



MASSACHUSETTS WATER RESOURCES AUTHORITY

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

Frederick A. Laskey
Executive Director

BOARD OF DIRECTORS' MEETING

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

To be Held Virtually on April 14, 2021

Pursuant to Governor Baker's March 12, 2020 Order
Suspending Certain Provisions of the Open Meeting Law

WebEx Meeting Link for Attendees

<https://mwra.webex.com/mwra/onstage/g.php?MTID=e0d5b965b65406e80a385caf8a63ca979>

Event number: 129 736 5653 Event password: 41421

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

Time:

1:00 p.m.

REVISED AGENDA (2)

I. APPROVAL OF MINUTES

II. REPORT OF THE CHAIR

III. REPORT OF THE EXECUTIVE DIRECTOR

IV. WATER POLICY AND OVERSIGHT

A. Information

1. Quarterly Update: Section 22 Rehabilitation Alternatives Analysis and Environmental Permitting, Black & Veatch Corporation; Contract 7155

B. Contract Awards

1. Diver Assisted Suction Harvesting of Invasive Plants at Wachusett Reservoir Lower Basin and Coves: AE Commercial Diving Services, Contract WRA-4942
2. Community Leak Detection Survey Services: Arthur Pyburn & Sons, Inc., Contract W332 and Liston Utility Services, Contract W332A
3. Shaft 5 Building Improvements, Design and Engineering Services During Construction: Kleinfelder Northeast, Inc., Contract 7599
4. Section 89 Replacement Project, Resident Engineering Services: Stantec Consulting Services Inc., Contract 7633

IV. WATER POLICY AND OVERSIGHT (Continued)

C. Contract Amendments/Change Orders

1. Section 89 Replacement Project: Design and Engineering Services During Construction, Stantec Consulting Services Inc., Contract 7116, Amendment 1

V. PERSONNEL AND COMPENSATION

A. Approvals

1. Appointment of Deputy Director, Waterworks

B. Contract Awards

1. Employee Medical Services: AllOne Health, Contract A628

VI. ADMINISTRATION, FINANCE AND AUDIT

A. Information

1. 2020 Annual Update on New Connections to MWRA System
2. Delegated Authority Report – March 2021
3. FY21 Financial Update and Summary as of March 2021

B. Approvals

1. Assignment and Assumption of Contract 7347, Quinepoxet Dam Removal

C. Contract Awards

1. Task Order Appraisal Services: Foster Appraisal and Consulting, Contract 607TA
2. Technical Assistant Consultant Services, Hazardous Materials: Hydro-Environmental Technologies, Inc., Contract 609TA; and Green Seal Environmental, Inc., Contract 610TA
3. Maintenance and Support of the Integrated Financial, Procurement and Human Resources/Payroll Management System, Infor Inc.
4. Telephone System Replacement: ePlus Technology, Inc., Contract WRA-4957Q, State Contract ITT50

VII. WASTEWATER POLICY AND OVERSIGHT

A. Approvals

1. Financial Assistance Agreement with Boston Water and Sewer Commission for East Boston Sewer Separation and Other CSO Improvements

B. Contract Awards

1. Deer Island South System Pump Station Improvements Preliminary Design, Final Design, Bidding, ESDC and RE/RI: Hazen and Sawyer, P.C., Contract 7126
2. Repair of Three Digester Mixer Assemblies: Aqua Solutions, Inc.

VIII. CORRESPONDENCE TO THE BOARD

IX. OTHER BUSINESS

X. EXECUTIVE SESSION

- i. Approval of March 17, 2021 Executive Session Minutes

A. Litigation

1. Litigation Update and Authorization for Settlement of Claim
2. Update on CSO Assessment (Verbal)
3. Update on PFML Cases (Verbal)

B. Real Estate

1. Update on Chelsea Facility

C. Security

1. Update on Wachusett Railroad (Verbal)

XI. ADJOURNMENT

MASSACHUSETTS WATER RESOURCES AUTHORITY

Meeting of the Board of Directors

March 17, 2021

Pursuant to Governor Baker's March 12, 2020 Order Suspending Certain Provisions of the Open Meeting Law the March 17, 2021 meeting of the Board of Directors of the Massachusetts Water Resources Authority was conducted by remote participation. Secretary Theoharides and Vice Chair Carroll presided. Present remotely from the Board, in addition to Secretary Theoharides and Mr. Carroll, were Ms. Wolowicz and Messrs. Cook, Flanagan, Foti, Pappastergion, Peña and Vitale. Mr. Walsh was absent. MWRA staff participants included Frederick Laskey, Executive Director; Carolyn Francisco Murphy, General Counsel; David Coppes, Chief Operating Officer; Carolyn Fiore, Deputy Chief Operating Officer; Thomas Durkin, Director of Finance; Michele Gillen, Director of Administration; Carl Leone, Senior Program Manager, Planning; Marty McGowan, Construction Coordinator, Engineering and Construction; John Colbert, Chief Engineer; Stephen Estes-Smargiassi, Director, Planning and Sustainability; Cori Barrett, Director, Construction; Andrea Murphy, Director, Human Resources; Matthew Horan, Deputy Director of Finance/Treasurer; Douglas Rice, Director, Procurement; Michael Cole, Budget Director; Paula Weadick, Director, MIS; and, Assistant Secretaries Ria Convery and Kristin MacDougall. Vandana Rao, EOEEA, and Joseph Favaloro, MWRA Advisory Board, also participated. The meeting was called to order at 1:01 pm. All motions were individually made and presented for discussion and deliberation. After any discussion and deliberation, motions for which there were no objections were then consolidated for one omnibus roll call vote.

APPROVAL OF FEBRUARY 17, 2021 MINUTES

A motion was duly made and seconded to approve the minutes of the Board of Directors' meeting of February 17, 2021.

Chair Theoharides called for any discussion or objections. Hearing none, the Chair referred the motion to an omnibus roll call vote. (ref. I)

REPORT OF THE CHAIR

Secretary Theoharides reported that she recently declared a Level 1 – Mild Drought in Western Massachusetts; all other regions of the Commonwealth remained in Normal Conditions. The Secretary emphasized the ongoing need for water conservation across Massachusetts. In observance of National Fix a Leak Week, Secretary Theoharides thanked MWRA and its service communities for aggressively addressing water losses and for fixing leaks system wide.

Next, the Secretary noted that the Massachusetts Department of Environmental Protection awarded \$3 million in grants to seventeen public water systems in support of efforts to address elevated levels of PFAS in drinking water.

Finally, Secretary Theoharides reported that MWRA received \$1.3 million from the Commonwealth's Sewer Rate Relief Fund, which will be applied to reduce MWRA community assessments in Fiscal Year 2022. (ref. II)

REPORT OF THE EXECUTIVE DIRECTOR

Mr. Laskey reported that the Baker-Polito Administration had designated sanitation and other public utility workers eligible to receive COVID-19 vaccine; he thanked Governor Baker and his administration for their ongoing support. He then described MWRA's initiatives to encourage eligible staff to receive vaccines as soon as possible.

Next, Mr. Laskey noted that MWRA staff is reviewing internal policies in furtherance of Governor Baker's Future of Work initiative.

Mr. Laskey gave a brief presentation to update Board members on MWRA's Biobot COVID-19 Wastewater Tracking Program and staff COVID-19 testing results.

Finally, Mr. Laskey noted that he had recently forwarded correspondence related to the Pan Am Railroad to Board members. There was discussion and questions and answers. (ref. III)

WASTEWATER POLICY AND OVERSIGHT INFORMATION

Infiltration/Inflow Local Financial Assistance Program Annual Update

Staff gave a presentation.

There was brief discussion and questions and answers.

Hearing no further discussion, Committee Chair Flanagan proceeded to the next agenda item. (ref. IV A.1)

CONTRACT AMENDMENTS/CHANGE ORDERS

Chelsea Creek Headworks Upgrade: BHD/BEC JV 2015, A Joint Venture, Contract 7161 Change Order 45

A motion was duly made and seconded to authorize the Executive Director, on behalf of the Authority, to approve Change Order 45 to Contract 7161, Chelsea Creek Headworks Upgrade, with BHD/BEC 2015, A Joint Venture for an amount not to exceed \$644,447.00, increasing the contract amount from \$84,189,092.06 to \$84,833,539.06, with no increase in contract term.

Further, a motion was duly made and seconded to authorize the Executive Director to approve additional change orders as may be needed to Contract 7161 in an amount not to exceed the aggregate of \$250,000, in accordance with the Management Policies and Procedures of the Board of Directors.

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

Hearing no further questions or objections, Chair Theoharides referred the motion to an omnibus roll call vote. (ref. IV B.1)

Remote Headworks Upgrade: Arcadis U.S., Inc., Contract 7206, Amendment 7

A motion was duly made and seconded to authorize the Executive Director, on behalf of the Authority, to approve Amendment 7 to Contract 7206, Remote Headworks Upgrade Design and Construction Administration, with Arcadis U.S., Inc., increasing the contract amount by \$439,000, from \$10,315,831 to \$10,754,831 and extending the contract term by 6 months from October 1, 2021 to April 1, 2022.

Staff gave a presentation.

Hearing no questions or objections, Chair Theoharides referred the motion to an omnibus roll call vote. (ref. IV B.2)

WATER POLICY AND OVERSIGHT

INFORMATION

Response to WSCAC Correspondence on Green Forestry Certification

Staff gave a presentation.

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

Local Water System Assistance Program Annual Update

Staff gave a presentation.

Hearing no questions or discussion, Committee Chair Peña proceeded to the next agenda item. (ref. V A.2)

CONTRACT AWARDS

Quabbin Maintenance Building Design, Construction Administration and Resident Engineering Services: The Robinson Green Beretta Corporation, Contract 7677

A motion was duly made and seconded to authorize the Executive Director, on behalf of the Authority, to award Contract 7677, Quabbin Maintenance Building Design, Construction Administration and Resident Engineering Services, to the first ranked firm, The Robinson Green Beretta Corporation, and to authorize the Executive Director, on behalf of the Authority, to execute said contract in an amount not to exceed \$1,318,278 for a contract term of 43 months from the Notice to Proceed.

Staff gave a presentation. There was questions and answers.

Hearing no further questions or objections, Chair Theoharides referred the motion to an omnibus roll call vote. (ref. V B.1)

CONTRACT AMENDMENTS/CHANGE ORDERS

Commonwealth Avenue Pumping Station: WES Construction, Contract 7524, Change Order 10

A motion was duly made and seconded to authorize the Executive Director, on behalf of the Authority, to approve Change Order 10 to Contract 7524, Commonwealth Avenue Pumping Station Improvements, with WES Construction Corp., for a not to exceed amount of \$230,246.92, increasing the contract amount from \$7,669,408.18 to \$7,899,655.10, with no increase in contract term.

Further, a motion was duly made and seconded to authorize the Executive Director to approve additional change orders as may be needed to Contract 7524 in an amount not to exceed the aggregate of \$250,000, in accordance with the Management Policies and Procedures of the Board of Directors.

Staff gave a presentation.

Hearing no questions or objections, Chair Theoharides referred the motion to an omnibus roll call vote. (ref. V C.1)

PERSONNEL AND COMPENSATION

APPROVALS

PCR Amendments – March 2021

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

Staff provided a verbal summary.

Hearing no questions or objections, Chair Theoharides referred the motion to an omnibus roll call vote. (ref. VI A.1)

Appointment of Manager, Operations Administration

A motion was duly made and seconded to approve the appointment of Ms. Laurie Allen as Manager, Operations Administration (Unit 6 Confidential, Grade 13) in the Operations Division at an annual salary of \$120,129.66 commencing on a date to be determined by the Executive Director.

Staff provided a verbal summary.

Hearing no questions or objections, Chair Theoharides referred the motion to an omnibus roll call vote. (ref. VI A.2)

Appointment of Director, Security

A motion was duly made and seconded to approve the appointment of Mr. Gary Cacace as Director, Security (Grade 16, Non-Union) in the Executive Office at an annual salary of \$161,000.00 commencing on a date to be determined by the Executive Director.

Staff provided a verbal summary.

Hearing no questions or objections, Chair Theoharides referred the motion to an omnibus roll call vote. (ref. VI A.3)

Appointment of Deputy Director, MIS

A motion was duly made and seconded to approve the appointment of Mr. Roni Holzer to the position of Deputy Director, Management Information Systems (MIS), Non-

Union, Grade 15, at an annual salary of \$146,000.00 commencing on a date to be determined by the Executive Director.

Staff provided a verbal summary.

Hearing no questions or objections, Chair Theoharides referred the motion to an omnibus roll call vote. (ref. VI A.4)

Appointment of Associate General Counsel, Labor and Employment, Law

A motion was duly made and seconded to approve the appointment of Ms. Wenhwei ("Wendy") Chu to the position of Associate General Counsel, Labor and Employment, Law Division (Non-Union, Grade 15) at an annual salary of \$140,000, commencing on a date to be determined by the Executive Director.

Staff provided a verbal summary.

Hearing no questions or objections, Chair Theoharides referred the motion to an omnibus roll call vote. (ref. VI A.5)

(Chair Theoharides left the meeting after referring the motion.)

ADMINISTRATION, FINANCE AND AUDIT INFORMATION

Delegated Authority Report – February 2021

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

FY21 Financial Update and Summary as of February 2021

Staff provided a verbal summary. There were questions and answers.

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

APPROVALS

Appointment of Proxy for Fore River Railroad Corporation

A motion was duly made and seconded that the MWRA Board of Directors, as holder of all voting rights of all the issued and outstanding shares of stock of the Fore River Railroad Corporation, vote to appoint Bethany A. Card, with the power of substitution, to vote as proxy at the next annual meeting and any special meeting of the stockholders for the Fore River Railroad Corporation in accordance with the form of proxy as presented and filed with the records of this meeting.

Further, a motion was duly made and seconded that the MWRA Board of Directors directs the proxy to elect the following board members: David W. Coppes, Thomas J. Durkin, Godfrey O. Ezeigwe, Carolyn M. Fiore, Michele S. Gillen, Lisa R. Grollman, Frederick A. Laskey, Carolyn M. Francisco Murphy, Brian Peña and John J. Walsh.

Hearing no questions or objections, Vice Chair Carroll referred the motion to an omnibus roll call vote. (ref. VII B.1)

CONTRACT AWARDSHarbor Outfall Monitoring and Loading System Upgrade, Guild Systems, Inc., Contract 7653

A motion was duly made and seconded to approve the recommendation of the Selection Committee to award Contract 7653, Harbor Outfall Monitoring and Loading System Upgrade, to Guild Systems Inc., and authorize the Executive Director, on behalf of the Authority to execute said contract in an amount not to exceed \$195,640, for a contract term of six months, which includes a three month warranty period, from the Notice to Proceed.

Staff provided a verbal summary.

Hearing no questions or objections, Vice Chair Carroll referred the motion to an omnibus roll call vote. (ref. VII C.1)

OMNIBUS ROLL CALL VOTE

Vice Chair Carroll called for an omnibus roll call vote on the motions made and seconded.

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

<u>Yes</u>	<u>No</u>	<u>Abstain</u>
Carroll		
Cook		
Foti		
Flanagan		
Pappastergion		
Peña		
Vitale		
Wolowicz		

Voted: to approve the minutes of the Board of Directors' February 17, 2021 meeting as presented and filed with the records of the meeting; (ref. I)

Further, voted: to authorize the Executive Director, on behalf of the Authority, to approve Change Order 45 to Contract 7161, Chelsea Creek Headworks Upgrade, with BHD/BEC 2015, A Joint Venture for an amount not to exceed \$644,447.00, increasing the contract amount from \$84,189,092.06 to \$84,833,539.06, with no increase in contract term; and, further, voted: to authorize the Executive Director to approve additional change orders as may be needed to Contract 7161 in an amount not to exceed the aggregate of \$250,000, in accordance with the Management Policies and Procedures of the Board of Directors; (ref. IV B.1)

Further, voted: to authorize the Executive Director, on behalf of the Authority, to approve Amendment 7 to Contract 7206, Remote Headworks Upgrade Design and

Construction Administration, with Arcadis U.S., Inc., increasing the contract amount by \$439,000, from \$10,315,831 to \$10,754,831 and extending the contract term by 6 months from October 1, 2021 to April 1, 2022; (ref. IV B.2)

Further, voted: to authorize the Executive Director, on behalf of the Authority, to award Contract 7677, Quabbin Maintenance Building Design, Construction Administration and Resident Engineering Services, to the first ranked firm, The Robinson Green Beretta Corporation, and to authorize the Executive Director, on behalf of the Authority, to execute said contract in an amount not to exceed \$1,318,278 for a contract term of 43 months from the Notice to Proceed; (ref. V B.1)

Further, voted: to authorize the Executive Director, on behalf of the Authority, to approve Change Order 10 to Contract 7524, Commonwealth Avenue Pumping Station Improvements, with WES Construction Corp., for a not to exceed amount of \$230,246.92, increasing the contract amount from \$7,669,408.18 to \$7,899,655.10, with no increase in contract term; and, further, voted: to authorize the Executive Director to approve additional change orders as may be needed to Contract 7524 in an amount not to exceed the aggregate of \$250,000, in accordance with the Management Policies and Procedures of the Board of Directors; (ref. V C.1)

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

Further, voted: to approve the appointment of Ms. Laurie Allen as Manager, Operations Administration (Unit 6 Confidential, Grade 13) in the Operations Division at an annual salary of \$120,129.66 commencing on a date to be determined by the Executive Director; (ref. VI A.2)

Further, voted: to approve the appointment of Mr. Gary Cacace as Director, Security (Grade 16, Non-Union) in the Executive Office at an annual salary of \$161,000.00 commencing on a date to be determined by the Executive Director. (ref. VI A.3)

Further, voted: to approve the appointment of Mr. Roni Holzer to the position of Deputy Director, Management Information Systems (MIS), Non-Union, Grade 15, at an annual salary of \$146,000.00 commencing on a date to be determined by the Executive Director; (ref. VI A.4)

Further, voted: to approve the appointment of Ms. Wen-hwei ("Wendy") Chu to the position of Associate General Counsel, Labor and Employment, Law Division (Non-Union, Grade 15) at an annual salary of \$140,000, commencing on a date to be determined by the Executive Director; (ref. VI A.5)

Further, voted: that the MWRA Board of Directors, as holder of all voting rights of all the issued and outstanding shares of stock of the Fore River Railroad Corporation, vote to appoint Bethany A. Card, with the power of substitution, to vote as proxy at the next annual meeting and any special meeting of the stockholders for the Fore River Railroad Corporation in accordance with the form of proxy as presented and filed with the records of this meeting; and, further, voted: that the MWRA Board of Directors directs the

proxy to elect the following board members: David W. Coppes, Thomas J. Durkin, Godfrey O. Ezeigwe, Carolyn M. Fiore, Michele S. Gillen, Lisa R. Grollman, Frederick A. Laskey, Carolyn M. Francisco Murphy, Brian Peña and John J. Walsh; (ref. VII B.1)

Further, voted: to approve the recommendation of the Selection Committee to award Contract 7653, Harbor Outfall Monitoring and Loading System Upgrade, to Guild Systems Inc., and authorize the Executive Director, on behalf of the Authority to execute said contract in an amount not to exceed \$195,640, for a contract term of six months, which includes a three month warranty period, from the Notice to Proceed. (ref. VII C.1)

EXECUTIVE SESSION

Vice Chair Carroll moved that the Board enter Executive Session to discuss real estate and litigation since discussion in Open Session may have a detrimental effect upon the negotiating position of the Authority; further, to not return to Open Session and to adjourn the meeting from Executive Session.

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>
Carroll		
Cook		
Foti		
Flanagan		
Pappastergion		
Peña		
Vitale		
Wolowicz		

Voted: to enter Executive Session to discuss real estate and litigation; further, voted: to not return to Open Session, and to adjourn the meeting from Executive Session.

*** EXECUTIVE SESSION ***


The meeting entered Executive Session at 2:16pm and adjourned at 2:47pm.

Approved: April 14, 2021

Attest:

Andrew M. Pappastergion, Secretary


STAFF SUMMARY

TO: Board of Directors
FROM: Frederick A. Laskey, Executive Director 
DATE: April 14, 2021
SUBJECT: Project Update: Section 22 Rehabilitation Alternatives Analysis and Environmental Permitting
Black & Veatch Corporation; Contract 7155

COMMITTEE: Water Policy & Oversight

X INFORMATION
 VOTE

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


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

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

RECOMMENDATION:

For information only.

DISCUSSION:

During the previous quarter, the focus of the project has been completion of the pipeline condition assessment field program, which included the internal leak detection of piping under the Neponset River and under the Route 93 Expressway. The Hydraulic Evaluation Memorandum was completed and the Geotechnical Data Report, Hazardous Materials Report, Pipeline Condition Assessment and Corrosion Analysis Memorandum are near completion. All pipeline condition assessment activities have been completed. No additional test pits or borings are necessary. To date approximately \$1,000,000 has been spent and approximately \$730,000 for the pipeline condition assessment will remain unspent.

The 600-foot portion of pipeline beneath the Neponset River is a 52-inch diameter concrete-lined steel pipe that also has an exterior concrete encasement. To determine the pipe condition, an internal acoustic leak detection was completed. This required the installation of an access port in the pipeline and insertion of a tethered hydrophone acoustic leak detection unit and camera. The



Neponset River Internal Leak Detection Equipment
(Hydrophone)

inspection was performed on March 16 and indicated that no leaks are present along this critical section and minimal tuberculation is present. The results are positive; the exterior concrete encasement and interior concrete lining have provided an effective barrier to protect this pipeline. Therefore, Black & Veatch has concluded that no rehabilitation, or replacement, is recommended at this time for the Neponset River crossing.

Black & Veatch has been evaluating alternatives for the remainder of the project based upon the information collected in the boring program, test pit program and internal leak detection inspection. The pipeline in the Area of Critical Environmental Concern (ACEC) may require a MEPA filing and therefore a formal evaluation of alternatives is required. Figure 1 (attached) depicts the primary alternatives that Black & Veatch is evaluating.

Four key findings of the pipeline condition assessment and historical data review are summarized below and identified by segment on Figure 1. When the alternatives evaluation is completed, staff will prioritize construction spending on critical items and may delay construction spending on less critical items.

SEGMENT 1. Section 22 in Adams Street and Butler Street in Boston, approximately 1,000 linear feet, has experienced numerous leaks. Replacement is proposed for this segment.

SEGMENT 2. Section 22 within the ACEC marsh area, approximately 6,700 linear feet, is in aggressive soils and has experienced a few leaks. However, the pipeline is in overall good condition due to its exterior concrete envelope. The wood pile foundation was also found to be in good condition.

The Alternatives to be considered for the pipelines in the ACEC include:

- Cleaning and cement mortar lining of the existing pipeline;
- Slip lining of the existing pipeline;
- Horizontal direction drilling (HDD) for installation of a replacement pipeline under the Neponset River;
- Pipe replacement;

- An alternative pipe route partially outside the ACEC; and
- Delaying the recommended rehabilitation to the future.

The portion of Section 22 under the Route 93 Expressway is not in the ACEC. This pipeline is concrete encased from the invert to the pipe centerline. No leaks were detected during the recent internal leak detection under Route 93. In the past, this pipeline has experienced a major leak in this heavily traveled area. Slip lining is proposed for this segment due to its critical location.

SEGMENT 3. Section 22 for the remainder of the project, approximately 8,300 linear feet, is in fair to good condition, and is in weakly aggressive soils with isolated areas of aggressively corrosive soils. Corrosion pits at one location on this segment of Section 22 have been measured to a depth of approximately half of the 7/16-inch steel pipe wall thickness. This segment has had only a few leaks in the past. The proposed rehabilitation for this segment is by cleaning and lining, with portions of replacement or rehabilitation potentially delayed to a later time.

SEGMENT 4. Section 21, approximately 5,000 linear feet, is in good overall condition and is in weakly aggressive soils. The interior of the pipeline is heavily tuberculated based on inspection of a portion of the pipe removed for laboratory testing. This segment has had only a few leaks in the past. Due to its age and condition, proposed rehabilitation for this segment is by cleaning and lining.

During the next quarter, it is anticipated that the Alternatives Analysis Memorandum and the Environmental Assessment will be completed. MWRA staff will discuss these recommended alternatives with MEPA staff to determine if an Environmental Notification Form (ENF) must be filed for the rehabilitation in the ACEC. The ENF will be drafted, if required.

As of April 1, 2021, approximately 52% of the contract budget has been expended.

BUDGET/FISCAL IMPACT:

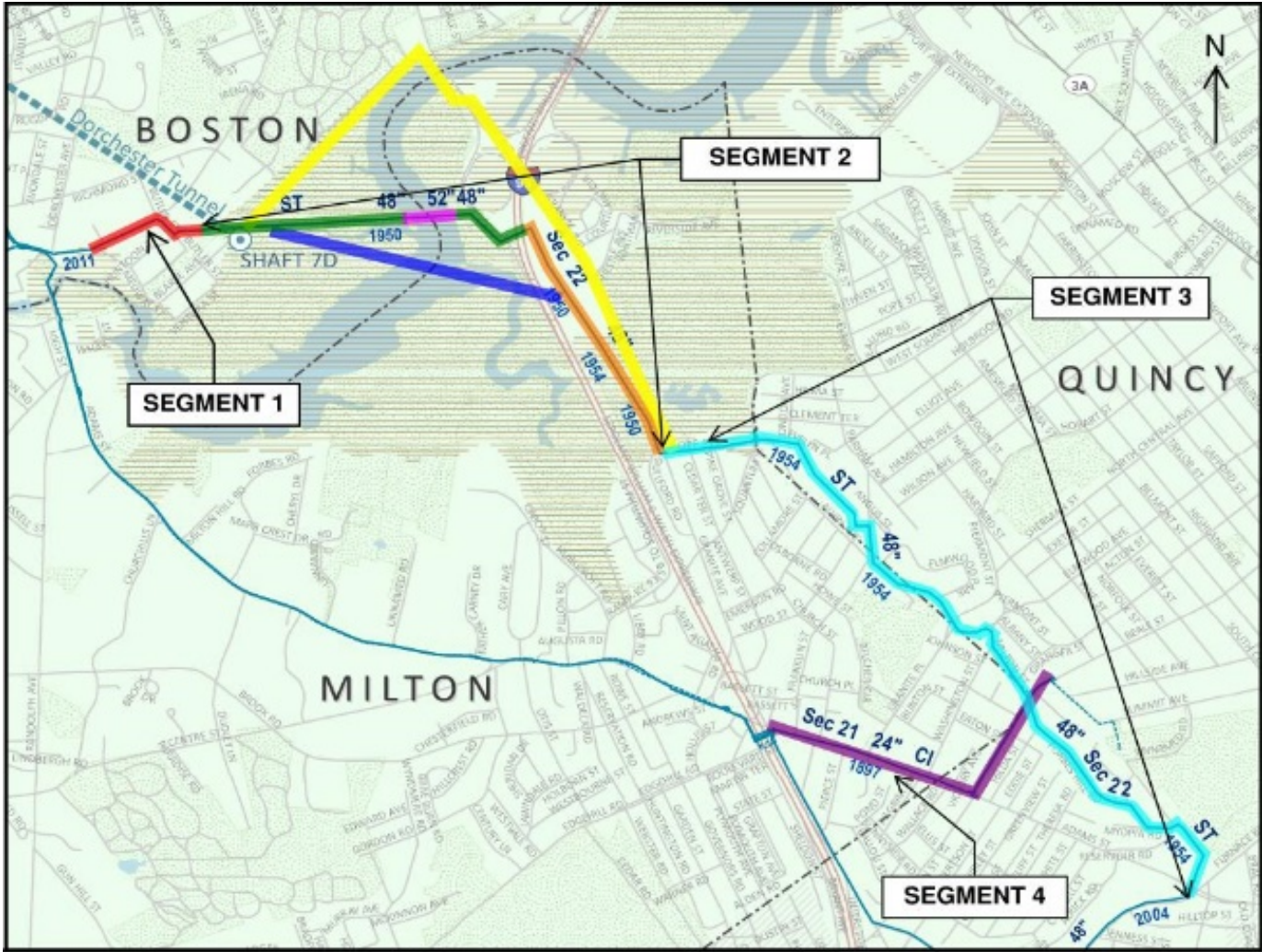
The FY21 CIP includes a budget of \$2,870,000 for Contract 7155.

MBE/WBE PARTICIPATION:

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

ATTACHMENT:


Figure 1 – Draft Construction Alternatives



LEGEND	
█	Remove & Replace
█	a. Clean & Line or b. Slip line
█	Horizontal Directional Drill
█	a. Clean & Line or b. Slip line or c. Relocate Pipe to Granite Ave
█	Good Condition, Defer Construction
█	Alternative Pipe Route
█	a. Clean & Line or b. Remove & Replace
█	Clean & Line


FIGURE 1
 MWRA Distribution Pipes
 Sections 21 & 22
**DRAFT CONSTRUCTION
 ALTERNATIVES**

STAFF SUMMARY


TO: Board of Directors
FROM: Frederick A. Laskey, Executive Director 
DATE: April 14, 2021
SUBJECT: Diver Assisted Suction Harvesting of Invasive Aquatic Plants at Wachusett Reservoir Lower Basins and Coves
AE Commercial Diving Services
WRA-4942

COMMITTEE: Water Policy & Oversight

INFORMATION
 VOTE


Michele S. Gillen
Director of Administration

John J. Gregoire, Program Manager, Reservoir Operations
Valerie L. Moran P.E., Director of Waterworks
Preparer/Title


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

RECOMMENDATION:

To approve the award of a purchase order contract for the control of invasive plants in the Wachusett Reservoir lower basins and main reservoir coves to the lowest responsive bidder under Bid WRA-4942, AE Commercial Diving Services, and to authorize the Executive Director, on behalf of the Authority, to execute said purchase order contract in the bid amount of \$448,000 for a term of six months from July 1, 2021 to December 31, 2021.

DISCUSSION:

MWRA first began to address invasive aquatic plants at the Wachusett Reservoir in 2002, when they were raised as a concern. Since that time, MWRA’s program to control and eradicate aquatic invasive plants has evolved based on reservoir conditions and techniques available. Early efforts involved laborious diver hand pulling of these plants. The current method deployed is Diver Assisted Suction Harvesting (DASH), a proven combination of diver and mechanical vacuuming.

The target invasive plants in these areas are Eurasian Watermilfoil (*Myriophyllum spicatum*), Fanwort (*Cabomba caroliniana*), and Variable Leaf Milfoil (*Myriophyllum heterophyllum*). All three of these plants are known to aggressively displace native vegetation and grow to nuisance densities with associated impairments to water quality. Staff are focused on keeping these plants from colonizing new areas of the Wachusett Reservoir, especially the large north basin shallows near the Cosgrove Intake (Figure 1).

Staff are reporting success on the upstream Stillwater Basin DASH project, which has allowed for evolution to a scaled-down spot removal effort there. Consequently, that formerly intensive effort no longer needs to be procured as a separate contract. It has been reduced by 20 percent and added to this contract. The lower basins and coves throughout the reservoir that have been under this

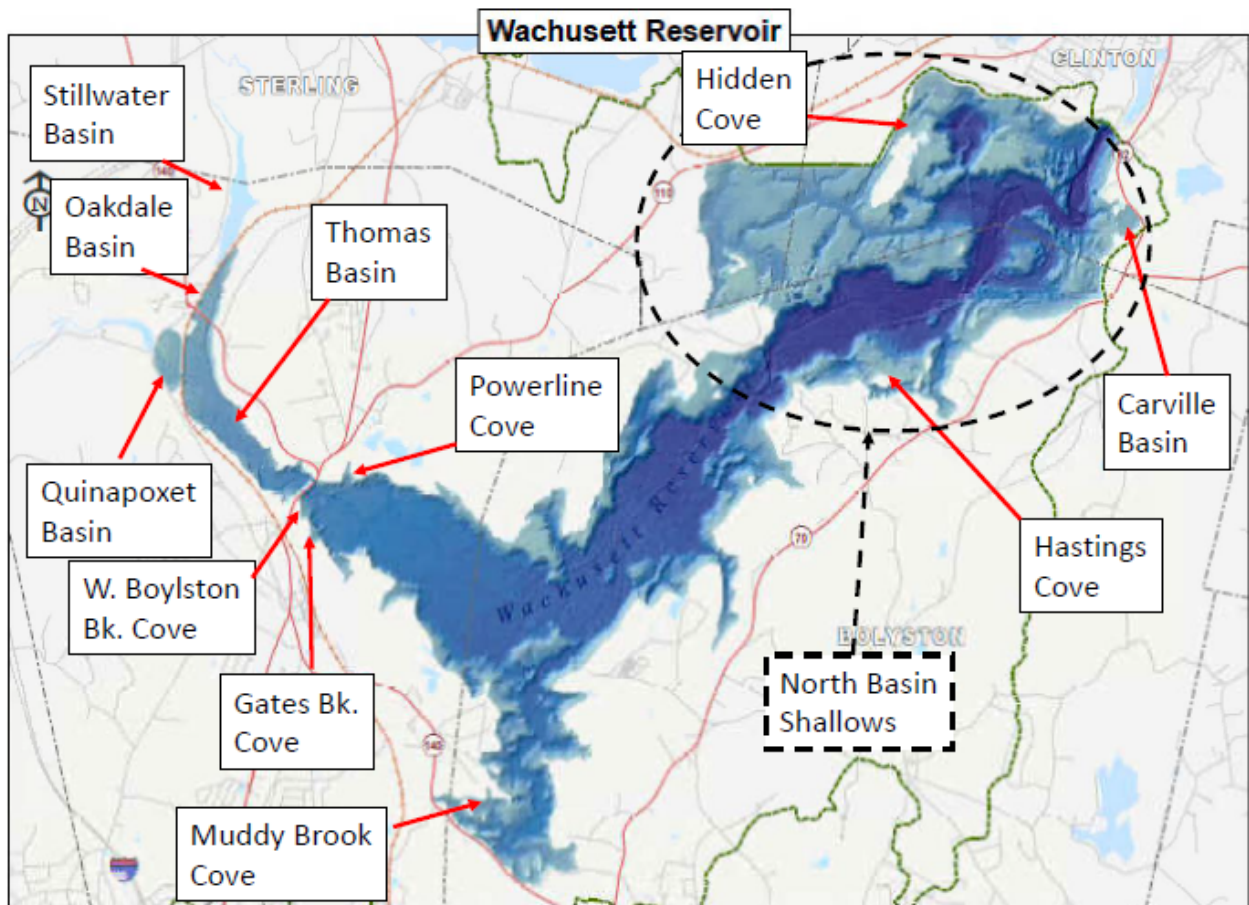


Figure 1. Wachusett Reservoir DASH work areas

control program are also showing reductions in the invasive plant populations, with a robust return of native plants with the exception of Muddy Brook Cove (Figure 2). This remote 0.5-acre cove has a mature Variable Milfoil growth along the center submerged channel, and was a late addition to the contract scope this season. The scope of four other coves has been reduced to just a “survey pass” this season with no anticipated harvest effort.

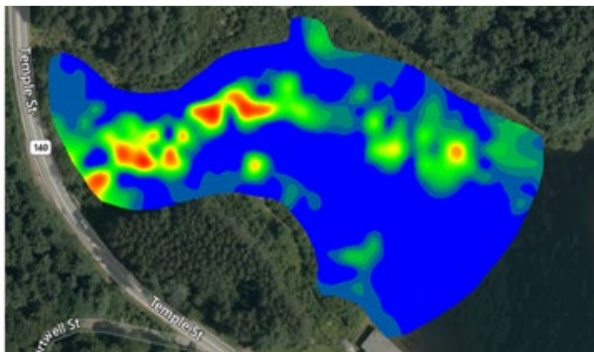


Figure 2. Muddy Brook Cove

The focus of this contract is for a maintenance level of effort for the lower basins and coves and for a continued large-scale basin-wide removal in the Quinapoxet Basin (Figure 3) and Muddy Brook Cove, which still have dense Variable Leaf Milfoil growth. The small, isolated coves have responded well to DASH.

One DASH boat and crew will operate across two phases (early growth in the summer months and in the fall to address regrowth) from July through November 2021.

A second DASH boat and full crew of divers and surface tenders will be dedicated to work the entire Quinapoxet Basin over one full pass, including the immediate upstream Quinapoxet River area, from July through November. Figure 3 below shows the progress over the 2020 season.

This contract also includes provisions for a standby DASH boat and crew as needed, and an allowance of an additional 10 days for a DASH boat and crew for rapid response in the event of new invasive plant discovery.

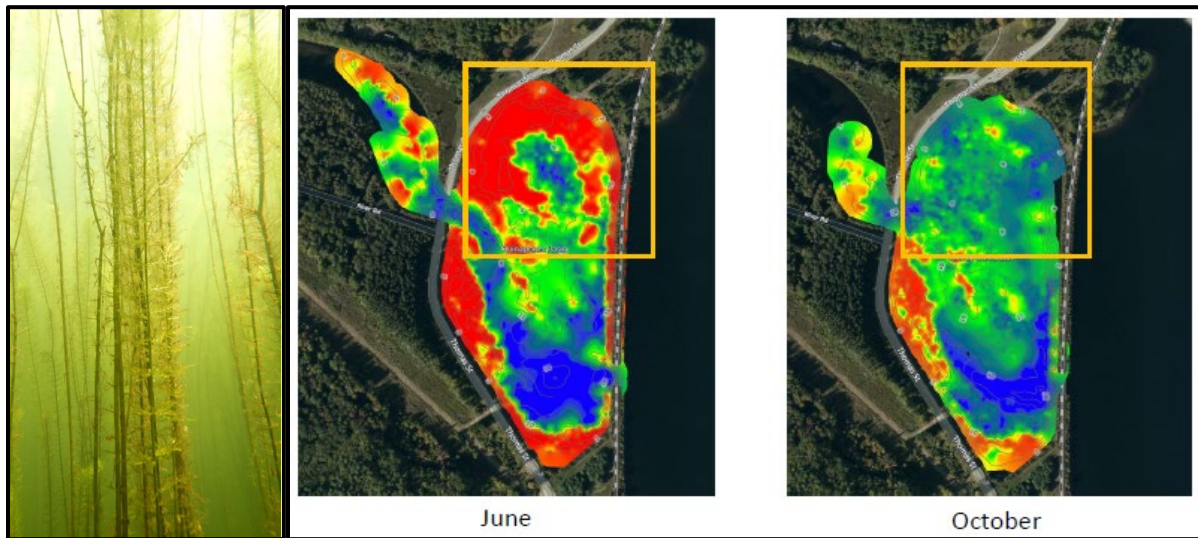


Figure 3. Quinapoxet Basin: Underwater photo of VLM (L), highest plant density at start of 2020 season in red (C), and mid-DASH harvest in October 2020 (R)

A quality assurance diving contractor (QA Diver) will be procured separately to inspect the DASH work zones weekly after this contractor has reported work completion in these areas. These areas will be mapped and videotaped for documentary purposes, to support pay requisitions by the DASH contractor, and to ensure that specific target areas are easily identified if contractor rework is necessary. The QA Diver also documents the return of native plants to the DASH harvest areas.

Procurement Process

Bid WRA-4942 was advertised in the following publications: the Boston Herald, the Goods and Services Bulletin, El Mundo, and Banner Publications. In addition, bids were made available for public downloading on MWRA’s e-procurement system (Event 4572).

On March 8, 2021, Event 4572 closed with the following results

<u>BIDDERS</u>	<u>BID AMOUNT</u>
AE Commercial Diving Services	\$448,000
<i>Staff Estimate</i>	<i>\$355,000*</i>

** The Staff Estimate left out significant scope items as explained below.*

Staff solicited five potential vendors. As in 2020, only one bid was received. Staff are aware that, while there are other environmental companies doing lake treatment work, there are few vendors doing diver assisted suction harvesting in our region. The current vendor is based in Vermont and relocates its operation and personnel to Massachusetts for this work. The only other vendor who has performed DASH for MWRA previously has relocated business operations to upstate New York.

Staff contacted AE Commercial to better understand its bid. The Staff Estimate was based on the day rate and level of effort of the prior contract. Representatives of the company indicated that their day rate was higher this year by 9% due to increased unemployment insurance and labor costs. In comparing the Staff Estimate with AE Commercial's bid, staff noted a few additional differences:

- The Staff Estimate did not include the Stillwater Basin work, previously performed under a separate contract but which was added as a bid item under this contract (AE Commercial's price for this work is \$33,250);
- The Staff Estimate also did not include work for Muddy Cove that was added to the contract later in the procurement process (AE Commercial's price for this work is \$17,500);
- The Staff Estimate did not include four additional contingency days (AE Commercial's price for the four days is \$7,000).

Staff have reviewed AE Commercial's bid and determined it meets all of the requirements of the specifications. AE Commercial has successfully performed the Stillwater Basin and the Lower Basins seasonal DASH work in 2014 through 2019. The firm demonstrated that it has the qualifications, skill, ability, equipment and experience necessary to satisfactorily complete all requirements of this purchase order contract. References were checked and found to be favorable. Therefore, staff recommend award of the purchase order contract to AE Commercial Diving Services.

BUDGET/FISCAL IMPACT:

Appropriate funding will be included in the FY22 Current Expense Budget.

MBE/WBE PARTICIPATION:

AE Commercial Diving Services is not a Certified Minority- or Women-owned business.

STAFF SUMMARY

TO: Board of Directors
FROM: Frederick A. Laskey, Executive Director
DATE: April 14, 2021
SUBJECT: Community Leak Detection Survey Task Order Services
Arthur Pyburn & Sons, Inc., Contract W332
Liston Utility Services, Contract W332A




COMMITTEE: Water Policy & Oversight


 INFORMATION

 X VOTE

Carolyn M. Fiore, Deputy Chief Operating Officer
Stephen Estes-Smargiassi, Director, Planning and Sustainability
Carl H. Leone, Senior Program Manager, Planning
David Granados, Project Manager, Planning
Preparer/Title


Michele S. Gillen

Director of Administration


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

RECOMMENDATION:

To authorize the Executive Director, on behalf of the Authority, to award Contracts W332 and W332A for Community Leak Detection Survey Task Order Services to Arthur Pyburn & Sons, Inc. and Liston Utility Services, respectively, and to authorize the Executive Director, on behalf of the Authority, to execute each contract in an amount not to exceed \$400,000 for a contract term of three years from the Notice to Proceed.

DISCUSSION:

As part of the Long-Range Water Supply Program (1988-1990), MWRA funded a leak detection survey of the over 6,000 miles of water mains owned and operated by MWRA's customer communities. The survey located 2,374 leaks, which were wasting more than 30 million gallons of water per day. Since water system leakage can recur rapidly in the absence of an active leak detection and repair program, it is important to maintain the progress made through the initial survey effort.

On July 1, 1991, leak detection regulations (360 CMR 12.00) were promulgated by MWRA requiring that each community purchasing MWRA water conduct a leak detection and repair program covering its entire water distribution system not less than once every two years. Communities' compliance with the leak detection regulation is reported in the Orange Notebook. To perform local water leak detection work, communities can either: (1) use their in-house staff; (2) procure their own contractor; or (3) use one of MWRA's leak detection task order services contracts. The task order contracts provide communities with access to competitively procured leak detection services without the need for individual local procurement processes, making it easier to comply with the leak detection requirement. Each community using an MWRA task order

contract must execute an agreement to repay MWRA the cost of the survey in the following fiscal year. The leak detection regulations and procurement of community leak detection services contracts support MWRA's efforts to comply with Massachusetts Water Conservation Standards.

Since July 1991, MWRA communities have collectively surveyed over 99,000 miles of water main, locating over 15,200 leaks with estimated leakage of over 170 mgd. During this period, under MWRA's community leak detection contracts, over 35,000 miles of water main have been surveyed locating over 6,100 leaks with estimated leakage of over 60 mgd. During the most recent three-year contract period, two contractors have performed 16 leak detection surveys, covering 3,170 miles of water main locating 346 leaks.

It should be noted that MWRA has an active leak detection program for the MWRA-owned water distribution system that is performed by in-house staff. The activity of MWRA's leak detection program, including mileage of water main inspected, leaks detected, and leaks repaired is reported in the Orange Notebook.

Leak Correlation Survey

Leak correlation surveys are performed using accelerometer equipment (computerized sound data loggers) placed directly on hydrants, valves, service connections, etc. Computer software is used to evaluate the logged sound data files and perform a correlation between the points of contact to



Leak Detection Technician
"sounding" at a fire hydrant
to verify leak

determine the location of potential water leaks. Water leaks are identified via a graphic representation of sound frequency. A water leak is



Correlation survey accelerometer (data logger)

represented as a sharp discontinuity or spike in the sound frequency graph and the location of the leak is pinpointed as the distance between the points of contact within the water system to the identified spike. Leak sites identified using leak correlation equipment are verified with sonic ground sounding equipment. The capabilities of the leak correlation equipment and ability of the technician to properly utilize the equipment are key aspects of an effective leak survey.

Procurement Process

In order to provide communities with flexibility in their choice of leak detection contractors, staff utilized a procurement process designed to select multiple qualified leak detection firms. Staff utilized a one-step Request for Qualifications/Proposal (RFQ/P) process for the selection of contractors on an all-qualified, low cost basis. The RFQ/P required that the cost proposal (cost per

mile of water main surveyed) be submitted separately from the qualification proposal. The RFQ/P was publically advertised in the Central Register, the Boston Herald, Banner Publications and El Mundo. In addition, over 400 firms received notice of the RFQ/P via the MWRA Supplier Portal and the solicitation was emailed directly to eight leak detection firms.

The Selection Committee separately evaluated the contractors' qualifications on a Qualified/Not Qualified (pass/fail) basis. The following evaluation criteria were used: (1) similar experience and past performance; (2) capacity, qualifications, and key personnel; and (3) organization, management, and technical approach. Once the qualifications were reviewed and evaluated, the committee determined the qualified firms and then the cost proposal of each qualified firm was opened and reviewed to determine the lowest to highest cost ranking based on the comprehensive per-mile rate proposed for leak detection surveys. The contractors are not guaranteed any minimum amount of work and each contractor will be paid only for services provided under each task order, based on its proposed per-mile rate, up to the not-to-exceed contract limit.

Three contractors submitted proposals: Consulting Engineering, Inc., Arthur Pyburn & Sons, Inc., and Liston Utility Services. The Selection Committee qualified two of the three proposals. An overview of the three proposals is provided below.

Consulting Engineering, Inc. - This contractor is a small engineering company that performs leak detection surveys, as well as other engineering projects. The proposal identified seven total staff that would be involved with the MWRA contract, including four qualified field technicians that would perform the leak detection work. The lead leak detection technician has 13 years of experience and other field technicians have two to five years of experience. The company's office is in Strongsville, Ohio and no local office was noted in the proposal. The methodology/approach section of the proposal detailed a leak detection listening survey with correlator equipment used only for confirming and pinpointing leaks initially identified through the listening survey. The Selection Committee agreed this methodology was not responsive to the scope of services, which specified a correlation survey with correlating accelerometers placed directly on every hydrant, selected main line valves or selected sidewalk service connections to perform a correlation between them to determine if there is a leak between the points of contact. Consulting Engineers included two non-MWRA Massachusetts communities as references. Staff received information from one of these communities and the review of the contractor's work was not remarkable. Additionally, they indicated they would not rehire the contractor. Much of this contractor's work is in Illinois, Ohio and Pennsylvania. A second reference from Ohio had a more positive response. The Selection Committee determined this proposal as not qualified and, therefore, the cost proposal was not reviewed.

Arthur Pyburn & Sons, Incorporated - This contractor is a small family owned and operated company. The proposal identified two qualified staff that will work on MWRA projects. The lead leak detection technician has 35 years of experience performing leak surveys and the leak technician assistant has two years of experience. The company specializes in leak correlation survey work and has a local office in Rowley, Massachusetts. Arthur Pyburn & Sons has performed leak detection surveys in at least nine MWRA communities and many non-MWRA communities in Massachusetts, New Hampshire and Rhode Island. Arthur Pyburn & Sons is one of three contractors that worked under MWRA's most recent three-year contract for community leak detection services. Community feedback on prior projects has been positive and the MWRA

Project Manager indicated the contractor has been responsive. The Selection Committee determined this proposal as qualified. The contractor’s cost proposal was then reviewed and ultimately ranked first for cost-per-mile of leak correlation survey.

MWRA employs Brian Pyburn, an Inspection Supervisor for Water Operations & Maintenance. My Pyburn was not on the Selection Committee or involved in the procurement process. Mr. Pyburn has no ownership interest nor involvement in the operations of Pyburn & Sons; however, he works on occasion for the family business as an employee, during his non-MWRA work hours, performing construction laborer and heavy equipment operator work. Because Mr. Pyburn is a state employee, in a supervisory role for MWRA for leak detection services, and he is also an occasional employee of Pyburn & Sons, and his family’s business has a financial interest in this contract, he apprised MWRA officials responsible for his appointment to his position. In 2018, when the prior contract was awarded, Mr. Pyburn sought guidance from the State Ethics Commission and Law Division on his responsibilities under the state ethics law. With this renewal contract, Law Division will work with Mr. Pyburn to again seek an opinion from the State Ethics Commission regarding Mr. Pyburn’s obligations. Law Division will also work with Mr. Pyburn to ensure that required disclosures are filed and provisions are in place to comply with the State Ethics requirements, including assigning work to other MWRA employees when required.

Liston Utility Services - This contractor is a one-person owner/operator company. The owner/operator is the sole leak detection technician; he has over 30 years of experience performing leak surveys. The company specializes in leak correlation survey work and has a local office in Stoneham, Massachusetts. Liston Utility Services has performed leak detection surveys in at least 30 MWRA communities and many other non-MWRA communities in Massachusetts. Liston Utility Services is one of three contractors that worked under MWRA’s most recent three-year contract for community leak detection services. Community feedback on prior projects has been positive and the MWRA Project Manager indicated that the contractor has been responsive. The Selection Committee determined this proposal to be qualified. The contractor’s cost proposal was then reviewed and ultimately ranked second of two proposals for cost-per-mile of leak correlation survey.

The Selection Committee ranked, from lowest to highest, the qualified contractors’ proposed comprehensive per-mile bid cost as follows:

<u>Contractor</u>	<u>Bid Cost per Mile</u>	<u>Cost Ranking</u>
Arthur Pyburn & Sons, Inc.	\$154.00	1
Liston Utility Services	\$158.00	2

Therefore, the Selection Committee recommends the award of contracts W332 and W332A for community leak detection survey task order services to Arthur Pyburn & Sons, Inc. and Liston Utility Services, respectively, each in a not-to-exceed amount of \$400,000.

BUDGET/FISCAL IMPACT:

MWRA expenditures for Community Leak Detection Task Order Services are posted to a deferred billing account until reimbursement is received from each participating community the following

fiscal year. This deferred billing account allows MWRA to incur community-related expenses until reimbursement is received, without any impact on the Current Expense Budget.

MBE/WBE PARTICIPATION:

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

STAFF SUMMARY

TO: Board of Directors
FROM: Frederick A. Laskey, Executive Director
DATE: April 14, 2021
SUBJECT: Shaft 5 Building Improvements
Design and Engineering Services During Construction
Kleinfelder Northeast, Inc.
Contract 7599



COMMITTEE: Water Policy & Oversight

 INFORMATION

 X VOTE



Michele S. Gillen

Director of Administration



David W. Coppes, P.E.

Chief Operating Officer

John P. Colbert P.E., Chief Engineer
Maureen K. McAvoy, P.E., Program Manager
Preparer/Title

RECOMMENDATION:

To approve the recommendation of the Consultant Selection Committee to award Contract 7599, Shaft 5 Building Improvements Design and Engineering Services During Construction, to Kleinfelder Northeast, Inc., and to authorize the Executive Director, on behalf of the Authority, to execute said contract in the amount of \$1,158,678 for a contract term of 60 months from the Notice to Proceed.

DISCUSSION:

The City Tunnel, completed in 1950, is a 4.8-mile tunnel system connected to the Metrowest Tunnel System and the Hultman Aqueduct via major valve connections at Shaft 5 in Weston. An overview map of the Metropolitan Tunnel System is shown below as Figure 1.

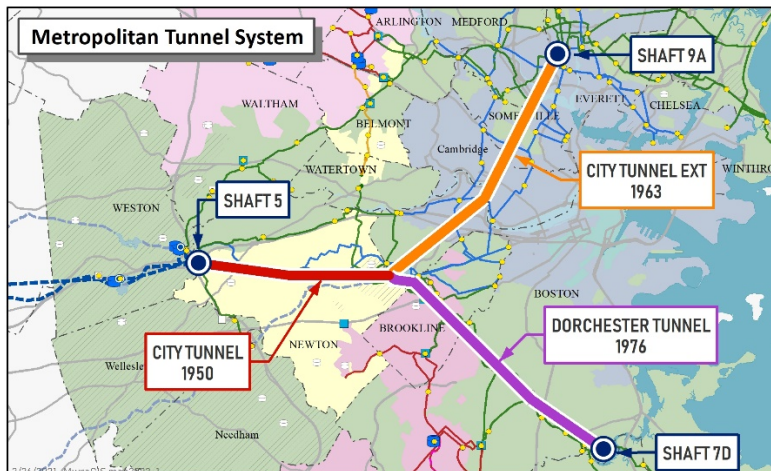


Figure 1 – Overview Map of Metropolitan Tunnel System

The Shaft 5 Facility was originally constructed in 1947 and houses a vertical shaft, which provides access to the deep rock tunnel approximately 400 feet below the building floor. The facility also contains isolation valves and pumping equipment related to the MWRA water transmission system. The Shaft 5 Facility is constructed of concrete with a mortared stone and brick masonry exterior. The building consists of a ground floor and a subgrade basement. The first floor provides access to the three shafts at the location as well as access to the gate valve chambers. The first floor also contains the existing electrical switchboard, abandoned restroom facilities, hydraulic valve system controls and gate valve operators. The basement houses a step-down transformer, pumping equipment and a ventilation blower.



Figure 2: Shaft 5 – Recreation Road, Weston

The Shaft 5 Facility has a footprint of approximately 2,800 square feet and a total aggregate floor area of approximately 5,600 square feet. The first floor of the building contains an unenclosed exit access stairway connecting to the basement floor. Both floors are served by a single means of egress located on the first floor. The site plan for Shaft 5 is shown below as Figure 2.

This project provides engineering services to upgrade the 74-year-old facility, including all utilities and components due to age and wear. In addition, hazardous materials including lead and PCBs will be

abated as part of this project.

MWRA has a separate task order design in progress for hardening of critical piping and components and protection of the pump chamber located 400 feet below the facility to prevent failure. The project scope that is the subject of this award includes the following major replacements and improvements:

- Upgrade/replacement of electrical systems;
- Installation of oil/water separator/treatment for existing discharge to Charles River;
- Replacement of dewatering and sump pumps;
- Replacement of building crane;
- Installation of a Fire Protection system;
- Upgrades to Instrumentation and Controls;
- Replacement of plumbing including reestablishment of Sanitary Facilities;
- Second means of egress including existing stair replacement; and
- Hazardous materials remediation (lead paint and PCB abatement).

This project will require a Chapter 149 construction contract. Resident Engineer/Resident Inspection services will be procured under a separate contract. Design and construction bidding services are estimated to take 24 months from the notice to proceed date. Construction is estimated to take an additional 24 months, plus a 12-month warranty period, for a contract duration of 60 months.

Procurement Process

On January 29, 2021, MWRA issued a one-step Request for Qualifications Statements/Proposals (RFQ/P) that was publicly advertised in the Central Register, the Boston Herald, Banner Publications and El Mundo. In addition, approximately 158 firms received notice of the RFQ/P via the MWRA Supplier Portal, and the solicitation/advertisement was emailed directly to approximately 40 engineering firms.

The following criteria were used to evaluate each of the proposals: Cost (25 points); Qualifications and Key Personnel (25 points); Experience/Past Performance on Similar Non-MWRA Projects and Past Performance on MWRA Projects (25 points); and Technical Approach/Capacity/Organization and Management Approach (25 points).

A pre-proposal meeting was held remotely on February 12, 2021 and attended by three firms. A pre-proposal site visit was held at Shaft 5 on February 18, 2021 and attended by two firms. MWRA received proposals on March 5, 2021 from Kleinfelder Northeast, Inc. and Mott MacDonald, LLC.

A summary of the proposal cost and level of effort are as follows:

<u>Firm</u>	<u>Proposed Contract Cost</u>	<u>Level of Effort</u>
Kleinfelder	\$ 1,158,678	7,124 hours
<i>Engineer's Estimate</i>	<i>\$ 1,293,150</i>	<i>7,121 hours</i>
Mott MacDonald	\$ 1,308,443*	7,317 hours

* Contract cost adjusted to correct minor mathematical errors.

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

	<u>Total Points</u>	<u>Order of Preference*</u>	<u>Final Ranking</u>
Kleinfelder	368.50	7	1
Mott MacDonald	354.25	8	2

*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.

Kleinfelder's overall cost proposal was lower than that proposed by Mott MacDonald and 10 percent lower than the Engineer's Estimate. Kleinfelder proposed an overall cost of \$1,158,678 compared to \$1,308,443 for Mott MacDonald and the Engineer's Estimate of \$1,293,150.

Kleinfelder teamed with several subconsultants for this contract. The firm presented a strong project team with excellent qualifications, experience and past performance on relevant projects. All members of the team exceed the minimum qualifications required for this contract, and all lead discipline engineers have over 15 years of experience. Both internal and external references rated Kleinfelder as very good to excellent. All referenced projects were of similar size and design compared to this project.

Kleinfelder's technical approach demonstrated a clear understanding of the project. Some of the key elements of its technical approach outlined its past experience and knowledge of the Shaft 5 site from the completion of a code review as part of a technical assistance task order.

Mott MacDonald's proposed overall cost and level of effort were higher than Kleinfelder's and the Engineer's Estimate. Mott MacDonald proposed a smaller team with fewer subconsultants than Kleinfelder. The majority of the lead discipline engineers have over 20 years' experience. Mott MacDonald's proposed team is well qualified overall; however, its team is split between offices in Massachusetts and New Jersey. Some concern was expressed about their ability to coordinate the design team with the Project Manager located in New Jersey and several team members located in different offices.

Both external and internal reference checks for Mott MacDonald were rated very good overall, although several projects referenced were for larger projects than this facility rehabilitation. The technical approach of Mott MacDonald's proposal was rated as average. The proposal was more generic than Kleinfelder's and did not have many specific project details that were provided by Kleinfelder.

Kleinfelder submitted an excellent proposal with a highly qualified team, proven experience on directly relevant projects, an approach reflecting the project's goals, a justified level of effort for the project and overall best value. MWRA staff met with Kleinfelder's design team and Principal in Charge to confirm the anticipated level of effort. Kleinfelder's team is confident the firm can perform the work for the proposed amount. The firm's proposed level of effort is based on established project delivery protocols to successfully administer MWRA projects.

Based on final rankings and the reasons set forth above, the Selection Committee recommends that the Board approve the award of this contract to Kleinfelder.


BUDGET/FISCAL IMPACT:

The FY21 CIP includes a budget of \$750,000 for Contract 7599. The award amount is \$1,158,678 or \$408,678 over budget. This amount will be absorbed within the five-year CIP spending cap.

MBE/WBE PARTICIPATION:

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



STAFF SUMMARY

TO: Board of Directors
FROM: Frederick A. Laskey, Executive Director 
DATE: April 14, 2021
SUBJECT: Section 89 Replacement Project, Resident Engineering Services
Stantec Consulting Services Inc.
Contract 7633

COMMITTEE: Water Policy & Oversight

INFORMATION
 VOTE

John Colbert, P.E., Chief Engineer
Patrick Barrett, Program Manager
Preparer/Title


Michelle S. Gillen
Director of Administration

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

RECOMMENDATION:

To approve the recommendation of the Consultant Selection Committee to award Contract 7633, Section 89 Replacement Project, Resident Engineering Services, to Stantec Consulting Services Inc. and to authorize the Executive Director, on behalf of the Authority, to execute said contract in an amount not to exceed \$1,697,990, for a contract term of forty-eight months from the Notice to Proceed.

DISCUSSION:

MWRA's Northern Intermediate High (NIH) pressure zone has supplied water to the communities of Reading, Stoneham, Wakefield, Wilmington, Winchester and Woburn through a single 48-inch diameter pipeline, fed by the Gillis and Spot Pond Pumping Stations in Stoneham. MWRA has recently completed the NIH Redundancy Project with the installation and activation of Section 110 through the communities of Stoneham, Reading and Woburn. Section 110 provides for a fully redundant water supply to the NIH communities.

The activation of Section 110 has allowed MWRA to proceed with design and construction for the replacement of Section 89, which had previously been the single spoke transmission line to the NIH communities. Section 89 was installed in the 1970s and is made of pre-stressed concrete cylinder pipe (PCCP) that has been susceptible to catastrophic failure. With the redundant water supply in place, MWRA is ready to proceed with the replacement of Section 89 with ductile iron pipe. Figure 1, attached, shows the new redundancy loop and PCCP main to be replaced.

Contract 7633 is a 48-month professional services contract to provide resident engineering (RE) services in support of the construction performed under Contract 7117, NIH Section 89 Replacement. Contract 7117 is currently out for bid and anticipated to be awarded at the May 26, 2021 Board of Directors' meeting. Further, Contract 7117 will include the replacement of the 10,500-foot portion of PCCP with class IV reinforcing wire, replacement of line valves and appurtenances on the existing ductile iron portion of Section 89, and abandonment of the 118-year-old 24-inch diameter cast iron Section 29 pipeline.

Procurement Process

On November 4, 2020, MWRA issued a one-step Request for Qualifications Statements/Proposals (RFQ/P) that was publically advertised in the Central Register, the Boston Herald, Banner Publications and El Mundo. In addition, notice of the RFQ/P was sent directly to 38 engineering firms. A total of 42 firms requested access to the RFQ/P documents.

The RFQ/P included the following evaluation criteria and points: Cost - 30 points; Qualifications and Key Personnel - 30 points; Relevant Experience/Past Performance - 20 points; Technical Approach and Capacity/Organization and Management Approach - 17 points; and MBE and WBE Participation - 3 points.

On March 5, 2021, MWRA received proposals from the following three firms: Stantec Consulting Services Inc., MWH Constructors, Inc., and CDM Smith Inc.

The proposal costs and level of effort are presented below:

Proposer	Proposed Contract Cost	Level of Effort
CDM Smith Inc.	\$1,635,935	16,944 hours
Stantec Consulting Services Inc.	\$1,697,990	17,147 hours
<i>Engineer's Estimate</i>	<i>\$2,120,720</i>	<i>16,640 hours</i>
MWH Constructors, Inc.	\$2,225,096	17,024 hours

The proposed costs of the three proposers (CDM Smith, MWH Constructors and Stantec), were within 5% to 23% of the Engineer's Estimate, or within 28% of each other. The two lowest cost proposals were within 3.7% of one other, which gives staff a high level of confidence in the overall cost of the project.

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

Proposer	Total Points	Order of Preference*Total Score	Final Ranking
Stantec Consulting Services Inc.	4	5	1
CDM Smith Inc.	3	10	2
MWH Constructors, Inc.	3	15	3

*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.

Stantec was within 4% of the lowest cost proposal and was ranked first by all Selection Committee members. The Selection Committee was in agreement that Stantec's proposal was excellent and included an appropriate level of effort and distribution of work, as well as key personnel with excellent qualifications and experience. The project team has extensive relevant experience as it has successfully completed RE and resident inspection services for the NIH redundancy project and is the current consultant for the design and engineering services during construction under contract 7116 NIH Section 89 Replacement project.

CDM Smith proposed the lowest cost and was ranked second overall by the Committee. CDM Smith's proposal was good, and the proposed staff have had recent success providing RE and resident inspection services for the MWRA Chelsea Headworks project. However, the proposed Resident Engineer has less relevant pipeline experience as compared to Stantec's proposed Resident Engineer.

MWH Constructors proposed the highest cost and was ranked third overall by the Selection Committee. MWH Constructors' proposed staff were well experienced and the proposal demonstrated a good understanding of the project requirements.

Based on final rankings, and for the reasons set forth above, the Selection Committee recommends the award of this contract to Stantec Consulting Services Inc. in an amount not to exceed \$1,697,990.

BUDGET/FISCAL IMPACT:

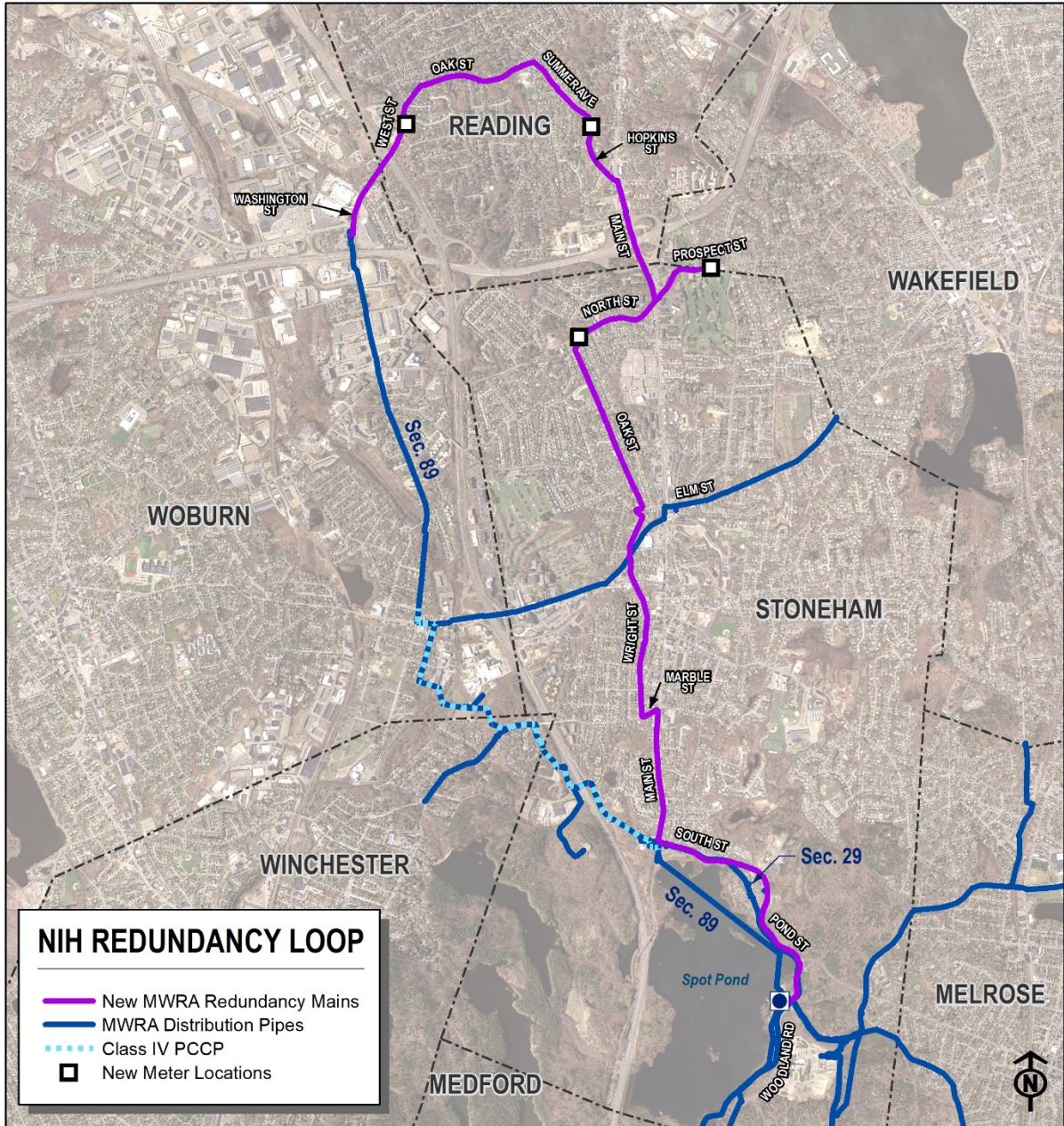
The FY21 CIP includes a budget of \$2,000,000 for Contract 7633. The award amount is \$1,697,990, or \$302,010 under budget.

MBE/WBE PARTICIPATION:

The Affirmative Action and Compliance Unit established a MBE/WBE participation requirement for this project of 0%. However, Stantec's proposal identified its commitment of 0% MBE and 12.41% WBE participation, which becomes a requirement for this contract.

ATTACHMENTS:

Figure 1- NIH Section 89 Replacement



STAFF SUMMARY


TO: Board of Directors
FROM: Frederick A. Laskey, Executive Director
DATE: April 14, 2021
SUBJECT: Section 89 Replacement Project
Design and Engineering Services During Construction
Stantec Consulting Services Inc.
Contract 7116, Amendment 1



COMMITTEE: Water Policy & Oversight

INFORMATION
 VOTE

Patrick Barrett, Program Manager
John Colbert, P.E., Chief Engineer
Preparer/Title



David W. Coppes P.E.
Chief Operating Officer

RECOMMENDATION:

To authorize the Executive Director, on behalf of the Authority, to approve Amendment 1 to Contract 7116, Section 89 Replacement Project Design and Engineering Services During Construction, with Stantec Consulting Services Inc., increasing the contract amount by \$443,100, from \$3,948,625, to \$4,391,725, and extending the contract term time by 41 months, from January 2, 2023 to June 2, 2026.

DISCUSSION:

MWRA’s Northern Intermediate High (NIH) pressure zone has supplied water to the communities of Reading, Stoneham, Wakefield, Wilmington, Winchester, and Woburn through a single 48-inch diameter pipeline fed by the Gillis and Spot Pond Pumping Stations in Stoneham. The MWRA has recently completed the NIH Redundancy Project with the installation and activation of Section 110 through the communities of Stoneham, Reading, and Woburn. Section 110 provides for a fully redundant water supply to the NIH communities.

The activation of Section 110 has allowed MWRA to proceed with design and construction for the replacement of Section 89, which has previously been the single spoke transmission line to the NIH communities. Section 89 was installed in the 1970s and is made of a material called pre-stressed concrete cylinder pipe (PCCP) that has been susceptible to catastrophic failure. With the redundant water supply in place, MWRA is ready to proceed with the replacement of Section 89 with ductile iron pipe. See Figure 1, attached, for the new redundancy loop and PCCP main to be replaced.

This contract is providing design and engineering services during construction for the replacement of the 10,500-foot portion of PCCP, replacement of line valves and appurtenances along the existing ductile iron portion of Section 89 and abandonment of the 118-year-old 24-inch diameter cast iron Section 29 pipeline. That associated construction contract is currently out for bid and anticipated to be awarded at the May 26, 2021 Board of Director’s meeting.

The current contract is a 57-month professional services contract for design and engineering services including 27 months for design and bidding, 19 months for construction and a 12-month warranty period.

The scope of services included confirming the final pipeline alignment; performing a geotechnical and hazardous waste exploration/assessment program along the alignment; evaluating traffic impacts; obtaining all required permits; determining construction control measures for residents, businesses, pedestrians; and development of construction contract documents including drawings and specifications. The scope also includes engineering services during construction to review submittals, evaluate change orders and respond to contractor questions. Resident engineering inspection services are being procured through a separate RFQ/P process that is also being presented at this Board of Director's meeting.

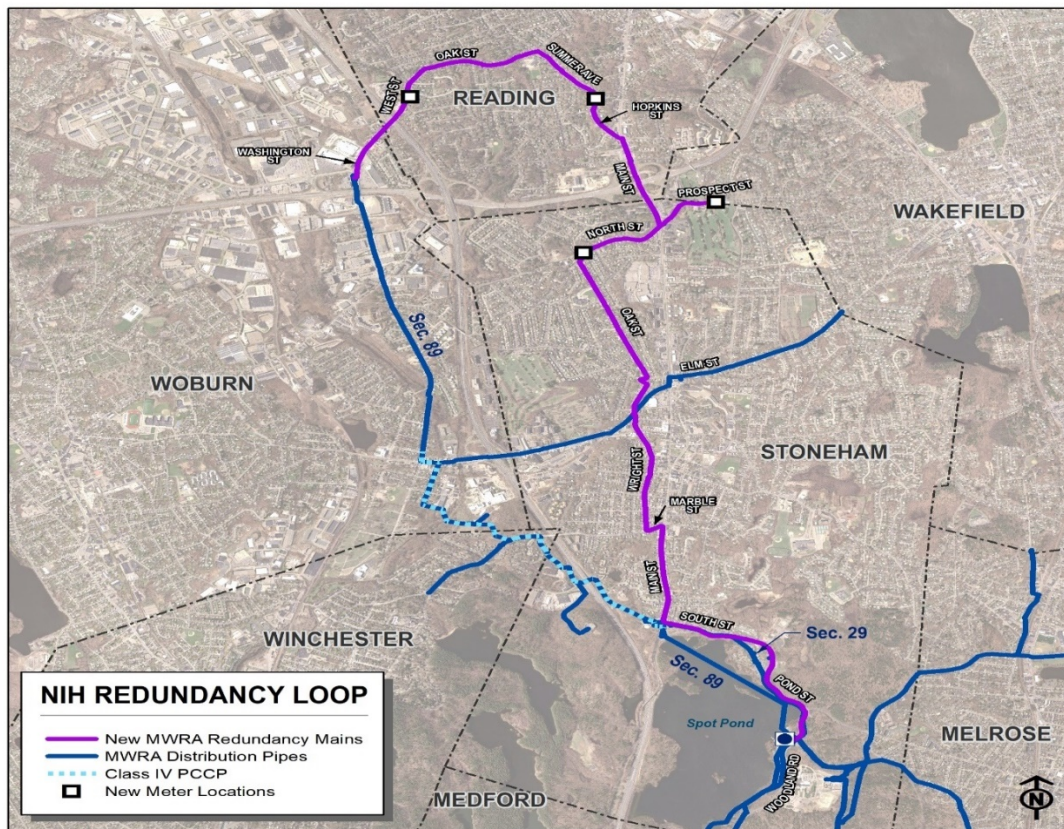


Figure 1 NIH Redundancy Loop

This Amendment

Time Extension

41 Months

Amendment 1 includes a 41-month time extension for a longer design period due to Covid-19 and a longer construction period due to operational constraints to ensure no interruptions of water supply.

The design required an additional 12 months to complete the design, bid and award process. The permits to support this project were delayed due to Covid-19, which resulted in conservation commission meetings and permit approvals being delayed and longer time periods for agency reviews and approvals of permits. The permits required additional time to incorporate engineering changes from the permit review requested into the design.

The design contract specified a 19-month construction period where engineering services would be required. The 19-month construction schedule was based upon full isolation of Section 89 with multiple construction crews. As design proceeded, additional construction constraints were added to ensure the safe and reliable operation of the Northern Intermediate High system. These constraints include maintaining the Bear Hill Storage Tank on line to provide flow and backup supply to the water distribution system and limiting work to the low flow periods. This required the phasing of Section 89 replacement into four phases and increasing the construction duration from 19 to 48 months. See Figure 2 attachment.

Phase 1 of the project includes preliminary work to insure all MWRA communities receive full benefit of water services when large portions of section 89 are taken out of service for replacement. This phase has a duration of eight months and includes replacement of 160 feet of Section 89 to provide reliable water supply to all the communities impacted by this rehabilitation. It includes the new interconnection of Section 89 to the new Section 110 pipeline and replacement of Meters 53 and 138 connections in Stoneham.

Phase 2 has a duration of 13 months and includes the northern portion of the pipe replacement in Woburn and Winchester. This work includes replacement of 4,500 feet of 48" piping, installation of new 3-way valve and vault for Meter 234, slip lining of the existing Aberjona River crossing, and cured-in-place pipe lining of MWRA Sewer Sections 046, 072, 169 that are located above the water line to ensure protection of the water main during replacement.

Phase 3 has a duration of 15 months and includes all work starting at the Bear Hill Tank in Stoneham and continuing into Winchester. This work includes replacement of 3,000 LF of 48" pipe, installation of temporary linestops and bypass at the Bear Hill Tank connection to allow continued water supply to impacted communities, installation of new 3-way valve and vault for connection to Bear Hill Tank, and slip lining the existing pipeline at a MassDOT exit ramp crossing.

Phase 4 has a duration of 12 months and includes all work in Stoneham starting at North Border Road and completing at Fallon Road. The work includes replacement of 2,700 feet of 48" piping. Additional project work includes replacement of mainline valves, air valves, and blowoff valves on the 36-inch diameter ductile iron portion of Section 89 in Washington Street in Woburn, and abandonment of the existing Section 29 cast iron pipeline.

Each phase of the project must be completed, including pressure testing and disinfection, prior to starting a successive phase. The construction was originally scheduled to begin in June 2020; construction is now expected to begin in June 2021.

Additional Costs: **\$443,100**

Engineering Services During Construction \$303,000

The increase in the construction duration requires an additional 29 months of Engineering Services during Construction. These services include an increase in contractor progress meeting and additional community coordination meetings, as well as overall construction administration and coordination.

Project Administration and Management \$271,000

The time extension requires an additional 41 months of project management and administration, progress reports, M/WBE compliance reporting, invoicing and monthly project update meetings. The amendment includes additional cost and escalation increases for the longer time period that engineering services are required to support the pipe installation construction.

Final Design Services \$83,100

During Final Design, additional design services have been required due to extended review and approvals for permitting. Local Conservation Commission meetings were not held for several months, required additional review time, and required the added design of specialized stream bank restoration. MassDOT design comments altered the proposed replacement design from open cut to a slip lining to reduce potential impacts to the Interstate 93 Bridge crossing. Army Corps of Engineers required additional submissions of Water Quality Certifications for dredging and fill with Department of Environmental Protection. Additional out of scope work for the limited area were the pipe replacement relocation from the existing alignment, which included new temporary/permanent easements and land takings to be completed.

Reduction in Costs: **(\$214,000)**

The preliminary design is complete and remaining funds will be used to offset the cost of this amendment and will be reallocated to engineering services during construction and project administration and management.

CONTRACT SUMMARY:

	<u>Amount</u>	<u>Time</u>	<u>Dated</u>
Original Contract:	\$3,948,625.00	1,736 Days	03/23/11
Amendment 1	<u>\$ 443,100.00</u>	<u>1,247 Days</u>	Pending
Amended Contract:	\$4,391,725.00	2,983 Days	

The percentage of amendments for this contract is 10.9% of the original contract value.

BUDGET/FISCAL IMPACT:

The FY21 CIP includes a budget of \$3,948,625 for Contract 7116. Including this amendment for \$430,100, the adjusted subphase total will be \$4,378,725 or \$430,100 over budget. This amount will be covered within the five-year CIP spending cap.

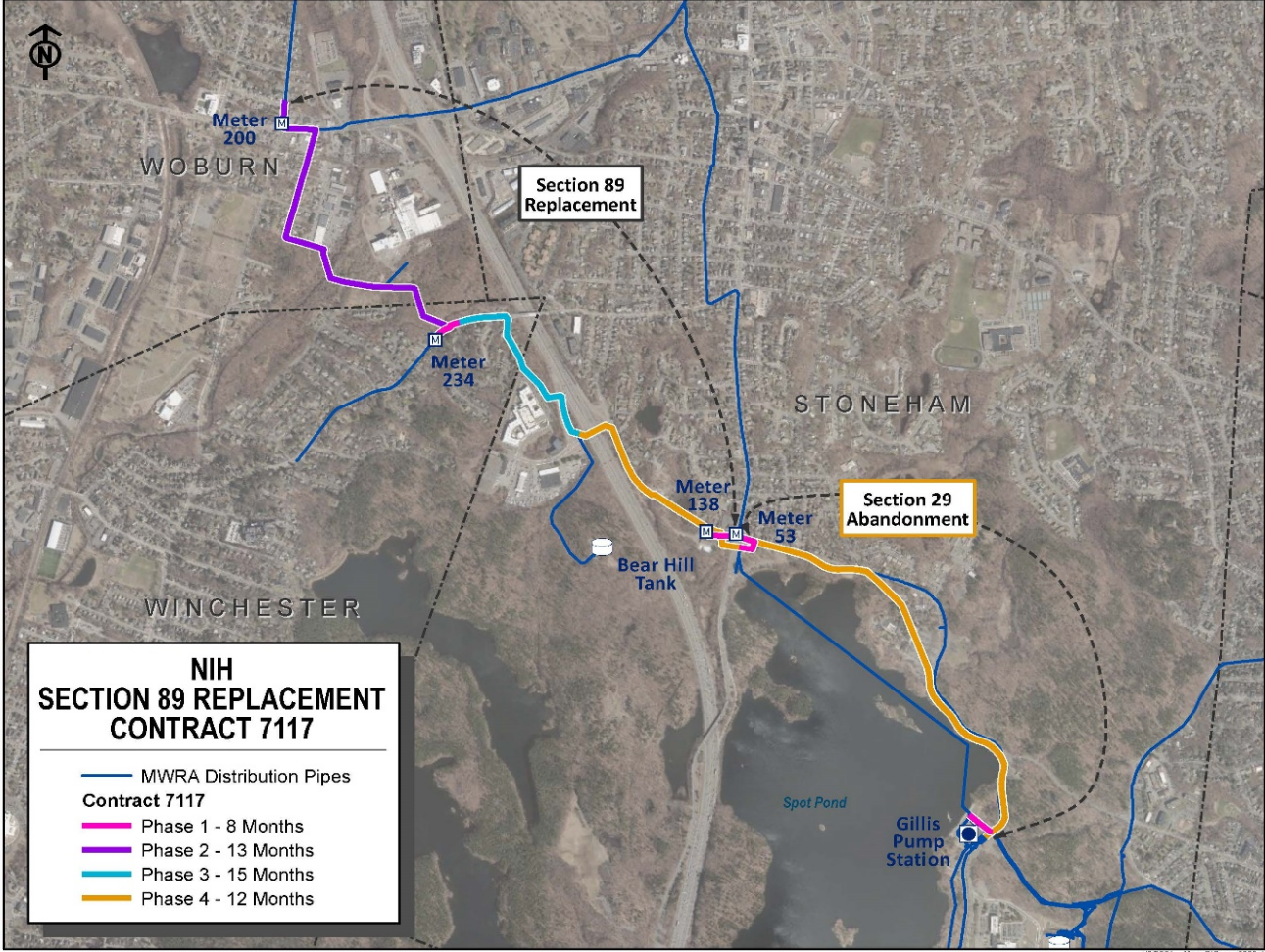
MBE/WBE PARTICIPATION:

The minimum MBE and WBE participation requirements for this project were established at 7.18% and 5.77% respectively. Stantec Consulting Services has committed to 12.51% MBE and 10.46% WBE participation.


ATTACHMENT:

Figure 2 – Contract Phases

Figure 2. Contract Phases




STAFF SUMMARY

TO: Board of Directors
FROM: Frederick A. Laskey, Executive Director 
DATE: April 14, 2021
SUBJECT: Appointment of Deputy Director, Waterworks, Operations Division

COMMITTEE: Personnel & Compensation

 INFORMATION
 X VOTE

Andrea Murphy, Director, Human Resources
Valerie Moran, P.E., Director, Waterworks
Preparer/Title


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

RECOMMENDATION:

To approve the appointment of Ms. Lisa Bina to the position of Deputy Director, Waterworks (Non-Union, Grade 15) in the Operations Division, at the recommended annual salary of \$149,968 commencing on a date to be determined by the Executive Director.

DISCUSSION:

The position of Deputy Director, Waterworks became vacant upon the promotion of the incumbent. The Deputy Director reports to the Director of Waterworks. This position assists the Director in overseeing the planning, design, construction, operation, and maintenance of all water supply facilities and services, including reservoirs, aqueducts, pumping stations, distribution pipelines, water supply, and treatment and transmission operations. The position is responsible for managing the Operations Engineering group that ensures that effective engineering, operations planning, and process control are performed for the water distribution, water treatment and transmission systems. The Operations Engineering group also provides similar functions for the wastewater collections systems.

Selection Process

This position was posted internally. Three candidates applied for the position, two of whom were determined to be qualified and were referred for an interview. The Director, Waterworks, the Director, Wastewater and the Special Assistant for Affirmative Action interviewed the candidates. Upon completion of the interviews, Ms. Lisa Bina was determined to be the best candidate for the position, based on her combination of experience, abilities, knowledge, skills and education.

Ms. Bina has over 26 years of wide-ranging experience working in both the water and wastewater industries and she has been employed by MWRA for 21 years. Before joining MWRA, she was a Project Engineer at two consulting firms for four years supporting modeling, design, and construction of water and wastewater system projects. She started at MWRA as a Project Engineer in the CSO program assisting in the design management of CSO projects. She was then promoted to a Project Manager position in the Planning Department where she was responsible for managing

MWRA's water system hydraulic model. In this position, she gained extensive knowledge of the MWRA water system. She held this position for 12 years, and then moved to a Project Manager position in Operations Engineering. She quickly moved up to Construction Coordinator in the Engineering and Construction Department, and then to Senior Program Manager, Process Control and Project Support, which she has held for over six years. Initially this position mainly supported Wastewater Operations, but recently its focus was broadened to also cover Water Operations.

In the Senior Program Manager position, Ms. Bina has gained extensive knowledge of the wastewater facilities and collections systems and has deepened her knowledge of water facilities, pipeline projects and community water systems. She has also gained multi-level management experience. She has managed technical assistance and reviews for capital projects, developed expertise in wet weather management and emergency response, completed assessments of process control and system issues, and performed evaluations to improve system optimization. She is responsible for control strategy development, startup, and testing of new facilities to ensure systems perform as designed and meet MWRA's operational needs. She is well respected by her managers, employees, colleagues, and the communities, and is an excellent candidate for the Deputy Director Waterworks position.

Ms. Bina earned a Bachelor of Science in Civil & Environmental Engineering from Clarkson University. She has her Professional Engineering License in the state of Massachusetts. She holds a Water Distribution Operator Grade 4 full license, a Water Treatment Operator Grade 1 operator in training license, a Wastewater Operator Grade 6-C license and a Collections Grade 4 Certificate.

BUDGET/FISCAL IMPACTS:

There are sufficient funds in the Operations Division's FY21 Current Expense Budget to fund this position.

ATTACHMENTS:

Resume of Lisa Bina
Position Description
Organization Chart

PROFESSIONAL SUMMARY

- Over 25 years of experience in the management and design of water and wastewater engineering projects from conceptual planning through to construction, and operational testing.
- Strong experience and knowledge of the operational needs and requirements of the MWRA water distribution and wastewater collection systems.
- Extensive experience in hydraulic analysis and modeling of water distribution systems for the use of master planning and day-to-day operational needs.

EDUCATION

Clarkson University, BS Civil and Environmental Engineering, 1992

RELEVANT LICENSES

Registered Professional Engineer, Civil, Massachusetts #40698; Water Distribution System Grade 4D #24014; Water Treatment Grade T1 #28686; Wastewater Treatment Plant Operator Grade 6-C #18559; Collection Systems Operator Grade 4.

PROFESSIONAL EXPERIENCE

Massachusetts Water Resources Authority

10/1999 - Present

Senior Program Manager, Operations Engineering/Process Control

11/2015 – present

Responsible for the management of engineering staff performing the diverse responsibilities of the Operations Engineering and Process Control group, including:

- Leading the assessment of process control and system issues for maintenance and construction projects and for day-to-day operations within wastewater facilities and collection systems and water facilities, and distribution and transmission systems. Providing technical support on all operational issues, regulatory and compliance matters.
- Managing the technical assistance and reviews provided by Operations during the planning, design and construction of water and wastewater capital engineering projects. Responsible for control strategy development and startup and testing of new facilities to ensure systems perform as designed and meet MWRA's operational needs.
- Supervising hydraulic modeling efforts to ensure the scheduling of capital improvement projects and operational system reconfigurations maintain a continuous uninterrupted level of service. Providing technical and hydraulic support for the evaluation of system expansion and redundancy for the waterworks system.
- Managing the development of emergency supply plans and providing training for in-house and community member staff. Acting as community liaison for system reconfigurations and construction and maintenance activities.
- Providing a key role during water system emergencies and wet weather events planning and monitoring. Responsible for evaluating system performance during wet weather events and providing post storm evaluations to assistance in system optimization and CSO monitoring.

Construction Coordinator, Engineering & Construction

12/2014 – 11/2015

- Supervised field staff and oversaw construction of the Webster Ave water main project both the original design and redesign. Responsibilities included monitoring budgets, reviewing change orders and schedules, community coordination and ensuring compliance with contract documents.

Project Manager, Operations Engineering

9/2013 – 12/2014

- Served as the Operations liaison during the construction of the Spot Pond Coverage Storage Facility and associated pump station and the Gillis PS Upgrades. Responsibilities included design and construction submittal review, SCADA coordination and control strategy development, O&M and Facility manuals, and start-up and commissioning activities.
- Developed operations plans for water system isolations and system reconfigurations to support maintenance and construction activities. Responsibilities included hydraulic modeling, scheduling and coordination with in-house staff and relevant communities, and monitoring system conditions during implementation.

Project Manager, Planning Department

6/2001 – 9/2013

- Responsible for managing the MWRA’s water system hydraulic model and performing all modeling services to assist in the development of the capital improvement program, design and construction activities and all operational and maintenance activities for the waterworks system.
- Provided on-going technical assistance on hydraulic related issues for planning and engineering staff such as system expansion, alternative energy, water quality monitoring, meter design and operational shutdowns to support on-going construction and maintenance activities.
- Responsible for maintaining the water distribution hydraulic model that entailed maintaining master files, updating modeling network, controls and system demands, and updating modeling software, as needed.

Project Engineer, CSO Program

10/1999–6/2001

- Assisted in the management of the design of the North Dorchester CSO Project and the Cottage Farm and Prison Point CSO Facility Upgrade Projects which included the review of plans and specifications, project scheduling and permitting.
- Assisted in the supervision of the consultant’s progress on projects involving MWRA’s SWMM model. Assisted in model upgrades and performed hydraulic evaluation of the Prison Point CSO system.

Coler & Colantonio Inc., Project Engineer

8/1997 - 10/1999

- Project Engineer for various water and wastewater system expansion projects including the design of a new groundwater pumping station that included corrosion control equipment for pH adjustment using hydrated lime. Provided a key role in the development of hydraulic models for clients which included the building and calibration of the model using various software packages.

Earth Tech/Whitman & Howard Inc., Project Engineer

10/1994 – 8/1997

- Project/Field Engineer for the design and construction of various water system upgrades and sewer improvement projects. Assisted in several water distribution studies that included the development, calibration and analyses of hydraulic models of the water systems.

US Peace Corps - Bangkok, Thailand

Assisted in the design and construction of wastewater collection and treatment systems in local hospitals throughout the country under the Ministry of Public Health.

PROFESSIONAL AFFILIATIONS

American Water Works Association

REFERENCES

Available upon request.

**MWRA
POSITION DESCRIPTION**

POSITION: Deputy Director, Waterworks

DIVISION: Operations

DEPARTMENT: Waterworks

BASIC PURPOSE:

The Deputy Director, Waterworks assists the Director, Waterworks in overseeing the planning, design, construction, operation, and maintenance of all water supply facilities and services including reservoirs, aqueducts, pumping stations, distribution pipelines, water supply, and treatment and transmission operations. In addition, the position is responsible for ensuring that effective engineering, operations planning, and process control is performed for the water distribution, water treatment & transmission, and wastewater collections systems.

SUPERVISION RECEIVED:

Works under the general supervision of the Director, Waterworks.

SUPERVISION EXERCISED:

Exercises direct supervision of Senior Program Manager, Process Control and close supervision of professional, management, engineering and technical staff, and supervises other assigned operations and maintenance staff as needed.

ESSENTIAL DUTIES AND RESPONSIBILITIES:

- Assists in development of operational strategies for the water system. Coordinates the use of supply reservoir, aqueduct flow, power generation, flood control, pumping, distribution, treatment and transmission, water quality and other elements of water supply.
- Provides input for the long-term planning for modernizing, rehabilitating and upgrading the Authority's water and wastewater facilities.
- Provides input into the design and construction of rehabilitating and upgrading the Authority's waterworks and wastewater facilities.
- Provides advice/assistance on all issues (i.e. operations, administrative, safety, security, financial, and planning activities) to the Director, Waterworks and acts in place of Director in his/her absence.

- Directs Operations Engineering staff to work with Engineering and Construction Department staff to ensure that Operations-related design requirements are incorporated into project designs.
- Oversees the coordination of Operations reviews of all internal and external design projects.
- Directs Operations Engineering staff on in-house design of various maintenance and improvement projects and on development and management of various service contracts.
- Directs Operation Engineering staff in implementing and improving instrumentation and automated facility controls and facility/equipment performance and reliability, and reducing energy consumption and maintenance requirements.
- Directs Operation Engineering staff in the optimization of the wastewater system during wet weather.
- Oversees the development, updating and management of process control strategies to ensure clear documentation of manual and automated facility controls and alarming functions.
- Oversees the performance of facility audits to ensure automation, alarms, and emergency safeguards are functioning as designed and documented.
- Works closely with Operations staff on construction liaison, turnover and start-up efforts related to water facilities.
- Manages the development and implementation of written operations plans.
- Provides input to senior Operations staff on planning for various field operations, maintenance and construction projects.
- Participates in departmental and agency-wide emergency response and safety programs.
- Participates in the Emergency Operations Center (EOC) staffing for emergency responses.
- 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, standard operating procedures (SOP) improvements and research and implementation of technology advances.

- Represents Waterworks Department as required with the Authority's Division Directors, Executive Director and Board of Directors.
- Reviews assigned employees' performance per MWRA procedures. Provides feedback and coaching to managers to maximize successful performance.
- 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.

SECONDARY DUTIES:

- Performs related duties as required.

MINIMUM QUALIFICATIONS:

Education and Experience:

- (A) Bachelor's Degree in civil, environmental, or mechanical engineering or a related technical discipline; and
- (B) Understanding of planning, design, operations and maintenance of major water utilities as acquired through ten (10) to twelve (12) years of experience in water operations engineering or related field, of which at least five (5) years must be in the successful management in a waterworks engineering environment; or
- (C) Any equivalent combination of education or experience.

Necessary Knowledge, Skills and Abilities:

- (A) In depth knowledge of engineering principles and practices.
- (B) Excellent working knowledge of operations engineering and process control for a large water supply system and associated systems and equipment, or of a similar complex hydraulic and treatment system operation.
- (C) Excellent computer skills in the Microsoft Office (word processing, spreadsheets and databases) and knowledge of computerized maintenance management systems and procedures.
- (D) Excellent interpersonal, written and verbal communication skills.
- (E) Demonstrated successful experience managing in a union environment with a diverse workforce.

SPECIAL REQUIREMENTS:

- A Registered Professional Engineering License.
- A valid Massachusetts Grade IV Distribution Operator's License or Grade VI Wastewater Treatment Plant Operator's license preferred.
- A valid Massachusetts Class D Motor Vehicle Operators License.
- Must be available for on-call assignments and responding to emergencies on a 24/7 basis using a domicile MWRA vehicle.

TOOLS AND EQUIPMENT USED:

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

PHYSICAL DEMANDS:

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

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

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

WORK ENVIRONMENT:

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

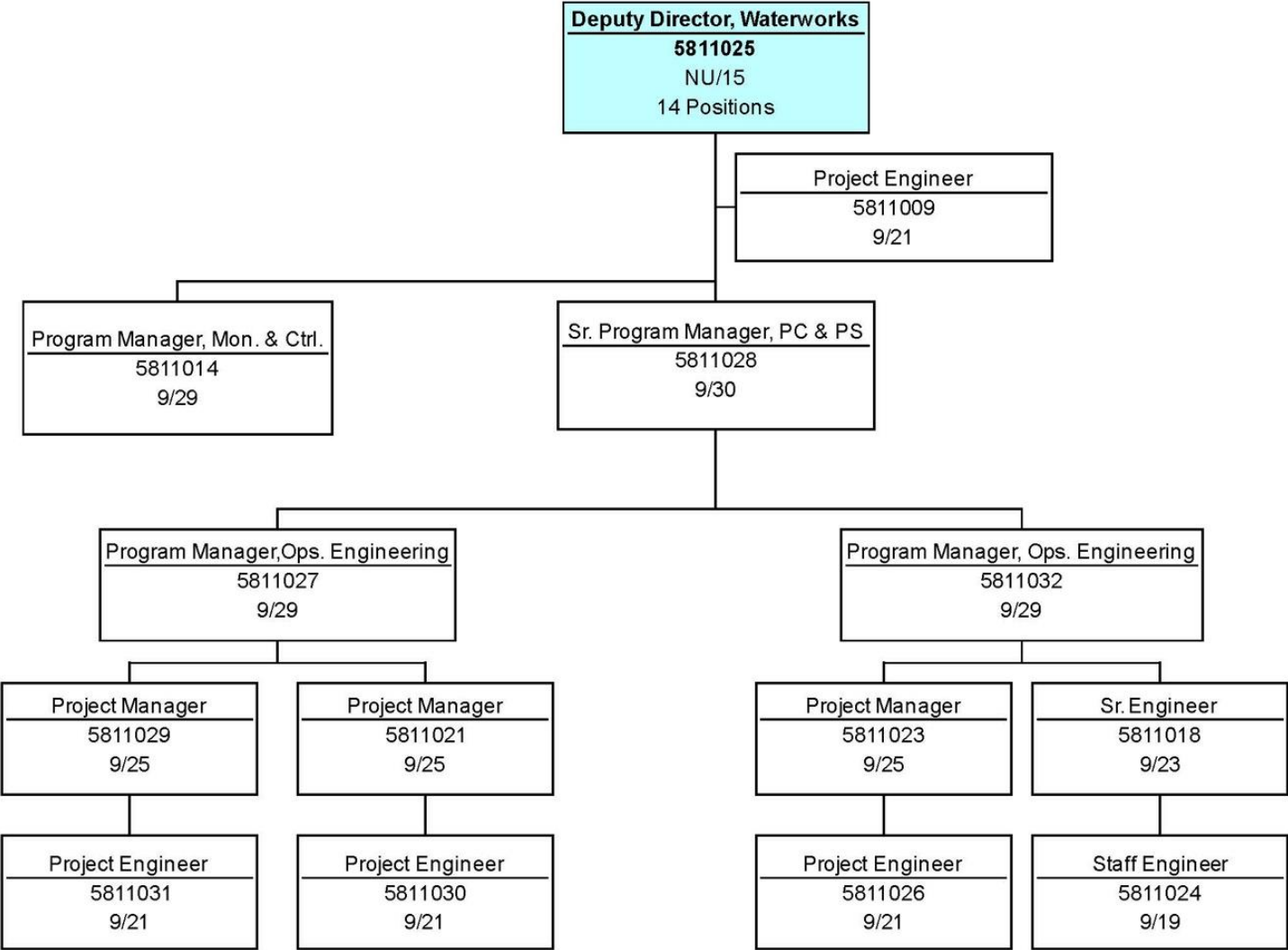
While performing the duties of this job, the employee regularly works in an office environment. The employee occasionally exposed to outdoor weather conditions. The employee is occasionally exposed to fumes and airborne particles.

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

January 2021

Operations Engineering

April, 2021



STAFF SUMMARY


TO: Board of Directors
FROM: Frederick A. Laskey, Executive Director
DATE: April 14, 2021
SUBJECT: Occupational and Medical Services
AllOne Health Resources, Inc.
Contract A628



COMMITTEE: Administration, Finance and Audit

INFORMATION
 VOTE

Andrea Murphy, Director, Human Resources
Preparer/Title



Michele S. Gillen
Director of Administration

RECOMMENDATION:

To approve the recommendation of the Selection Committee to award Contract A628 for Occupational and Medical Services to AllOne Health Resources, Inc., and to authorize the Executive Director on behalf of the Authority to execute said contract in an amount not-to-exceed \$132,625.50 for a three year period, commencing June 1, 2021.

DISCUSSION:

Medical services, such as medical evaluations and pre-employment physicals, are an important component of MWRA's compliance with occupational safety and health standards and Department of Transportation testing regulations for commercial drivers. MWRA also uses medical services to ensure that MWRA employees are fully capable of performing the essential functions of their jobs and to assess health or safety risks to MWRA employees, such as the ability to safely wear personal protective equipment.

This medical services contract will include tests, examinations, and evaluations such as respirator medical evaluations, pre-employment physicals, assessments regarding ability to perform job functions and other special services as required. Drug and alcohol testing is performed under a separate contract.

Procurement Process:

On February 10, 2021, MWRA issued a one-step Request for Qualifications Statement/Proposal (RFQ/P) that was publically advertised in the Boston Herald, Banner Publication, El Mundo, Central Register and through the MWRA Supplier Portal. Five Occupational Health Services companies were notified of this procurement opportunity. The RFQ/P included the following evaluation criteria: Cost – 40 points; Capacity – 20 points; Experience and Past Performance – 15 points; Qualifications and Key Personnel – 20 Points; Technical Approach/Organization and Management Approach – 5 points.

MWRA received a proposal from one firm, AllOne Health Resources, Inc. The Selection Committee reviewed, scored, and ranked the proposal as follows:

FIRM	PROPOSED COST	TOTAL POINTS	*ORDER OF PREFERENCE/ TOTAL SCORE	FINAL RANKING
AllOne Health	\$132,924.50	411	5	1

AllOne was the only bid, therefore ranked first by all Selection Committee members. AllOne's proposal was extremely organized and thoroughly addressed all the components of the RFQ/P. AllOne provided a number of facilities located throughout the state, thereby accommodating MWRA's geographically diverse work force. AllOne also clearly described its on-site services, management approach, scheduling methodologies, and operational approach. Authorized MWRA employees can utilize AllOne's secure website 24/7 to generate reports and schedule appointments, among other things. AllOne provides medical services to over 100 Massachusetts cities and towns (public and private) and the specific references they provided, Clean Harbors and Mass DEP have similar needs as the MWRA. These references provided favorable references and as MWRA's current provider, AllOne has performed well. Further, AllOne provided detailed information and qualifications regarding its key personnel, including resumes. Finally, AllOne provided the MWRA with its technical approach on all five tasks delineated in the RFQ/P.

Based on the above, the Selection Committee recommends the award of this contract to AllOne Health Resources, Inc. in an amount not to exceed \$132,924.50.


BUDGET/FISCAL IMPACT:

The FY21 Current Expense Budget includes funding for this contract. Funding will also be included in the FY22 Proposed Current Expense Budget.

MBE/WBE UTILIZATION:

There are no MBE/WBE participation requirements for this contract.


STAFF SUMMARY

TO: Board of Directors
FROM: Frederick A. Laskey, Executive Director 
DATE: April 14, 2021
SUBJECT: 2020 Annual Update on New Connections to the MWRA System

COMMITTEE: Administration, Finance and Audit

INFORMATION
 VOTE

Beth Card, Director, Environmental and Regulatory Affairs
Katie Ronan, Environmental Analyst
Preparer/Title


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

RECOMMENDATION:

For information only. This 2020 Annual Update on New Connections to the MWRA System has been prepared pursuant to the “Annual Update” requirements of MWRA’s system expansion policies.

DISCUSSION:

MWRA’s system expansion policies require an annual update on the status of any new connections (connection approved within the preceding five years) to MWRA from outside the water and sewer service areas. Calendar year 2002 was the first year that MWRA system expansion policies prescribed update requirements. This 2020 Annual Update addresses post-2002 connections to MWRA. A summary of each connection’s compliance with requirements as stipulated in its water supply or sewer use agreement is provided. For water connections, requirements include compliance with water withdrawal limits and entrance payments due to MWRA. For wastewater connections, requirements address inflow removal, ongoing stipulations regarding management of wet weather flows, compliance with discharge limits, and entrance payments due to MWRA. An update on inquiries from potential applicants for admission and other system expansion considerations is also included.

The MWRA operating policies listed below govern system expansion. A more detailed summary of each policy is provided in Attachment A.

- OP.04, Sewer Connections Serving Property Partially Located in a Non-MWRA Community (the “Sewer Straddle” policy);
- OP.05, Emergency Water Supply Withdrawals;
- OP.09, Water Connections Serving Property Partially Located in a Non-MWRA community (the “Water Straddle” policy);
- OP.10, Admission of New Community to MWRA Water System; and
- OP.11, Admission of New Community to MWRA Sewer System and Other Requests for Sewer Service to Locations Outside MWRA Sewer Service Area.

Summary of Approved Connections to the MWRA System

Water

In 2020, the Executive Office of Energy and Environmental Affairs and its agencies, through the Massachusetts Drought Management Task Force, continued to assess hydrologic conditions throughout the Commonwealth. According to monthly DCR Hydrologic Conditions Reports, low precipitation began abruptly in May and was followed quickly by low groundwater and streamflow conditions. In June, a *Level 2 – Significant Drought* was declared in the Western, Connecticut River Valley, Central and Northeastern regions of the state. Especially alarming was the sudden and rapid deterioration of conditions, which led to use of the term “Flash Drought” to describe the combination of lack of precipitation and the sudden onset of high temperatures. In September, a *Level 2 – Significant Drought* was declared in all seven regions of the Commonwealth. Dry conditions persisted through the early fall, though recovery began towards the end of the year. All regions improved to a *Level 1 – Mild Drought* in December and returned to normal in January 2021. Despite drought conditions, Quabbin Reservoir was well within the normal operating band throughout the year and spilled a total 4.49 billion gallons over 73 days. In addition to following water quantity issues related to drought, MWRA continues to see an uptick in inquiries as a result of communities finding elevated PFAS in their water supplies.

In early June, Lynnfield Center Water District (LCWD) requested emergency withdrawals pursuant to OP.05 *Emergency Water Supply Withdrawals* for up to six months and was authorized by the Board of Director to withdraw up to 0.144 mgd from the MWRA water system. LCWD was experiencing increased demand as a result of impacts from COVID-19 stay at home advisories, which was compounded by restricted use of local sources due to water quality concerns. In the end, LCWD did not utilize the approved emergency connection. LCWD is not presently a member of the MWRA water system, though it can connect via temporary bypass to the Lynnfield Water District, which is a partially supplied MWRA community. As discussed in more detail later in this report, LCWD has inquired about admission to the MWRA water system and is evaluating options.

Burlington requested emergency withdrawals from MWRA on three occasions in 2020 due to operational issues and necessary maintenance within the local system resulting in inability to meet local demand. In July and August respectively, Burlington was authorized pursuant to OP.05 by MWRA’s Chief Operating Officer for short-term withdrawal (less than thirty days). In October, Burlington was authorized pursuant to OP.05 by the MWRA Board of Directors for a long-term emergency withdrawal of up to six months, for up to 0.7 mgd. In total, during 2020 Burlington withdrew 5,528,200 gallons from the MWRA water system pursuant to OP.05.

In 2020, MWRA received two formal applications under OP.10 *Admission of New Community to MWRA Water System* from the towns of Burlington and Ashland. Both communities were approved for admission to MWRA by the Board of Directors on December 16, 2020. Burlington was approved under MEPA and the state Water Resources Commission to withdraw up to 6.5 mgd from MWRA; however, presently only intends to withdraw an average of up to 0.886 mgd via a connection to the town of Lexington water system. The Town is in the process of designing and constructing a direct connection to the MWRA water system, which will allow the community to withdraw up to 6.5 mgd. Ashland was approved under MEPA and the state Water Resources Commission to withdraw up to 32.8 million gallons annually from MWRA via a connection to the town of Southborough water system. Ashland intends to utilize the connection primarily as supplemental water supply between the months of October and January, when use of local sources is restricted. Water Supply Contracts for both communities will be executed in 2021 and associated

entrance fees will be collected pursuant to MWRA’s 25-year, interest fee payment plan. MWRA expects that as communities across the Commonwealth are working to address concerns related to PFAS levels, additional inquiries about admission may be received in coming months.

Since 2002, Stoughton, Reading, the Dedham-Westwood Water District, Wilmington, Ashland and Burlington have become MWRA water supplied communities. (Bedford was admitted into the MWRA system prior to 2002, before firm water withdrawal limits were established for new communities.) There have also been two “straddle connections” since 2002: Avalon in Peabody/Danvers (now called 14 North), and the YMCA in Marblehead/Salem. The connections are shown on the map in Figure 1 and information pertaining to these connections is provided in Table 1.

Figure 1: New Water Connections Since 2002 and Communities Pursuing Admission

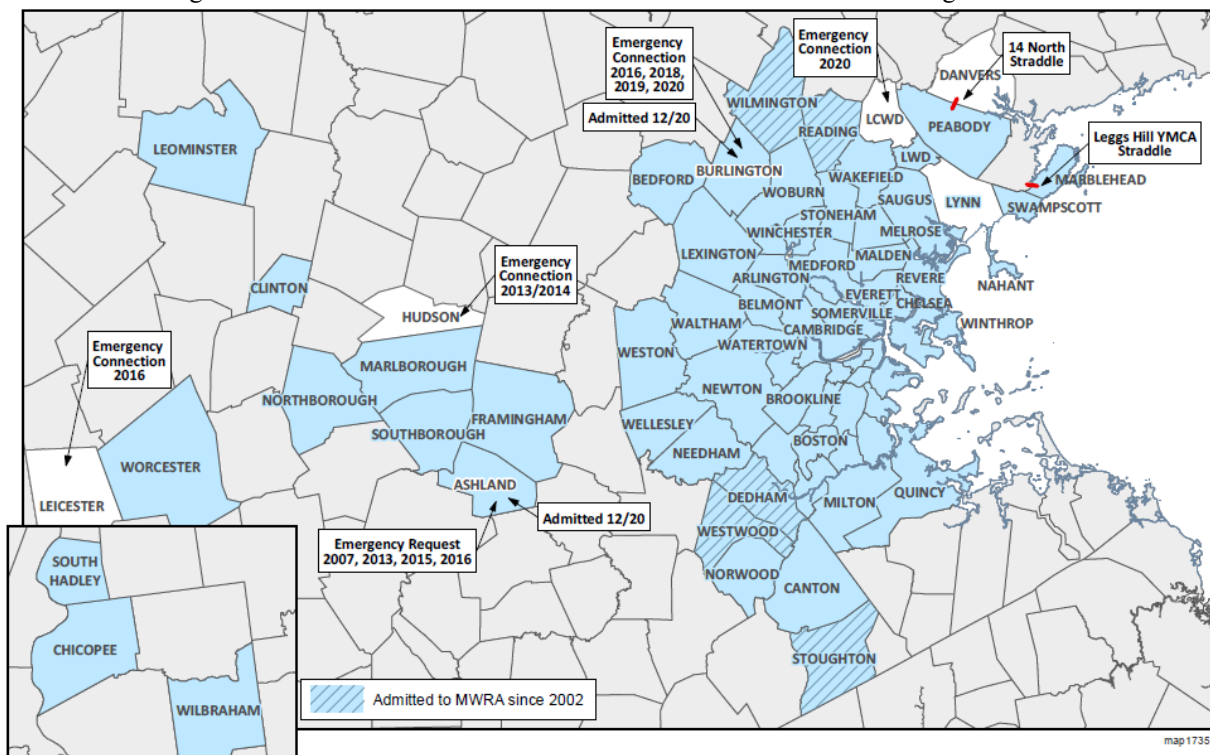


Table 1 - Approved Connections to MWRA Water System Since 2002					
Applicant	Applicable MWRA Policy	Approval Date or Emergency Period	Entrance Fee or Payment of Charges Under the Emergency Policy	MWRA Approved withdrawal	2020 MWRA Withdrawal
Burlington (OP.10 admission approved 12/20)	OP.05 Emergency	9/30/16- 3/29/17 1/18 7/18 12/18 3/19 5/19 10/19 7/20 8/20 10/20	Prior to 2020, MWRA has received a total of \$263,388. For 2020, MWRA received a total of \$41,565.83 prior to admission.	0.7 mgd	5,528,200 mg prior to admission

Table 1 - Approved Connections to MWRA Water System Since 2002					
Applicant	Applicable MWRA Policy	Approval Date or Emergency Period	Entrance Fee or Payment of Charges Under the Emergency Policy	MWRA Approved withdrawal	2020 MWRA Withdrawal
Cherry Valley Rochdale Water District	OP.05 Emergency	10/27/16- 4/6/17	0	N/A	0
Ashland (OP.10 admission approved 12/20)	OP.05 Emergency	12/07-5/07 12/13-6/14 12/15-6/16 8/22/16- 2/22/17	For 4 six-month emergency withdrawal periods, MWRA received \$14,078.	.75 mgd	0
Hudson	OP.05 Emergency	6/13 12/13 6/14	For 3 six-month emergency withdrawal periods, MWRA received a total of \$1,033,787.	N/A	0
Dedham/ Westwood W.D (partially supplied)	OP.10, New	12/05 12/14 10/18	Entrance fee \$548,748 for first .1 mgd paid in full. Fee of \$566,727 for additional 0.1 mgd paid in full.	0.2 mgd 150 mg (1 mgd for 5 months)	.386mgd*
Wilmington (partially supplied)	OP.10, New	5/09 10/20	Net Entrance Fee of \$2,809,320 w/ 20-year payment schedule. On-time payments.	0.6 mgd 219 mg	.686mgd *
Reading	OP.10, New	11/05 10/07	\$3,285,242 (first 0.6 mgd) \$7,799,606 (for additional 1.5 mgd). Paid in full	2.1 mgd	1.79mgd
YMCA Salem/Marblehead	OP.09, Straddle	11/06	\$70,823 paid in full	0.0127 mgd	0.004164mg d
14 North Danvers/Peabody	OP.09 Straddle	05/03	\$64,063 paid in full	0.012 mgd	0.006107 mgd
Stoughton (partially supplied)	OP.10, New	6/02	\$5,657,117 paid in full	1.15 mgd	.104mgd

* Approved for temporary increase beyond Water Supply Agreement withdrawal limit.

The highlights of Table 1 include:

- In May 2020, Dedham-Westwood (DWWD) completed work on its treatment plant. DWWD had been approved in 2018 to temporarily increase withdrawals by 150 million gallons (one mgd for five months); however, the work was delayed and began in 2019. The existing MWRA Water Supply Agreement has a provision for a temporary increase in volumes beyond two MGD and 73 million gallons on an annual basis without a written amendment to that agreement. MWRA expects water usage to return back to normal and within approved limits, now that this work is complete.
- In October 2020, Wilmington formally requested approval from the MWRA and the MWRA Advisory Board to temporarily increase withdrawal volumes beyond the Town's approved 219 mg limit. Wilmington noted that declining groundwater levels had caused a substantial drop in the production capabilities of the municipal groundwater wells. MWRA

approved the temporary increase in withdrawals on October 7, 2020, noting that emergency conditions were present as evident from the Secretary of Energy and Environmental Affairs September 2, 2020 declaration of significant drought. The existing MWRA Water Supply Agreement has a provision for temporary increase without a written amendment to that agreement.

- All other water supply withdrawals are below their MWRA Water Supply Agreement limits.
- For permanent connections made prior to 2020, all entrance fees have been paid pursuant to agreed-upon schedules of payments included in MWRA Water Supply Agreements.
- At Burlington's request on two occasions in the summer of 2020, MWRA authorized the temporary use of an emergency connection (up to thirty days) as a result of maintenance and mechanical issues within the local system. Also at Burlington's request, on October 14, 2020 pursuant to OP.05, the MWRA's Board of Directors voted to authorize long-term use of the emergency connection (up to six months) to perform necessary maintenance at the local Mill Pond Water Treatment Plant; however, the six-month agreement was unnecessary. On December 16, 2020, the Board of the Directors approved Burlington for admission into the MWRA water system.
- The YMCA, located on the Salam/Marblehead municipal boundary, experienced a decrease in water usage in 2020 from 2019. Communications with the property manager indicate that this decrease was likely related to impacts of COVID-19, as the facility was closed for a portion of 2020 and subsequently operated at a reduced capacity for the remainder of the year.

Sewer

In 2020, the MWRA Board of Directors voted to approve one request under OP.04, Sewer Connections Serving Property Partially Located in a Non-MWRA Community (the "Sewer Straddle" policy), for The Rivers School, located on the municipal boundary of Weston and Natick with property and buildings in both communities. There were no other new formal applications for admission under OP.11 or OP.4, the "Sewer Straddle" policy; however, several inquiries about admission were received.

Figure 2 shows and Table 2 summarizes connections to the MWRA sewer system since 2002 when annual reporting requirements were established, including the recently approved Rivers School connection.

Figure 2: New or Increased Volume Sewer Connections Since 2002

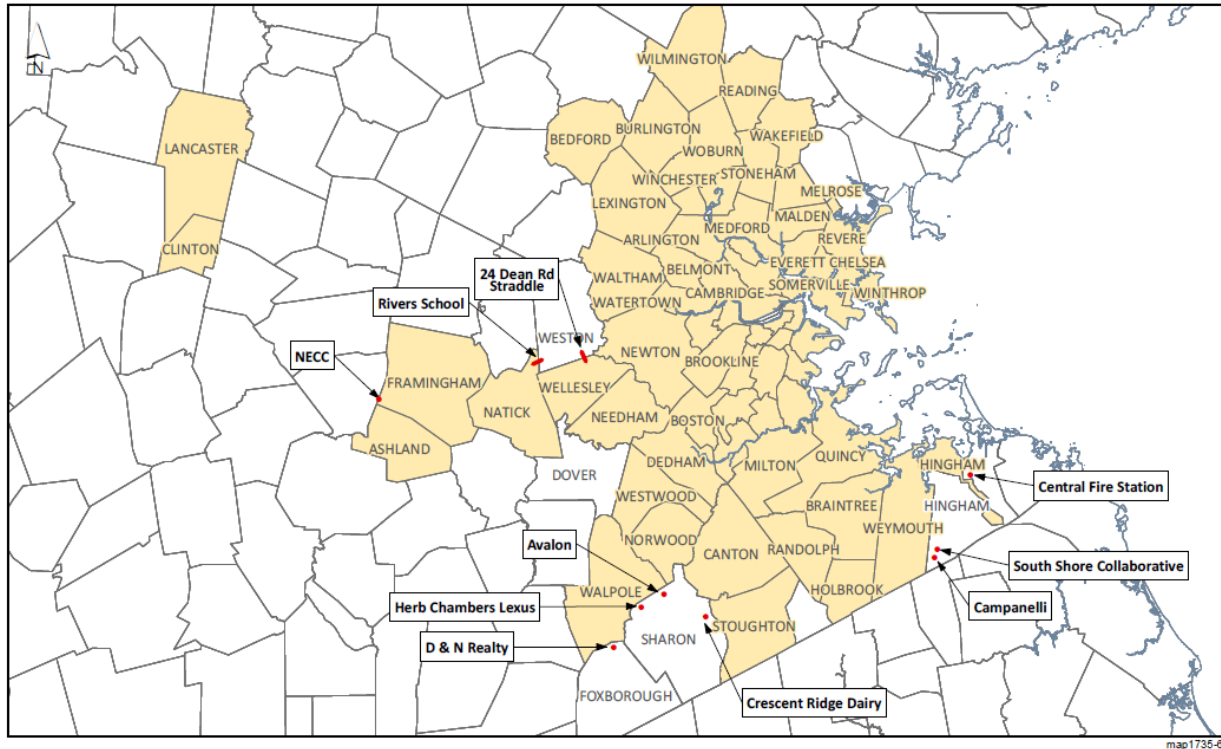


Table 2 - Approved Connections to MWRA Sewer System Since 2002

<i>Applicant</i>	<i>MWRA Policy</i>	<i>Approval Date</i>	<i>Entrance Fee Payment</i>	<i>Status of Inflow Removal/Other Contract Requirements</i>	<i>MWRA Approved discharge</i>	<i>Estimated Discharge to MWRA in 2020*</i>
New England Center for Children, Southborough	OP.11	7/15	\$24,228 Paid in full	Inflow removal completed.	12,500 gpd	4,982 gpd
FoxRock Realty South Shore Collaborative, Hingham	OP.11	4/12	\$9,133 + \$12,750 paid in full	Inflow removal completed.	5,536 gpd	1,220 gpd
24 Dean Road, Weston/Wellesley	OP.04	3/11	\$18,033 paid in full	Inflow removal completed.	575 gpd	386 gpd
D&N Realty, Foxborough Funway	OP.11	6/07	\$168,391 paid in full	Inflow removal completed.	13,000 gpd (average) 22,750 gpd (max day)	2,472 gpd
Avalon Bay, Sharon	OP.11	6/07	\$105,586 paid in full	Inflow removal completed.	16,120 gpd	17,071 gpd
Herb Chambers Lexus, Sharon	OP.11	5/07	\$40,750 paid in full.	Inflow removal completed.	6,400 gpd (average) 10,500 gpd (max)	4,208 gpd**

Table 2 - Approved Connections to MWRA Sewer System Since 2002						
<i>Applicant</i>	<i>MWRA Policy</i>	<i>Approval Date</i>	<i>Entrance Fee Payment</i>	<i>Status of Inflow Removal/Other Contract Requirements</i>	<i>MWRA Approved discharge</i>	<i>Estimated Discharge to MWRA in 2020*</i>
Hingham Fire Station, Hingham	OP.11	4/07	\$8,429 paid in full	Inflow removal completed.	782 gpd	209 gpd
Campanelli, Hingham (now Gill Research Drive, LLC)	OP.11	2/04	\$11,162, paid in full	Inflow removal completed.	2,475 gpd	No reporting requirement in contract
Crescent Ridge Dairy, Sharon	OP.11	5/19	\$33,642 paid in full	Payment of \$200,000 made to Stoughton to complete inflow removal.	10,000 gpd	0
Rivers School, Weston	OP.04	6/20	\$42,086 paid in full	Payment of \$141,600 to Natick to complete inflow removal.	3,000 gpd (average) 12,000 gpd (max)	2,285 gpd
* Wastewater discharges are estimated based on water meter readings.						
**Water consumption figures are adjusted downward by 5% to account for a certain percentage of water that is used by the facility and not returned as wastewater (such as landscaping, water consumed).						

The key findings of Table 2 include:

- Many entities saw a decrease in estimated discharges for 2020. Communications with some property managers indicate that this may be related to impacts of COVID-19. Both the New England Center for Children and the South Shore Collaborative are educational facilities and were either closed or operating at a reduced capacity during much of 2020. D&N Reality confirmed that operation of the function hall and restaurant at Funway in Foxborough was also heavily impacted by COVID-19.
- Avalon Bay, a residential community in Sharon, was over its approved discharge limit in 2020 and up from 2019. The increase in estimated discharges may be due to impacts of COVID-19 and increased teleworking. MWRA will coordinate with Avalon if the issue persists.
- Herb Chambers Lexus-Sharon was within its approved discharge limit after exceeding the limit in 2019.
- All other connections reported that wastewater discharges in 2019 were below their approved agreement limits and entities reported compliance with obligations related to sewer system operations.
- Crescent Ridge Dairy (CRD) was approved by the Board of Directors in 2019 for admission to the MWRA water system pursuant to OP.11 to discharge up to 10,000 gpd to the Stoughton collection system. CRD is expected to begin discharging in 2021 and has committed to pay \$200,000 to Stoughton to conduct work which will result in the removal of 40,000 gpd of inflow from the local collection system. This work has been delayed due to COVID-19 because it requires access to residential sump pumps and will commence as soon as feasible.

- In 2020, Rivers School (Rivers) completed the application process pursuant to OP.04 and on June 24, 2020 the MWRA Board of Directors voted to approve admission to the MWRA wastewater system. Rivers connected to the Natick wastewater system and began discharging on September 1, 2020. Through November 1, 2020, Rivers discharged a total of 210,188 gallons. This is an average of 2,285 gpd and is within the contract limit of 3,000 gpd. Rivers has committed to pay \$141,600 to Natick, which will be used by the Town to repair 96 manholes and will result in the removal of 48,000 gpd of inflow. Natick has executed a contract and is scheduled to perform the inflow removal work in spring of 2021, pursuant to the agreement.

Potential Future Connections and Expansions

In 2020, several communities and other potential applicants inquired about the process and feasibility of connection to the MWRA or expanding existing service volumes.

Communities

Avon: In March 2020, Avon reached out to MWRA staff regarding the possible need for an emergency connection in anticipation of staffing impacts related to COVID-19. MWRA staff reviewed the requirements of OP.05 and logistical considerations of any emergency connection with the community; however, an emergency connection was not needed in 2020. MWRA staff also coordinated with the Town's consultants throughout the year to answer questions related to an interconnection evaluation. MWRA staff provided information regarding the requirements of both emergency connections pursuant to OP.05 and admission to the water system pursuant to OP.10.

Hudson: The Town of Hudson has been evaluating options to remedy local supply issues related to PFAS contamination. In March 2020, the Town reached out to MWRA requesting information about connecting to the MWRA water system. MWRA staff provided OP.10 and other relevant information. In early January of 2021, MWRA staff met with the Town to review the admission process and requirements of OP.10, as well as associated costs and logistic considerations of any potential connection.

Lincoln: In June 2020, a Lincoln Water Commissioner reached out to MWRA staff requesting information about connecting to the MWRA water system, possibly via the town of Lexington. MWRA provided the Commissioner with OP.10 and other relevant information including information on potential costs of connection. In December, MWRA staff met virtually with the Town's consultant to review the admission process and requirements of OP.10, as well as logistic considerations of any potential connection.

Lynnfield Center Water District (LCWD): LCWD has identified connecting to the MWRA water system via Wakefield as the preferred alternative to remedy local contamination issues and increased difficulty meeting demand. Together with the Town of Wakefield, LCWD is evaluating construction of a new water main that would allow LCWD to connect to the Wakefield water system. This scenario would also remedy water quality issues (due to two dead end pipes) in the Wakefield system. As previously discussed, LCWD obtained approval for a long term (up to six month) emergency connection to MWRA via Lynnfield Water District (LWD) in 2020. MWRA staff will continue to coordinate with LCWD and Wakefield to advise on the admission process and requirements of OP.10.

Medfield: The Town of Medfield is in the process of designing a new water treatment plant and evaluating alternatives. In December, MWRA met with the Town and its consultants to discuss the admission process and requirements OP.10, as well as logistic considerations of any potential connection.

Natick: The Town is experiencing water quality issues related to PFAS and has recently inquired about the possibility of using an emergency connection to the MWRA water system. MWRA staff along with the Town and MassDEP have been reviewing water quality compatibility data and infrastructure options for connections.

Ware: In December, MWRA received an inquiry from consultants for the Town of Ware requesting information on the feasibility and requirements of connecting to MWRA's Chicopee Valley Aqueduct (CVA) water system. The Town is currently in the design process of a new water treatment plant. However, the estimated cost of the plant has increased significantly, prompting the preliminary evaluation of other alternatives to meet local demand. MWRA staff discussed the admission process and requirement of OP.10 as well as logistic considerations of a connection to the CVA system.

Wayland: Wayland has been exploring full admission to the MWRA under OP.10. Over the last 12 to 18 months, MWRA has provided detailed information about the benefits of joining and potential connection locations. More recently, Wayland has inquired about the logistics of a potential emergency connection to the MWRA water system. The community is experiencing water quality issues related to PFAS.

Non-Communities

Sherborn Potential Development: Pulte Homes of New England, LLC has been in contact with MWRA regarding a proposed residential development in Sherborn to be located near the Natick and Framingham borders. The developer is interested in options to connect to the sewer in Natick and to purchase water through Framingham. Initial conversations allowed Pulte Homes to understand that while a sewer connection is likely feasible, a water connection is not because it is the development, as opposed to the municipality or a water district, which is seeking to purchase water. In 2019, the developer expressed intentions to create a water district to make connection to MWRA possible. In 2020, MWRA met with Pulte to discuss requirements of admission to MWRA pursuant to both OP.10 and OP.11, as well as costs and logistical considerations of any potential connection. MWRA staff also participated in an interagency coordination meeting regarding the proposed development and potential concerns related to creation of a water district with representatives from the Massachusetts Environmental Policy Act, the Water Resources Commission and MassDEP.

ATTACHMENT:

Attachment A: Policies for Admission to the MWRA


ATTACHMENT A

Policies for Admission to the MWRA

- **OP.04, Sewer Connections Serving Property Partially Located in a Non-MWRA Community.** This policy applies to persons seeking sewer services for buildings/structures that are located partially within an MWRA sewer community and partially outside an MWRA sewer community (the actual structures, not just the parcel of land on which the structure is located, must straddle the municipal boundary). It is also known as the “Sewer Straddle” policy.
- **OP.05. Emergency Water Supply Withdrawals.** This policy applies to communities outside MWRA’s Water Service Area that are seeking MWRA water on an emergency basis. MWRA may approve emergency withdrawals for no more than six months at a time, and typically, the emergency withdrawal period coincides with a DEP Declaration of Emergency for the Community.
- **OP.09, Water Connections Serving Property Partially Located in a Non-MWRA community.** This policy applies to persons seeking to obtain water for a location, building, or structure located on a parcel of land, under single ownership, and which is subject to an integrated plan for use of development that is located partially within an MWRA water community and partially outside an MWRA water community. It is also known as the “Water Straddle” policy.
- **OP.10, Admission of New Community to MWRA Water System.** This policy applies to communities seeking admission to the MWRA water system. OP.10 also applies to any local body, institution, agency or facility of the Commonwealth or federal government seeking MWRA water for a location outside MWRA’s Water Service area. Connections and withdrawals by private entities outside the water service area are prohibited, except for those that are eligible under either the water straddle policy (OP.9), or that are located contiguous to, or in the vicinity of local community-owned water supply pipelines that extend from the MWRA’s Chicopee Valley Aqueduct (CVA) and that receive the appropriate approvals from the CVA, host communities and applicable regulatory bodies.
- **OP.11, Admission of New Community to MWRA Sewer System and Other Requests for Sewer Service to Locations Outside MWRA Sewer Service Area.** This policy applies to communities seeking admission to the MWRA sewer system and to all parties seeking sewer service for locations outside the MWRA service area that are not eligible under the Sewer Straddle Policy.


MWRA must approve all extension of service to entities outside the service area pursuant to the applicable policy noted above, with the exception of connections to local community-owned water supply pipelines that extend from the Chicopee Valley Aqueduct. This is the case even when an entity outside the service area is not directly connected to the MWRA, but instead to a community local system that is part of the MWRA service area.

STAFF SUMMARY

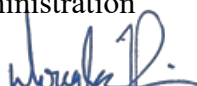
TO: Board of Directors
FROM: Frederick A. Laskey, Executive Director 
DATE: April 14, 2021
SUBJECT: Delegated Authority Report – March 2021

COMMITTEE: Administration, Finance & Audit

INFORMATION
 VOTE


Michele S. Gillen
Director of Administration

Linda Grasso, Admin. Systems Coordinator
Barbara Aylward, Administrator A & F
Preparer/Title


Douglas J. Rice
Director of Procurement

RECOMMENDATION:

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

This report is broken down into three sections:

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

DISCUSSION:

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

Construction Contract Awards:

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

Change Orders:

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

Professional Service Contract Awards:

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

Non-Professional Service Contract Awards:

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

Purchase or Lease of Equipment, Materials or Supplies:

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

Amendments:

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

Amendments to the Position Control Register:

Amendments which result only in a change in cost center.

BUDGET/FISCAL IMPACT:

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


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

NO.	DATE OF AWARD	TITLE AND EXPLANATION	CONTRACT	AMEND/CO	COMPANY	FINANCIAL IMPACT
C-1.	03/18/21	WESTERN OPERATIONS FACILITIES GROUNDSKEEPING SERVICES AWARD OF A CONTRACT TO THE LOWEST RESPONSIVE BIDDER FOR WESTERN OPERATIONS FACILITIES GROUNDSKEEPING SERVICES FOR A TERM OF 1,095 CALENDAR DAYS.	OP-425	AWARD	JAM CORPORATION	\$164,320.00
C-2.	03/19/21	DEER ISLAND TREATMENT PLANT GAS PROTECTION SYSTEM REPLACEMENT, PHASE I FURNISH AND INSTALL VALVE STATUS INDICATORS FOR ALL SCRUBBER AND CARBON ADSORBER VALVES, WIRED INPUTS AND PERFORM RELATED SOFTWARE CHANGES.	7167	1	J.F. WHITE CONTRACTING COMPANY	\$46,956.85
C-3.	03/31/21	THERMAL AND HYDRO POWER PLANT MAINTENANCE DEER ISLAND TREATMENT PLANT FINAL BALANCING CHANGE ORDER TO DECREASE THE FOLLOWING BID ITEMS TO REFLECT ACTUAL QUANTITIES USED: DELETE SCHEDULED MAINTENANCE DEEMED NOT REQUIRED AT COSGROVE AND DEER ISLAND, NON-EMERGENCY AND EMERGENCY MAINTENANCE AND REPAIR SERVICES, REPLACEMENT PARTS, AUTHORIZED FACTORY SERVICE REPRESENTATIVES AND FIRE DEPARTMENT SERVICES.	S578	1	IPC LYDON, LLC	(\$517,924.10)
C-4.	03/31/21	ELEVATOR INSPECTION, MAINTENANCE AND REPAIR SERVICE DEER ISLAND TREATMENT PLANT FINAL BALANCING CHANGE ORDER TO DECREASE THE FOLLOWING BID ITEMS TO REFLECT ACTUAL QUANTITIES USED: NON-EMERGENCY AND EMERGENCY REPAIR SERVICES AND REPLACEMENT PARTS.	S571	1	UNITED ELEVATOR CO., INC.	(\$275,949.81)
C-5.	03/31/21	HYDRAULIC EQUIPMENT SERVICES FINAL BALANCING CHANGE ORDER TO DECREASE THE FOLLOWING BID ITEMS TO REFLECT ACTUAL QUANTITIES USED: PREVENTIVE MAINTENANCE SERVICES AND NON-EMERGENCY ON-CALL MAINTENANCE SERVICE, EMERGENCY ON-CALL MAINTENANCE SERVICE, REPLACEMENT PARTS AND RENTAL EQUIPMENT.	OP-368	3	R. ZOPPO CORP.	(\$71,545.98)
C-6.	03/31/21	CRANE MAINTENANCE SERVICE AWARD OF A CONTRACT TO THE LOWEST RESPONSIVE BIDDER FOR CRANE MAINTENANCE SERVICE FOR 162 CRANES, AGENCY-WIDE, FOR A TERM OF 730 CALENDAR DAYS.	OP-426	AWARD	SAFEWAY OVERHEAD CRANE SERVICE, INC.	\$189,788.00

PURCHASING DELEGATED AUTHORITY ITEMS MARCH 1 - 31, 2021

NO.	DATE OF AWARD	TITLE AND EXPLANATION	CONTRACT	AMENDMENT	COMPANY	FINANCIAL IMPACT
P-1.	03/05/21	WHOLE EFFLUENT TOXICITY TESTING Award of a 3-year purchase order to the lowest responsive bidder for whole effluent toxicity testing of the MWRA's National Pollutant Discharge Elimination System samples for the period March 3, 2021 through March 2, 2024.	WRA-4933		Enthalpy Analytical, LLC	\$89,250
P-2	03/09/21	PURCHASE OF TWO SIX-INCH AND TWO EIGHT-INCH PLUG VALVES Award of a purchase order to the lowest responsive bidder for two six-inch and two eight-inch plug valves and actuators for the Deer Island Treatment Plant.	WRA-4929Q		Aquila and Neptun Enterprises, LLC	\$30,402.10
P-3	03/09/21	PURCHASE OF ONE AUTOMATED SOLID PHASE EXTRACTION SYSTEM Award of a purchase order to the lowest responsive bidder for one automated solid phase extraction system used to regulate per- and polyfluoroalkyl substances (PFAS) in MWRA drinking water.	WRA-4923		PromoChrom Technologies, Ltd	\$82,700.00
P-4	03/12/21	RENEWAL AND CO-TERMINATION OF CITRIX WORKSPACE SUTIE AND VIRTUAL APPLICATIONS & DESKTOP LICENSE SUBSCRIPTIONS Award of a one-year purchase order under State Contract #ITC47 to the lowest responsive bidder for the renewal and co-termination of Citrix Workspace Suite and Virtual Applications & Desktop license subscriptions for the service period of March 18, 2021 through April 6, 2022.	WRA-4944		CDW-Government, LLC	\$36,600.00
P-5	03/12/21	PURCHASE OF ONE TOTAL ORGANIC CARBON COMBUSTION ANALYZER Award of a purchase order to the lowest responsive bidder for one total organic carbon combustion analyzer used as a general indicator of overall levels of organic compounds present in water.	WRA-4934Q		O.I. Corporation	\$40,124.55
P-6	03/12/21	PURCHASE OF ONLINE WATER/WASTEWATER TREATMENT OPERATOR TRAINING Award of a sole source purchase order for online Water/Wastewater Treatment Operator Training for the time period March 1, 2021 through December 31, 2021.			NEIWPC	\$50,000.00
P-7	03/12/21	PURCHASE OF ONE VIDEO INSPECTION UNIT AND ONE 90 DEGREE CAMERA Award of a sole source purchase order for one video inspection unit and one 90 degree camera to inspect MWRA's wastewater pipelines for leaks, infiltration and inflow, obstructions, pipe failures and collapses.			CUES, Inc.	\$53,280.09
P-8	03/12/21	PURCHASE OF 25 SIX-INCH GLASS-LINED PLUG VALVES Award of a purchase order to the lowest responsive bidder for 25 six-inch glass-lined plug valves for the replacement to those currently in operation at the Deer Island Treatment Plant.	WRA-4926		Aquila and Neptun Enterprises, LLC	\$54,625.00
P-9	03/18/21	PURCHASE OF 25 NORDIC DISC FILTER CARTRIDGES Award of a sole source purchase order for 25 disc filter cartridges for the Clinton Wastewater Treatment Plant.			WesTech Engineering, Inc.	\$26,650.00
P-10	3/18/2021	PURCHASE OF ONE 48-INCH BY 12-INCH DUCTILE IRON TEE Award of a purchase order to the lowest responsive bidder for one 48-inch by 12-inch ductile iron tee used in the event of a pipe failure, these pipe fittings are used to repair sections of pipelines by in-house staff.	WRA-4927Q		John Hoadley and Sons, Inc	\$29,450.00
P-11	03/18/21	REPLACEMENT OF ACTIVATED CARBON Award of a purchase order to the lowest responsive bidder for the replacement of activated carbon at the Chelsea Screen House.	WRA-4936Q		Carbon Activated Corporation	\$31,500.00
P-12	03/18/21	PURCHASE OF 60 REPLACEMENT LAMPS FOR THE ULTRAVIOLET REACTORS Award of a sole source purchase order for 60 replacement lamps for the ultraviolet reactors at the John J. Carroll Water Treatment Plant.			Calgon Carbon Corporation	\$48,532.80
P-13	03/18/21	PURCHASE OF TWO STRAINER SUB-ASSEMBLIES Award of a sole source purchase order for two strainer sub-assemblies for the Deer Island Treatment Plant.			S.P. Kinney Engineers, Inc.	\$274,725.00

STAFF SUMMARY

TO: Board of Directors
FROM: Frederick A. Laskey, Executive Director 
DATE: April 14, 2021
SUBJECT: FY21 Financial Update and Summary Through March 2021

COMMITTEE: Administration, Finance & Audit

INFORMATION
 VOTE

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


Thomas J. Durkin
Director, Finance

RECOMMENDATION:

For information only. This staff summary provides financial results and variance highlights for Fiscal Year 2021 through March 2021, comparing actual spending to the budget.

DISCUSSION:

MWRA is continuing the practice of setting aside favorable Capital Finance variances into the Defeasance Account with the intention of using these funds to defease debt and provide rate relief in future years. Targeted defeasances are a critical component of the Authority's multi-year rate management strategy. As such, in March the year-to-date debt related savings of \$11.3 million was transferred to the Defeasance Account. This is the result of the lower than budgeted variable interest rates, timing of the SRF transaction, and lower than anticipated Senior Debt.

The total Year-to-Date variance for the FY21 CEB is \$8.8 million, due to lower direct expenses of \$8.9 million, higher indirect expenses of \$0.6 million; and higher revenue of \$0.5 million. The year-end favorable variance is projected at \$27.0 million, of which \$18.6 million is related to debt service. Beyond debt service savings, staff project a surplus of approximately \$8.4 million at year-end of which \$9.4 million would be from lower direct expenses, offset by higher indirect expenses of \$1.0 million. Please note, these amounts may not add due to rounding.

As the year progresses and more actual spending information becomes available, staff will continue to refine the year-end projections and update the Board accordingly.

FY21 Current Expense Budget

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

- Lower Direct Expenses of \$8.9 million or 4.9% under budget. Spending was lower for Wages & Salaries, Utilities, Other Services, Professional Services, Maintenance, Overtime, Worker's Compensation, Chemicals, Fringe Benefits, and Training and Meetings. Spending was higher than budget for Other Materials.

Higher Indirect Expenses of \$0.6 million or 1.5% over budget due primarily to the updated HEEC capacity and service charge, partially offset by lower Watershed Reimbursements and Pension expense.

**FY21 Budget and FY21 Actual Variance by Expenditure Category
(in millions)**

	FY21 Budget YTD	FY21 Actual YTD	\$ Variance	% Variance
Direct Expenses	\$183.2	\$174.2	-\$8.9	-4.9%
Indirect Expenses	\$43.2	\$43.9	\$0.6	1.5%
Capital Financing	\$336.6	\$336.6	\$0.0	0.0%
Total	\$563.0	\$554.7	-\$8.3	-1.5%

Totals may not add due to rounding

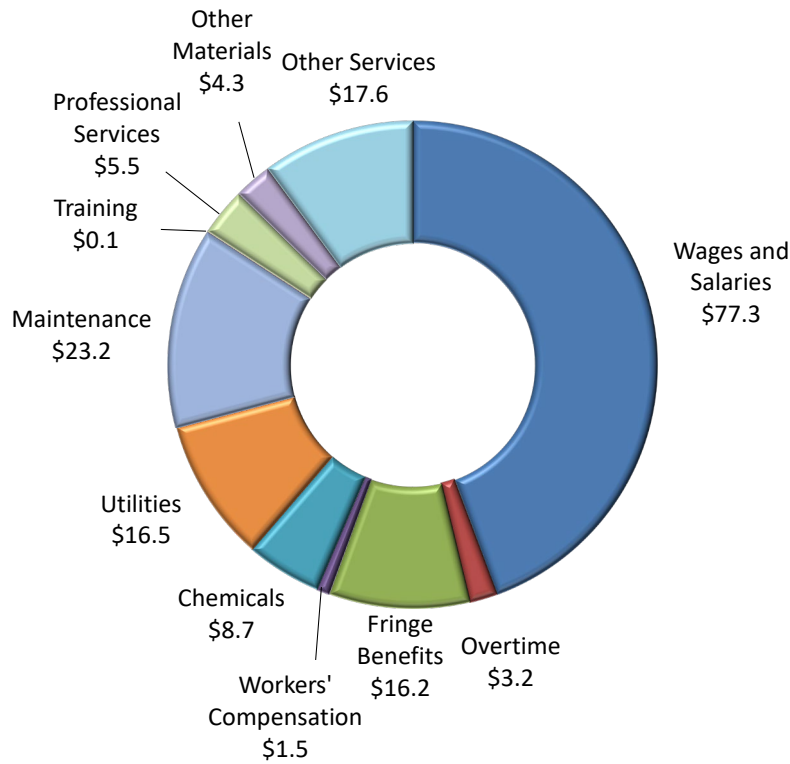
Total Revenues of \$594.3 million were \$0.5 million or 0.1% higher than budget due to higher Other Revenue, partially offset by lower Investment Income.

Please refer to Attachment 1 for a more detailed comparison by line item of the budget variances for FY21.

Direct Expenses

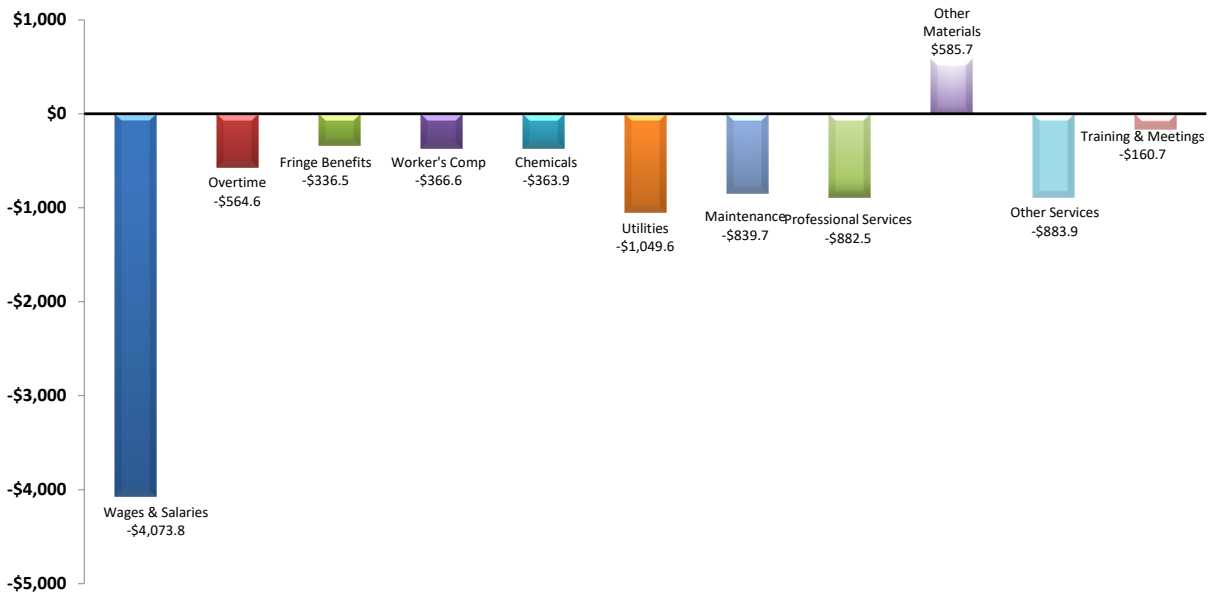
FY21 direct expenses through March totaled \$174.2 million, which was \$8.9 million or 4.9% less than budgeted.

**FY21 Direct Expenses
(in millions)**



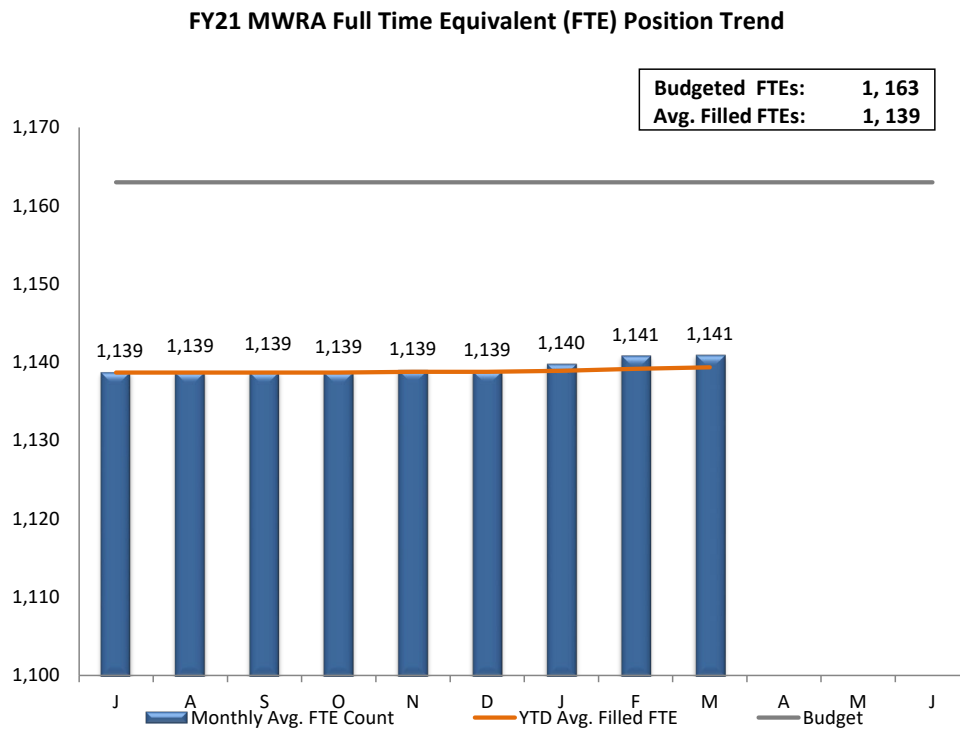
The budget variance is due to lower spending for Wages & Salaries, Utilities, Other Services, Professional Services, Maintenance, Overtime, Worker's Compensation, Chemicals, Fringe Benefits, and Training and Meetings. Spending was higher than budget for Other Materials.

**FY21 Direct Expense Variance
(in thousands)**



Wages and Salaries

Wages and Salaries are under budget by \$4.1 million or 5.0%. Through March, there were 24 fewer average FTEs (1,139 versus 1,163 budget) or 2.1% and lower average salaries for new hires versus retirees. The timing of backfilling vacant positions also contributed to Regular Pay being under budget.



Utilities

Utilities were less than budget by \$1.0 million or 6.0%. The budget variance is due to underspending in Electricity of \$966,000 primarily at Deer Island (\$625,000) driven primarily by power demand charges being less than budgeted based on flows, new pricing, and real time market prices for the non-block purchases under the Direct Energy contract; and Water Operations of \$240,000 due to lower rates and quantity.

Professional Services

Professional Services were lower than budget by \$0.9 million or 13.8%. The overall underspending is due to lower than budgeted spending in Computer Systems Consultant of \$1.0 million in MIS primarily due to timing delays of projects including Website Redesign, PIMS Power Builder, Landesk, and Crystal Report Writer; Engineering of \$389,000 primarily in Field Operations; and Legal Services of \$151,000 in Law and Administration. This is partially offset by higher Lab and Testing Analysis of \$543,000 in Operations due to the Biobot contract.

Other Services

Other Services were lower than budget by \$0.9 million or 4.8%. The budget variance is due to lower than budgeted spending for Sludge Pelletization of \$796,000 due to lower year-to-date quantities, Grit and Screening Removal of \$111,000 due to lower quantities, and Telecommunications of \$93,000 primarily in MIS. This is partially offset by greater than budgeted spending in Other Services of \$251,000 primarily in Water Operations due to the Brookline water pipeline break.

Maintenance

Maintenance was lower than budget by \$0.8 million or 3.5%, largely driven by the timing of projects. Maintenance Materials were under budget by (\$783,000) driven by Plant & Machinery Materials (\$419,000) due to timing of materials including rolling stock and booster pumps, and HVAC Materials (\$382,000) and Electrical Materials (\$223,000) due to the timing of purchases. Maintenance Services are under budget by \$57,000 driven by lower Building & Grounds Services (\$624,000) and Electrical Services (\$260,000) primarily due to underspending on service contracts, and Special Equipment Services (\$255,000), partially offset by higher Plant and Machinery Services (\$1.1 million) due to the timing of work for several contracts including DITP painting and coatings and Computer Software Licenses (\$223,000).

Overtime

Overtime expenses were lower than budget by \$0.6 million or 14.9% primarily in Field Operations (\$593,000) mainly for emergency and planned overtime, with lower spending on emergency maintenance, CSO activation, planned off-hours maintenance, training, and community assistance; TRAC (\$19,000) due to fewer responses to rain events and limited 8M permit inspections; and Engineering & Construction (\$108,000). This was partially offset by higher spending for Deer Island (\$171,000) for shift coverage including Covid-19 coverage and unplanned maintenance including HEEC maintenance

Worker's Compensation

Worker's Compensation expenses were lower than budget by \$0.4 million or 19.7%. The lower expenses were primarily due to favorable variances in compensation payments (\$347,000), administrative expenses (\$11,000), and medical payments (\$9,000). This reflects fewer accidents and reduced severity of those accidents. Due to the uncertainties of when spending will happen, the budget is spread evenly throughout the year.

Chemicals

Chemicals were lower than budget by \$0.4 million or 4.0%. Lower than budget spending on Sodium Hypochlorite of \$205,000 is driven by Field Operations due to lower dosing at the Carroll Water Treatment Plant; Sodium Bisulfite of \$102,000 driven by Wastewater Treatment; Polymer of \$92,000 driven by Deer Island due to less usage for centrifuge operations; and Soda Ash of \$61,000 driven by Water Operations due to source water showing fluctuations in alkalinity affecting the dose and Clinton Wastewater Treatment Plant due to timing of deliveries. This is offset by higher than budget spending on Carbon Dioxide of \$151,000 driven by Water Operations due to the force majeure surcharge and higher dose to meet the pH target; and Hydrogen Peroxide of \$88,000 driven by Deer Island due to higher H₂S gas levels. Deer Island flows are 7.1% lower

than the budget and Carroll preliminary flows are 0.41% higher than the budget through March. It is important to note that Chemical variances are also based on deliveries which in general reflect the usage patterns and timing.

Fringe Benefits

Fringe Benefit spending was lower than budget by \$0.3 million or 2.0%. This is primarily driven by lower Health Insurance costs of \$294,000, 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 that are less expensive.

Training and Meetings

Training and Meetings expenses were lower than budget by \$0.2 million or 55.6% driven by the timing of spending as well as conferences that were postponed or canceled due to the pandemic.

Other Materials

Other Materials were higher than budget by \$0.6 million or 15.7% driven by higher than budgeted spending of \$718,000 for Vehicle Purchases/Replacements due to timing; Computer Hardware of \$311,000 in MIS and \$147,000 for Health/Safety Materials, both driven by purchases made in response to Covid-19. This was partially offset by lower Other Materials of \$222,000 and lower Vehicle Expense of \$153,000 primarily due to less driving and lower fuel prices.

Indirect Expenses

Indirect Expenses totaled \$43.9 million, which is \$0.6 million or 1.5% greater than budget. The variance is primarily driven by the cost for the new HEEC cable (\$3.1 million). Based on the latest information from HEEC, MWRA will owe HEEC additional costs related to FY20, and we expect to make that payment by June 2021. Because we are now aware of this liability, we accrued for it starting in November. This is partially offset by lower Pension expense (\$1.0 million). After approval of the FY21 Current Expense Budget, the retirement system received a new Public Employee Retirement Administration Commission approved required contribution. The required contribution was reduced from \$11.0 million to \$10.0 million.

Based on FY21 operating activity only, the Watershed Division is \$2.4 million or 17.9% under budget through March. This is driven by lower spending on Wages and Salaries, Maintenance, Fringe Benefits, Professional Services, and Equipment. When factoring in the FY20 balance forward (\$959,000) which was paid during Q1 of FY21, and the lower PILOT payment (\$132,000), Watershed Reimbursement is \$1.6 million or 7.2% below budget through March.

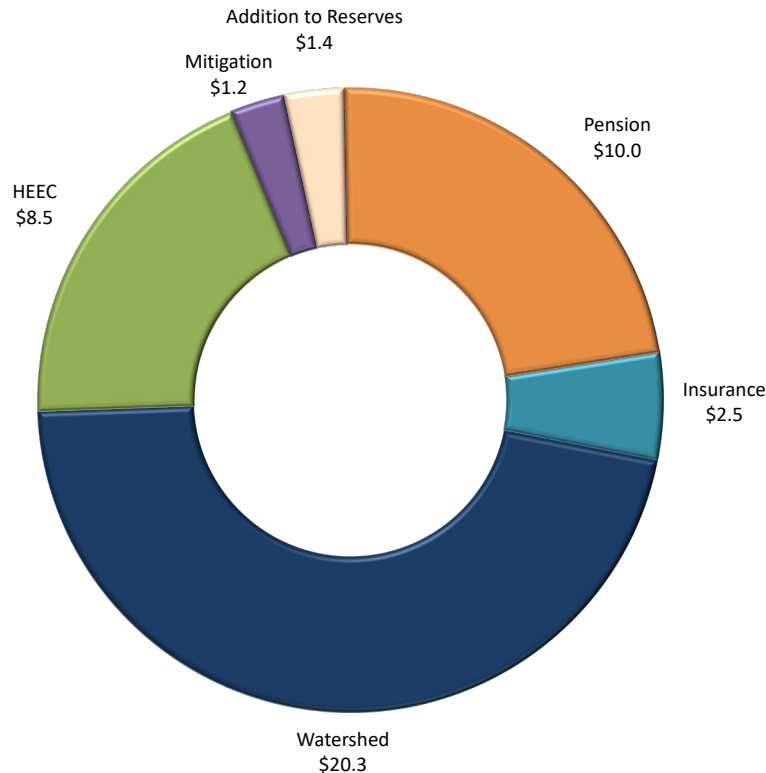
FY21 Watershed Protection Variance

\$ in millions	YTD Budget	YTD Actual	YTD \$ Variance	YTD % Variance
Operating Expenses	14.3	11.6	-2.7	-18.6%
Operating Revenues - Offset	0.9	0.6	-0.3	-29.3%
FY21 Operating Totals	13.4	11.0	-2.4	-17.9%
DCR Balance Forward (FY20 4th quarter accrual true-up)	0.0	1.0	1.0	
FY21 Adjusted Operating Totals	13.4	12.0	-1.4	-10.7%
PILOT	8.5	8.4	-0.1	-1.2%
Total Watershed Reimbursement	21.9	20.4	-1.5	-7.0%

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. The FTE count at the end of March was 136 (and 133.1 on a year-to-date basis) vs. a budget of 150.

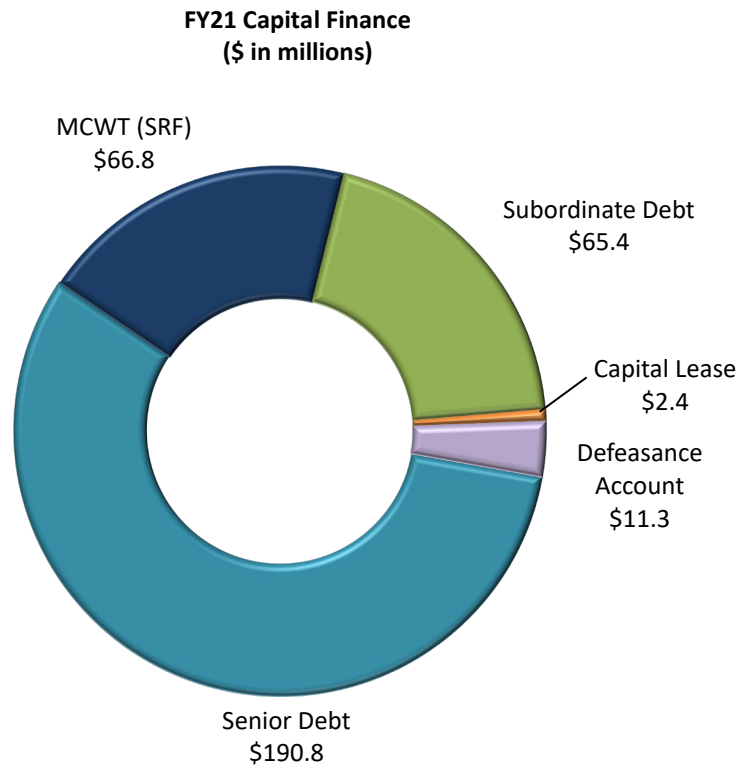
**FY21 Indirect Expenses
(in millions)**



Capital Financing

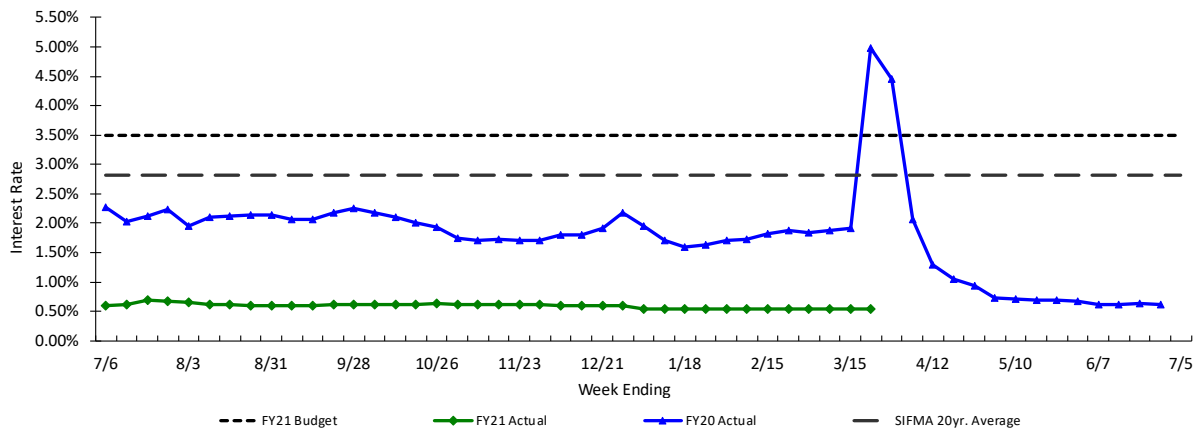
Capital Financing expenses include the principal and interest payments for fixed senior debt, the variable subordinate debt, the Massachusetts Clean Water Trust (SRF) obligation, the commercial paper program for the local water pipeline projects, current revenue for capital, Optional Debt Prepayment,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

Year-to-date Capital Financing expenses for FY21 totaled \$336.6 million, which is right on budget. In March, the year-to-date debt related savings of \$11.3 million was transferred to the Defeasance Account. This is the result of the lower than budgeted variable interest rates, timing of the SRF transaction, and lower than anticipated Senior Debt due to the timing of borrowings.



The graph below reflects the FY21 actual variable rate trend by week against the FY21 Budget.

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



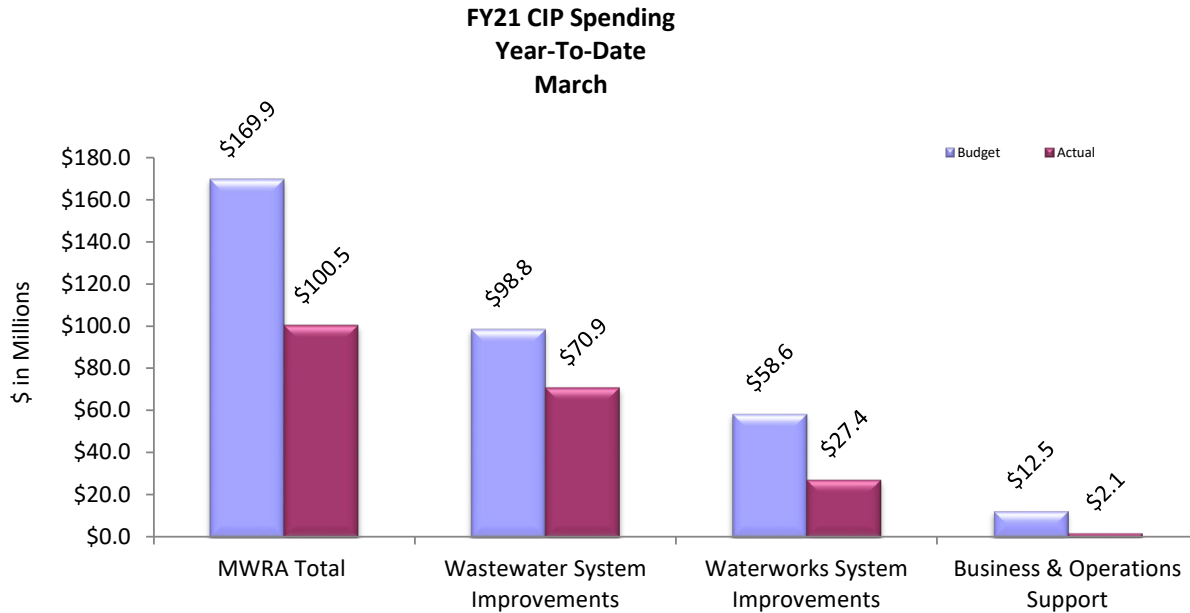
Revenue & Income

Revenues of \$594.3 million were \$541,000 or 0.1% over budget. Other Revenue was \$1.1 million or 20.7% over budget due to Energy Revenue of \$463,000, Disposal of surplus materials of \$281,000, Miscellaneous Revenue of \$163,000 primarily associated with worker's compensation reimbursement for older claims; \$68,000 in grant money; and \$42,000 for emergency water surcharges. In addition, Other User Charges were over the budget by \$105,000 primarily due to the entrance fee payments from the Rivers School in Weston and Crescent Ridge Dairy in Sharon. This was partially offset by lower Investment Income of \$635,000 or 16.9% due to lower than budgeted interest rates (0.49% vs. 0.71%), partially offset by higher than budgeted average balances.

FY21 Capital Improvement Program

Capital expenditures in Fiscal Year 2021 through March total \$100.5 million, \$69.4 million or 40.9% under budget.

After accounting for programs which are not directly under MWRA's control, most notably the Inflow and Infiltration (I/I) grant/loan program, the Local Water System Assistance loan program, and the community managed Combined Sewer Overflow (CSOs) projects, capital spending totaled \$74.0 million, \$43.9 million or 37.2% under budget.



Overall, CIP spending reflects the underspending in Wastewater Improvements (\$27.9 million), Waterworks (\$31.2 million), and Business and Operations Support (\$10.4 million). Major variances in Wastewater are primarily due to Channel 4 work being behind schedule and Covid-19 delays for the Chelsea Headworks Upgrades Construction and a time extension, delay in equipment delivery and Covid-19 shutdown for Nut Island Odor Control and HVAC Improvements, updated schedules for Prison Point Rehabilitation and the Dorchester Infiltration/Inflow Removal, timing of community repayments for the I/I Local Financial Assistance Program due to less than anticipated communities deferring their loan repayments, work anticipated in FY21 that was completed in FY20 for the Pellet Conveyance Piping project, and delays in NTP and snow as well as winter moratorium for the Dorchester Interceptor Sewer. This was partially offset by contractor progress for Deer Island Winthrop Terminal Facility (WTF) VFD Replacement – Construction, Gas Protection System Replacement Phase 1, and Gravity Thickener Rehabilitation.

Waterworks variances are primarily due to less than anticipated communities deferring their loan repayments for the Water Loan Program, delay in award of CP-1 Shafts 6, 8, and 9A, timing of consultant work for the Tunnel Preliminary Design and MEPA Review and Program Support Services contracts. This was partially offset by contractor progress on the Southern Extra High Section 111 Construction 2, Section 56 Replacement/Saugus River - Design/CA, and Commonwealth Avenue Pumping Station Construction contracts.

FY21 Budget and FY21 Actual Variance by Program
(in millions)

\$ in Millions	Budget	Actuals	\$ Var.	% Var.
Wastewater System Improvements				
Interception & Pumping	51.1	34.2	(16.8)	-33.0%
Treatment	17.8	13.2	(4.6)	-25.7%
Residuals	3.7	1.4	(2.3)	-62.7%
CSO	3.3	1.0	(2.2)	-68.1%
Other	22.9	21.0	(1.9)	-8.3%
Total Wastewater System Improvements	\$98.8	\$70.9	(\$27.9)	-28.2%
Waterworks System Improvements				
Drinking Water Quality Improvements	1.7	1.1	(0.5)	-33.0%
Transmission	13.2	11.0	(2.2)	-16.6%
Distribution & Pumping	15.1	9.2	(5.9)	-39.2%
Other	28.7	6.1	(22.6)	-78.6%
Total Waterworks System Improvements	\$58.6	\$27.4	(\$31.2)	-53.2%
Business & Operations Support	\$12.5	\$2.1	(\$10.4)	-82.9%
Total MWRA	\$169.9	\$100.5	(\$69.4)	-40.9%

Totals may not add due to rounding

FY21 Spending by Program:

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

Other Waterworks: Net underspending of \$22.6 million

- \$21.3 million for Local Financial Assistance due to timing of community repayments due to less than anticipated communities deferring their loan repayments.
- \$1.3 million for Carroll Water Treatment Plant SCADA Design and Construction due to updated schedule for the SCADA Construction.
- This underspending was partially offset by overspending of \$0.3 million for Cosgrove Intake Roof Replacement, \$0.2 million for Bellevue 2/Turkey Hill Tanks Painting, and \$0.1 million for Gillis Pumping Station/Cottage Farm CSO Roof Replacement due to FY20 planned work that was completed in FY21.

Interception & Pumping: Net underspending of \$16.8 million

- \$4.6 million for Chelsea Creek Upgrade Construction and Resident Engineering Inspection due to Channel 4 work behind schedule, Covid-19 delays, and time extension.
- \$7.8 million for Prison Point Rehabilitation Construction due to updated schedule.
- \$0.6 million for Nut Island Odor Control and HVAC Construction due to delays in equipment delivery and Covid-19 shut down.
- \$1.9 million for Wastewater Metering Construction due to delay in award and software training, and \$0.5 million for Wastewater Metering Planning/Design due to time extension through the construction installation and warranty period.
- \$1.2 million for Dorchester Interceptor Sewer Construction and CA/RI due to Notice to Proceed and snow delays as well as winter moratorium.
- \$0.4 million for Prison Point Design/CA/REI due to delay in construction award.

- This underspending was partially offset by overspending of \$0.3 million for Interceptor Renewal 7, Malden & Melrose - Study/Design/CA, and \$0.2 million for Siphon Structure Rehabilitation Design due to consultant progress.

Business & Operations Support: Net underspending of \$10.4 million

- \$2.6 million for As-Needed Technical Assistance and Resident Engineering and Inspection Services due to lower than projected task order work, \$1.4 million for Lawson Upgrade, \$1.1 million for Enterprise Content Management, and \$0.5 million for MAXIMO Interface Enhancements and Upgrades due to schedule changes, \$0.5 million for Security Equipment & Installation due to timing of physical security initiatives, and \$0.4 million for Vehicle Purchases due to timing.

Water Distribution and Pumping: Net underspending of \$5.9 million

- \$2.7 million for Sections 23, 24, 47 Rehabilitation and CA/RI, and \$2.3 million for Section 89/29 Replacement – Construction, ESDC and RE/RI Services due to schedule changes.
- \$0.4 million for Sections 50/57 Water due to contract scope reduction.
- \$0.3 million for NIH Section 89 and 29 Design/CA/RI due to less than anticipated contract administration/resident inspection budgeted spending.
- \$0.3 million for NEH Improvements Design & ESDC due to contract award later than anticipated.
- \$0.2 million for SEH Redundancy Pipeline Section 111 - Construction Phase 3 due to timing of final work.
- This underspending was partially offset by overspending of \$0.4 million for Section 56 Replacement/Saugus River - Design/CA due to consultant progress, and \$0.3 million for Southern Extra High Section 111 Construction 2 due to contractor progress.

Wastewater Treatment: Net underspending of \$4.6 million

- \$4.0 million for Clarifier Rehabilitation Phase 2 - Construction, Design and REI due to updated schedules.
- \$0.9 million for less than anticipated as-needed task order work.
- \$0.7 million for MCC Switchgear Replacement - Design/ESDC/REI and Construction due to updated construction schedule.
- \$0.3 million for Miscellaneous VFD Replacements FY19-FY23 due to timing of work.
- This underspending was partially offset by overspending of \$1.0 million for Winthrop Terminal Facility (WTF) VFD Replacement – Construction, \$0.6 million for Gravity Thickener Rehabilitation, and \$0.4 million for Gas Protection System Replacement Phase 1 due to contractor progress, and \$0.3 million for CHP Alternatives Study due to timing of work.

Residuals: Net underspending of \$2.3 million

- \$1.8 million for Pellet Conveyance Piping Relocation and \$0.6 million for Residuals Mechanical/Electrical/Dryer Drum Replacements due to work anticipated in FY21 completed in FY20.

Combined Sewer Overflow: Net underspending of \$2.2 million

- \$2.3 million for Dorchester Inflow Removal Construction due to updated schedules partially offset by \$0.1 million for CSO Performance Assessment due to greater than anticipated consultant progress.

Waterworks Transmission: Net underspending of \$2.2 million

- \$1.8 million for CP-1 Shafts 6, 8, and 9A due to award of contract later than anticipated and repair clamps issue.
- \$1.3 million for Tunnel Preliminary Design & MEPA Review and \$0.1 million for Program Support Services due to timing of consultant work.
- \$0.8 million for Weston Aqueduct Sluice Gates Construction due to updated schedule and delay in slide gate fabrication.
- \$0.8 million for River Road Improvements due to award later than anticipated.
- This underspending was partially offset by overspending of \$4.0 million for WASM 3 Rehabilitation, CP-1 and \$0.4 million for Commonwealth Avenue Pumping Station Construction due to contractor progress.

Other Wastewater: Net underspending of \$1.9 million

- \$1.9 million for Community I/I Financial Assistance due to timing of community repayments as a result of less than anticipated communities deferring their loan repayments.

Drinking Water Quality Improvements: Net underspending of \$0.5 million

- \$0.5 million for updated schedule for CP-7 Existing Facilities Modifications.
- \$0.4 million for Carroll Water Treatment Plant Technical Assistance due to timing of task order work
- This underspending was partially offset by overspending of \$0.1 million for Ancillary Modifications – Construction due to award being greater than budgeted.

Construction Fund Balance

The construction fund balance was \$247.4 million as of the end of March. Commercial Paper/Revolving Loan available capacity was \$222 million.

ATTACHMENTS:

Attachment 1 – Variance Summary March 2021

Attachment 2 – Current Expense Variance Explanations

Attachment 3 – Capital Improvement Program Variance Explanations

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

ATTACHMENT 1
FY21 Actuals vs. FY21 Budget

	Mar 2021 Year-to-Date				
	Period9 YTD Budget	Period9 YTD Actual	Period9 YTD Variance	%	FY21 Approved
EXPENSES					
WAGES AND SALARIES	\$ 81,406,459	\$ 77,332,636	\$ (4,073,823)	-5.0%	\$ 112,919,298
OVERTIME	3,796,046	3,231,462	(564,584)	-14.9%	5,019,295
FRINGE BENEFITS	16,500,240	16,163,709	(336,531)	-2.0%	22,402,224
WORKERS' COMPENSATION	1,857,491	1,490,888	(366,603)	-19.7%	2,476,655
CHEMICALS	9,068,455	8,704,539	(363,916)	-4.0%	12,091,255
ENERGY AND UTILITIES	17,594,028	16,544,396	(1,049,632)	-6.0%	24,200,847
MAINTENANCE	24,057,122	23,217,402	(839,720)	-3.5%	32,618,569
TRAINING AND MEETINGS	289,029	128,295	(160,734)	-55.6%	405,264
PROFESSIONAL SERVICES	6,402,671	5,520,164	(882,507)	-13.8%	8,377,283
OTHER MATERIALS	3,732,166	4,317,889	585,723	15.7%	6,706,916
OTHER SERVICES	18,458,374	17,574,521	(883,853)	-4.8%	24,983,777
TOTAL DIRECT EXPENSES	\$ 183,162,081	\$ 174,225,901	\$ (8,936,174)	-4.9%	\$ 252,201,383
INSURANCE	\$ 2,294,414	\$ 2,453,793	\$ 159,379	6.9%	\$ 3,059,218
WATERSHED/PILOT	21,897,253	20,330,023	(1,567,230)	-7.2%	26,422,138
HEEC PAYMENT	5,411,400	8,483,942	3,072,542	56.8%	7,215,200
MITIGATION	1,269,258	1,237,044	(32,214)	-2.5%	1,692,344
ADDITIONS TO RESERVES	1,361,308	1,361,308	-	0.0%	1,815,077
RETIREMENT FUND	11,000,000	10,000,000	(1,000,000)	-9.1%	11,000,000
POST EMPLOYEE BENEFITS	-	-	-	---	6,065,490
TOTAL INDIRECT EXPENSES	\$ 43,233,633	\$ 43,866,110	\$ 632,477	1.5%	\$ 57,269,467
STATE REVOLVING FUND	\$ 70,331,239	\$ 66,771,953	\$ (3,559,286)	-5.1%	\$ 97,811,162
SENIOR DEBT	191,128,587	190,774,371	(354,216)	-0.2%	258,730,904
DEBT SERVICE ASSISTANCE	-	-	-	---	-
CURRENT REVENUE/CAPITAL	-	-	-	---	16,200,000
SUBORDINATE MWRA DEBT	72,746,900	72,746,900	-	0.0%	96,339,598
LOCAL WATER PIPELINE CP	-	-	-	---	5,686,864
CAPITAL LEASE	2,412,795	2,412,795	-	0.0%	3,217,060
VARIABLE DEBT	-	(7,374,605)	(7,374,605)	---	-
DEFEASANCE ACCOUNT	-	11,288,106	11,288,106	---	3,900,000
DEBT PREPAYMENT	-	-	-	---	-
TOTAL DEBT SERVICE	\$ 336,619,521	\$ 336,619,521	\$ -	0.0%	\$ 481,885,588
TOTAL EXPENSES	\$ 563,015,235	\$ 554,711,532	\$ (8,303,697)	-1.5%	\$ 791,356,438
REVENUE & INCOME					
RATE REVENUE	\$ 577,038,750	\$ 577,038,750	\$ -	0.0%	\$ 769,385,000
OTHER USER CHARGES	6,678,180	6,782,813	104,633	1.6%	9,208,367
OTHER REVENUE	5,187,243	6,259,033	1,071,790	20.7%	6,095,403
RATE STABILIZATION	1,125,000	1,125,000	-	0.0%	1,500,000
INVESTMENT INCOME	3,753,820	3,118,666	(635,154)	-16.9%	5,167,668
TOTAL REVENUE & INCOME	\$ 593,782,993	\$ 594,324,262	\$ 541,268	0.1%	\$ 791,356,438

**ATTACHMENT 2
Current Expense Variance Explanations**

Total MWRA	FY21 Budget YTD March	FY21 Actuals March	FY21 YTD Actual vs. FY21 Budget		Explanations
			\$	%	
Direct Expenses					
Wages & Salaries	81,406,459	77,332,636	(4,073,823)	-5.0%	Wages and Salaries are under budget by \$4.1 million. Year to date, there have been 24 fewer average FTEs (1,139 versus 1,163 budget), lower average new hire salaries versus retirees, the timing of backfilling vacant positions.
Overtime	3,796,046	3,231,462	(564,584)	-14.9%	Lower spending mainly in Field Operations (\$593,000) primarily in emergency and planned overtime with lower spending on emergency maintenance, CSO activation, planned off-hours maintenance, training and community assistance. TRAC (\$19,000) due to fewer responses to rain events and limited 8M permit inspections, and. Engineering & Construction (\$108,000), offset by higher spending for Deer Island (\$171,000) for shift coverage including Covid-19 coverage and unplanned maintenance including HEEC maintenance.
Fringe Benefits	16,500,240	16,163,709	(336,531)	-2.0%	Lower than budget in Health Insurance of \$294,000, 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, Medicare was under budget by \$57,000, partially offset by Unemployment Insurance which is over budget by \$36,000.due to unemployment fraud charges that are being disputed..
Worker's Compensation	1,857,491	1,490,888	(366,603)	-19.7%	The lower expenses were due to favorable variances in Compensation Payments of \$347,000, Administrative Expenses of \$11,000, and Medical Payments of \$9,000. These lower payments reflect fewer accidents to date. Due to uncertainties of when spending will happen, the budget is spread evenly throughout the year.
Chemicals	9,068,455	8,704,539	(363,916)	-4.0%	Lower than budget spending on Sodium Hypochlorite of \$205,000 driven by Field Operations due to lower dosing at JCWTP; Sodium Bisulfite of \$102,000 driven by Wastewater Treatment; Polymer of \$92,000 driven by DITP due to less usage for centrifuge operations; and Soda Ash of \$61,000 driven by Water Operations due to source water showing fluctuations in alkalinity, affecting the dose and Clinton Wastewater Treatment Plant due to timing of deliveries. This is offset by higher than budget spending on Carbon Dioxide of \$151,000 driven by Water Operations due to the force majeure surcharge and higher dose to meet pH target; and Hydrogen Peroxide of \$88,000 driven by DITP due to higher H2S gas levels.. DITP flows are 7.1% lower than the budget and CWTP preliminary flows are 0.41% higher than the budget through March. 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	17,594,027	16,544,396	(1,049,631)	-6.0%	Underspending in Electricity of \$1.0 million primarily at DITP (\$0.6 million) driven primarily by lower pricing partially offset by usage, and real time energy and ancillary pricing has been lower under the Direct Energy contract.. Also, Water Operations (\$0.2 million) is under budget primarily due to lower rates and quantity.

ATTACHMENT 2
Current Expense Variance Explanations

Total MWRA	FY21 Budget YTD March	FY21 Actuals March	FY21 YTD Actual vs. FY21 Budget		Explanations
			\$	%	
Maintenance	24,057,121	23,217,404	(839,717)	-3.5%	Underspending in Ongoing Maintenance by \$840,000 is largely driven by the timing of projects. Maintenance Materials which are under budget by (\$0.8 million), driven by Plant & Machinery Materials (\$0.4 million) primarily due to timing of materials including rolling stock and booster pumps, HVAC Materials (\$0.4 million) due to timing of purchases, Electrical Materials (\$0.2 million), and Special Equipment Materials (\$0.2 million), partially offset by Warehouse inventory (\$0.4 million) and Automotive Materials (\$0.1 million). Also, <i>Maintenance Services</i> are under budget by \$0.1 million driven by Building & Grounds Services (\$0.6 million), and Electrical Services (\$0.3 million), primarily due to underspending on service contracts, Special Equipment Services (\$0.3 million), and Pipe Services (\$0.1 million), partially offset by Plant and Machinery Services (\$1.1 million) driven by timing of work for several contracts including DITP painting and coatings and Computer Software Licenses (\$0.2 million)
Training & Meetings	289,028	128,295	(160,733)	-55.6%	Lower than budget spending on Training & Meetings by \$161,000 is driven by MIS (\$46,000), Field Operations (\$27,000), DI (\$22,000), Engineering & Construction (\$11,000), and Procurement (\$9,000) primarily due to timing and conferences that were postponed or canceled.
Professional Services	6,402,671	5,520,164	(882,507)	-13.8%	Lower than budget spending in Computer Systems Consultant of \$1.0 million in MIS primarily due to timing delays of projects including Website Redesign, PIMS Power Builder, Landesk, and Crystal Report Writer; Engineering of \$389,000 primarily in Field Operations; Legal Services of \$151,000 in Law and Administration; partially offset by Lab and Testing Analysis of \$543,000 in Operations due to the Biobot contract.
Other Materials	3,732,166	4,317,889	585,723	15.7%	Driven by higher than budgeted spending of \$718,000 for Vehicle Purchases/Replacements due to timing, Computer Hardware of \$311,000 in MIS and \$147,000 for Health/Safety Materials both driven by purchases due to Covid-19, partially offset by \$222,000 for Other Materials , and \$153,000 for Vehicle Expense primarily due to less driving and lower fuel prices.
Other Services	18,458,374	17,574,521	(883,853)	-4.8%	Lower than budgeted spending for Sludge Pelletization of \$796,000 due to lower year-to-date quantities; Grit & Screening Removal of 111,000 due to lower quantities, and Telecommunication Services of \$93,000 primarily in MIS, partially offset by higher than budgeted spending for Other Services of \$251,000 primarily in Water Operations due to the Brookline water pipeline break.
Total Direct Expenses	183,162,078	174,225,903	(8,936,175)	-4.9%	

ATTACHMENT 2
Current Expense Variance Explanations

Total MWRA	FY21 Budget YTD March	FY21 Actuals March	FY21 YTD Actual vs. FY21 Budget		Explanations
			\$	%	
Indirect Expenses					
Insurance	2,294,414	2,453,793	159,379	6.9%	Higher premiums received for property and excess general liability (\$285,000) offset by Lower Payments/Claims costs (\$125,000).
Watershed/PILOT	21,897,253	20,330,023	(1,567,230)	-7.2%	Watershed costs are lower than budget by \$1.6 million due to lower costs associated with Wages and Salaries, Maintenance, Fringe Benefits, Professional Services, and Equipment, and partially offset by a prior period adjustment.
HEEC Payment	5,411,400	8,483,942	3,072,542	56.8%	Increase is due to updated cost for HEEC capacity and service charge.
Mitigation	1,269,258	1,237,044	(32,214)	-2.5%	
Addition to Reserves	1,361,308	1,361,308	-	0.0%	
Pension Expense	11,000,000	10,000,000	(1,000,000)	-9.1%	After approval of the FY21 CEB, the retirement system received a new PERAC approved required contribution. The required deposit was reduced from \$11.0 million to \$10.0 million.
Post Employee Benefits	-	-	-		
Total Indirect Expenses	43,233,633	43,866,110	632,477	1.5%	
Debt Service					
Debt Service	336,619,521	336,619,521	-	0.0%	\$11.3 million was transferred to the defeasance account reflecting lower than budgeted interest expenses of \$7.4 million due to lower interest rates and lower SRF spending of \$3.6 million as a result of timing, and lower than anticipated Senior Debt of \$0.4 million.
Debt Service Assistance	-	-	-		
Total Debt Service Expenses	336,619,521	336,619,521	-	0.0%	
Total Expenses					
Total Expenses	563,015,232	554,711,534	(8,303,698)	-1.5%	

ATTACHMENT 2
Current Expense Variance Explanations

Total MWRA	FY21 Budget YTD March	FY21 Actuals March	FY21 YTD Actual vs. FY21 Budget		Explanations
			\$	%	
Revenue & Income					
Rate Revenue	577,038,750	577,038,750	-	0.0%	
Other User Charges	6,678,180	6,782,813	104,633	1.6%	Rivers School in Weston entrance fee of \$42,000 and Crescent Ridge Dairy in Sharon of \$34,000, and other user charges of \$29,000.
Other Revenue	5,187,243	6,259,033	1,071,790	20.7%	Energy Revenue (\$463,000); Disposal of surplus materials of \$281,000; Miscellaneous Revenue of \$163,000 primarily associated with worker's compensation reimbursement for older claims; (\$68,000) in grant money, and \$77,000 for permit fees.
Rate Stabilization	1,125,000	1,125,000	-	0.0%	HEEC Reserve.
Investment Income	3,753,820	3,118,666	(635,154)	-16.9%	Investment Income is under budget due to lower than budgeted interest rates (0.49% actual vs. 0.71% budget) partially offset by higher than budgeted average balances.
Total Revenue	593,782,993	594,324,262	541,269	0.09%	
Net Revenue in Excess of Expenses	30,767,761	39,612,728	8,844,967		

ATTACHMENT 3
FY21 CIP Year-to-Date Variance Report (\$000's)

	FY21 Budget YTD March	FY21 Actuals YTD March	YTD Actuals vs. Budget		Explanations
			\$	%	
Wastewater					
Interception & Pumping (I&P)	\$51,063	\$34,222	(\$16,841)	-33.0%	<u>Underspending</u> Prison Point Rehabilitation - Construction; \$7.8M (updated schedule) Chelsea Creek Headworks Upgrades - Construction and REI: \$4.6M (delay in work on Channel 4, Covid-19 delays, and time extension) Wastewater Meter System Equipment Replacement: \$1.9M (delay in award and software training) Interceptor Renewal No. 3, Dorchester Interceptor Sewer - Construction and CA/RI: \$1.2M (notice-to-proceed and snow delay as well as winter moratorium) Nut Island Odor Control & HVAC Improvements Phase 2 - Construction: \$632k (delays in equipment delivery and Covid-19 shut down) Wastewater Meter System Planning/Study/Design: \$547k (due to time extension through construction installation and warranty period) Ward Street & Columbus Park Headworks - Design/CA: \$433k (awarded later than anticipated) Prison Point Rehabilitation - Design/CA/RI: \$404k (delay in construction award) <u>Offset Overspending</u> Interceptor Renewal 7, Malden & Melrose - Study/Design/CA: \$311k, and Siphon Structure Rehabilitation Design: \$185k (consultant progress)
Treatment	\$17,825	\$13,246	(\$4,579)	-25.7%	<u>Underspending</u> As-Needed Design: \$864k (less than anticipated task order work) Miscellaneous VFD Replacements FY19-FY23: \$300k (timing of work) Clarifier Rehabilitation Phase 2 - Construction \$3.6M, Design: \$180k, and REI: \$168k, DI Dystor Membrane Replacements: \$286k, South System Pump Station (SSPS) VFD Replacement - Design/ESDC/REI: \$270k, and Screw Pump Replacement: \$240k (updated schedules) MCC Switchgear Replacement - Design/ESDC/REI and Construction: \$725k (updated construction schedule) <u>Offset Overspending</u> Winthrop Terminal Facility (WTF) VFD Replacement - Construction: \$1.0M, Gravity Thickener Rehabilitation: \$614k, and Gas Protection System Replacement - Phase 1: \$409k (contractor progress) CHP Alternatives Study: \$299k (timing of work) Radio Repeater System Upgrade - Phase 1: \$138k (work anticipated in FY20 completed in FY21)

**ATTACHMENT 3
FY21 CIP Year-to-Date Variance Report (\$000's)**

	FY21 Budget YTD March	FY21 Actuals YTD March	YTD Actuals vs. Budget		Explanations
			\$	%	
Residuals	\$3,711	\$1,386	(\$2,325)	-62.7%	<u>Underspending</u> Pellet Conveyance Relocation: \$1.8M, and Residuals Mechanical/Electrical/Dryer Drum Replacements: \$568k (work anticipated in FY21 completed in FY20)
CSO	\$3,267	\$1,043	(\$2,224)	-68.1%	<u>Underspending</u> Dorchester Inflow Removal Construction: \$2.3M (updated schedules) <u>Offset Overspending</u> CSO Performance Assessment: \$141k (consultant progress)
Other Wastewater	\$22,917	\$21,020	(\$1,897)	-8.3%	<u>Underspending</u> I/I Local Financial Assistance: \$1.9M (timing of community repayments as a result of less than anticipated communities deferring loan repayments)
Total Wastewater	\$98,784	\$70,917	(\$27,867)	-28.2%	

**ATTACHMENT 3
FY21 CIP Year-to-Date Variance Report (\$000's)**

	FY21 Budget YTD March	FY21 Actuals YTD March	YTD Actuals vs. Budget		Explanations
			\$	%	
Waterworks					
Drinking Water Quality Improvements	\$1,657	\$1,110	(\$548)	-33.0%	<u>Underspending</u> CP-7 Existing Facilities Modifications: \$450k (updated schedule, awaiting NTP) Carroll Water Treatment Plant Technical Assistance: \$415k (timing of task order work) <u>Offset Overspending</u> Ancillary Modifications - Construction: \$100k (contract awarded greater than budgeted)
Transmission	\$13,185	\$11,002	(\$2,183)	-16.6%	<u>Underspending</u> CP-1 Shafts 6, 8, and 9A: \$1.8M (contract award later than originally anticipated and repair clamps issue) Metropolitan Tunnel Redundancy Preliminary Design & MEPA Review: \$1.3M, and Program Support Services: \$140k (timing of consultant work) Weston Aqueduct Sluice Gates - Construction: \$831k(delay in slide gate fabrication and updated schedule) River Road Improvements-Wachusett: \$809k, and Maintenance Garage/Wash Bay/Storage Building - Design/CA/RI: \$169k (contract awards later than originally anticipated) WASM/SPSM West PRV - Construction: \$284k, and Sudbury/Foss Dam Improvements - Construction: \$160k (updated schedules) Watershed Land: \$558k (timing of purchases) <u>Offset Overspending</u> WASM 3 Rehabilitation, CP-1: \$4.0M, and Commonwealth Ave Pump Station Improvements - Construction: \$391k, (contractor progress)

**ATTACHMENT 3
FY21 CIP Year-to-Date Variance Report (\$000's)**

	FY21 Budget YTD March	FY21 Actuals YTD March	YTD Actuals vs. Budget		Explanations
			\$	%	
Distribution & Pumping	\$15,053	\$9,151	(\$5,902)	-39.2%	<u>Underspending</u> CP3-Sections 23, 24, 47 Rehabilitation and CA/RI: \$2.7M, and Section 89/29 Replacement - Construction, ESDC and RE/RI Services: \$2.3M (schedule changes) Sections 50 & 57 Water Rehabilitation - Design/ESDC; \$428k (contract scope reduction) NEH Improvements Design & ESDC: \$286k (contract awarded later than originally anticipated) Section 89/29 Redundancy -Design/CA/RI: \$334k (Construction Administration and Resident Inspection services less than anticipated budgeted spending) SEH Redundancy Pipeline Section 111 - Construction Phase 3: \$234k (timing of final work) <u>Offset Overspending</u> Section 56 Replacement/Saugus River - Design/CA: \$369K (consultant progress) SEH Redundancy Pipeline Section 111 - Construction Phase 2: \$312k (contractor progress)
Other Waterworks	\$28,707	\$6,149	(\$22,558)	-78.6%	<u>Underspending</u> Local Water Pipeline Financial Assistance Program: \$21.3M (primarily due timing of community repayments due to less than anticipated communities deferring their loan repayments) CWTP SCADA Upgrades - Design Programming RE: \$658k and Construction: \$625k (updated schedule for SCADA Construction) Steel Tank Improvements - Design/CA: \$269k (contract awarded later than originally anticipated) <u>Offset Overspending</u> Cosgrove Intake Roof Replacement: \$266k, Bellevue 2/Turkey Hill Tanks Painting: \$177k, and Gillis Pump Station/Cottage Farm CSO Roof Replacements: \$141k (FY20 planned work completed in FY21)
Total Waterworks	\$58,603	\$27,412	(\$31,191)	-53.2%	
Business & Operations Support					

**ATTACHMENT 3
FY21 CIP Year-to-Date Variance Report (\$000's)**

	FY21 Budget YTD March	FY21 Actuals YTD March	YTD Actuals vs. Budget		Explanations
			\$	%	
Total Business & Operations Support	\$12,501	\$2,140	(\$10,361)	-82.9%	<u>Underspending</u> As-Needed Technical Assistance and CS/REI Services: \$2.6M (lower than projected task order work) Lawson Upgrade: \$1.4M, Enterprise Content Management: \$1.1M, MAXIMO Interface Enhancements and Upgrades: \$549k, Telephone System Upgrade: \$298k, and Instrumentation & Controls IT: \$310k (schedule changes) Security Equipment & Installation: \$481k (timing of physical security initiatives) FY19-23 Vehicle Purchases: \$372k (due to timing)
Total MWRA	\$169,888	\$100,469	(\$69,419)	-40.9%	


Attachment 4
FY21 Budget vs. FY21 Projection

TOTAL MWRA	FY21 Budget	FY21 Projection	Change FY21 Budget vs FY21 Projection	
			\$	%
EXPENSES				
WAGES AND SALARIES	\$ 112,919,297	\$ 108,224,204	\$ (4,695,093)	-4.2%
OVERTIME	5,019,296	4,948,638	(70,658)	-1.4%
FRINGE BENEFITS	22,402,224	21,536,592	(865,632)	-3.9%
WORKERS' COMPENSATION	2,476,655	2,000,018	(476,637)	-19.2%
CHEMICALS	12,091,255	12,069,541	(21,714)	-0.2%
ENERGY AND UTILITIES	24,200,846	23,246,152	(954,694)	-3.9%
MAINTENANCE	32,618,569	32,927,928	309,358	0.9%
TRAINING AND MEETINGS	405,264	189,676	(215,588)	-53.2%
PROFESSIONAL SERVICES	8,377,283	6,539,644	(1,837,639)	-21.9%
OTHER MATERIALS	6,706,916	6,870,184	163,268	2.4%
OTHER SERVICES	24,983,777	24,245,984	(737,793)	-3.0%
TOTAL DIRECT EXPENSES	\$ 252,201,383	\$ 242,798,562	\$ (9,402,821)	-3.7%
INSURANCE	\$ 3,059,218	\$ 3,224,058	164,840	5.4%
WATERSHED/PILOT	26,422,138	25,108,346	(1,313,792)	-5.0%
HEEC PAYMENT	7,215,200	10,431,993	3,216,793	44.6%
MITIGATION	1,692,344	1,652,058	(40,286)	-2.4%
ADDITIONS TO RESERVES	1,815,077	1,815,077	-	0.0%
RETIREMENT FUND	11,000,000	10,000,000	(1,000,000)	-9.1%
POSTEMPLOYMENT BENEFITS	6,065,490	6,065,490	-	0.0%
TOTAL INDIRECT EXPENSES	\$ 57,269,467	\$ 58,297,022	\$ 1,027,555	1.8%
STATE REVOLVING FUND	\$ 97,811,162	\$ 95,328,912	(2,482,250)	-2.5%
SENIOR DEBT	258,730,904	255,429,061	(3,301,843)	-1.3%
SUBORDINATE DEBT	96,339,599	86,506,795	(9,832,804)	-10.2%
LOCAL WATER PIPELINE CP	5,686,864	2,680,950	(3,005,914)	-52.9%
CURRENT REVENUE/CAPITAL	16,200,000	16,200,000	-	0.0%
CAPITAL LEASE	3,217,060	3,217,060	-	0.0%
DEBT PREPAYMENT	3,900,000	3,900,000	-	0.0%
TOTAL DEBT SERVICE	\$ 481,885,588	\$ 463,262,777	\$ (18,622,811)	-3.9%
TOTAL EXPENSES	\$ 791,356,438	\$ 764,358,361	\$ (26,998,077)	-3.4%
REVENUE & INCOME				
RATE REVENUE	\$ 769,385,000	\$ 769,385,000	-	0.00%
OTHER USER CHARGES	9,208,367	9,253,367	45,000	0.5%
OTHER REVENUE	6,095,403	6,887,806	792,402	13.0%
RATE STABILIZATION	1,500,000	1,500,000	-	0.0%
INVESTMENT INCOME	5,167,668	4,341,478	(826,190)	-16.0%
TOTAL REVENUE & INCOME	\$ 791,356,438	\$ 791,367,650	\$ 11,212	0.0%

VARIANCE:


\$ (27,009,289) \$ (27,009,289)

STAFF SUMMARY


TO: Board of Directors
FROM: Frederick A. Laskey, Executive Director 
DATE: April 14, 2021
SUBJECT: Assignment and Assumption of Contract 7347, Quinapoxet Dam Removal Design, Permitting and Engineering Services During Construction, from Milone & MacBroom, Inc. to SLR International Corporation

COMMITTEE: Administration, Finance & Audit

 INFORMATION
 X VOTE


Michele S. Gillen
 Director of Administration

Douglas J. Rice, Director of Procurement
John J. Gregoire, Program Manager, Reservoir Operations
 Preparer/Title


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

RECOMMENDATION:

To authorize the Executive Director, on behalf of the Authority, to approve the assignment and assumption of Contract 7347, Quinapoxet Dam Removal Design, Permitting and Engineering Services During Construction, from Milone & MacBroom, Inc. to SLR International Corporation, and to further authorize the Executive Director, on behalf of the Authority, to execute a separate Assignment and Assumption Agreement to effectuate that assignment with no increase in price or contract term.

DISCUSSION:

The Quinapoxet Dam is an earthen embankment and stone masonry horseshoe dam that spans the Quinapoxet River from bank to bank. Constructed in 1905 as part of an effort to straighten and widen the riverbed to drop sediment before entering the Wachusett Reservoir, this dam is in need of repair and will require continued maintenance and regulatory inspection into the future. MWRA is collaborating with the Department of Conservation and Recreation Division of Water Supply Protection, the Department of Fish and Game, and the Division of Ecological Restoration to remove this dam, with the goal of protecting reservoir water quality, while also achieving restoration of fish and wildlife passage and the naturalization of riverine hydrology.



In September 2019, the Board voted to award Contract 7347 to Milone & MacBroom, Inc. to provide design and engineering services during construction for this project. The project will address outstanding structural and constructability questions related to maintaining downstream water quality, to establish engineering design plans to support all required environmental and historic permitting, including documentation and preparation of the MEPA application in the initial project phase. The first MEPA filing is expected to be submitted in early May, 2021.

On January 6, 2020, Malone & MacBroom was acquired by and merged into SLR International Corporation. As a result, on January 26, 2021, Malone & MacBroom requested MWRA's consent for Contract 7347 to be assigned to SLR. The firm stated that there would be no change in schedule or performance on this contract. Staff contacted Malone & MacBroom, to discuss the acquisition and any potential impacts to the contract. Malone & MacBroom assured staff that the project would continue under SLR unimpeded, and that the original Milone & MacBroom personnel will remain on this contract under SLR International. Staff reviewed audited financial statements provided by SLR and have determined that the firm appears to have the financial capacity to perform for the remainder of Contract 7347. Staff recommend approval and execution of the Assignment and Assumption Agreement to effectuate such assignment.

BUDGET/FISCAL IMPACTS:

There are no budget or fiscal impacts to this contract as a result of this Assignment. Work being conducted under the contract is on track and on budget and is funded under the CIP. Financial support for implementation of the dam removal project, estimated at \$1.3 million, will be sought from various grant sources by the partner agencies following this preliminary design and permitting phase.

MBE/WBE PARTICIPATION:

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

STAFF SUMMARY


TO: Board of Directors
FROM: Frederick A. Laskey, Executive Director
DATE: April 14, 2021
SUBJECT: Task Order Appraisal Services
Foster Appraisal & Consulting Co, Inc.
Contract 607TA



COMMITTEE: Administration, Finance & Audit

 INFORMATION
 X VOTE

Lisa Grollman, Project Manager
Preparer/Title



Michele S. Gillen
Director, Administration

RECOMMENDATION:

To approve the recommendation of the Consultant Selection Committee to award Contract 607TA to Foster Appraisal & Consulting Co., Inc. to provide appraisal services and to authorize the Executive Director, on behalf of the Authority, to execute a contract in an amount not to exceed \$100,000 for a term of three years from the Notice to Proceed.

DISCUSSION:

MWRA staff use property appraisals to establish value when acquiring property in support of Board-approved capital construction projects, in the disposition of surplus MWRA property, and for negotiation of lease, permit and license fees. MWRA also requires consulting services and market studies, as needed. The purpose of this procurement is to make appraisal services available on an as-needed basis for projects that arise. Recent examples of appraisal assignments include:

- Southern Extra High Service Pipeline, Dedham (MBTA Dedham Station easements)
- New Neponset Valley Relief Sewer, Dedham (relocation of access easement for golf development)
- 2 Griffin Way, Chelsea (valuation of MWRA Chelsea Facility)
- Sections 50/57 Rehabilitation, Medford (temporary easements from ten property owners)
- 8m permit valuations at Brattle Court Pump Station, Arlington (storage facility)
- Market studies as needed (e.g. office rents in the greater Charlestown area)

As described in further detail below, MWRA sought two task-order appraisal contracts through this procurement, as has been past practice. Since only one proposal was successfully received by the deadline, a separate procurement is currently under way for the second contract. Funding for this procurement has been increased from a not-to-exceed amount of \$50,000 to \$100,000 to address the increased work volume anticipated over the next three years in support authority-wide projects and the Metropolitan Tunnel Redundancy Project.

Procurement Process:

The procurement process utilized a one-step Request for Qualification Statements and Proposals (RFQ/P), which was issued February 3, 2021. The RFQ/P was publically advertised in the Goods and Services, Boston Herald, Banner Publication, and El Mundo. In addition, 24 firms received notice of the RFQ/P via the MWRA Supplier Portal and 16 other firms who routinely provide appraisal services to other public entities in Massachusetts were also notified. Six firms requested a copy of the RFQ/P. One proposal was received on March 12, 2021 from Foster Appraisal & Consulting Co., Inc., one of the Authority’s current task-order appraisers. The remaining five firms on the planholder’s list were contacted. One firm, Colliers, prepared and thought it had submitted its proposal, but failed to hit the “submit” button on the Supplier Portal. Two firms indicated that they do not perform appraisals, one firm indicated the submittal process was too time consuming, and another firm did not respond to staff’s inquiry. Due to project needs, the Selection Committee proceeded with review of Foster’s proposal for Contract 607TA. Staff have re-advertised Contract 608TA and have issued another RFQ/P for a second task-order appraisal contract.

The Selection Committee evaluated and ranked the proposal based on the criteria contained in the RFQ/P (Cost - 30 points; Qualifications and Key Personnel - 25 points; Experience and Past Performance - 20 points; Technical Approach - 20 points; and Capacity, Organization, and Management Approach - 5 points).

Foster’s proposal was scored and ranked as follows:

<u>Firm</u>	<u>Total Points</u>	<u>Total Order of Preference</u>	<u>Final Rank</u>
Foster	464	5	1

Foster submitted Single Hourly Rates by job classification for each year of the contract and kept its rates constant over the three-year term for all the staff. Foster proposes using only senior appraisers and principals at a rate of \$195/hour.

As part of the technical approach and cost analysis, the RFQ/P required that Proposers submit a cost estimate and approach for three sample appraisal scenarios representing residential, commercial, and industrial valuation problems. The summary for total hours and costs for all three samples, as well as the average number of hours and costs per appraisal, from Foster are as follows:

Firm	Total Hours (3 samples)	Total Cost (3 samples)	Average Hours Per Appraisal	Average Cost Per Appraisal
Foster	78	\$15,210	26	\$5070

The Committee deemed the cost proposal competitive based on past similar Authority-wide work.

Foster has varied experience, depth of staff, strong recommendations, comprehensive and clear technical approach, and a clear management approach. The firm has strong previous performance on a variety of public and private appraisal projects, from simple to complex. Foster’s clients include the Commonwealth of Massachusetts, CSX Railroad, as well as many cities and towns. References were received from MWRA, DCAMM, Town of Hudson and CSX, and all provided strong recommendations for the company. Foster’s work for MWRA has included easements for water and sewer projects, railroad valuation, permit fee analysis, fee acquisitions, consulting, market studies, and litigation support. Overall, Foster submitted a thorough, detailed proposal.

The Selection Committee recommends that Foster Appraisal & Consulting Co, Inc. be awarded Contract 607TA for appraisal services.


BUDGET/FISCAL IMPACT:

The FY21 CIP includes a budget of \$100,000 for Appraisal Services. Contracts 607TA will be used on an as-needed basis and costs incurred to perform services will be charged to the specific project under the FY21 CIP.

MBE/WBE PARTICIPATION:

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

STAFF SUMMARY

TO: Board of Directors
FROM: Fredrick A. Laskey, Executive Director 
DATE: April 14, 2021
SUBJECT: Technical Assistance Consultant Services, Hazardous Materials
Hydro-Environmental Technologies, Inc., Contract 609TA
Green Seal Environmental, Inc., Contract 610TA

COMMITTEE: Administration, Finance & Audit

INFORMATION
 VOTE

Lori Ann Foley, Program Manager, Environmental
Richard Geisler, Environmental Manager
Preparer/Title


Michele S. Gillen

Director of Administration


David W. Coppes, P.E.

Chief Operating Officer

RECOMMENDATION:

To approve the recommendation of the Consultant Selection Committee to award Contract 609TA to Hydro-Environmental Technologies, Inc. and Contract 610TA to Green Seal Environmental, Inc. to provide Technical Assistance Consulting Services for Hazardous Materials and to authorize the Executive Director, on behalf of the Authority, to execute said contracts, each for an amount not to exceed \$550,000, and each with a contract term of three years from the Notice to Proceed.

DISCUSSION:

The purpose of these technical assistance contracts is to make available, on an as-needed basis, hazardous materials assessment services for small, unanticipated or emergency projects.

Over the years, because of the significant demand for task order work involving hazardous materials, MWRA typically awards separate contracts to two firms. This two-contract approach has been successful in ensuring the availability of qualified expertise in this important and environmentally sensitive discipline at all times.

Some typical examples of task order work likely to be issued under this contract include:

- preparation and implementation of spill prevention plans at MWRA facilities required under the federal Clean Water Act;
- staff training related to oil-handling spill prevention and response procedures;
- annual update of the Deer Island Treatment Plant Integrated Contingency Plan by a Professional Engineer. The Deer Island Treatment Plant Integrated Contingency Plan is a comprehensive document that provides information and regulatory guidance to allow for the effective response to emergencies at the Deer Island Treatment Plant and establishes plans and procedures to minimize the potential for pollution to impact Boston Harbor and the Massachusetts Bay;

- hazardous materials sampling and analysis support to MWRA staff as they plan, design, and construct new and rehabilitated infrastructure;
- hazardous materials spill response actions by a Licensed Site Professional in accordance with the Massachusetts Contingency Plan. The Massachusetts Contingency Plan is the set of regulations under Massachusetts General Laws Chapter 21E that creates the program for required assessment, risk assessment and remediation of oil and hazardous materials contamination; and
- ground water remediation and monitoring.

Procurement Process

Staff used a one-step, two-envelope Request for Qualifications/Proposals (RFQ/P) process seeking two consultants to be selected on an all-qualified low-cost basis, with cost and qualifications submitted separately. Because these contracts often involve ensuring regulatory compliance and remediation of complex site conditions, proposers were required to meet minimum threshold qualification requirements in specific areas of experience and expertise. In their proposals, respondents were directed to demonstrate that the technical threshold requirements have been met, and further, that each firm employs at least one Licensed Site Professional and one Massachusetts Licensed Professional Engineer. Proposers meeting all qualification requirements were deemed qualified, then ranked on the basis of cost. The two qualified proposers with the lowest cost are recommended for contract award.

The RFQ/P did not include a detailed scope of work on which proposers could submit a cost proposal because tasks will vary depending on the nature and circumstances of the requested work. Instead, firms were required to provide single hourly rates for each person, within each labor classification, for three successive years of the contract, along with unit prices for laboratory and drilling costs. Each single hourly rate is the billable rate of each specific employee for each hour spent on a task order and is inclusive of all direct labor costs, indirect costs and profit. Staff developed a sample cost exercise, which included a variety of representative expenses and level of effort that could be called for in task orders issued under these hazardous materials contracts. This cost exercise was the basis for determining the lowest cost proposals.

On January 13, 2021, MWRA issued the RFQ/P, which was publicly advertised in the Goods and Services Bulletin, the Boston Herald, Banner Publications and El Mundo. In addition, notice of the RFQ/P was sent directly to 21 firms. Seven proposals were received by the February 12, 2021 deadline from BETA Group, Inc., Civil & Environmental Consultants, Inc., Geosphere Environmental Management, Inc., Green Seal Environmental, Inc., Green Site Service Group, Inc., Hydro-Environmental Technologies, Inc., and TechLaw Consultants, Inc. The proposal from Civil & Environmental Consultants, Inc. was deemed non-responsive, and was not presented to the committee for evaluation.

On February 23, 2021, the Selection Committee met and carefully examined the six responsive proposals. Of the six proposals, four firms were deemed qualified by the committee. The four qualified firms were ranked based upon cost, using the established cost exercise for the purpose of evaluation.

The results are presented below.

<u>Firms</u>	<u>Sample Cost Exercise</u>	<u>Rank</u>
Hydro-Environmental Technologies, Inc.	\$60,957.00	1
Green Seal Environmental, Inc.	\$66,057.79	2
BETA Group, Inc.	\$66,110.08	3
TechLaw Consultants, Inc.	\$75,741.56	4

Hydro-Environmental Technologies, Inc., with the lowest sample cost exercise, was ranked first. Hydro-Environmental was established in 1986 and recently completed Contract OP-331 with MWRA on an industrial noise measurement and monitoring project. The firm proposed a highly qualified project team with excellent experience performing complex Massachusetts Contingency Plan work. Hydro-Environmental's principal point of contact and Licensed Site Professional has extensive experience as a project manager for MWRA task order projects under a similar contract with a prior firm, worked at many MWRA properties and demonstrated an understanding of MWRA's procedures, operations and requirements. Hydro-Environmental's office is located in Acton, Massachusetts, allowing quick response to MWRA properties and project needs. Furthermore, Hydro-Environmental listed seven technical staff, including three Licensed Site Professionals, to support the contract.

Green Seal Environmental, Inc. was the second-ranked firm and is one of the recommended Consultants. This Massachusetts certified MBE/WBE firm has excellent prior experience working for MWRA. In particular, it has managed several task orders, including the assessment of hazardous building materials at MWRA facilities undergoing design for rehabilitation. In addition, its well qualified Licensed Site Professional and staff demonstrated excellent understanding of the Massachusetts Contingency Plan regulations through its management of response actions involving releases of hazardous material at several MWRA facilities. Green Seal's proposal provides a well-qualified project team, which includes teaming with BETA Group, Inc., a firm with excellent experience in environmental regulations applicable to MWRA operations.¹ Green Seal's proposal demonstrated significant experience on previous related projects and a thoughtful technical and management approach to anticipated task order work.

The Selection Committee was in agreement that the other two applicant firms were also well qualified and met the threshold requirements for consideration; however, their proposals were not as competitively priced as the two recommended firms were.

Therefore, the Selection Committee recommends the award of Contract 609TA to Hydro-Environmental Technologies, Inc. and Contract 610TA Green Seal Environmental, Inc., each for an amount not to exceed \$550,000.

¹ As indicated above, BETA Group, Inc. also submitted a proposal to this RFQ/P. Based on that submission and Green Seal's inclusion of BETA as a subconsultant on its proposal, staff requested a meeting with representatives from Green Seal to discuss their teaming arrangement with BETA. A meeting was held on March 26, 2021, and staff were provided a satisfactory explanation of the relationship between the two proposers and the manner in which bid prices were calculated.


BUDGET/FISCAL IMPACT:

The FY21 Capital Improvement Program contains \$900,000 for Hazardous Materials Services. Any difference will be absorbed within the five-year CIP spending cap or CEB.

MBE/WBE PARTICIPATION:

There were no MBE or WBE participation requirements established for this contract due to limited opportunities for subcontracting. However, Green Seal Environmental, Inc. is a Certified Minority- and Women-owned business.

STAFF SUMMARY

TO: Board of Directors
FROM: Frederick A. Laskey, Executive Director 
DATE: April 14, 2021
SUBJECT: Maintenance and Support of the Integrated Financial, Procurement and Human Resources/Payroll Management System
Infor Inc.

COMMITTEE: Administration, Finance, & Audit

 INFORMATION

 X VOTE



Thomas Durkin

Director, Finance

Paula Weadick, MIS Director
Giri Narayanan, App & Sys Development Mgr.
Douglas J. Rice, Director, Procurement
Preparer/Title



Michele S. Gillen

Director of Administration

RECOMMENDATION:

To approve the award of a sole source purchase order contract for the annual maintenance and support of the integrated financial, procurement and human resources/payroll management system to Infor Inc. and to authorize the Executive Director to execute said purchase order contract in an amount not to exceed \$508,757.77 for a period of one year, from June 1, 2021 through May 31, 2022.

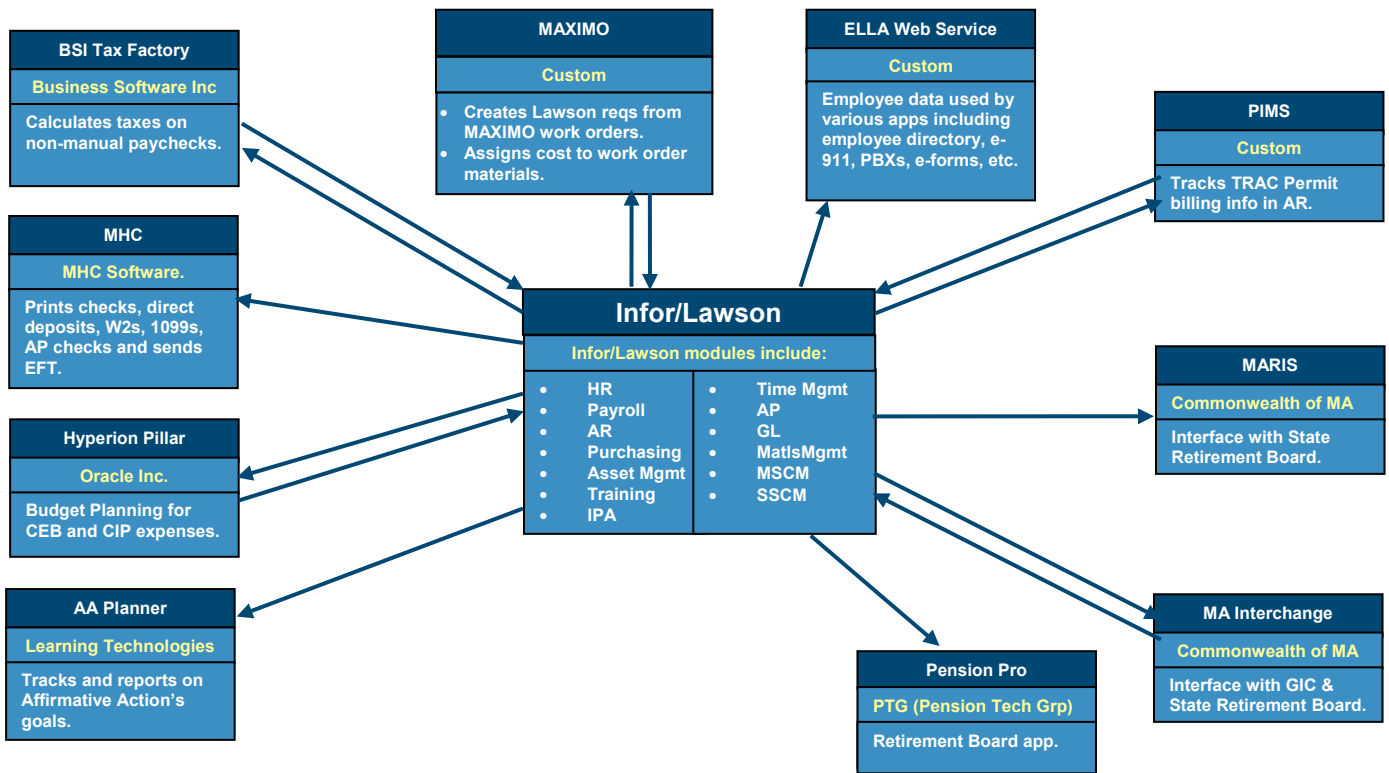
DISCUSSION:

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.

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

Infor/Lawson Dependent Systems



This maintenance and support agreement is an essential tool to protect the MWRA's Lawson software investment. The Lawson support agreement ensures that the MWRA receives vendor support including:

- Access to the Infor Support Portal which provides product patches, version releases, software upgrades, documentation, "How To" assistance, remote diagnosis, priority case queuing, e-mail notifications, web discussion groups, and electronic self-service case logging, tracking and management.
- Access to support engineers twelve hours a day, five days a week and twenty-four hour, seven day a week support for critical issues.

Staff have thoroughly reviewed the sole source nature of this procurement. Infor Inc. is the manufacturer of this software and while there are third party vendors who provide support for various applications, they do not have the ability to change standard code or provide upgrades or fixes to the application. This ability is important to the MWRA to ensure that it is able to maximize its use of Lawson.

Non-renewal of the maintenance and support agreement would place the MWRA at risk since no further support will be provided on the existing applications. Therefore, staff recommend that the MWRA renew the annual maintenance agreement to provide ongoing support for the Lawson System.

BUDGET/FISCAL IMPACT:

This year's request of \$508,757.77 represents a 6% increase over last year's not-to-exceed amount of \$479,960.16. There are sufficient funds available in the FY21 CEB for this renewal.

MBE/WBE PARTICIPATION:

Infor Inc. is not a certified Minority or Woman Owned business.

STAFF SUMMARY


TO: Board of Directors
FROM: Frederick A. Laskey, Executive Director
DATE: April 14, 2021
SUBJECT: Telephone System Replacement
ePlus Technology, Inc.
WRA-4957Q, State Contract ITT50



COMMITTEE: Administration, Finance, & Audit

 INFORMATION
 X VOTE

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


Michele S. Gillen
Director, Administration

RECOMMENDATION:

To approve the award of a purchase order contract for telephone system hardware, software, five years maintenance support, three years managed services, and installation services to the lowest responsive bidder under Bid WRA-4957Q, ePlus Technology, Inc., and authorize the Executive Director to execute said purchase order in the bid amount of \$1,094,551.80.

DISCUSSION:

MWRA's existing PBX systems reside in nine locations and consist of seven Mitel SX2000 units, one Mitel ICP 330 unit and one NEC Key System with the initial installation dating back to 1998. Each of these systems are standalone systems that are managed independently. These systems are obsolete and in need of replacement. Staff evaluated a number of replacement options and have selected a Cisco Unified Communications (UC) platform. This solution will replace the existing analog systems with a Voice Over Internet Protocol (VOIP) system that will be able to utilize existing data network circuits while continuing to support the operational needs for analog lines such as fire panels. The VOIP system will also allow for improved call handling capabilities, better call reporting and support for mobile users.

Since March 2020, due to the pandemic, the MWRA has standardized its video conferencing on the Cisco Webex platform and team collaboration utilizing Cisco Webex Teams. The Cisco Unified Communications (UC) solution will integrate seamlessly with these tools, provide for greater functionality when using them and provide licensing for all staff.

The decision to standardize on Cisco UC was based on following factors:

- 1) Cisco UC integrates with the Cisco Webex Web Collaboration solution, which MWRA has already implemented.

- 2) MWRA has standardized on Cisco switches and routers for all its wired network implementations.
- 3) Cisco UC uses Cisco Discovery Protocol that all Cisco switches and routers support without any custom configurations and therefore will integrate seamlessly with existing Cisco network equipment.
- 4) MWRA has staff certified to support Cisco networking equipment which will result in a shorter learning curve to support Cisco UC.

This procurement is to upgrade the aging, unsupported PBX and other voice-related equipment with Cisco UC. The procurement also includes hardware and software licenses for five years, implementation services, and three years of managed services that includes one annual preventative maintenance and health check, proactive monitoring of events, management of incidents 24x7x365, and system administration such as moves, adds and changes.

The equipment will be installed at following sites:

1. Charlestown Navy Yard
2. Chelsea Facility
3. Clinton Water Treatment Plant
4. Cosgrove Intake
5. Records Center
6. John J. Carroll Water Treatment Plant
7. Nut Island Headworks
8. Southborough Facility
9. Deer Island Treatment Plant
10. Pelletizing Plant

Implementation in Clinton, Cosgrove, Southborough and Deer Island is dependent upon cabling upgrades within these sites. Scopes are being developed for this work and will be procured separately. The awarded vendor will provide and install all equipment over an anticipated four to six month period from date of award. Once installed, the vendor will test all equipment for functionality, make any repairs as needed, and provide training to staff.

Procurement Process:

Under Bid WRA-4957Q, utilizing MWRA’s e-procurement system (Event 4618), staff directly solicited the 10 vendors listed on State Contract ITT50, which are authorized to provide Cisco Voice and Data Communications Systems, Services and Equipment.

On April 2, 2021, Event 4618 closed with the following results:

BIDDERS	BID AMOUNT
ePlus Technology, Inc.	\$1,094,551.80
NWN Corporation	\$1,356,773,71

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


BUDGET/FISCAL IMPACT:

There are sufficient funds for this purchase order in the FY21 Capital Improvement Program.

MBE/WBE PARTICIPATION:

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

STAFF SUMMARY


TO: Board of Directors
FROM: Frederick A. Laskey, Executive Director 
DATE: April 14, 2021
SUBJECT: Financial Assistance Agreement with BWSC for Sewer Separation and Other CSO Improvements in East Boston

COMMITTEE: Wastewater Policy & Oversight

John P. Colbert, P.E., Chief Engineer
Brian L. Kubaska, P.E., Assistant Director of Engineering
Preparer/Title

 INFORMATION

 X VOTE


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

RECOMMENDATION:

To authorize the Executive Director, on behalf of the Authority, to execute the *Financial Assistance Agreement by and between Massachusetts Water Resources Authority and Boston Water and Sewer Commission for East Boston Sewer Separation and Other CSO Improvements*, substantially in the form attached, by which BWSC agrees to perform sewer separation and other CSO system improvements in East Boston to further reduce CSO activations and volumes and assist MWRA in meeting its Long Term CSO Control Plan goals and MWRA agrees to provide funding for eligible sewer separation and CSO system improvement costs at a total amount not to exceed \$2,181,667 and a term of 24 months, from July 1, 2021 through June 30, 2023.

DISCUSSION:

In 1996, MWRA and BWSC entered into a Memorandum of Understanding and Financial Assistance Agreement (MOU/FAA) by which, and as amended, BWSC assumed responsibility for implementing nine of the 35 projects in MWRA's Long Term CSO Control Plan (LTCP). The MOU/FAA included additional work to provide inflow removal and hydraulic relief of the BWSC-owned Dorchester Interceptor in large storms following completion of the South Boston Dorchester Bay Sewer Separation Project and the permanent closing of related CSOs (Fox Point and Commercial Point CSO Facilities). BWSC required additional time beyond the original June 30, 2017 end date of the MOU/FAA to complete the hydraulic relief/inflow removal efforts. Therefore, with approval of the Board of Directors on May 8, 2017, the remaining funds of the original MOU/FAA (\$3,763,054) were transferred into a separate, four-year Financial Assistance Agreement (FAA) with BWSC, allowing BWSC an extended period, until June 30 2021, to complete additional hydraulic relief and inflow removal work. BWSC has since studied, designed and awarded a contract, with MWRA's approval of eligibility, to National Water Main for \$1,581.387 to rehabilitate 35,600 linear-feet of sewer and perform repairs at four points within the Dorchester system to remove inflow and support hydraulic relief. This construction effort is currently underway and scheduled for completion before June 30, 2021.

BWSC has indicated that it will not be pursuing any further inflow removal or hydraulic relief work for the Dorchester Interceptor system under the current FAA and has requested the transfer of the uncommitted \$2,181,667 to support BWSC’s work in East Boston that will further lower CSO towards attainment of MWRA’s LTCP.

As part of the LTCP, MWRA completed construction of the \$85.2M East Boston Branch Sewer relief project in 2010. This project included three contracts to rehabilitate the main trunk sewer:

pipe relining (Contract 6840, March 2002 – May 2004), microtunneling (Contract 6257, July 2008 – July 2010) and pipebursting (Contract 6841, April 2009 – June 2010). The project substantially reduced CSO discharge from East Boston’s eight active CSO outfalls. In 1992, CSOs in East Boston were predicted to activate as many as 48 times, and discharge approximately 70 Million Gallons (MG) in a typical year, where the recent updated and calibrated model predicts ten activations and 9.4 MG, an 87% reduction in CSO volumes. Despite this substantial progress, the newly calibrated model, developed as part of the CSO Performance Assessment shows that MWRA is still not fully meeting the court mandated levels of control at a few of these East Boston outfalls. BWSC has been working on a multi-phased sewer separation effort within East Boston that includes installation of new storm drains, sanitary sewers and water mains. It has designed and completed implementation of Phase 1 (37 acres), providing separation to certain areas tributary to two CSO outfalls (BOS012 and BOS013); and has designed and is near completion of construction on Phase 2 (32 acres), providing separation to certain areas tributary to two more outfalls (BOS005 and BOS010). These two phases are predicted to further reduce CSO discharges to eight activations and 8.35MG, in a typical year. However, three CSO outfalls (BOS003, BOS009 & BOS014) still remain above the LTCP goals for activation frequency and volumes.

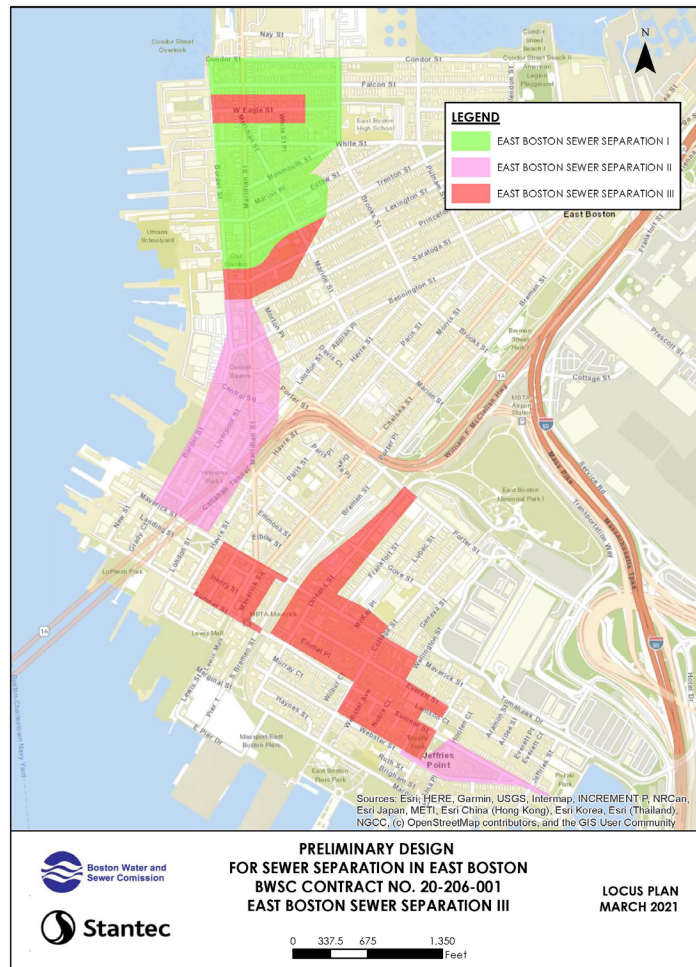


Figure 1 – East Boston Sewer Separation Map

MWRA and BWSC have been working together to establish design requirements for the Phase 3 sewer separation contract that will allow the LTCP goals to be met in East Boston. BWSC has already added additional design components in Phase 3 (49 acres), including connection relief of

outfall BOS003, and has committed to working to modify the systems at outfall BOS014 to achieve LTCP goals based on conceptual design recommendations recently made by MWRA and its CSO Consultant. The Phase 3 project is in final design, and has been approved by the Commission for advertisement in the coming months.

MWRA Funding and Oversight

The proposed East Boston Sewer Separation and Other CSO Improvements Financial Assistance Agreement (Agreement) will provide the oversight and funding mechanisms by which MWRA will make funds available to BWSC to pay eligible construction costs associated with East Boston Sewer Separation – Phase III Contract 19-309-002 in East Boston, and other CSO improvements that work to meet the LTCP goals at BOS014. The proposed Agreement includes a total not-to-exceed award amount of \$2,181,667 and a term of 24 months, from July 1, 2021 through June 30, 2023.

The proposed Agreement includes the following provisions:

- BWSC shall work with MWRA in the development of, and submit, contract documents to MWRA for concurrence of eligibility prior to advertisement of the BWSC Sewer Separation Contract 19-309-002 and CSO improvement in East Boston that work to meet the LTCP goal of BOS014.
- MWRA shall provide a lump sum payment of two-third of the award amount (\$1,454,445) to BWSC for eligible expenses upon construction award of BWSC Sewer Separation Contract 19-309-002. The completion of this sewer separation project is predicted to achieve LTCP goals at BOS003 and BOS009.
- MWRA shall provide a lump sum payment of one-third of the award amount (\$727,222) to BWSC for eligible expenses upon construction award of CSO improvements in East Boston that work to meet the LTCP goals of BOS014.
- BWSC shall submit to MWRA quarterly progress reports that include the progress of each project, project tasks initiated and completed each quarter and an accounting of the quarterly costs for which payment of any portion of the award amount was made. BWSC shall append to each quarterly progress report all documentation necessary to justify the eligible project costs for which payment of any portion of the award amount was made.
- MWRA may inspect/monitor the progress of the BWSC work to verify it is proceeding in a manner that will result in MWRA's achievement of its LTCP goals in East Boston.
- BWSC shall provide MWRA with documentation of completed projects, including as-built plans and photographs.
- MWRA will provide technical assistance to BWSC, if requested, to assist with the implementation of the proposed projects.

Staff will continue to work cooperatively with BWSC and hold regular coordination meetings to review the progress of BWSC's work and expenditures.

BUDGET/FISCAL IMPACT:

The FY21 CIP includes a budget of \$3,763,054 for Contract 7576 Dorchester Interceptor Inflow Removal. Of this amount, \$1,581,387 will be carried forward into FY22 to cover the committed funds, while the remainder of \$2,181,667 will be carried into a new CIP line item for Sewer Separation and Other CSO Improvements in East Boston.

MBE/WBE PARTICIPATION:

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

ATTACHMENTS:

Attachment 1 – Proposed Financial Assistance Agreement by and between Massachusetts Water Resources Authority and Boston Water and Sewer Commission for East Boston Sewer Separation and Other CSO Improvements

FINANCIAL ASSISTANCE AGREEMENT
BY AND BETWEEN
MASSACHUSETTS WATER RESOURCES AUTHORITY
AND
BOSTON WATER AND SEWER COMMISSION
FOR
EAST BOSTON SEWER SEPARATION AND OTHER CSO IMPROVEMENTS

This Financial Assistance Agreement ("Agreement") is made by and between Massachusetts Water Resources Authority, a body politic and corporate and public instrumentality, existing under Chapter 372 of the Acts of 1984, with its principal place of business at 100 First Avenue, Charlestown, MA 02129 ("MWRA"), and Boston Water and Sewer Commission, a body politic and corporate and public instrumentality established pursuant to Chapter 436 of the Acts of 1977, with its principal place of business at 980 Harrison Avenue, Boston, MA 02119 ("BWSC" or "Awardee"); (individually "Party" and collectively the "Parties");

WHEREAS, in 1996, MWRA and BWSC executed a Memorandum of Understanding and Financial Assistance Agreement ("MOU/FAA") for the implementation of combined sewer overflow ("CSO") control projects, by which, and as amended, BWSC assumed responsibility for implementing nine of the 35 projects in MWRA's Long-Term CSO Control Plan. BWSC attained substantial completion and beneficial use of all of these projects by December 2015 in compliance with the Federal District Court Order;

WHEREAS, the MOU/FAA included funds for the removal of additional stormwater inflow or other actions that could provide adequate hydraulic relief to BWSC's Dorchester Interceptor and control flooding in large storms ("Dorchester Interceptor Relief Work"). As of May 2017, it was estimated that the Dorchester Interceptor Relief Work would take an additional four years to complete. Effective July 1, 2017, MWRA and BWSC entered into a new Financial Assistance Agreement (Dorchester Interceptor FAA) whereby the MOU/FAA was closed out and the remaining funds thereunder were transferred to the Dorchester Interceptor FAA, thereby allowing BWSC further time for removal of additional stormwater inflow or other actions that could provide adequate hydraulic relief to BWSC's Dorchester Interceptor and control flooding in large storms;

WHEREAS, BWSC has planned, designed, bid and awarded a single contract for inflow removal and hydraulic relief within the Dorchester Interceptor system under the Dorchester Interceptor FAA. No further work is planned by BWSC under the Dorchester Interceptor FAA;

WHEREAS, \$2,181,667 remains unspent and uncommitted under the Dorchester Interceptor FAA;

WHEREAS, BWSC is currently completing design of its third sewer separation contract in East Boston, identified as BWSC Contract 19-309-002, ("East Boston Sewer Separation Phase III Project"), which is expected to be advertised and bid in the spring of 2021;

WHEREAS, MWRA hydraulic modeling shows that completion of certain work included in the East Boston Sewer Separation Phase III Project will allow MWRA to meet its CSO Long Term Control Plan ("LTCP") goals for frequency and activation at BOS003 and BOS009; and other CSO improvement work by BWSC will allow MWRA to meet its LTCP goals at BOS014;

WHEREAS, MWRA is willing to provide BWSC financial assistance to defray, in part, the costs of performing the East Boston Sewer Separation Phase III Project and other CSO improvement work by BWSC to meet MWRA's CSO LTCP goals;

WHEREAS, BWSC agrees to perform the East Boston Sewer Separation Phase III Project (BWSC Contract 19-309-002), and other CSO improvement work, that will allow MWRA to meet its CSO LTCP goals for frequency and activation;

WHEREAS, BWSC and MWRA agree to terminate the Dorchester Interceptor FAA as of June 30, 2021, and to transfer the remaining uncommitted and unspent \$2,181,667 from the Dorchester Interceptor FAA to this Agreement for the East Boston Sewer Separation Phase III Project and other CSO improvement work in East Boston that will allow MWRA to meet its LTCP goals as to frequency and activation; and

WHEREAS, the purpose of this Agreement is to ensure the timely completion of the East Boston Sewer Separation Phase III Project and other CSO improvement work in East Boston, as identified by BWSC and approved by MWRA, to allow MWRA to meet its LTCP goals at BOS003, BOS009 and BOS014.

NOW THEREFORE, in consideration of the foregoing and the promises contained herein, the Parties agree that MWRA will provide and Awardee will accept financial assistance under the following terms and conditions:

I. FINANCIAL ASSISTANCE

A. MWRA shall provide financial assistance ("Award") to Awardee in the form of two lump sum payments for eligible expenses upon construction contract award of the East Boston Sewer Separation Phase III Project and the further project for CSO improvement to support meeting LTCP goals at BOS 014 as recommended by Awardee and approved by MWRA and in accordance with this Agreement. The total amount of the Award ("Total Award Amount") over the term of this Agreement is a not-to-exceed amount of Two Million, One Hundred Eighty One Thousand, Six Hundred and Sixty Seven Dollars (\$2,181,667). Revision of the Total Award Amount requires MWRA Board of Directors approval and amendment of this Agreement. The actual amount of the Award at the termination of this Agreement shall be the summation of two payments for construction contracts or approved change orders awarded by Awardee and approved by MWRA for the East Boston Sewer Separation Phase III Project and other CSO improvement work recommended by Awardee and approved by MWRA up to, and not exceeding, the Total Award Amount. The dollars estimated for the Total Award Amount shall not be construed as an obligation on MWRA's part either to fund or reimburse, in whole or in part, the Total Award Amount. MWRA shall not be responsible

for any costs incurred by BWSC for the East Boston Sewer Separation Phase III Project or other CSO improvement work, or any other Scope of Services, that is in excess of the Total Award Amount.

B. It is expressly understood that Awardee is solely responsible for the complete and timely performance of the Scope of Services to the extent that the work and schedule are reasonably within its control.

II. ELIGIBILITY

A. Financial assistance provided by MWRA pursuant to this Agreement shall be for the purposes of funding the actual, reasonable, eligible costs associated with construction of the sewer separation and other CSO improvement projects that will be implemented by Awardee, up to the Total Award Amount and as defined in the Agreement. Eligible project costs shall include those related expenses incurred by Awardee in the implementation of the projects in accordance with the Scope of Services.

B. Costs which are eligible under this Agreement include, but are not limited to:

1. General

- a. All reasonable costs necessary to construct the sewer separation and other CSO improvement projects in accordance with and to the limits of the project descriptions in the Scope of Services in this Agreement.
- b. Costs to obtain permits, including street opening permits, and regulatory approvals required to construct the projects.
- c. Fees payable by Awardee under local by-law or ordinance as a direct result of the project, including payments to the City of Boston for the occupation of metered parking spaces during construction.
- d. Project costs that are associated with the mitigation of construction impacts are eligible only if the mitigation measures are consistent with the "Statement of Mitigation Principles," adopted by the MWRA Board of Directors on October 26, 1988, and the "Guidelines for Engineering and Construction Practices," adopted by the MWRA Board of Directors on March 9, 1994 and the MWRA Advisory Board on May 19, 1994 and revised December 17, 1997, copies of both included in Attachment 1.
- e. Other reasonable costs that arise and are approved in writing by MWRA as eligible costs.

2. Construction

- a. Police details that are directly related to the eligible construction activities.

- b. Relocation and/or replacement by the Awardee of publicly owned utilities and other surface or subsurface structures that are in direct conflict with proposed structures only to the extent necessary to avoid the structure. Utilities perpendicular to the trenchwork will be supported in place or, if required, replaced to the nearest joint beyond each side of the trench or to 4 feet beyond the trench, whichever is less.
 - c. Pavement - permanent trench patch or reduced depth trench patch with curb to curb overlay; restoration of sidewalks disturbed by project construction.
- C. Costs which are ineligible under this Agreement include, but are not limited to:
- 1. General
 - a. Costs incurred outside the scope of the projects.
 - b. Costs in excess of the Total Award Amount established in Article I A.
 - c. Project-related costs incurred later than one year following the completion of construction of the respective project.
 - d. Ordinary operating expenses of Awardee.
 - e. Costs for which funding has been or will be received under any other MWRA, state or federal funding assistance program.
 - f. Costs for development or printing of operation and maintenance manuals.
 - g. Costs for development of or revisions to sewer use ordinance, sewer use rules and regulations, or sewer user charge systems.
 - h. Costs for purchase, rental, installation or operation of equipment for permanent or temporary monitoring of flow in sewer or storm drain systems.
 - i. Costs for purchase of sewer cleaning and/or internal TV inspection equipment.
 - j. Bonus payments to contractors for completing construction earlier than contracted completion date.
 - k. Personal injury compensation, claims related to wrongful deaths, or property damage arising out of the project, however determined.
 - l. Costs of services, equipment or materials procured in violation of state or federal law.
 - m. Fines and penalties.

- n. Any cost not listed as an eligible cost and not pre-approved in writing by MWRA.
- o. Costs incurred through errors, omissions or negligence on the part of Awardee, its consultants and/or contractors.

2. Design

- a. Services and purchases, under force account or contract, for preparation of design plans, specifications, cost estimates and other construction bid documents.
- b. Services to supervise or manage project construction activities.
- c. Field inspections, internal system inspections including internal television inspections, sewer system cleaning and temporary flow metering.
- d. Subsurface investigations, including test pits, borings and soils and groundwater testing.
- e. Surveying services.
- f. Police details directly related to any of the work listed above.

3. Construction

- a. Construction costs incurred by a third party unless pre-approved by MWRA.
- b. Rehabilitation, relocation and/or replacement of publicly owned utilities or other subsurface structures not in direct conflict with the project.
- c. Rehabilitation, relocation and/or replacement of privately owned utilities or other subsurface structures within a public right-of-way.
- d. Replacement of curbing, sidewalks, trees, streetlights, traffic signs, signalization and other surface features not in direct conflict with the project.
- e. Implementation of mitigation plans that do not conform to the MWRA mitigation policy (see Article II(B)(1)(d)), unless required through or by federal or state regulatory review and approved by MWRA.

D. Financial assistance will not be provided for the costs of owning, operating and maintaining facilities owned by Awardee, including those facilities to be constructed or modified under the sewer separation and other CSO improvement projects. It is expressly understood that such costs shall be borne entirely by Awardee.

III. RELEASE OF PAYMENTS AND EXPENDITURE VERIFICATION

- A. BWSC shall work with MWRA in the development of, and submit, contract documents to MWRA for concurrence of eligibility prior to advertisement of the BWSC Sewer Separation Contract 19-309-002 and the CSO improvement in East Boston that work to meet the LTCP goal of BOS014.
- B. MWRA shall provide a lump sum payment of two-third of the award amount (\$1,454,445) to BWSC for eligible expenses upon construction award of BWSC Sewer Separation Contract 19-309-002. The completion of this sewer separation project is predicted to achieve LTCP goals at BOS003 and BOS009.
- C. MWRA shall provide a lump sum payment of one-third of the award amount (\$727,222) to BWSC for eligible expenses upon construction award of CSO improvements in East Boston that work to meet the LTCP goals of BOS014.
- D. BWSC shall submit to MWRA a quarterly progress report on or about the fifteenth day of the month following the close of the previous prior quarter. The report shall be in a form established and/or approved by MWRA and shall include the progress of each project, project tasks initiated and completed that quarter and an accounting of the quarterly costs for which payment of any portion of the award amount was made. BWSC shall append to each quarterly progress report all documentation necessary to justify the eligible project costs for which payment of any portion of the award amount was made including, but not limited to, contractor invoices and documentation regarding equipment, materials and other costs and expenses.
- E. MWRA may inspect/monitor the progress of the BWSC work to verify it is proceeding in a manner, which will result in MWRA's achievement of its LTCP goals in East Boston.
- F. BWSC shall provide MWRA with documentation of completed projects, including as-built plans and photographs.
- G. MWRA will provide technical assistance to BWSC, if requested, to assist with the implementation of the proposed projects.

IV. SCOPE OF SERVICES

A. Projects to be Implemented by Awardee

i.) Sewer Separation

Awardee has recommended the construction of the East Boston Sewer Separation Phase III Project (BWSC Contract 19-309-002) as a means to assist MWRA in achieving its LTCP goals as to frequency and activation. Specifically, the East Boston Sewer Separation Phase III Project

includes, without limitation, replacement of the RE003-12 connection with a 24" pipe, the closing of RE003-2 and RE003-7, and related work. Contract 19-309-002, includes, among other work, sewer separation by installing 7,600 linear feet of storm drains and the replacement of 2,300 linear feet and rehabilitation of 4,000 linear feet of sewer pipe is included in this contract. Only the sewer separation and sewer repair work shall be eligible for reimbursement under this agreement.

ii.) Other CSO Improvements

Awardee shall provide MWRA with a description and construct CSO improvement projects to be undertaken as part of this Agreement, which will assist MWRA in achieving its LTCP goals in East Boston at BOS014. The description shall include anticipated activities and costs. All such projects must be approved by MWRA prior to implementation. Approval shall be in MWRA's sole discretion.

B. General Requirements for all Projects

1. The following activities are considered to be part of the scope of each project, as applicable:
 - a. Oils and hazardous material (OHM) contamination in soil and groundwater may be encountered during construction of the projects. Assessment of OHM contamination prior to construction shall be conducted by Awardee in conformance with the MWRA White Paper, *Property Acquisition: MWRA Site Assessment for Identifying Hazardous Material*. A copy of the White Paper is included in Attachment 2.
 - b. Provisions for handling OHM during construction will be incorporated into the plans and specifications addressing procedures for identifying OHM and conducting URAMs (Utility-related Abatement Measures), guidelines for stoppage of work to control costs and/or prevent exacerbating existing conditions, and notification of URAM activities.
 - c. Relocation of utilities and other subsurface structures that conflict with the alignment of the proposed facilities. Relocation of existing structures should be avoided where possible by evaluating appropriate alternatives.
 - d. Acquisition of construction permits, including regulatory approvals.
 - e. Work necessary to comply with federal, state and local law and permit conditions, including full compliance with Americans with Disabilities Act.
 - f. Acquisition of necessary police details during construction.
 - g. Acquisition of sewer connection permits, including MWRA connection permits, for new connections to public sewer systems.
 - h. Reconstruction and/or replacement of surface features disturbed by the construction activities.

2. The scope does not include:
 - a. Cleaning and/or rehabilitation of existing conduits and structures solely to improve hydraulic capacity and/or structural integrity.
 - b. Removal of illegal sanitary connections to existing, public storm drain systems.

C. Changes to the Scope of Services

The Parties acknowledge that changes to the Scope of Services may be warranted by new information that arises during project implementation and/or by additional regulatory requirements placed on the project(s) or by other reasons. Either Party may request a change to the Scope of Services; all such requests must be in writing. Changes to the Scope of Services may be made only after consultation between the Parties and approval by MWRA. Any change will be formally incorporated into this Agreement by amendment if such formal incorporation is requested by either Party.

D. MWRA Technical Assistance

In addition to payments at construction awards, MWRA will also provide technical assistance to BWSC, if requested, to assist with the implementation of the proposed projects.

E. As-Built Drawings

BWSC must provide to MWRA as-built drawings of completed projects.

V. PROJECT SCHEDULE

A. Awardee agrees to implement the projects on a Schedule defined by Awardee and approved by MWRA. The Schedule at a minimum shall include the anticipated start and end dates for each construction package. The Schedule and any Schedule changes shall be subject to review and approval by MWRA.

B. The Schedule shall include an end date for all construction activities for all projects no later than June 30, 2023.

VI. PROJECT REVIEW AND INSPECTION

Awardee agrees to routinely apprise MWRA of project progress and to make the project sites and all project records available to MWRA for review during the course of the projects. MWRA will routinely monitor the progress of work to ensure that the project is: (1) proceeding substantially as defined in the Scope of Services; (2) proceeding substantially within the project Schedule; and (3) proceeding in a manner that is acceptable to MWRA for achievement of its CSO LTCP goals in East

Boston as to frequency and activations as shown by MWRA's hydraulic modeling.

VII. PROJECT CLOSEOUT PROVISIONS

Upon completion of each project, the Awardee shall notify MWRA that the project is complete and shall certify, on a form provided by MWRA, that all work included in the Scope of Services has been completed and performed in accordance with this Agreement.

VIII. PROJECT RECORDKEEPING AND AUDIT PROVISIONS

A. Awardee and its contractors shall maintain books, records, and other documents that pertain to and involve transactions related to this Agreement in accordance with generally accepted professional practice and generally accepted accounting principles. Awardee and its contractors shall also maintain the financial information and data used by Awardee, and its contractors, in the preparation or support of all invoices and progress reports. MWRA and any other duly authorized person shall have access to such books, records, documents, and other evidence for inspection, audit, and copying during normal business hours, at MWRA's expense and upon reasonable notice to Awardee. Awardee and its contractors shall provide proper facilities for such access and inspection. All documents shall be kept for at least seven (7) years after either the final payment to the contractor or closeout of the project, whichever is later.

B. Awardee agrees to include the wording of Article VIII A., above, in all contracts and subcontracts hereafter awarded to third party contractors, vendors and service providers related to this Agreement.

C. Audits conducted by MWRA, or its duly authorized representatives, shall be in accordance with generally accepted government auditing standards and established procedures and guidelines of MWRA. Such audits shall be conducted at the expense of MWRA.

D. Awardee agrees to provide MWRA with a copy of Awardee's annual audited financial statements within a reasonable time after the issuance thereof, together with a certificate of Awardee stating that Awardee is in compliance with its obligations under this Agreement.

IX. INTERACTION WITH OTHER PROGRAMS OF ASSISTANCE

A. MWRA reserves the right to seek state and/or federal funding for all or a portion of the work under this Agreement. If any agency of the Commonwealth or United States requires modifications in this Agreement as a condition precedent to the authorization and/or the expenditure of state and/or Federal funds for the project, irrespective of the funding agency or process, Awardee shall consent to such modifications as may be reasonably required to obtain such funds and the parties shall agree upon any necessary equitable adjustments in the compensation.

C. The Awardee certifies that it has not and will not receive financial assistance under the SRF, the MWRA I/I Local Financial Assistance Program, or any other state, federal, or other program of funding assistance for any project costs for which financial assistance has been provided by the MWRA under this Agreement.

X. EFFECTIVE DATE OF AGREEMENT

This Agreement is in effect as of April 14, 2021.

XI. TERM

This Agreement shall remain in effect until June 30, 2023.

XII. AUTHORITY TO EXECUTE AGREEMENT

Prior to the execution of this Agreement, Awardee shall take all steps necessary to authorize it to properly execute this Agreement and such authorization shall be documented by Awardee's execution of Attachment 3, Authority to Execute Agreement.

XIII. GOVERNING LAW

This Agreement shall be governed by and construed and enforced in accordance with the laws of the Commonwealth of Massachusetts.

XIV. COMPLIANCE WITH LOCAL LAWS

Awardee shall comply with all applicable laws, ordinances, and codes of the state and local governments, and shall commit no trespass on any public or private property in performing any of the work embraced by this Agreement.

XV. INVALIDITY OF PARTICULAR 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.

XVI. CONTRACTING/SUBCONTRACTING

A. Awardee shall, in accordance with its own competitive procurement practices and procedures, enter into contracts with contractors qualified to perform the Scope of Services or portions thereof. Awardee shall have no capacity to involve MWRA in any contract nor to incur any obligation or liability on the part of MWRA.

B. Awardee shall be as fully responsible to MWRA for the acts and omissions of its consultants and/or its Contractors, and of persons either directly or indirectly employed by them, as it is for the acts and omissions of persons directly employed by it.

C. Awardee agrees to include, in all contracts and subcontracts hereafter awarded to third party contractors, vendors and service providers related to this Agreement, the requirement that MWRA shall be named as an additional insured on policies providing coverage for general liability, automobile liability, and valuable papers.

D. Contract change orders that increase a contract amount by \$100,000 or more or 10% or more of the original contract amount, whichever is less, and all change orders that increase the contract amount to a new total contract amount that exceeds the original contract amount by \$100,000 or more or 10% or more, whichever is less, must be approved by MWRA prior to incurring the associated additional cost.

XVII. PERSONNEL

A. Awardee represents that it has, or will secure at its own expense, all personnel required in monitoring and managing delivery of services under this Agreement. Such personnel shall not be employees of or have any contractual relationship with MWRA.

B. All monitoring and managing of delivery of services required hereunder will be performed by Awardee or under its supervision and all personnel engaged in the work shall be fully qualified and shall be authorized or permitted under state and local law to perform such services.

XVIII. EQUAL EMPLOYMENT OPPORTUNITY

Awardee shall not discriminate against any employee or applicant for employment because of race, religion, color, sex, age, handicap status or national origin. Awardee, its engineer(s), and its contractor(s) shall comply with all applicable laws and regulations pertaining to nondiscrimination, equal opportunity and affirmative action, including without limitation executive orders and rules and regulations of federal, state and local agencies of competent jurisdiction.

XIX. INDEMNIFICATION

Awardee, at its expense, shall defend and shall indemnify and hold harmless MWRA, its members, officers and employees, from and against any and all claims, causes of action, suits, losses, damages and expenses, including attorneys' fees, arising out of or resulting from any acts, errors or omissions or breach of contractual duties by Awardee and anyone employed by it (including contractors, subcontractors and/or consultants and their employees) in performance of this Agreement to the extent permitted by law. Such obligation shall not be construed to negate or abridge any other obligation of indemnification running to MWRA which would otherwise exist.

XX. MEMBERS, EMPLOYEES NOT LIABLE

No member or employee of MWRA shall be charged personally or held contractually liable by or to Awardee under any term or provision of this Agreement or because of any breach thereof or because of its execution or attempted execution.

XXI. INTEREST OF AWARDEE

Awardee covenants that its contractors, subcontractors and/or consultants presently have no interest and shall not acquire any interest, direct or indirect, in the property to which this Agreement pertains or any parcels therein or any other interest which would conflict in any manner or degree with the performance of its services hereunder. Awardee further covenants that no person having any such interest shall be employed in the performance of this Agreement.

XXII. INTEREST OF EMPLOYEES; M.G.L.C. 268A

A. Neither Awardee, nor its contractors, subcontractors and/or consultants shall, during the term of this Agreement, hire or employ on either a full-time or part-time basis any person or persons so long as such person shall be employed by MWRA.

B. Awardee acknowledges that MWRA is a state agency for the purposes of Chapter 268A of the Massachusetts General Laws (the Massachusetts Conflict of Interest statute). Awardee agrees to take actions and to forbear from taking actions, as circumstances require, so as to be in compliance at all times with said statute.

XXIII. ASSIGNABILITY

Awardee shall not assign any interest, in whole or in part, in this Agreement and shall not transfer any interest in the same, whether by assignment or novation, without the prior written approval of MWRA.

XXIV. PAYMENT NOT A WAIVER

A. MWRA's payment to Awardee under this Agreement or its review, approval or acceptance of any actions by Awardee under this Agreement shall not operate as a waiver of any rights under this Agreement and Awardee shall remain liable to MWRA for all damages incurred by Awardee's failure to perform in accordance with the terms and conditions of this Agreement.

B. The rights and remedies of MWRA provided for under this Agreement are in addition to any other rights or remedies provided by law. MWRA may assert a right to recover damages by any appropriate means, including but not limited to set-off, suit, withholding, recoupment, or counter-claim either during or after performance of this Agreement.

XXV. TERMINATION OF THE AGREEMENT FOR CAUSE

A. If, through any cause, Awardee shall fail to fulfill in a timely and proper manner its obligations under this Agreement (including performance of the Scope of Services and maintenance of the project Schedule), or if Awardee has failed to comply with the terms and conditions of this Agreement, MWRA shall hereupon have the right to terminate this Agreement by giving written notice to Awardee of such termination and specifying the effective date thereof.

XXVI. TERMINATION OF FINANCIAL ASSISTANCE AGREEMENT BY AND BETWEEN MASSACHUSETTS WATER RESOURCES AUTHORITY AND BOSTON WATER AND SEWER COMMISSION FOR DORCHESTER INTERCEPTOR INFLOW REMOVAL

BWSC and MWRA agree that the Dorchester Interceptor FAA is terminated as of June 30, 2021.

XXVII. ATTACHMENTS

Attachments to this Agreement are incorporated herein and are as follows:

- | | |
|--------------|--|
| Attachment 1 | MWRA Mitigation Guidelines |
| Attachment 2 | MWRA White Paper, <i>Property Acquisition: MWRA Site Assessment for Identifying Hazardous Material</i> |
| Attachment 3 | Authority to Execute Agreement |

IN WITNESS WHEREOF, the parties have executed this Agreement this _____ day of _____, 2021.

MASSACHUSETTS WATER RESOURCES AUTHORITY

BY: _____
Frederick A. Laskey, Executive Director

AWARDEE: BOSTON WATER AND SEWER COMMISSION

BY: _____
Henry F. Vitale, Executive Director/Chief Financial Officer

Approved as to Form: _____
Janis DiLoreto Smith, General Counsel

Attachment 3

AUTHORITY TO EXECUTE AGREEMENT

I hereby certify that the (name of governing body) Board of the (City, Town, or Commission) Boston Water and Sewer Commission (hereinafter referred to as the "Awardee"), at a meeting noticed and conducted in accordance with all applicable legal requirements, duly voted, at a meeting of the governing body held on the _____ day of _____, 21 and duly recorded in my office, to authorize (title of official) _____ to act on behalf of the Awardee, as its agent, in executing agreements and performing any or all other actions necessary to secure for the Awardee financial assistance in the form of annual grant disbursements for the construction of Dorchester Interceptor Inflow Removal projects as may be made available to the Awardee from the Massachusetts Water Resources Authority.

I hereby certify that (name of official) _____ is the present incumbent of the position referenced above, and do hereby certify:

1. that said meeting noted above was duly convened and held in all respects in accordance with law and to the extent required by law, due and proper notice of such meeting was given; and a legal quorum was present throughout the meeting, and a legally-sufficient number of members of the governing body voted in the proper manner and for the adoption of said authorization; that all other requirements and proceedings under the law incident to the proper adoption or passage of said authorization, including publication, if required, have been duly fulfilled, carried out, and otherwise observed; and that I am authorized to execute this certificate:

2. that if an impression of a seal has been affixed below, it constitutes the official seal of the Awardee and this certification is hereby executed under such official seal; but if no seal has been affixed, the Applicant does not have an official seal:

IN WITNESS WHEREOF, this _____ day of _____, 20__.

(Signature of Officer)

(Print name of officer)

(Print title)

STAFF SUMMARY

TO: Board of Directors
FROM: Frederick A. Laskey, Executive Director *Frederick A. Laskey*
DATE: April 14, 2021
SUBJECT: Deer Island Treatment Plant South System Pump Station Improvements – Preliminary Design, Final Design, Bidding, Engineering Services During Construction, and Resident Engineering/Inspection Services
 Hazen and Sawyer, P.C.
 Contract 7126

COMMITTEE: Wastewater Policy and Oversight

 INFORMATION
 X VOTE

Michele S. Gillen
Michele S. Gillen
 Director of Administration

Dave Duest, Director, Deer Island WWTP
 Richard Adams, Manager, Engineering Services
John Riccio, Project Manager, Mechanical
 Preparer/Title

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

RECOMMENDATION:

To approve the recommendation of the Consultant Selection Committee to award of Contract 7126, Deer Island Treatment Plant South System Pump Station Improvements – Preliminary Design, Final Design, Bidding, Engineering Services During Construction, and Resident Engineering/Inspection Services, to Hazen and Sawyer, P.C., and to authorize the Executive Director, on behalf of the Authority, to execute said contract in an amount not to exceed \$7,535,701.14, for a contract term of 80 months from the Notice to Proceed.

DISCUSSION:



South System Pump Station

Deer Island was built in several phases between 1988 and 2000 and provides wastewater treatment services for 43 greater-Boston communities. Deer Island is designed to treat an average of 361 million gallons per day with peak flows of 1.3 billion gallons per day.

Flows from 20 southern MWRA communities are conveyed to the South System Pump Station located on Deer Island and account for roughly one-third of the total Deer Island plant flow.

Flow arrives at the South System Pump Station from an 11.5-foot diameter inter-island tunnel originating at the Nut Island Headworks Facility located in Quincy, Massachusetts. The South System Pump Station and

associated inter-island tunnel were placed into service in 1998. The inter-island tunnel connects to two wet wells within the South System Pump Station. Each wet well has four vertical, non-clog, centrifugal pumps (pictured at right) for a total of eight pumps within the station. Each pump is rated for 66.7 mgd. A 60-inch suction piping system interfaces with the wet-well. Wastewater is lifted into two 90-inch force main lines that discharge into the North System Grit Facility Effluent Channel, via an effluent distribution chamber.



SSPS Pump Assembly

The maximum design flow for the South System Pump Station is 400 mgd. Two pumps typically operate at design average flow, while six pumps are required to handle peak flows from the southern communities.

Much of the South System Pump Station Equipment is original and is nearing the end of its useful life or has become obsolete.



SSPS Pump Variable Frequency Drive

Contract 7126 includes a preliminary design report, final design, engineering services during construction (ESDC) and resident engineering/inspection services (RE/RI) for the improvements of Deer Island's South System Pump Station. Preliminary studies include 3D laser scanning of the pump station and development of a Building Information Model, influent flow evaluation, pump performance evaluation and condition assessment from the Original Equipment Manufacturer, a variable frequency drive ("VFD") and motor evaluation, influent wet-well condition assessment, pump station condition assessment and Building Code Compliance evaluations. The contract includes evaluation of alternatives for check valve replacement, lubrication systems, pump isolation, and influent sampling. The preliminary design report will summarize all recommendations and include discussions on cost, schedule, permitting and access.

Final design will include preparation of construction contract plans, specifications, cost estimates and bidding assistance, as well as preparation of draft and final permit applications, and individual information as required by permitting agencies. ESDC and RE/RI services are also included in this contract.

The anticipated construction work includes: replacement of eight raw wastewater pumps, shafts, motors, and VFDs, raw wastewater piping, dewatering system, influent sampling system, influent slide and roller gates at the facility, effluent slide and roller gates at the Grit Facility and various valves; HVAC upgrades; cathodic protection replacement; and wet well improvements, including

concrete repair and corrosion prevention measures.

Procurement Process

On November 9, 2020, MWRA issued a one-step Request for Qualifications Statements/Proposals (RFQ/P) that was publically advertised in the Central Register, the Boston Herald, Banner Publications and El Mundo; and staff directly solicited firms by e-mail. Twelve firms received copies of the RFQ/P. The RFQ/P included the following evaluation criteria and points: Cost (25 points); Qualifications and Key Personnel (25 Points); Experience/Past Performance on Similar Non-Authority Projects and Past Performance on Authority Projects (25 Points); Technical Approach (10 Points), Capacity/Organization and Management Approach (10 points); MBE/WBE Participation (5 points).

On December 7, 2020, MWRA received a proposal from AECOM, Hazen and Sawyer and Brown and Caldwell. Staff contacted firms that took out the RFQ/P, but did not submit a proposal. The firms reported a variety of reasons for not submitting a proposal, including proposing on other current competing MWRA RFQ/Ps. As a result, staff determined that the competition was adequate, and the Selection Committee proceeded to evaluate the proposals received. The following table represents the cost and level of effort proposed.

Proposer	Proposed Cost	Proposed Hours
Brown and Caldwell	\$4,924,513.99	29,923
Hazen and Sawyer, P.C.	\$7,535,701.14	44,325
AECOM	\$8,297,068.70	49,869
<i>Engineer's Estimate</i>	<i>\$5,129,418.66</i>	<i>29,887</i>

Given the range in values between the proposals, staff submitted written questions to each of the proposers to clarify cost assumptions, experience and level of effort for specific subtasks to help explain the variance between the three firms and the Engineer's Estimate. The Selection Committee met on January 14, 2021, to evaluate and rank the proposals.

The results of the Selection Committee evaluation and ranking are presented below.

Proposer	Total Final Score	Order of Preference* Points	Ranking
Hazen and Sawyer. P.C.	350	6	1
AECOM	341	9	2
Brown and Caldwell	303	15	3

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

The Engineer's Estimate for the project was approximately \$5.13 million. Staff formulated the Engineer's Estimate during the development phase of the RFQ/P based upon previous simple retrofit projects on Deer Island. After receipt of the bids, it became evident that the Engineer's Estimate significantly underestimated the level of effort required for development of the

construction drawings. The Estimate only assumed 14 hours per drawing, compared to the average of 47 hours per drawing received from all three firms. Further analysis found that the required level of effort was greater for this project than for a simple retrofit project, as the scope included a number of complex studies, including hydraulic, pump performance and VFD technology studies. In addition, new designs are required for the isolation of the individual pumps and for the discharge mains to the grit facility. These new isolation points will allow staff to perform service on individual pumps, versus shutting down half the pump station to perform critical maintenance.

In addition, the proposers are required to provide 3D laser scanning to create a Building Information Model (BIM) and the Revit model. The 3D laser scanning and BIM development and Revit modeling were added to conform to MWRA's current design standards. This is the first Deer Island project to use this approach. The BIM model and 3D conversion will allow Deer Island to keep pace with changes in the engineering field. The use of Revit modeling will reduce potential conflicts during the design phase between engineering disciplines. These conflicts would have otherwise been identified during the construction phase, which could lead to potential change orders and time delays. Furthermore, future consultants will be working from the same model, which will significantly reduce the amount of time required to field verify the as-built drawings before a new design can commence. Another advantage of Revit is the ability to identify items on drawings as real world objects such as doors, windows, duct work and piping systems. Revit utilizes the objects to perform basic design calculations, such as pipe and HVAC duct sizing, which should reduce design errors; and the information is permanently stored and categorized in an active database. In contrast, 2D design programs can only represent items with basic lines and no correlation to what the objects represents. Further, the Engineer's Estimate did not originally include 3D scanning or the Revit model, as those were added later in the procurement process. Moreover, information obtained during the bid analysis indicates the 3D modeling adds roughly a 20% premium to a standard 2D AutoCAD design.

The "rule of thumb" for the cost of consultant services (design, ESDC, RE/RI) is that it can range from 20% to 25% of the construction cost. Staff also noted that their Estimate was significantly lower than this range, as the construction project in the proposed FY22 is currently estimated at \$32 million in the proposed FY22 CIP. Given these factors, the Selection Committee concluded the Engineer's Estimate for the design contract did not accurately reflect the required level of effort to successfully complete the project.

Hazen and Sawyer's proposal included very qualified personnel who have the required experience in pump station rehabilitation projects. Hazen and Sawyer presented a multi-disciplinary team, including subconsultants with whom the firm has successfully worked in the past. In addition to positive references for performance on past MWRA projects and external projects, all references indicated they would rehire the firm. Hazen and Sawyer demonstrated a full understanding of the project requirements as evidenced by the many site-specific challenges it presented in its Technical Approach and the manner in which it will achieve the project goals. The proposal was well presented and the proposed project team has the capacity to successfully perform the work.

Hazen and Sawyer's cost was approximately \$2,400,000 above the Engineer's Estimate, or 47% higher; but for this price the firm included 44,325 hours, 14,438 (48%) more than the Engineer's Estimate. Hazen and Sawyer's proposal was excellent and reflected the firm's experience with

pump stations and large wastewater facilities, and demonstrated its thorough understanding of the scope of work for this project. In addition, Hazen & Sawyer's proposal included approximately 9,000 hours for ESDC, of which only 960 hours were associated with the administration effort. The remaining hours are related to technical support, including responding to Requests for Information, submittal reviews, review of change orders and supporting MWRA through the claims process. Given this complexity, it is critical that the firm include sufficient hours to ensure the project proceeds through the construction process with adequate engineering support. It should be noted that the ESDC level of effort is not a lump sum, but rather based on the number of hours actually authorized and used. Staff expect the total number of hours for this effort will be less than the 9,000 hours reflected in Hazen's proposal.

AECOM also submitted a very good proposal that included qualified and experienced individuals. Its price, however, was significantly higher than the Engineer's Estimate (62%) and 10% higher than Hazen and Sawyer's price. AECOM carried a similar level of effort to Hazen and Sawyer for drawing development during design, although its level of effort associated with the Preliminary Design Report was roughly three times that of Hazen and Sawyer and four times that of the Engineer's Estimate. The firm also carried a total of 8,500 hours for ESDC, which was significantly higher than the Engineer's Estimate.

Brown and Caldwell's proposal included experienced personnel and a good technical approach. The proposal included a significantly lower level of effort than the other proposers, and only assumed 75 design drawings, as compared to the over 200 assumed by both the Engineer's Estimate and Hazen and Sawyer, and the 160 assumed by AECOM. In addition, Brown & Caldwell only assumed 34 hours per drawing, well under the average of 54 hours carried by both the other two proposers. The Selection Committee determined that the number of hours per drawing and the quantity of drawings carried in its proposal are not sufficient to complete the complex design. In addition, Brown and Caldwell only included approximately 4,500 hours for the ESDC level of effort, of which 1,400 hours were allocated to administrative services. This leaves only 3,100 hours for technical support, significantly under the level of effort proposed by Hazen and Sawyer and AECOM. The Committee determined that Brown and Caldwell's proposal did not include sufficient hours to provide the design services or ESDC to successfully complete the project.

Four of the five Selection Committee members ranked Hazen and Sawyer first and the fifth member ranked them second. Based on the overall ranking, staff recommend the award of Contract 7126 to Hazen and Sawyer, P.C. in the amount not to exceed \$7,535,701.14.

BUDGET/FISCAL IMPACTS:

The FY21 Capital Improvement Program includes a budget of \$4,464,000 for Contract 7126; the recommended contract amount is \$7,535,701.14 or \$3,071,701.14 over budget. This amount will be covered within the five-year CIP spending cap.

MBE/WBE PARTICIPATION:

The minimum MBE and WBE participation requirements for this project established at 7.18% and 5.77%, respectively. Hazen and Sawyer has committed 7.21% MBE and 5.82% WBE participation.

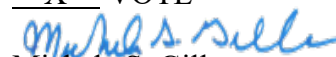
STAFF SUMMARY

TO: Board of Directors
FROM: Frederick A. Laskey, Executive Director
DATE: April 14, 2021
SUBJECT: Repair of Three Digester Mixer Assemblies
Aqua Solutions, Inc.



COMMITTEE: Wastewater Policy & Oversight

 INFORMATION
 X VOTE


Michele S. Gillen

Director of Administration

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



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

RECOMMENDATION:

To approve the award of a sole source contract for the repair of three digester mixer assemblies to Aqua Solutions, Inc., and to authorize the Executive Director, on behalf of the Authority, to execute said contract in the amount of \$302,820 for a contract term of three years, from April 14, 2021 through April 13, 2024.

DISCUSSION:

There are twelve egg-shaped, anaerobic sludge digesters at the Deer Island Treatment Plant, which have been in operation for more than 20 years, and eight of them are operated concurrently and continuously. A key component common to all of the digesters is the central mixer assembly. When first constructed, the central mixers were specified as proprietary equipment originally provided by Sterling-Halberg and manufactured in Ludwigshafen, Germany. All associated parts are still manufactured in Germany and repairs to these mixers can only be performed by the equipment manufacturer through its local distributor.

The original local distributor for Sterling-Halberg mixers was purchased by Flowserve Corporation in 2015. These mixers are now distributed exclusively for Flowserve by Aqua Solutions, Inc. for the New England market. Although MWRA is not purchasing new mixer assemblies, the equipment manufacturer, Flowserve, will complete the refurbishment of mixer assemblies to “like new” condition with a full warranty through Aqua Solutions, Inc.

These mixers are critical to the proper operation of the digesters. They provide the driving force for mixing the digester’s contents and assist in maintaining a uniform temperature within the sludge mass. A thoroughly mixed digester results in proper operation, with no “dead” spots. Proper operation results in higher gas production and higher solids destruction, thus reducing energy costs and sludge sent to the Pellet Plant for conversion to fertilizer.

Routine maintenance is performed on mixer assemblies by MWRA staff. Staff perform vibration and acoustic monitoring monthly on each operating mixer to identify early signs of wear before a failure impacts mixer performance. Once a test indicates degradation in performance, staff begin to prepare for replacement. Over time, in spite of preventive maintenance, rotating assemblies develop problems that affect their performance, including; worn impellers, erosion, scoring, fatigue, and flaking. The pictures below are from one of MWRA's mixers after sandblasting, which shows substantial impeller wear.



Mixer assembly after sandblasting, showing substantial impeller wear and pitting

The mixer assemblies weigh between 8,000 and 9,000 pounds each and operate within a tube approximately 30 inches in diameter and approximately 100 feet high. Each spiral-designed impeller is two feet long, two feet wide, rotates at a speed of 590 revolutions per minute and is capable of moving 15,000 gallons of digested sludge per minute. Two spare mixers are kept on hand so that when a mixer begins to show signs of wear, staff can remove it and replace it with another one, reducing digester down time. When the mixer assemblies are removed, the digester is emptied and cleaned so that when it is placed back on line after the mixer assembly rebuild, it is operating at maximum efficiency.

Staff will remove the mixer assembly for shipment back to the equipment manufacturer Flowserve, through Aqua Solutions, Inc., for refurbishment. Each refurbishment returns the mixer assembly to a "like new" condition covered under a warranty as a new unit. Mixer refurbishment includes sandblasting, disassembly, and critical components, including but not limited to; the impeller, splash disc, shaft sleeve, lower thrust bearing, and upper guide bearing, which will be replaced. All components will be inspected and returned to "like-new" condition. After reassembly, the mixer will be balanced back to original specifications. A short-duration run test will be performed before the mixer assembly is returned to MWRA. Three mixers will be refurbished under this contract. Historically, Deer Island has averaged approximately one mixer refurbishment per year over the past ten years.

Procurement Process:



Refurbished mixer returned to Deer Island

The digester mixers and their associated parts are proprietary, highly specialized, and only available from Flowserve’s distributor, Aqua Solutions, Inc. There are no generic or “after-market” parts available for these mixers. They were designed and specially made to operate in Deer Island’s egg-shaped digesters. Staff have received updated confirmation that the Flowserve mixers and parts are still distributed by Aqua Solutions, Inc. exclusively for the New England market, and as such, can only be procured and repaired by Flowserve through its distributor, Aqua Solutions, Inc.

The cost to purchase a brand new mixer assembly is approximately \$311,000. The per-unit cost to refurbish each mixer assembly is \$100,940, or 32% of the replacement cost. The primary reason for the cost differential is the fact that the mixer assembly shaft is expected to be reusable in the refurbishment. Staff plan to have three mixers

refurbished over the three-year period of the contract for a total contract amount of \$302,820. This purchase order provides for the transportation to and from Flowserve’s repair facility in Connecticut, and includes the full refurbishment as mentioned above. The expected useful life of a refurbished mixer is 10 to 12 years. Due to the specialize nature of this work, the Director of Procurement has approved the sole source nature of this procurement.

BUDGET/FISCAL IMPACT:

Sufficient funds for this contract have been included in the FY21 Current Expense Budget. Appropriate funding will be included in subsequent CEB requests for the remaining two years of the contract.

MBE/WBE PARTICIPATION:

Aqua Solutions, Inc. is not a certified Minority- or Women-owned business.