



*Presentation to*

**MWRA Board of Directors**

***MWRA Fiscal Year 2026  
Proposed Capital Improvement Program***

January 15, 2025



# FY26 Proposed CIP – Baseline Cap vs. FY26 Proposed Cap

FY24-28 Baseline CAP		FY24	FY25	FY26	FY27	FY28	FY24-28
	Projected Expenditures excl. Metro Tunnel	\$288.2	\$357.9	\$313.5	\$349.8	\$349.1	\$1,658.5
	Metropolitan Tunnel	\$14.4	\$25.2	\$23.9	\$23.9	\$78.6	\$166.2
	I/I Program	(42.9)	(41.5)	(27.5)	(28.4)	(34.2)	(174.5)
	Water Loan Program	(14.1)	(10.9)	(5.0)	(2.6)	8.6	(24.0)
	<b>MWRA Spending</b>	<b>\$245.6</b>	<b>\$330.8</b>	<b>\$304.9</b>	<b>\$342.8</b>	<b>\$402.2</b>	<b>\$1,626.3</b>
	Contingency	15.2	21.8	20.7	23.6	31.7	113.0
	Inflation on Unawarded Construction	1.9	8.1	12.2	22.1	36.1	80.4
	Chicopee Valley Aqueduct Projects	(0.3)	(0.5)	0.0	0.0	0.0	(0.8)
	<b>Projected Spending before Adjustment</b>	<b>\$262.4</b>	<b>\$360.2</b>	<b>\$337.8</b>	<b>\$388.5</b>	<b>\$469.9</b>	<b>\$1,818.9</b>
FY26 Proposed CAP	Spend Rate Adjustment (25%)*	(65.6)	(90.1)	(84.5)	(97.1)	(117.5)	(454.7)
	<b>FY24 Final FY24-28 Spending</b>	<b>\$196.8</b>	<b>\$270.2</b>	<b>\$253.4</b>	<b>\$291.4</b>	<b>\$352.5</b>	<b>\$1,364.2</b>
		FY24	FY25	FY26	FY27	FY28	FY24-28
	Projected Expenditures excl. Metro Tunnel	\$199.2	\$295.6	\$358.2	\$437.4	\$496.9	\$1,787.3
	Metropolitan Tunnel	\$9.0	\$28.1	\$43.2	\$39.7	\$73.9	\$194.0
	I/I Program	(22.0)	(62.5)	(51.3)	(48.6)	(53.4)	(237.9)
	Water Loan Program	(26.2)	(27.7)	(30.4)	(18.9)	(16.9)	(120.1)
	<b>MWRA Spending</b>	<b>\$160.1</b>	<b>\$233.5</b>	<b>\$319.7</b>	<b>\$409.5</b>	<b>\$500.5</b>	<b>\$1,623.3</b>
	Contingency	0.0	14.7	21.3	28.1	36.5	100.5
	Inflation on Unawarded Construction	0.0	0.0	3.1	12.1	25.5	40.6
	Chicopee Valley Aqueduct Projects	0.0	0.0	(0.0)	(0.3)	0.0	(0.3)
	<b>Projected Spending before Adjustment</b>	<b>\$160.1</b>	<b>\$248.2</b>	<b>\$344.0</b>	<b>\$449.4</b>	<b>\$562.4</b>	<b>\$1,764.2</b>
	Spend Rate Adjustment (25%)*	0.0	(62.0)	(86.0)	(112.4)	(140.6)	(401.0)
	<b>FY26 Proposed FY24-28 Spending</b>	<b>\$160.1</b>	<b>\$186.1</b>	<b>\$258.0</b>	<b>\$337.1</b>	<b>\$421.8</b>	<b>\$1,363.1</b>



# FY26 Proposed CIP – Top Spending Subphases Excl. Community Loans in FY26

Project	Subphase	FY26 \$s in Millions
DI Treatment Plant Asset Protection	Clarifier Rehab Phase 2 - Construction	\$50.0
Metro Water Tunnel Program	Final Design/ESDC	\$23.0
New Connect Mains-Shaft 7 to WASM3	Section 75 Extension - Construction CP-1	\$12.0
Metro Water Tunnel Program	Admin Legal & Public Outreach	\$12.0
NHS - Revere & Malden Pipelines	Section 56 Replacement- Construction	\$10.2
Facility Asset Protection	Hayes Pump Station Rehab Construction	\$8.8
Northern Extra High Service New Pipelines	CP-2 NEH Improvements	\$8.5
NHS - Revere & Malden Pipelines	CP-1 Section 68 Construction	\$8.0
Residuals Asset Protection	Various Equipment Replacement	\$6.8
DI Treatment Plant Asset Protection	DI Digester Storage Membrane Replacements	\$6.0
Alternative Energy Initiatives	DITP Solary Canopy	\$6.0
Metro Redundancy Interim Improvements	Waltham Water Pipeline Construction	\$5.4
DI Treatment Plant Asset Protection	MCC & Switchgear Replace Construction	\$5.3
<b>Total Contracts ≥ \$5 million (excluding Loan Programs)</b>		<b>\$161.8</b>
<b>% of FY26 Spending</b>		<b>40.3%</b>
<b>Other Project Spending</b>		<b>\$239.5</b>
<b>Total FY26 Spending</b>		<b>\$401.4</b>

- 13 subphases with anticipated spending of > \$5M are driving 40.3% of total projected spending in FY26.
- 6 of the top spending subphases listed are awarded/active.



# FY26 Proposed CIP – Top Spending Subphases Excl. Community Loans in FY24-28

Project	Subphase	FY24-FY28 \$s in Millions
DI Treatment Plant Asset Protection	Clarifier Rehab Phase 2 - Construction	\$227.7
Metro Water Tunnel Program	Final Design/ESDC	\$82.5
NHS - Revere & Malden Pipelines	CP-2 Section 116	\$62.0
Facility Asset Protection	Prison Point Rehab Repackaged	\$38.7
DI Treatment Plant Asset Protection	SSPS VFD Replace Construcion	\$38.0
Metro Water Tunnel Program	Admin Legal & Public Outreach	\$37.8
DI Treatment Plant Asset Protection	Combined Heat & Power - Construction	\$33.5
Metro Redundancy Interim Improvements	Waltham Water Pipeline Construction	\$28.6
DI Treatment Plant Asset Protection	Digester/Storage Tank Rehab Construction	\$27.9
Facility Asset Protection	Hayes Pump Station Rehab Construction	\$25.6
Metro Water Tunnel Program	Tunnel Construction South CP2	\$24.6
Northern Extra High Service New Pipelines	CP-2 NEH Improvements	\$22.8
DI Treatment Plant Asset Protection	Fire Alarm System Replacement - Construction	\$22.0
New Connect Mains-Shaft 7 to WASM3	Sect 25 & 24 - Const CP-2	\$21.2
Facility Asset Protection	Ward St Headworks Construction	\$21.0
DI Treatment Plant Asset Protection	MCC & Switchgr Replace Construction	\$21.0
Quabbin Transmission System	Wach LGH Pipe & Boiler Rpl Construction	\$20.5
NIH Redundancy & Storage	Section 89 & 29 Repl - Construction	\$19.2
DI Treatment Plant Asset Protection	Eastern Seawall Construction - 1	\$18.1
New Connect Mains-Shaft 7 to WASM3	Section 75 Extension - Construction CP-1	\$17.3
<b>Total Top 20 Spending Subphases (excluding Loan Programs)</b>		<b>\$810.0</b>
<b>% of FY24-28 Spending</b>		<b>40.9%</b>
<b>Other Proiect Spending</b>		<b>\$1,171.3</b>
<b>Total FY24-FY28 Spending</b>		<b>\$1,981.3</b>

- The top 20 spending subphases are driving 40.9% of total projected spending in the FY24-28 Cap Period.
- 9 of the top spending subphases listed are awarded/active.



# DI Treatment Plant Asset Protection Clarifier Rehab Phase 2



**Contract 7395**

**Walsh Construction Co. II**

**\$289,595,007**

**NTP: March 10, 2023**

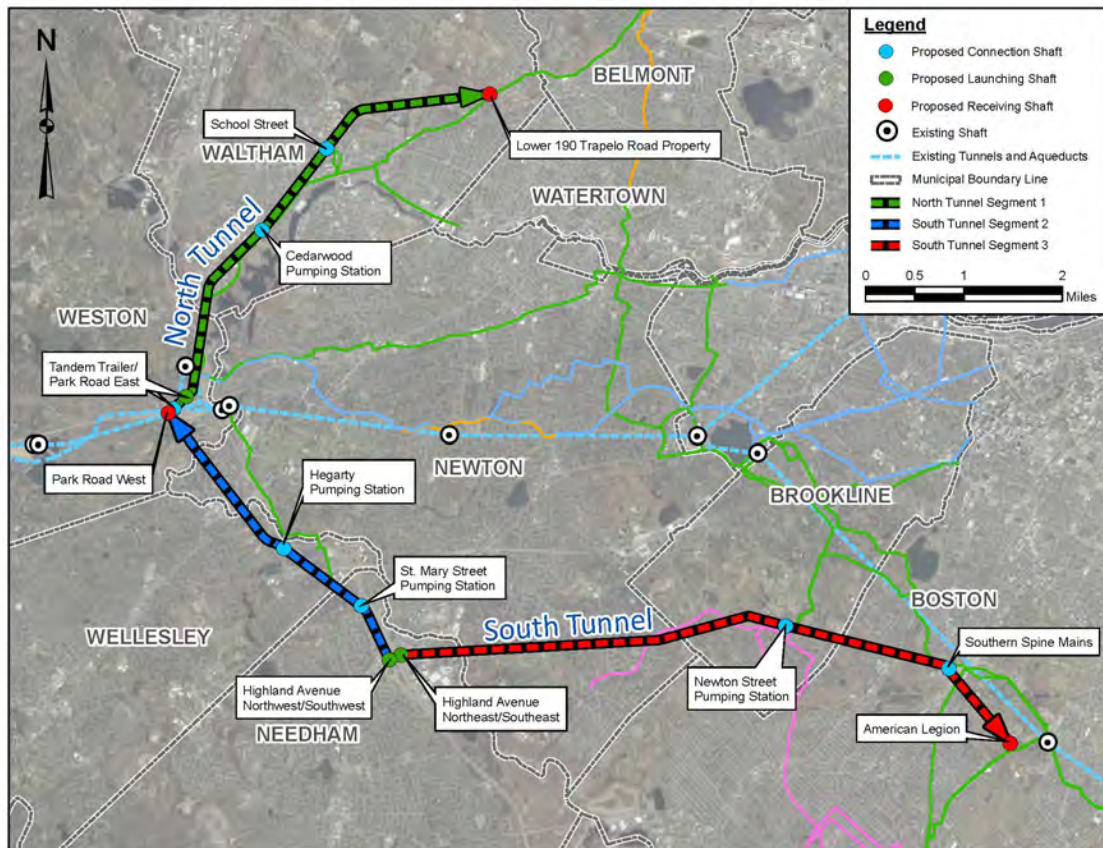
**END: Nov 14, 2027  
(57 Months)**

**26% Complete**





# Metro Water Tunnel Program Final Design/ESDC



**Contract 7556**

**WSP USA Inc.**

**\$93,605,158**

**NTP: Nov 4, 2024  
(180 Months)**



# New Connect Mains – Shaft 7 to WASM3 Section 75 Extension – CP1



**Contract 7484**

P. Gioioso & Sons, Inc.

\$22,580,000

NTP: January 2025\*

END: July 2027  
(30 Months)

0% Complete





# NHS – Revere & Malden Pipelines Section 56 Replacement Saugus River Crossing



**Contract 7486**

**Advertise in February 2025**

**Estimate: \$13,426,784**





# Facility Asset Protection

## Hayes Pump Station Rehabilitation



**Contract 7375**

Waterline Industries Corp.

\$25,559,181

NTP: Dec 9, 2024

END: Dec 9, 2027  
(36 Months)

0% Complete



# Northern Extra High Service New Pipelines CP-2 NEH Improvements



**Contract 7725**

Bids Due January 2025

Estimate: \$22,833,825

Term: 40 Months





## 2 New Energy Projects

- Chelsea Admin Building Heat Pumps: \$2.5M
- Deer Island Wind Turbine Replacement: \$4.5M







## 3 Other New Projects

- Ward Street Air Handling Replacement: \$2.0M
- Lonergan Intake Improvements: \$2.0M
- Pipe Bridge Inspection: \$0.9M





## FY26 Proposed CIP – Next Steps

- Today – Requesting Board approval to transmit to the Advisory Board for their 60-day minimum comment and review period
- Spring Revisit Process/Brief Advisory Board Staff
- Present FY26 Draft Final CIP to the Board of Directors for approval in June 2025







*Presentation to*

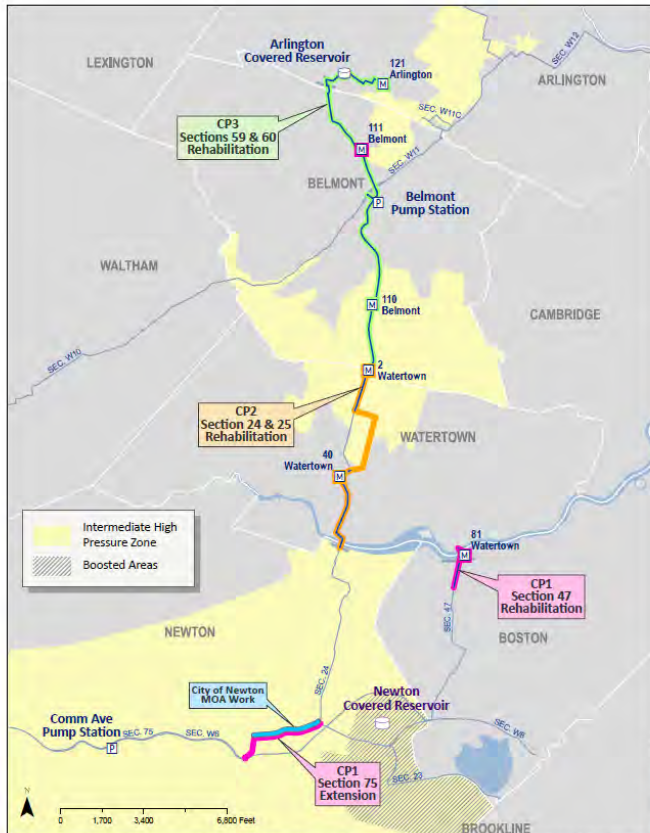
## **MWRA Board of Directors**

*Intermediate High Pipeline Improvements  
Design and Engineering Services During Construction  
Contract 6955*

January 15, 2025



# Intermediate High Pipeline Improvements Location Map



ATTACHMENT 1: INTERMEDIATE HIGH PIPELINE IMPROVEMENTS – CONTRACT 6955

## Project Goals

- Improve system reliability
- Provide hydraulic looping and redundancy between the IH pressure zones
- Provide operational flexibility
- Improve water quality

## Construction Packages

- CP1 – P.Gioioso & Sons, Inc. \$22.58M
- CP2 – Albanese D&S \$18.673M
- CP3 – Future



## Contract 6955 Summary

	Amount	Duration	Dated
Original Contract	\$6,451,904	90 Months	February 6, 2019
Amendment 1*	\$0	0 Months	April 23, 2024
Amendment 2	\$0	24 Months	Pending
Adjusted Contract	\$6,451,904	114 Months	

\*Approved under delegated authority.







*Presentation to*

## **MWRA Board of Directors**

*SCADA System Improvements, Carroll Treatment Plant: Arcadis, Inc., Contract 7581, Amendment 5*

January 15, 2025



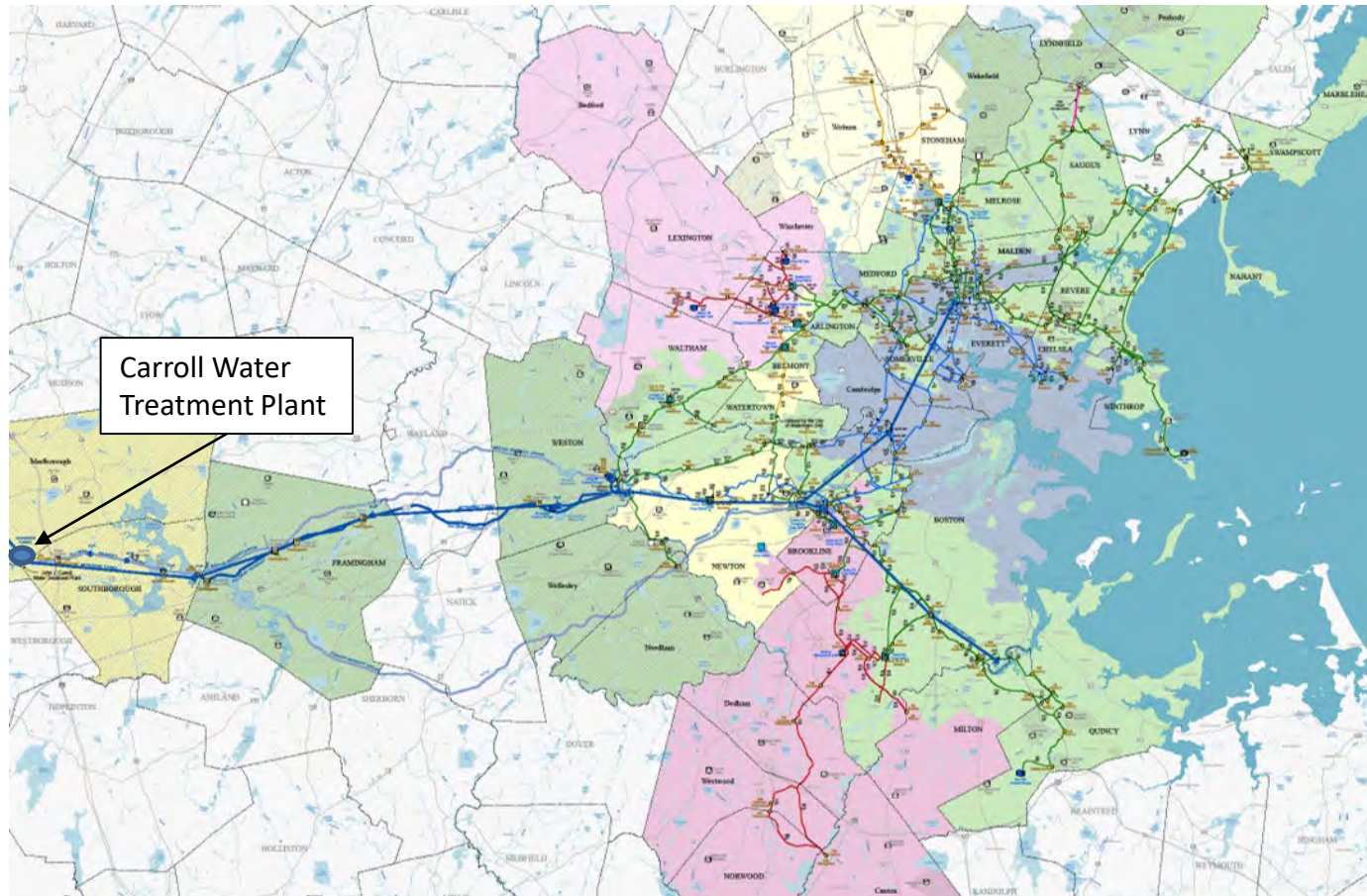
# Background

- Carroll Water Treatment Plant treats drinking water for MWRA's Metropolitan Boston communities
- SCADA essential to maintain continuous operations
- Project replaces legacy SCADA equipment and uses updated control system standards
  - Enhance redundancy
  - Enhance future reliability
  - Maintain secure plant operations





# MWRA Water System







# Project Update

- Parallel SCADA system has been constructed (\$12.9 M contract)
- New control cabinets with 22 PLCs fabricated and installed
- New computer server room, network, and control room linking new PLCs completed
- New PLC code and over 800 SCADA screens have been written and tested in the factory and at the Plant





# Cut-Over Schedule

Date	Activity
11/1/24	Cut-overs Begin in Off-line Train B
1/12/25	Cut-overs Completed in Hydraulic Control and UV system on Train B
1/13/25	Plant Train B restarted using new SCADA system
1/13/25-1/27/25	Full Plant operated on both old and new SCADA
1/27/25	Cut-overs Begin on off-line Train A Hydraulic Control and UV system



# Cutover Activities

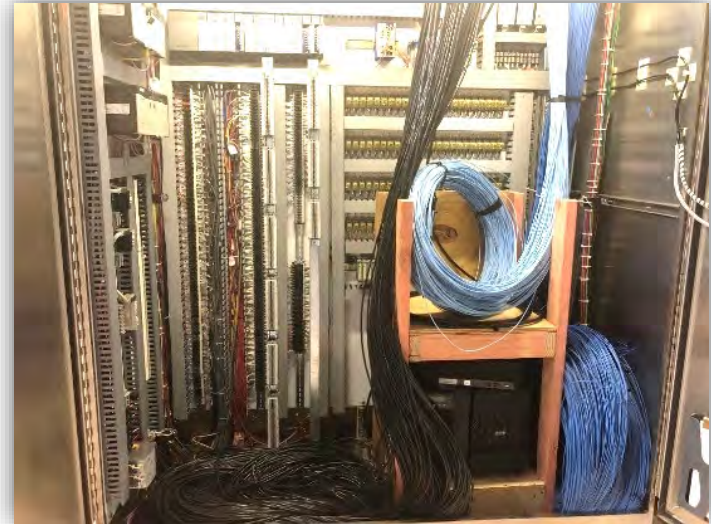
- Significant effort to fully test plant processes
- Requires five Arcadis staff, one contractor electrician, and multiple MWRA supporting staff
- Electrician moves the signal wire, then the signal is tested.
- Commands issued from SCADA (ie. open a gate)
- Response checked at PLC and field equipment (Gate open correctly?)
- This sequence is repeated for thousands of points in 11 different new PLC panels





# Amendments

- Original contract \$4,652,028.07
- Amendment 1-4 \$2,591,266.97
  - Additional R.E. costs and admin costs due to longer duration
  - Additional programming costs for SCADA screen improvements
- Proposed Amendment 5
  - \$1,323,864 and 18 month extension
  - Additional costs due to extension
  - Additional field testing due to changed approach and risk reduction







## Proposed Amendment 5



- Engineering Services \$586,700
  - Add'l 18 months of R.E. site time
  - Add'l Contract administration time
- Increase in Submittals and RFIs \$93,800
  - Add'l 40 submittals
  - Add'l 60 RFIs
- Improved coordination \$122,476
  - Add'l 67 meetings
- Staff Training \$81,188
  - Add'l 200 hours



# Additional Field Testing Effort

- Additional Field Testing
  - Change in testing approach to parallel SCADA system
  - Cutover complexity requiring additional site hours
  - Increased contract duration requiring site time spread over several months
  - Proper operation of new system vital
  - Critical to minimize risk of unplanned shutdowns

\$439,700





# Conclusion

- This project has unique importance for MWRA
  - Necessary for reliable water delivery
  - Transition while continuing high standard of water treatment
  - Adds SCADA system redundancy
  - Improves plant operation
- Project staff are continually looking for ways to improve the project and reduce risk



