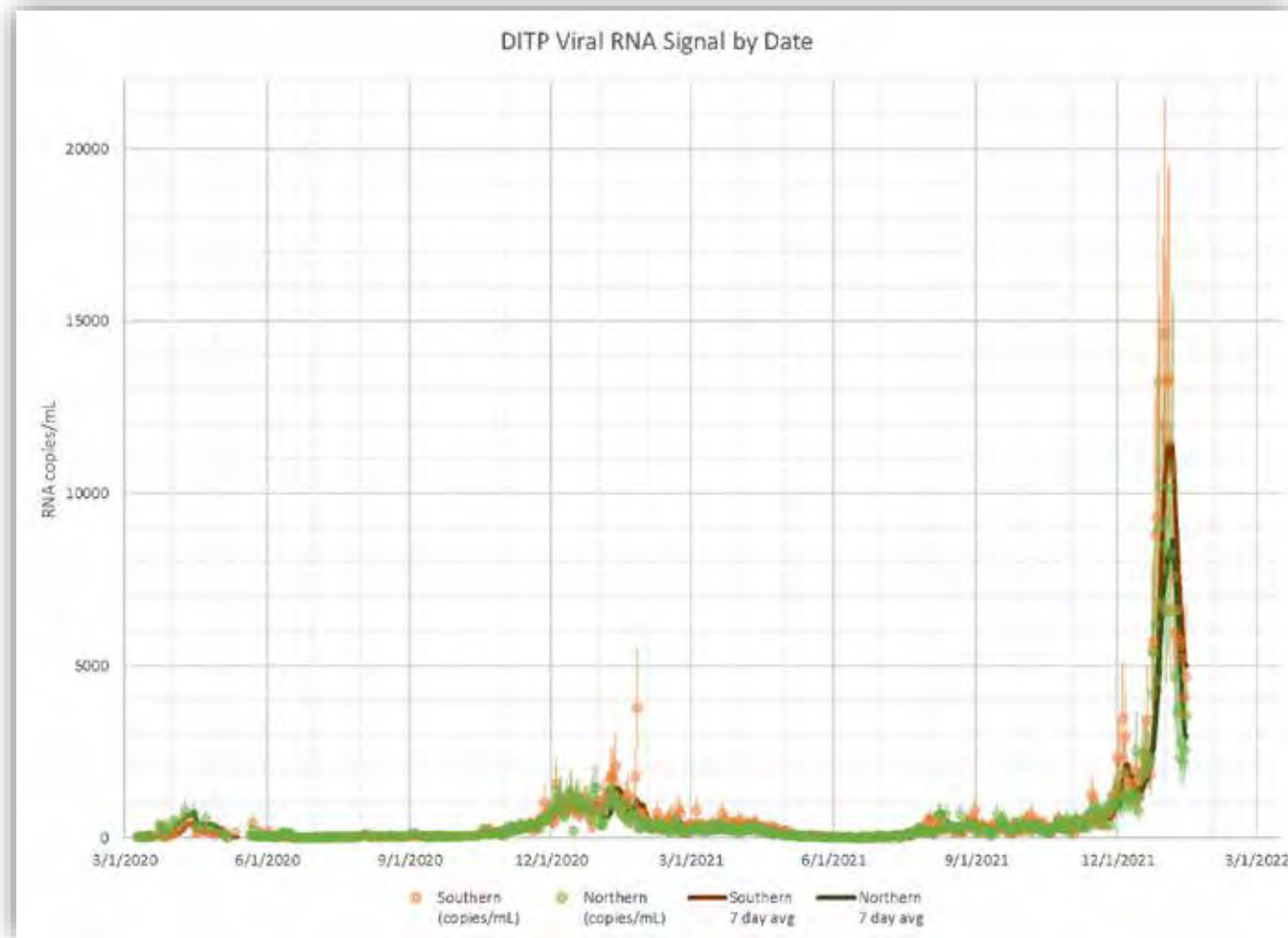


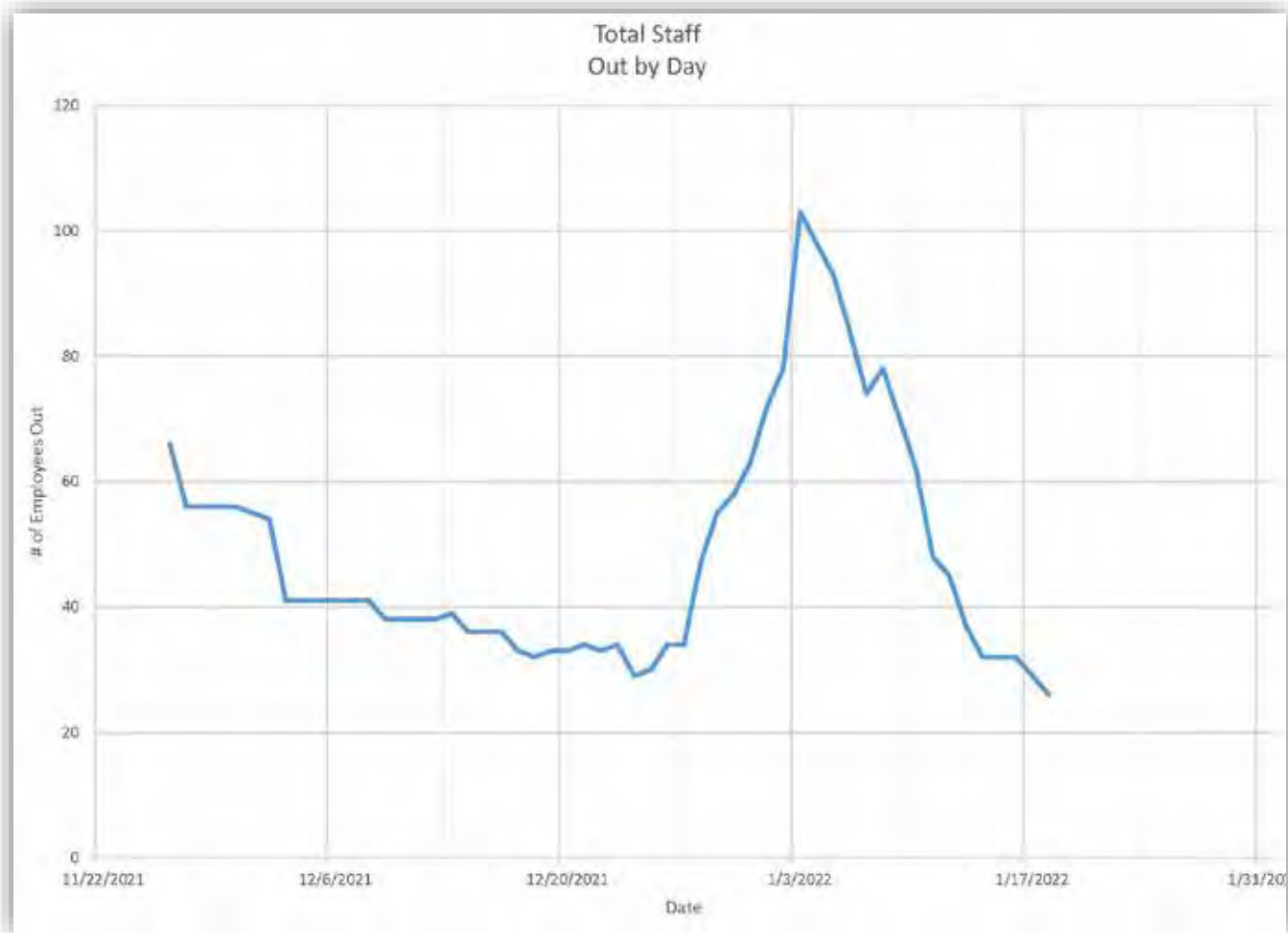


# Wastewater COVID Testing





# COVID Absences





*Management, Operation, and Maintenance of the  
Union Park Pump Station/CSO Facility and the  
Unstaffed Pump Stations  
Contract S606*

January 19, 2022



# Union Park Pump Station/CSO Facility



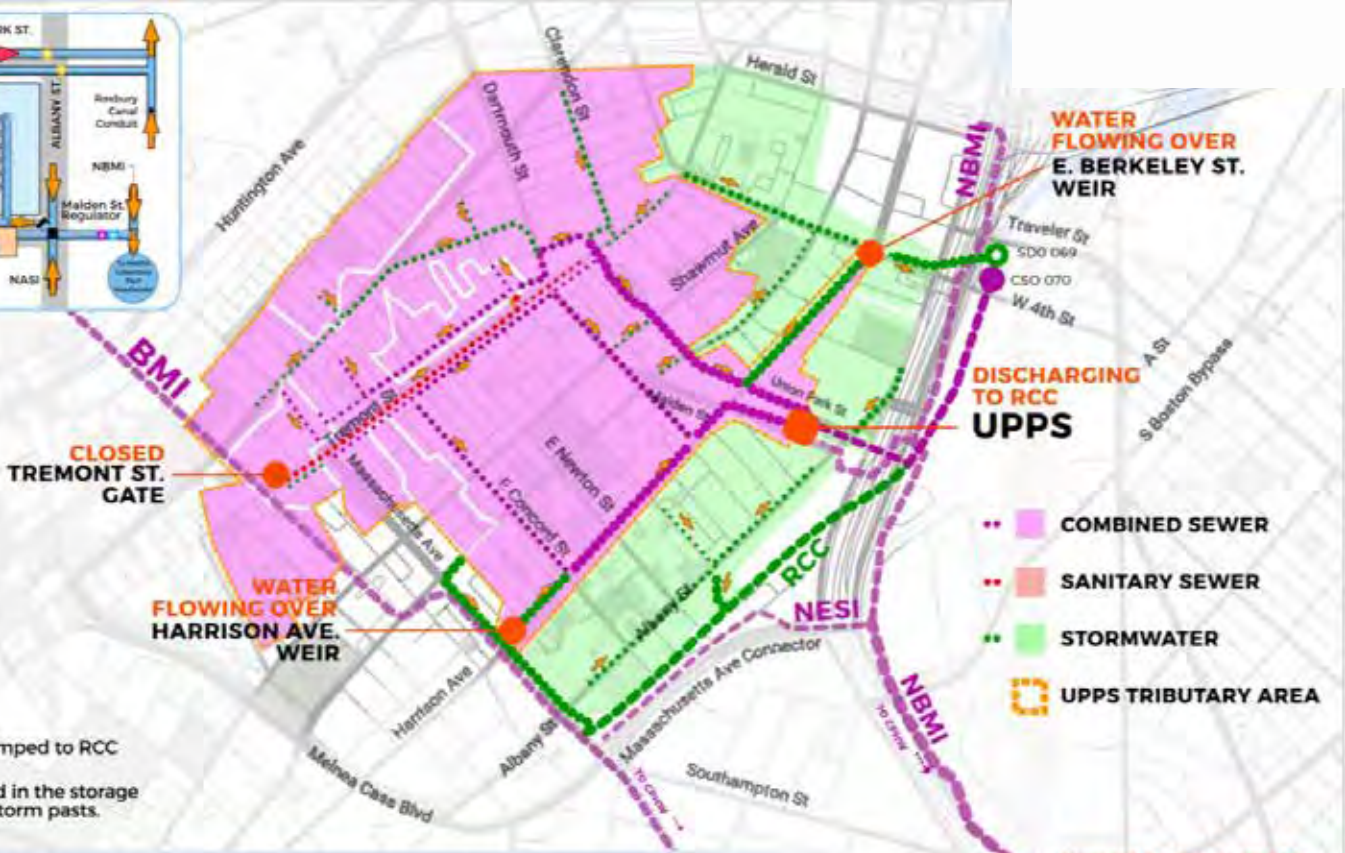
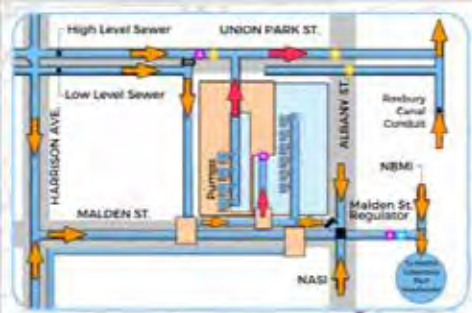


# Location – South End in Boston





# Tributary Area



- Flow from UPPS will be Pumped to RCC after Disinfection
- Wet weather flow remained in the storage will be lifted to NBMI after storm pasts.

## Large Storm Events: Union Park Pump Station Discharge to RCC

\* Areas and dimensions are to be considered approximations.



# Screening and Disinfection





# Detention Basins and Wetwell







# Pumping and Odor Control



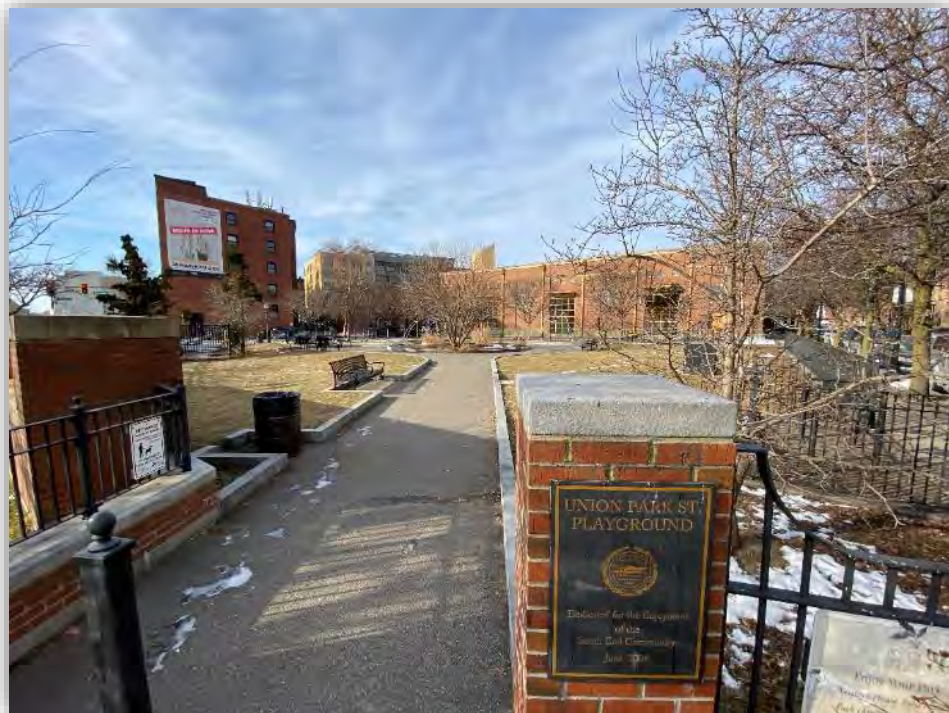


# Management, Maintenance, and Operation Contract S606

- 3-year contract, option for up to 2 additional years
- Union Park Pump Station/CSO Facility
- 9 BWSC Unstaffed Pump Stations
- Annual service fee - \$6,181,262 (27% MWRA, 73% BWSC)
  - Year 1: \$1,999,826
  - Year 2: \$2,059,821
  - Year 3: \$2,121,615
- Funding allowance - \$1,050,000
  - \$350,000 per year (\$100,000 MWRA, \$250,000 BWSC)



# Questions?





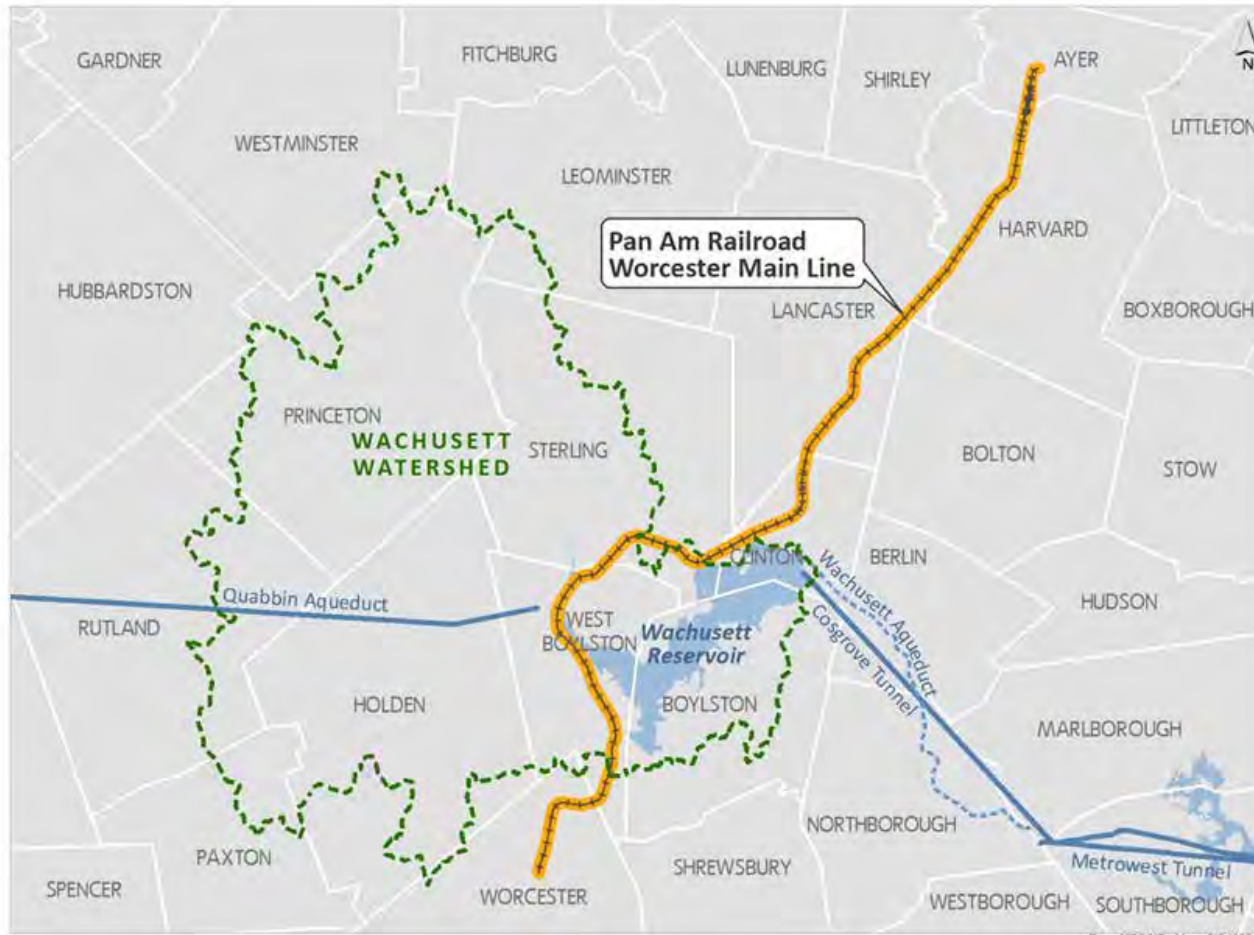
*Wachusett Reservoir Watershed  
Worcester Main Line*

January 19, 2022



# Worcester Main Line

- 23.7 miles long with 7.6 miles within the Wachusett Watershed





# Key Agreement Conditions

- Upgrade/Maintain tracks from FRA Class 1 to Class 3
- Track speeds limited to 25 miles per hour
- No parking or idling within the watershed
- Install railcar monitoring equipment
- Provide information on hazardous materials being transported
- Provide notice of derailments, spills or releases





*Revised Lead and Copper Rule*

January 19, 2022



# Significant Community Requirements by October 2024

- Service Line Inventories
- Annual Service Line Notices
- Lead Service Line Replacement Plan
- Changes in Sampling
- Public Notification Changes
- Find and Fix for Any Elevated Samples
- School and Childcare Facility Sampling





*John J. Carroll Water Treatment Plant  
Chemical Feed System Improvements  
Contract 7598*

January 19, 2022



# Contract 7598 - Carroll Fluoride System Improvements



Fluoride Weigh Feeder

Replace CPVC Piping





# Contract 7598 – Soda Ash Systems Improvements



Gravimetric Feeder



Soda Ash Silo



# Procurement Process

Contractor	Bid Amount
<b>Walsh Construction Company</b>	<b>\$2,479,000</b>
Harding & Smith	\$2,660,360
<i>Engineer's Estimate</i>	<i>\$3,411,000</i>
WES Construction Corp.	\$3,746,000
William M. Collins Company, Inc.	\$3,769,000

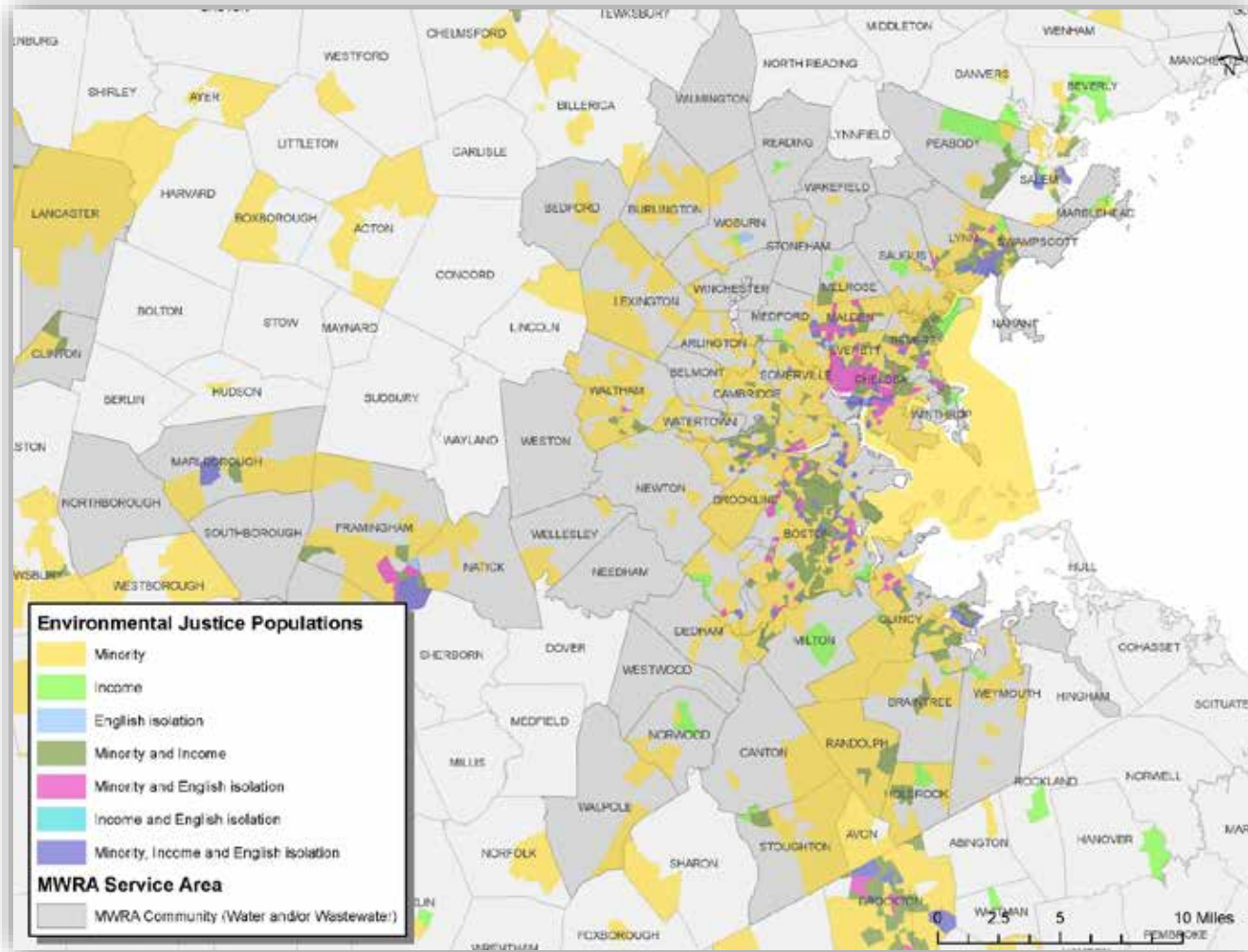


*Update on New  
Environmental Justice Initiatives*

January 19, 2022



# Environmental Justice Communities in MWRA's Service Area





*Change Order and Amendment Statistics*

January 19, 2022

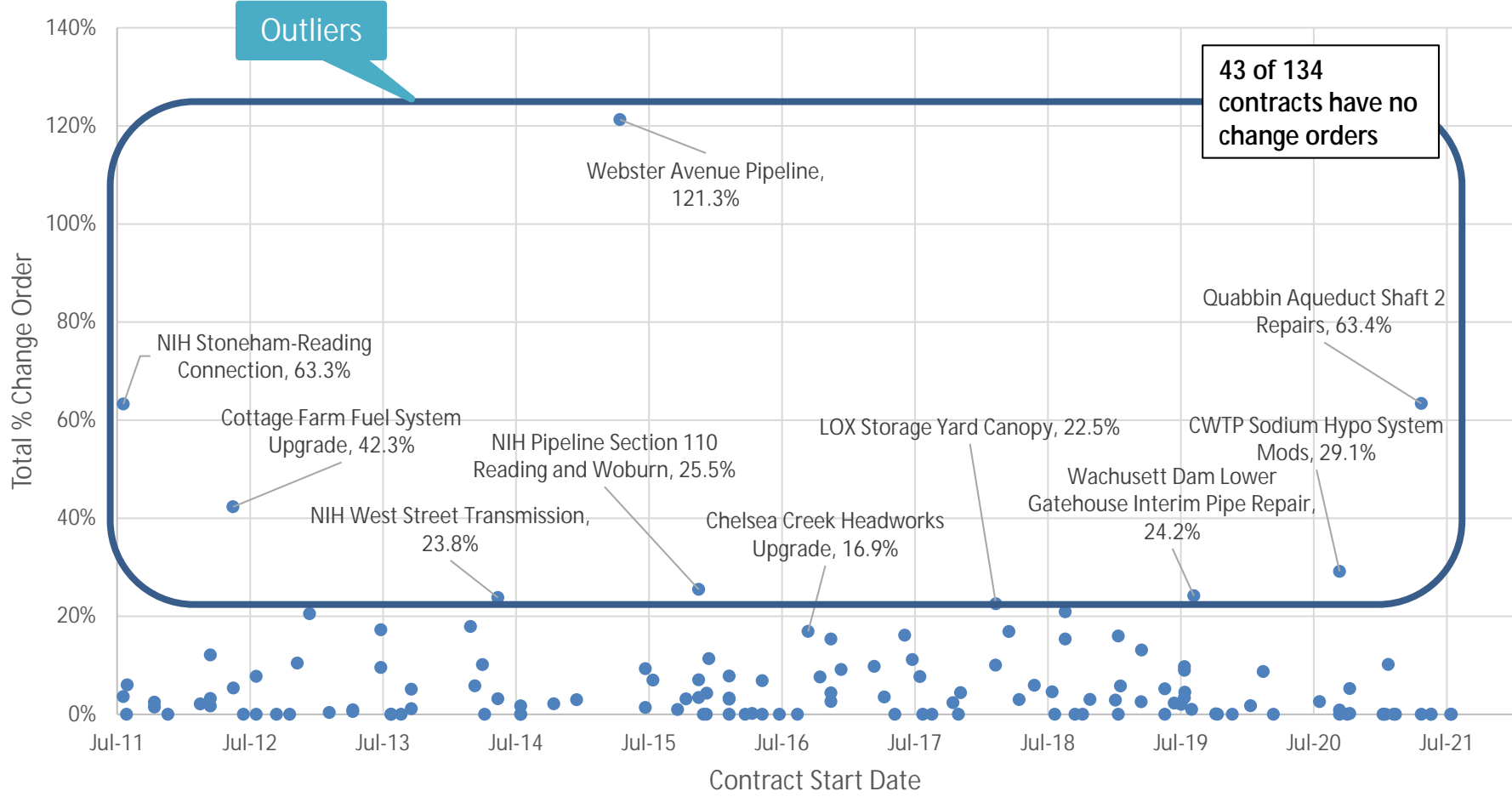


# Change Order Statistics

	Total Contracts	Chapter 30	Chapter 149
# of Contracts	134	51	83
Contracts w/change orders	91	28	63
Award Amount Total	\$757,994,674	\$271,601,738	\$486,392,936
Change Order Amount	\$44,881,539	\$15,150,908	\$29,730,630
% Change Order	5.92%	5.58%	6.11%



# Total % Change Order by Start Date





# Change Order: Unforeseen Condition Deficient Masonry Substrate at Chelsea Creek Headworks



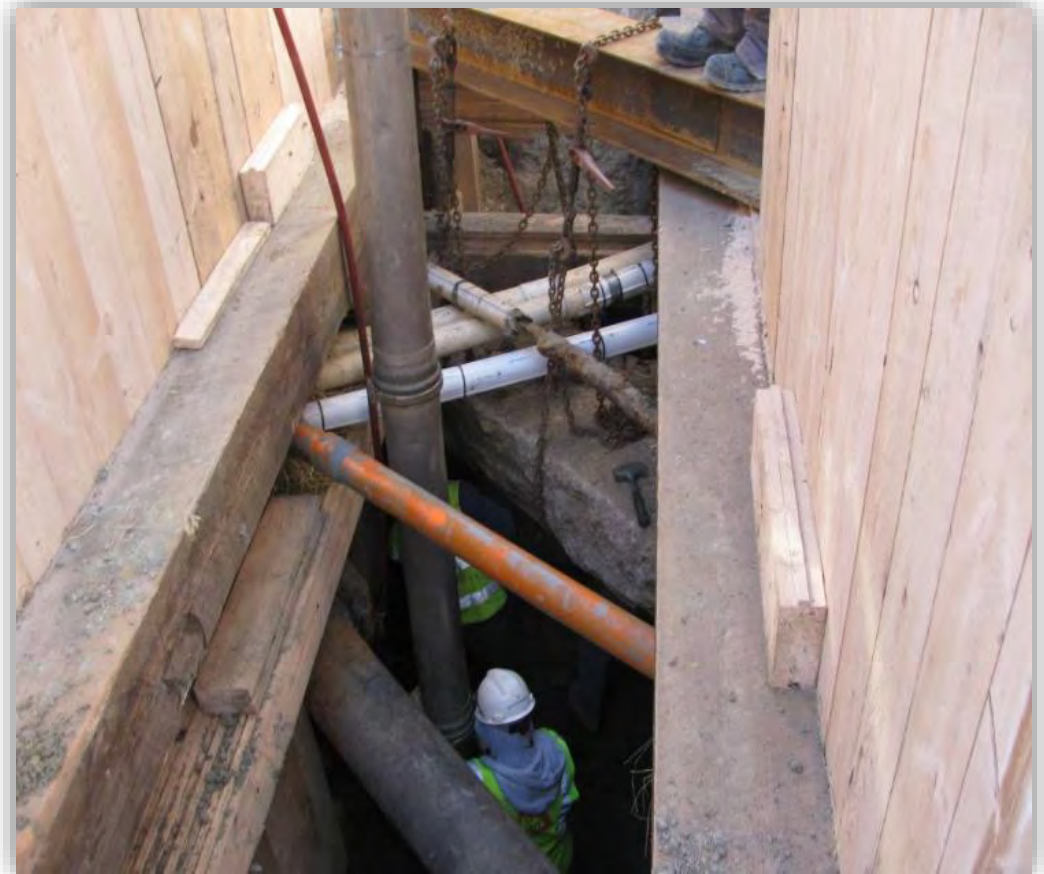


# Change Order: Unforeseen Condition Deteriorated Concrete at Chelsea Creek Headworks





# Change Order: Unforeseen Condition East Boston Sewer Relief Utility Interferences





# Change Order: Unforeseen Condition Insertion Valves at Commonwealth Avenue Pumping Station





# Change Order: Unforeseen Condition Quabbin Aqueduct at Shaft 2 Repairs





# Change Order: Unforeseen Condition

## South Street Drain – NIH Section 110, Stoneham





# Change Order: Overrun Ledge Quantity, NIH Reading



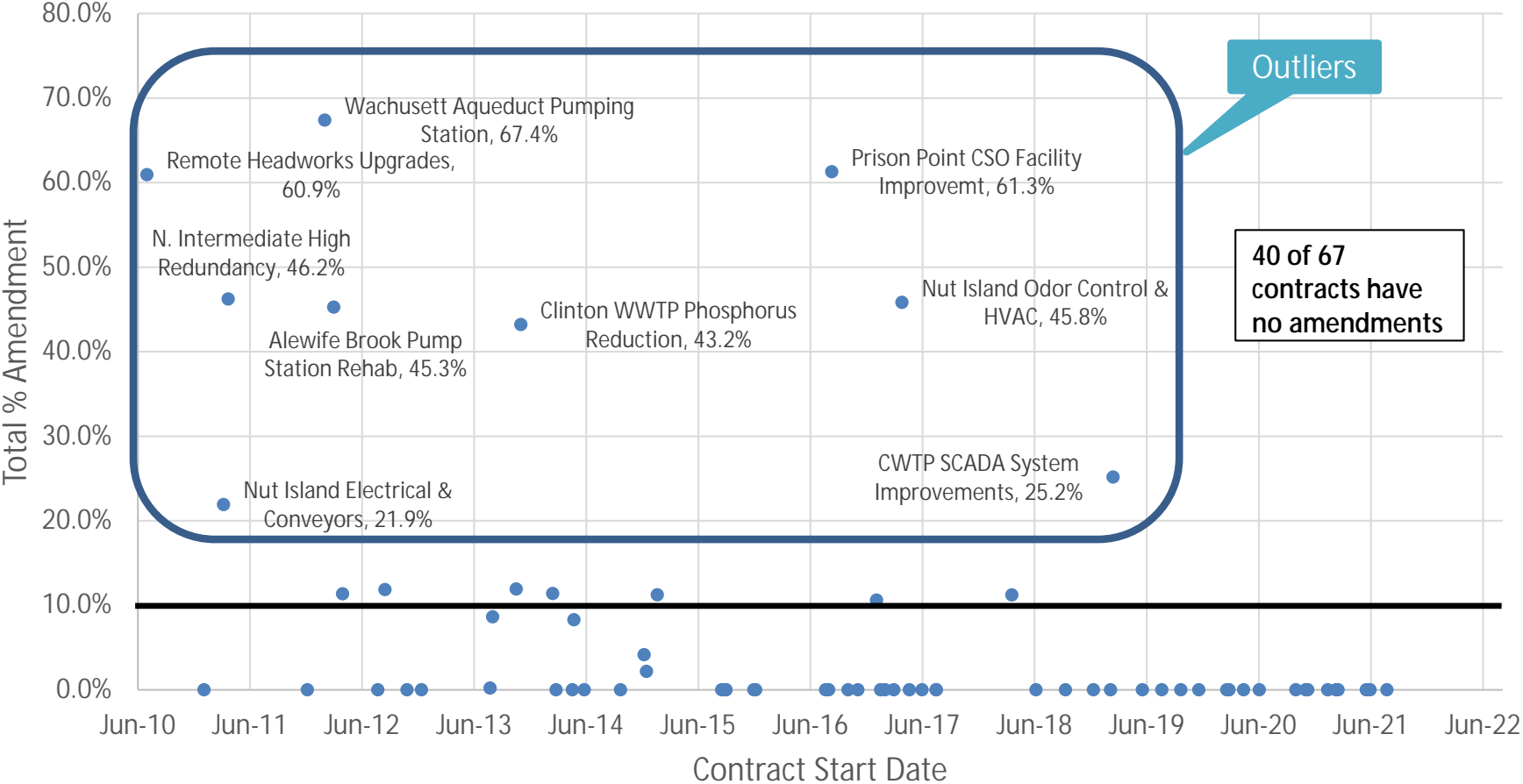




# Amendment Statistics 2010-2021

	Total Contracts	Chapter 30	Chapter 149
Number of Contracts	67	30	37
Contracts w/amendments	27	7	20
Original Contract Value	\$197,430,688	\$86,242,238	\$111,188,450
Amendments Amount	\$17,911,620	\$2,730,600	\$14,932,476
% Amendments	9.05%	3.17%	13.4%

# Total % Amendment By Start Date





# Design Amendment – Zero Net Energy Wachusett Aqueduct Pumping Station





# Design Amendment – Flood Protection Barriers Chelsea Creek Headworks





*FY23 Proposed  
Capital Improvement Program*

January 19, 2022



# FY23 Proposed CIP - FY19-23 Base-Line Cap

FY19-23 Base-Line Cap		FY19	FY20	FY21	FY22	FY23	Total FY19-23
	Projected Expenditures	\$179.2	\$276.1	\$251.3	\$194.9	\$150.4	\$1,051.8
	I/I Program	(19.2)	(25.7)	(24.3)	(27.9)	(26.1)	(123.2)
	Water Loan Program	(8.3)	(8.4)	(7.2)	(5.6)	(2.8)	(32.4)
	<b>MWRA Spending</b>	<b>\$151.7</b>	<b>\$241.9</b>	<b>\$219.7</b>	<b>\$161.4</b>	<b>\$121.4</b>	<b>\$896.2</b>
	Contingency	9.9	15.9	14.5	11.0	8.2	59.4
	Inflation on Unawarded Construction	0.7	5.0	7.8	7.2	8.5	29.3
	Chicopee Valley Aqueduct Projects	(0.0)	0.0	0.0	0.0	0.0	(0.0)
<b>FY19 Final FY19-23 Spending</b>	<b>\$162.3</b>	<b>\$262.8</b>	<b>\$242.0</b>	<b>\$179.6</b>	<b>\$138.1</b>	<b>\$984.8</b>	

FY23 Proposed		FY19	FY20	FY21	FY22	FY23	Total FY19-23
	Projected Expenditures	\$142.9	\$159.0	\$148.4	\$180.9	\$309.7	\$940.9
	I/I Program	(39.6)	(35.2)	(31.3)	(24.0)	(35.5)	(165.7)
	Water Loan Program	(13.8)	(11.4)	(14.9)	(23.1)	5.8	(57.5)
	<b>MWRA Spending</b>	<b>\$89.4</b>	<b>\$112.3</b>	<b>\$102.2</b>	<b>\$133.8</b>	<b>\$279.9</b>	<b>\$717.7</b>
	Contingency	0.0	0.0	0.0	7.9	18.0	25.9
	Inflation on Unawarded Construction	0.0	0.0	0.0	0.0	3.6	3.6
	Chicopee Valley Aqueduct Projects	(0.0)	0.0	0.0	0.0	0.0	(0.0)
<b>FY23 Proposed FY19-23 Spending</b>	<b>\$89.4</b>	<b>\$112.3</b>	<b>\$102.2</b>	<b>\$141.7</b>	<b>\$301.5</b>	<b>\$747.2</b>	

*\$s in millions*



# FY23 Proposed CIP – Top Spending Projects Excluding Community Loans in FY23

Project	Subphase	FY23 \$s in Millions	% of Total
Deer Island Treatment Plant Asset Protection	Clarifier Rehabilitation Phase 2 - Construction	\$31.2	10.1%
Facility Asset Protection	Prison Point Rehabilitation - Construction	19.7	6.4%
Corrosion & Odor Control	NI Odor Control HVAC Improvements Construction Phase 2	15.2	4.9%
Metro Redundancy Interim Improvements	Waltham Water Pipeline Construction	14.0	4.5%
MWRA Facilities Management	Office Space Modifications	13.8	4.5%
Deer Island Treatment Plant Asset Protection	Fire Alarm System Replacement - Construction	8.3	2.7%
Metro Redundancy Interim Improvements	WASM/SPSM West Pressure Reducing Valve Construction	7.9	2.5%
New Connecting Mains-Shaft 7	CP3-Sect 23,24,47, Rehabilitation	7.8	2.5%
NIH Redundancy & Storage	Section 89 & 29 Replacement - Construction	7.1	2.3%
Central Monitoring System	CWTP SCADA Upgrade Construction	5.4	1.7%
Metro Redundancy Interim Improvements	WASM 3 CP-1	5.2	1.7%
Siphon Structure Rehabilitation	Construction	5.0	1.6%
	<b>Total Contracts &gt; \$5.0 million (excl. Loan Programs)</b>	<b>\$140.7</b>	<b>45.4%</b>
	<b>Other Project Spending</b>	<b>\$169.0</b>	<b>54.6%</b>
	<b>Total FY23 Spending</b>	<b>\$309.7</b>	<b>100.0%</b>



# FY23 Proposed CIP – FY23 Top Spenders

## Clarifier Rehab Phase 2 Construction



## Prison Point Rehab Construction







# FY23 Proposed CIP – FY23 Top Spenders

## Nut Island Odor Control and HVAC Improvements Construction



## Waltham Water Pipeline Construction





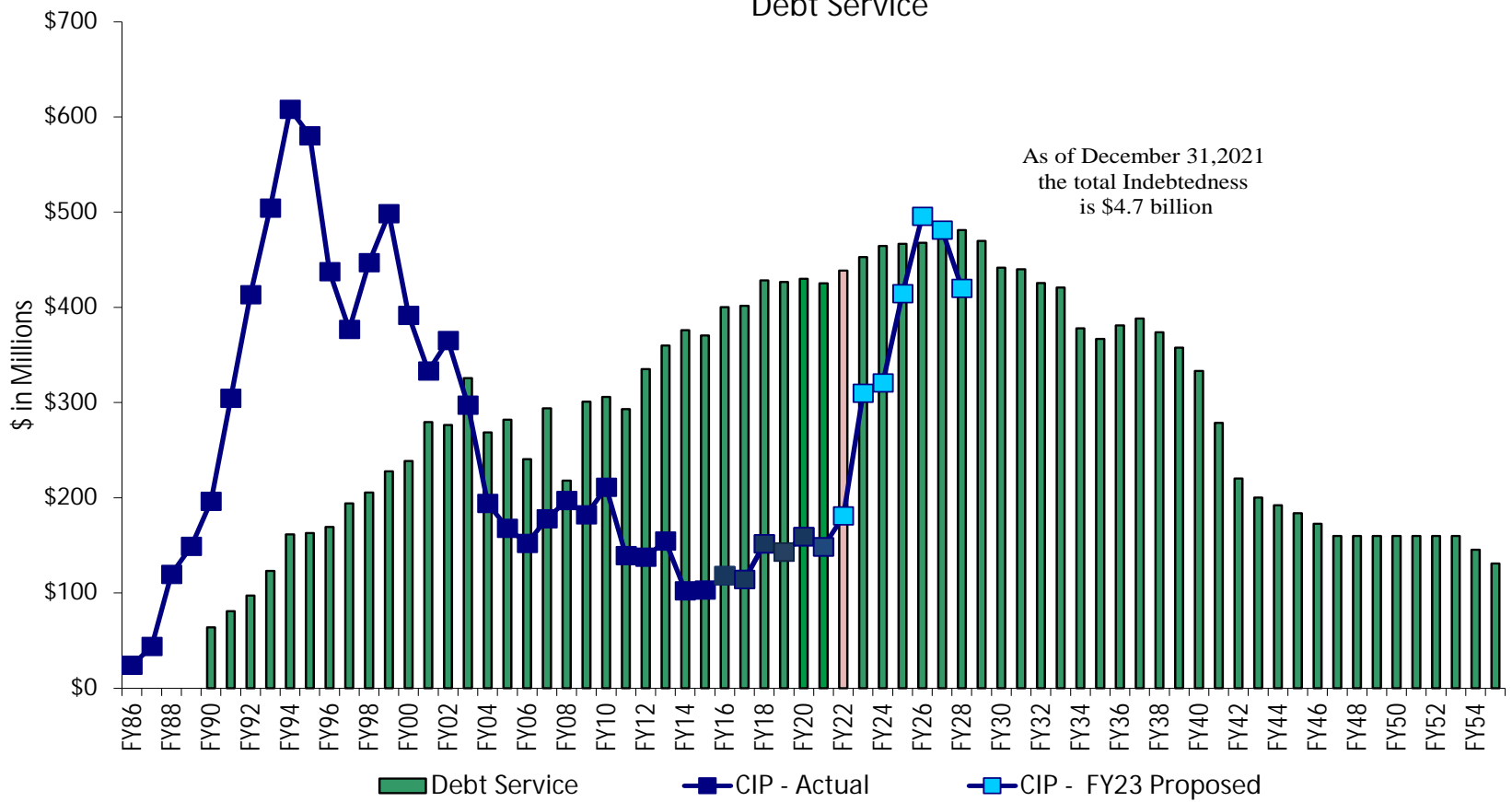
# FY23 Proposed CIP - Projected Contract Awards (\$s in millions)

Project	Subphase	Notice to Proceed	Total Contract Amount \$s in Millions
DI Treatment Plant Asset Protection	Fire Alarm System Replacement - Construction	Oct-22	\$31.0
Metropolitan Redundancy Interim Improvements	WASM 3 Rehab CP-2	Jan-23	\$21.8
MWRA Facilities Management	Office Space Modifications	Aug-22	\$13.8
Facility Asset Protection	Hayes Pump Station Rehab Construction	Nov-22	\$13.1
DI Treatment Plant Asset Protection	Combined Heat & Power Design/ESDC/REI	Oct-22	\$11.4
Waterworks Facility Asset Protection	Steel Tank/Impr Construction	Apr-23	\$11.0
Metropolitan Tunnel Redundancy	Technical Assistance	Jan-23	\$9.0
Siphon Structure Rehabilitation	Construction	Jul-22	\$8.3
Facility Asset Protection	Interceptor Renewal 7-Malden & Melrose-Construction	Jan-23	\$8.1
DI Treatment Plant Asset Protection	Eastern Seawall Construction - 1	Oct-22	\$7.3
	<b>Top 10 Contracts</b>		<b>\$134.8</b>
	<b>% of Total Planned Awards</b>		<b>57.7%</b>
	<b>65 Contract Awards Planned</b>		<b>\$233.5</b>



# Capital Spending and Debt Service

## MWRA Capital Spending & Debt Service





## Looking Ahead

- Focus on Asset Protection and Redundancy
- Metropolitan Tunnel Redundancy Project
- Incorporate lessons learned from Chelsea Creek Headworks
- Monitor the impacts of COVID-19, Inflation and Supply Chain Disruptions
- Potential Federal Stimulus
- Advisory Board Review/Comments and Recommendations