Presentation to

MWRA Advisory Board

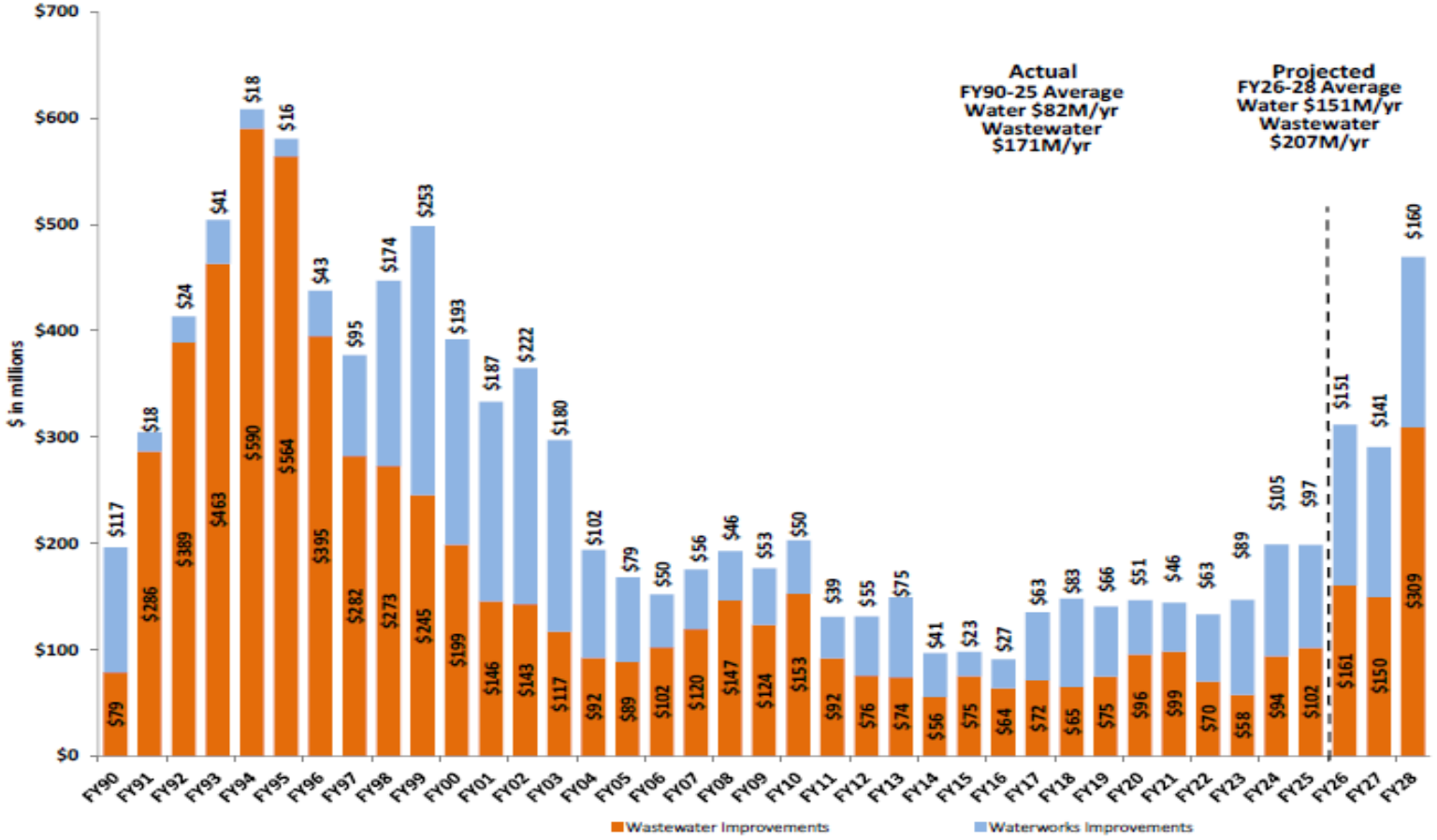
MWRA Capital Program

Brian Kubaska, Chief Engineer
Kathy Murtagh, Chief Operating Officer

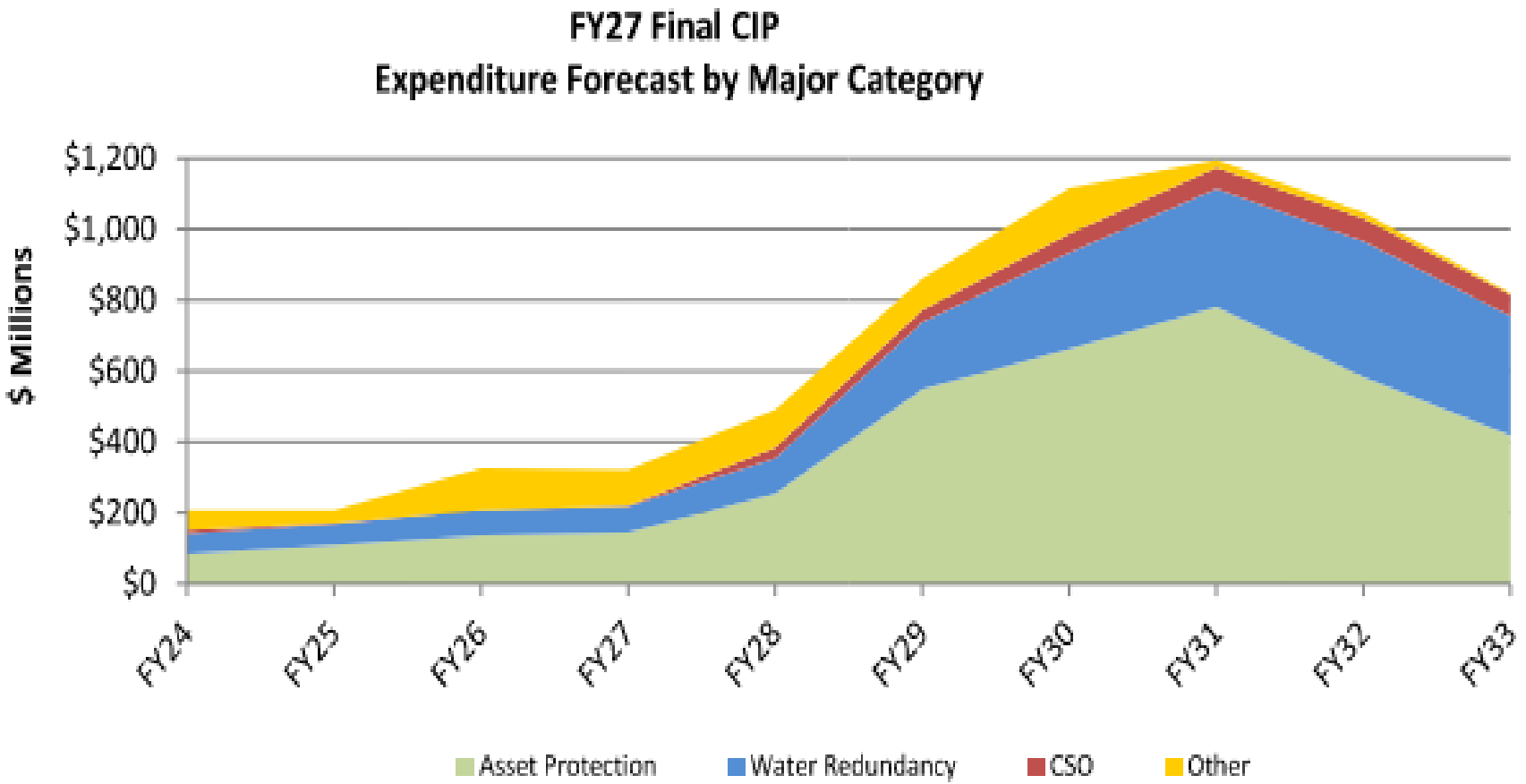
November 19, 2026

Capital Program

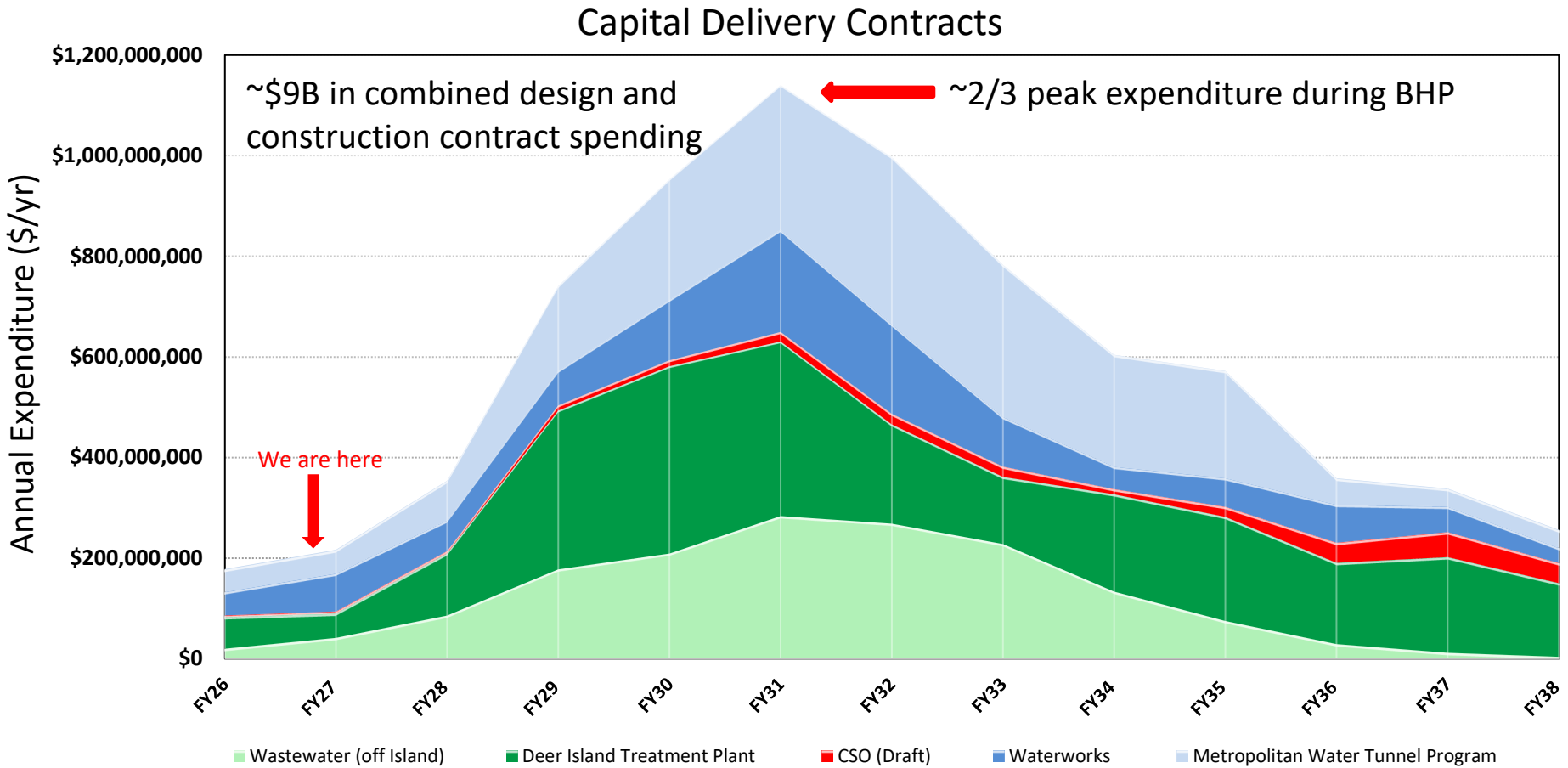
MWRA FY27 Final CIP – Annual Spending by Utility



MWRA FY 27 Final CIP – Projected Spending



Capital Program Spending Forecast (Final FY27 CIP)



FY27 Capital Improvement Plan

174 Construction Projects Totaling **$7.6B**

Category/Program	#	Total
DITP/Clinton/Pellet Plant	44	$3.15B
Tunnel Program	7	$1.68B
Wastewater (off-island)	39	$1.07B
Water	79	$905M
CSO (Draft)*	5	$762M

* Design & construction budgets combined

FY27 Capital Improvement Plan

270 Professional Services Projects Totaling **$1.65B**

Category/Program	#	Total
DITP/Clinton/Pellet Plant	36	$480M
Tunnel Program	8	$485M
Wastewater (off island)	117	$270M
Water	109	$415M

Past 10 yr Contract Awards vs. Future Contract Awards

- 2017 – 2026 (average)
  - Awarded ~25 individual contracts* annually
  - Total awarded value ~$168M annually
  - Individual awarded value: Max $289M (DI Clarifier, 2023)
    Avg <$10M (has been rising in recent years)

- FY27 CIP (averages for next ~5 years)
  - Award ~46 individual contracts* annually
  - Total award value ~$884M annually
  - Individual award value: Max >$1B (South Tunnel)
    Avg ~$40M

* contract = professional services or construction

Staffing Trends*

- ~126 positions in E&C, DITP Capital Eng & Tunnel Dept*
  - Pre-COVID, vacancy rate ~10% avg
  - Since ~2020, vacancy rate has steadily increased
  - Up to 30% vacancy in FY24
  - Mostly due to retirements + challenging recruiting environment
  - Currently ~25% vacant
  - ~17 positions are actively in the recruiting process (i.e., posted+)

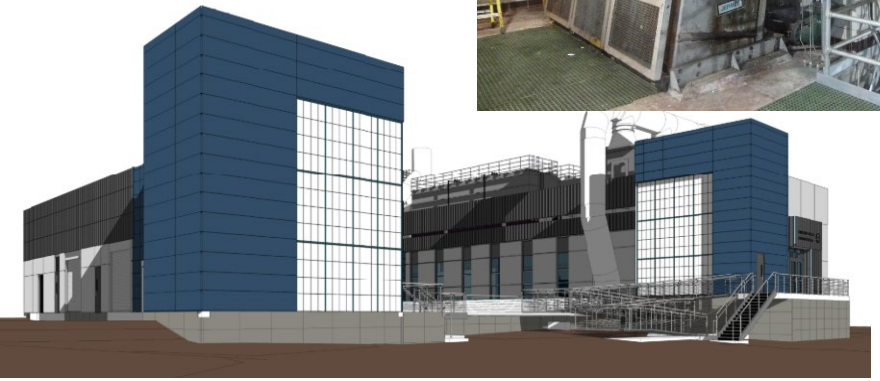
* Departments that manage most CIP design/construction projects.
Note: Many other Departments also contribute to successful project execution.

Sample of Upcoming Projects

Construction Contract 7587: Columbus Park Headworks Rehabilitation South Boston







Description: Provide complete rehabilitation of Headwork facility, including construction of a new super structure followed by demo of existing above grade facilities. Facility to be operational during construction limiting rehab to 1 of 4 channels at a time. Closely monitoring the City of Boston's Moakley Park Floodwall project located immediately adjacent to the headworks for schedule impacts.

Design Status: Ongoing, ~60%

Estimated Budget REI: $15,000,000 (#7636*)

Estimated Construction Cost: $260,000,000

Construction Contract Type: Chapter 149

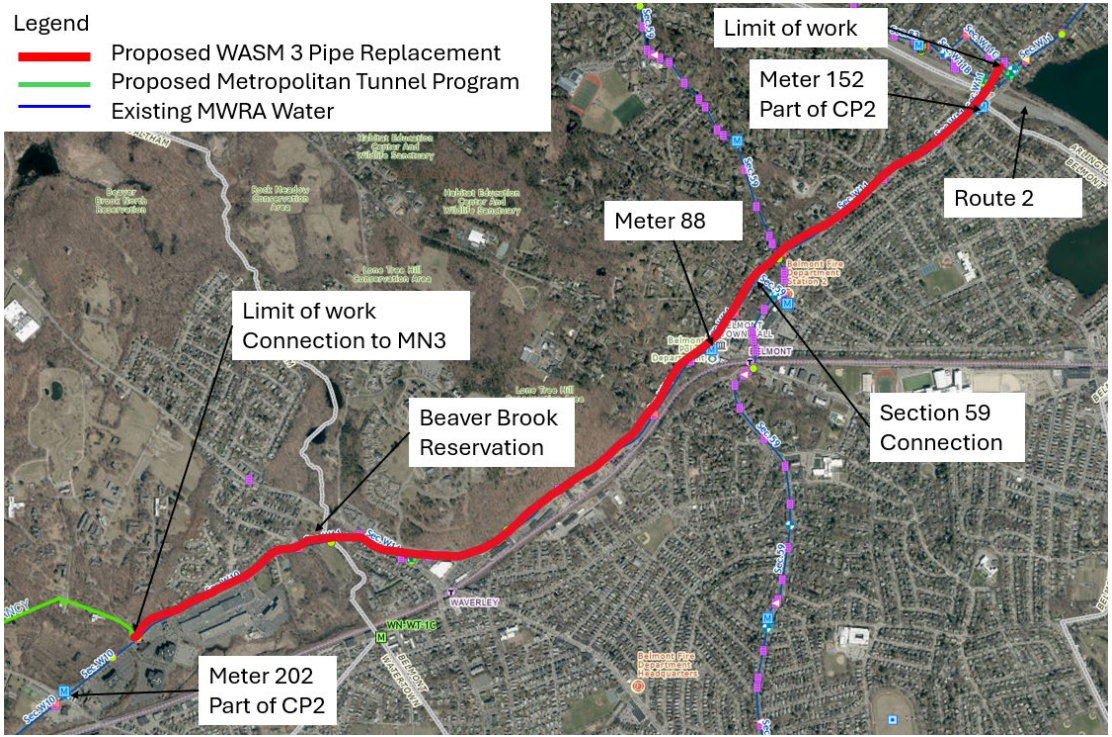
Estimated Construction Schedule:

NTP: 2028

Term: 60 months

* REI - combined with Ward St Headworks

Construction Contract 6545, WASM 3 CP 3 Pipe Replacement, Belmont



Description: ~14,000 linear feet of pipe replacement located in Waltham, Belmont, and Arlington between proposed Metropolitan Tunnel Shaft MN3 and Route 2 in Arlington

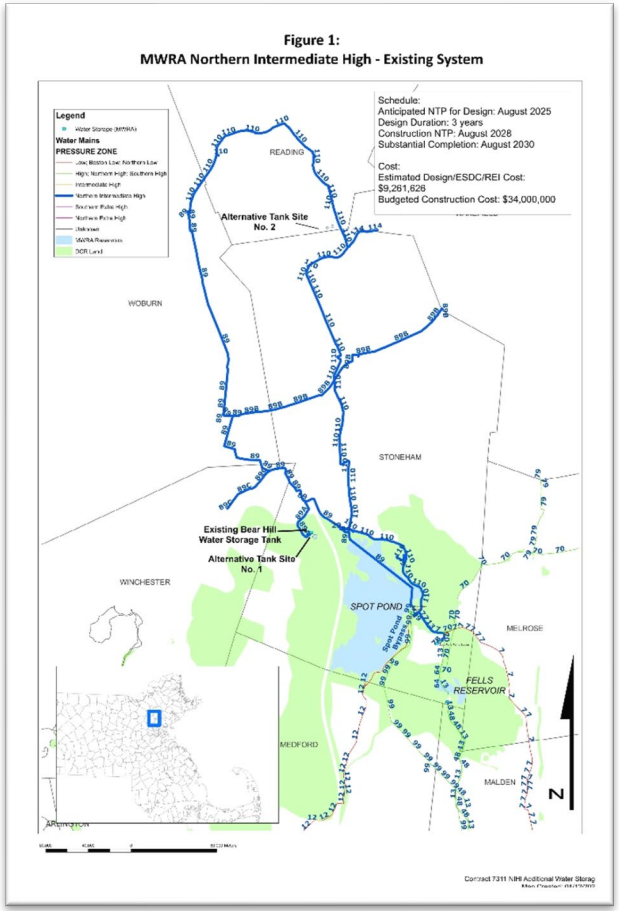
Design Status: Pre-RFQ/P
Estimated Budget:

Design/ESDC (#8027): $12,000,000
REI (#8026): $8,000,000

Estimated Construction Cost: ~$100,000,000
Construction Contract Type: Chapter 30/39M
Estimated Construction Schedule:

NTP: 2029
Duration: 50 months

Contract 7068: Northern Intermediate High Water Storage Stoneham & Reading



Project Description: To construct additional water storage, adding six million gallons of storage to the Northern Intermediate High pressure zone, providing storage redundancy to the system and bringing storage capacity in line with MassDEP Guidelines. Pre-fabricated water quality structure to be constructed, as well as a new overflow relief valve at Spot Pond reservoir.

Design Status: Pre RFQ/P (#7311)
Estimated Budget: $7,737,000

Estimated Construction Cost: $34,011,000
Construction Contract Type: Chapter 149
Estimated Construction Schedule:

- NTP: ~2030
- Duration: 24 months

Construction Contract 7138: Centrifuge Facility Rehabilitation
Deer Island Treatment Plant



Description: Rehabilitation of the Centrifuge Facility, including:

- Existing 12 Centrifuges
- Waste Sludge Pumping Systems
- Centrate Pumping systems
- Polymer System
- Centrifuge Control Systems
- Piping and Valves

Design Status: Developing RFQ/P (#7137)

Estimated Budget: $18,000,000

Estimated Construction Cost: ~$90,000,000

Construction Contract Type: Chapter 149

Estimated Construction Schedule:

- NTP: ~2030
- Duration: 48 months

Construction Contracts 7745, 7746, 7747: HVAC Systems Rehabilitation
Deer Island Treatment Plant





Project Description: Three Construction Phase Approach:

Phase 1 (#7745): Replacement of HVAC Controls System

Phase 2 (#7746): Replacement of 25 Fume Hoods Lab Facility

Phase 3 (#7747): Replacement of HVAC and Chiller Systems

Design Status: Ongoing

Phase 1: 90%

Phase 2 & 3: 60%

Estimated Budget REI: $17,000,000 (#7094)

Estimated Construction Cost: Phase 1: $78,000,000

Phase 2: $57,000,000

Phase 3: $47,000,000

Construction Contract Type: Chapter 149

Estimated Construction Schedule:

NTP: 2027

Duration: 48 months

Construction Contract 7971: Cottage Farm CSO Facility Rehabilitation, Phase 2 Cambridge



Description: Full facility rehabilitation and complete remaining PCB abatement not done in Phase 1

Design Status: Pre-RFQ/P (#7970)

Estimated Budget: $15,000,000

Estimated Construction Cost: ~$60,000,000
Construction Contract Type: Chapter 149
Estimated Construction Schedule:

NTP: ~2030
Duration: 24 months

Construction Contract 7495: Nut Island Mechanical and Electrical Upgrade Quincy



Project Description: Provide rehabilitation of the mechanical and electrical components of the Nut Island Headworks facility. Major facility components include hydraulic and electric influent sluice gates, mechanical bar screens, manual screen effluent sluice gates, and vortex grit chambers with air lift pump collectors for six operating channels.

Design Status: Pre-RFQ/P

Estimated Budget:

Design/ESDC (#7365) $10,000,000

REI (#7635) $4,500,000

Estimated Construction Cost: ~$50,000,000

Construction Contract Type: Chapter 149

Estimated Construction Schedule:

NTP: ~2031

Duration: 36 months

Additional Major Construction Projects

Program / Project / Contract	Contract No.	Estimated NTP	Estimated Contract Amount
Ward St Headworks	7430	10/1/2030	$254,955,000
Somerville-Margi CSO Facility Rehab	7688	2/1/2028	$26,000,000
DeLauri Pump Station Rehab	7826	7/1/2029	$30,000,000
Prison Point Rehab Repackaged	8020	1/1/2030	$65,000,000
DI Residual Facility Rehab	6240	12/1/2027	$425,000,000
DI Eastern Seawall	6724	5/1/2027	$70,000,000
DI Barge Berth Rehab	6726	3/1/2030	$62,000,000
DI Combined Heat & Power	6964	6/1/2029	$260,000,000
DI Fire Alarm System Replacement	7051	3/1/2028	$52,000,000
DI Centrifuge Replacements	7138	11/16/2030	$90,000,000
DI MCC & Switchgear Replace	7420	12/1/2027	$46,700,000
Shaft 12 Isolation Gates	7197	7/1/2029	$25,700,077
Tunnel Construction North CP1	7291	1/1/2029	$576,167,506
Tunnel Construction South CP2	7357	1/1/2028	$1,070,025,368
Sections 20 & 58	6298	10/1/2030	$38,036,685
Section 22 - CP1	6844	10/1/2030	$37,046,339
Section 8 & 57	6322	7/1/2030	$37,263,428

Preparing

CIP Initiatives – Project Scheduling

- Prioritize all capital projects within the FY27 CIP
  - Focus on “when”, not “if”
- Develop a more detailed Master Schedule of CIP projects including all project components and phases (pre-design, design, construction, close-out)
- Establish a consistent Project Controls policy for planning, monitoring, forecasting, and controlling all major capital projects
- Conduct a (limited) Readiness Assessment of MWRA’s current capital delivery capacity
  - Focus on strengths, capacity constraints, critical competencies, workload distribution, tools, etc.

CIP Initiatives – Increase Capacity to Deliver

- Expand recruitment efforts to backfill vacant positions
- Recruit project management, design and construction management talent necessary to effectively manage the CIP
- Expand outreach to the consultants and construction industries so they can better support our future capital projects
- Expand analysis of capital delivery metrics to better inform future decisions
- Update project management and quality management guidelines and best practices
- Incorporate risk management into capital delivery implementation

CIP Initiatives – Consider New Approaches

- Evaluate capital delivery models that could be used to effectively manage the CIP:
  - Expanded in-house capabilities (current model +++)
  - Program Manager/Construction Manager model (~BHP)
  - Program Support Services model (~Tunnel Program)
  - Other models = PM/PMO/OA/OR/LDE/DSSC/etc.
  - Combination/hybrid of models to meet Program specific needs
- Evaluate alternative delivery (e.g., D-B, CMAR)

Thank you!

Questions?