M Charge of \$15,000.
Mitigation	1,602,180	1,602,178	(2)	0.0%	
Addition to Reserves	2,232,418	2,232,418	-	0.0%	
Pension Expense	12,555,203	12,555,203	-	0.0%	
Post Employee Benefits	-	-	-		
<b>Total Indirect Expenses</b>	<b>51,911,774</b>	<b>49,458,475</b>	<b>(2,453,299)</b>	<b>-4.7%</b>	
<b>Debt Service</b>					
Debt Service	437,667,560	437,667,560	-	0.0%	Debt Service matches the budget after the transfer of \$16.8 million to the defeasance account driven by lower Senior Debt spending of \$7.8 million as a result of the refunding and new money transactions, lower than budgeted variable interest expense of \$3.0 million, and lower SRF spending of \$5.9 million due to timing.
Debt Service Assistance	(1,182,494)	(1,182,494)	-	0.0%	
<b>Total Debt Service Expenses</b>	<b>436,485,066</b>	<b>436,485,066</b>	<b>-</b>	<b>0.0%</b>	
<b>Total Expenses</b>	<b>733,402,036</b>	<b>722,579,766</b>	<b>(10,822,269)</b>	<b>-1.5%</b>	

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

Total MWRA	FY23 Budget YTD May	FY23 Actuals May	FY23 YTD Actual vs. FY23 Budget		Explanations
			\$	%	
<b>Revenue &amp; Income</b>					
Rate Revenue	751,982,770	751,982,769	(1)	0.0%	
Other User Charges	9,087,468	13,754,200	4,666,732	51.4%	Water usage by the City of Cambridge.
Other Revenue	5,714,462	8,378,818	2,664,356	46.6%	Other Revenue was \$2.7 million or 46.6% over budget due to <b>Payments from the Commonwealth for debt service assistance</b> of \$1.2 million, <b>Energy Revenue</b> of \$566,00, <b>Miscellaneous Revenue</b> of \$444,000, <b>Permit Fees</b> of \$340,000, and <b>Energy Rebates</b> of \$59,000. Also, <b>Operating Grant</b> of \$184,000 primarily for COVID-19 grant from FEMA.
Rate Stabilization	904,615	904,615	-	0.0%	HEEC Reserve.
Investment Income	7,744,381	21,649,537	13,905,156	179.6%	Investment Income is over budget due to higher than budgeted interest rates.
<b>Total Revenue</b>	<b>775,433,696</b>	<b>796,669,939</b>	<b>21,236,243</b>	<b>2.7%</b>	
<b>Net Revenue in Excess of Expenses</b>	<b>42,031,660</b>	<b>74,090,173</b>	<b>32,058,512</b>		

**ATTACHMENT 3  
FY23 CIP Year-to-Date Variance Report (\$000s)**

	FY23 Budget YTD May	FY23 Actuals YTD May	YTD Actuals vs. Budget		Explanations
			\$	%	
<b>Wastewater</b>					
Interception & Pumping (I&P)	\$35,599	\$22,756	(\$12,843)	-36.1%	<u>Underspending</u> Ward Street & Columbus Park Headworks Upgrades - Design/CA: \$3.6M (completed some design and inspection tasks later than anticipated) Nut Island Odor Control & HVAC Improvements Phase 2 - Construction and CA/REI: \$3.3M (contractor behind schedule) Siphon Structure Rehabilitation Construction: \$1.5M, and Interceptor Renewal 7-Malden & Melrose - Construction: \$675k (updated schedules) Prison Point Rehabilitation - Design/CA/RI: \$1.1M (CA/RI services lower than budgeted due to cancellation of construction contract) Wastewater Meter System Equipment Replacement: \$324k (timing of final work)
Treatment	\$33,452	\$9,226	(\$24,226)	-72.4%	<u>Underspending</u> Primary & Secondary Clarifier Rehab Phase 2 Construction and REI: \$7.3M, DITP Roofing Replacement: \$2.5M, DI Motor Control Center & Switchgear Replacement - Construction & Design/ESDC/REI: \$2.4M, Deer Island Dystor Membrane Replacements: \$2.0M, Clinton Digester Cover Replacement: \$1.6M, Fire Alarm System Replacement - Construction: \$1.3M, Cryo Plant Equipment Replacement Design/ESDC/REI: \$721k, Combined Heat and Power - Design/ESDC/REI: \$533k, and Digester & Storage Tank Rehabilitation Design/ESDC: \$507k (updated schedules) South System Pump Station VFD Replacement Design/ESDC: \$2.4M (construction schedule change) As-Needed Design: \$1.3M (lower than projected task order work) Screw Pumps Replacement Phase 1 - Construction: \$458k (longer than anticipated delivery of pumps)
Residuals	\$0	\$0			
CSO	\$2,312	\$1,862	(\$451)	-19.5%	<u>Underspending</u> Chelsea 008 Pipe Replacement: \$1.0M (updated schedule and long lead time for materials) <u>Offset Overspending</u> Fort Point Channel Sewer Separation: \$750k (unplanned community managed work)
Other Wastewater	\$25,055	\$11,432	(\$13,622)	-54.4%	<u>Underspending</u> I/I Local Financial Assistance: \$13.6M (timing of community distributions of grants and loans)

**ATTACHMENT 3  
FY23 CIP Year-to-Date Variance Report (\$000s)**

	FY23 Budget YTD May	FY23 Actuals YTD May	YTD Actuals vs. Budget		Explanations
			\$	%	
<b>Total Wastewater</b>	<b>\$96,418</b>	<b>\$45,276</b>	<b>(\$51,142)</b>	<b>-53.0%</b>	
<b>Waterworks</b>					
Drinking Water Quality Improvements	\$3,909	\$2,324	(\$1,585)	-40.5%	<u>Underspending</u> CWTP Chemical Feed System Improvements - Construction: \$735k, and Marlboro Pump Station Connection Construction: \$273k (timing of work) CWTP Technical Assistance: \$642k (lower than projected task order work)
Transmission	\$53,270	\$31,148	(\$22,121)	-41.5%	<u>Underspending</u> Waltham Water Pipeline - Construction and REI: \$12.7M (long lead time for piping material) Wachusett Lower Gatehouse Pipe & Boiler Replacement - Construction: \$2.5M (longer than anticipated equipment lead time and updated Notice to Proceed) Quabbin Maintenance Garage/Wash Bay/Storage Building - Construction: \$2.4M, and CP-2 Shaft 5 Construction: \$1.9M (schedule changes) Geotechnical Support Services: \$2.1M (timing of support services) Watershed Land: \$520k (timing of purchases) Wachusett Lower Gatehouse Windows & Doors: \$482k (long lead time for windows) <u>Offset Overspending</u> Tunnel Redundancy Preliminary Design & MEPA Review: \$1.3M (timing of consultant work)
Distribution & Pumping	\$32,003	\$35,431	\$3,428	10.7%	<u>Overspending</u> Section 89/29 Replacement - Construction: \$5.0M, and CP-1 NEH Improvements: \$953k (contractors progress) Section 53 and 99 Connection - Design/CA: \$800k, NEH Improvements Design - ESDC: \$605k, and Sections 25, 75, 24, 47, 59 & 60 - Design/CA: \$277k (timing of consultant work) <u>Offset Underspending</u> Cathodic Protection Shafts N & W: \$1.8M (scope changes) CP3-Sections 23, 24, 47 Rehabilitation and Final Design/CA/RI: \$733k (timing of work) Section 56 Replacement/Saugus River - Design/CA: \$893k (permitting delays)

**ATTACHMENT 3  
FY23 CIP Year-to-Date Variance Report (\$000s)**

	FY23 Budget YTD May	FY23 Actuals YTD May	YTD Actuals vs. Budget		Explanations
			\$	%	
Other Waterworks	\$33,558	\$8,541	(\$25,017)	-74.5%	<u>Underspending</u> Local Water Pipeline Financial Assistance Program: \$24.5M (timing of community distributions) <u>Offset Overspending</u> New Roofs at Water Pump Stations - Construction: \$381k (timing of work)
<b>Total Waterworks</b>	<b>\$122,740</b>	<b>\$77,445</b>	<b>(\$45,295)</b>	<b>-36.9%</b>	
<b>Business &amp; Operations Support</b>					
<b>Total Business &amp; Operations Support</b>	<b>\$31,338</b>	<b>\$21,508</b>	<b>(\$9,830)</b>	<b>-31.4%</b>	<u>Underspending</u> Cabling: \$3.9M, Lawson Upgrade: \$1.3M, MAXIMO Interface Enhancements: \$865k, and Oracle Database Appliance: \$775k (timing of work) FY19-23 Vehicle Purchases: \$1.5M (timing of purchases and supply chain issues) Security Equipment & Installation: \$1.2M (timing of security initiatives) MSSP/SIEM: \$925k (scope reduction) <u>Offset Overspending</u> Office Space Modifications: \$3.2M (contract award was greater than budget)
<b>Total MWRA</b>	<b>\$250,496</b>	<b>\$144,229</b>	<b>(\$106,266)</b>	<b>-42.4%</b>	


**Attachment 4**  
**FY23 Budget vs. FY23 Projection**

TOTAL MWRA	FY23 Budget	FY23 Projection	Change FY23 Budget vs FY23 Projection	
			\$	%
<b>EXPENSES</b>				
WAGES AND SALARIES	\$ 118,980,689	\$ 107,177,992	\$ (11,802,697)	-9.9%
OVERTIME	5,337,896	5,177,759	(160,137)	-3.0%
FRINGE BENEFITS	23,961,641	23,242,792	(718,849)	-3.0%
WORKERS' COMPENSATION	2,519,751	2,141,788	(377,963)	-15.0%
CHEMICALS	14,994,036	18,142,784	3,148,748	21.0%
ENERGY AND UTILITIES	30,896,365	32,750,147	1,853,782	6.0%
MAINTENANCE	33,241,022	35,352,692	2,111,670	6.4%
TRAINING AND MEETINGS	492,197	344,538	(147,659)	-30.0%
PROFESSIONAL SERVICES	8,197,575	7,910,660	(286,915)	-3.5%
OTHER MATERIALS	6,728,862	6,459,708	(269,154)	-4.0%
OTHER SERVICES	28,372,237	27,662,931	(709,306)	-2.5%
<b>TOTAL DIRECT EXPENSES</b>	<b>\$ 273,722,272</b>	<b>\$ 266,363,790</b>	<b>\$ (7,358,481)</b>	<b>-2.7%</b>
INSURANCE	\$ 3,916,002	\$ 3,955,162	\$ 39,160	1.0%
WATERSHED/PILOT	28,890,762	27,267,547	(1,623,216)	-5.6%
HEEC PAYMENT	6,225,566	6,798,522	572,956	9.2%
MITIGATION	1,735,694	1,735,694	-	0.0%
ADDITIONS TO RESERVES	2,418,452	2,418,452	-	0.0%
RETIREMENT FUND	12,555,203	12,555,203	-	0.0%
POSTEMPLOYMENT BENEFITS	4,754,061	4,754,061	-	0.0%
<b>TOTAL INDIRECT EXPENSES</b>	<b>\$ 60,495,741</b>	<b>\$ 59,484,641</b>	<b>\$ (1,011,100)</b>	<b>-1.7%</b>
STATE REVOLVING FUND	\$ 96,342,495	\$ 88,499,360	\$ (7,843,135)	-8.1%
SENIOR DEBT	302,169,940	291,597,013	(10,572,927)	-3.5%
SUBORDINATE DEBT	75,491,975	72,645,188	(2,846,787)	-3.8%
LOCAL WATER PIPELINE CP	6,233,882	5,384,397	(849,485)	-13.6%
CURRENT REVENUE/CAPITAL	18,200,000	18,200,000	-	0.0%
CAPITAL LEASE	3,217,060	3,217,060	-	0.0%
DEBT PREPAYMENT	5,500,000	5,500,000	-	0.0%
DEBT SERVICE ASSISTANCE	(1,182,494)	(1,182,494)	-	0.0%
<b>TOTAL DEBT SERVICE</b>	<b>\$ 505,972,858</b>	<b>\$ 483,860,524</b>	<b>\$ (22,112,334)</b>	<b>-4.4%</b>
<b>TOTAL EXPENSES</b>	<b>\$ 840,190,871</b>	<b>\$ 809,708,956</b>	<b>\$ (30,481,914)</b>	<b>-3.6%</b>
<b>REVENUE &amp; INCOME</b>				
RATE REVENUE	\$ 814,648,000	\$ 814,648,000	\$ -	0.00%
OTHER USER CHARGES	9,836,508	14,548,590	4,712,082	47.9%
OTHER REVENUE	6,139,104	6,983,303	844,199	13.8%
RATE STABILIZATION	980,000	980,000	-	0.0%
INVESTMENT INCOME	8,587,259	24,591,573	16,004,314	186.4%
<b>TOTAL REVENUE &amp; INCOME</b>	<b>\$ 840,190,871</b>	<b>\$ 861,751,466</b>	<b>\$ 21,560,595</b>	<b>2.6%</b>

**VARIANCE:**

**\$ (52,042,510) \$ (52,042,509)**

## STAFF SUMMARY

**TO:** Board of Directors  
**FROM:** Frederick A. Laskey, Executive Director   
**DATE:** June 21, 2023  
**SUBJECT:** Approval of the FY24 Final Capital Improvement Program and FY24-28 Spending Cap

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**COMMITTEE:** Administration, Finance and Audit

INFORMATION

VOTE

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

  
Thomas J. Durkin  
Director, Finance

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### RECOMMENDATION:

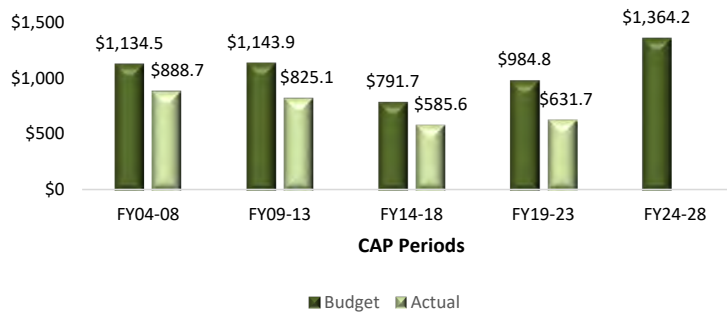
To approve the FY24 Final Capital Improvement Program with planned spending of \$302.6 million, including \$245.6 million in project spending and \$57.0 million in community assistance loan programs.

To approve the 5-year spending Cap of \$1.4 billion for the FY24-28 period.

### DISCUSSION:

The concept of a five-year spending Cap was first introduced at the Advisory Board's recommendation in 2003 for the FY04-08 period. The FY24-28 Cap will be the fifth cap established by the Authority. The Cap represents a targeted maximum spending limit to ensure adequate capital program funding and to serve as a guide for long-term planning estimates and community assessments. The following graph illustrates the history of the past four five-year Caps and the Final FY24-28 Cap, both in terms of the Cap levels and actual spending:

**CAP Spending  
Budget & Actuals**  
\$s in millions



MWRA project spending (excluding water and wastewater loan programs) has been 25% under plan levels on average since FY04. Underspending for the past two Cap periods, FY14-18 and projected FY19-23, were 26% and 36%, respectively. To try to better predict future spending, the Authority proposes to discount projected Cap spending by applying a Spend Rate Adjustment of 25%. This will be a better reflection of likely spending targets without removing future projects from plan. The Final FY24-28 Cap cash flows total \$1.8 billion and net to \$1.4 billion after applying the 25% Spend Rate Adjustment. Annual cash flows for the Cap period are shown in the following table (in millions):

		FY24	FY25	FY26	FY27	FY28	FY24-28
<b>FY24 Final</b>	Projected Expenditures excl. Metro Tunnel	\$288.2	\$357.9	\$313.5	\$349.8	\$349.1	\$1,658.5
	Metropolitan Tunnel	\$14.4	\$25.2	\$23.9	\$23.9	\$78.6	\$166.2
	I/I Program	(42.9)	(41.5)	(27.5)	(28.4)	(34.2)	(174.5)
	Water Loan Program	(14.1)	(10.9)	(5.0)	(2.6)	8.6	(24.0)
	<b>MWRA Spending</b>	<b>\$245.6</b>	<b>\$330.8</b>	<b>\$304.9</b>	<b>\$342.8</b>	<b>\$402.2</b>	<b>\$1,626.3</b>
	Contingency	15.2	21.8	20.7	23.6	31.7	113.0
	Inflation on Unawarded Construction	1.9	8.1	12.2	22.1	36.1	80.4
	Chicopee Valley Aqueduct Projects	(0.3)	(0.5)	0.0	0.0	0.0	(0.8)
	<b>Projected Spending before Adjustment</b>	<b>\$262.4</b>	<b>\$360.2</b>	<b>\$337.8</b>	<b>\$388.5</b>	<b>\$469.9</b>	<b>\$1,818.9</b>
	Spend Rate Adjustment (25%)*	(65.6)	(90.1)	(84.5)	(97.1)	(117.5)	(454.7)
<b>FY24 Draft Final FY24-28 Spending</b>	<b>\$196.8</b>	<b>\$270.2</b>	<b>\$253.4</b>	<b>\$291.4</b>	<b>\$352.5</b>	<b>\$1,364.2</b>	

\*Based on historical underspending FY04-FY22 excluding community loan programs

In addition to the Spend Rate Adjustment, the format of the Cap table is adjusted to account separately for MWRA and Metropolitan Tunnel spending, and excludes the local I/I grant and loan program and the local water pipeline loan spending which are both outside of MWRA's control. The Cap also excludes Chicopee Valley Aqueduct system projects. As in past Caps, contingency for each fiscal year is incorporated into the Capital Improvement Program (CIP) to fund the uncertainties inherent to construction. The contingency budget is calculated as a percentage of budgeted expenditure outlays. Specifically, contingency is 7% for non-tunnel projects and 15% for tunnel projects. Inflation is added for unawarded construction contracts.

The Fiscal Year 2024 Capital Improvement Program (CIP) represents an update to the FY23 CIP Program approved by the Board in June 2022 for Fiscal Year 2023. The FY24 Final CIP includes the latest cost estimates, revised schedules, and new projects, and reaffirms MWRA's commitment



to the community financing assistance programs on both the water and wastewater sides. The FY24 Final CIP projects \$302.6 million spending for FY24, of which \$137.6 million supports Wastewater System Improvements, \$141.7 million supports Waterworks System Improvements, and \$23.2 million is for Business and Operations Support. The projects with significant spending in FY24 include Deer Island Clarifier Rehabilitation Phase 2 Construction (\$24.8 million), Wachusett Lower Gate House Pipe and Boiler Replacement (\$13.6 million), Waltham Water Pipeline Construction (\$13.5 million), and NIH Redundancy and Storage - Section 89 and 29 Replacement Construction (\$10.8 million).

The Capital Improvement Program includes on-going Combined Sewer Overflow improvements in Boston, Chelsea and Somerville, rehabilitation of MWRA's Somerville Marginal, Prison Point and Cottage Farm CSO treatment facilities, and a new placeholder at the end of the cap period for design of any projects that come out of the Variance Water updated CSO Long-Term Control Plan process. MWRA continues to evaluate the needs of the program and will refine cost projections as more information becomes available.

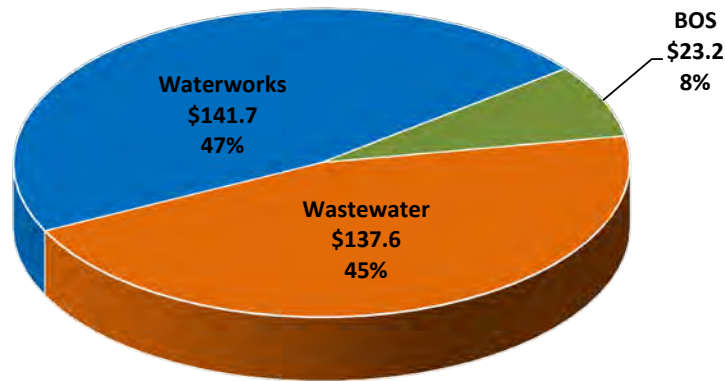
The Capital Improvement Program continues to address critical redundancy improvements most notably the Metropolitan Water Tunnel Program. When this program was initially added to the CIP in FY17, estimated program costs totaled \$1.47 billion, since that time some actual contracts have been awarded and costs are known and additional inflation has been applied. The FY24 CIP includes approximately \$1.79 billion in projected project spending, an increase of \$324.3 million due primarily to inflation. As the design of the tunnel progresses, the associated costs will continue to be refined. The initial contract for Program Support Services was awarded in March 2019 with a budget of \$17.5 million and spanning over a nine-year period. The second contract, Preliminary Design and MEPA Review (Massachusetts Environmental Policy Act), for \$15.7 million was awarded in May 2020 with projected spending through FY24. The third contract, Metropolitan Water Tunnel Program Geotechnical Support Services, for \$12.8 million and a term of 36 months was awarded in December 2022. This contract is critical to identifying geological conditions and selecting the optimal tunnel route.

Today, the Authority is well positioned to reinvest in rehabilitation and replacement of aging facilities as result of conservative fiscal management, which includes judicious control of expenses, and the fact that MWRA has implemented the practice of utilizing available funds for defeasances resulting in the reduction of debt service expense and lowering the rate of increase to assessments. MWRA projects an overall reduction in outstanding indebtedness during the FY24-28 period.

### **Final FY24 Spending**

The FY24 Final Capital Improvement Program projects \$302.6 million in spending for FY24, of which \$137.6 million supports Wastewater System Improvements, \$141.7 million supports Waterworks System Improvements, and \$23.2 million is for Business and Operations Support.

### FY24 Spending



The FY24 Final CIP includes \$57.0 million for community assistance programs, which are a combination of loan and partial grant programs, with net expenditures of \$42.9 million for the local Infiltration/Inflow program and net expenditures of \$14.1 million for the local water pipeline program.

The \$302.6 million in projected spending is driven by 40 active wastewater and water projects. Of this \$302.6 million in spending, project contracts with spending greater than \$5.0 million in FY24, excluding local community assistance programs, total \$114.5 million and account for 37.8% of the total annual spending. These projects are presented in the following table:

Project	Subphase	FY24 \$s in Millions	% of Total
DI Treatment Plant Asset Protection	Clarifier Rehab Phase 2 - Construction	\$24.8	8.2%
Quabbin Transmission System	Wachusett Lower Gate House Pipe&Boiler Replacement Construction	\$13.6	4.5%
Metro Redundancy Interim Improvements	Waltham Water Pipeline Construction	\$13.5	4.5%
NIH Redundancy & Storage	Section 89 & 29 Replacement - Construction	\$10.8	3.6%
Braintree-Weymouth Relief	B/W Improvements - Construction	\$9.7	3.2%
New Connecting Mains-Shaft 7 to WASM 3	CP3-Sect 23,24,47, Rehabilitation	\$9.5	3.1%
New Connecting Mains-Shaft 7 to WASM 3	Sect 25 & 24 - Construction CP-2	\$9.0	3.0%
DI Treatment Plant Asset Protection	MCC & Switchgear Replacement Construction	\$6.0	2.0%
New Connecting Mains-Shaft 7 to WASM 3	Section 75 Extension - Construction CP-1	\$6.0	2.0%
Metro Tunnel Redundancy	Geotechnical Support Services	\$6.0	2.0%
Metro Redundancy Interim Improvements	CP3 Shafts 7, 7B, 7C, 7D	\$5.7	1.9%
<b>Total Contracts &gt; \$5 million (excl. Loan Programs)</b>		<b>\$114.5</b>	<b>37.8%</b>
<b>Other Project Spending</b>		<b>\$188.2</b>	<b>62.2%</b>
<b>Total FY24 Spending</b>		<b>\$302.6</b>	<b>100.0%</b>

**Clarifier Rehabilitation Phase 2 Construction** - \$24.8 million (\$289.4 million total construction cost). This project will rehabilitate the sludge removal system in the primary tanks and the aeration/recirculation systems in the secondary tanks. The influent gates, effluent launders and aeration systems, and concrete corrosion in primary clarifiers will also be addressed and repaired.

**Wachusett Lower Gatehouse Pipe and Boiler Replacement Construction** - \$13.6 million (\$19.0 million total construction cost). Replace the oldest piping in the Lower Gatehouse. Provide

CFRP lining of the pipes between the dam and the Lower Gatehouse. Replace the existing propane fueled boilers and radiators.

**Waltham Water Pipeline Construction** - \$13.5 million (\$27.6 million total construction cost). This contract will include installation of approximately 8,920 linear feet of new 36-inch diameter water main along Lexington Street in Waltham, from Meter 182 to a new meter near Totten Pond Road, including installation of valves, meters and other appurtenances, by-pass pumping, replacement of certain utilities, pavement restoration, traffic and environmental controls.

**Northern Intermediate High Redundancy Section 89 and 29 Replacement Construction** - \$10.8 million (\$33.7 million total construction cost). This is a redundancy project for MWRA's Northern Intermediate High service area. Section 89 will be replaced now that the redundant pipeline is completed. This contract was awarded in May 2021.

**Braintree-Weymouth Improvements Construction** - \$9.7 million (\$13.5 million total construction cost). Modifications needed to improve facility safety, reliability and performance. Construction improvements are required to address deficiencies in odor control, monitoring/instrumentation systems, solids screenings/handling and pumping operations.

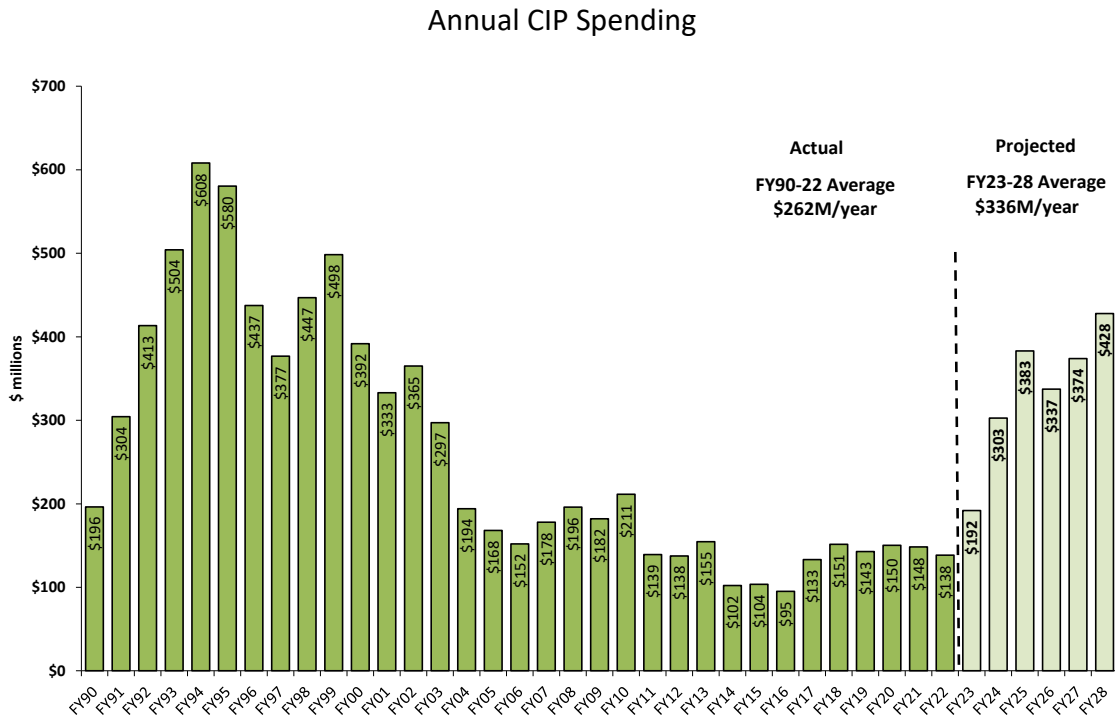
**CP3 Sections 23, 24 and 47 Rehabilitation** - \$9.5 million (\$24.6 million total construction cost). This contract includes cleaning and cement mortar lining approximately 4,500 linear feet of Section 23, which is a 36-inch diameter cast iron water main, 10,800 feet of 20-inch Section 24 and Section 47 cast iron water mains, and 500 feet of 20-inch steel water main along Section 24. The construction work will also include installing, by open-cut, 3,600 feet of 36-inch ductile iron Section 23 water main, 6,400 feet of 24-inch ductile iron Section 24 water main, and new valves and appurtenances, and replacing the check valve assembly at Boston Meter 120. Additionally, the construction contract will include replacing approximately 2,400 linear feet of City of Newton 20-inch diameter, 140 year old cast iron water main on Ward Street between Manet Road and Waverly Avenue. This contract was awarded in October 2021.

**Sections 24 and 25 – Construction CP-2** - \$9.0 million (\$21.4 million total construction cost). Replacement of the existing Watertown 4,900ft Section 25, a 16-in CI pipe, with 5,900ft of 20-in DI pipe and valves. Relocation/replacement of Watertown revenue Meter 2 and replacement of Watertown Meter 40 and new PRV for interconnection of the intermediate high to southern high systems. Cleaning and lining 3,300ft of Section 24, a 20-inch CI pipe, including valve replacements. Work in Newton includes the cleaning and lining of the southern crossing of the Charles River (part of Section 24) and valve replacements.

**MCC and Switchgear Replacement Construction** - \$6.0 million (\$23.5 million total construction cost). Project includes the replacement of Motor Control Center equipment that has become obsolete and unreliable at Deer Island Treatment Plant.

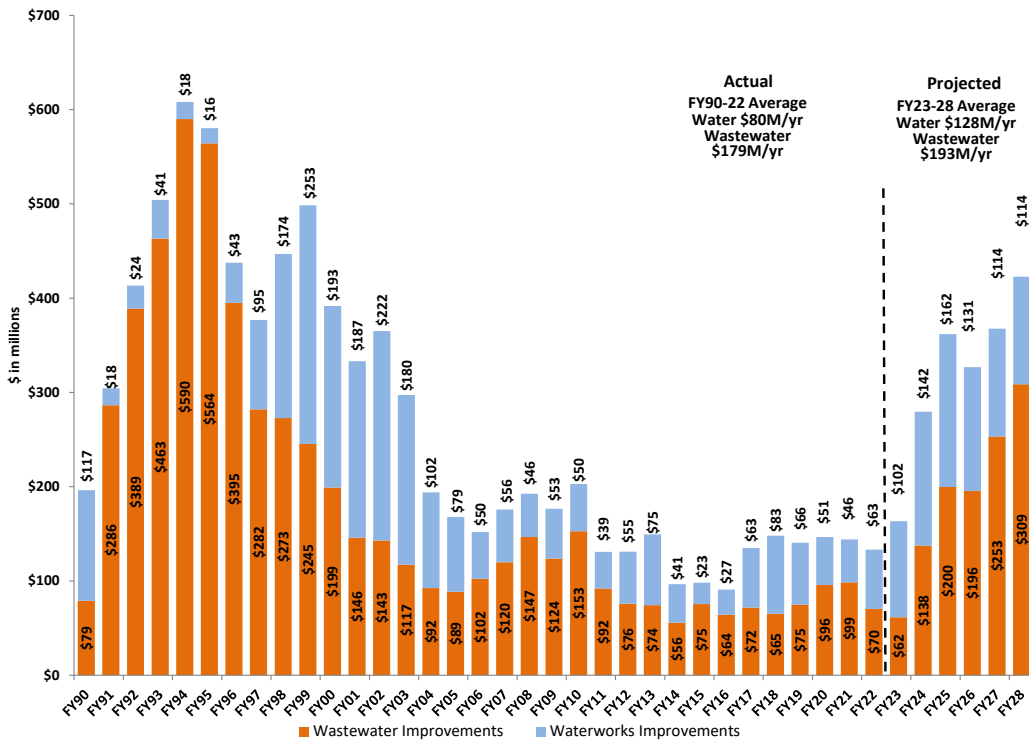
## Historical and Projected Spending

The following chart captures the historical CIP spending through FY22 and projects spending through FY28 based on the FY24 Proposed CIP. Average annual CIP spending through FY22 was \$262 million. Average annual CIP spending for the FY23-28 period is projected to be \$336 million.



The following chart shows the historical CIP spending from FY90 through FY22 by utility with projections through FY28. Average annual CIP spending through FY22 was \$80 million for Waterworks and \$179 million for Wastewater. Average annual CIP spending for FY23-28 is projected to be \$128 million for Waterworks and \$193 million for Wastewater.

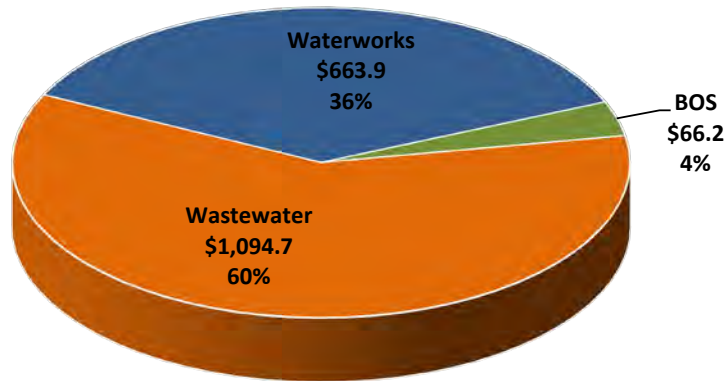
## Annual CIP Spending by Utility



### FY24-28 Spending

Spending during the FY24-28 timeframe is planned to be \$1.8 billion, including local community spending of \$174.5 million for the I/I loan and grant program and \$24.0 million for the water pipeline loan program. Spending under the Wastewater and Waterworks programs is projected at \$1,094.7 million and \$663.9 million, respectively, followed by Business and Operations at \$66.2 million. The spending projections set forth here include updates to the approved FY23 CIP with the latest cost estimates, revised schedules, and new projects.

### FY24-28 Spending



Yearly projected expenditures for the Proposed FY24-28 period by program are shown below in millions:

	Future Spending Beyond FY22	FY24	FY25	FY26	FY27	FY28	Total FY24-28
<b>Wastewater System Improvements</b>	<b>\$2,420.6</b>	<b>\$137.6</b>	<b>\$199.6</b>	<b>\$195.6</b>	<b>\$253.3</b>	<b>\$308.7</b>	<b>\$1,094.7</b>
Interception & Pumping	883.3	31.0	40.8	34.6	82.8	110.4	299.5
Treatment	1,277.8	56.2	109.5	132.1	138.1	159.8	595.8
Residuals	90.6	0.0	0.8	0.8	3.5	3.5	8.6
CSO	21.3	7.5	7.1	0.5	0.5	0.8	16.4
Other Wastewater	147.5	42.9	41.5	27.5	28.4	34.2	174.5
<b>Waterworks System Improvements</b>	<b>\$2,736.0</b>	<b>\$141.7</b>	<b>\$162.4</b>	<b>\$131.3</b>	<b>\$114.3</b>	<b>\$114.1</b>	<b>\$663.9</b>
Drinking Water Quality Improvements	72.5	4.0	5.7	5.3	3.7	7.8	26.6
Transmission	2,080.9	66.2	60.5	36.2	39.6	91.4	293.9
Distribution & Pumping	626.7	47.1	68.8	65.0	52.7	14.5	248.1
Other Waterworks	(44.0)	24.5	27.3	24.7	18.3	0.4	95.2
<b>Business &amp; Operations Support</b>	<b>\$96.2</b>	<b>\$23.2</b>	<b>\$21.2</b>	<b>\$10.6</b>	<b>\$6.2</b>	<b>\$4.9</b>	<b>\$66.2</b>
<b>Total MWRA</b>	<b>\$5,252.9</b>	<b>\$302.6</b>	<b>\$383.2</b>	<b>\$337.4</b>	<b>\$373.8</b>	<b>\$427.8</b>	<b>\$1,824.8</b>

It is important to emphasize that the majority of spending within the Wastewater and Waterworks programs is concentrated in several larger projects with significant spending in the FY24-28 timeframe. Project contracts with expenditures greater than \$21 million for the FY24-28 period total \$766.7 million, which excludes local community assistance programs. These 15 projects account for 42.0% of total period spending. Largest construction initiatives in terms of FY24-28 spending include the Clarifier Rehabilitation at Deer Island of \$224.8 million (total cost \$289.4 million), Ward Street Headworks of \$61.3 million (total cost \$142.8 million), CP-1 Section 53 Construction total cost of \$51.5 million, Tunnel Construction of \$50.0 million (total cost \$1.3 billion), Tunnel Final Design \$45.8 million (total cost \$114.4 million), South System PS VFD Replacement of \$45.5 million (total cost \$80.5 million), and Combined Heat and Power Construction \$44.3 million (total cost \$114.0 million).

The table below highlights major project spending in the FY24-28 timeframe:

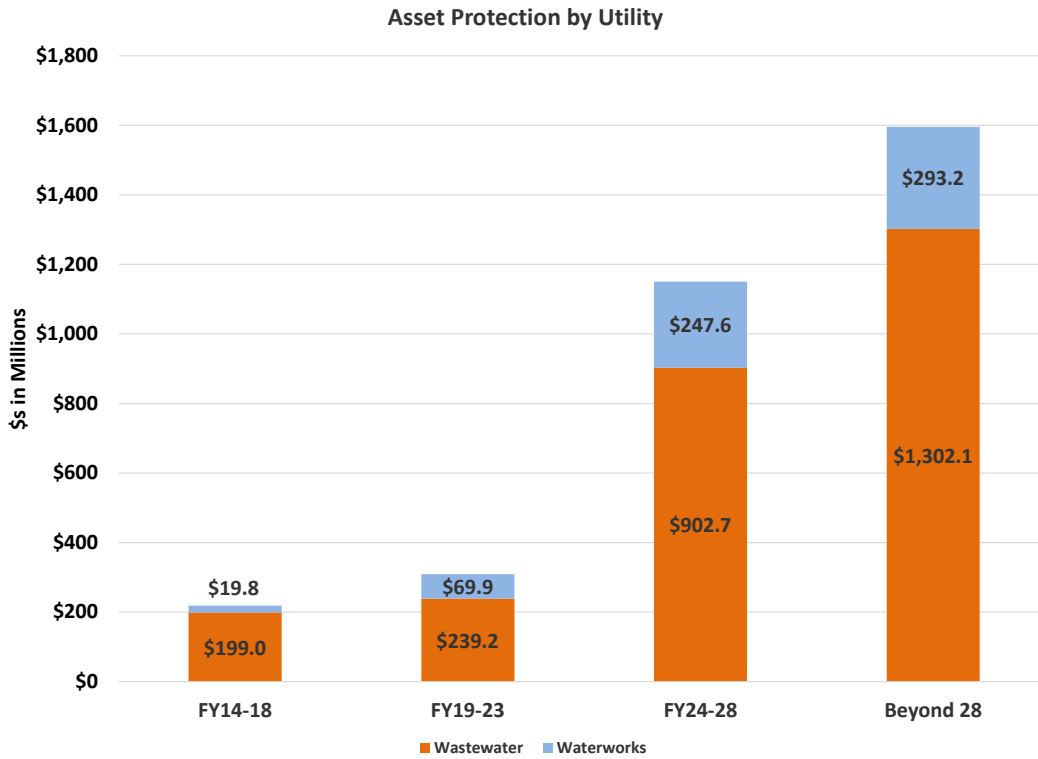
Project	Subphase	FY24-FY28 \$s in Millions
DI Treatment Plant Asset Protection	Clarifier Rehab Phase 2 - Construction	\$224.8
Facility Asset Protection	Ward St Headworks Construction	\$61.3
NHS - Revere & Malden Pipelines	CP-1 Section 53 Conn-Construction	\$51.5
Metro Tunnel Redundancy	Tunnel Construction	\$50.0
Metro Tunnel Redundancy	Final Design/ESDC	\$45.8
DI Treatment Plant Asset Protection	SSPS VFD Replace Construction	\$45.5
DI Treatment Plant Asset Protection	Combined Heat & Power - Construction	\$44.3
Facility Asset Protection	Columbus Park HW Construction	\$43.8
Metro Tunnel Redundancy	Admin Legal & Public Outreach	\$37.1
DI Treatment Plant Asset Protection	Fire Alarm System Replacement - Construction	\$35.0
NIH Redundancy & Storage	NIH Storage - Construction	\$33.0
Facility Asset Protection	Prison Point Rehabilitation	\$28.7
DI Treatment Plant Asset Protection	MCC & Switchgear Replace Construcion	\$23.5
New Connecting Mains-Shaft 7 to WASM 3	Sect 25 & 24 - Construction CP-2	\$21.4
Metro Redundancy Interim Improvements	Waltham Water Pipeline Construction	\$21.2
<b>Top 15 Subphase Spending (excl. Loan Programs)</b>		<b>\$766.7</b>
<b>% of FY24-28 Spending</b>		<b>42.0%</b>
<b>FY24-28 Spending</b>		<b>\$1,824.8</b>

Asset Protection accounts for the largest share of capital expenditures for the FY24-28 period. The FY24 Final CIP includes \$1.2 billion for asset protection initiatives, representing 63.9% of total MWRA spending in this timeframe. Asset protection spending by program is as follows: Wastewater (\$902.7 million), Waterworks (\$247.6 million), and Business and Operations Support (\$15.4 million). Spending for Water Redundancy projects totals \$365.8 million in the same FY24-28 period, accounting for 20.0% of total spending.

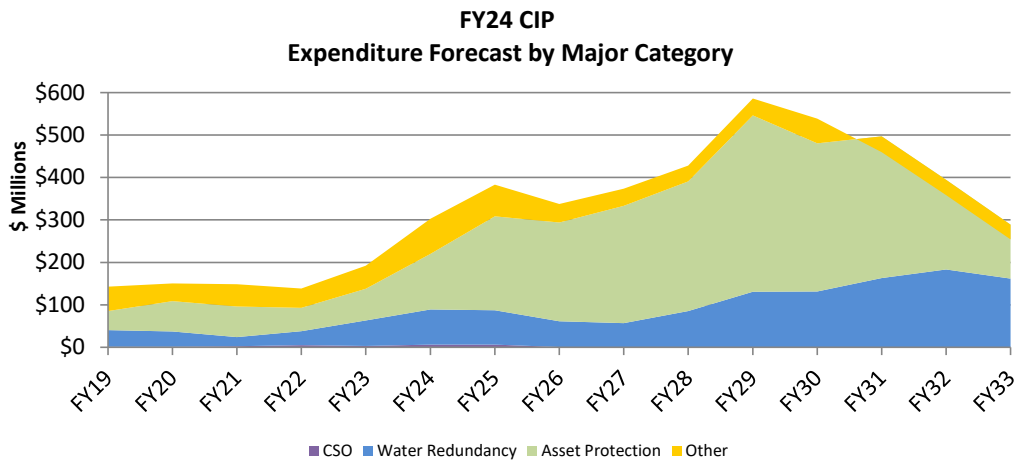
**Changing nature of the CIP by Category  
(\$s in millions)**

Project Category	FY14-18	FY19-23	FY24-28	Beyond 28
Asset Protection	\$222.8	\$318.3	\$1,165.7	\$1,596.8
Water Redundancy	\$174.6	\$189.7	\$365.8	\$1,813.1
CSO	\$64.7	\$12.3	\$14.2	\$2.2
Other	\$123.5	\$251.6	\$279.0	-\$175.9
<b>Total</b>	<b>\$585.6</b>	<b>\$771.9</b>	<b>\$1,824.8</b>	<b>\$3,236.3</b>
<b>Asset Protection</b>	<b>38.0%</b>	<b>41.2%</b>	<b>63.9%</b>	<b>49.3%</b>
<b>Water Redundancy</b>	<b>29.8%</b>	<b>24.6%</b>	<b>20.0%</b>	<b>56.0%</b>
CSO	11.0%	1.6%	0.8%	0.1%
Other	21.1%	32.6%	15.3%	-5.4%
<b>Total</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>

In terms of utility spending, Wastewater Asset Protection accounts for 77.4% of the FY24-28 projected Asset Projection spending at \$902.7 million of which \$581.4 million is designated for the Deer Island Treatment Plant and \$321.3 million for headworks and pipelines. The \$247.6 million targeted for Waterworks Asset Protection includes \$142.3 million for water pipeline projects.



As illustrated by the following graph, the next two waves of spending over the FY24-28 and the FY29-33 periods will be for asset protection and water redundancy. This reflects MWRA’s commitment to maintaining its physical plant and addressing the need for water system redundancy in some critical service areas.





## FY24 CIP Future Expenditures

The FY24 CIP contains future spending (beyond FY22) estimated at \$5.3 billion, including \$2.4 billion for Wastewater (primarily Asset Protection of \$2.2 billion) and \$2.7 billion for Waterworks (primarily Redundancy projects of \$2.2 billion). Wastewater Asset Protection includes \$1.3 billion for Deer Island and \$985.2 million for Wastewater Facility Asset Protection (primarily pump station rehabilitation). Redundancy projects include the Metro Tunnel Redundancy and Metro Redundancy Interim Improvement projects with future spending of \$1.8 billion and \$167.0 million, respectively. FY24-FY28 spending is projected at \$1.8 billion or 34.7% of future spending.

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

	Future Spending Beyond FY22	Total FY19-23	Total FY24-28	Total FY19-28	Beyond 28
<b>Wastewater System Improvements</b>	<b>\$2,420.6</b>	<b>\$401.0</b>	<b>\$1,094.7</b>	<b>\$1,495.8</b>	<b>\$1,264.3</b>
Interception & Pumping	883.3	166.6	299.5	466.1	554.3
Treatment	1,277.8	57.1	595.8	652.8	672.2
Residuals	90.6	15.6	8.6	24.2	82.0
CSO	21.3	12.3	16.4	28.7	2.2
Other Wastewater	147.5	149.4	174.5	323.9	-46.4
<b>Waterworks System Improvements</b>	<b>\$2,736.0</b>	<b>\$326.8</b>	<b>\$663.9</b>	<b>\$990.6</b>	<b>\$1,970.4</b>
Drinking Water Quality Improvements	72.5	12.6	26.6	39.1	41.6
Transmission	2,080.9	112.4	293.9	406.3	1,744.9
Distribution & Pumping	626.7	127.3	248.1	375.4	339.2
Other Waterworks	(44.0)	74.5	95.2	169.8	-155.3
<b>Business &amp; Operations Support</b>	<b>\$96.2</b>	<b>\$44.1</b>	<b>\$66.2</b>	<b>\$110.3</b>	<b>\$1.6</b>
<b>Total MWRA</b>	<b>\$5,252.9</b>	<b>\$771.9</b>	<b>\$1,824.8</b>	<b>\$2,596.7</b>	<b>\$3,236.3</b>

## FY24 New Projects

The FY24 CIP adds 10 new projects at a total cost of \$245.7 million with projected spending of \$81.2 million over the FY24-28 period. There are 8 wastewater projects totaling \$232.5 million and 2 waterworks projects at \$13.2 million. The largest new project is the Rehabilitation of the Braintree-Weymouth Intermediate Pump Station at \$46.5 million. Other new wastewater projects include rehab of four pump stations: Squantum PS, Quincy PS, Framingham, and New Neponset PS at \$24 million each. The largest water project is the Butterfly Valve Replacement project at the Carroll Water Treatment Plant for \$12.5 million. Another phase of I/I assistance was also added in the FY24 Budget cycle at \$75 million. A complete listing of projects is included as Attachment C.

Project	Total Contract Amount	FY24-28 Spending
I/I Local Financial Assistance - Phase XIV	\$75.0	\$55.8
Intermediate Pump Station Rehabilitation	46.5	0.0
New Neponset Pump Station Rehabilitation	24.0	0.0
Framingham Pump Station Rehabilitation	24.0	0.0
Quincy Pump Station Rehabilitation	24.0	0.0
Squantum Pump Station Rehabilitation	24.0	0.0
Fort Point Channel & Mystic/Chelseas Confluence	10.0	9.4
CSO Updated Control Plan Design	5.0	2.8
<b>Total Wastewater #8</b>	<b>\$232.5</b>	<b>\$68.0</b>
Carroll Water Treatment Plant Butterfly Valve 4	12.5	12.5
Brutsch Treatment Plant Sodium Hypo Upgrade	0.7	0.7
<b>Total Waterworks #2</b>	<b>\$13.2</b>	<b>\$13.2</b>
<b>10 New Projects</b>	<b>\$245.7</b>	<b>\$81.2</b>

**ATTACHMENTS:**

- A. FY24 Project Level Expenditure Forecast
- B. Overview of the FY24 CIP and Changes from the FY23 Final CIP
- C. FY24 New Projects

**ATTACHMENT A**  
**FY24 Final CIP**  
**Expenditure Forecast at Project Level**  
**(\$000s)**

Program / Project / Contract	Total Contract Amount	Payments through FY22	Remaining Balance	FY23	FY19-FY23	FY24-FY28	Beyond FY28
<b>Total MWRA</b>	<b>10,106,705</b>	<b>4,853,845</b>	<b>5,252,860</b>	<b>191,853</b>	<b>771,936</b>	<b>1,824,757</b>	<b>3,236,250</b>
<b>Wastewater</b>	<b>4,821,406</b>	<b>2,400,809</b>	<b>2,420,597</b>	<b>61,557</b>	<b>401,049</b>	<b>1,094,739</b>	<b>1,264,301</b>
<b>Interception &amp; Pumping</b>	<b>1,622,776</b>	<b>739,472</b>	<b>883,303</b>	<b>29,514</b>	<b>166,586</b>	<b>299,538</b>	<b>554,252</b>
102 Quincy Pump Facilities	25,907	25,907	-	completed project			-
104 Braintree-Weymouth Relief Facilities	248,035	228,893	19,141	4,112	5,301	11,580	3,448
105 New Neponset Valley Relief Sewer	30,300	30,300	-	completed project			-
106 Wellesley Extension Replacement Sewer	64,359	64,359	-	completed project			-
107 Framingham Extension Relief Sewer	47,856	47,856	-	completed project			-
127 Cummingsville Replacement Sewer	8,999	8,999	-	completed project			-
130 Siphon Structure Rehabilitation	24,362	2,794	21,568	648	2,502	13,251	7,669
131 Upper Neponset Valley Sewer System	54,174	54,174	-	completed project			-
132 Corrosion & Odor Control	103,497	54,675	48,821	15,939	64,434	2,969	29,913
136 West Roxbury Tunnel	10,964	10,314	650	-	-	650	-
137 Wastewater Central Monitoring	27,482	19,926	7,556	-	144	3,322	4,234
139 South System Relief Project	4,939	3,439	1,500	-	-	-	1,500
141 Wastewater Process Optimization	8,310	2,172	6,138	27	698	-	6,111
142 Wastewater Meter System - Equipment Replacement	21,030	11,961	9,069	395	6,632	-	8,674
143 Regional I/I Management & Planning	169	169	-	completed project			-
145 Facility Asset Protection	936,696	173,533	763,162	8,392	86,875	262,765	492,005
146 Deer Island Cross Harbor Tunnel	5,000	-	5,000	-	-	5,000	-
147 Randolph Trunk Sewer Relief	698	-	698	-	-	-	698

**ATTACHMENT A**  
**FY24 Final CIP**  
**Expenditure Forecast at Project Level**  
**(\$000s)**

Program / Project / Contract	Total Contract Amount	Payments through FY22	Remaining Balance	FY23	FY19-FY23	FY24-FY28	Beyond FY28
<b>Treatment</b>	<b>1,626,192</b>	<b>348,360</b>	<b>1,277,832</b>	<b>9,872</b>	<b>57,075</b>	<b>595,763</b>	<b>672,198</b>
182 Deer Island Primary and Secondary Treatment	(958)	(958)	-	completed project			-
200 Deer Island Plant Optimization	33,279	33,279	-	completed project			-
206 Deer Island Treatment Plant Asset Protection	1,556,032	297,107	1,258,925	7,850	52,598	581,371	669,704
210 Clinton Wastewater Treatment Plant	35,628	16,721	18,907	2,021	4,477	14,391	2,494
211 Laboratory Services	2,212	2,212	-	completed project			-
<b>Residuals</b>	<b>171,326</b>	<b>80,696</b>	<b>90,629</b>	<b>-</b>	<b>15,649</b>	<b>8,586</b>	<b>82,043</b>
261 Residuals	63,811	63,811	-	completed project			-
271 Residuals Asset Protection	107,515	16,886	90,629	-	15,649	8,586	82,043
<b>CSO</b>	<b>933,246</b>	<b>911,927</b>	<b>21,319</b>	<b>2,800</b>	<b>12,330</b>	<b>16,353</b>	<b>2,167</b>
<b>CSO MWRA Managed</b>	<b>437,697</b>	<b>433,534</b>	<b>4,163</b>	<b>1,000</b>	<b>1,000</b>	<b>3,163</b>	
339 North Dorchester Bay	221,510	221,510	-	completed project			-
347 East Boston Branch Sewer Relief	85,637	85,637	-	completed project			-
348 BOS019 Storage Conduit	14,288	14,288	-	completed project			-
349 Chelsea Trunk Sewer	31,779	29,779	2,000	1,000	1,000	1,000	-
350 Union Park Detention Treatment Facility	49,583	49,583	-	completed project			-
353 Upgrade Existing CSO Facilities	22,385	22,385	-	completed project			-
354 Hydraulic Relief Projects	4,458	2,295	2,163	-	-	2,163	-
355 MWR003 Gate & Siphon	4,424	4,424	-	completed project			-
357 Charles River CSO Controls	3,633	3,633	-	completed project			-

**ATTACHMENT A**  
**FY24 Final CIP**  
**Expenditure Forecast at Project Level**  
**(\$000s)**

Program / Project / Contract	Total Contract Amount	Payments through FY22	Remaining Balance	FY23	FY19-FY23	FY24-FY28	Beyond FY28
<b>CSO Community Managed</b>	<b>433,780</b>	<b>423,780</b>	<b>10,000</b>	<b>625</b>	<b>4,388</b>	<b>9,375</b>	
340 Dorchester Bay Sewer Separation (Fox Point)	55,029	55,029	-	completed project			-
341 Dorchester Bay Sewer Separation (Commercial Point)	61,443	61,443	-	-	1,581	-	-
342 Neponset River Sewer Separation	2,492	2,492	-	completed project			-
343 Constitution Beach Sewer Separation	3,731	3,731	-	completed project			-
344 Stony Brook Sewer Separation	44,319	44,319	-	completed project			-
346 Cambridge Sewer Separation	104,552	104,552	-	completed project			-
351 BWSC Floatables Controls	946	946	-	completed project			-
352 Cambridge Floatables Controls	1,127	1,127	-	completed project			-
356 Fort Point Channel Sewer Separation	21,507	11,507	10,000	625	625	9,375	-
358 Morrissey Boulevard Drain	32,181	32,181	-	completed project			-
359 Reserved Channel Sewer Separation	70,524	70,524	-	completed project			-
360 Brookline Sewer Separation	24,715	24,715	-	completed project			-
361 Bulfinch Triangle Sewer Separation	9,032	9,032	-	completed project			-
362 East Boston CSO Control	2,182	2,182	-	-	2,182	-	-
<b>CSO Planning &amp; Support</b>	<b>61,769</b>	<b>54,613</b>	<b>7,156</b>	<b>1,175</b>	<b>6,942</b>	<b>3,815</b>	<b>2,167</b>
324 CSO Support	61,769	54,613	7,156	1,175	6,942	3,815	2,167
<b>Other Wastewater</b>	<b>467,866</b>	<b>320,353</b>	<b>147,513</b>	<b>19,371</b>	<b>149,407</b>	<b>174,500</b>	<b>(46,358)</b>
128 I/I Local Financial Assistance	467,585	320,072	147,513	19,371	149,407	174,500	(46,358)
138 Sewerage System Mapping Upgrades	281	281	-	completed project			-

**ATTACHMENT A**  
**FY24 Final CIP**  
**Expenditure Forecast at Project Level**  
**(\$000s)**

Program / Project / Contract	Total Contract Amount	Payments through FY22	Remaining Balance	FY23	FY19-FY23	FY24-FY28	Beyond FY28
<b>Waterworks</b>	<b>5,072,429</b>	<b>2,336,392</b>	<b>2,736,037</b>	<b>101,786</b>	<b>326,763</b>	<b>663,865</b>	<b>1,970,386</b>
<b>Drinking Water Quality Improvements</b>	<b>730,720</b>	<b>658,226</b>	<b>72,493</b>	<b>4,303</b>	<b>12,557</b>	<b>26,574</b>	<b>41,616</b>
542 Carroll Water Treatment Plant (CWTP)	444,062	428,970	15,092	1,785	7,638	4,057	9,250
543 Quabbin Water Treatment Plant	19,973	19,973	-	completed project			-
544 Norumbega Covered Storage Facility	106,674	106,674	-	completed project			-
545 Blue Hills Covered Storage	40,083	40,083	-	completed project			-
550 Spot Pond Covered Storage Facility	60,126	60,126	-	completed project			-
555 Carroll Water Treatment Plant (CWTP) Asset Protection	59,802	2,401	57,401	2,519	4,919	22,517	32,366
<b>Transmission</b>	<b>2,976,391</b>	<b>895,523</b>	<b>2,080,868</b>	<b>42,030</b>	<b>112,353</b>	<b>293,908</b>	<b>1,744,930</b>
597 Winsor Station Pipeline	70,000	7,518	62,482	(169)	1,615	-	62,651
601 Sluice Gate Rehabilitation	9,158	9,158	-	completed project			-
604 MetroWest Tunnel	700,184	697,182	3,002	-	-	3,002	-
615 Chicopee Valley Aqueduct Redundancy	8,666	8,666	-	completed project			-
616 Quabbin Transmission System	40,506	10,650	29,856	7,279	9,261	22,063	515
617 Sudbury/Weston Aqueduct Repairs	12,913	4,870	8,043	-	2,638	6,912	1,131
620 Wachusett Reservoir Spillway Improvements	9,287	9,287	-	completed project			-
621 Watershed Land	34,000	27,407	6,593	1,070	5,631	5,523	-
622 Cosgrove Tunnel Redundancy	58,619	58,619	-	-	6,601	-	-
623 Dam Projects	10,523	3,583	6,940	127	594	6,813	-
625 Metro Tunnel Redundancy	1,794,583	18,715	1,775,867	10,108	25,368	166,208	1,599,551
628 Metropolitan Redundancy Interim Improvements	204,369	37,403	166,967	22,651	57,217	67,943	76,372
630 Watershed Division Capital Improvements	23,582	2,464	21,118	964	3,428	15,444	4,710

**ATTACHMENT A**  
**FY24 Final CIP**  
**Expenditure Forecast at Project Level**  
**(\$000s)**

Program / Project / Contract	Total Contract Amount	Payments through FY22	Remaining Balance	FY23	FY19-FY23	FY24-FY28	Beyond FY28
<b>Distribution And Pumping</b>	<b>1,178,967</b>	<b>552,270</b>	<b>626,696</b>	<b>39,391</b>	<b>127,304</b>	<b>248,144</b>	<b>339,161</b>
618 Peabody Pipeline Project	1,448	1,448	-	-	389	-	-
677 Valve Replacement	12,016	12,016	-	completed project			-
678 Boston Low Service - Pipe & Valve Rehabilitation	23,691	23,691	-	completed project			-
683 Heath Hill Road Pipe Replacement	19,358	19,358	-	completed project			-
689 James L. Gillis Pump Station Rehabilitation	33,419	33,419	-	completed project			-
692 Northern High Service (NHS) - Section 27 Improvements	2,141	124	2,017	4	4	-	2,013
693 NHS - Revere & Malden Pipeline Improvements	122,270	34,024	88,247	1,671	7,133	72,135	14,441
702 New Connecting Mains - Shaft 7 to WASM 3	99,669	18,943	80,726	14,563	20,581	66,163	-
704 Rehabilitation of Other Pump Stations	51,572	30,090	21,482	-	33	2,180	19,302
706 NHS - Connecting Mains from Section 91	2,360	2,360	-	completed project			-
708 Northern Extra High Service (NEH) - New Pipelines	59,771	7,161	52,610	9,449	12,978	35,098	8,063
712 Cathodic Protection Of Distribution Mains	7,268	1,160	6,108	-	891	6,108	-
713 Spot Pond Supply Mains Rehabilitation	67,282	65,627	1,655	668	806	187	800
714 Southern Extra High Sections 41 & 42	3,657	3,657	-	completed project			-
719 Chestnut Hill Connecting Mains	54,433	18,287	36,146	-	-	-	36,146
720 Warren Cottage Line Rehabilitation	1,205	1,205	-	completed project			-
721 Southern Spine Distribution Mains	113,605	38,445	75,159	233	1,995	2,356	72,570
722 Northern Intermediate High (NIH) Redundancy & Storage	151,514	79,373	72,141	12,770	43,247	59,371	-
723 Northern Low Service Rehabilitation - Section 8	68,982	5,592	63,390	(30)	2,607	69	63,351
725 Hydraulic Model Update	598	598	-	completed project			-
727 Southern Extra High (SEH) Redundancy & Storage	169,288	65,022	104,266	63	36,640	3,130	101,072
730 Weston Aqueduct Supply Mains (WASM)	80,403	80,403	-	completed project			-
731 Lynnfield Pipeline	5,626	5,626	-	completed project			-
732 Walnut St. & Fisher Hill Pipeline Rehabilitation	2,717	2,717	-	completed project			-
735 Section 80 Rehabilitation	24,675	1,925	22,750	1	1	1,347	21,402

**ATTACHMENT A**  
**FY24 Final CIP**  
**Expenditure Forecast at Project Level**  
**(\$000s)**

Program / Project / Contract	Total Contract Amount	Payments through FY22	Remaining Balance	FY23	FY19-FY23	FY24-FY28	Beyond FY28
<b>Other Waterworks</b>	<b>186,351</b>	<b>230,373</b>	<b>(44,021)</b>	<b>16,061</b>	<b>74,549</b>	<b>95,238</b>	<b>(155,320)</b>
753 Central Monitoring System	43,500	26,187	17,314	6,271	11,753	11,043	-
763 Distribution Systems Facilities Mapping	3,087	1,295	1,792	330	590	1,461	-
764 Local Water Infrastructure Rehabilitation	7,488	7,488	-	completed project			-
765 Local Water System Assistance Program	-	183,009	(183,009)	5,577	48,312	24,000	(212,585)
766 Waterworks Facility Asset Protection	132,276	12,394	119,882	3,883	13,894	58,734	57,265
<b>Business &amp; Operations Support</b>	<b>212,870</b>	<b>116,644</b>	<b>96,226</b>	<b>28,510</b>	<b>44,124</b>	<b>66,153</b>	<b>1,562</b>
881 Equipment Purchase	42,623	26,154	16,469	821	5,118	15,648	-
925 Technical Assistance	1,300	-	1,300	360	360	940	-
930 MWRA Facility - Chelsea	9,812	9,812	-	completed project			-
931 Business Systems Plan	24,562	24,562	-	completed project			-
932 Environmental Remediation	1,479	1,479	-	completed project			-
933 Capital Maintenance Planning/Development	39,160	20,120	19,040	2,999	8,918	14,479	1,562
934 MWRA Facilities Management & Planning	22,700	379	22,320	19,620	19,629	2,700	-
935 Alternative Energy Initiatives	28,184	18,184	10,000	-	(234)	10,000	-
940 Applications Improvements Program	21,375	4,853	16,522	3,134	5,095	13,387	-
942 Information Security Program (ISP)	3,709	2,861	848	256	1,409	592	-
944 Information Technology Management Program	2	2	-	completed project			-
946 IT Infrastructure Program	17,966	8,238	9,727	1,320	3,828	8,407	-



**ATTACHMENT B**  
**Overview of the FY24 Proposed CIP and Changes from the Final FY23 CIP**

Program and Project	FY23 Final				FY24 Final				Change from Final FY23			
	Total Budget Amount	FY19-23	FY24-28	Beyond 28	Total Budget Amount	FY19-23	FY24-28	Beyond 28	Total Budget Amount	FY19-23	FY24-28	Beyond 28
<b>Total MWRA</b>	<b>9,053,707</b>	<b>884,476</b>	<b>2,223,256</b>	<b>1,672,217</b>	<b>10,106,710</b>	<b>771,934</b>	<b>1,824,757</b>	<b>3,236,253</b>	<b>1,053,001</b>	<b>(112,543)</b>	<b>(398,498)</b>	<b>1,564,033</b>
<b>Wastewater</b>	<b>4,153,426</b>	<b>461,069</b>	<b>1,228,234</b>	<b>402,803</b>	<b>4,821,408</b>	<b>401,046</b>	<b>1,094,737</b>	<b>1,264,301</b>	<b>667,982</b>	<b>(60,023)</b>	<b>(133,497)</b>	<b>861,498</b>
<b>Interception &amp; Pumping</b>	<b>1,294,212</b>	<b>180,142</b>	<b>376,409</b>	<b>135,262</b>	<b>1,622,777</b>	<b>166,586</b>	<b>299,537</b>	<b>554,252</b>	<b>328,565</b>	<b>(13,556)</b>	<b>(76,872)</b>	<b>418,990</b>
102 Quincy Pump Facilities	25,907	-	-	-	25,907	-	-	-	-	-	-	-
104 Braintree-Weymouth Relief Facilities	243,825	5,584	9,675	861	248,035	5,301	11,580	3,448	4,210	(283)	1,905	2,587
105 New Neponset Valley Relief Sewer	30,300	-	-	-	30,300	-	-	-	-	-	-	-
106 Wellesley Extension Replacement Sewer	64,359	-	-	-	64,359	-	-	-	-	-	-	-
107 Framingham Extension Relief Sewer	47,856	-	-	-	47,856	-	-	-	-	-	-	-
127 Cummingsville Replacement Sewer	8,999	-	-	-	8,999	-	-	-	-	-	-	-
130 Siphon Structure Rehabilitation	19,423	4,659	13,824	-	24,362	2,502	13,251	7,669	4,939	(2,157)	(573)	7,669
131 Upper Neponset Valley Sewer	54,174	-	-	-	54,174	-	-	-	-	-	-	-
132 Corrosion & Odor Control	101,977	66,227	28,695	876	103,497	64,434	2,969	29,913	1,520	(1,793)	(25,726)	29,037
136 West Roxbury Tunnel	11,314	-	1,000	-	10,964	-	650	-	(350)	-	(350)	-
137 Wastewater Central Monitoring	27,482	234	7,368	98	27,482	144	3,322	4,234	-	(90)	(4,046)	4,136
139 South System Relief Project	4,939	-	1,500	-	4,939	-	-	1,500	-	-	(1,500)	1,500
141 Wastewater Process Optimization	8,310	701	2,954	3,154	8,310	698	-	6,111	-	(3)	(2,954)	2,957
142 Wastewater Meter System-Equipment	21,030	6,179	-	9,126	21,030	6,632	-	8,674	-	453	-	(452)
143 Regional I/I Management Planning	169	-	-	-	169	-	-	-	-	-	-	-
145 Facility Asset Protection	618,450	96,558	305,695	121,147	936,696	86,875	262,765	492,005	318,246	(9,683)	(42,930)	370,858
146 D.I. Cross Harbor Tunnel Inspection	5,000	-	5,000	-	5,000	-	5,000	-	-	-	-	-
147 Randolph Trunk Sewer Relief	698	-	698	-	698	-	-	698	-	-	(698)	698
<b>Treatment</b>	<b>1,378,267</b>	<b>92,682</b>	<b>730,848</b>	<b>253,578</b>	<b>1,626,193</b>	<b>57,075</b>	<b>595,762</b>	<b>672,197</b>	<b>247,926</b>	<b>(35,607)</b>	<b>(135,086)</b>	<b>418,619</b>
182 DI Primary and Secondary	(958)	-	-	-	(958)	-	-	-	-	-	-	-
200 DI Plant Optimization	33,279	-	-	-	33,279	-	-	-	-	-	-	-
206 DI Treatment Plant Asset Protection	1,308,809	84,632	718,989	252,828	1,556,032	52,598	581,371	669,704	247,223	(32,034)	(137,618)	416,876
210 Clinton Wastewater Treat Plant	34,925	8,050	11,859	751	35,628	4,477	14,391	2,494	703	(3,573)	2,532	1,743
211 Laboratory Services	2,212	-	-	-	2,212	-	-	-	-	-	-	-
<b>Residuals</b>	<b>171,338</b>	<b>15,662</b>	<b>8,986</b>	<b>81,643</b>	<b>171,326</b>	<b>15,649</b>	<b>8,586</b>	<b>82,043</b>	<b>(12)</b>	<b>(13)</b>	<b>(400)</b>	<b>400</b>
261 Residuals	63,811	-	-	-	63,811	-	-	-	-	-	-	-
271 Residuals Asset Protection	107,527	15,662	8,986	81,643	107,515	15,649	8,586	82,043	(12)	(13)	(400)	400

**ATTACHMENT B**  
**Overview of the FY24 Proposed CIP and Changes from the Final FY23 CIP**

Program and Project	FY23 Final				FY24 Final				Change from Final FY23			
	Total Budget Amount	FY19-23	FY24-28	Beyond 28	Total Budget Amount	FY19-23	FY24-28	Beyond 28	Total Budget Amount	FY19-23	FY24-28	Beyond 28
<b>CSO</b>	<b>916,743</b>	<b>12,278</b>	<b>2,067</b>	<b>-</b>	<b>933,246</b>	<b>12,329</b>	<b>16,352</b>	<b>2,167</b>	<b>16,503</b>	<b>51</b>	<b>14,285</b>	<b>2,167</b>
324 CSO Support	56,769	7,116	808	-	61,769	6,942	3,815	2,167	5,000	(174)	3,007	2,167
339 North Dorchester Bay	221,510	-	-	-	221,510	-	-	-	-	-	-	-
340 Dorchester Bay Sewer Separation (Fox Point)	55,029	-	-	-	55,029	-	-	-	-	-	-	-
341 Dorchester Bay Sewer Separation (Commercial Point)	61,443	1,581	-	-	61,443	1,581	-	-	-	-	-	-
342 Neponset River Sewer Separation	2,492	-	-	-	2,492	-	-	-	-	-	-	-
343 Constitution Beach Sewer Separation	3,731	-	-	-	3,731	-	-	-	-	-	-	-
344 Stony Brook Sewer Separation	44,319	-	-	-	44,319	-	-	-	-	-	-	-
346 Cambridge Sewer Separation	104,552	-	-	-	104,552	-	-	-	-	-	-	-
347 East Boston Branch Sewer Relief	85,637	-	-	-	85,637	-	-	-	-	-	-	-
348 BOS019 Storage Conduit	14,288	-	-	-	14,288	-	-	-	-	-	-	-
349 Chelsea Trunk Sewer	31,179	1,400	-	-	31,779	1,000	1,000	-	600	(400)	1,000	-
350 Union Park Detention Treatment Facility	49,583	-	-	-	49,583	-	-	-	-	-	-	-
351 BWSC Floatables Controls	946	-	-	-	946	-	-	-	-	-	-	-
352 Cambridge Floatables Control	1,127	-	-	-	1,127	-	-	-	-	-	-	-
353 Upgrade Existing CSO Facilities	22,385	-	-	-	22,385	-	-	-	-	-	-	-
354 Hydraulic Relief Projects	3,555	-	1,260	-	4,458	-	2,163	-	903	-	903	-
355 MWR003 Gate & Siphon	4,424	-	-	-	4,424	-	-	-	-	-	-	-
356 Fort Point Channel Sewer Separation	11,507	-	-	-	21,507	625	9,375	-	10,000	625	9,375	-
357 Charles River CSO Controls	3,633	-	-	-	3,633	-	-	-	-	-	-	-
358 Morrissey Boulevard Drain	32,181	-	-	-	32,181	-	-	-	-	-	-	-
359 Reserved Channel Sewer Separation	70,524	-	-	-	70,524	-	-	-	-	-	-	-
360 Brookline Sewer Separation	24,715	-	-	-	24,715	-	-	-	-	-	-	-
361 Bulfinch Triangle Sewer Separation	9,032	-	-	-	9,032	-	-	-	-	-	-	-
362 East Boston CSO Control	2,182	2,182	-	-	2,182	2,182	-	-	-	-	-	-
<b>Other Wastewater</b>	<b>392,866</b>	<b>160,305</b>	<b>109,924</b>	<b>(67,680)</b>	<b>467,866</b>	<b>149,407</b>	<b>174,500</b>	<b>(46,358)</b>	<b>75,000</b>	<b>(10,898)</b>	<b>64,576</b>	<b>21,322</b>
128 I/I Local Financial Assistance	392,585	160,305	109,924	(67,680)	467,585	149,407	174,500	(46,358)	75,000	(10,898)	64,576	21,322
138 Sewerage System Mapping Upgrade	281	-	-	-	281	-	-	-	-	-	-	-
<b>Total Waterworks</b>	<b>4,698,980</b>	<b>366,083</b>	<b>952,075</b>	<b>1,269,417</b>	<b>5,072,430</b>	<b>326,764</b>	<b>663,867</b>	<b>1,970,390</b>	<b>373,450</b>	<b>(39,319)</b>	<b>(288,208)</b>	<b>700,973</b>
<b>Drinking Water Quality</b>	<b>732,200</b>	<b>12,775</b>	<b>41,182</b>	<b>28,271</b>	<b>730,720</b>	<b>12,557</b>	<b>26,574</b>	<b>41,616</b>	<b>(1,480)</b>	<b>(218)</b>	<b>(14,608)</b>	<b>13,345</b>
542 Carroll Water Treatment Plant	442,141	7,571	11,454	-	444,062	7,638	4,057	9,250	1,921	67	(7,397)	9,250
543 Quabbin Water Treatment Plant	19,973	-	-	-	19,973	-	-	-	-	-	-	-
544 Norumbega Covered Storage	106,674	-	-	-	106,674	-	-	-	-	-	-	-
545 Blue Hills Covered Storage	40,083	-	-	-	40,083	-	-	-	-	-	-	-
550 Spot Pond Storage Facility	60,126	-	-	-	60,126	-	-	-	-	-	-	-
555 CWTP Asset Protection	63,203	5,204	29,728	28,271	59,802	4,919	22,517	32,366	(3,401)	(285)	(7,211)	4,095

**ATTACHMENT B**  
**Overview of the FY24 Proposed CIP and Changes from the Final FY23 CIP**

Program and Project	FY23 Final				FY24 Final				Change from Final FY23			
	Total Budget Amount	FY19-23	FY24-28	Beyond 28	Total Budget Amount	FY19-23	FY24-28	Beyond 28	Total Budget Amount	FY19-23	FY24-28	Beyond 28
<b>Transmission</b>	<b>2,677,081</b>	<b>132,698</b>	<b>379,133</b>	<b>1,340,055</b>	<b>2,976,392</b>	<b>112,355</b>	<b>293,910</b>	<b>1,744,932</b>	<b>299,311</b>	<b>(20,343)</b>	<b>(85,223)</b>	<b>404,877</b>
597 Winsor Station Pipeline	59,087	1,943	50,757	653	70,000	1,615	-	62,651	10,913	(328)	(50,757)	61,998
601 Sluice Gate Rehabilitation	9,158	-	-	-	9,158	-	-	-	-	-	-	-
604 MetroWest Tunnel	700,184	-	3,002	-	700,184	-	3,002	-	-	-	-	-
615 Chicopee Valley Aqueduct Redundancy	8,666	-	-	-	8,666	-	-	-	-	-	-	-
616 Quabbin Transmission System	24,126	9,920	5,489	50	40,506	9,261	22,063	515	16,380	(659)	16,574	465
617 Sudbury/Weston Aqueduct Repairs	12,815	2,638	7,278	667	12,913	2,638	6,912	1,131	98	-	(366)	464
620 Wachusett Reservoir Spillway Improvement	9,287	-	-	-	9,287	-	-	-	-	-	-	-
621 Watershed Land	29,000	6,154	-	-	34,000	5,631	5,523	-	5,000	(523)	5,523	-
622 Cosgrove/Wachusett Redundancy	58,619	6,601	-	-	58,619	6,601	-	-	-	-	-	-
623 Dam Projects	8,323	773	4,434	-	10,523	594	6,813	-	2,200	(179)	2,379	-
625 Metro Tunnel Redundancy	1,557,718	25,730	196,709	1,331,823	1,794,583	25,368	166,208	1,599,551	236,865	(362)	(30,501)	267,728
628 Metro Redundancy Interim Improvement	176,731	72,140	99,154	2,600	204,369	57,217	67,943	76,372	27,638	(14,923)	(31,211)	73,772
630 Watershed Division Capital Improvement	23,365	6,797	12,308	4,260	23,582	3,428	15,444	4,710	217	(3,369)	3,136	450
<b>Distribution &amp; Pumping</b>	<b>1,107,743</b>	<b>124,366</b>	<b>439,346</b>	<b>79,678</b>	<b>1,178,967</b>	<b>127,304</b>	<b>248,145</b>	<b>339,160</b>	<b>71,224</b>	<b>2,938</b>	<b>(191,201)</b>	<b>259,482</b>
618 Peabody Pipeline	1,448	389	-	-	1,448	389	-	-	-	-	-	-
677 Valve Replacement	22,635	-	6,747	3,872	12,016	-	-	-	(10,619)	-	(6,747)	(3,872)
678 Boston Low Service-Pipe & Valve Rehabilitation	23,691	-	-	-	23,691	-	-	-	-	-	-	-
683 Heath Hill Road Pipe Replacement	19,358	-	-	-	19,358	-	-	-	-	-	-	-
689 James L. Gillis Pump Station Rehabilitation	33,419	-	-	-	33,419	-	-	-	-	-	-	-
692 NHS - Section 27 Improvements	2,164	28	2,013	-	2,141	4	-	2,013	(23)	(24)	(2,013)	2,013
693 NHS - Revere & Malden Pipeline Improvement	84,861	7,058	46,590	2,652	122,270	7,133	72,135	14,441	37,409	75	25,545	11,789
702 New Connect Mains-Shaft 7 to WASM 3	88,293	20,679	54,690	-	99,669	20,581	66,163	-	11,376	(98)	11,473	-
704 Rehabilitation of Other Pump Stations	51,572	33	19,500	1,982	51,572	33	2,180	19,302	-	-	(17,320)	17,320
706 NHS-Connecting Mains from Section 91	2,360	-	-	-	2,360	-	-	-	-	-	-	-
708 Northern Extra High Service New Pipelines	51,304	10,895	36,437	340	59,771	12,978	35,098	8,063	8,467	2,083	(1,339)	7,723
712 Cathodic Protection Of Distrubution Mains	39,284	3,422	34,769	824	7,268	891	6,108	-	(32,016)	(2,531)	(28,661)	(824)
713 Spot Pond Supply Mains Rehabilitation	66,697	408	800	-	67,282	806	187	800	585	398	(613)	800
714 Southern Extra High Sections 41 & 42	3,657	-	-	-	3,657	-	-	-	-	-	-	-
719 Chestnut Hill Connecting Mains	43,504	-	24,941	277	54,433	-	-	36,146	10,929	-	(24,941)	35,869
720 Warren Cottage Line Rehabilitation	1,205	-	-	-	1,205	-	-	-	-	-	-	-
721 South Spine Distribution Mains	104,191	2,285	64,515	708	113,605	1,995	2,356	72,570	9,414	(290)	(62,159)	71,862
722 NIH Redundancy & Storage	141,221	38,839	53,487	-	151,514	43,247	59,371	-	10,293	4,408	5,884	-
723 Northern Low Service Rehabilitation Section 8	69,346	2,988	62,174	1,229	68,982	2,607	69	63,351	(364)	(381)	(62,105)	62,122
724 Northern High Service - Pipeline Rehabilitation	-	-	-	-	-	-	-	-	-	-	-	-
725 Hydraulic Model Update	598	-	-	-	598	-	-	-	-	-	-	-
727 Southern Extra High Redundancy & Storage	146,425	37,287	19,968	60,725	169,288	36,640	3,130	101,072	22,863	(647)	(16,838)	40,347
730 Weston Aqueduct Supply Mains	80,457	54	-	-	80,403	-	-	-	(54)	(54)	-	-
731 Lynnfield Pipeline	5,626	-	-	-	5,626	-	-	-	-	-	-	-
732 Walnut St. & Fisher Hill Pipeline Rehabilitation	2,717	-	-	-	2,717	-	-	-	-	-	-	-
733 NHS Pipeline Rehabilitation 13-18 & 48	-	-	-	-	-	-	-	-	-	-	-	-
734 Southern Extra High Pipelines-Sections 30, 39,40, & 44	-	-	-	-	-	-	-	-	-	-	-	-

**ATTACHMENT B**  
**Overview of the FY24 Proposed CIP and Changes from the Final FY23 CIP**

Program and Project	FY23 Final				FY24 Final				Change from Final FY23			
	Total Budget Amount	FY19-23	FY24-28	Beyond 28	Total Budget Amount	FY19-23	FY24-28	Beyond 28	Total Budget Amount	FY19-23	FY24-28	Beyond 28
735 Section 80 Rehabilitation	21,711	2	12,714	7,069	24,675	1	1,347	21,402	2,964	(1)	(11,367)	14,333
<b>Other</b>	<b>181,956</b>	<b>96,244</b>	<b>92,414</b>	<b>(178,589)</b>	<b>186,351</b>	<b>74,548</b>	<b>95,238</b>	<b>(155,320)</b>	<b>4,395</b>	<b>(21,696)</b>	<b>2,824</b>	<b>23,269</b>
753 Central Monitoring System	43,157	12,512	9,940	-	43,500	11,753	11,043	-	343	(759)	1,103	-
763 Distribution Systems Facilities Mapping	3,087	649	1,402	-	3,087	590	1,461	-	-	(59)	59	-
<del>764 Local water infrastructure Renovation Assistance Program</del>	7,488	-	-	-	7,488	-	-	-	-	-	-	-
765 Local Water Pipeline Improvement Loan Program	-	68,391	1,531	(210,195)	-	48,312	24,000	(212,585)	-	(20,079)	22,469	(2,390)
766 Waterworks Facility Asset Protection	128,224	14,693	79,541	31,606	132,276	13,894	58,734	57,265	4,052	(799)	(20,807)	25,659
<b>Business &amp; Operations Support</b>	<b>201,301</b>	<b>57,324</b>	<b>42,947</b>	<b>-</b>	<b>212,872</b>	<b>44,124</b>	<b>66,153</b>	<b>1,562</b>	<b>11,569</b>	<b>(13,201)</b>	<b>23,207</b>	<b>1,562</b>
881 Equipment Purchase	42,357	9,970	10,530	-	42,623	5,118	15,648	-	266	(4,852)	5,118	-
925 Technical Assistance	1,300	865	435	-	1,300	360	940	-	-	(505)	505	-
930 MWRA Facility - Chelsea	9,812	-	-	-	9,812	-	-	-	-	-	-	-
931 Business Systems Plan	24,562	(1)	-	-	24,562	(1)	-	-	-	-	-	-
932 Environmental Remediation	1,479	-	-	-	1,479	-	-	-	-	-	-	-
933 Capital Maintenance Planning	28,764	10,418	4,146	-	39,160	8,918	14,479	1,562	10,396	(1,500)	10,333	1,562
934 MWRA Facilities Management	18,375	15,307	2,698	-	22,700	19,629	2,700	-	4,325	4,322	2	-
935 Alternative Energy Initiatives	26,184	(234)	8,000	-	28,184	(234)	10,000	-	2,000	-	2,000	-
940 Applicat Improv Program	21,459	8,060	10,506	-	21,375	5,095	13,387	-	(84)	(2,965)	2,881	-
942 Info Security Program ISP	8,428	2,690	4,030	-	3,709	1,409	592	-	(4,719)	(1,281)	(3,438)	-
944 Info Tech Mgmt Program	2	2	-	-	2	2	-	-	-	-	-	-
946 IT Infrastructure Program	18,581	10,248	2,601	-	17,966	3,828	8,407	-	(615)	(6,420)	5,806	-

**Attachment C  
New Capital Projects Added to the FY24 CIP**

Program	Project	Subphase	Total Contract Amount	NTP	SC	FY23	FY24	FY25	FY26	FY27	FY28	FY24-28	Beyond FY28	Total Expenditures
Interception & Pumping	Facility Asset Protection	New Neponset Pump Station Rehab Design/ESDC	\$ 3,000,000	Jul-30	Jul-35	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 3,000,000	\$ 3,000,000
Interception & Pumping	Facility Asset Protection	New Neponset Pump Station Rehab Construction	\$ 20,000,000	Jul-32	Jul-34	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 20,000,000	\$ 20,000,000
Interception & Pumping	Facility Asset Protection	New Neponset Pump Station Rehab REI	\$ 1,000,000	Jul-32	Jul-34	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 1,000,000	\$ 1,000,000
Interception & Pumping	Facility Asset Protection	Framingham Pump Station Rehab Design/ESDC	\$ 3,000,000	Jul-30	Jul-35	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 3,000,000	\$ 3,000,000
Interception & Pumping	Facility Asset Protection	Framingham Pump Station Rehab Construction	\$ 20,000,000	Jul-32	Jul-34	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 20,000,000	\$ 20,000,000
Interception & Pumping	Facility Asset Protection	Framingham Pump Station Rehab REI	\$ 1,000,000	Jul-32	Jul-34	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 1,000,000	\$ 1,000,000
Interception & Pumping	Facility Asset Protection	Quincy Pump Station Rehab Design/ESDC	\$ 3,000,000	Jul-28	Jul-33	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 3,000,000	\$ 3,000,000
Interception & Pumping	Facility Asset Protection	Quincy Pump Station Rehab Construction	\$ 20,000,000	Jul-30	Jul-32	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 20,000,000	\$ 20,000,000

**Attachment C  
New Capital Projects Added to the FY24 CIP**

Program	Project	Subphase	Total Contract Amount	NTP	SC	FY23	FY24	FY25	FY26	FY27	FY28	FY24-28	Beyond FY28	Total Expenditures
Interception & Pumping	Facility Asset Protection	Quincy Pump Station Rehab REI	\$ 1,000,000	Jul-30	Jul-32	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 1,000,000	\$ 1,000,000
Interception & Pumping	Facility Asset Protection	Squantum Pump Station Rehab Design/ESDC	\$ 3,000,000	Jul-28	Jul-33	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 3,000,000	\$ 3,000,000
Interception & Pumping	Facility Asset Protection	Squantum Pump Station Rehab Construction	\$ 20,000,000	Jul-30	Jul-32	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 20,000,000	\$ 20,000,000
Interception & Pumping	Facility Asset Protection	Squantum Pump Station Rehab REI	\$ 1,000,000	Jul-30	Jul-32	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 1,000,000	\$ 1,000,000
Interception & Pumping	Facility Asset Protection	Intermediate Pump Station Rehab Design/ESDC	\$ 5,000,000	Jul-28	Jul-33	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 5,000,000	\$ 5,000,000
Interception & Pumping	Facility Asset Protection	Intermediate Pump Station Rehab Construction	\$ 40,000,000	Jul-30	Jul-32	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 40,000,000	\$ 40,000,000
Interception & Pumping	Facility Asset Protection	Intermediate Pump Station Rehab REI	\$ 1,500,000	Jul-30	Jul-32	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 1,500,000	\$ 1,500,000
CSO Community Managed	356 Fort Point Channel Sewer S	Fort Point Channel & Mystic	\$ 10,000,000	Nov-22	Nov-25	\$ 625,000	\$ 3,813,000	\$ 5,563,000	\$ -	\$ -	\$ -	\$ 9,376,000	\$ (1,000)	\$ 10,000,000

**Attachment C  
New Capital Projects Added to the FY24 CIP**

Program	Project	Subphase	Total Contract Amount	NTP	SC	FY23	FY24	FY25	FY26	FY27	FY28	FY24-28	Beyond FY28	Total Expenditures
CSO Planning & Support	324 CSO Support	CSO Updated Control Plan Des	\$ 5,000,000	Jun-27	Jun-32	\$ -	\$ 500,000	\$ 500,000	\$ 500,000	\$ 500,000	\$ 833,000	\$ 2,833,000	\$ 2,167,000	\$ 5,000,000
Other Wastewater	I/I Local Financial Assistance	Phase XIV Grants	\$ 75,000,000	Oct-22	Jun-30	\$ 4,750,000	\$ 15,000,000	\$ 7,500,000	\$ 7,500,000	\$ 7,500,000	\$ 7,500,000	\$ 45,000,000	\$ 25,250,000	\$ 75,000,000
Other Wastewater	I/I Local Financial Assistance	Phase XIV Loans	\$ 25,000,000	Oct-22	Jun-30	\$ 1,580,000	\$ 5,000,000	\$ 2,500,000	\$ 2,500,000	\$ 2,500,000	\$ 2,500,000	\$ 15,000,000	\$ 8,420,000	\$ 25,000,000
Other Wastewater	I/I Local Financial Assistance	Phase XIV Repayments	\$ (25,000,000)	Nov-23	May-40	\$ -	\$ (33,000)	\$ (660,000)	\$ (910,000)	\$ (1,160,000)	\$ (1,410,000)	\$ (4,173,000)	\$ (20,827,000)	\$ (25,000,000)
Drinking Water Quality Improvements	CWTP Asset Protection	CWTP Butterfly Valve 4 - Design	\$ 2,000,000	Jul-24	Jul-28	\$ -	\$ -	\$ 750,000	\$ 1,000,000	\$ 250,000	\$ -	\$ 2,000,000	\$ -	\$ 2,000,000
Drinking Water Quality Improvements	CWTP Asset Protection	CWTP Butterfly Valve 4 - Construction	\$ 10,000,000	Jul-25	Jul-27	\$ -	\$ -	\$ -	\$ 3,000,000	\$ 3,000,000	\$ 4,000,000	\$ 10,000,000	\$ -	\$ 10,000,000
Drinking Water Quality Improvements	CWTP Asset Protection	CWTP Butterfly Valve 4 - REI	\$ 500,000	Jul-25	Jul-27	\$ -	\$ -	\$ -	\$ 100,000	\$ 300,000	\$ 100,000	\$ 500,000	\$ -	\$ 500,000
Other Waterworks	Waterworks Facility Asset Protection	Brutsch T.P. Sodium Hypo Upgr.	\$ 705,000	Oct-23	Oct-24	\$ -	\$ 294,000	\$ 411,000	\$ -	\$ -	\$ -	\$ 705,000	\$ -	\$ 705,000

**Attachment C  
New Capital Projects Added to the FY24 CIP**

Program	Project	Subphase	Total Contract Amount	NTP	SC	FY23	FY24	FY25	FY26	FY27	FY28	FY24-28	Beyond FY28	Total Expenditures
<b>SUMMARY:</b>														
Total Wastewater Projects			\$ 232,500,000			\$ 6,955,000	\$ 24,280,000	\$ 15,403,000	\$ 9,590,000	\$ 9,340,000	\$ 9,423,000	\$ 68,036,000	\$ 157,509,000	\$ 232,500,000
Total Water Projects			\$ 13,205,000			\$ -	\$ 294,000	\$ 1,161,000	\$ 4,100,000	\$ 3,550,000	\$ 4,100,000	\$ 13,205,000	\$ -	\$ 13,205,000
Total Projects			\$ 245,705,000			\$ 6,955,000	\$ 24,574,000	\$ 16,564,000	\$ 13,690,000	\$ 12,890,000	\$ 13,523,000	\$ 81,241,000	\$ 157,509,000	\$ 245,705,000



**STAFF SUMMARY**

**TO:** Board of Directors  
**FROM:** Frederick A. Laskey, Executive Director  
**DATE:** June 21, 2023  
**SUBJECT:** Approval of the Final FY24 Current Expense Budget



**COMMITTEE:** Administration, Finance & Audit

     INFORMATION  
  X   VOTE

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

Thomas J. Durkin  
Director, Finance



*The Proposed FY24 Current Expense Budget (CEB) submitted to the Advisory Board at the February 2023 Board meeting included a 3.4% combined assessment increase.*

*MWRA received the Advisory Board comments and recommendations in May 2023, which recommended a combined assessment increase of 2.4% representing a \$8.3 million decrease to the Proposed FY24 Rate Revenue Requirement. The Authority has updated the Proposed Budget with the latest information, incorporated many of the Advisory Board recommendations and was able to achieve a 2.4% combined assessment increase.*

*As every year, the main focus is on next year's budget, but always with the goal of continuing to utilize MWRA's multi-year rate management strategy to provide sustainable, and predictable assessment increases to its member communities. To achieve this goal again this year, MWRA has continued to employ conservative budgeting and fiscal discipline which includes controlled spending and use of historical variable interest rate assumptions. The combination of these measures resulted in assessment increase projections below 3.5% for the next several years.*

*The FY24 Final Budget reflects the benefits of a planned \$31.9 million defeasance to be executed in FY23 with targeted savings during FY24-28. Besides the planned defeasances, the Authority is continuing to address the Pension and the Other Post Employment Benefits (OPEB) obligations, which are the largest long-term liabilities after the debt payments.*

**RECOMMENDATION:**

To adopt the Final FY24 Current Expense Budget (CEB) set forth in Attachment A with current revenue and expense of \$874,148,898; and

To adopt the Final FY24 Operating Budget (Trustee's Budget) set forth in Attachment B.

## **DISCUSSION:**

This staff summary presents the Final FY24 CEB. Discussions and materials are provided herein outlining changes to the budget since the transmittal of the FY24 Proposed CEB in February 2023. In working with the MWRA Advisory Board, staff revisited all major line items of the budget and evaluated options to reduce the Rate Revenue Requirement to 2.4%.

For a line item comparison between the Proposed FY24 CEB and the Final FY24 CEB, please refer to Attachment A.

### **Summary**

The Final FY24 Budget recommends a combined increase in rates and charges of 2.4%. Total expenses are \$874.1 million, an increase of \$34.0 million or 4.0% over the FY23 Budget. Capital Financing costs remain the largest component of the CEB and account for 55.8% of total expenses. The Final FY24 Budget assumes an offset of \$1.2 million for Debt Service Assistance (DSA) received in April 2023, consistent with the Advisory Board's recommendation.

Total expenses include \$487.8 million for Capital Financing costs and \$386.4 million for operating expenses, of which \$316.0 million is for Direct Expenses and \$70.4 million is for Indirect Expenses. The \$34.0 million increase in total expenses is due to higher Direct Expenses of \$42.3 million, Indirect Expenses of \$9.9 million, and lower Capital Financing costs of \$18.2 million.

The FY24 Final Budget revenues, excluding rate revenue, total \$39.9 million, an increase of \$14.3 million or 56.1% over the FY23 Budget. The FY24 Final Budget non-rate revenue estimates include \$16.2 million in Other User Charges and Other Revenue, \$23.3 million for Investment Income, and \$0.3 million in Rate Stabilization.

The FY24 Final Rate Revenue Requirement is \$834.3 million, an increase of \$19.6 million or 2.4% over the FY23 Budget.

*Table 1 on the following page provides a comparison of the Final FY24 CEB to the Approved FY23 CEB by major categories. Additional detail by line item is provided in Attachment A.*

<b>Table 1</b>				
<b>MWRA Current Expense Budget</b>				
<b>FY24 Final Budget versus FY23 Approved Budget</b>				
(\$ in Millions)	FY23 Approved Budget	FY24 Final Budget	\$ Change	% Change
Directs	\$ 273.7	\$ 316.0	\$ 42.3	15.4%
Indirects	60.5	70.4	9.9	16.3%
<b>Sub-Total Operating Expenses</b>	<b>\$ 334.2</b>	<b>\$ 386.4</b>	<b>\$ 52.2</b>	<b>15.6%</b>
Capital Financing (before Offsets)	507.2	488.9	(18.2)	-3.6%
Offsets: Bond Redemption <sup>1</sup>	-	-	-	-
Variable Debt Savings	-	-	-	-
Debt Service Assistance	(1.2)	(1.2)	(0.0)	0.4%
<b>Sub-Total Capital Financing</b>	<b>\$ 506.0</b>	<b>\$ 487.8</b>	<b>\$ (18.2)</b>	<b>-3.6%</b>
<b>Total Expenses</b>	<b>\$ 840.2</b>	<b>\$ 874.1</b>	<b>\$ 34.0</b>	<b>4.0%</b>
Investment Income	\$ 8.6	\$ 23.3	\$ 14.8	171.9%
Non-Rate Revenue	16.0	16.2	0.3	1.6%
Rate Stabilization <sup>1</sup>	1.0	0.3	(0.7)	-68.8%
<b>Sub-Total Non-Rate Revenue</b>	<b>\$ 25.5</b>	<b>\$ 39.9</b>	<b>\$ 14.3</b>	<b>56.1%</b>
Rate Revenue	814.6	834.3	19.6	2.4%
<b>Total Revenue &amp; Income</b>	<b>\$ 840.2</b>	<b>\$ 874.1</b>	<b>\$ 34.0</b>	<b>4.0%</b>
<b>FY24 Rate Revenue Increase</b>			2.4%	
<b>Combined Use of Reserves</b>			\$ 0.3	

<sup>1</sup> MWRA has two reserve funds (Bond Redemption and Rate Stabilization) which can be used at the discretion of the Authority to manage the rate revenue requirement. Use of the Bond Redemption reduces total expenses and Rate Stabilization increases total revenue. Under the terms of the General Bond Resolution the annual use of Rate Stabilization funds cannot exceed 10% of the year's senior debt service. Bond Redemption funds can be used only to retire or prepay outstanding debt. There is no annual limit on the amount of Bond Redemption funds used in a year, however the use is tied to the bonds' maturity dates and it is utility specific.

**EXPENSES:**

Direct Expenses

FY24 Direct Expenses total \$316.0 million, an increase of \$42.3 million, or 15.4%, over the FY23 Budget.

<b>FY24 FINAL CURRENT EXPENSE BUDGET</b>				
<b>MWRA DIRECT EXPENSES BY LINE ITEM</b>				
Line Item	FY23 Approved Budget	FY24 Final Budget	Change FY24 vs FY23	
WAGES AND SALARIES	\$118,980,689	\$127,828,246	\$8,847,556	7.4%
OVERTIME	\$5,337,896	\$5,727,593	\$389,697	7.3%
FRINGE BENEFITS	\$23,961,641	\$25,823,383	\$1,861,742	7.8%
WORKERS' COMPENSATION	\$2,519,751	\$2,144,395	(\$375,356)	-14.9%
CHEMICALS	\$14,994,036	\$28,269,124	\$13,275,088	88.5%
ENERGY AND UTILITIES	\$30,896,365	\$31,064,893	\$168,528	0.5%
MAINTENANCE	\$33,241,022	\$38,574,255	\$5,333,233	16.0%
TRAINING AND MEETINGS	\$492,197	\$498,597	\$6,400	1.3%
PROFESSIONAL SERVICES	\$8,197,575	\$10,410,484	\$2,212,909	27.0%
OTHER MATERIALS	\$6,728,862	\$7,167,398	\$438,536	6.5%
OTHER SERVICES	\$28,372,237	\$38,494,660	\$10,122,423	35.7%
<b>TOTAL</b>	<b>\$273,722,272</b>	<b>\$316,003,028</b>	<b>\$42,280,756</b>	<b>15.4%</b>

- *Wages and Salaries* – The budget includes \$127.8 million for Wages and Salaries as compared to \$119.0 million in the FY23 Budget, an increase of \$8.8 million or 7.4%. Regular Pay makes up \$125.8 million or 98.4% of the total Wages and Salaries. The FY24 Budget includes 1,168.0 FTE’s which is 0.6 more than the FY23 Budget. As always, new hires and backfilling of vacant positions will be managed at the agency level and addressed on a case-by-case basis by senior management. A vacancy adjustment (reduction) of \$4.0 million is factored in to the FY24 Final Budget.
- *Overtime* – The budget includes \$5.7 million for Overtime, an increase of \$390,000 or 7.3% over the FY23 Budget. Overtime was increased to reflect wage increases and recent trends in planned overtime for off-hours maintenance, emergency, coverage, and planned projects that include construction.
- *Fringe Benefits* – The budget includes \$25.8 million for Fringe Benefits, an increase of \$1.9 million or 7.8% over the FY23 Budget. Health Insurance premiums total \$22.2 million, an increase of \$1.7 million or 6.3% over the FY23 Budget largely due to an increase in the health plans rates.
- *Workers’ Compensation* – The budget includes \$2.1 million for Workers’ Compensation. This is \$375,000 or 14.9% less than the prior year’s level and is based on a three-year historical average spending for Worker’s Compensation.

- Chemicals* – The budget includes \$28.3 million for Chemicals, an increase of \$13.3 million or 88.5% over the FY23 Budget. Higher prices drove the budget increase. Several chemicals increased including Sodium Hypochlorite by \$7.0 million or 135.4%, Ferric Chloride by \$3.4 million or 143.8%, Carbon Dioxide by \$727,000 or 166.4%, Sodium Bisulfite by \$479,000 or 108.7%, Aqua Ammonia by \$413,000 or 142.0%, Liquid Oxygen by \$413,000 or 84.6%, and Hydrofluosilic Acid by \$327,000 or 87.8%. The FY24 Budget includes \$489,000 for the anticipated Deer Island National Pollutant Discharge Elimination System (NPDES) permit, which is projected to have more stringent requirements for enterococcus treatment compliance.
- Utilities* – The budget includes \$31.1 million for Utilities, which is an increase of \$168,000 million or 0.5% over the FY23 Budget. The budget funds \$23.4 million for Electricity, an increase of \$333,000 or 1.4% over the FY23 budget primarily due to higher pricing. Natural Gas budget of \$1.1 million is \$277,000 or \$33.1% greater than the FY23 Budget primarily due to higher pricing in Wastewater Operations and Western Facilities. The Diesel Fuel budget of \$3.8 million is \$247,000 or 6.1% lower than the FY23 Budget primarily due to decrease in price and volume at Deer Island and Nut Island Headworks.
- Maintenance* – The budget includes \$38.6 million for Maintenance projects, an increase of \$5.3 million or 16.0% over the FY23 budget. The increase is driven by Special Equipment Materials of \$2.0 million primarily for hatch cover replacement at Loring Road and Fells, flow meter at Nut Island Headworks, and for PLC's, cards and parts; Plant and Machinery Services of \$1.7 million for Norumbega and Nash Hill Tank cleaning, Spare Parts for Alewife Brook Pump Station, Deer Island spare disinfection gearbox and spare ALP blower overhauls and coating of centrifuge bases; Computer Software Licenses of \$684,000 for updated costs including Microsoft Office Upgrade, Financial Management System Maintenance, AutoCAD subscriptions, MAXIMO maintenance, and Oracle DBMS maintenance amongst others; Building and Grounds Services of \$530,000 for updated cost for CVA Intake Repointing and work for Dam Asset Maintenance Plan at Goodnough Dike drain cleaning and relief well redevelopment at Sudbury Dam, and shift of work from FY23 to FY24 for the Eastern Ave traffic signal; and HVAC Materials of \$304,000 at Deer Island for glycol feeders, isolation valves for hot water loop, and HEX plates for the mechanical room in the Admin/Lab Bldg and Plant & Machinery Materials of \$207,000 for Prison Point CSO transfer switch, reactor gearboxes and polymer pumps that shifted from FY23 to FY24, and thermal air dryer, partially offset by materials that were purchased or completed in FY23 including the replacement of disinfection instrument air compressor, and spare mixer gearbox and other reductions to as-needed items. These increases are partially offset by Computer Services of \$264,000 primarily for updated cost and solution to monitor SCADA systems.
- Training and Meetings* – The budget includes \$499,000 for Training and Meetings, an increase of \$6,000 or 1.3% over the FY23 Budget.

- *Professional Services* – The budget includes \$10.4 million for Professional Services, an increase of \$2.2 million or 27.0% over the FY23 Budget. The increase is driven by Affirmative Action’s Disparity Study of \$800,000 (with the remaining portion to be budgeted in FY25), MIS for Managed Security Service Provider (MSSP)/Security Information and Event Management (SIEM) monitoring of \$462,000, additional Legal services for NPDES permit of \$450,000, Security of \$287,000 for updated rates, and Lab & Testing Analysis of \$284,000 primarily for updated costs including PFAS testing of \$187,000.
- *Other Materials* – The budget includes \$7.2 million for Other Materials, an increase of \$439,000 or 6.5% over the FY23 Budget. The increase reflects \$406,000 in Other Materials largely due to office space modifications costs for Phase 3 fit-out for the CNY to Chelsea and Deer Island move that is not funded in the CIP contract. Also, increase in Equipment/Furniture of \$152,000 due to upgrades to the Operations Control Center. This is partially offset by Vehicle Expense decrease of \$306,000 primarily due to electric chargers purchases in FY23 instead of FY24 partially offset by increase in fuel costs, and a reduction in Computer Software of \$103,000 driven by SCADA Maintenance software driven by SCADA Maintenance software.
- *Other Services* – The budget includes \$38.5 million for Other Services, an increase of \$10.1 million or 35.7% over the FY23 Budget. Sludge Pelletization increased by \$9.6 million or 56.3%. This increase reflects \$6.2 million for 6 months of potential landfill disposal costs due to PFAS issues and \$3.4 million due mainly to the projected cost increase of the pellet plant contract primarily due to inflation. Also, Grit & Screenings Removal of \$1.1 million due to updated costs for new contract. This increase was partially offset by lower Space/Lease Rentals of \$1.0 million due to the termination of the CNY lease, partially offset by an increase in cost for Rock Core Shed Lease, and increase in cost of the Chelsea Facility lease.

### Indirect Expenses

Indirect Expenses for FY24 total \$70.4 million, an increase of \$9.9 million or 16.3% over the FY23 Budget. Below are the highlights of major changes:

- The budget includes \$4.1 million for Insurance, an increase of \$149,000 or 3.8% over the FY23 Budget. Insurance Premiums increased 5.7% based on proposals received. Claim payments decreased based on a 5-year average.
- The budget includes \$30.4 million for the Watershed Management budget, an increase of \$1.5 million or 5.1% above the FY23 Budget. The budget includes \$21.5 million for reimbursement of operating expenses net of revenues, and \$8.9 million for Payment in Lieu of Taxes (PILOT). The budget increase is driven by contractual wage increases and health care costs. A vacancy adjustment of \$353,000 (based on 3 FTEs) has been applied to reflect the actual timing of hiring.

- The budget includes \$7.5 million for the Harbor Energy Electric Company (HEEC), an increase of \$1.3 million or 20.5% over the FY23 Budget. The budget reflects the latest cost estimates and true up payment due for prior calendar year.
- The budget includes \$1.8 million for Mitigation payments to the City of Quincy and Town of Winthrop in accordance with mitigation agreements, which expire in FY25.
- Funding for the Additions to the Operating Reserve for FY24 is \$7.9 million. The Operating Reserve balance is in compliance with MWRA General Bond Resolution which requires a balance of one-sixth of annual operating expenses. Based on the FY24 Final Budget, the required balance is \$57.6 million versus the \$49.7 million required in FY23.
- The budget includes \$16.0 million for the Retirement Fund, an increase of \$3.4 million or 27.2% over the FY23 budget. The increase to the required contribution of \$1.5 million is based on the January 2023 actuarial valuation combined with the addition of OPEB savings of \$1.9 million. Staff recommend allocating the \$1.9 million reduction to the required OPEB contribution to the Pension. MWRA's pension fund is at the 88.4% funding level and projected to be fully funded by June 30, 2030.
- The Authority has complied with the GASB 45, *Accounting and Financial Reporting by Employers for Postemployment Benefits Other than Pensions (OPEB)*, by disclosing this liability in the year-end Financial Statements. As part of the multi-year strategy to address its unfunded liabilities for OPEB and pension holistically, the Board approved a plan to pay down the pension liability and upon reaching full funding, move to address the OPEB obligation. To maximize the benefits in terms of returns and accounting treatment, an irrevocable OPEB Trust was established with Board approval and funding started on April 23, 2015. The OPEB Trust balance was \$63.5 million (59.6% funded) as of December 31, 2022. Starting in FY18, GASB 75 is the governing regulation for employee OPEB contributions. The proposed \$2.8 million budget is based on 50% of the contribution determined in the December 31, 2021 actuarial report. This is a \$1.9 million reduction from FY23. Staff are recommending that these funds be deposited into the Pension.

### Capital Financing

Capital financing as a percent of total expenses has decreased from 60% in FY23 to 56% in the FY24 Final Current Expense Budget. Much of this debt service is for completed projects, primarily the Boston Harbor Project, the Integrated Water Supply Improvement Program, and the Combined Sewer Overflow (CSO) projects. MWRA's capital spending, from its inception, has been dominated by projects mandated by court ordered or regulatory requirements, which in total have accounted for ~72% of capital spending to date. Going forward, the majority of spending will be focused on asset protection and water redundancy initiatives.

The Authority has actively managed its debt structure to take advantage of favorable interest rates. Tools used by MWRA to lower borrowing costs and manage rates include current and advanced refunding of outstanding debt, maximizing the use of the subsidized State Revolving Fund (SRF) debt, issuance of variable rate debt, swap agreements, and the use of positive year-end budget variances to defease debt. MWRA also uses tax exempt commercial paper to minimize the financing cost of construction in process.

The FY24 Final Budget capital financing costs total \$487.8 million and remains the largest portion of the MWRA's budget.

The FY24 Final Budget includes a planned defeasance of \$31.9 million in June 2023 which will reduce debt service by approximately \$5.8 million in FY24, \$12.0 million in FY25, \$679,750 in FY26, \$10.1 million in FY27, and \$4.3 million in FY28.

The FY24 Final Budget assumes a 4.75% interest rate for variable rate debt which is 1.25% greater than the FY23 assumed rate. The Authority's variable rate debt assumption is comprised of three separate elements: the interest rate for the daily and weekly series; liquidity fees for the Standby Bond Purchase Agreement, Letter of Credit, and Direct Purchase providers; and remarketing fees. Since March of 2022, the Federal Reserve Open Market Committee has raised interest rates by 5.0% resulting in higher short-term variable interest costs.

The FY24 Final Budget capital financing costs decreased by \$18.2 million or 3.6% compared to the FY23 Budget. This decrease in the MWRA's debt service is the result of projected FY24 borrowings, the structure of the existing debt, and by the impact of the June 2023 defeasance.

The FY24 capital financing budget includes:

- \$294.1 million in principal and interest payments on MWRA's senior fixed rate bonds. This amount includes \$9.0 million to support a new money issuance of \$200.0 million in May 2024;
- \$69.9 million in principal and interest payments on subordinate bonds;
- \$90.8 million in principal and interest payments on SRF loans. This amount includes \$9.0 million to support an issuances of \$105.0 million during fiscal 2024;
- \$19.2 million to fund ongoing capital projects with current revenue and to meet coverage requirements;
- \$4.0 million in debt prepayment;
- \$7.7 million to fund the interest expense related to the Local Water Pipeline Assistance Program; and,
- \$3.2 million for the Chelsea Lease, and



- \$1.2 million offset to Debt Service for the Debt Service Assistance received in FY23.

## **Revenue**

FY24 non-rate revenue totals \$39.9 million, which is an increase of \$14.3 million or 56.1% versus the FY23 Budget. The FY24 non-rate revenue budget includes:

- \$10.4 million in Other User Charges, including \$5.6 million for the Chicopee Valley Aqueduct (CVA) communities, \$2.1 million for Deer Island water usage, \$500,000 for the Commonwealth's partial reimbursement for Clinton Wastewater Treatment Plant expenses, and \$426,000 for entrance fees payments from existing member communities. Other User Charges are \$554,000 or 5.6% higher than the FY23 Budget.
- \$5.8 million in Other Revenue, a decrease of \$300,000 or 4.9% from the FY23 Budget. Other Revenue includes \$1.4 million from the sale of the Authority's Renewable Portfolio Credits, revenue from participating in load response programs, and the sale of generated power to the grid. Energy related revenue decreased by \$717,000 reflecting decreased power sales revenue and reduced pricing for Renewable Portfolio Credits. The balance of Other Revenue includes \$2.7 million in permit fees and penalties, an increase of \$220,000 over the FY23 Budget.
- \$23.3 million in Investment Income, an increase of \$14.8 million or 171.9% from the FY23 Budget. The budget reflects the increased short-term interest rates as a result of the actions of the Federal Reserve Open Market Committee.

The Rate Revenue Requirement for FY24 is \$834.3 million, an increase \$19.6 million or 2.4% over the FY23 Budget. The Rate Revenue Requirement is the difference between total expenses of \$874.1 million and non-rate revenue of \$39.9 million.

## **Planning Estimates and Future Rate Projections**

MWRA's planning estimates are projections based on a series of assumptions about future spending (operating and capital), interest rates, inflation, and other factors. MWRA uses the planning estimates to model and project what future rate increases might be based upon these assumptions, as well as to test the impact of changes to assumptions on future rate increases. The planning estimates are not predictions of what rate increases will be but rather they provide the context and framework for guiding MWRA financial policy and management decision making that ultimately determine the level of actual rate increases on an annual basis. Historically, the planning estimates were based on conservative financial assumptions. Conservative projections of future rate increases benefit the MWRA by providing assurance to all stakeholders, including the rating agencies that MWRA anticipates raising revenues sufficient to pay for its operations and outstanding debt obligations now and over the long-term. Additionally, conservative forecasts of rate revenue requirements enable member communities to adequately plan and budget for future payments to MWRA.

Table 3 below presents the combined estimated future rate increases and household charges based on the Final FY24 Budget. The planning estimates shown below assume no Debt Service Assistance from the Commonwealth or use of Bond Redemption reserves through FY28. It does, however, assume the use of Rate Stabilization through FY28.

**Table 3**

<b>Rates &amp; Budget Projections</b>						
<b>Final FY24 CEB</b>	<b>FY2023</b>	<b>FY2024</b>	<b>FY2025</b>	<b>FY2026</b>	<b>FY2027</b>	<b>FY2028</b>
Total Rate Revenue (\$000)	\$ 814,648	\$ 834,268	\$ 862,953	\$ 892,629	\$ 923,248	\$ 954,061
Rate Revenue Change from Prior Year (\$000)	\$ 22,564	\$ 19,620	\$ 28,685	\$ 29,676	\$ 30,619	\$ 30,812
Rate Revenue Increase	2.8%	2.4%	3.4%	3.4%	3.4%	3.3%
Use of Reserves (\$000)	\$ 980	\$ 305	\$ 917	\$ 809	\$ 780	\$ 782

***Estimated Household Bill***

Based on annual water usage of 61,000 gallons	\$1,331	\$1,385	\$1,445	\$1,509	\$1,575	\$1,644
Based on annual water usage of 90,000 gallons	\$1,963	\$2,043	\$2,132	\$2,226	\$2,324	\$2,425

**CEB Review and Adoption Process**

In February, the MWRA transmitted the Proposed FY24 Budget to the Advisory Board for its review and comments. MWRA staff have worked closely with MWRA Advisory Board staff in an effort to review the budget and reduce the rate revenue requirement from 3.4% in the FY24 Proposed Budget to 2.4% in the FY24 Final Budget.

**ATTACHMENTS:**

- Attachment A FY24 Final Budget vs. FY24 Proposed Budget vs. FY23 Approved Budget
- Attachment B FY24 Final Operating Budget (Trustee’s Budget)
- Attachment C FY24 Final Budget vs. FY23 Projection
- Attachment D MWRA Responses to Advisory Board’s FY24 Integrated CIP and CEB Comments and Recommendations

ATTACHMENT A

FY24 Draft Final Budget vs. FY24 Proposed Budget vs. FY23 Approved Budget

TOTAL MWRA	FY23 Approved Budget	FY24 Proposed Budget	FY24 Draft Final Budget	Change FY24 Draft Final Budget vs FY23 Approved Budget		Change FY24 Draft Final Budget vs FY24 Proposed Budget	
				\$	%	\$	%
<b>EXPENSES</b>							
WAGES AND SALARIES	\$ 118,980,689	\$ 123,095,429	\$ 127,828,242	\$ 8,847,552	7.4%	\$ 4,732,813	3.8%
OVERTIME	5,337,896	5,575,588	5,727,593	389,697	7.3%	152,005	2.7%
FRINGE BENEFITS	23,961,641	25,365,846	25,823,383	1,861,742	7.8%	457,537	1.8%
WORKERS' COMPENSATION	2,519,751	2,144,395	2,144,395	(375,356)	-14.9%	-	0.0%
CHEMICALS	14,994,036	28,340,408	28,269,124	13,275,088	88.5%	(71,284)	-0.3%
ENERGY AND UTILITIES	30,896,365	33,097,598	31,064,893	168,528	0.5%	(2,032,705)	-6.1%
MAINTENANCE	33,241,022	36,521,085	38,574,255	5,333,233	16.0%	2,053,170	5.6%
TRAINING AND MEETINGS	492,197	498,597	498,597	6,400	1.3%	-	0.0%
PROFESSIONAL SERVICES	8,197,575	10,146,844	10,410,484	2,212,909	27.0%	263,640	2.6%
OTHER MATERIALS	6,728,862	7,309,691	7,167,398	438,536	6.5%	(142,293)	-1.9%
OTHER SERVICES	28,372,237	37,900,991	38,494,660	10,122,423	35.7%	593,669	1.6%
<b>TOTAL DIRECT EXPENSES</b>	<b>\$ 273,722,272</b>	<b>\$ 309,996,472</b>	<b>\$ 316,003,024</b>	<b>\$ 42,280,752</b>	<b>15.4%</b>	<b>\$ 6,006,552</b>	<b>1.9%</b>
INSURANCE	\$ 3,916,002	\$ 4,265,380	\$ 4,065,380	\$ 149,378	3.8%	\$ (200,000)	-4.7%
WATERSHED/PILOT/DEBT	28,890,762	29,332,594	\$ 30,358,187	1,467,425	5.1%	1,025,593	3.5%
HEEC PAYMENT	6,225,566	7,445,441	\$ 7,500,650	1,275,084	20.5%	55,209	0.7%
MITIGATION	1,735,694	1,779,086	\$ 1,779,086	43,392	2.5%	-	0.0%
ADDITIONS TO RESERVES	2,418,452	6,884,074	\$ 7,861,035	5,442,582	225.0%	976,960	14.2%
RETIREMENT FUND	12,555,203	15,972,805	\$ 15,972,805	3,417,602	27.2%	-	0.0%
POSTEMPLOYMENT BENEFITS	4,754,061	2,849,365	\$ 2,849,365	(1,904,696)	-40.1%	-	0.0%
<b>TOTAL INDIRECT EXPENSES</b>	<b>\$ 60,495,741</b>	<b>\$ 68,528,745</b>	<b>\$ 70,386,507</b>	<b>\$ 9,890,767</b>	<b>16.3%</b>	<b>\$ 1,857,762</b>	<b>2.7%</b>
STATE REVOLVING FUND	\$ 96,342,495	\$ 95,120,996	\$ 90,798,263	\$ (5,544,232)	-5.8%	\$ (4,322,733)	-4.5%
SENIOR DEBT	302,169,940	301,278,236	294,055,644	(8,114,296)	-2.7%	(7,222,592)	-2.4%
SUBORDINATE DEBT	75,491,975	68,763,592	69,931,072	(5,560,903)	-7.4%	1,167,480	1.7%
LOCAL WATER PIPELINE CP	6,233,882	7,744,625	7,744,625	1,510,743	24.2%	-	0.0%
CURRENT REVENUE/CAPITAL	18,200,000	19,200,000	19,200,000	1,000,000	5.5%	-	0.0%
CAPITAL LEASE	3,217,060	3,217,060	3,217,060	-	0.0%	-	0.0%
DEBT PREPAYMENT	5,500,000	6,000,000	4,000,000	(1,500,000)	-27.3%	(2,000,000)	-33.3%
DEBT SERVICE ASSISTANCE	(1,182,494)	-	(1,187,297)	(4,803)	0.4%	(1,187,297)	0.0%
<b>TOTAL DEBT SERVICE</b>	<b>\$ 505,972,858</b>	<b>\$ 501,324,509</b>	<b>\$ 487,759,367</b>	<b>\$ (18,213,491)</b>	<b>-3.6%</b>	<b>\$ (13,565,142)</b>	<b>-2.7%</b>
<b>TOTAL EXPENSES</b>	<b>\$ 840,190,871</b>	<b>\$ 879,849,726</b>	<b>\$ 874,148,898</b>	<b>\$ 33,958,027</b>	<b>4.0%</b>	<b>\$ (5,700,828)</b>	<b>-0.6%</b>
<b>REVENUE &amp; INCOME</b>							
RATE REVENUE	\$ 814,648,000	\$ 842,545,600	\$ 834,268,000	\$ 19,620,000	2.4%	\$ (8,277,600)	-1.0%
OTHER USER CHARGES	9,836,508	10,244,658	10,390,434	553,926	5.6%	145,777	1.4%
OTHER REVENUE	6,139,104	5,860,303	5,838,903	(300,201)	-4.9%	(21,400)	-0.4%
RATE STABILIZATION	980,000	305,482	305,482	(674,518)	-68.8%	-	0.0%
INVESTMENT INCOME	8,587,259	20,893,685	23,346,079	14,758,820	171.9%	2,452,394	11.7%
<b>TOTAL REVENUE &amp; INCOME</b>	<b>\$ 840,190,871</b>	<b>\$ 879,849,727</b>	<b>\$ 874,148,898</b>	<b>\$ 33,958,027</b>	<b>4.0%</b>	<b>\$ (5,700,829)</b>	<b>-0.6%</b>
<b>Rate Revenue Increase over FY23</b>		<b>3.4%</b>	<b>2.4%</b>				

**ATTACHMENT B**

**Massachusetts Water Resources Authority  
Fiscal Year 2024 Operating Budget for Filing with the Trustee  
Pursuant to Section 712 of General Bond Resolution Adopted January 24, 1990**

(\$000s)

Projected Monthly Deposits:

Fund	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Total
Operating	\$26,782	\$33,478	\$26,782	\$26,782	\$33,478	\$26,782	\$26,782	\$33,478	\$26,782	\$26,782	\$33,478	\$26,782	\$348,170
Debt Service & Coverage	37,520	46,900	37,520	37,520	46,900	37,520	37,520	46,900	37,520	37,520	46,900	37,520	487,759
Debt Service Reserve	---	---	---	---	---	---	---	---	---	---	---	---	0
CORE	---	---	---	---	---	---	---	---	---	---	---	---	0
Commonwealth Obligations	2,335	2,919	2,335	2,335	2,919	2,335	2,335	2,919	2,335	2,335	2,919	2,335	30,358
Operating Reserve	605	756	605	605	756	605	605	756	605	605	756	605	7,861
Insurance Reserve	---	---	---	---	---	---	---	---	---	---	---	---	0
Renewal & Replacement Reserve	---	---	---	---	---	---	---	---	---	---	---	---	0
Rate Stabilization Reserve	---	---	---	---	---	---	---	---	---	---	---	---	0
<b>Total</b>	<u>\$67,242</u>	<u>\$84,053</u>	<u>\$67,242</u>	<u>\$67,242</u>	<u>\$84,053</u>	<u>\$67,242</u>	<u>\$67,242</u>	<u>\$84,053</u>	<u>\$67,242</u>	<u>\$67,242</u>	<u>\$84,053</u>	<u>\$67,242</u>	<u>\$874,149</u>

## Attachment C

### FY24 Final Budget vs. FY23 Projection

TOTAL MWRA	FY23 Projection	FY24 Final Budget	Change	% Change
<b>EXPENSES</b>				
WAGES AND SALARIES	\$ 107,177,992	\$ 127,828,246	\$ 20,650,253	19.3%
OVERTIME	5,177,759	5,727,593	549,834	10.6%
FRINGE BENEFITS	23,242,792	25,823,383	2,580,591	11.1%
WORKERS' COMPENSATION	2,141,788	2,144,395	2,607	0.1%
CHEMICALS	18,142,784	28,269,124	10,126,340	55.8%
ENERGY AND UTILITIES	32,750,147	31,064,893	(1,685,254)	-5.1%
MAINTENANCE	35,352,692	38,574,255	3,221,563	9.1%
TRAINING AND MEETINGS	344,538	498,597	154,059	44.7%
PROFESSIONAL SERVICES	7,910,660	10,410,484	2,499,824	31.6%
OTHER MATERIALS	6,459,708	7,167,398	707,690	11.0%
OTHER SERVICES	27,662,931	38,494,660	10,831,729	39.2%
<b>TOTAL DIRECT EXPENSES</b>	<b>\$ 266,363,790</b>	<b>\$ 316,003,028</b>	<b>\$ 49,639,237</b>	<b>18.6%</b>
INSURANCE	\$ 3,955,162	\$ 4,065,380	\$ 110,218	2.8%
WATERSHED/PILOT/DEBT	27,267,547	30,358,187	3,090,640	11.3%
HEEC PAYMENT	6,798,522	7,500,650	702,128	10.3%
MITIGATION	1,735,694	1,779,086	43,392	2.5%
ADDITIONS TO RESERVES	2,418,452	7,861,035	5,442,583	225.0%
RETIREMENT FUND	12,555,203	15,972,801	3,417,598	27.2%
POSTEMPLOYMENT BENEFITS	4,754,061	2,849,365	(1,904,696)	-40.1%
<b>TOTAL INDIRECT EXPENSES</b>	<b>\$ 59,484,641</b>	<b>\$ 70,386,504</b>	<b>\$ 10,901,862</b>	<b>18.3%</b>
STATE REVOLVING FUND	\$ 88,499,360	\$ 90,798,263	\$ 2,298,903	2.6%
SENIOR DEBT	291,597,013	294,055,644	2,458,631	0.8%
SUBORDINATE DEBT	72,645,188	69,931,072	(2,714,116)	-3.7%
LOCAL WATER PIPELINE CP	5,384,397	7,744,625	2,360,228	43.8%
CURRENT REVENUE/CAPITAL	18,200,000	19,200,000	1,000,000	5.5%
CAPITAL LEASE	3,217,060	3,217,060	-	0.0%
DEBT PREPAYMENT	5,500,000	4,000,000	(1,500,000)	-27.3%
DEBT SERVICE ASSISTANCE	(1,182,494)	(1,187,297)	(4,803)	0.4%
<b>TOTAL DEBT SERVICE</b>	<b>\$ 483,860,524</b>	<b>\$ 487,759,367</b>	<b>\$ 3,898,842</b>	<b>0.8%</b>
<b>TOTAL EXPENSES</b>	<b>\$ 809,708,956</b>	<b>\$ 874,148,898</b>	<b>\$ 64,439,942</b>	<b>8.0%</b>
<b>REVENUE &amp; INCOME</b>				
RATE REVENUE	\$ 814,648,000	\$ 834,268,000	\$ 19,620,000	2.4%
OTHER USER CHARGES	14,548,590	10,390,434	(4,158,156)	-28.6%
OTHER REVENUE	6,983,303	5,838,903	(1,144,400)	-16.4%
RATE STABILIZATION	980,000	305,482	(674,518)	-68.8%
INVESTMENT INCOME	24,591,573	23,346,079	(1,245,494)	-5.1%
<b>TOTAL REVENUE &amp; INCOME</b>	<b>\$ 861,751,466</b>	<b>\$ 874,148,898</b>	<b>\$ 12,397,432</b>	<b>1.4%</b>

**ATTACHMENT D**

**MWRA's Responses to the Advisory Board's FY2024 Integrated CIP and CEB Recommendations and Comments**

Advisory Board Recommendations and Comments	MWRA Responses
<p>The Advisory Board recommends reducing the FY24 Rate Revenue Requirement by \$8,188,819 resulting in a combined wholesale assessment increase of 2.42%.</p>	<p>Agree.</p>
<p>Advisory Board recommends a reduction of \$1,250,000 in the Wages and Salaries line item. This reduction would entail \$750,000 for the water utility and \$500,000 for the sewer utility.</p>	<p>Partially agree. MWRA agrees to the total amount of \$1,250,000 but overall split between the water and sewer utilities is based on the overall position splits.</p>
<p>Advisory Board recommends a reduction of \$1,550,000 to the Sludge Pelletization line item.</p>	<p>Disagree. MWRA is in the process of procuring a new vendor for the pellent plant contract, and given the uncertainty as it relates to PFAS and the procurement process staff recommend leaving the \$1,550,000 in the budget for FY24.</p>
<p>Consistent with the "two sides of the same coin" approach endorsed by the MWRA Board of Directors, and in line with previous MWRA policies (including in PFY24), the Authority should shift all water and sewer OPEB contributions PFY24 CEB to the pension line item and continue to do so until "virtual full funding" level is achieved (95%-105%).</p>	<p>Partially agree. In the FY24 Proposed CEB, MWRA allocated \$1.9 million in OPEB funding to the Pension line as a result of a lower OPEB contribution requirement based on the actuarial valuation completed in 2022.</p>
<p>The Authority should not move away the Advisory Board recommendation on shifting all OPEB contributions to pension without extending out the current pension funding schedule provided it doesn't dramatically impact the CEB Rate Revenue Requirement.</p>	<p>Partially agree. MWRA will work with the MWRA Retirement Board, and we anticipate a new actuarial valuation next spring.</p>
<p>Advisory Board recommends reducing the Watershed Reimbursement line item by \$500,000 to account for the assumption of the carryover of surplus from FY23 to FY24.</p>	<p>Partially agree. MWRA's FY24 Draft Final Watershed Reimbursement budget has been reduced in total by \$500,000 from DCR's FY24 Final Work Plan approved by the Trust.</p>
<p>The Advisory Board recommends that the MWRA take any and all actions needed to ensure that the Division of Water Supply Protection's active forestry management program is restarted and is exempted from the statewide forestry moratorium.</p>	<p>Disagree. The current moratorium is limited to 6 months.</p>
<p>Taking into account the projected availability of surplus funds for defeasance, the Advisory Board recommends allocating \$2,850,000 towards targeting water defeasance in the final FY2024 operating budget.</p>	<p>Agree. MWRA has utilized the defeasance to reduce the Water Rate Revenue Requirement.</p>
<p>The Advisory Board recommends continuation of the Advisory Board's "Pay it Forward" Principle, applying the FY23 Debt Service Assistance of \$1,187,297 towards the FY24 budget.</p>	<p>Agree.</p>

ATTACHMENT D

**MWRA's Responses to the Advisory Board's FY2024 Integrated CIP and CEB Recommendations and Comments**

Advisory Board Recommendations and Comments	MWRA Responses
<p><b>10.</b> The Advisory Board recommends that the MWRA work collaboratively with the Advisory Board to identify additional funding from each of the stakeholders in the system expansion process – the federal government, the Commonwealth of Massachusetts, and the communities seeking to join the MWRA waterworks system.</p>	<p>Agree.</p>
<p><b>11.</b> The Advisory Board strongly encourages the MWRA to actively participate in all necessary efforts to safeguard the shared objective of limiting as much as possible the impacts of co-permittee language in the final Deer Island NPDES permit upon the MWRA wastewater communities and, especially, any significant adjustment to the relationship between the MWRA and its member communities.</p>	<p>The MWRA will continue to work collaboratively with the communities.</p>
<p><b>12.</b> The Advisory Board anticipates spring revisit item totals of \$3,613,906 on the water utility and -\$5,040,340 on the sewer utility. (Totals exclude Debt Service Assistance and adjustments to Operating Reserve).</p>	<p>Agree.</p>
<p><b>13.</b> The Advisory Board remains committed to reducing the levels of CIP underspending and will work with the Authority to analyze, and respond to, trends following the implementation of the 25% Spend Rate Adjustment.</p>	<p>Agree.</p>
<p><b>14.</b> Advisory Board, guided by its long-standing principle of "environmentally sound and ratepayer equitable," cannot endorse a plan that places a significant financial burden on ratepayers despite its environmental advantages – whether in the form of the proposed legislation’s terms or the complete elimination of CSOs.</p>	<p>Agree.</p>

## STAFF SUMMARY


**TO:** Board of Directors  
**FROM:** Frederick A. Laskey, Executive Director  
**DATE:** June 21, 2023  
**SUBJECT:** Final FY24 Water and Sewer Assessments



**COMMITTEE:** Administration, Finance & Audit

INFORMATION  
 VOTE

Michael Cole, Budget Director  
Leo Norton, Asst. Mgr, Rates, Revenue and Finance  
Preparer/Title



Thomas J. Durkin  
Director of Finance

*The Proposed FY24 Current Expense Budget was submitted to the Advisory Board at the February 2023 Board meeting and included a 3.4% combined assessment increase.*

*MWRA's long-term goal has been to provide sustainable and predictable assessments to its member communities. In the past few years, the Advisory Board challenged MWRA to limit the assessment increases at a level less than 4%. MWRA has continuously been successful in achieving this goal by utilizing a multi-year rates management strategy, which includes controlled spending, the use of historical variable rate assumptions, and the practice of targeted debt defeasance.*

*Staff have met the Advisory Board's five-year challenge and recommend a combined assessment increase of 2.4%, which includes a 1.6% increase for sewer assessments and a 3.9% increase for water assessments.*

### RECOMMENDATION:

To adopt the following effective July 1, 2023:

- 1) Water system assessments of \$299,675,872 and sewer system assessments of \$534,592,128 for FY24.
- 2) FY24 sewer assessments of \$500,000 for the Town of Clinton and \$509,130 for the Lancaster Sewer District.
- 3) FY24 charge to the City of Worcester of \$241,807 representing approximately 7.9% of the direct operating expenses for the Clinton Wastewater Treatment Plant.
- 4) FY24 water assessments of \$3,934,629 for the City of Chicopee, \$779,537 for South Hadley Fire District #1, and \$880,070 for the Town of Wilbraham.
- 5) A wholesale water rate of \$4,536.10 per million gallons.
- 6) A retail sewer rate of \$8,536.37 per million gallons.



**DISCUSSION:**

The Final FY24 Current Expense Budget (CEB) includes a Rate Revenue Requirement of \$834,357,000, an increase of 2.42% over the FY23 requirement.

	Rate Revenue Requirement		Change from FY23	
	FY24 Final	FY23 Approved	Dollars	Percent
<b>Water</b>	\$299,675,872	\$288,304,865	\$11,371,007	3.9%
<b>Sewer</b>	\$534,592,128	\$526,343,135	\$ 8,248,993	1.6%
<b>Total</b>	\$834,268,000	\$814,648,000	\$19,620,000	2.4%

*Attachment 1 details the FY24 wholesale water and sewer charges for each MWRA community.*

The estimated annual impact of the FY24 assessment increase on the MWRA portion of the average household bill for water and sewer service in a fully served MWRA community that uses close to the system average of 61,000 gallons of water per year is approximately \$16.

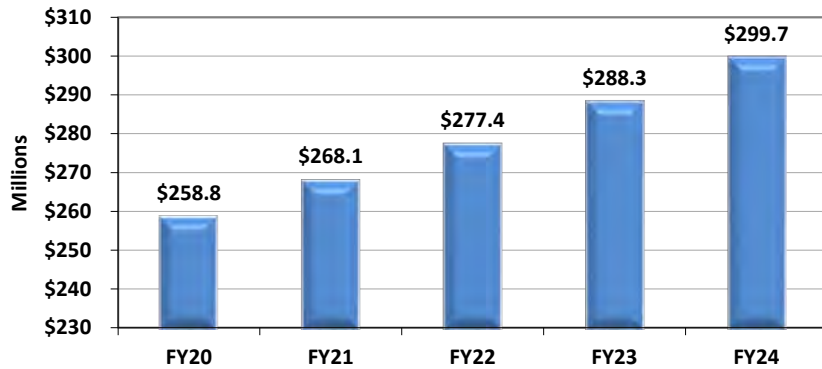
**Water Assessments**

MWRA calculates water assessments for customer communities by apportioning the water rate revenue requirement according to each community’s share of total water use for the most recent calendar year. FY24 water assessments are based on each community's share of CY22 water use of 66.065 billion gallons, a 6.1% increase compared to CY21 water use of 62.294 billion gallons. Changes in FY24 water assessments for customer communities compared to FY23 assessments will vary considerably, depending on each community's use of water and how that use factors into their share of the water system in CY22 compared to CY21. This is particularly true for communities that receive only part of their water from MWRA.

Preliminary FY24 water assessments were calculated based on preliminary CY22 water use as of February 2023. Since February, ongoing review of CY22 water meter data resulted in revised water use for the City of Boston. Boston’s CY22 water use has been reduced by 34.3 million gallons, and will result in a \$103,000 decrease to their FY24 water assessment.

The graph below illustrates the water Rate Revenue Requirement for the past 5 years. The changes from FY23 to FY24 are primarily the result of increased debt service related to water system rehabilitation and improvements.

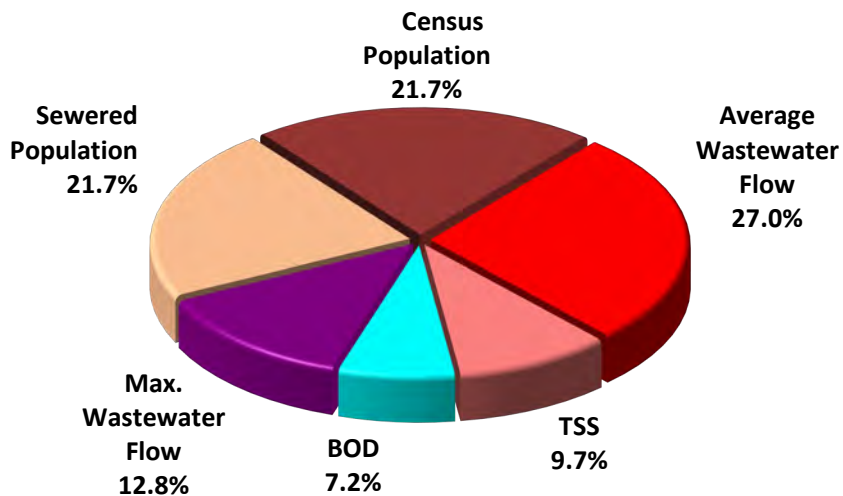
### MWRA Water Rate Revenue Requirement



### Sewer Assessments

MWRA allocates sewer assessments based on each community's share of the following allocation parameters: three-year average of annual wastewater flow, maximum month flow, strength of flow, census population, and sewered population.

On average, approximately 57% of a community's FY24 sewer assessment is based on each community's share of wastewater flow and strength of flow (total suspended solids or TSS and biochemical oxygen demand or BOD), and approximately 43% is based on population as illustrated in the following graph.



The population component of FY24 assessments were calculated using July 2021 community population estimates from the U.S. Census Bureau, as well as the percentage of total population receiving municipal sewer service reported by each MWRA community.

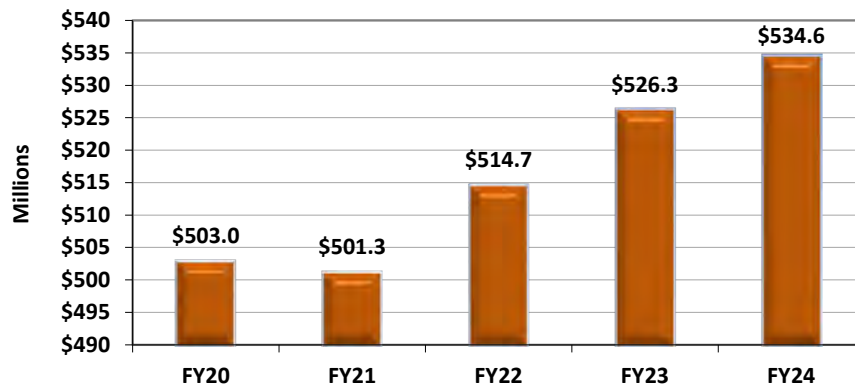
The flow component of the FY24 assessments were calculated using the average of CY20, CY21 and CY22 wastewater flows and strength of flows. CY20 and CY22 flows are based on actual metered flow, and CY21 flows were estimated during the sewer system meter replacement project.

Since preliminary assessments were calculated in February, ongoing review of CY22 wastewater meter data resulted in revised wastewater flows for several communities resulting in assessment

impacts for Boston (+\$144,880 or 0.10%), Brookline (-\$35,884 or 0.25%), Canton, (+\$66,306 or 1.30%), Chelsea (+\$89,433 or 0.92%), Dedham (+\$11,521 or 0.18%), Malden (-\$16,566 or 0.11%), Norwood (-\$57,211 or 0.61%), Revere (-\$78,836 or 0.62%), Stoneham (+\$1,709 or 0.03%), Stoughton (-\$79,740 or 1.35%), Winchester (+\$964 or 0.02%), and Woburn (-\$132,774 or 1.23%).

The graph below illustrates the sewer Rate Revenue Requirement for the past 5 years. As with the water utility, the annual changes continue to be primarily the result of increased debt service related to sewer system rehabilitation and improvements.

**MWRA Sewer Rate Revenue Requirement**



**Clinton Sewer Service Area Assessments**

FY24 operating and maintenance (O&M) and capital expenses attributable to the Clinton Wastewater Treatment Plant are \$5,311,973, an increase of 8.9% from FY23. This includes a 14.9% increase in operating costs, and a 2.5% increase in capital expenses.

In accordance with the agreement that allows the City of Worcester to take water from the Wachusett watershed, Worcester is charged approximately 7.9% of the direct operating expenses for the Clinton Wastewater Treatment Plant. FY24 direct operating expenses for the plant total \$3,056,600, resulting in an FY24 charge of \$241,807 for the City of Worcester. Worcester has been paying this annual charge to MWRA or its predecessors since 1914.

The Town of Clinton and the Lancaster Sewer District are allocated proportional shares of the remaining expenses based on annual metered wastewater flow to the Clinton Plant. Based on FY24 expenses and CY22 wastewater flows, Lancaster’s FY24 charge is \$509,130, an increase of 10.7% from FY23.

The FY24 charge for the Town of Clinton is \$4,507,522. However, pursuant to Chapter 307, Section 8 of the Acts of 1987, Clinton is only liable for the first \$500,000 of its share of O&M and capital costs.

*Attachment 2* details the expenses and corresponding charges for the Clinton Sewer Service Area.

## **CVA Water Assessments**

Based on the FY24 CIP and CEB for the Chicopee Valley Aqueduct (CVA) water system, the FY24 system assessment is \$5,595,236, an increase of 2.6% from FY23.

MWRA's CVA water assessment methodology allocates CVA assessments to the three communities served by the CVA system based on their share of prior calendar year water use.

Based on CY22 water use, FY24 assessments are as follows:

- City of Chicopee: \$3,934,629 (+3.4%)
- South Hadley Fire District #1: \$ 779,537 (-3.2%)
- Town of Wilbraham: \$ 880,070 (+4.1%)

As with the metropolitan water system, changes in FY24 water assessments for each CVA community compared to FY23 assessments vary depending on their water use and how that use factors into their share of the CVA water system in CY22 compared to CY21.

*Attachment 3* details the expenses and corresponding assessments for the CVA Water Service Area.

## **Wholesale Water Rate**

MWRA's wholesale water rate per million gallons is applied to customers purchasing MWRA water on a pay-as-you-go basis (including customers with emergency agreements). The wholesale water rate for FY24 is \$4,536.10 per million gallons. The FY24 CEB includes revenue of \$149,335 from these customers.

## **Retail Sewer Rate**

MWRA provides direct retail sewer service to Regis College in Weston and the New England Center for Children in Southborough. In accordance with MWRA Policy #OP.11, "Admission of New Community to MWRA Sewer System and Other Requests for Sewer Service to Locations Outside MWRA Sewer Service Area", both entities are charged a modified per million gallon "retail" rate that captures both sanitary and non-sanitary flows. Based on FY24 sewer assessments, the FY24 retail sewer rate is \$8,536.37 per million gallons. The FY24 CEB includes revenue of \$66,476 from these customers.

## **ATTACHMENTS:**

1. FY24 Water and Sewer Assessments
2. Clinton Wastewater Treatment Plant Sewer User Charge Determination
3. Chicopee Valley Aqueduct System Assessment

MWRA Fully Served Water and Sewer Customers	Final FY23 Water Assessment	Final FY24 Water Assessment	Percent Change from FY23	Final FY23 Sewer Assessment	Final FY24 Sewer Assessment	Percent Change from FY23	Final FY23 Combined Assessment	Final FY24 Combined Assessment	Dollar Change from FY23	Percent Change from FY23
ARLINGTON	\$5,648,095	\$5,723,767	1.3%	\$9,392,520	\$9,375,412	-0.2%	\$15,040,615	\$15,099,179	\$58,564	0.4%
BELMONT	3,134,847	3,281,643	4.7%	5,677,771	5,652,772	-0.4%	8,812,618	8,934,415	121,797	1.4%
BOSTON (BWSC)	99,390,501	101,284,742	1.9%	149,691,865	148,321,901	-0.9%	249,082,366	249,606,643	524,277	0.2%
BROOKLINE	8,018,472	8,536,286	6.5%	14,277,393	13,902,081	-2.6%	22,295,865	22,438,367	142,502	0.6%
CHELSEA	5,460,876	5,466,192	0.1%	9,362,781	9,640,943	3.0%	14,823,657	15,107,135	283,478	1.9%
EVERETT	6,422,774	6,179,040	-3.8%	10,050,691	10,045,294	-0.1%	16,473,465	16,224,334	(249,131)	-1.5%
FRAMINGHAM	9,531,024	9,526,952	0.0%	13,631,754	14,213,653	4.3%	23,162,778	23,740,605	577,827	2.5%
LEXINGTON	8,493,467	8,832,742	4.0%	8,432,789	8,861,891	5.1%	16,926,256	17,694,633	768,377	4.5%
MALDEN	8,758,033	8,565,543	-2.2%	14,707,651	14,777,974	0.5%	23,465,684	23,343,517	(122,167)	-0.5%
MEDFORD	7,666,268	7,823,249	2.0%	13,036,799	13,530,297	3.8%	20,703,067	21,353,546	650,479	3.1%
MELROSE	3,499,715	3,520,729	0.6%	7,179,811	7,002,292	-2.5%	10,679,526	10,523,021	(156,505)	-1.5%
MILTON	4,022,582	4,176,564	3.8%	6,075,110	6,314,438	3.9%	10,097,692	10,491,002	393,310	3.9%
NEWTON	14,157,661	14,430,518	1.9%	22,803,614	23,540,735	3.2%	36,961,275	37,971,253	1,009,978	2.7%
NORWOOD	4,502,690	4,646,813	3.2%	8,789,271	9,252,685	5.3%	13,291,961	13,899,498	607,537	4.6%
QUINCY	13,856,502	14,041,679	1.3%	22,536,756	23,052,419	2.3%	36,393,258	37,094,098	700,840	1.9%
READING	2,807,828	2,826,508	0.7%	5,378,343	5,245,406	-2.5%	8,186,171	8,071,914	(114,257)	-1.4%
REVERE	6,348,919	6,411,786	1.0%	12,301,606	12,448,042	1.2%	18,650,525	18,859,828	209,303	1.1%
SOMERVILLE	9,471,778	9,500,557	0.3%	17,021,568	17,759,770	4.3%	26,493,346	27,260,327	766,981	2.9%
STONEHAM	3,289,382	3,617,722	10.0%	5,652,234	5,906,212	4.5%	8,941,616	9,523,934	582,318	6.5%
WALTHAM	11,044,210	11,996,268	8.6%	14,787,236	14,796,930	0.1%	25,831,446	26,793,198	961,752	3.7%
WATERTOWN	4,147,401	4,202,656	1.3%	6,800,255	7,004,552	3.0%	10,947,656	11,207,208	259,552	2.4%
WINTHROP	1,918,276	1,865,387	-2.8%	3,970,824	3,978,407	0.2%	5,889,100	5,843,794	(45,306)	-0.8%
<b>TOTAL</b>	<b>\$241,591,301</b>	<b>\$246,457,343</b>	<b>2.0%</b>	<b>\$381,558,642</b>	<b>\$384,624,106</b>	<b>0.8%</b>	<b>\$623,149,943</b>	<b>\$631,081,449</b>	<b>\$7,931,506</b>	<b>1.3%</b>

MWRA Sewer and Partial Water Customers	Final FY23 Water Assessment	Final FY24 Water Assessment	Percent Change from FY23	Final FY23 Sewer Assessment	Final FY24 Sewer Assessment	Percent Change from FY23	Final FY23 Combined Assessment	Final FY24 Combined Assessment	Dollar Change from FY23	Percent Change from FY23
ASHLAND	\$0	\$0	-	\$2,886,179	\$2,924,453	1.3%	\$2,886,179	\$2,924,453	\$38,274	1.3%
BURLINGTON	1,253,355	1,668,047	33.1%	6,021,745	6,153,342	2.2%	7,275,100	7,821,389	546,289	7.5%
CANTON	2,022,211	2,490,180	23.1%	4,862,293	5,085,296	4.6%	6,884,504	7,575,476	690,972	10.0%
NEEDHAM	1,464,186	1,887,130	28.9%	6,760,857	7,084,841	4.8%	8,225,043	8,971,971	746,928	9.1%
STOUGHTON	118,822	103,566	-12.8%	5,471,765	5,714,438	4.4%	5,590,587	5,818,004	227,417	4.1%
WAKEFIELD	2,617,209	3,337,730	27.5%	6,848,039	6,826,973	-0.3%	9,465,248	10,164,703	699,455	7.4%
WELLESLEY	3,325,451	4,211,496	26.6%	6,273,591	6,630,804	5.7%	9,599,042	10,842,300	1,243,258	13.0%
WILMINGTON	716,510	1,145,370	59.9%	3,230,781	3,173,321	-1.8%	3,947,291	4,318,691	371,400	9.4%
WINCHESTER	1,943,817	2,356,818	21.2%	4,592,965	4,875,271	6.1%	6,536,782	7,232,089	695,307	10.6%
WOBURN	5,385,782	5,851,127	8.6%	9,810,353	10,478,117	6.8%	15,196,135	16,329,244	1,133,109	7.5%
<b>TOTAL</b>	<b>\$18,847,343</b>	<b>\$23,051,464</b>	<b>22.3%</b>	<b>56,758,568</b>	<b>58,946,856</b>	<b>3.9%</b>	<b>\$75,605,911</b>	<b>\$81,998,320</b>	<b>\$6,392,409</b>	<b>8.5%</b>

MWRA Sewer-only Customers	Final FY23 Water Assessment	Final FY24 Water Assessment	Percent Change from FY23	Final FY23 Sewer Assessment	Final FY24 Sewer Assessment	Percent Change from FY23	Final FY23 Combined Assessment	Final FY24 Combined Assessment	Dollar Change from FY23	Percent Change from FY23
BEDFORD				\$3,696,476	\$3,784,242	2.4%	\$3,696,476	\$3,784,242	\$87,766	2.4%
BRAINTREE				10,873,607	10,766,148	-1.0%	10,873,607	10,766,148	(107,459)	-1.0%
CAMBRIDGE				28,578,466	30,213,141	5.7%	28,578,466	30,213,141	1,634,675	5.7%
DEDHAM				6,153,063	6,409,056	4.2%	6,153,063	6,409,056	255,993	4.2%
HINGHAM SEWER DISTRICT				2,132,148	2,172,503	1.9%	2,132,148	2,172,503	40,355	1.9%
HOLBROOK				1,936,897	2,028,551	4.7%	1,936,897	2,028,551	91,654	4.7%
NATICK				6,287,053	6,408,947	1.9%	6,287,053	6,408,947	121,894	1.9%
RANDOLPH				6,940,976	7,144,574	2.9%	6,940,976	7,144,574	203,598	2.9%
WALPOLE				4,449,490	4,614,313	3.7%	4,449,490	4,614,313	164,823	3.7%
WESTWOOD				3,274,618	3,249,150	-0.8%	3,274,618	3,249,150	(25,468)	-0.8%
WEYMOUTH				13,703,131	14,230,541	3.8%	13,703,131	14,230,541	527,410	3.8%
<b>TOTAL</b>				<b>\$88,025,925</b>	<b>\$91,021,166</b>	<b>3.4%</b>	<b>\$88,025,925</b>	<b>\$91,021,166</b>	<b>\$2,995,241</b>	<b>3.4%</b>

MWRA Water-only Customers	Final FY23 Water Assessment	Final FY24 Water Assessment	Percent Change from FY23	Final FY23 Sewer Assessment	Final FY24 Sewer Assessment	Percent Change from FY23	Final FY23 Combined Assessment	Final FY24 Combined Assessment	Dollar Change from FY23	Percent Change from FY23
LYNNFIELD WATER DISTRICT	\$865,543	\$945,917	9.3%				\$865,543	\$945,917	\$80,374	9.3%
MARBLEHEAD	2,941,372	3,130,039	6.4%				2,941,372	3,130,039	188,667	6.4%
NAHANT	578,355	592,489	2.4%				578,355	592,489	14,134	2.4%
SAUGUS	5,020,868	5,446,924	8.5%				5,020,868	5,446,924	426,056	8.5%
SOUTHBOROUGH	984,014	1,202,081	22.2%				984,014	1,202,081	218,067	22.2%
SWAMPSCOTT	2,552,649	2,610,031	2.2%				2,552,649	2,610,031	57,382	2.2%
WESTON	2,456,156	2,867,622	16.8%				2,456,156	2,867,622	411,466	16.8%
<b>TOTAL</b>	<b>\$15,398,957</b>	<b>\$16,795,103</b>	<b>9.1%</b>				<b>\$15,398,957</b>	<b>\$16,795,103</b>	<b>\$1,396,146</b>	<b>9.1%</b>

MWRA Partial Water-only Customers	Final FY23 Water Assessment	Final FY24 Water Assessment	Percent Change from FY23	Final FY23 Sewer Assessment	Final FY24 Sewer Assessment	Percent Change from FY23	Final FY23 Combined Assessment	Final FY24 Combined Assessment	Dollar Change from FY23	Percent Change from FY23
DEDHAM-WESTWOOD WATER DISTRICT	\$256,078	\$670,890	162.0%				\$256,078	\$670,890	\$414,812	162.0%
LYNN (LWSC)	187,732	133,677	-28.8%				187,732	133,677	(54,055)	-28.8%
MARLBOROUGH	6,733,069	7,138,193	6.0%				6,733,069	7,138,193	405,124	6.0%
NORTHBOROUGH	1,508,715	1,476,411	-2.1%				1,508,715	1,476,411	(32,304)	-2.1%
PEABODY	3,781,670	3,952,791	4.5%				3,781,670	3,952,791	171,121	4.5%
<b>TOTAL</b>	<b>\$12,467,264</b>	<b>\$13,371,962</b>	<b>7.3%</b>				<b>\$12,467,264</b>	<b>\$13,371,962</b>	<b>\$904,698</b>	<b>7.3%</b>
<b>SYSTEMS TOTAL</b>	<b>\$288,304,865</b>	<b>\$299,675,872</b>	<b>3.94%</b>	<b>\$526,343,135</b>	<b>\$534,592,128</b>	<b>1.57%</b>	<b>\$814,648,000</b>	<b>\$834,268,000</b>	<b>\$19,620,000</b>	<b>2.41%</b>

Massachusetts Water Resources Authority  
Clinton Wastewater Treatment Plant  
Sewer User Charge Determination

BUDGETED EXPENSES: Preliminary FY24	
Clinton Direct Operating Expenses:	\$3,056,600
MWRA Support Allocation:	616,268
Subtotal O&M Expenses:	\$3,672,868
Total Debt Service Expenses:	\$1,639,105
Total Clinton Service Area Expenses	\$5,311,973
Less Revenue (City of Worcester Payment)	-241,807
Clinton WWTP Rate Revenue Requirement:	\$5,070,165

WASTEWATER FLOW and FLOW SHARES:	CY2022		
	Town of Clinton Flow	Lancaster Sewer District Flow	Total Wastewater Flow
Average Daily Flow (MGD)	2.039	0.254	2.293
Average Flow (MG/YR)	744.134	92.885	837.019
Proportional Share of Flow	88.90%	11.10%	100.0%

Sewer User Charge Determination

TOWN OF CLINTON	
O&M Expenses	\$3,672,868
Less Revenue (City of Worcester Payment)	-241,807
O&M Expenses to be Recovered	\$3,431,061
Clinton's Share of Flow	88.90%
Clinton's Share of O&M Costs	\$3,050,311
<b>Total Clinton O&amp;M Charge</b>	<b>\$3,050,311</b>
Debt Service Costs to be Recovered	\$1,639,105
Clinton's Share of Wastewater Flow	88.90%
<b>Total Clinton Debt Service Charge</b>	<b>\$1,457,211</b>
<b>Total Clinton O&amp;M and Debt Service Charge</b>	<b>\$4,507,522</b>
Less MWRA Water Ratepayer Subsidy	-4,007,522
Billable Charge to the Town of Clinton as per CH. 307, Section 8 The Acts of 1987	\$500,000

LANCASTER SEWER DISTRICT	
O&M Expenses	\$3,672,868
Less Revenue (City of Worcester Payment)	-241,807
O&M Expenses to be Recovered	\$3,431,061
Lancaster's Share of Flow	11.10%
Lancaster's Share of O&M Costs	\$380,750
<b>Total Lancaster Sewer District O&amp;M Charge</b>	<b>\$380,750</b>
Debt Service Costs to be Recovered	\$1,639,105
Lancaster's Share of Wastewater Flow	11.10%
<b>Total Lancaster Sewer District Debt Service Charge</b>	<b>\$181,894</b>
<b>Total Lancaster O&amp;M and Debt Service Charge</b>	<b>\$562,644</b>
Billable Charge to Lancaster Sewer District	\$562,644

Clinton WWTP Charges and Payment Schedule

Sewer Customer	Billable Charges	Change from Prior Year	
		Amount	Percentage
Town of Clinton (billable)	\$500,000	\$0	0.0%
Lancaster Sewer District (before adj.)	\$562,644		
Lancaster Sewer District (prior yr. adj.)	-\$53,514		
Lancaster Sewer District (billable)	\$509,130	\$49,246	10.7%
<b>Total Billable Sewer Use Charges</b>	<b>\$1,009,130</b>		
City of Worcester	\$241,807	\$31,276	14.9%

Payment 1 on or before Sept 15, 2023	Payment 2 on or before Nov 15, 2023	Payment 3 on or before Feb 15, 2024	Payment 4 on or before May 15, 2024
\$125,000	\$125,000	\$125,000	\$125,000
\$127,283	\$127,283	\$127,283	\$127,283
<b>\$252,283</b>	<b>\$252,283</b>	<b>\$252,283</b>	<b>\$252,283</b>
\$0	\$0	\$241,807	\$0

# Massachusetts Water Resources Authority

## Chicopee Valley Aqueduct Water System Assessment

### FY2024 Budget and Assessments

CVA Operating Budget	FY23	FY24	Change from Prior Year	
			Dollars	Percent
CVA Cost Center Expenses	\$1,077,970	\$1,210,632	\$132,662	12.3%
Allocated Waterworks Expenses	149,654	143,193	-6,461	-4.3%
Allocated Watershed/PILOT	509,913	502,979	-6,934	-1.4%
Allocated Watershed Land Acquisition	30,433	28,853	-1,580	-5.2%
Allocated MWRA Indirect Expenses	700,654	702,601	1,946	0.3%
<b>SUBTOTAL OPERATING BUDGET</b>	<b>\$2,468,624</b>	<b>\$2,588,257</b>	<b>\$119,633</b>	<b>4.8%</b>

CVA Capital Budget	FY23	FY24	Change from Prior Year	
			Dollars	Percent
Capital Expenses	\$3,047,744	\$3,153,967	\$106,223	3.5%
<b>TOTAL CVA BUDGET</b>	<b>\$5,516,368</b>	<b>\$5,742,224</b>	<b>\$225,856</b>	<b>4.1%</b>

BASE COMMUNITY ASSESSMENT	FY23 <sup>1</sup>	FY24 <sup>2</sup>	Change from Prior Year	
			Dollars	Percent
Chicopee	\$3,847,836	\$4,037,457	\$189,620	4.9%
South Hadley Fire District #1	814,572	801,557	-13,015	-1.6%
Wilbraham	853,960	903,210	49,250	5.8%
<b>CVA BASE SYSTEM ASSESSMENT</b>	<b>\$5,516,368</b>	<b>\$5,742,224</b>	<b>\$225,856</b>	<b>4.1%</b>

PRIOR PERIOD ADJUSTMENTS <sup>3</sup>	FY23	FY24	Change from Prior Year	
			Dollars	Percent
Chicopee	-\$43,446	-\$102,827	-\$59,381	136.7%
South Hadley Fire District #1	-9,107	-22,020	-12,913	141.8%
Wilbraham	-8,833	-23,141	-14,307	162.0%
<b>TOTAL ADJUSTMENTS</b>	<b>-\$61,386</b>	<b>-\$147,988</b>	<b>-\$86,602</b>	<b>141.1%</b>

ADJUSTED ASSESSMENT	FY23	FY24	Change from Prior Year	
			Dollars	Percent
Chicopee	\$3,804,390	\$3,934,629	\$130,239	3.4%
South Hadley Fire District #1	805,465	779,537	-25,928	-3.2%
Wilbraham	845,127	880,070	34,943	4.1%
<b>ADJUSTED ASSESSMENT</b>	<b>\$5,454,982</b>	<b>\$5,594,236</b>	<b>\$139,254</b>	<b>2.55%</b>

<sup>1</sup> Based on CY2021 water use and before prior period adjustments.

<sup>2</sup> Based on CY2022 water use and before prior period adjustments.

<sup>3</sup> Prior period adjustment to account for budget to actual expenses.

## STAFF SUMMARY

**TO:** Board of Directors  
**FROM:** Frederick A. Laskey, Executive Director  
**DATE:** June 21, 2023  
**SUBJECT:** Infor Lawson CloudSuite Upgrade  
RPI Consultants, LLC  
Contract 7286




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**COMMITTEE:** Administration, Finance & Audit

INFORMATION  
 VOTE

Paul Fentross, Business Applications Manager  
Paula Weadick, Director, MIS  
Preparer/Title

  
Michele S. Gillen  
Director of Administration

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*Contract 7286 will migrate MWRA's existing Enterprise Resource Planning (ERP) System, Infor/Lawson to the Infor Software-as-a-Service platform Infor CloudSuite. The migration includes configuration of three environments, migration of data, elimination of existing customization, and the re-establishment of existing interfaces with the new platform. This contract will also provide three years of Managed Services.*

### RECOMMENDATION:

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.

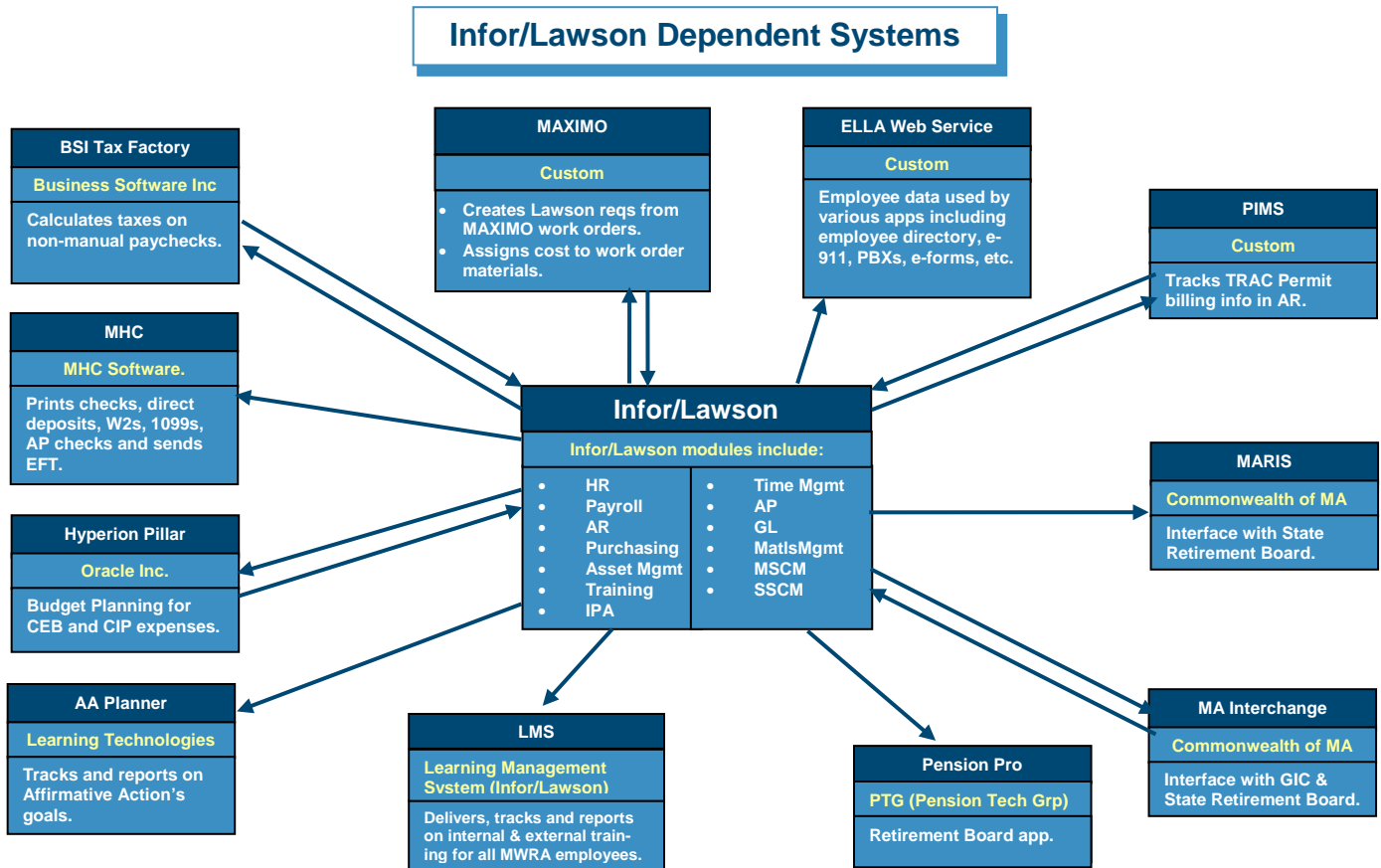
### DISCUSSION:

On March 24, 1999, the Board of Directors approved Contract 6362 with Lawson Associates (now Infor Inc.) to implement an integrated financial and procurement management system. In May 2000, the implementation of a Human Resources/Payroll module was included as part of the Lawson System. Today this set of application modules represents the core administrative and financial management functionality for the MWRA (Human Resources, Payroll, Finance, Procurement, and Materials Management).

In October 2012, as part of an effort to reduce the use of customized applications, use more off-the-shelf products, and respond to the MIS 5-Year Strategic Plan recommendations (including enhancing e-Procurement functionality and reducing paper), the Board of Directors approved the implementation of the Strategic Sourcing, Supplier Order Management and Contracts Management modules into the Infor Lawson environment.



The illustration below shows the significant Infor/Lawson modules in use and interfaces with other applications.



## This Contract

The current installed version of this software suite is covered under legacy maintenance and is several versions behind the latest release by the manufacturer. In addition, the infrastructure platform has reached end of support. In 2019, in order to make the most informed business and financial decision as to whether or not to remain with Infor/Lawson and upgrade to the current version or consider alternative Enterprise Resource Planning (ERP) systems, Gartner, Inc. was contracted to conduct an ERP assessment. This assessment incorporated interviews with stakeholders to identify business capabilities needed and mapping those against capabilities of ERP solutions on the market. Their final report recommended that MWRA upgrade to the latest on premise version of the Infor/Lawson software.

In 2020, MWRA issued an RFQ/P soliciting vendors for proposals to upgrade the existing on premise Infor/Lawson environment and implement additional software modules that would replace legacy custom code being used. Only one proposal was received in response to the RFQ/P. Staff reviewed the proposal and determined that some of the needed business capabilities were no longer being offered in an “on premise” solution. This is the trend with many technology solution

providers. The Selection Committee determined that in order to meet all business capabilities needed, the scope of work associated with the RFQ/P would need to be updated to include the full migration of the MWRA existing environment to the Infor CloudSuite platform.

There are significant benefits to migrating to the cloud and using a ERP Software as a Service (SaaS) such as Infor's CloudSuite. These benefits include:

1. Business Continuity is implemented by default because the system and application environment is replicated across other data centers in other geographic areas. If the primary system and application goes down then application users are shifted to another application environment in another data center.
2. Centralized data security. The Infor CloudSuite platform is hosted on Amazon Web Services (AWS). In AWS, data is encrypted in transit and at rest, is backed up continually, and can be restored in the event that is needed.
3. Centralized system security. Utilizing role based access, permissions are locked down to only those who should have access. Cloud providers make cybersecurity a top priority. They hire expert cybersecurity personnel and leverage their knowledge to continually improve system security.
4. Application performance is highly scalable since additional resources can be provisioned in the cloud on demand.
5. Application upgrades and patches are managed by the cloud application services provider (Infor) eliminating the administrative overhead of managing these update from MWRA ERP support personnel and system administrators allowing them to focus on ERP functional issues and other MWRA on premise applications.
6. System infrastructure is managed by the cloud infrastructure provider (Amazon Web Services). This includes hardware, databases, and operating systems ensuring that the infrastructure platform hosting the application stays current and supported by manufacturers. This allows MWRA system administrators to focus on other MWRA on premise infrastructure and systems.
7. Utilizing a SaaS solution eliminates the need to run the infrastructure within the MWRA datacenter reducing power, cooling and space requirements.

The Scope of Work (SOW) for the Infor Lawson CloudSuite Upgrade Project includes 18 tasks and 77 related deliverables. RPI Consultants, LLC (RPI) will partner with MWRA management and departmental personnel from the initial project governance, planning and strategy discussions through the project warranty period. Given the size and scope, the duration of this project is expected to be up to 3 years. It will require the active participation of many MWRA managers, subject matter experts, and end users in order to ensure that the delivered ERP application satisfies MWRA requirements. The high level details of the SOW are presented below:

- Configure three system environments (Dev/Test/PROD)
- Implement Core Functionality of the CloudSuite applications:

- Financials and Supply Management
- Mobile Supply Chain Management
- Strategic Sourcing/Supplier Portal
- Supply Chain Management
- Work Force Management
- Global Human Resource
- Global Payroll
- Recreate existing system interfaces with other MWRA systems in CloudSuite
- Replace Infor/Lawson 9.x Customizations
- Report Generation
- Migration of data from the existing environment to the CloudSuite platform
- Training and documentation
- Three years of post-implementation Managed Services

**Procurement Process**

On April 12, 2023, MWRA issued a one-step Request for Qualifications Statements/Proposals (RFQ/P) that was publicly advertised in Goods and Services, the Boston Herald, Banner Publications and El Mundo. In addition, eleven candidate firms were directly notified, and more than 200 firms received notice of the RFQ/P via the MWRA Supplier Portal. The RFQ/P documents were requested by 20 firms. The RFQ/P included a Scope of Work that detailed 17 Tasks with deliverables to achieve the above-stated goals to migrate to the Infor CloudSuite applicaton.

On May 17, 2023, MWRA received proposals from two firms: CherryRoad Technologies Inc. and RPI Consultants, LLC.

After an initial review of the two proposals, there were concerns that the proposals lacked adequate details regarding technical approach to the Scope of Work established by the Selection Committee and lacked adequate details around the price submissions. Based on those concerns, a request for “Best and Final Offer” (BAFO) was issued to both proposers on May 31, 2023, with responses due on June 6, 2023.

Both proposers submitted BAFO responses which included updated pricing submissions and answers to clarification questions. The proposal costs compared to the Staff Estimate are presented below:

<b><u>Proposer Teams</u></b>	<b><u>Cost <sup>1</sup></u></b>
CherryRoad Technologies	\$8,132,722.40
RPI Consultants, LLC	\$8,849,440.00
<i>Staff Estimate</i>	\$7,600,000.00

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<sup>1</sup> Five year cost of the project including migration of five years of data to Infor CloudSuite application database.

Both proposals exceeded the Staff Estimate. Staff underestimated the level of effort required to migrate the core functionality and data, perform testing and provide training to MWRA staff. A cloud migration of an enterprise application like ERP is a very large undertaking; this will be a first for the MWRA and as a result it was very difficult to foresee the cost estimates that implementers and providers would submit.

Additional factors contributing to the rise in costs include the inflationary impact on software and services of the last few years. There are no other more cost effective options in keeping these business capabilities in a single solution than migrating to Infor CloudSuite. Furthermore, since the full suite of Infor HR, Financial and Strategic Sourcing modules are only available in the cloud it is in the Authorities interest to start this migration project as soon as possible to keep rising costs at a minimum.

There are also factors that will mitigate the stated costs of this project. There will be savings as a result of moving to a SaaS environment such as infrastructural savings, energy and power savings and business continuity savings. There will also be the benefit of freeing up MWRA personnel to perform more value-added tasks that their roles really demand and potentially reducing the need to acquire professional services and staff augmentations. These offsetting factors to the stated cost would take a deeper Total Cost of Ownership (TCO) analysis to quantify but in all likelihood can be realized in the intermediate and longer terms.

The Selection Committee convened on June 8, 2023, to assess the proposals. Five criteria were used to evaluate each of the proposals: Cost (25 points); Technical Approach (25 points); Qualifications and Key Personnel (20 points); Experience/Past Performance on similar public and private non-Authority projects ongoing and completed within the past seven years (15 points); and Capacity/Organization and Management Approach (15 points). Focusing first on a comparison of cost and approach for each of the 17 Tasks set forth in the Scope of Work, the Selection Committee then discussed each member's evaluation of Proposers based on the criteria.

The Selection Committee scored and ranked the proposals as follows:

<b>Rank</b>	<b>Proposer</b>	<b>Total Points</b>
1	RPI Consultants, LLC	296.25
2	CherryRoad Technologies	262

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

The Selection Committee scored RPI the highest. Although RPI submitted the highest cost proposal, its proposal was more responsive and contained the most details regarding the performance of the tasks in the Scope of Work. RPI's proposal also did a good job of addressing the informational requirements of the RFQ/P and gave a good description of their proposed Project Management Methodology. They provided very understandable descriptions of the in-scope and out-of-scope items for their Technical Development, Change Management, Testing, Data Migration, Reporting and Training and clearly identified the project Assumptions.

RPI's proposal included a large team of highly qualified "Infor Certified" personnel including managers, some of whom are located in Massachusetts and would be committed to the project. RPI also had excellent public sector references for contacts of similar scope. RPI provided a solid technical approach in their proposal. They indicated that technical solutions would be accomplished using native Infor CloudSuite tools and that they would be responsible for all "RICE" items (Reports, Integrations, Conversions, Extensions) up to the available budgeted amount. RPI further offered a Sustainment Plan to help ensure that MWRA support personnel and end users will be prepared to perform their roles in the new application post go-live. RPI has a significant webinar presence for Infor topics and training and is including 8 spots in their Infor Bootcamp and providing onsite training for our departmental and functional super users.

Second-ranked CherryRoad partnered with Intellias Inc. on its proposal. CherryRoad also proposed a thoughtful and competitive proposal with a well-developed project approach. However, CherryRoad's technical approach lacked the managed services, training support, and implementation strategy that the committee expected. The proposal from CherryRoad included seven dedicated Intellias personnel, only five of whom are "Infor Certified". It was also noted that CherryRoad would subcontract most of the work included in the Scope of Work, and lacked a local presence. CherryRoad's sole reference was for Intellias and involved a project that was dissimilar in scope to this project, and was for a private sector entity. Finally, CherryRoad took exception to many terms of the Authority's proposed Agreement, and the Scope of Work generally, which would cause notable obstacles for coming to an agreement, should CherryRoad be selected.

Based on the reasons set forth above, the Selection Committee determined RPI submitted a strong proposal with a highly qualified and large team, a detailed technical approach reflecting the Authority's stated preference to have managed services with significant training provided, proven experience on relevant projects for public sector clients, which resulted in the overall best value for the Authority. Therefore, the Selection Committee recommends award of this contract to RPI Consultants, LLC in an amount not to exceed \$8,849,440.

**BUDGET/FISCAL IMPACT:**

The Draft Final FY24 CIP includes a budget of \$7,600,000 for Contract 7286. The award amount is \$1,249,440 over budget. This amount will be absorbed in the FY24-28 CIP Spending Cap.

**MBE/WBE PARTICIPATION:**

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

## STAFF SUMMARY

**TO:** Board of Directors  
**FROM:** Frederick A. Laskey, Executive Director  
**DATE:** June 21, 2023  
**SUBJECT:** Deer Island Wind Turbine Generator 1 Failure




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**COMMITTEE:** Wastewater Policy & Oversight

INFORMATION  
 VOTE

David F. Duest, Director, Deer Island Treatment Plant  
Preparer/Title



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

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### RECOMMENDATION:

For information only. On May 29, 2023, Wind Turbine Generator 1 at Deer Island experienced a catastrophic failure. This staff summary describes the situation and actions taken since then.

### DISCUSSION:

The two 600 kW wind turbines were commissioned in November 2009 and have been operating since April 2010.

#### **Wind Turbine Generator-1 Maintenance Concern**

On April 11, 2022, on Wind Turbine Generator (WTG)-1, the main bearing on the shaft between the blades and the generator failed. As a result, the nacelle (the main equipment housing at the top of the tower) was locked into position so it could not rotate and the WTG control system was placed into emergency mode.

Since April 2022, WTG-1 has remained in this emergency/locked status while the cause of the bearing failure was investigated and a repair plan developed. Recently, a replacement main bearing was ordered by MWRA's wind turbine maintenance contractor with the expected return to operation in July 2023.

#### **WTG-1 Catastrophic Failure**

Shortly after 10:00 a.m. on Monday, May 29, 2023, a concerned citizen on public access notified security personnel at Deer Island that WTG-1 was falling apart, and also indicated they were on the phone with police. A video posted on social media showed at least two sections of blades broke free from the unit during the initial failure of the turbine (several photos of the blade failure are shown below). The section of blade, highlighted, was actually thrown nearly 800 feet from the turbine when found later that day.



In response, Deer Island safety, management and primary operations were notified and a portion of Deer Island public access was closed as a precaution. At around 10:15 a.m., Winthrop Fire, Winthrop Police, Boston Fire, Action EMS, and Massachusetts State Police arrived on Deer Island. Logan Airport and the Coast Guard were notified. An incident command center was set up south of Deer Island's Reception/Training building, a safe distance from WTG-1. The incident received intense interest from local news agencies and a number of video crews were dispatched to Deer Island.

The WTG-1 blades continued to spin without any ability to control their speed, with observable damage continuing to occur to the blades, in addition to occasional tower vibrations. During this period, two additional small sections of blade came loose and were observed being thrown from the turbine. It was also apparent that damage was occurring to equipment in the nacelle because of a burning smell and pieces of metal fragments in the base of the tower. MWRA's turbine maintenance contractor attempted several steps to engage the braking system through the control system at the base of the tower. The primary controller appeared to have failed and, therefore, the contractor was unable to control operations. Upon the suggestion of MWRA staff, the maintenance contractor moved the controller from the other turbine. This allowed the contractor to establish communication with the equipment in the nacelle, but the braking system would not engage, indicating a failure in the hydraulic system. It was determined that it was unsafe to ascend the tower while the blades were spinning without control. The only option was to wait for the winds to die down, or the rotor to stop rotating, so technicians could safely climb the tower and lock the blades in place.

By 2:20 p.m., blade rotation had ceased allowing the maintenance contractor to ascend the tower and mechanically lock the blades in place. The contractor discovered substantial damage in the nacelle (photos below) with equipment broken from mountings and the hub rotor and blades separated from the nacelle, leaning forward from its normal vertical position with numerous retaining bolts snapped. Out of an abundance of caution, staff isolated the area around WTG-1 and kept portions of public access closed on the southwest side of the island until the turbine could be made fully safe. There were no injuries as a result of this failure and no secondary damages outside the damage to WTG-1.



### **WTG-1 Emergency Removal**

By Wednesday, May 31, staff had solicited two bids for removal of the wind turbine and MWRA received a DCAMM waiver for emergency work. O'Connor Constructors, Inc., the lowest bidder, was authorized to begin the work.



On Thursday morning, the first crane arrived and the contractor began the process of stabilizing the unit while preparations were made to lower the rotor and blades to the ground. Throughout the day the contractor's personnel stabilized equipment inside the nacelle, including pulling the rotor and blades back into a vertical position, strapping them to the crane for additional support, and positioning the blades for lowering the next morning. On Friday June 2, the second crane arrived and the rotor and blades were successfully lowered to the ground (photos above). With WTG-1 fully stabilized and made safe, public access was reopened in time for the weekend.



Over the week of June 5, the contractor continued to remove equipment from inside the nacelle. The nacelle housing itself remains on the top of the tower to protect remaining equipment from the weather. WTG-1 has sustained extensive damage. Two of the three wind turbine blades have incurred enough damage to be irreparable and much of the equipment in the nacelle is damaged and will require extensive repair or replacement. All equipment was removed and the blade assembly will be stored in a secure area for future analysis.


### **Next Steps**

Failure analysis will be performed to attempt to determine the causes and sequence of the hydraulic brake failure, PLC failure, and the failure of the turbine blades.

WTG-2 was proactively paused on Monday, May 29 out of an abundance of caution, and remains in this mode. Before being returned to operation, a full interior and exterior inspection will be performed, including a blade inspection. The hydraulic and braking systems will be inspected in addition to the PLC and control system. In addition, MWRA has contracted separately for a third party inspection. After these inspections are completed and it is technically cleared to start up, MWRA management will determine when to resume normal operation of WTG-2. MWRA is also arranging for an inspection of the Charlestown wind turbine as a precautionary measure.

Staff will research potential safety system enhancements for WTG-2 as well as assess the costs and benefits to fully repairing WTG-1.


**STAFF SUMMARY**

**TO:** Board of Directors  
**FROM:** Frederick A. Laskey, Executive Director   
**DATE:** June 21, 2023  
**SUBJECT:** Deer Island Wastewater Treatment Plant Draft National Pollutant Discharge Elimination System (NPDES) Permit and Draft State Surface Water Discharge Permit

**COMMITTEE:** Wastewater Policy & Oversight

X  INFORMATION  
  VOTE

Carolyn M. Fiore, Deputy Chief Operating Officer  
 Wendy S. Leo, Sr. Program Manager, NPDES  
Betsy Reilley, Director, Environmental Quality  
 Preparer/Title

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

*On May 31, 2023, EPA and MassDEP issued draft permits for the Deer Island Wastewater Treatment Plant and Combined Sewer Overflow outfalls. The public comment period was initially set for 60 days, but has been extended by 30 days to August 30, 2023. MWRA will submit a comment letter by that date to suggest revisions to the draft permit and also to protect MWRA’s right to appeal portions of the final permit when it is ultimately issued. This staff summary provides an overview of the draft permit requirements and describes issues staff will address in MWRA’s comment letter. As anticipated, the permit names the 43 MWRA wastewater member communities as Co-permittees, with requirements relating to operations and maintenance of their collection systems.*

**RECOMMENDATION:**

For information only.

**DISCUSSION:**

MWRA’s Deer Island Treatment Plant requires a National Pollutant Discharge Elimination System (NPDES) permit to discharge into Massachusetts Bay. The permit currently in effect was issued in July 2000 and has been administratively continued since its August 2005 expiration date. In May 2023, the U.S. Environmental Protection Agency (EPA) and the Massachusetts Department of Environmental Protection (MassDEP) each issued a draft permit<sup>1</sup> encompassing operation of the Deer Island Treatment Plant; CSOs currently permitted to MWRA, Boston Water & Sewer Commission (BWSC), Cambridge, Chelsea, and Somerville; and the sewer collection systems of all MWRA wastewater member communities.

<sup>1</sup> In Massachusetts, NPDES permits are no longer issued jointly by EPA and MassDEP. Although jointly administered by EPA and MassDEP in the past, as of June 20, 2020, the NPDES permit program is administered solely by the EPA. MassDEP administers a parallel surface water discharge permitting program. In this instance, the draft state surface water discharge permit generally incorporates the draft NPDES permit by reference and adds a few state-specific requirements relating to monitoring of PFAS compounds and reporting. As used in this staff summary “draft permit” refers to the NPDES draft permit, unless otherwise specified.

The state and federal permits were issued for public comment on May 31, 2023; MWRA and members of the public have until August 30, 2023 to provide comments to EPA and MassDEP on the draft permits. EPA will hold a public meeting and a public hearing on July 12. After the comment period closes, EPA and MassDEP will make any changes to the permits they deem appropriate based on comments received. EPA will issue a Response to Comments with the final permit. The new permit will be in effect for five years.

The permitting process requires that in order to preserve the right to appeal, MWRA must raise all reasonably ascertainable issues and submit all arguments supporting its position by the close of the public comment period. If MWRA wishes to appeal EPA's final permit decision, it must petition the Environmental Appeals Board within 30 days of the issuance of the final permit decision.<sup>2</sup> MWRA may appeal any issue that it provided comment on during the public comment period or any changes from the draft to the final permit decision.



### *Co-permittees*

A major item in this draft permit, which will be the subject of MWRA comment, is the inclusion of Co-permittees (all sewer system member communities) for requirements relating to collection system Operation and Maintenance, and the inclusion of the “CSO-responsible Co-permittee” communities of BWSC, Cambridge, Chelsea and Somerville for requirements relating to CSOs.

This draft permit has specific requirements with which the municipalities must comply. The CSO-responsible Co-permittee communities currently hold NPDES permits for their CSO discharges. The remainder of the MWRA wastewater communities have not applied for NPDES permits, yet are included in in the draft permit as Co-permittees and will be responsible for certain requirements of the permit. Included in the draft permit sections, applicable to member communities, are reporting requirements for unauthorized discharges from the municipal collection systems (e.g. sanitary sewer overflows); operation and maintenance (O&M) requirements for their respective collection systems, including provisions for infiltration/inflow (I/I) reduction programs and for updating existing O&M plans; a major new requirement for “Major Storm Plans” and reporting on their implementation; and requirements for backup power.

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<sup>2</sup> Along similar lines, within 30 days from the issuance of the final state surface water discharge permit, this action may be appealed by filing a request for an adjudicatory hearing with MassDEP's Office of Appeals and Dispute Resolution.

The CSO-responsible Co-permittee communities already have (administratively continued) NPDES permits and have applied for renewal as required. MWRA maintains that these should not be combined into the Deer Island permit because CSO systems already have NPDES permits and, therefore, do not require coverage under the MWRA permit. Moreover, by utilizing separate NPDES permits the roles, responsibilities, and potential liabilities are more clearly defined and more narrowly tailored to the individual holders of those respective NPDES permits.

MWRA has recently submitted comments that question both the legal and policy bases regarding the inclusion of Co-permittees in NPDES permits. In 2015, EPA's Environmental Appeals Board, responsible for hearing administrative appeals of permits, ruled against the Charles River Pollution Control District and others' appeal of similar language in its permit issued in 2014, and upheld EPA's ability to add satellite communities and specific permit requirements to a NPDES permit. Staff understand that the MWRA Advisory Board has similar concerns and has engaged its own legal counsel.

The Co-permittee language in the draft permit is similar to that in the current Clinton Plant's permit. EPA has attempted to clarify the roles and responsibilities of the municipalities and MWRA as Co-permittees. Each Co-permittee is responsible for: (a) operation and maintenance of the collection system owned and operated by the municipality, (b) ensuring backup power for their collection systems (*e.g.* pump stations), (c) new reporting requirements for unauthorized discharges (*e.g.* sanitary sewer overflows) and (d) developing and implementing a Major Storm Plan, an I/I Reduction Plan, and a Sanitary Sewer Overflow Mitigation Plan. Further, the CSO-responsible Co-permittees have responsibilities for their CSOs and reporting.

### ***Operation and Maintenance of the MWRA- and Community-Owned Sewer Systems***

Requirements for adequate operation and maintenance staffing, I/I reduction to prevent high-flow-related unauthorized discharges from the collection system, preventative maintenance, and alternative power sources are much more detailed than what is in the existing permit. The requirements apply to MWRA as well as to the co-permittees. Each permittee must develop a collection system O&M Plan, which must describe staffing, preventative maintenance, funding, I/I program and related work, and annually report on activities carried out under the plan. The O&M Plans must include a Major Storm Plan, with requirements that are extensive and very prescriptive. These plans require planning horizons much longer than the useful life of facilities. The draft permit requires the Major Storm Plans to be developed and implemented within one year from the date of issuance of the final permit, and also require annual reporting of progress.

In addition to the O&M Plan, within one year MWRA must update its I/I Reduction Plan and begin implementing it; each co-permittee must develop and implement an I/I Reduction Plan. Also within one year, MWRA and the co-permittees must develop and implement a Sanitary Sewer Overflow Mitigation Plan.

A new requirement for rapid reporting of sanitary sewer overflows and upsets (applies to co-permittees as well) is generally consistent with the Sewage Notification Regulation, which went into effect in 2022.

Co-permittees are required to provide back-up power for their collection system facilities and to map their sewer systems. Both of these are similar to requirements in the state wastewater regulation.

### ***Wet Weather Blending (a.k.a. Bypass of Secondary Treatment)***

During wet weather events, one of the bedrock tools that the MWRA utilizes to reduce CSO discharges is to maximize the amount of sewage flow to Deer Island for treatment. Maximizing flow in this fashion is one of the nine minimum controls set forth in EPA's 1994 CSO Policy and the terms of the existing Deer Island NPDES permit.

Pursuant to the terms of a Stipulation and Order entered in the Boston Harbor Case in July 2008, MWRA has been required to maintain a secondary process limit of at least 700 MGD. The term "secondary process limit" generally refers to the setting in the process control system for Deer Island, which directs flows up to and including that flow rate through secondary treatment. When total plant flow exceeds the capacity of secondary treatment the excess flow, which has undergone primary treatment, is blended with the rest of the fully treated flow. This combined flow meets all effluent permit limits; by maximizing the amount of flow treated at Deer Island, it reduces the amount that must be discharged at CSO facilities. In the draft permit, EPA did not maintain or reference the secondary process limit of 700 MGD or otherwise introduce a new secondary process limit. The draft permit is ambiguous insofar as it is unclear whether the provisions of the Stipulation and Order continue to govern.

### ***Deer Island Effluent Permit Limits***

The draft permit contains the following changes to permit limits:

- Seasonal limits on the bacterial indicator *Enterococcus*. Meeting the new limit will require an increase of 17 more trucks per year of sodium hypochlorite used for disinfection and 21 more trucks per year of sodium bisulfite used for dechlorination, an increase in total chemical trucks of about 5%.
- Stricter limits on the bacterial indicator fecal coliform, due to changes in state water quality standards. Staff do not anticipate any problem meeting the new fecal coliform limits, but may need to increase chemicals used for disinfection.
- Stricter limit on dry day flow, set at the plant design average flow of 361 MGD, is not anticipated to be a problem. Average dry day flow has ranged from 252 MGD to 320 MGD.
- New limits on percent removal of total suspended solids (TSS) and chemical biological oxygen demand (cBOD), which apply during dry weather.
- New limit on oil and grease, with daily monitoring. This is not expected to be a compliance concern, although the high frequency of monitoring may strain lab resources.
- Stricter limit for acute toxicity. This is a minor concern in terms of compliance.
- Deleted limit on PCB Aroclors, which while monitored over more than the last two decades, have not been detected.

The draft permit also carries forward the existing limitations on cBOD, TSS, pH, total chlorine residual, ammonia, and whole effluent toxicity, which the plant consistently meets. Monitoring requirements and changes are summarized in Attachment A.

### ***CSOs***

BWSC and the cities of Cambridge, Chelsea and Somerville have partially combined sewer systems and are named as "CSO-responsible Co-permittees" in the draft permit. The draft permit incorporates and updates requirements that are currently in MWRA's permit as well as the individual community CSO NPDES discharge permits.

The draft permit authorizes CSO typical year discharge activations and volumes up to the limits shown in Exhibit B to the Second Stipulation in the Boston Harbor case (an attachment to the draft permit.) The draft permit also includes, as an attachment, the CSO Variances for the Charles River and Alewife Brook/Mystic River Basins and incorporates the conditions of the Variances as enforceable elements of the permit. Finally, the draft permit includes language that the discharges must meet federal and state water quality standards subject to and consistent with these variances or variance extensions issued by MassDEP and approved by EPA.

### ***CSO Facility Permit Limits***

The draft permit also maintains the existing limitations on pH, sets more stringent limits on total chlorine residual for most facilities, and preserves the monitoring requirements for biological oxygen demand (BOD), TSS, and whole effluent toxicity at the MWRA's four<sup>3</sup> CSO treatment facilities. Monitoring requirements and changes are summarized in Attachment B.

### ***Environmental Justice***

Both EPA and MassDEP have new requirements to consider Environmental Justice in permitting, and MWRA supports this emphasis. Accordingly, EPA is conducting additional outreach in multiple languages to inform environmental justice communities and solicit their comments. Also, new climate change planning requirements are particularly intended to protect vulnerable environmental justice communities. Importantly, EPA determined that the MWRA's "discharges will not result in disproportionately high and adverse human health or environmental impacts on minority or low income populations."

### ***Other Permit Provisions***

Other changes in the permit include:

- extensive requirements for O&M;
- new monitoring requirements for PFAS in influent, effluent, sludge, and certain industries;
- required reporting of average monthly total nitrogen load;
- CSO treatment facility monitoring schedule – while frequency of sampling annually is unchanged, the draft permit targets sample collection seasonally, which will add complexity and potentially more staffing to try and capture one spring, two summer, and one fall event;
- changes in Ambient Monitoring, as described below;
- required updates to bacterial monitoring in Massachusetts Bay conducted under Memorandum of Understanding with the Massachusetts Division of Marine Fisheries;
- required dilution studies of CSO treated outfalls;
- reduced frequency of monitoring for biotoxicity and for metals;
- elimination of requirement to monitor some chlorinated pesticides and PCBs, which have historically not been detected in Deer Island effluent;
- changes in how some values are calculated for reporting, and expansion of values to be reported on the monthly discharge monitoring reports to include some ambient monitoring data;

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<sup>3</sup> The Union Park CSO Treatment Facility is jointly owned and operated by the Boston Water & Sewer Commission and MWRA, and is currently permitted jointly to BWSC and MWRA.

- requirement to update MWRA’s “pollution prevention plan” and add contaminants of emerging concern such as PFAS, pharmaceuticals, and microplastics (add to household hazardous products booklet); and
- elimination of outdated requirements (*e.g.*, hard copy reports, maintenance of old Deer Island outfalls, Massachusetts Bay outfall “contingency plan” and water conservation).

The draft permit requires revisions to the ambient monitoring plan; the required monitoring is specified in the permit. Water column monitoring for eutrophication (*i.e.* nutrients, dissolved oxygen, chlorophyll) will continue. There is a special focus on harmful and nuisance algal species, with added monitoring requirements. Monitoring of sediment, fish, and shellfish is not required. The Outfall Monitoring Science Advisory Panel is not included in the draft permit.

The requirements in the draft permit for MWRA’s pretreatment program (TRAC) are standard and similar to the existing permit, although staff believe the time frame of 90 days to submit a local limits evaluation is too short, and staff will seek at least 180 days, which is in the existing permit. Also, the annual reporting requirement in the draft permit is out of sync with our longstanding reporting schedule. Finally, there are several new requirements for including information about Significant Noncompliance in the annual pretreatment report, which go beyond the EPA pretreatment regulations. The draft permit contains the same requirements as the existing permit for the disposal and monitoring of sludge.

**BUDGET/FISCAL IMPACTS:**

If the draft permits are issued as final with no changes, there will be additional costs for chemicals, monitoring of PFAS, and the Major Storm planning requirements. There will be further costs related to revision of the pollution prevention plan, technical evaluation of industrial local limits, completing dye studies for CSO treatment facilities, and costs for monitoring harmful algal blooms.

Increased costs may be partly offset by some savings due to eliminating the requirement to monitor chlorinated pesticides and PCBs, and possible cost savings from refocusing the Ambient Monitoring Plan.

Member communities will also incur costs for developing and implementing Major Storm Plans, I/I Reduction Plans, and Sanitary Sewer Overflow Mitigation Plans. These Plans are all due to be completed within the first year from the date of issuance of the final permit. MWRA and member communities will likely not be able to complete these Plans with in-house resources and will need to procure consulting services.

**ATTACHMENTS:**

Attachment A: Deer Island permit limits - Comparison between current (2000) and draft (2023) permit

Attachment B: CSO permit limits - Comparison between current (2000) and draft (2023) permit

Attachment A: Deer Island permit limits - Comparison between current (2000) and draft (2023) permit

Parameter	2000 Permit limit	2023 Draft Permit limit
dry day flow	436 MGD 365 day rolling average	<b>361 MGD</b> 365 day rolling average
cBOD (carbonaceous biochemical oxygen demand)	25 milligrams/liter average monthly 40 milligrams/liter weekly average	25 milligrams/liter average monthly 40 milligrams/liter weekly average <b>85% removal minimum monthly average; using only dry days</b>
TSS (total suspended solids)	30 milligrams/liter average monthly 45 milligrams/liter weekly average	30 milligrams/liter average monthly 45 milligrams/liter weekly average <b>85% removal minimum monthly average; using only dry days</b>
pH	within range 6.0 - 9.0 no change to background cond. > 0.2	<b>within range 6.0 - 8.5</b>
<b>Oil &amp; Grease</b>	N/A	<b>non-detect (&lt; ML of 5 mg/L) monthly average</b>
Fecal coliform	14000 colonies/100 milliliters weekly average 14000 colonies/100 milliliters daily maximum <10 % of samples > 14000/100 mL  not more than 3 consecutive samples > 14000/100 ml  MOU with DMF	<b>980</b> colonies/100 milliliters weekly average <b>1960</b> colonies/100 milliliters daily maximum     <b>MOU with DMF (required to update to include station N21, and seasonal <i>Enterococcus</i> monitoring)</b>
Enterococcus	N/A  N/A	<b>2,450</b> colonies/100 milliliters monthly average <b>9,100</b> colonies/100 milliliters daily maximum  <b>seasonal (April 1- Oct. 31)</b>
total residual chlorine	456 micrograms/liter monthly average 631 micrograms/liter daily maximum	456 micrograms/liter monthly average 631 micrograms/liter daily maximum
PCBs (Aroclors PCB-1016, 1221, 1232, 1242, 1248, 1254, 1260)	0.000045 ug/L average monthly	<b>N/A</b>
WET and associated chemistry	Acute toxicity LC50 50% Chronic toxicity C-NOEC >1.5% footnote prohibiting polymers	<b>Acute toxicity LC50 100%</b> Chronic toxicity C-NOEC >1.5%



Attachment B: CSO permit limits - Comparison between current (2000) and draft (2023) permit

Parameter	2000 Permit sample frequency	2023 Draft Permit sample frequency
rainfall	per event	per event
flow	continuous (typo in permit, really "per event")	per event
TSS	hourly grab, 4 events/year	composite, 4/year
BOD	composite, 4/year	composite, 4/year
total residual chlorine	hourly grab, 4 events/year	hourly grab, 4 events/year
pH	hourly grab, 4 events/year	hourly grab, 4 events/year
Fecal coliform	hourly grab, 4 events/year	N/A
E. coli		MWR201, MWR205A: hourly grab, 4 events/year
<i>Enterococcus</i>	MWR215 only: 4 events/year	MWR203, MWR205 and MWR215: hourly grab, 4 events/year
acute toxicity	2/year	2/year, spring & summer
chronic toxicity (sea urchin)	N/A	MWR203, MWR205, MWR215: 2/year, spring & summer
effluent toxicity samples: ammonia, metals, TOC	2/year	2/year, spring & summer
effluent toxicity samples: salinity	N/A	2/year, spring & summer

## STAFF SUMMARY

**TO:** Board of Directors  
**FROM:** Frederick A. Laskey, Executive Director  
**DATE:** June 21, 2023  
**SUBJECT:** Wastewater Advisory Committee Contract



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**COMMITTEE:** Wastewater Policy & Oversight

       INFORMATION

  X   VOTE

Carolyn M. Fiore, Deputy Chief Operating Officer  
Wendy Leo, Senior Program Manager  
Rose Souliotis, Administrative Coordinator  
Preparer/Title

Sean Navin   
Director, Intergovernmental Affairs

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### RECOMMENDATION:

To authorize the Executive Director, on behalf of the Authority, to execute a contract, substantially in the form attached hereto, 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.

### DISCUSSION:

In addition to the critical oversight functions of the Advisory Board, many of MWRA's policy decisions are made with advice and support from two standing citizens' advisory committees, the Wastewater Advisory Committee (WAC) and the Water Supply Citizens Advisory Committee (WSCAC). A separate staff summary presented at this meeting recommends authorization for the Executive Director to execute a similar contract with WSCAC for FY24.

The Wastewater Advisory Committee was created in 1990 to offer independent recommendations on wastewater programs and policies; it is a successor to the Facilities Planning Citizen Advisory Committee established during the planning of the new Deer Island Treatment Plant. WAC's members include citizen advocates, representatives from the Metropolitan Area Planning Council, watershed associations, the engineering and business communities, environmental law, and science and education fields. The Advisory Board has historically appointed a member as well.

The proposed FY24 WAC contract is 2.93% higher than the FY23 contract. Health insurance increased by 7.5%, while hourly salaries increased by 6.09% and other reimbursable expense items increased by \$750 to cover the cost of a meeting rental space required for a limited number of in-person meetings. Health insurance is budgeted at 80% reimbursement for the Executive Director only, not to exceed \$12,621, with an optional health insurance buy-out program similar to that offered to MWRA employees who do not use MWRA's health insurance benefit. Office space for WAC is provided by MWRA at the Chelsea facility. The proposed total FY24 WAC funding is \$85,813.

WAC's monthly meetings are geared toward engendering discussion and facilitating timely recommendations to MWRA's Board of Directors and staff on wastewater policies, projects, and program initiatives directly related to MWRA, and public concerns. Current topics of interest to WAC include reissuance of MWRA NPDES permits, operations and maintenance, combined sewer overflows, green energy, PFAS, treatment technologies, climate change, and wastewater/water policy and funding initiatives in Massachusetts.

WAC elects its Chair and employs an Executive Director (selected by WAC's membership with the concurrence and approval of MWRA's Public Affairs Department). WAC's current chair is Wayne Chouinard and WAC's current Executive Director is Andreae Downs. Pursuant to the terms of the attached contract, WAC's members are approved by MWRA's Board of Directors.

**BUDGET/FISCAL IMPACT:**

Sufficient funds for the WAC contract are included in the Draft Final FY24 Current Expense Budget.

**ATTACHMENT:**

Agreement between Massachusetts Water Resources Authority and Wastewater Advisory Committee.

AGREEMENT  
BETWEEN  
MASSACHUSETTS WATER RESOURCES AUTHORITY  
AND  
WASTEWATER ADVISORY COMMITTEE

This Agreement (“Agreement”) is by and between the Massachusetts Water Resources Authority (“Authority”), a body politic and corporate and a public instrumentality of the commonwealth, created by Chapter 372 of the Acts of 1984, with offices at Deer Island, 33 Tafts Avenue, Boston, MA 02128 and the Wastewater Advisory Committee (“WAC”) a body created by the Authority’s Board of Directors (“Board”) (collectively “Parties”).

WHEREAS, the WAC was created to offer independent advice to the Board and to the professional staff of the Authority, regarding wastewater programs and policies directly related to the Authority;

WHEREAS, the WAC will (i) review and comment to the Authority on wastewater reports and related proposed documents, and (ii) offer independent commentary and advice on current and proposed wastewater program and policy directions to further Authority objectives;

WHEREAS, the WAC membership is designed to reflect the knowledge and interest of major affected constituencies, including engineering, construction, business/industry, planning, academic research, and environmental advocacy;

WHEREAS, the Authority desires the WAC to advise the Authority in wastewater planning, and

WHEREAS, the WAC desires to have a role advising the Authority on such matters.

NOW, THEREFORE, for the consideration of mutual promises contained herein, the Authority and WAC agree as follows:

ARTICLE 1. EFFECTIVE DATE

This Agreement shall be effective from July 1, 2023 through June 30, 2024, inclusive.

## ARTICLE 2. COMPENSATION, BUDGET, PAYMENT, AND EXPENSES

2.1 The Authority shall make funds available as follows:

(a) Executive Director Salary.

In order to minimize the WAC's expenses and for the WAC's convenience, the Authority shall make direct payments to the WAC for the WAC Executive Director salary. Such payments shall not exceed \$70,368 from July 1, 2023 through June 30, 2024, inclusive. The hourly salary rate (inclusive of payroll taxes) shall be \$48.63 with annual total hours of 1,447 (average 30 hours per week for 49 weeks).

(b) Reimbursable expenses.

The Authority shall reimburse the WAC for 80% of the non-employer-sponsored health insurance for the WAC Executive Director (not to exceed \$12,621), and for stationery, payroll services expenses, bank expenses, and for mileage costs, public transportation costs, highway tolls and parking expenses for meeting attendance by WAC's Executive Director and membership, and for other miscellaneous expenses of the WAC staff approved by the Authority on a case-by-case basis. Such expenses will be reimbursed when submitted to the Public Affairs Unit. Mileage costs will be reimbursed at the prevailing Authority rate per mile.

The percentage rate for reimbursement of health insurance costs shall be changed to that of Authority staff if the Group Insurance Commission changes the rate.

Health insurance buy-out: The WAC Executive Director may elect a monetary allowance in lieu of reimbursement of health insurance costs, provided he or she has health insurance coverage through another employer-sponsored plan that meets Internal Revenue Service "minimum value" criteria, throughout that six-month period. The amount of the allowance will be \$1000 to waive family coverage or \$700 for waiving individual coverage. The WAC Executive Director is responsible for any withholding taxes on these payments with WAC being responsible for the employer share of payroll taxes.

The total annual expense reimbursement to WAC, excluding health insurance reimbursements or buy-out, shall not exceed \$2,824.

(c) Non-reimbursable expenses.

The following expenses are not reimbursable: meals, entertainment, room and board expenses, fines, fees, or costs assessed as a result of improper or illegal actions on the part of the member, such as parking tickets or speeding fines.

ARTICLE 3. RESPONSIBILITIES OF THE AUTHORITY AND WAC.

- (a) The WAC shall employ an Executive Director who is prohibited from being a member of the WAC while serving his or her term as a paid employee. The Authority Public Affairs Office must concur with and approve the selection of the WAC Executive Director by the WAC. The duties of the Executive Director shall be in accordance with the job description prepared by the WAC, and on file with the Authority.
- (b) The WAC shall submit weekly statements to the Authority requesting payment for expenses listed in Article 2. Such requests shall be supplemented or accompanied by time sheets, travel and expense vouchers, and by such other supporting data as may be required by the Authority.
- (c) The WAC shall maintain accounts, records, documents, and other evidence directly pertinent to performance of work under this Agreement. The parties and their duly authorized representatives shall have access to such records, documents, and other evidence for the purpose of inspection, audit, and copying.
- (d) The Authority or its duly authorized agent shall have the right at any and all reasonable times, to examine and audit WAC's records, documents and other evidence.
- (e) This Agreement is subject to the laws dealing with the expenditures of public funds, including Chapter 12A of the Massachusetts General Laws.
- (f) The parties shall agree to any reasonable modifications or changes in this contract that may be required by the Commonwealth of Massachusetts or any of its agencies.
- (g) The WAC acknowledges that the Authority is a state agency for purposes of Chapter 268A of the General Laws (the Massachusetts Conflict of Interest Law) and understands that for the purposes of that law, WAC staff and members are special state employees.
- (h) The WAC shall be responsible for compliance with all applicable provisions and requirements of the Massachusetts Open Meeting Law and the Public Records Law.

ARTICLE 4. RESPONSIBILITIES OF THE WAC STAFF.

4.1 The WAC staff shall be responsible for the following tasks:

- (a) aiding the WAC in its tasks under Article 6, educating the public, and acting as liaison with the Authority and its staff;
- (b) maintaining financial records, minutes of the WAC meetings, and other WAC records;
- (c) providing to the Authority copies of the notices for and minutes of all meetings of WAC and of all WAC correspondence relative to Authority projects and proposals as soon as such materials are available; and

(d) administering and maintaining compliance by all its members and staff with the provisions of the Massachusetts Conflict of Interest Law including, without limitation, those mandatory provisions relating to: (i) annual distribution to members and staff of the State Ethics Commission's (SEC) Summary of Law and maintenance and archiving of acknowledgements of receipt of the Summary of Law from all members and staff, and (ii) compliance by members and staff with the SEC's bi-annual educational training exercises.

## ARTICLE 5. MEMBERSHIP, MEETINGS, TERMS.

5.1 the WAC membership, meetings and terms shall be as follows:

- (a) the WAC will have a maximum of twenty (20) members ("Members") approved by the Board. (Alternates or designees are prohibited);
- (b) the WAC shall meet once per month and maintain records of its meetings;
- (c) to the extent reasonable, Members will meet as a committee of the whole, without resort to subcommittees;
- (d) members will elect their Chair.
- (e) members' terms will be three (3) years; members may succeed themselves.
- (f) members unable to maintain reasonable participation in the committee's work will be expected to resign. The Authority's Public Affairs Unit, in consultation with the WAC Chair, will nominate a replacement for Board approval.

## ARTICLE 6. WAC TASKS.

The WAC shall undertake the following tasks:

### 6.1 Wastewater Policies and Programs Review.

Advise the Authority staff and Board. Participate in review and evaluation of wastewater management plans (e.g., local limits, I/I, CSO), reports and new ideas for programs. Provide comments, information, advice, recommendations and guidance as to the direction, intent and execution of wastewater planning and policy directly related to MWRA.

### 6.2 Outreach and Education.

Strive to increase citizen participation and education by providing assistance in outreach to various groups regarding the Authority's wastewater programs and state wastewater resource policies. Review programs and explain plans and policies to organizations and citizens.

6.3 Working Group Representation.

When possible, provide a representative on Authority working groups, comprising MWRA staff and consultants, related to wastewater programs and policy, including the Advisory Board and its subcommittees and the Water Supply Citizens Advisory Committee.

6.4 Recommendations on Long Term Public Involvement.

Provide to the Authority staff and Board, proposals for continued effective and efficient long term public involvement in wastewater programs.

6.5 Recommendations and Discussion Documents.

The WAC staff shall be responsible for providing to the Authority's staff, Board, and others, recommendation and discussion documents on wastewater programs and policy. Documents may be in the form of minutes of WAC meetings, memoranda, letters, reports, presentations and discussions as appropriate.

ARTICLE 7. MISCELLANEOUS REQUIREMENTS.

7.1 Nondiscrimination and Equal Employment Opportunity

The WAC agrees to comply with the Authority's policy regarding non-discrimination and affirmative action.

ARTICLE 8. GENERAL PROVISIONS.

8.1 Termination of Contract.

(a) This Agreement may be terminated in writing, at any time, in whole or in part, by the Authority for its convenience or in the event of substantial failure by the WAC to fulfill its obligations, or for violation of any of the covenants and stipulations of this Agreement.

(b) If termination is effected by the Authority an equitable adjustment shall be made providing for payment to the WAC for services rendered and expenses incurred prior to the termination.

(c) No termination hereunder may be effected unless the terminating party gives the other party:

- (1) not less than forty-five days' written notice delivered by certified mail, return receipt requested, of intent to terminate; and
- (2) an opportunity for consultation with the other party prior to termination, or
- (3) by mutual agreement of the parties.



8.2 Assignability.

The WAC shall not assign or transfer this Agreement or delegate its responsibility for the performance of services under this agreement.

8.3 Integration Clause.

This Agreement integrates and supersedes all prior negotiations, representations, or agreements.

8.4 Amendment.

This Agreement may be amended only by a writing executed by each of the parties.

8.5 Severability of Provisions.

If any provision of this Agreement shall, to any extent, be held invalid or unenforceable, the remainder of this Agreement shall not be deemed affected thereby.

8.6 Massachusetts Law to Govern.

All parties to this Agreement agree that this Agreement shall be governed by and enforced in accordance with the laws of the Commonwealth of Massachusetts.

8.7 Duplicate Originals.

This Agreement may be signed in more than one identical counterpart, each of which shall be deemed to be an original hereof.

8.8 Notices.

Communications shall be deemed to have been made when mailed postage prepaid or delivered among:

Executive Director  
Wastewater Advisory Committee  
c/o MWRA  
Deer Island  
33 Tafts Avenue  
Boston, MA 02128

Executive Director  
Massachusetts Water Resources Authority  
Deer Island  
33 Tafts Avenue  
Boston, MA 02128

Director of Public Affairs  
Massachusetts Water Resources Authority  
Deer Island  
33 Tafts Avenue  
Boston, MA 02128

IN WITNESS WHEREOF, this Agreement is executed as of this \_\_\_\_th day of  
June, 2023.

FOR: WASTEWATER ADVISORY COMMITTEE

By: \_\_\_\_\_  
Wayne Chouinard, Chair

FOR: MASSACHUSETTS WATER RESOURCES AUTHORITY

By: \_\_\_\_\_  
Frederick A. Laskey, Executive Director

## STAFF SUMMARY

**TO:** Board of Directors  
**FROM:** Frederick A. Laskey, Executive Director  
**DATE:** June 21, 2023  
**SUBJECT:** Janitorial Services at the Deer Island Treatment Plant  
Facilities Management and Maintenance Inc.  
Bid WRA-5317




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**COMMITTEE:** Wastewater Policy & Oversight

INFORMATION  
 VOTE

Michele S. Gillen  
Director of Administration

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



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

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### RECOMMENDATION:

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.

### DISCUSSION:

MWRA has been contracting janitorial and window cleaning services at the Deer Island Treatment Plant for the past 25 years. The current contract will expire on July 22, 2023.

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

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



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

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

### **Procurement Process**

Purchasing staff solicited bids from eight firms listed as approved contractors on the Commonwealth of Massachusetts janitorial contract (Massachusetts State Contract FAC 114) to perform janitorial services at Deer Island for a contract term of three years. Each of the eight firms, including the low bidder Facilities Management and Maintenance Inc., are also listed on the SEIU Responsible Contractors List. Three of the eight firms solicited have bid on previous janitorial services contracts at Deer Island and, as such, are familiar with the Deer Island facility.

On May 26, 2023, pricing submittals were received from two bidders with the following results:

<b>VENDOR</b>	<b>BID PRICE</b>
<b>Facilities Management and Maintenance Inc.</b>	<b>\$1,860,832.92</b>
Star Building Services, Inc.	\$1,950,368.60

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

Facilities Management and Maintenance Inc. submitted the lowest of the two responsive bids received. Under the current contract with Star Building Services, Inc., MWRA is paying an annual rate of \$543,935.08 for similar services. Facilities Management and Maintenance Inc.’s bid price for year one of the new contract is \$599,147.84, which reflects an annual increase of \$55,212.76 or 10% for the first year from the existing original contract term. Facilities Management and Maintenance Inc.’s bid price will be \$615,042.20 for year two and \$646,642.88 for year three.

Staff have reviewed Facilities Management and Maintenance Inc.’s bid and have determined that it meets all of the requirements of the bid specifications. The firm has extensive experience in providing janitorial services for other large public agencies, such as the DCAMM-Massachusetts Information Technology Center, the Massachusetts State Lottery Commission, the Commonwealth of Massachusetts Wrentham Development Center, and at MWRA’s Western Operations Facilities. Therefore, staff recommend the award of this contract to Facilities Management and Maintenance Inc. as the lowest responsive bidder.

**BUDGET/FISCAL IMPACT:**

The Operations Division's FY24 Current Expense Budget included sufficient funding for the first year of this contract. Appropriate funding will be included in subsequent Proposed CEB requests for the remaining term of the contract.

**MBE/WBE PARTICIPATION:**

Facilities Management and Maintenance Inc. is not a certified Minority or Women-owned business.

**STAFF SUMMARY**

**TO:** Board of Directors  
**FROM:** Frederick A. Laskey, Executive Director  
**DATE:** June 21, 2023  
**SUBJECT:** Town of Burlington First Amendment to the Water Supply Continuation Agreement and Waiver of Entrance Fee  
Dedham-Westwood Water District First Amendment to Water Supply Continuation Agreement and Waiver of Entrance Fee




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**COMMITTEE:** Water Policy and Oversight

         INFORMATION  
  X   VOTE

Rebecca Weidman, Director, Env. and Regulatory Affairs  
Katherine Ronan, Project Manager, Environmental Permitting  
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 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, 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 this Staff Summary, to effectuate the increased withdrawal volume limits.

Further, 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, 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 this Staff Summary, to effectuate the increased withdrawal volume limits.

**DISCUSSION:**

The Town of Burlington and the Dedham-Westwood Water District are “contract communities;” they receive MWRA water pursuant to Water Supply Continuation Agreements reflecting obligations to be fulfilled by both MWRA and the communities. The difference between contract and non-contract communities dates back to before MWRA’s Enabling Act. Of the 53 MWRA water-served communities, 28 are contract communities. Of these MWRA contract communities, eight are fully served, 17 are partially supplied by MWRA and regularly used local sources to meet some portion of demand, and three rely of MWRA only in unusual or emergency situations.

The typical term for Water Supply Continuation Agreements with communities is ten years, with the exception of first-time Agreements for new entrants to the MWRA water system, which are five years. An important component of Water Supply Continuation Agreements is that they set maximum annual water volumes and maximum daily water volumes that MWRA agrees to provide to the community. The Water Supply Continuation Agreements also set forth the entrance fee that the community agrees to pay pursuant to MWRA *Operating Policy 10, Admission of New Community to MWRA Water Works System* (OP.10). The Town of Burlington and the Dedham-Westwood Water District are each partially supplied by MWRA and respectively seeking to permanently increase their usage of and reliance on MWRA water. This requires amending their existing Water Supply Continuation Agreements to reflect the requested increases in withdrawal volume limits.

The Town of Burlington and the Dedham-Westwood Water District joined MWRA under OP.10 at a time when an increase to the maximum annual water volume limit also required the assessment of an entrance fee for the additional volume of water requested. On September 14, 2022, at the recommendation of the Advisory Board and staff, the Board of Directors approved a waiver of the entrance fee through December 31, 2027, for communities which can demonstrate that their local sources are impacted by water quality issues, their water supply is located in a stressed basin, or local economic development is significantly constrained by their existing water supply. Under the approved entrance fee waiver, a total of up to 20 million gallons per day (mgd) is available for new communities that are not currently members of MWRA's water system. The Town of Burlington and the Dedham-Westwood Water District are now both requesting additional volumes of water under their Water Supply Continuation Agreements and a waiver of the entrance fee for the additional volume of water due to water quality issues in local sources, which result in public health concerns and difficulty meeting local demand. Both communities are existing MWRA water system members and therefore the requested additional water volumes do not count towards the 20 mgd new community entrance fee waiver limit in OP.10.

### **Town of Burlington**

The Town was admitted to the MWRA water system on December 16, 2020. The Town was admitted to MWRA's water system for a volume of up to 6.5 mgd to be supplied via a connection to the Town of Lexington local distribution system. Construction of a new pipeline was required in order for the Town to obtain the requested 6.5 mgd from MWRA. Burlington supplemented local sources with MWRA water in the short term while constructing the new pipeline and this initial MWRA water supply was considered the Town's Phase1 connection. Under Phase 1, a Water Supply Continuation Agreement was executed in early 2021 allowing the Town to purchase up to 324 million gallons per year, or 0.886 mgd average daily use, and up to 1.5 mgd on a maximum day from MWRA via an existing connection with the Town of Lexington. No significant infrastructure improvements or modifications were required. At that time, as required by OP.10, the Town agreed to pay an entrance fee of \$4,407,986.46 pursuant to a 25-year, interest-free payment plan with a grace period for the first three years. The Town is due to begin making annual payments of \$200,363.03 in December 2023.

Construction of the necessary pipeline that will enable MWRA to supply the Town with up to 6.5 mgd via Lexington is complete. The Town is seeking to amend its existing Water Supply Continuation Agreement to purchase up to 1,278 million gallons per year, or 3.5 mgd average daily use, and up to 6.5 mgd maximum day use.

The Town is also requesting a waiver of the entrance fee associated with this increased withdrawal volume on the basis of the water quality of local sources and resulting public health concerns (See Attachment B). The Town's local sources include the Vine Brook wells, a groundwater source with 3.2 mgd capacity, and Mill Pond, a surface water source with 2.5 mgd capacity. Three wells at Vine Brook have been taken offline due to 1,4 Dioxane in excess of the MassDEP's drinking water guideline level of 0.3 parts per billion (ppb), reducing capacity from the Vine Brook wells to under two mgd. As a result, the Town has had difficulty meeting demand and required numerous emergency connections to MWRA prior to its admission in 2020. Further, the Town has detected per- and polyfluoroalkyl substances (PFAS) in finished water and in all the Vine Brook water supply wells at approximately twice the MassDEP maximum contaminant level (MCL) of 20 parts per trillion (ppt). The Town was required to develop both short-term and long-term corrective action plans, which include temporarily supplying an alternative source of water to sensitive subgroups in the community, and ultimately abandoning the Vine Brook Water Treatment Plant, further reducing the ability to meet local demand.

In accordance with entrance fee waiver requirements approved by the Board of Directors in September 2022, staff have determined that the Town's local sources are impacted by significant water quality issues and, therefore, qualify for a waiver of the entrance fee for the additional volume of water requested. The Town will still be required to make entrance fee payments associated with Phase 1 of the connection, as was previously agreed.

For the reasons set forth herein, staff recommend the Board's approval of the Town of Burlington's request to purchase 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 this increased withdrawal volume.

### **Dedham-Westwood Water District**

The Dedham-Westwood Water District was originally admitted to the MWRA water system in 2005. The District has four local groundwater sources, including the Bridge Street Wellfield, the Rock Meadow Well, the White Lodge Wellfield and the Fowl Meadow Wellfield. The District originally sought admission to MWRA to supplement local sources when use of its largest source, the Fowl Meadow Well, was restricted due to low flow in the Neponset River.

At that time, a Water Supply Continuation Agreement was executed with withdrawal volume limits of 36.5 million gallons per year, or 0.1 mgd average daily use, and up to two mgd on a maximum daily basis. As required by OP.10, the District paid a \$548,748 entrance fee pursuant to a five-year schedule. In 2014, the District was approved to increase its annual withdrawal volume to the current 73 million gallons, or 0.2 mgd average daily use, and two mgd maximum day use, due to continued difficulties meeting local demand as a result of these restrictions. At that time, the District's Water Supply Continuation Agreement was amended and an additional entrance fee of \$566,727 was paid pursuant to a five-year schedule. It is important to note that the Water Resource Commission determined that an Interbasin Transfer Act review was not required for additional water supplied to the District by MWRA, because Dedham was originally named in MWRA's Enabling Act.

In 2018, the District was temporarily authorized to exceed its withdrawal limits while performing work on its local Bridge Street Water Treatment Plant. In 2021, the District's Water Supply Continuation Agreement was up for its ten year renewal. At that time, withdrawal volumes were



expected to return to normal and were therefore maintained at a maximum of 73 million gallons per year, or 0.2 mgd average daily use, and two mgd maximum day demand. In 2022, the District began experiencing elevated Total Trihalomethanes (TTHMs) and was again temporarily authorized to exceed withdrawal volume limits to increase blending in an effort to come into compliance with MassDEP requirements.

The District has now determined that permanently increasing use of MWRA water is the most effective way to reliably meet regulatory requirements for TTHMs and chloride, as well as to meet peak summer demand when the use of the Fowl Meadow Well is limited due to streamflow conditions. Therefore, the District requests to permanently increase its withdrawal volume limits to 565.75 million gallons per year, or 1.55 mgd average daily use and up to 3.1 mgd maximum daily use.

The District is also requesting a waiver of the entrance fee associated with these increased withdrawal volume limits on the basis of water quality of local sources and resulting public health concerns, as well as sources being located in a stressed basin (See Attachment D). As discussed, the District has experienced elevated TTHMs in violation of USEPA's Stage 2 Disinfection Byproducts Rule. Despite flushing efforts, increasing use of MWRA water and blending with local sources has been the only effective solution to achieve compliance. Further, the District's White Lodge Wellfield is situated in close proximity to Interstate 93 and 95, and has experienced steadily increasing chloride levels for many years as a result of road salt application. The District has exceeded the MassDEP Secondary Maximum Contaminant Level on several occasions since 2014. Although, the District is currently meeting the MassDEP MCL for PFAS6, it expects difficulty meeting the more stringent proposed USEPA MCL. Finally, the District's White Lodge Wellfield is within the Neponset River watershed, is a stressed basin according to a report approved by the Water Resource Commission in 2001, and is considered a Medium Stressed basin. This classification is the basis of the limitations on usage of the source.

In accordance with entrance fee waiver requirements approved by the Board of Directors in September 2022, staff have determined that the District's local sources are impacted by significant water quality issues and that one of the District's largest sources is located in a stressed basin and, therefore, qualifies for the entrance fee waiver.

For the reasons set forth herein, staff recommend the Board's approval of the District's request to increase its withdrawal volume limits 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 this increased withdrawal volume.

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

The Town of Burlington and the Dedham-Westwood Water District will continue to be assessed in accordance with MWRA's Community Charge Determination Policy. MWRA's Community Charge Determination Policy computes charges for water services on the basis of each community's metered water flows. For fiscal year 2023, MWRA will receive \$1,253,355 from Town of Burlington and \$256,078 from Dedham-Westwood Water District.

The Town of Burlington and the Dedham-Westwood Water District are seeking a waiver of the entrance fee associated with their requested additional withdrawal volume limits on the basis of local source water quality and associated public health concerns. If not waived, the entrance fee

for Burlington's requested additional water would be approximately \$11.1 million and Dedham-Westwood Water District's entrance fee would be approximately \$5.8 million. As explained in the September 14, 2022 Staff Summary associated with the amendments to OP-10 regarding the entrance fee waiver approval, the reallocation of the rate revenue requirement as a result of selling additional water is a significant benefit that will offset potential loss of the more limited revenue associated with collection of an entrance fee. The total requested additional average daily use for the Town of Burlington and the Dedham-Westwood Water District is approximately four mgd. As noted in the September 14, 2022 staff summary, the sale of an additional five mgd of water over a period of 25 years, based on the FY23 rate revenue requirement, would provide approximately \$204.5 million in revenue and reduce other existing communities' shares of the system.

**ATTACHMENTS:**

Attachment A: First Amendment to the Water Supply Continuation Agreement with the Town of Burlington

Attachment B: Town of Burlington's Request for a Waiver of the Entrance Fee

Attachment C: First Amendment to the Water Supply Continuation Agreement with the Dedham-Westwood Water District

Attachment D: Dedham-Westwood Water District's Request for a Waiver of the Entrance

**FIRST AMENDMENT TO THE  
WATER SUPPLY AGREEMENT  
BETWEEN THE  
MASSACHUSETTS WATER RESOURCES AUTHORITY  
AND THE  
TOWN OF BURLINGTON**

**PARTIES:**

This First Amendment to the Water Supply Agreement is entered into by and between the Massachusetts Water Resources Authority, a body corporate and politic and an instrumentality of the Commonwealth of Massachusetts established pursuant to Chapter 372 of the Acts of 1984, as amended, having an address of the Deer Island, 33 Tafts Avenue, Boston, MA 02128 (the “MWRA”) and the Town of Burlington, having an address of 29 Center Street, Burlington, MA 01803 (the “Town or Burlington”)(hereinafter the MWRA and the Town are collectively referred to as the “Parties” and each individually, as a “Party”).

**RECITALS:**

Whereas, on May 7, 2021, a Water Supply Agreement was executed between the Parties, allowing the Town to withdraw 0.886 million gallons per day (“mgd”) on average from the MWRA Waterworks System (“System”), with a term beginning on or around January 1, 2021, and ending at midnight on December 31, 2025 (“Agreement”).

Whereas, on September 14, 2022, MWRA’s Board of Directors approved revisions to MWRA’s *OP #10 Admission of a New Community to the Waterworks System* (“OP.10”), to allow a waiver of the entrance fee, under certain conditions (*e.g.*, local water sources being impacted by (a) water quality issues, (b) located in a stressed basin, and/or (c) significantly constraining economic development), for communities entering the System or those purchasing additional water.

Whereas, in accordance with the Agreement and OP.10, on May 4, 2023, the Town submitted a two-part-request that: (1) seeks to increase its withdrawal from the System to a total of 3.5 mgd average day supply, up to 6.5 mgd maximum day supply, and a total annual volume of 1,278 million gallons; and (2) seeks a waiver of the entrance fee for the additional volume of water withdrawal.

Whereas, on \_\_\_\_, 2023, the MWRA Board of Directors approved the Town’s two-part-request authorizing the additional supply of water and waiving the corresponding entrance fee, such that no further changes to the Agreement’s entrance fee provisions are necessary.

Whereas, the Parties wish to formalize their rights and obligations regarding the additional supply of water to the Town from the System.

Now, therefore, in consideration of the mutual promises contained herein and for other good and valuable consideration, the Parties agree to amend the Agreement as follows:

A. The Second Paragraph of the Agreement is deleted and replaced with the following Paragraph:

2. During the Term of this Agreement, MWRA shall provide Burlington with water on an annual volume basis of 1,278 million gallons for each year, 3.5 mgd on an average daily basis and up to 6.5 mgd on a maximum day basis, subject to the hydraulic capabilities of MWRA's distribution system, any hydraulic limitation in the Lexington water distribution system and subject to any applicable terms of the Burlington/Lexington Inter-municipal Agreement on water supply. In the event that Burlington anticipates that its withdrawals from MWRA will exceed a flow rate of 6.5 mgd, Burlington shall notify MWRA Operations. MWRA reserves the right to restrict peak maximum day withdrawals should problems be encountered.

B. The Third Paragraph the Agreement is deleted and replaced with the following Paragraph:

3. The Parties agree that, with the exception of emergencies, any withdrawal in excess of 3.5 million gallons per day on an annual average basis will require a written contract revision signed by each of the Parties hereto, including any corresponding revision to the Entrance Fee in accordance with OP.10.

C. The Fourth Paragraph the Agreement is deleted and replaced with the following Paragraph:

4. The Parties agree that in the event that Burlington determines that 3.5 million gallons per day to be supplied from the MWRA system is insufficient to meet the Town's requirements, Burlington may petition the MWRA to amend this Agreement pursuant to 360 CMR 11.11 and OP.10.

D. The Fifth Paragraph the Agreement is deleted and replaced with the following Paragraph:

5. Notwithstanding the above, the Parties agree that if Burlington's water use regularly exceeds 1,278 mg annually, average day use of 3.5 mgd, or maximum day use of 6.5 mg, the Agreement must be amended pursuant to 360 CMR 11.11 and OP.10.

E. The Eighth Paragraph of the Agreement is deleted and replaced with the following Paragraph:

8. The Parties agree that if Burlington's water use regularly exceeds 1,278 mgd annually, or 3.5 mgd average day use, the Entrance Fee will be recalculated pursuant to 360 CMR 11.11 and OP.10.

F. All other terms and conditions of the Agreement shall remain the same.

In witness whereof, the Parties have caused this First Amendment to the Agreement to be executed by their duly authorized representatives.

MASSACHUSETTS WATER RESOURCES AUTHORITY

By: \_\_\_\_\_ Date: \_\_\_\_\_

Frederick A. Laskey

Executive Director

TOWN OF BURLINGTON

By: \_\_\_\_\_ Date: \_\_\_\_\_

Paul Sagarino

Town Administrator



## TOWN OF BURLINGTON

### *Town Administrator's Office*

*Paul F. Sagarino, Jr., Town Administrator*

May 4, 2023

Massachusetts Water Resources Authority  
Charlestown Navy Yard  
100 First Ave, Building 39  
Boston, MA 02129

Subject: Burlington - MWRA Water Supply Agreement Amendment

Dear Advisory Board and Board of Directors:

On December 16, 2020 the MWRA Board of Directors approved Phase 1 of Burlington's entrance to the MWRA water system at a volume of 324 million gallons each year, or 0.886 million gallons per day (mgd) average supply. As stated in the Board's approval documents, Burlington planned to come back for additional flow approval when construction of phase 2 was completed (see Dec 16, 2020 MWRA BOD Meeting Materials).

Burlington began Phase 2 construction in September 2021 and is expected to be complete by the end of June 2023. This work included the installation of new water infrastructure necessary to provide increased capacity as a requisite for Burlington's addition flow request.

In anticipation of completion of Phase 2 of Burlington's connection to the MWRA water system, and in accordance with the MWRA-Burlington Water Supply Agreement dated May 3, 2021, I am respectfully requesting that the Massachusetts Water Resources Authority approves an increase, for a total of 3.5 mgd average day supply, 6.5 mgd maximum day supply (see November 6, 2020 Burlington's application for projected daily water demands) and a total annual volume of 1,278 million gallons.

Following a town meeting majority vote to join the MWRA water system on May 16, 2018, and as part of the environmental approval process, the Town of Burlington received a Final Environmental Report (FEIR) certificate on April 20, 2020. And on November 20, 2020, the Water Resources Commission approved the Interbasin Transfer to allow Burlington to purchase up to 6.5 mgd from the MWRA (see Burlington's November 12, 2020 ITA Approval). With these in place, all local and regulatory approvals received by Burlington allow for a maximum day supply of 6.5 mgd.



## TOWN OF BURLINGTON

### *Town Administrator's Office*

*Paul F. Sagarino, Jr., Town Administrator*

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Burlington is also requesting that the entrance fee be waived for the additional volume in accordance with the new Five-Year Waiver of Entrance Fee Policy dated September 14, 2022. The policy allows for a waiver to address or correct “an exceedance of a Final or Proposed USEPA or MassDEP Maximum Contaminant Level, Treatment Technique, Maximum Residual Disinfectant Level, Action Level, or MassDEP Office of Research and Standards Guideline Level”. Burlington’s water system meets this water quality and public health concern, which led to joining the MWRA water system, detailed as follows.

In 2011, the Massachusetts Department of Environmental Protection (MassDEP) Office of Research and Standards decreased the state drinking water guideline level for 1,4 Dioxane from 3.0 parts per billion (ppb) to 0.3 ppb. This change affected the Town’s ability to utilize some of its groundwater source wells and the ability to meet water demands. Until this change by MassDEP, Burlington’s drinking water supply consisted of two water treatment facilities (Vine Brook – groundwater with a capacity of 3.2 mgd, and Mill Pond – surface water with an effective capacity of 2.5 mgd). However, in order to meet the new 1,4 Dioxane guideline, Burlington took 3 wells offline, decreasing supply capacity to under 2 mgd at the Vine Brook Treatment Facility (currently at 1.5 mgd due to wells deterioration).

Although Burlington instituted severe outdoor watering restrictions, prior to 2021 Burlington still required several emergency connections to the MWRA water system during Mill Pond Treatment Plant maintenance and to meet water demand during water main break emergencies.

In 2016 Stantec conducted a Water Supply Evaluation (see November 6, 2020 Burlington’s OP10 application documents), including water treatment alternatives for 1,4 Dioxane in which Stantec recommended that the Vine Brook Treatment Facility be taken off-line and joining the MWRA water supply to restore capacity. Since there are 46 known contamination sites surrounding the Vine Brook aquifer, there was concern that in addition to having to treat for 1,4 Dioxane, there could be new contaminants that may also require treatment in the future. Therefore, it was determined that a connection to the MWRA and abandoning the Vine Brook treatment plant is the best alternative to protect public health and meet Burlington’s water supply demand into the future.

As we are all aware, the newest of these contaminants, regulated by MassDEP, is a group of 6 per- and polyfluoroalkyl substances (PFAS6). PFAS6 were also found in Burlington’s finished water and in all Vine Brook water supply wells at approximately twice the MassDEP maximum contaminant level (MCL). (See attached for 1,4 Dioxane and PFAS levels in Burlington). In addition, Burlington has concern in complying with the more stringent PFAS MCLs the United States Environmental Protection Agency (USEPA) recently proposed. This is a precise example of Stantec’s concern explained in the Water Supply Evaluation.



## TOWN OF BURLINGTON

### *Town Administrator's Office*

*Paul F. Sagarino, Jr., Town Administrator*

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Due to Burlington exceeding the PFAS6 MCL, MassDEP issued a Notice of Non-Compliance (NON) in June 2021 (see attached) which requires a short-term corrective action plan to provide an alternative source of water for sensitive subgroups served by Burlington's system (pregnant or nursing women, infants, and people diagnosed by their health care provider to have compromised immune system) for drinking and cooking. The NON also requires a long-term corrective plan to reduce the PFAS6 below the MCL. In response to the NON, Burlington instituted a short-term bottled water rebate program for sensitive subgroups and proposes to abandon the Vine Brook Treatment facility as part of the long-term corrective plan.

Please let us know if you need additional information on this request as we look forward to increasing the MWRA water supply into Burlington by July 2023.

Sincerely,

Paul Sagarino, Jr.  
Town Administrator

CC: Fred Laskey, MWRA  
Rebecca Weidman, MWRA



## 1, 4 Dioxane Levels at Vinebrook WTP (ppb)\*

Year	Well 1	Well 2	Well 3**	Well 4**	Well 5**	Well 10	Well 11
2013	0.081	0.15	1.1	3	0.23	0.46	0.17
2014	0.072	0.57	0.58	1.1	0.59	0.3	0.16
2015	0.058	0.087	0.65	0.68	1.5	0.32	0.12
2016	0.077	0.089	0.23	0.5	1.4	0.23	0.14
2017	0.11	0.088	0.18	0.65	0.93	0.15	0.12
2018	0.08	0.12	0.29	0.86	0.95	0.25	0.16
2019	0.1	0.087	0.2	0.7	1.5	0.3	0.094
2020	0	0.089	0.074	1.2	3.8	0.23	0.18
2021	0	0	0.11	0.98	1.6	0.17	0.098
2022	0	0	0.27	0.92	1.3	0.21	0.11
2023	0	0.046	0.15	0.55	1.3	0.21	0.084
Average	0.053	0.121	0.349	1.013	1.373	0.257	0.131
Max	0.11	0.57	1.10	3.00	3.80	0.46	0.18

\*Parts per billion or microgram per liter ( $\mu\text{g/L}$ )

**Mass DEP MCL=0.3 ppb**

\*\*Wells 3, 4, and 5 are off-line due to high levels of 1,4 Dioxane

## PFAS6 Levels in Burlington's Drinking Water Supply

### Vinebrook Water Treatment Plant

Month	Year	Collection Date	PFAS6 Results
April	2021	4/15/2021	39.5 ppt
May	2021	5/10/2021	39.9 ppt
June	2021	6/14/2021	39.9 ppt
July	2021	7/12/2021	42.0 ppt
August	2021	8/11/2021	47.7 ppt
September	2021	9/17/2021	49.0 ppt
October	2021	10/7/2021	32.1 ppt
November	2021	11/2/2021	37.6 ppt
December	2021	12/10/2021	37.6 ppt
January	2022	1/5/2022	35.4 ppt
February	2022	2/3/2022	36.7 ppt
March	2022	3/2/2022	40.3 ppt
April	2022	4/7/2022	45.6 ppt
May	2022	5/5/2022	36.3 ppt
June	2022	6/9/2022	37.3 ppt
July	2022	7/6/2022	46.2 ppt
August	2022	8/9/2022	51.7 ppt
September	2022	9/7/2022	45.4 ppt
October	2022	10/6/2022	39.0 ppt
November	2022	11/3/2022	49.2 ppt
December	2022	12/7/2022	39.4 ppt
January	2023	1/12/2023	39.0 ppt
February	2023	2/16/2023	49.2 ppt
March	2023	3/8/2023	35.9 ppt
Average =			41.3 ppt
Max =			51.7 ppt

### Mill Pond Water Treatment Plant

Month	Year	Collection Date	PFAS6 Results
April	2021	4/15/2021	45.7 ppt
May	2021	5/10/2021	44.4 ppt
June	2021	6/14/2021	48.4 ppt
July	2021	7/12/2021	47.2 ppt
August	2021	8/11/2021	53.8 ppt
September	2021	9/17/2021	50.0 ppt
October	2021	10/7/2021	46.3 ppt
November	2021	11/2/2021	50.7 ppt
December	2021	12/10/2021	52.8 ppt
January	2022	1/5/2022	51.7 ppt
February	2022	2/3/2022	49.2 ppt
March	2022	3/2/2022	52.1 ppt
April	2022	4/7/2022	45.2 ppt
May	2022	5/5/2022	43.7 ppt
June	2022	6/9/2022	46.8 ppt
July	2022	7/6/2022	45.0 ppt
August	2022	8/9/2022	45.9 ppt
September	2022	9/7/2022	45.2 ppt
October	2022	10/6/2022	44.5 ppt
November	2022	11/3/2022	50.1 ppt
December	2022	12/7/2022	41.6 ppt
January	2023	1/12/2023	44.5 ppt
February	2023	2/16/2023	50.1 ppt
March	2023	3/8/2023	40.3 ppt
Average =			47.3 ppt
Max =			53.8 ppt

\*Parts per trillion or nanogram per Liter (ng/L)

**MassDEP MMCL = 20 ppt**

Proposed EPA MCL = 4 ppt



Massachusetts Department of Environmental Protection  
Bureau of Water Resources – Drinking Water Program

**PER- AND POLYFLUOROALKYL SUBSTANCES (PFAS) MAXIMUM  
CONTAMINANT LIMIT (MCL) NOTICE OF NONCOMPLIANCE (NON)  
With Violation Response/Compliance Schedule Approval (CSA) Form**  
M.G.L. c. 21A, § 16, 310 CMR 5.00

**Attention: Public Water Supplier**

**A General Information**

John Sanchez, Superintendent Department of Public Works Burlington Water and Sewer Division 25 Center Street Burlington, MA 01803-3093	<b>CITY/TOWN:</b> Burlington  <b>PWS ID #</b> 3048000 <b>CLASS:</b> COM <b>ENF DOC#:</b> 00011459
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**B Location Where Noncompliance Occurred**

Burlington Water and Sewer Division, 25 Center Street, Burlington MA 01803-3093

- Vine Brook GWTF – 3048000-03T
- Mill Pond SWTP – 3048000-01T

**C Description of Violations under M.G.L. c. 111, §§159-160 and 310 CMR 22.00**

The Department of Environmental Protection (MassDEP) Drinking Water Program has determined that you are in violation of the Per- and Polyfluoroalkyl Substances Rule for the following checked contaminant(s) and monitoring period(s):

**Table 1- PFAS 6**

	<b>Contaminant</b>	<b>Monitoring Period(s)</b>
<input checked="" type="checkbox"/>	Per- and Polyfluoroalkyl Substances - PFAS6 (sum of the concentrations of the six contaminants listed below) Perfluorooctane Sulfonic Acid (PFOS) Perfluorooctanoic Acid (PFOA) Perfluorohexane Sulfonic Acid (PFHxS) Perfluorononanoic Acid (PFNA) Perfluoroheptanoic Acid (PFHpA) Perfluorodecanoic Acid (PFDA)	<b>Quarter 2, 2021</b>

**Below is a description of the regulation(s) you have violated.**

**PFAS6 - MAXIMUM CONTAMINANT LEVEL**

Your public water system violated the maximum contaminant level (MCL) specified in 310 CMR 22.07G(3)(d) for PFAS6 during the monitoring period(s) listed in Table 1 above.

**D Action to Be Taken, and the Deadline for Taking Such Action**

- 1: By June 17, 2021, provide Public Education and Public Notice to your customers in accordance with the provisions of 310 CMR 22.07G(7)(e), 310 CMR 22.07G(11), and 310 CMR 22.16.

2. By July 6, 2021, submit to MassDEP for its review and approval a written proposal setting forth how and when you propose to come into compliance with the requirements cited in Section C of this NON, by **completing and submitting the attached PFAS Response/Compliance Schedule Approval Form (“compliance plan”) and conducting all required public notice.** To return to compliance, **you must implement the compliance plan,** including the schedule for completing the activities proposed, as approved by MassDEP. If you determine that you need additional time to complete and submit the compliance plan, you may request an extension **before** the submission deadline by contacting Amy LaPusata at 617-721-0160 or by email at amy.lapusata@mass.gov.

**E**

***Important Information***

If you, the Supplier of Water, fail to take any action MassDEP now wants you to take by the prescribed deadline, or if you otherwise fail to remain in compliance in the future with the applicable requirements, you could be subject to legal action, including, but not limited to, criminal prosecution, court-imposed civil penalties, or civil administrative penalties assessed by MassDEP. A civil administrative penalty may be assessed for every day from now on that you are in noncompliance with the requirements specified above. MassDEP reserves its right to exercise the full extent of its legal authority to obtain compliance with all applicable requirements.

**Date: June 4, 2021**



**Rachel Freed**  
**Deputy Regional Director**  
**Northeast Regional Office**  
**MassDEP Bureau of Water Resources**

Enclosures:

NON CSA Response Form

cc: **Boston OE, Boston DWP**

**BOH**

**Russ Makiej, Operator**

Y/DWPArchive/PFAS-ENF-NONCSA-Burlington-3048000-2021-06-04

Rev. 2021-4-27



**PFAS VIOLATION RESPONSE  
AND COMPLIANCE SCHEDULE APPROVAL (CSA) FORM**

M.G.L. c. 21A, §16, 310 CMR 5.00

**Failure to complete and return this form, and failure to take the actions required to return to compliance, could result in serious legal consequences.**

**INSTRUCTIONS:** By July 6, 2021, please complete and submit this form and supporting documentation to MassDEP at the address specified at the bottom of this form to obtain MassDEP approval of your system’s proposed plan for returning to compliance with the requirements cited in your Notice of Noncompliance (NON).

**A General Information**

Burlington Water and Sewer Division  
25 Center Street  
Burlington, MA 01803-3093

**CITY/TOWN** Burlington  
**PWS ID #:** 3048000  
**CLASS:** COM  
**ENF DOC#:** 00011459

**B Corrective Actions required under M.G.L. c. 111, §§ 159-160 and 310 CMR 22.00**

**PWS: Please check *all* boxes below that apply**

**PFAS6 - MAXIMUM CONTAMINANT LEVEL**

My system violated the maximum contaminant level (MCL) for PFAS6 in the monitoring period(s) identified in the NON. My system then issued a Tier 2 public notice in accordance with 310 CMR 22.16(3) and reported the MCL violation to MassDEP as required by 310 CMR 22.07G(11)(a). I have completed Section C below to address the MCL violation(s) cited in the NON.

**C Request for Compliance Plan Approval**

PWS: For each violation cited in the NON, please select **Option 1** or **Option 2** below by checking the appropriate box.

**OPTION 1: MassDEP Approval of Pre-determined Compliance Plan**

For each violation, I understand that, by selecting Option 1, my system’s Compliance Plan for that violation will be deemed approved upon MassDEP’s receipt of this completed form.

PWS: Select the schedule and approval options below for violations checked off in Section B above.

**PFAS6 - MAXIMUM CONTAMINANT LEVEL**

<input type="checkbox"/>	<ul style="list-style-type: none"> <li>• Within 30 days of the date of this NON, my system will submit to MassDEP a short-term corrective action plan to reduce the PFAS6 level to below the MCL. Short term actions may include: discontinuing use of a source, blending the source with elevated PFAS6 with other source(s), optimization of existing treatment processes, and/or obtaining water from an interconnection with another PWS. My system will implement the short-term corrective action plan as soon as feasible and submit a long-term corrective action plan (see below).</li> </ul>
<input type="checkbox"/>	<p>Within 30 days of the date of this NON, <b>if short-term actions cannot reduce PFAS6 levels below the MCL</b>, then my system will :</p> <ul style="list-style-type: none"> <li>• Submit a short-term corrective action plan that includes an interim proposal to provide an alternative source of water for sensitive subgroups served by my system (pregnant or nursing women, infants, and people diagnosed by their health care provider to have a compromised immune system) for drinking and cooking. Such alternative measures may include, but not be limited to, providing bottled water, vending machines, or water bill rebates for customers who purchase bottled water; AND</li> <li>• Implement the short-term corrective action plan as soon as feasible; AND</li> <li>• Submit an explanation as to why there are no feasible short-term measures to reduce PFAS6 levels below the MCL ; AND</li> <li>• Submit a long-term corrective action plan (see below).</li> </ul>
<input type="checkbox"/>	<p>Within 60 days of the date of this NON, my system will submit to MassDEP a long-term corrective action plan to reduce the PFAS6 level to reliably and consistently below the MCL. Long-term actions may include: the construction of an interconnection with another PWS, construction of a new treatment facility, the addition of PFAS6 treatment to an existing water treatment facility, and/or the installation of a new well. The long-term corrective action plan will be stamped by a Massachusetts Registered Professional Engineer with expertise in Drinking Water. The plan shall include an alternatives analysis including a feasibility evaluation, effectiveness determination, cost estimate, and implementation schedule. My system will implement the recommended actions set forth in the plan as approved by MassDEP in accordance with a schedule approved by MassDEP.</p>

**PUBLIC NOTICE AND CONSUMER CONFIDENCE REPORT**

<input type="checkbox"/>	<p>My system provided <b>public notice</b> of each violation that requires Tier 2 <b>public notice</b> in accordance with 310 CMR 22.16(3) and (5) and submitted to the local Board of Health and MassDEP a certification that it has fully complied with the <b>public notice</b> regulations in accordance with 310 CMR 22.15(3)(b). Two copies of the <b>public notice</b> and certification are attached. My system will repeat the <b>public notice</b> and certification every three months as long as the violation(s) persist(s) unless MassDEP determines in writing that appropriate circumstances warrant a different repeat frequency.</p>
<input type="checkbox"/>	<p>My system will include in its next Consumer Confidence Report (CCR) the following information: an explanation of each monitoring and/or reporting violation in accordance with 310 CMR 22.16A(6)(a); and/or the information on each MCL violation required by 310 CMR 22.16A(4)(k).</p>

**OPTION 2: PWS’s Proposed Compliance Plan for Approval**

For each violation, ***Understand that, by selecting Option 2, the following is applicable:***

- My Proposed Compliance Plan **must** be submitted with this Violation Response Compliance Schedule Form by the date specified in Section D of the NON.

- My Proposed Compliance Plan must include a schedule for coming into compliance with each violation cited in the NON for which the system is required to complete Section C and did not select an Option 1 pre-determined compliance plan.
- At a minimum, my Proposed Compliance Plan must address all applicable elements listed in Option 1.
- If my system is a repeat violator, my Proposed Compliance Plan must also include the actions that the system intends to take to prevent future noncompliance.
- MassDEP will notify me by e-mail whether my system's proposed Compliance Plan is approved or whether it must be revised and resubmitted to MassDEP.
- My Proposed Compliance Plan must be implemented as approved.

**D** *Water Commissioner, Owner, Owner Representative or Other Responsible Party*

I certify that I am duly authorized to complete and submit this form on behalf of the public water system identified above and that the information contained herein is true, accurate and complete to the best of my knowledge and belief. I understand that MassDEP may assess civil administrative penalties in accordance with M.G.L. c. 21A, §16, and 310 CMR 5.00 on any Supplier of Water that fails to comply with the provisions and schedule set forth in a MassDEP-approved Compliance Plan.

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Print Name: \_\_\_\_\_

Title: \_\_\_\_\_

Phone #: \_\_\_\_\_

Email Address: \_\_\_\_\_

---

**Please return this form and all attachments to:**

**Amy LaPusata  
MassDEP/DWP  
205B Lowell Street  
Wilmington, MA 01887  
[Amy.LaPusata@mass.gov](mailto:Amy.LaPusata@mass.gov)**





## 1, 4 Dioxane Levels at Vinebrook WTP (ppb)\*

Year	Well 1	Well 2	Well 3**	Well 4**	Well 5**	Well 10	Well 11
2013	0.081	0.15	1.1	3	0.23	0.46	0.17
2014	0.072	0.57	0.58	1.1	0.59	0.3	0.16
2015	0.058	0.087	0.65	0.68	1.5	0.32	0.12
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2017	0.11	0.088	0.18	0.65	0.93	0.15	0.12
2018	0.08	0.12	0.29	0.86	0.95	0.25	0.16
2019	0.1	0.087	0.2	0.7	1.5	0.3	0.094
2020	0	0.089	0.074	1.2	3.8	0.23	0.18
2021	0	0	0.11	0.98	1.6	0.17	0.098
2022	0	0	0.27	0.92	1.3	0.21	0.11
2023	0	0.046	0.15	0.55	1.3	0.21	0.084
Average	0.053	0.121	0.349	1.013	1.373	0.257	0.131
Max	0.11	0.57	1.10	3.00	3.80	0.46	0.18

\*Parts per billion or microgram per liter ( $\mu\text{g/L}$ )

**Mass DEP MCL=0.3 ppb**

\*\*Wells 3, 4, and 5 are off-line due to high levels of 1,4 Dioxane

**FIRST AMENDMENT TO THE  
WATER SUPPLY CONTINUATION AGREEMENT  
BETWEEN THE  
MASSACHUSETTS WATER RESOURCES AUTHORITY  
AND THE  
DEDHAM-WESTWOOD WATER DISTRICT**

**PARTIES:**

This First Amendment to the Water Supply Continuation Agreement is entered into by and between the Massachusetts Water Resources Authority, a body corporate and politic and an instrumentality of the Commonwealth of Massachusetts established pursuant to Chapter 372 of the Acts of 1984, as amended, having an address of the Deer Island, 33 Tafts Avenue, Boston, MA 02128 (the “MWRA”) and the Dedham-Westwood Water District, having an address of 50 Elm Street, Dedham, MA 02027-9137 (“DWWD”)(hereinafter the MWRA and the DWWD are collectively referred to as the “Parties” and each individually, as a “Party”).

**RECITALS:**

Whereas, on January 12, 2022, a Water Supply Continuation Agreement was executed between the Parties, allowing the DWWD to withdraw 73 million gallons (maximum annual volume) from the MWRA Waterworks System (“System”), with a term beginning on or around January 12, 2022, and ending at midnight on December 31, 2030 (“Agreement”).

Whereas, on September 14, 2022, MWRA’s Board of Directors approved revisions to MWRA’s *OP #10 Admission of a New Community to the Waterworks System* (“OP.10”), to allow a waiver of the entrance fee, under certain conditions (*e.g.*, local water sources being impacted by (a) water quality issues, (b) located in a stressed basin, and/or (c) significantly constraining economic development), for communities entering the System or those purchasing additional water.

Whereas, in accordance with the Agreement and OP.10, on May 4, 2023, the DWWD submitted a two-part-request that: (1) seeks to increase its withdrawal from the System to a total of 565.75 million gallons per year; and (2) seeks a waiver of the entrance fee for the additional volume of water withdrawal.

Whereas, on \_\_\_\_, 2023, the MWRA Board of Directors approved the DWWD’s two-part-request authorizing the additional supply of water and waiving the corresponding entrance fee, such that no further changes to the Agreement’s entrance fee provisions are necessary.

Whereas, the Parties wish to formalize their rights and obligations regarding the additional supply of water to the DWWD from the System.

Now, therefore, in consideration of the mutual promises contained herein and for other good and valuable consideration, the Parties agree to amend the Agreement as follows:

A. The Second Paragraph of the Agreement is deleted and replaced with the following Paragraph:

2. The MWRA shall during the Term provide DWWD with water on a maximum annual water volume basis, stated in millions of gallons, as follows:

Maximum Annual Volume  
565.75 million gallons

and 1.55 million gallon per day (mgd) average day use and up to 3.1 mgd on a maximum day (non-emergency) basis.

B. The Third Paragraph the Agreement is deleted and replaced with the following Paragraph:

3. Any increase beyond 565.75 million gallons on an average annual basis will require a written contract revision, including any corresponding revision to the entrance fee in accordance with OP.10. A water supply emergency may be an appropriate reason for DWWD to temporarily increase its maximum water volume in excess of the above referenced volume without requiring a revision to this Agreement.

C. All other terms and conditions of the Agreement shall remain the same.

In witness whereof, the Parties have caused this First Amendment to the Agreement to be executed by their duly authorized representatives.

MASSACHUSETTS WATER RESOURCES AUTHORITY

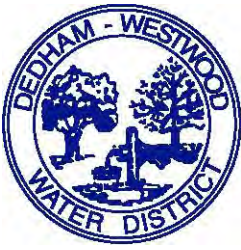
By: \_\_\_\_\_ Date: \_\_\_\_\_

Frederick A. Laskey  
Executive Director

DEDHAM-WESTWOOD WATER DISTRICT

By: \_\_\_\_\_ Date: \_\_\_\_\_

Blake Lukis  
Executive Director



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## DEDHAM-WESTWOOD WATER DISTRICT

50 Elm Street • Dedham, MA 02026  
(781) 329-7090 • Fax (781) 329-8737 • [www.dwwd.org](http://www.dwwd.org)

May 09, 2023

MWRA Advisory Board  
100 First Avenue  
Building 39 – 4<sup>th</sup> Floor  
Boston, MA 02129

MWRA Board of Directors  
Charlestown Navy Yard  
100 First Ave.  
Building 39  
Boston, MA 02129

Dear MWRA Advisory Board and MWRA Board of Directors,

This letter is to formally request that the Dedham-Westwood Water District (DWWD) be able to increase its current withdrawal limit from the Massachusetts Water Resources Authority (MWRA) from 73 million gallons (MG) a year to 565.75 MG a year. The rationale behind this request is described in detail below and DWWD believes that all requests fall within the eligible criteria for a waiver of the MWRA's entrance fee, as summarized in the MWRA's Staff Summary, dated September 14, 2022.

It should also be noted that DWWD would not require any additional permitting in order to increase its current withdrawal limit from the MWRA. The Water Resources Commission has previously reviewed the MWRA Enabling Act (Chapter 372 of the Acts of 1984) and the DWWD Enabling Act (Chapter 193 of the Acts of 1985) and indicated that the Interbasin Transfer Act does not apply to DWWD's applications to obtain water from the MWRA.

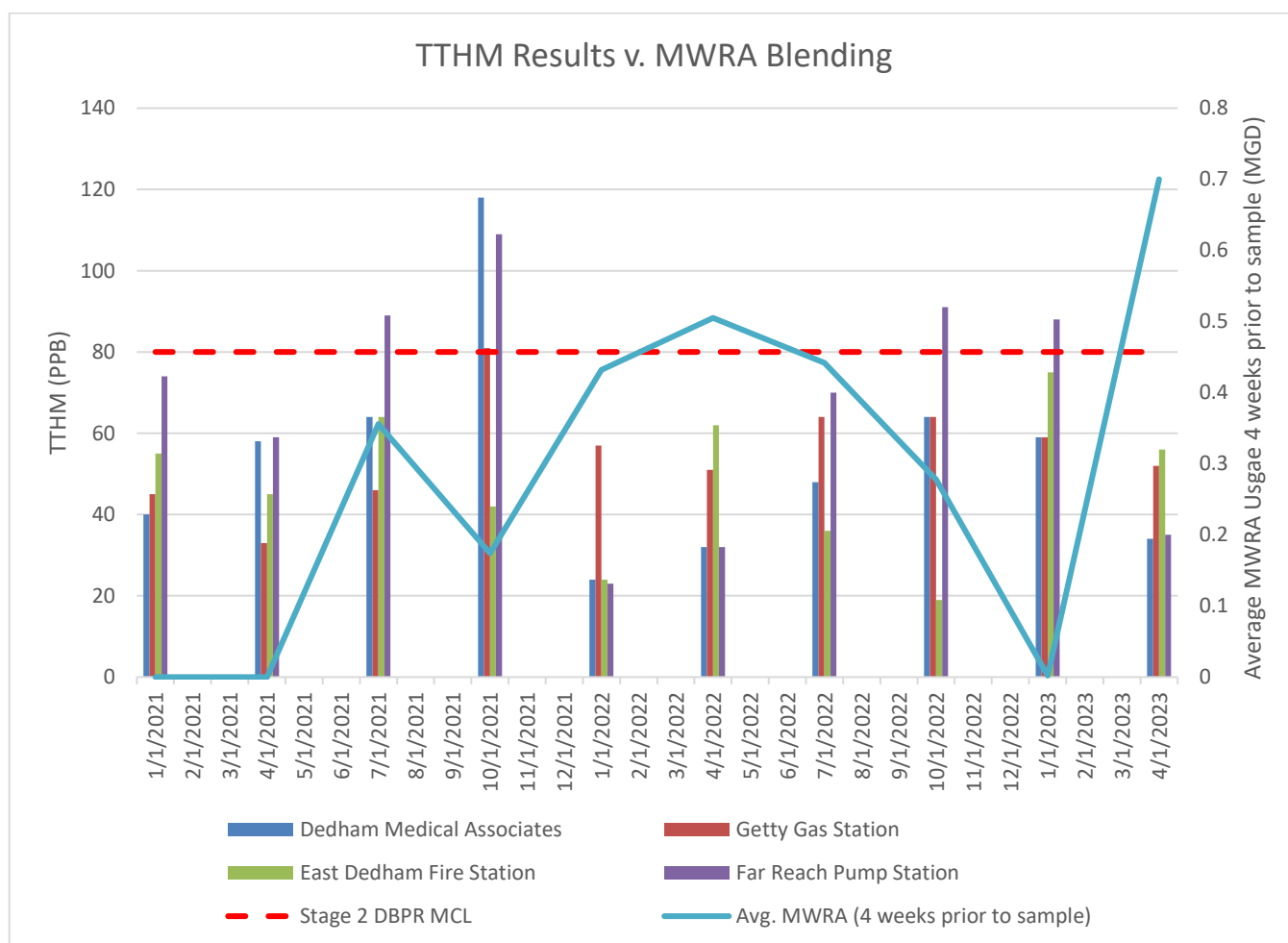
### Total Trihalomethane (TTHM) MCL

During the Districts 4<sup>th</sup> quarter compliance sampling for TTHM's in October of 2021, we experienced an exceedance in the Locational Running Annual Average (LRAA) at one of the four regulatory sampling points, resulting in a violation of the Stage 2 Disinfection Byproducts Rule. Although we only exceeded the LRAA at one sampling point, the TTHM levels at all sampling points were elevated, with 3 in excess of the 80 parts per billion (ppb) level. Please find the 4<sup>th</sup> quarter sampling compliance sheet for 2021 in Enclosure No. 1.

As part of the Districts actions to remediate these elevated TTHM levels, among other things such as flushing, we began blending with MWRA water in November of 2021. In the Districts January 2022 regulatory samples, we saw a significant reduction and were able to come back into compliance which can be largely attributed to blending. Therefore, in January and July of 2022, the District contacted the MWRA seeking approval for the ability to temporarily purchase additional volumes of water for the remainder of 2022 and into 2023 in order to

maintain compliance with the TTHM MCL, which were both approved by the MWRA. This approval allowed the District to continue blending through all of the 2022 regulatory TTHM samples, which all yielded results compliant with both the Operational Evaluation Level (OEL) and LRAA. Please find the 4<sup>th</sup> quarter sampling compliance sheet for 2022 in Enclosure No. 2, which shows all samples taken while blending with MWRA water.

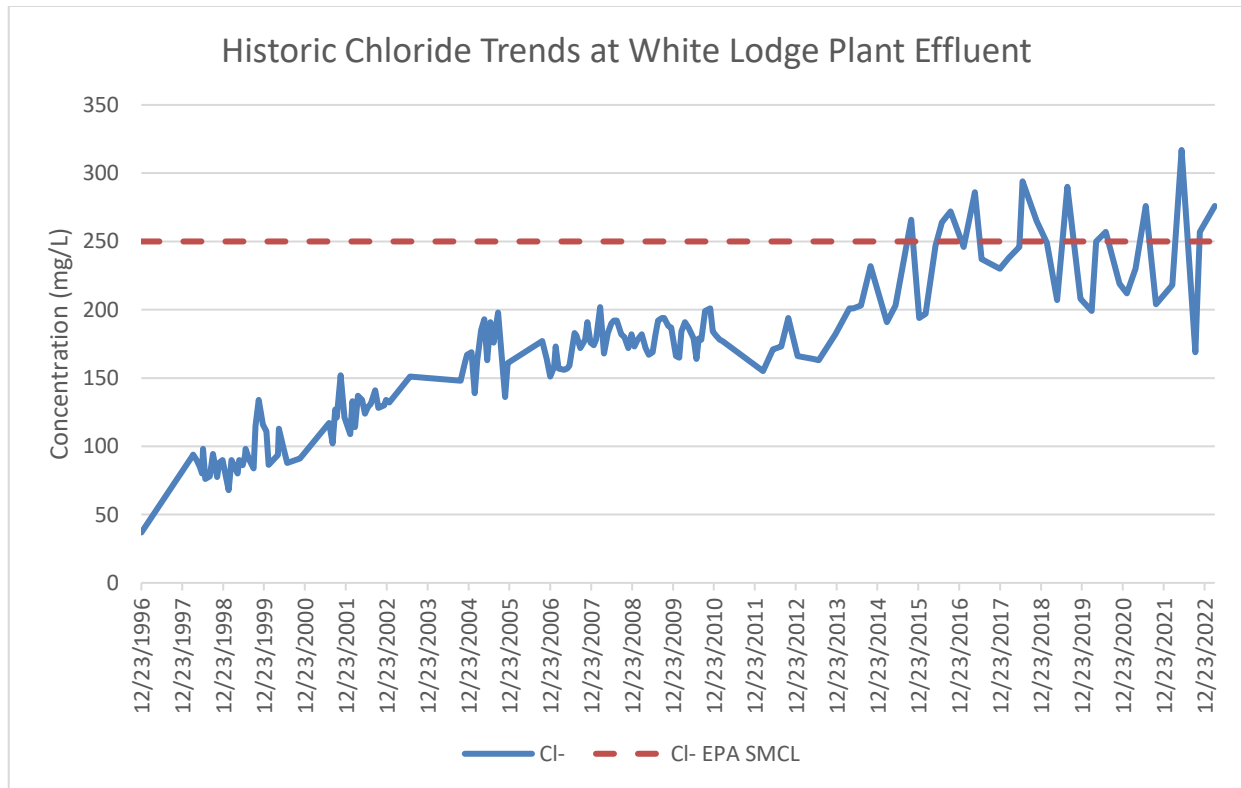
However, in mid-October 2022 the District stopped blending to see if we could keep TTHM levels down through the winter having completed the installation of two automatic flushing stations within the distribution system. Upon completion of the 1<sup>st</sup> quarter 2023 TTHM sampling, we found that the measures that we had taken did not lead to reduced TTHM levels. The results showed insignificant reductions in three sample location and the fourth sample actual had a significant increase. This was a stark contrast to the drop in TTHM levels we saw between October 2021 to January 2022, when we were blending at a rate of 0.400 million gallons per day (mgd). It should also be noted that we exceeded the OEL for the Far Reach pump station in the January 2023 sample. Given these results, we began blending again on February 6, 2023, and have since seen a positive result in our April 2023 compliance samples with all four samples seeing a reduction of TTHM levels. The chart below depicts the TTHM levels for each sample point and the average amount of MWRA the District was purchasing in the 4 weeks preceding the sample.



Given that DWWD has seen positive results in TTHM reductions by blending our water with the MWRA, we would need at least 0.5 mgd to reliably meet the TTHM standard.

## Chloride SMCL

The DWWD's White Lodge wellfield has seen a steady increase in chloride levels since recording began in 1996. The White Lodge wellfield is located along University Avenue in Westwood, in close proximity to the intersection of interstates I-93 and I-95. The increased chloride levels are due to road salt application for winter maintenance operations on these major highways. The chart below shows the historical Chloride levels from 1996 to date.



An analysis was performed by Weston & Sampson Engineers in 2016 and 2022 to determine the most feasible solution to reduce chloride levels within the finished water. Through these analyses, it was concluded that the most economically feasible solution is blending treated MWRA water directly with the White Lodge Treatment Plant effluent water. A blending rate of 24% MWRA water to local water was recommended to reliably reduce chloride levels to a level below the secondary maximum contaminant level (SMCL) of 250 milligrams per liter (mg/L). Included below is a chart prepared by Weston & Sampson, showing different flow volumes and the resulting blended chloride levels. Please find the 2016 report and excerpts from 2022 report relating to Chloride in Enclosure No. 3.

MWRA & White Lodge Blending Ratios - Chloride

WTP Flow (mgd)	MWRA Flow (mgd)	Combined Flow (mgd)	Max WTP Chloride (mg/L)	Average MWRA Chloride (mg/L)	Blended Chloride (mg/L)	Chloride SMCL (mg/L)	% of Flow coming from MWRA
4.00	1.25	5.25	317	30	249	250	24%
2.75	0.85	3.60	317	30	249	250	24%
3.05	0.95	4.00	317	30	249	250	24%
2.10	0.65	2.75	317	30	249	250	24%

Although the maximum capacity of the plant is 4.5 mgd, MassDEP has approved the wellfield at a combined registered and permitted volume of 3.11 mgd. This would result in an average volume of 0.75 mgd of MWRA water for blending (3.11 mgd x 24%). Therefore, we would need 0.75 mgd to reliably meet the Chloride standard.

### Stressed Basin

The Districts White Lodge wellfield is within the Neponset River water shed, which according to the “Stressed Basins in Massachusetts” report as approved by the Water Resources Commission in December of 2001, is considered a Medium Stressed basin. This fact limits the availability of the use of our highest producing well (no. 5) during certain times of the year, based on USGS streamflow gauge levels. There is a restriction for the months of March, April, and May if the USGS gauge at Milton Lower Falls (monitoring location [011055566](#)) is to fall below 95.0 cubic feet per second (cfs) and all year round (Jan-Dec) if the USGS gauge at Greenlodge St. (monitoring location [01105554](#)) is to fall below 12.6 cfs.

Historically, the District has only seen streamflow fall below the criteria which require the well to be turned off during the peak summer months during drought like conditions we had in 2016 and 2022. In these years we had to stop using well no. 5 for approximately one month and in 2016 had to make a special request to the MWRA to temporarily increase its withdrawal amount in order to overcome the loss of this source. The District is seeking the ability to increase our water supply agreement in the amount of 0.10 mgd, or 36.5 MG, in order to meet demand conditions during the peak summer months when well no. 5 may need to be offline. The 0.1 mgd was calculated by taking the total capacity of well no. 5 and multiplying it by 1 month (1.15 mgd x 31 days ≈ 36.5 MG). Although this water may not be used on a regular basis, including this request now will reduce the need for future special requests and additional paperwork in the event the well is required to be turned off.

### Summary of Current Request

To better understand the total increase that DWWD is requesting, it will first be helpful to share a little background of DWWD’s water system and its current connections to the MWRA. DWWD has two major pressure zones within its distribution system, Westwood high service area and Dedham main service area, and each is fed by a different MWRA connection. The Westwood High service area is fed by the MWRA via a booster station located on Route 1 in Westwood and the Dedham Main service area is fed by an underground vault within Dedham. The majority of our TTHM production occurs within the Westwood High service area, which requires the use of the MWRA booster station to blend. Alternatively, the anticipated blending at the White Lodge Treatment plant for Chloride reduction would not utilize the booster station that feeds the Westwood high service area, but rather a different interconnection. In addition, water from the White Lodge treatment plant only partially makes it to the Westwood High service area based on the flow patterns of the effluent water at this plant. This is important to note as it provides some context as to why DWWD is not just asking for the larger amount of the requests, but instead is adding them together in making the request to increase its withdrawal limit.

As summarized above, DWWD is seeking to increase its withdrawal limit from the MWRA in order to reliably meet the water quality standards for TTHM and Chloride as well as meet its peak summer demands at time where it’s largest source of water may be limited due to streamflow conditions. The total requested withdrawal limit increase is 492.75 MG, which is comprised of 182.5 MG for TTHM’s, 273.75 MG for Chloride’s, and 36.5 MG for Stressed Basin. When combined with our current annual withdrawal limit of 73 MG, DWWD is requesting a total revised withdrawal limit of 565.75 MG.

## Proposed EPA PFAS MCL

Although the District is meeting the current Massachusetts MCL for the six regulated per- and polyfluoroalkyl substances (PFAS6), it will not be able to meet the proposed U.S. Environmental Protection Agency (EPA) MCL for perfluorooctanoic acid (PFOA) and perfluorooctane sulfonic acid (PFOS) if promulgated at the proposed level of 4 parts per trillion (ppt). The District is currently moving forward with pilot studies at each plant to determine the effectiveness of Ion Exchange and granular activated carbon (GAC) filtration at each location and, based on the results, determine the costs of installation and long term operation and maintenance. There is a probability that this analysis will show that purchasing water from the MWRA may be a more cost effective alternative than the capital investment at DWWD's Bridge Street Treatment Plant, with a maximum production of 1.91 mgd. Although the District has not factored this amount in its current request, we wanted to be sure to inform the MWRA of this possibility and leave the door open for this future request. This analysis should be performed within the next year and if this additional request is made, it will be accompanied by the necessary sampling and cost information at that time.

DWWD would like to thank you in advance for your consideration on this matter and hope that you find the information included in this letter and the enclosed data set sufficient to make an informed decision. If after your review of this information you have any questions, comments, or require additional information, please do not hesitate to contact me.

Sincerely,



Blake D. Lukis,  
Executive Director

Cc: Joseph Favaloro, Executive Director, MWRA Advisory Board  
Fred Laskey, Executive Director, MWRA  
Dave Coppes, Chief Operating Officer, MWRA  
Matthew Romero, Deputy Executive Director, MWRA Advisory Board  
Rebecca Weidman, Director, Environmental and Regulatory Affairs, MWRA  
Robert Lexander, Chair, DWWD Board of Water Commissioners  
Steve Locke, Operations Manager, DWWD



Enclosure 1

Total Trihalomethane

2021 - 4<sup>th</sup> quarter sampling compliance Form

**Massachusetts Department of Environmental Protection - Drinking Water Program  
Stage 2 Disinfection By-Products Rule (DBPR) Quarterly Compliance Worksheet**

3073000	Dedham Westwood Water District	Dedham-Westwood
PWSID:	PWS Name:	City/Town:
<input checked="" type="radio"/> COM <input type="radio"/> NTNC	<b>Monitoring Frequency:</b> <input checked="" type="radio"/> Quarterly <input type="radio"/> Annual or less	<b>Monitoring Type:</b> <input checked="" type="radio"/> Routine <input type="radio"/> Reduced <input type="radio"/> Increased

CERTIFICATION: I certify under penalties of law that I am the person authorized to fill out this form and the information contained herein is true, accurate and complete to the best extent of my knowledge.

YEAR: 2021    QUARTER:  Q1: Jan-Mar     Q2: Apr-Jun     Q3: Jul-Sep     Q4: Oct-Dec

Primary Operator Signature: \_\_\_\_\_ Date: \_\_\_\_\_

**SYSTEMS USING CHLORINATION or CHLORAMINATION - COMPLETE TABLES A, B & C**

**A. CHLORINE RESIDUAL COMPLIANCE**

	Month	Year	# Samples	Monthly Avg (ppm)
Q1	January	2021	53	0.53
	February	2021	53	0.50
	March	2021	54	0.54
Q2	April	2021	53	0.50
	May	2021	53	0.53
	June	2021	53	0.65
Q3	July	2021	53	0.47
	August	2021	53	0.53
	September	2021	53	0.52
Q4	October	2021	53	0.50
	November	2021	53	0.55
	December	2021	53	0.81

Chlorine Running Annual Average (RAA): (Average of 12 Monthly Averages)	<b>0.55</b>
Chlorine MRDL (ppm):	<b>4.0</b>
Was Chlorine MRDL exceeded? If Yes, then MRDL violation for period.	<b>NO</b>

**B. TTHM COMPLIANCE**

Sample Location	Q1 (Jan - Mar)		Q2 (Apr - Jun)		Q3 (Jul - Sep)		Q4 (Oct - Dec)		OEL <sup>1</sup> Q4	LRAA	
	Date	ppb	Date	ppb	Date	ppb	Date	ppb			
Dedham Medical Associates	1/5/2021	40	4/6/2021	58	7/8/2021	89	10/7/2021	118	<b>97</b>	77	
Getty Gas Station	1/5/2021	45	4/6/2021	33	7/8/2021	46	10/7/2021	81	60	51	
East Dedham Fire Station	1/5/2021	55	4/6/2021	45	7/8/2021	64	10/7/2021	42	48	52	
Far Reach Pump Station	1/5/2021	74	4/6/2021	59	7/8/2021	89	10/7/2021	109	<b>92</b>	<b>83</b>	
MCL = 80 (ppb)		Was OEL exceeded? <sup>1</sup>				<b>YES</b>	Was MCL exceeded?:				<b>YES</b>

**C. HAA5 COMPLIANCE**

Sample Location	Q1 (Jan - Mar)		Q2 (Apr - Jun)		Q3 (Jul - Sep)		Q4 (Oct - Dec)		OEL <sup>1</sup> Q4	LRAA	
	Date	ppb	Date	ppb	Date	ppb	Date	ppb			
Dedham Medical Associates	1/5/2021	31	4/6/2021	39	7/8/2021	47	10/7/2021	26	35	36	
Getty Gas Station	1/5/2021	40	4/6/2021	32	7/8/2021	50	10/7/2021	60	51	46	
East Dedham Fire Station	1/5/2021	27	4/6/2021	35	7/8/2021	19	10/7/2021	32	30	28	
Far Reach Pump Station	1/5/2021	17	4/6/2021	25	7/8/2021	57	10/7/2021	22	32	30	
MCL = 60 (ppb)		Was OEL exceeded? <sup>1</sup>				<b>NO</b>	Was MCL exceeded?:				<b>NO</b>

**D. IMPORTANT COMPLIANCE NOTES**

- PWS has exceeded the OEL for TTHM and/OR HAA5 but is authorized to limit the scope of the OEL evaluation to reporting only. (Refer to letter regarding seasonal OEL exceedances)
- PWS has exceeded the OEL for TTHM and/OR HAA5 and must **complete and submit an Operational Evaluation Report** within 90 days of receipt of the analytical results (systems sampling quarterly only).
- PWS continues to qualify for reduced monitoring based on LRAAs of TTHM and HAA5 (and TOC if applicable)
- PWS **NO LONGER QUALIFIES** for reduced monitoring based on average concentrations of TTHM, HAA5 and/or TOC. (Refer to quarterly monitoring criteria on "Instructions" Tab)
- PWS has exceeded the MCL for TTHM or HAA5 during ANNUAL monitoring and therefore will be subject to **INCREASED monitoring** (quarterly dual sample sets at each location) until further notice.

<sup>1</sup>OELs apply to systems sampling quarterly only.

Enclosure 2

Total Trihalomethane

2022 - 4<sup>th</sup> quarter sampling compliance Form

**Massachusetts Department of Environmental Protection - Drinking Water Program  
Stage 2 Disinfection By-Products Rule (DBPR) Quarterly Compliance Worksheet**

<b>3073000</b>	<b>Dedham Westwood Water District</b>	<b>Dedham-Westwood</b>
<b>PWSID:</b>	<b>PWS Name:</b>	<b>City/Town:</b>
<input checked="" type="radio"/> COM <input type="radio"/> NTNC	<b>Monitoring Frequency:</b> <input checked="" type="radio"/> Quarterly <input type="radio"/> Annual or less	<b>Monitoring Type:</b> <input checked="" type="radio"/> Routine <input type="radio"/> Reduced <input type="radio"/> Increased

**CERTIFICATION:** I certify under penalties of law that I am the person authorized to fill out this form and the information contained herein is true, accurate and complete to the best extent of my knowledge.

**YEAR:** 2022 **QUARTER:**  Q1: Jan-Mar  Q2: Apr-Jun  Q3: Jul-Sep  Q4: Oct-Dec

**Primary Operator Signature:** \_\_\_\_\_ **Date:** \_\_\_\_\_

**SYSTEMS USING CHLORINATION or CHLORAMINATION - COMPLETE TABLES A, B & C**

**A. CHLORINE RESIDUAL COMPLIANCE**

	Month	Year	# Samples	Monthly Avg (ppm)
Q1	January	2022	53	0.97
	February	2022	53	0.69
	March	2022	53	0.72
Q2	April	2022	53	0.59
	May	2022	53	0.61
	June	2022	53	0.72
Q3	July	2022	53	0.73
	August	2022	53	0.76
	September	2022	53	0.66
Q4	October	2022	53	0.76
	November	2022	53	0.62
	December	2022	53	0.63

Chlorine Running Annual Average (RAA): (Average of 12 Monthly Averages)	<b>0.71</b>
Chlorine MRDL (ppm):	<b>4.0</b>
Was Chlorine MRDL exceeded? If Yes, then MRDL violation for period.	<b>NO</b>

<sup>1</sup>Note that you are required to notify MassDEP within 10 days of the end of the quarter of any DBPR MCL or MRDL violation. Tier 2 (30 day) Public Notification must also be conducted for all MCL and MRDL violations.

**B. TTHM COMPLIANCE**

Sample Location	Q1 (Jan - Mar)		Q2 (Apr - Jun)		Q3 (Jul - Sep)		Q4 (Oct - Dec)		OEL <sup>1</sup> Q4	LRAA
	Date	ppb	Date	ppb	Date	ppb	Date	ppb		
Dedham Medical	1/6/2022	24	4/5/2022	32	7/1/2022	48	10/6/2022	64	52	42
Getty Gas Station Bridge St.	1/6/2022	57	4/5/2022	51	7/1/2022	64	10/6/2022	64	61	59
East Dedham Fire Station	1/6/2022	24	4/5/2022	62	7/1/2022	36	10/6/2022	19	34	35
Far Reach Pump Station	1/6/2022	23	4/5/2022	32	7/1/2022	70	10/6/2022	91	71	54
<b>MCL = 80 (ppb)</b>		<b>Was OEL exceeded?<sup>2</sup></b>				<b>NO</b>		<b>Was MCL exceeded?<sup>1</sup></b>		<b>NO</b>

**C. HAA5 COMPLIANCE**

Sample Location	Q1 (Jan - Mar)		Q2 (Apr - Jun)		Q3 (Jul - Sep)		Q4 (Oct - Dec)		OEL <sup>1</sup> Q4	LRAA
	Date	ppb	Date	ppb	Date	ppb	Date	ppb		
Dedham Medical	1/6/2022	13	4/5/2022	11	7/1/2022	27	10/6/2022	37	28	22
Getty Gas Station Bridge St.	1/6/2022	54	4/5/2022	38	7/1/2022	32	10/6/2022	39	37	41
East Dedham Fire Station	1/6/2022	22	4/5/2022	40	7/1/2022	18	10/6/2022	23	26	26
Far Reach Pump Station	1/6/2022	13	4/5/2022	19	7/1/2022	32	10/6/2022	28	27	23
<b>MCL = 60 (ppb)</b>		<b>Was OEL exceeded?<sup>2</sup></b>				<b>NO</b>		<b>Was MCL exceeded?<sup>1</sup></b>		<b>NO</b>

**D. IMPORTANT COMPLIANCE NOTES**

- PWS has exceeded the OEL for TTHM and/OR HAA5 but is authorized to limit the scope of the OEL evaluation to reporting only. (Refer to letter regarding seasonal OEL exceedances)
- PWS has exceeded the OEL for TTHM and/OR HAA5 and must **complete and submit an Operational Evaluation Report** within 90 days of receipt of the analytical results (systems sampling quarterly only).
- PWS continues to qualify for reduced monitoring based on LRAAs of TTHM and HAA5 (and TOC if applicable)
- PWS **NO LONGER QUALIFIES** for reduced monitoring based on average concentrations of TTHM, HAA5 and/or TOC. (Refer to quarterly monitoring criteria on "Instructions" Tab)
- PWS has exceeded the MCL for TTHM or HAA5 during ANNUAL monitoring and therefore will be subject to **INCREASED monitoring** (quarterly dual sample sets at each location) until further notice.

<sup>2</sup>OELs apply to systems sampling quarterly only.

Enclosure 3

2016 Alternatives for Introducing MWRA Water for Blending with White Lodge Water  
Treatment Plant Water to Reduce Sodium and Chloride Concentrations in the  
Water Supplied to Customers Report by Weston & Sampson

and

Excerpts from the 2022 Water Treatment Plant Feasibility Study relating to Chloride prepared by Weston &  
Sampson.

## **Alternatives for Introducing MWRA Water for Blending with White Lodge Water Treatment Plant Water to Reduce Sodium and Chloride Concentrations in the Water Supplied to Customers**

### **Background and Goal**

Concentrations of sodium and chloride in the White Lodge Wells source water have been increasing consistently year after year since 1996 when extensive recording began. The increase has been consistent and shows no immediate sign of stabilizing or decreasing. White Lodge water treatment plant (WTP) treated water concentrations of sodium are currently approaching 125 mg/l and chloride is exceeding 250 mg/l. Figures 1 shows the historic trend of concentrations since 1996.

The DWWD has determined that is advisable to decrease the concentrations of these two constituents to lower levels in the water delivered to customers. Reducing concentrations can be achieved by treating the water or blending with MWRA water. Achieving various target concentrations of sodium and chloride will have direct impacts on the ability to fully utilize the White Lodge source water, as well as cost impacts. This evaluation will determine the feasibility of various MWRA supply options, improvements necessary to implement them and the estimated costs.

The cost to construct a treatment plant to remove sodium was considered but would be very expensive. Reverse osmosis (RO) is a treatment process that would work effectively. Typically, only a portion of the source water would be treated since the process would remove all constituents, including sodium. If half were treated, the blend would result in about 60mg/l sodium. For future planing, a treatment plant of at least 2 mgd to treat a portion of the available water was considered. The cost of this would exceed \$20 million. Energy costs would likely exceed the cost to purchase MWRA water, and disposal of the brine waste to the MWRA sewer system could be an issue.

### **MWRA Supply Alternatives**

The closest source of MWRA water is at the intersection of University Avenue and Canton Street. The DWWD recently completed construction of a 12-inch emergency connection to the MWRA at this location. The pressure of the water from the MWRA at this location is similar to the Westwood High Service (WWHS). It will require pressure reduction prior to blending with WTP finished water which is discharged at the pressure of the Dedham Main Service (DMS).

### **Blending Location**

The MWRA water will need to be blended with the WTP finished water. Several options are available to achieve the blending, as follows:

- Location Option 1 - Blend the MWRA water with the wells raw water, prior to treatment. This option would require treatment of the MWRA water, thereby increasing cost. It would require construction work within the WTP. It would also reduce the amount of water that can be withdrawn from the wells, leading to underutilization of the available resource. There would

also be additional annual cost to pump this water back into the DMS. The cost to buy, treat and then re-pump the MWRA water is very significant.

- Location Option 2 - Blend the MWRA water with the WTP treated water by introducing it into the clearwell, post treatment. This would be inefficient due to the small size of the clearwell and the need to repump the water after pressure reducing it. It would require construction work within the WTP. It would not reduce the amount of water that is withdrawn from the wells, but there would still be additional annual cost to pump this water back into the DMS. The cost to buy and then re-pump the MWRA water is significant.
- Location Option 3 - Blend the MWRA water with the WTP treated water by introducing it into the distribution main outside of the WTP, after the WTP pumps it into the Dedham Main Service system (DMS). This option does not require any additional pumping to blend the MWRA water with the WTP treated water. It is the most efficient, involves the least amount of modification to the water system, does not require any modification of the WTP, and is therefore recommended.

### Pipeline Options

The MWRA water will also need to be transmitted to the WTP. Three options are available to achieve the transfer, as follows:

- Pipeline Option 1 - Construct a pipeline from the MWRA connection to the WTP. This length is about 3,500 feet and would require trenching through the newly reconstructed and paved University Avenue and crossing of an active railroad. The cost of this pipeline including repaving of the street is estimated to be approximately \$900,000.
- Pipeline Option 2 - Construct a pipeline from the MWRA connection to Dartmouth Street. From this point the existing raw water main for well 2 could be converted for use as the MWRA transmission main. Well 2 discharge could be transferred to the parallel 16-inch raw water main for wells 3 and 4. The length of the necessary pipeline is about 2,400 feet and would also require trenching through the newly reconstructed and paved University Avenue. The cost of this pipeline including repaving of the street is estimated to be approximately \$650,000.
- Pipeline Option 3 - Utilize the distribution system serving the University Avenue area to transmit the water to the WTP. This would require some limited construction at the MWRA connection and at the WTP, but would not impact the newly constructed roadways significantly. It would require closing of one valve on the Blue Hill Avenue 12-inch water main. The University Avenue service area would then become a subsystem of the DMS but operating at a slightly higher pressure. This option is recommended as it is least costly and avoids trenching within the newly reconstructed University Avenue. There is no additional cost for this alternative.

### Meter & Control Improvements

Other improvements are necessary to accomplish the transfer, including the following:

- Construct a metering chamber at the connection to the MWRA. According to the MWRA, this meter chamber would need to be constructed to their standards at the cost of the DWWD. The concept and potential location is shown on an attached figure. The cost of this is estimated to be approximately \$340,000.

- Construct a pressure reducing valve (PRV) chamber. The MWRA has indicated that the PRV cannot be located in the metering chamber. At the point of connection to the treatment plant discharge main. This PRV would reduce pressure to a level slightly above the normal operating pressure of the DMS. The cost of this is estimated to be approximately \$160,000.
- Construct a control valve and meter chamber at the point of connection into the 20-inch WTP discharge water main. This control valve would be automated and would function to control the flow of MWRA water to a desired volume, as measured by the flow meter, to achieve the desired blending rate. The concept and potential location is shown on an attached figure. The cost of this is estimated to be approximately \$190,000.
- SCADA system additions would be required to coordinate the MWRA blending rate with the WTP pump rate to control the required volume of water to achieve the desired sodium concentration. The cost of this is included in the above costs.

**Water Purchase Volumes for Blending**

The desired blended sodium/chloride concentration will determine the volume of water purchased. The table below shows the results for several blends. This assumes DWWD water is at 125 mg/l sodium and MWRA water is at 20mg/l sodium. The results for 100 mg/l are shown in horizontal boxes; with the 2.75 mgd WTP average daily flow (in red) the most likely average target.

**White Lodge and MWRA Flow Rates to Achieve Sodium Blended Concentrations**

WTP Flow (mgd)	MWRA Flow (mgd)	Combined Flow (mgd)	WTP Sodium (mg/l)	MWRA Sodium (mg/l)	Blended Sodium (mg/l)
4.00	6.40	10.40	125	20	60
4.00	4.40	8.40	125	20	70
4.00	3.00	7.00	125	20	80
4.00	2.00	6.00	125	20	90
4.00	1.25	5.25	125	20	100
4.00	0.65	4.65	125	20	110
4.00	0.20	4.20	125	20	120
2.75	4.50	7.25	125	20	60
2.75	3.00	5.75	125	20	70
2.75	2.05	4.80	125	20	80
2.75	1.40	4.15	125	20	90
2.75	0.85	3.60	125	20	100
2.75	0.45	3.20	125	20	110
2.75	0.15	2.90	125	20	120
1.54	2.46	4.00	125	20	60
1.90	2.10	4.00	125	20	70
2.30	1.70	4.00	125	20	80
2.65	1.35	4.00	125	20	90
3.05	0.95	4.00	125	20	100



3.45	0.56	4.00	125	20	110
3.80	0.20	4.00	125	20	120
1.05	1.70	2.75	125	20	60
1.30	1.45	2.75	125	20	70
1.58	1.17	2.75	125	20	80
1.84	0.91	2.75	125	20	90
2.10	0.65	2.75	125	20	100
2.35	0.40	2.75	125	20	110
2.62	0.13	2.75	125	20	120

**Hydraulic Limitations**

The typical volume that would be expected to achieve a target 100 mg/l sodium concentration would have the WTP operating at an average capacity of 2.75 mgd, which is the average over the course of the past year. This would require an MWRA flow of at least 0.85 mgd. The hydraulics of these volumes does not add any stress to the distribution system and work well within the existing water system limits. At this rate, approximately 310 million gallons of MWRA water would have to be purchased over the course of the year for blending alone.

The hydraulics of the 2.75 mgd and several other flow rates were evaluated. The disadvantage of taking MWRA water near the WTP is that this large volume of water must be transmitted into the water system with a limited number and size of water mains to move it. All of the WTP and MWRA water must leave the vicinity of the WTP through the 16-inch DMS main or the 12-inch WWHS main. The DMS main splits into two 12-inch mains on Blue Hill Avenue that then transmit water under Route 128 and into Dedham. The 12-inch WWHS main is fairly long as it transmits water into the center of Westwood.

The practical maximum that can be discharged into the DMS and WWHS simultaneously is about 4 mgd and 1.5 mgd, respectively, for a total of about 5.5 mgd. At flows greater than this, a pump would be required to push the desired volume of MWRA water into the WTP discharge main. Alternatively, additional pipeline capacity could be constructed to transmit the additional water into Dedham at reasonable pressure.

**Water Quality Issues**

The MWRA uses chloramines for disinfection whereas the DWWD uses free chlorine. In chlorinated waters and blended waters, it is important that the ratios of chlorine to ammonia are understood so that the formation of trichloramine and dichloramine, which can lead to taste and odor problems, can be avoided. At certain lower pH levels and higher MWRA flow ratios, the blend could result in undesirable odors.

Our preliminary review of the blended water, at about 30% MWRA, with pH typically maintained in the two waters (9.4 for MWRA and 8.0 DWWD); there should be no resulting taste and odor problem. Additional chlorine may be required by DWWD to maintain the desired chlorine residual in the blended water of about 8.0. Further review of this issue is necessary to determine when issues could arise, such as lower blended pH, lower chlorine residual from DWWD and higher temperature water in the summer.

## Recommendations

The recommended option involves the following:

- A meter vault/PRV vault at the MWRA connection at University Avenue and Canton Street
- A meter and control valve vault at the WTP
- Utilize the University Avenue service area to transmit MWRA water to the WTP vault for blending

### Positive aspects

- Construction in the newly constructed streets is avoided
- The well's utilization and WTP capacity is maximized
- The least amount of construction is required

### Negative aspects

- Repumping cost for MWRA water pumped to the WWHS. There will be additional cost incurred to pump the water into the WWHS from this location as compared to the Pump Station on Route 1 near Glacier Drive.
- There may be added cost to purchase additional MWRA water consumed by the University Avenue area
- There may be additional cost to purchase additional MWRA water for blending. With a ratio of 30% MWRA and 70% MWRA, approximately 310 MG would need to be purchased based on a recent years average production of 2.75 mgd at the WTP

### Other Issues

- Consider taking all the water that is normally purchased from the MWRA at the new Canton Street connection point, thereby minimizing the total volume of water that is purchased from the MWRA. Currently most of the water purchased is via the connection on Route 1 near Glacier Drive.

## Costs

The costs below represent construction values, based upon recent construction projects. The final project cost includes an added 30% for engineering and contingencies.

- MWRA Meter Vault - The MWRA has received bids for several meter vaults recently that would be virtually identical to the new vault. The average cost has been about \$340,000.
- PRV & Vault at Meter - We have asked the MWRA if it would be acceptable to include the PRV in the meter vault. They indicated that they should be separate. We estimate the cost to be approximately \$160,000.
- Control & Meter Vault at WTP – The estimated cost for this vault, mechanical equipment and control systems is \$190,000.

The total project cost is estimated to be \$900,000.

## 2.0 SODIUM AND CHLORIDE TREATMENT ALTERNATIVES AND FEASIBILITY

The following section presents alternatives for NaCl reduction at White Lodge WTP. Weston & Sampson has previously evaluated alternatives for reducing NaCl concentrations at the White Lodge WTP in 2016 and a copy this evaluation is included as Appendix B. The 2016 evaluation concluded that the most economically feasible solution is blending treated MWRA water directly with the White Lodge WTP effluent. The evaluation recommended blending ratios that generated sodium levels less than 100 mg/L and chloride levels less than 200 mg/L.

### 2.1 Blending with MWRA Water

The closest source of MWRA water from White Lodge is at the intersection of University Avenue and Canton Street. This connection is currently a 12-inch emergency connection to the MWRA. The pressure of the water from the MWRA at this location is similar to the Westwood High Service (WWHS). One alternative for sodium and chloride reduction is to blend the MWRA water with the WTP treated water by introducing it into the distribution main outside of the WTP, after the WTP pumps it into the Dedham Main Service system (DMS). MWRA water will require pressure reduction prior to blending with WTP finished water which is discharged at the pressure of the Dedham Main Service (DMS). This option requires permitting with the MWRA. This report and analysis assume that the MWRA will approve additional purchasing of water to facilitate the required blending ratios.

#### Option #1

Blending is feasible by utilizing the existing 12-inch Well #2 raw water transmission main along University Avenue and converting it to transmit finished MWRA water to blend at the WTP. Raw water from Well #2 will be tied into the existing 16-inch raw water main that currently transports raw water from Well #3 and Well #4 to the WTP. The 16-inch main will instead transport raw well water from Wells #2, #3, and #4 to the WTP. A schematic of this alternative is presented in Figure 2-1 below. In this scenario, MWRA water will be blended outside the WTP and will not be retreated. Blending at the White Lodge WTP would require limited construction at the MWRA connection, at the WTP, and University Avenue roadways. Infrastructure improvements include:

- Construction of approximately 1,500 LF of new 12-inch ductile iron pipe to connect to the existing 12-inch Well #2 raw water transmission main to the MWRA connection. This existing 12-inch raw water transmission main will be extended to the MWRA connection and converted to transport finished MWRA water to the WTP.
- Closing of one valve on the Blue Hill Avenue 12-inch water main
- Installation of control valves, metering chambers, and pressure reducing valve

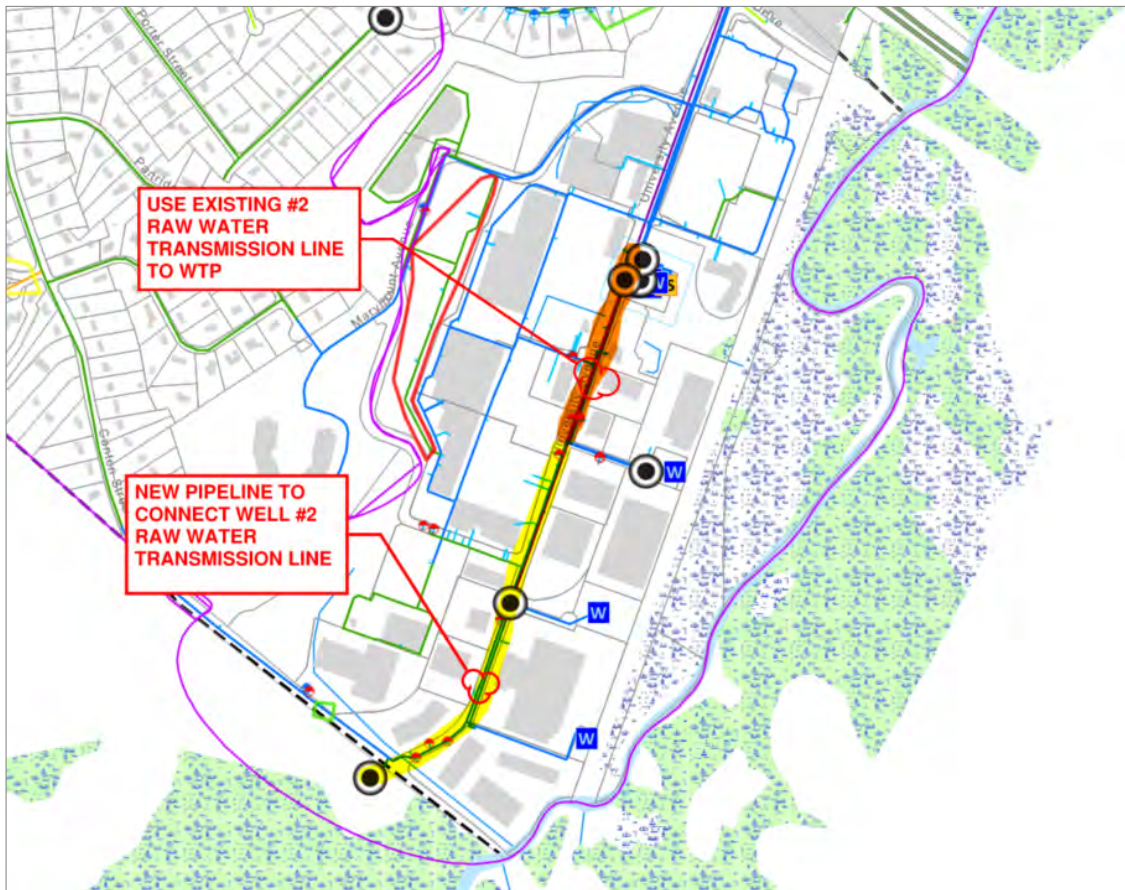


Figure 2-1: White Lodge Blending Pipeline

**Option # 2**

Utilize the distribution system serving the University Avenue area to transmit the water to the WTP. This would require some limited construction at the MWRA connection and at the WTP, but would not impact the newly constructed roadways significantly. It would require closing of one valve on the Blue Hill Avenue 12-inch water main. The University Avenue service area would then become a subsystem of the DMS but operating at a slightly higher pressure.

The desired final sodium and chloride concentrations will determine the volume of water needed to be purchased from the MWRA. Table 2-1 shows the volume of water needed from the MWRA based on various typical daily flowrates from the White Lodge WTP. It is assumed that the White Lodge WTP effluent contains 125 mg/L sodium and MWRA water contains 20 mg/L sodium.

Table 2-1: MWRA Blending Volumes

WTP Flow (mgd)	MWRA Flow (mgd)	Combined Flow (mgd)	WTP Sodium (mg/l)	MWRA Sodium (mg/l)	Blended Sodium (mg/l)
4.00	1.25	5.25	125	20	100
<b>2.75</b>	<b>0.85</b>	<b>3.60</b>	<b>125</b>	<b>20</b>	<b>100</b>
3.05	0.95	4.00	125	20	100

Table 2-1 suggests that about 30% of the blended water leaving the White Lodge WTP needs to be from the MWRA to achieve sodium concentrations below 100 mg/L.

The treated water from MWRA contains chloramines for residual disinfectant, while the White Lodge WTP effluent contains free chlorine as a residual disinfectant. Direct blending of these two disinfectants is not encouraged as excess free chlorine in the presence of monochloramine will lead to destruction of the monochloramines and the total chlorine residual. This reaction is referred to as break point chlorination and is displayed in Figure 2-2. Water from MWRA is operated in the ideal zone for chloramines, while water from DWWD is operated past the break point so that all chlorine is available as free chlorine. Increasing the monochloramine concentration in the water leaving the White Lodge WTP may reduce the free chlorine residual and require an increase in chlorine dose leaving the plant to ensure adequate residuals are maintained at far ends of the distribution system.

The District should actively monitor chlorine residual throughout the distribution system following implementation of finished water blending. If chlorine residual is reduced throughout the system, it is recommended the District change their residual disinfectant to chloramines at both White Lodge WTP and Bridge Street WTP. Section 4.0 details the required capital improvements to facilitate chloramination at each WTP.

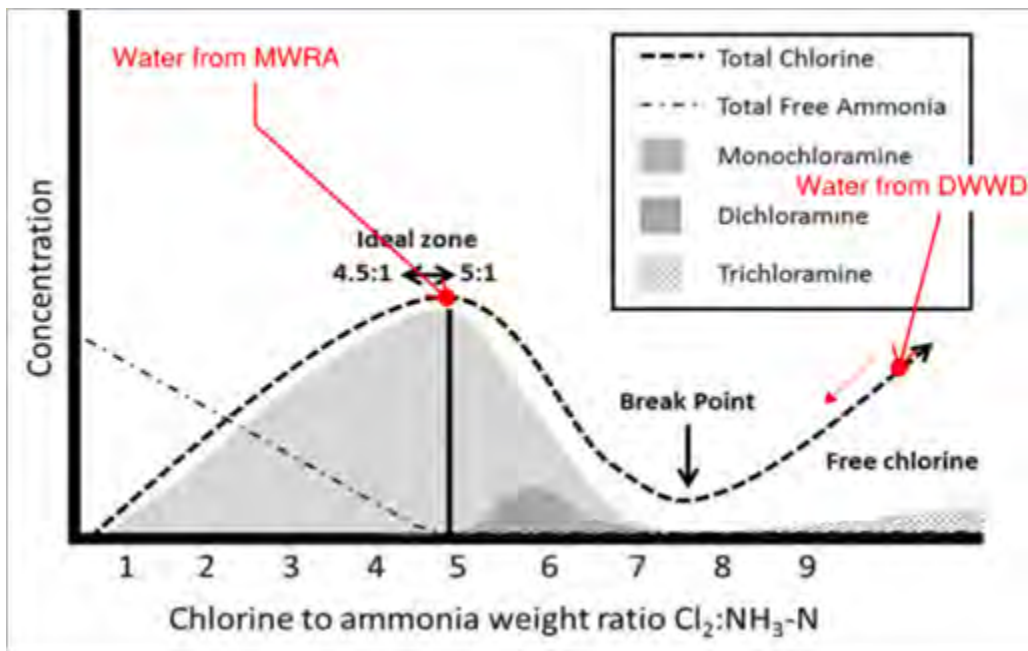


Figure 2-2: Break Point Chlorination Curve

Estimated costs for blending water with the MWRA are presented in Table 2-2. The annual costs assumes an average 0.85 MGD of water is purchased from MWRA for blending purposes. The costs also assume purchasing water from the MWRA will be \$4,387.28 per million gallons of water.

.....

Table 2-2: MWRA Blending Estimated Costs		
	Description	Estimated Cost
White Lodge WTP	Design	\$200,000
	Construction (Option #1)	\$2,170,000
	Construction (Option #2)	\$500,000 - \$800,000
	Total Capital Cost	\$2,370,000
	Total Annual Costs	\$1,362,000

**2.2 Reverse Osmosis**

Reverse Osmosis (RO) is a treatment technology that has shown to be effective in the removal of NaCl (typically from sea or brackish water sources), however, the expense of the process, both capital and operational, are very large. In addition, concentrated PFAS and salt levels in the reject water would require the District to manage this waste. Installation of a RO treatment system is not recommended at this time due to these considerations.

## STAFF SUMMARY

**TO:** Board of Directors  
**FROM:** Frederick A. Laskey, Executive Director  
**DATE:** June 21, 2023  
**SUBJECT:** Water Supply Citizens Advisory Committee Contract




---

**COMMITTEE:** Water Policy & Oversight

INFORMATION  
 VOTE

Carolyn M. Fiore, Deputy Chief Operating Officer  
Stephen Estes-Smargiassi, Director, Planning and Sustainability  
Rose Souliotis, Administrative Coordinator  
Preparer/Title

Sean Navin  
Director, Intergovern. Affairs



---

### RECOMMENDATION:

To authorize the Executive Director, on behalf of the Authority, to execute a contract, substantially in the form attached hereto, 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.

### DISCUSSION:

In addition to the critical oversight functions of the Advisory Board, many of MWRA's policy decisions are made with advice and support from two standing citizens' advisory committees, the Water Supply Citizens Advisory Committee (WSCAC) and the Wastewater Advisory Committee (WAC). A separate staff summary presented at this meeting recommends authorization for the Executive Director to execute a similar contract with WAC for FY24.

WSCAC originated in 1978 when its predecessor committee, the Northfield Citizens Advisory Committee, was formed at the direction of the Secretary of the Executive Office of Environmental Affairs. WSCAC has received direct funding from MWRA since MWRA's formation in 1984.

The proposed FY24 WSCAC contact is 2.44% greater than the FY23 contract. Health insurance increased 7.5%, while hourly salaries increased 6.09% and other reimbursable expense items increased \$400. Health insurance is budgeted at 80% reimbursement for the Executive Director only, not to exceed \$12,621, with an optional health insurance buy-out program similar to that offered to MWRA employees who do not use MWRA's health insurance benefit. The proposed total FY24 WSCAC funding is \$123,482.

Current topics of interest to WSCAC include system redundancy, energy efficiency and carbon footprint, water system expansion issues, changing drinking water regulations, the Water System Master Plan, and watershed management and protection issues. The committee currently has 15 active members. WSCAC continues to work to identify additional members in categories which are not well represented on the committee.

WSCAC's office is located at Quabbin Reservoir in a Department of Conservation and Recreation (DCR) building. Most meetings were held at MWRA's Southborough facility prior to the pandemic. Since March 2020, meetings have been held virtually. WSCAC's Executive Director is Lexi Dewey (selected by WSCAC's Executive Committee). The current Chair is Gerald Eves, with Paul Lauenstein as incoming Chair, elected from among the members.

**BUDGET/FISCAL IMPACT:**

Sufficient funds for the WSCAC contract are included in the FY24 Draft Final Current Expense Budget.

**ATTACHMENT:**

Agreement between Massachusetts Water Resources Authority and Water Supply Citizens Advisory Committee



**AGREEMENT**  
**BETWEEN**  
**MASSACHUSETTS WATER RESOURCES AUTHORITY**  
**AND**  
**WATER SUPPLY CITIZENS ADVISORY COMMITTEE**

This Agreement (“Agreement”) is by and between the Massachusetts Water Resources Authority (“Authority”), a body politic and corporate and a public instrumentality of the commonwealth created by Chapter 372 of the Acts of 1984 with offices at Deer Island, 33 Tafts Avenue, Boston, MA 02128 and the Water Supply Citizens Advisory Committee (“WSCAC”) an organization initially created under the Massachusetts Environmental Policy Act (“MEPA”) to ensure public representation and participation in Authority water supply activities, with offices currently at 485 Ware Road, Belchertown, MA 01007 (collectively “Parties”).

WHEREAS, the Authority is required to meet the water needs of its communities;

WHEREAS, the Authority desires WSCAC to continue to advise in water supply planning and programming; and

WHEREAS, WSCAC desires to have a continued role advising the Authority;

NOW, THEREFORE, for the consideration of mutual promises contained herein, the Authority and WSCAC agree as follows:

Article 1. Effective Date.

This Agreement shall be effective from July 1, 2023 through June 30, 2024, inclusive.

Article 2. Compensation, Budget, Payment, and Expenses.

2.1 The Authority shall make funds available as follows:

(a) Salaries and Duties.

Director. An Executive Director shall be chosen by WSCAC members at a salary not to exceed \$81,018 for the year commencing on July 1, 2023 through June 30, 2024, inclusive. The hourly salary rate (inclusive of payroll taxes) shall be \$48.63 with annual total hours of 1,666 (average 34 hours per week for 49 weeks). The duties of the Executive Director shall be in accordance with the job description prepared by the Executive Committee of WSCAC and on file with the Authority.

Administrative Assistant. A part-time Administrative Assistant shall be chosen by the WSCAC Executive Director in consultation with the Executive Committee of WSCAC at a salary not to exceed \$16,996 for the year commencing on July 1, 2023 through June 30, 2024, inclusive. The hourly salary rate shall be \$25.29 (inclusive of payroll taxes) with annual total hours of 672 (average 14 hours per week for 48 weeks). The duties of the Administrative Assistant shall be in accordance with the job description prepared by the Executive Committee of WSCAC and on file with the Authority.

(b) Reimbursable Expenses.

- (1) The Authority shall reimburse the WSCAC for 80% of the non-employer-sponsored health insurance for the WSCAC Executive Director (not to exceed \$12,621). The percentage rate for reimbursement of health insurance costs shall be changed to that of Authority staff if the Group Insurance Commission changes the rate.
- (2) Health insurance buy-out: The WSCAC Executive Director may elect a monetary allowance in lieu of reimbursement of health insurance costs, provided he or she has health insurance coverage through another employer-sponsored plan that meets Internal Revenue Service “minimum value” criteria, throughout that six-month period. The amount of the allowance will be \$1000 to waive family coverage or \$700 for waiving individual coverage. The WSCAC Executive Director is responsible for any withholding taxes on these payments with WSCAC being responsible for the employer share of payroll taxes.
- (3) Mileage costs, public transportation costs, highway tolls and parking expenses incurred by WSCAC staff and members from attendance at WSCAC meetings, pertinent conferences and seminars, or while performing other functions directly related to its scope of services. Mileage costs will be reimbursed at the prevailing Authority rate per mile.
- (4) Office supplies (such as letterhead, envelopes, pencils, paper clips), postage, office telephone and internet access, meeting expenses, and general administrative and office expenses;
- (5) The purchase or rental by WSCAC staff of books, films, cassettes, tapes, etc., if specifically approved by the Authority in advance, except that single copies of individual publications, books, and other written documents may be purchased for the WSCAC library use without prior approval, provided that the cost per item does not exceed \$200. All materials purchased under this section shall be considered property of the Authority.
- (6) Other miscellaneous expenses of the WSCAC staff approved by the Authority on a case-by-case basis. When possible, approval of the Authority should be received in advance of incurring such expenditures.

The Authority may advance up to \$750 to WSCAC, such advance to be applied to the payment of Miscellaneous Expenses as defined herein and as approved and budgeted under the terms of this Agreement. Payments made from an advance shall be accounted for in the same manner as all other Miscellaneous Expense payments. Prior to the expiration of this Agreement, any outstanding balance on an advance shall be applied against amounts due WSCAC.

The annual total reimbursement to WSCAC for annual and miscellaneous expenses combined shall not exceed \$25,868 from July 1, 2023 through June 30, 2024, inclusive.

(c) Non-reimbursable expenses.

The following expenses are not reimbursable: meals, entertainment, room and board expenses, fines, fees, or costs assessed as a result of improper or illegal actions on the part of the member, such as parking tickets or speeding fines.

ARTICLE 3. RESPONSIBILITIES OF THE AUTHORITY AND WSCAC.

(a) WSCAC shall employ an Executive Director, who is prohibited from being a member of WSCAC while serving his or her term as a paid employee.

(b) WSCAC shall, whenever applicable, take all necessary steps to receive an exemption from the Massachusetts Sales and Use taxes for materials, printing, and equipment purchased by WSCAC on behalf of the Authority.

(c) WSCAC shall submit monthly or periodic statements to the Authority requesting payment for salary, and for annual and miscellaneous expenses listed in Article 2. Such requests shall be supplemented or accompanied by time sheets, travel and expense vouchers, and by such other supporting data as may be required by the Authority.

(d) WSCAC shall maintain accounts, records, documents, and other evidence directly pertinent to performance of work under this Agreement. The Parties and their duly authorized representatives shall have access to such records, documents, and other evidence for the purpose of inspection, audit, and copying.

(e) The Authority or its duly authorized agent shall have the right at any and all reasonable times, to examine and audit WSCAC's records, documents and other evidence.

(f) This Agreement is subject to the laws dealing with the expenditures of public funds, including Chapter 12A of the Massachusetts General Laws.

(g) The Parties agree to consent to any reasonable modifications or changes in this contract that may be required by the Commonwealth of Massachusetts or any of its agencies.

(h) WSCAC acknowledges that the Authority is a state agency for purpose of Chapter 268A of the General Laws (the Massachusetts Conflict of Interest Law) and understands that for the purposes of that law, WSCAC staff and members are special state employees.

(i) WSCAC shall be responsible for compliance with all applicable provisions and requirements of the Massachusetts Open Meeting Law and the Massachusetts Public Records Law.

#### ARTICLE 4. RESPONSIBILITIES OF THE WSCAC STAFF.

4.1 The WSCAC staff shall be responsible for the following tasks:

- (a) aiding WSCAC in its tasks under Article 6, managing the WSCAC office, educating the public, and acting as liaison with the Authority and its staff;
- (b) preparing monthly progress reports for submission to the WSCAC Executive Committee, the WSCAC members, and the Authority;
- (c) maintaining financial records, minutes of the WSCAC meetings, and other WSCAC records;
- (d) assuring that at least every other meeting be held in Eastern Massachusetts at a location to be jointly agreed upon by WSCAC and the Authority where Authority attendance is expected.
- (e) providing to the Authority copies of the notices for and minutes of all meetings of WSCAC and of all the WSCAC correspondence as soon as such materials are available.
- (f) administering and maintaining compliance by all its members and staff with the provisions of the Massachusetts Conflict of Interest Law including, without limitation, those mandatory provisions relating to: (i) annual distribution to members and staff of the State Ethics Commission's (SEC) Summary of Law and maintenance and archiving of acknowledgements of receipt of the Summary of Law from all members and staff, and (ii) compliance by members and staff with the SEC's bi-annual educational training exercises.

#### ARTICLE 5. MEMBERSHIP

5.1 Membership of WSCAC

- (a) Membership of WSCAC shall maintain parity between those individuals representing the interests of the communities listed in section 8(d) of the Authority's Enabling Act, c. 372 of the Acts of 1984, ("User Representatives") and those individuals representing the interests of the watershed communities ("Donor Representatives") and those individuals representing the interests of statewide or other appropriate interests as mutually agreed upon by WSCAC and the MWRA ("Other Representatives").
- (b) In order to maintain WSCAC membership status, members must be active participants, as defined in the WSCAC by-laws.

5.2 The appointment of WSCAC members shall be by joint designation by WSCAC and the MWRA and shall have a goal of achieving at least 10% minority representation on WSCAC.

ARTICLE 6. WSCAC TASKS.

WSCAC shall undertake the following tasks:

6.1 Water Supply Programs Review.

Advise the Authority staff and Board in the performance of their duties relating to water supply planning and policies. Participate in the design, review and evaluation of research, reports and new ideas for programs. Provide comments, information, advice, recommendations and guidance as to the direction, intent and execution of water planning and policy development.

6.2 Outreach and Education.

Assure informed public input by providing assistance in outreach to various groups regarding the Authority's water supply programs and policies, and state water resources legislation and policies. Review programs with and explain plans and policies to organizations and citizens, including the scheduling of workshops, meetings and conferences. Provide comments and assistance on legislation of importance to the Authority.

6.3 Working Group Representation.

When requested, provide a representative on Authority working groups, comprising MWRA staff and consultants, related to water supply planning and policy development, including the Advisory Board and its subcommittees and the Wastewater Advisory Committee.

6.4 Recommendations on Long Term Public Involvement.

Provide to the Authority staff and Board, proposals for continued effective and efficient long-term public involvement in water programs.

6.5 Recommendations and Discussion Documents.

The WSCAC staff shall be responsible for providing to the Authority's staff, Board, and others, recommendation and discussion documents on the subjects of the above tasks. Documents may be in the form of minutes of WSCAC meetings, memoranda, letters, reports, presentations and discussions as appropriate.

ARTICLE 7. MISCELLANEOUS REQUIREMENTS.

7.1 Nondiscrimination and Equal Employment Opportunity.

(a) WSCAC agrees to comply with all Federal and State laws pertaining to Civil Rights and Equal Opportunity, including executive orders and rules and regulations regarding employment,

demotion, transfers, recruitment, layoffs or termination, rates of pay or other compensation and training, including apprenticeships. With regard to WSCAC membership, WSCAC agrees to affirmatively solicit minority representation.

(b) WSCAC agrees to comply with the Authority's policy regarding non-discrimination and affirmative action.

## ARTICLE 8. GENERAL PROVISIONS.

### 8.1 Termination of Contract.

(a) This Agreement may be terminated in writing, at any time, in whole or in part, by the Authority for its convenience or in the event of substantial failure by WSCAC to fulfill their obligations, or for violation of any of the covenants and stipulations of this Agreement.

(b) If termination is effected by the Authority an equitable adjustment shall be made providing for payment to WSCAC for services rendered and expenses incurred prior to the termination. In addition, termination settlement costs reasonably incurred by WSCAC relating to commitments, which had become firm prior to the termination, shall be paid.

(c) This agreement may be terminated at any time, in whole or in part, in writing by WSCAC in the event of substantial failure by the Authority to fulfill its obligations or for violation by the Authority to fulfill its obligations or for violation by the Authority of any of the covenants and stipulations of this agreement.

(d) No termination hereunder may be effected unless the terminating party gives the other party: (1) not less than forty-five days' written notice delivered by certified mail, return receipt requested of intent to terminate; and (2) an opportunity for consultation with the other party prior to termination, or (3) by mutual agreement of the parties.

### 8.2 Ownership of Property.

Upon termination of this Agreement for any reason, WSCAC shall turn over to the Authority all materials, equipment, including computer equipment currently on loan from the Authority and owned by the Authority, unused office supplies, books, pamphlets, publications and all other properties for which Authority or MDC reimbursements were made in whole or in part, directly or indirectly.

### 8.3 Assignability.

WSCAC shall not assign or transfer this Agreement or delegate its responsibility for the performance of services under this contract.

### 8.4 Integration Clause.

This Agreement may be amended only by a writing executed by each of the Parties.

8.5 Severability of Provisions.

If any provision of this Agreement shall, to any extent, be held invalid or unenforceable, the remainder of this Agreement shall not be deemed affected thereby.

8.6 Massachusetts Law to Govern.

All parties to this Agreement agree that this Agreement shall be governed by and enforced in accordance with the laws of the Commonwealth of Massachusetts.

8.7 Duplicate Originals.

This Agreement may be signed in more than one identical counterpart, each of which shall be deemed to be an original hereof.

8.8 Notices.

Communications shall be deemed to have been made when mailed postage prepaid or delivered to among:

Chair and  
Executive Director  
Water Supply Citizens Advisory Committee  
485 Ware Road  
Belchertown, MA 01007

Director of Public Affairs  
Massachusetts Water Resources Authority  
Deer Island  
33 Tafts Avenue  
Boston, MA 02128

Executive Director  
Massachusetts Water Resources Authority  
Deer Island  
33 Tafts Avenue  
Boston, MA 02128

IN WITNESS WHEREOF, this Agreement is executed as of this      day of June, 2023.

FOR: WATER SUPPLY CITIZENS ADVISORY COMMITTEE

By: \_\_\_\_\_  
Title: Chair, Water Supply Citizens  
Advisory Committee

Dated:

FOR: MASSACHUSETTS WATER RESOURCES AUTHORITY

By: \_\_\_\_\_  
Title: Executive Director

Dated:

## STAFF SUMMARY

**TO:** Board of Directors  
**FROM:** Frederick A. Laskey, Executive Director  
**DATE:** June 21, 2023  
**SUBJECT:** Water Supply Citizens Advisory Committee Contract

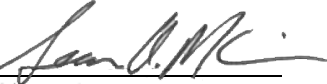
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**COMMITTEE:** Water Policy & Oversight

INFORMATION

VOTE

Carolyn M. Fiore, Deputy Chief Operating Officer  
Stephen Estes-Smargiassi, Director, Planning and Sustainability  
Rose Souliotis, Administrative Coordinator  
Preparer/Title

Sean Navin   
Director, Intergovern. Affairs

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WSCAC originated in 1978 when its predecessor committee, the Northfield Citizens Advisory Committee, was formed at the direction of the Secretary of the Executive Office of Environmental Affairs. WSCAC has received direct funding from MWRA since MWRA's formation in 1984.

The proposed FY24 WSCAC contact is 2.44% greater than the FY23 contract. Health insurance increased 7.5%, while hourly salaries increased 6.09% and other reimbursable expense items increased \$400. Health insurance is budgeted at 80% reimbursement for the Executive Director only, not to exceed \$12,621, with an optional health insurance buy-out program similar to that offered to MWRA employees who do not use MWRA's health insurance benefit. The proposed total FY24 WSCAC funding is \$123,482.

Current topics of interest to WSCAC include system redundancy, energy efficiency and carbon footprint, water system expansion issues, changing drinking water regulations, the Water System Master Plan, and watershed management and protection issues. The committee currently has 15 active members. WSCAC continues to work to identify additional members in categories which are not well represented on the committee.



WSCAC's office is located at Quabbin Reservoir in a Department of Conservation and Recreation (DCR) building. Most meetings were held at MWRA's Southborough facility prior to the pandemic. Since March 2020, meetings have been held virtually. WSCAC's Executive Director is Lexi Dewey (selected by WSCAC's Executive Committee). The current Chair is Gerald Eves, with Paul Lauenstein as incoming Chair, elected from among the members.

**BUDGET/FISCAL IMPACT:**

Sufficient funds for the WSCAC contract are included in the FY24 Draft Final Current Expense Budget.

**ATTACHMENT:**

Agreement between Massachusetts Water Resources Authority and Water Supply Citizens Advisory Committee

**AGREEMENT**  
**BETWEEN**  
**MASSACHUSETTS WATER RESOURCES AUTHORITY**  
**AND**  
**WATER SUPPLY CITIZENS ADVISORY COMMITTEE**

This Agreement (“Agreement”) is by and between the Massachusetts Water Resources Authority (“Authority”), a body politic and corporate and a public instrumentality of the commonwealth created by Chapter 372 of the Acts of 1984 with offices at Deer Island, 33 Tafts Avenue, Boston, MA 02128 and the Water Supply Citizens Advisory Committee (“WSCAC”) an organization initially created under the Massachusetts Environmental Policy Act (“MEPA”) to ensure public representation and participation in Authority water supply activities, with offices currently at 485 Ware Road, Belchertown, MA 01007 (collectively “Parties”).

WHEREAS, the Authority is required to meet the water needs of its communities;

WHEREAS, the Authority desires WSCAC to continue to advise in water supply planning and programming; and

WHEREAS, WSCAC desires to have a continued role advising the Authority;

NOW, THEREFORE, for the consideration of mutual promises contained herein, the Authority and WSCAC agree as follows:

Article 1. Effective Date.

This Agreement shall be effective from July 1, 2023 through June 30, 2024, inclusive.

Article 2. Compensation, Budget, Payment, and Expenses.

2.1 The Authority shall make funds available as follows:

(a) Salaries and Duties.

Director. An Executive Director shall be chosen by WSCAC members at a salary not to exceed \$81,018 for the year commencing on July 1, 2023 through June 30, 2024, inclusive. The hourly salary rate (inclusive of payroll taxes) shall be \$48.63 with annual total hours of 1,666 (average 34 hours per week for 49 weeks). The duties of the Executive Director shall be in accordance with the job description prepared by the Executive Committee of WSCAC and on file with the Authority.

Administrative Assistant. A part-time Administrative Assistant shall be chosen by the WSCAC Executive Director in consultation with the Executive Committee of WSCAC at a salary not to exceed \$16,996 for the year commencing on July 1, 2023 through June 30, 2024, inclusive. The hourly salary rate shall be \$25.29 (inclusive of payroll taxes) with annual total hours of 672 (average 14 hours per week for 48 weeks). The duties of the Administrative Assistant shall be in accordance with the job description prepared by the Executive Committee of WSCAC and on file with the Authority.

(b) Reimbursable Expenses.

- (1) The Authority shall reimburse the WSCAC for 80% of the non-employer-sponsored health insurance for the WSCAC Executive Director (not to exceed \$12,621). The percentage rate for reimbursement of health insurance costs shall be changed to that of Authority staff if the Group Insurance Commission changes the rate.
- (2) Health insurance buy-out: The WSCAC Executive Director may elect a monetary allowance in lieu of reimbursement of health insurance costs, provided he or she has health insurance coverage through another employer-sponsored plan that meets Internal Revenue Service “minimum value” criteria, throughout that six-month period. The amount of the allowance will be \$1000 to waive family coverage or \$700 for waiving individual coverage. The WSCAC Executive Director is responsible for any withholding taxes on these payments with WSCAC being responsible for the employer share of payroll taxes.
- (3) Mileage costs, public transportation costs, highway tolls and parking expenses incurred by WSCAC staff and members from attendance at WSCAC meetings, pertinent conferences and seminars, or while performing other functions directly related to its scope of services. Mileage costs will be reimbursed at the prevailing Authority rate per mile.
- (4) Office supplies (such as letterhead, envelopes, pencils, paper clips), postage, office telephone and internet access, meeting expenses, and general administrative and office expenses;
- (5) The purchase or rental by WSCAC staff of books, films, cassettes, tapes, etc., if specifically approved by the Authority in advance, except that single copies of individual publications, books, and other written documents may be purchased for the WSCAC library use without prior approval, provided that the cost per item does not exceed \$200. All materials purchased under this section shall be considered property of the Authority.
- (6) Other miscellaneous expenses of the WSCAC staff approved by the Authority on a case-by-case basis. When possible, approval of the Authority should be received in advance of incurring such expenditures.

The Authority may advance up to \$750 to WSCAC, such advance to be applied to the payment of Miscellaneous Expenses as defined herein and as approved and budgeted under the terms of this Agreement. Payments made from an advance shall be accounted for in the same manner as all other Miscellaneous Expense payments. Prior to the expiration of this Agreement, any outstanding balance on an advance shall be applied against amounts due WSCAC.

The annual total reimbursement to WSCAC for annual and miscellaneous expenses combined shall not exceed \$25,868 from July 1, 2023 through June 30, 2024, inclusive.

(c) Non-reimbursable expenses.

The following expenses are not reimbursable: meals, entertainment, room and board expenses, fines, fees, or costs assessed as a result of improper or illegal actions on the part of the member, such as parking tickets or speeding fines.

ARTICLE 3. RESPONSIBILITIES OF THE AUTHORITY AND WSCAC.

(a) WSCAC shall employ an Executive Director, who is prohibited from being a member of WSCAC while serving his or her term as a paid employee.

(b) WSCAC shall, whenever applicable, take all necessary steps to receive an exemption from the Massachusetts Sales and Use taxes for materials, printing, and equipment purchased by WSCAC on behalf of the Authority.

(c) WSCAC shall submit monthly or periodic statements to the Authority requesting payment for salary, and for annual and miscellaneous expenses listed in Article 2. Such requests shall be supplemented or accompanied by time sheets, travel and expense vouchers, and by such other supporting data as may be required by the Authority.

(d) WSCAC shall maintain accounts, records, documents, and other evidence directly pertinent to performance of work under this Agreement. The Parties and their duly authorized representatives shall have access to such records, documents, and other evidence for the purpose of inspection, audit, and copying.

(e) The Authority or its duly authorized agent shall have the right at any and all reasonable times, to examine and audit WSCAC's records, documents and other evidence.

(f) This Agreement is subject to the laws dealing with the expenditures of public funds, including Chapter 12A of the Massachusetts General Laws.

(g) The Parties agree to consent to any reasonable modifications or changes in this contract that may be required by the Commonwealth of Massachusetts or any of its agencies.

(h) WSCAC acknowledges that the Authority is a state agency for purpose of Chapter 268A of the General Laws (the Massachusetts Conflict of Interest Law) and understands that for the purposes of that law, WSCAC staff and members are special state employees.

(i) WSCAC shall be responsible for compliance with all applicable provisions and requirements of the Massachusetts Open Meeting Law and the Massachusetts Public Records Law.

#### ARTICLE 4. RESPONSIBILITIES OF THE WSCAC STAFF.

4.1 The WSCAC staff shall be responsible for the following tasks:

- (a) aiding WSCAC in its tasks under Article 6, managing the WSCAC office, educating the public, and acting as liaison with the Authority and its staff;
- (b) preparing monthly progress reports for submission to the WSCAC Executive Committee, the WSCAC members, and the Authority;
- (c) maintaining financial records, minutes of the WSCAC meetings, and other WSCAC records;
- (d) assuring that at least every other meeting be held in Eastern Massachusetts at a location to be jointly agreed upon by WSCAC and the Authority where Authority attendance is expected.
- (e) providing to the Authority copies of the notices for and minutes of all meetings of WSCAC and of all the WSCAC correspondence as soon as such materials are available.
- (f) administering and maintaining compliance by all its members and staff with the provisions of the Massachusetts Conflict of Interest Law including, without limitation, those mandatory provisions relating to: (i) annual distribution to members and staff of the State Ethics Commission's (SEC) Summary of Law and maintenance and archiving of acknowledgements of receipt of the Summary of Law from all members and staff, and (ii) compliance by members and staff with the SEC's bi-annual educational training exercises.

#### ARTICLE 5. MEMBERSHIP

5.1 Membership of WSCAC

- (a) Membership of WSCAC shall maintain parity between those individuals representing the interests of the communities listed in section 8(d) of the Authority's Enabling Act, c. 372 of the Acts of 1984, ("User Representatives") and those individuals representing the interests of the watershed communities ("Donor Representatives") and those individuals representing the interests of statewide or other appropriate interests as mutually agreed upon by WSCAC and the MWRA ("Other Representatives").
- (b) In order to maintain WSCAC membership status, members must be active participants, as defined in the WSCAC by-laws.

5.2 The appointment of WSCAC members shall be by joint designation by WSCAC and the MWRA and shall have a goal of achieving at least 10% minority representation on WSCAC.

ARTICLE 6. WSCAC TASKS.

WSCAC shall undertake the following tasks:

6.1 Water Supply Programs Review.

Advise the Authority staff and Board in the performance of their duties relating to water supply planning and policies. Participate in the design, review and evaluation of research, reports and new ideas for programs. Provide comments, information, advice, recommendations and guidance as to the direction, intent and execution of water planning and policy development.

6.2 Outreach and Education.

Assure informed public input by providing assistance in outreach to various groups regarding the Authority's water supply programs and policies, and state water resources legislation and policies. Review programs with and explain plans and policies to organizations and citizens, including the scheduling of workshops, meetings and conferences. Provide comments and assistance on legislation of importance to the Authority.

6.3 Working Group Representation.

When requested, provide a representative on Authority working groups, comprising MWRA staff and consultants, related to water supply planning and policy development, including the Advisory Board and its subcommittees and the Wastewater Advisory Committee.

6.4 Recommendations on Long Term Public Involvement.

Provide to the Authority staff and Board, proposals for continued effective and efficient long-term public involvement in water programs.

6.5 Recommendations and Discussion Documents.

The WSCAC staff shall be responsible for providing to the Authority's staff, Board, and others, recommendation and discussion documents on the subjects of the above tasks. Documents may be in the form of minutes of WSCAC meetings, memoranda, letters, reports, presentations and discussions as appropriate.

ARTICLE 7. MISCELLANEOUS REQUIREMENTS.

7.1 Nondiscrimination and Equal Employment Opportunity.

(a) WSCAC agrees to comply with all Federal and State laws pertaining to Civil Rights and Equal Opportunity, including executive orders and rules and regulations regarding employment,

demotion, transfers, recruitment, layoffs or termination, rates of pay or other compensation and training, including apprenticeships. With regard to WSCAC membership, WSCAC agrees to affirmatively solicit minority representation.

(b) WSCAC agrees to comply with the Authority's policy regarding non-discrimination and affirmative action.

## ARTICLE 8. GENERAL PROVISIONS.

### 8.1 Termination of Contract.

(a) This Agreement may be terminated in writing, at any time, in whole or in part, by the Authority for its convenience or in the event of substantial failure by WSCAC to fulfill their obligations, or for violation of any of the covenants and stipulations of this Agreement.

(b) If termination is effected by the Authority an equitable adjustment shall be made providing for payment to WSCAC for services rendered and expenses incurred prior to the termination. In addition, termination settlement costs reasonably incurred by WSCAC relating to commitments, which had become firm prior to the termination, shall be paid.

(c) This agreement may be terminated at any time, in whole or in part, in writing by WSCAC in the event of substantial failure by the Authority to fulfill its obligations or for violation by the Authority to fulfill its obligations or for violation by the Authority of any of the covenants and stipulations of this agreement.

(d) No termination hereunder may be effected unless the terminating party gives the other party: (1) not less than forty-five days' written notice delivered by certified mail, return receipt requested of intent to terminate; and (2) an opportunity for consultation with the other party prior to termination, or (3) by mutual agreement of the parties.

### 8.2 Ownership of Property.

Upon termination of this Agreement for any reason, WSCAC shall turn over to the Authority all materials, equipment, including computer equipment currently on loan from the Authority and owned by the Authority, unused office supplies, books, pamphlets, publications and all other properties for which Authority or MDC reimbursements were made in whole or in part, directly or indirectly.

### 8.3 Assignability.

WSCAC shall not assign or transfer this Agreement or delegate its responsibility for the performance of services under this contract.

### 8.4 Integration Clause.

This Agreement may be amended only by a writing executed by each of the Parties.

8.5 Severability of Provisions.

If any provision of this Agreement shall, to any extent, be held invalid or unenforceable, the remainder of this Agreement shall not be deemed affected thereby.

8.6 Massachusetts Law to Govern.

All parties to this Agreement agree that this Agreement shall be governed by and enforced in accordance with the laws of the Commonwealth of Massachusetts.

8.7 Duplicate Originals.

This Agreement may be signed in more than one identical counterpart, each of which shall be deemed to be an original hereof.

8.8 Notices.

Communications shall be deemed to have been made when mailed postage prepaid or delivered to among:

Chair and  
Executive Director  
Water Supply Citizens Advisory Committee  
485 Ware Road  
Belchertown, MA 01007

Director of Public Affairs  
Massachusetts Water Resources Authority  
Deer Island  
33 Tafts Avenue  
Boston, MA 02128

Executive Director  
Massachusetts Water Resources Authority  
Deer Island  
33 Tafts Avenue  
Boston, MA 02128

IN WITNESS WHEREOF, this Agreement is executed as of this      day of June, 2023.

FOR: WATER SUPPLY CITIZENS ADVISORY COMMITTEE

By: \_\_\_\_\_  
Title: Chair, Water Supply Citizens  
Advisory Committee

Dated:

FOR: MASSACHUSETTS WATER RESOURCES AUTHORITY

By: \_\_\_\_\_  
Title: Executive Director

Dated: