



Presentation to

MWRA Board of Directors

*Lead and Copper Rule
Changes and Recommendations*

February 21, 2024



Significant Changes to the Lead and Copper Rule

- DRAFT Lead and Copper Rule Improvements (LCRI)
 - Issued December 2023
 - Expected FINAL October 2024; Effective October 2027
- Builds On and Modifies/Defers the LCR Revisions (LCRR)
- Key LCRR Requirements Still Due October 16, 2024
 - Service Line Inventory
 - Related Outreach
 - 24-Hour Public Notice if over Action Level



LCRI Changes

- All systems must replace all lead service lines within 10 years
 - Regardless of lead sample results
- Lower Action Level from 15 ppb to 10 ppb
 - More systems will exceed
- Changes to sampling and compliance calculation
 - Reported levels will be higher
- More stringent requirements if over Action Level 3 times in 5 years
 - More outreach
 - Offer filters to all customers

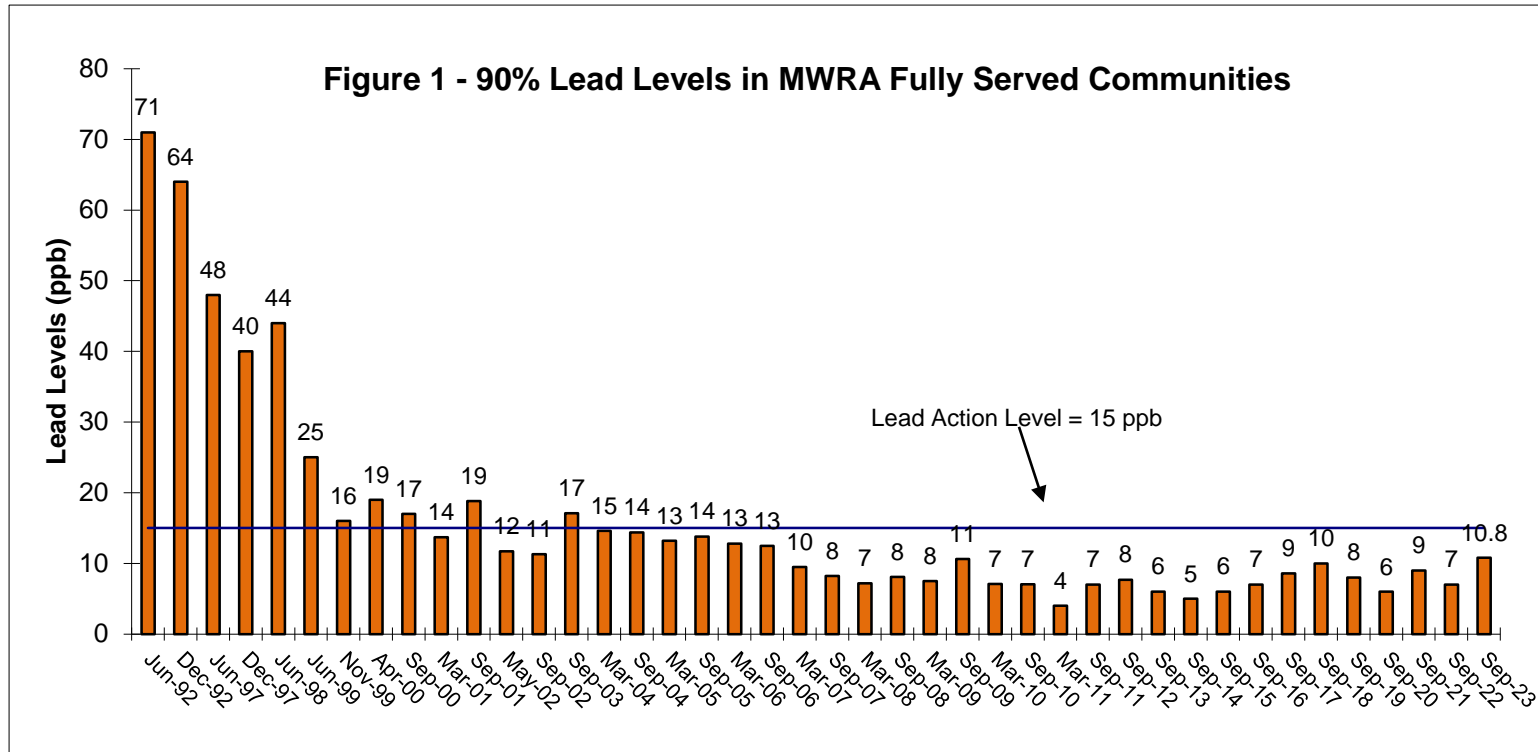


Option to Defer Change to Corrosion Treatment

- If MWRA exceeds the lead Action Level, we must re-optimize corrosion control treatment
 - Most likely option is adding orthophosphate
- Estimated capital and operating costs - \$60 to \$80 million
- LCRI offers an option to accelerate lead service line replacement rather than change corrosion control treatment
 - Replace all LSL within 5 years at 20% per year
 - Defer action on treatment changes while in process

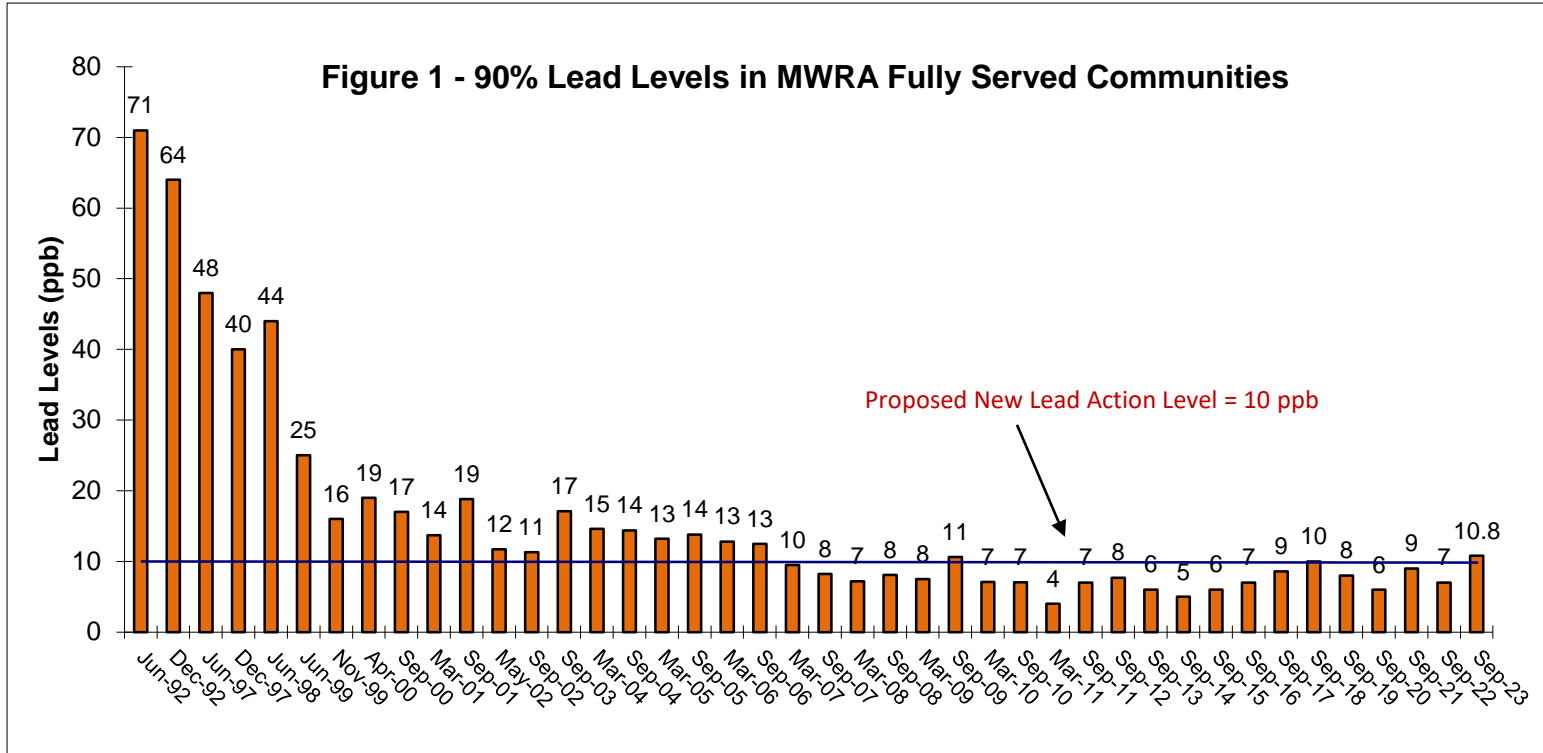


System – wide results





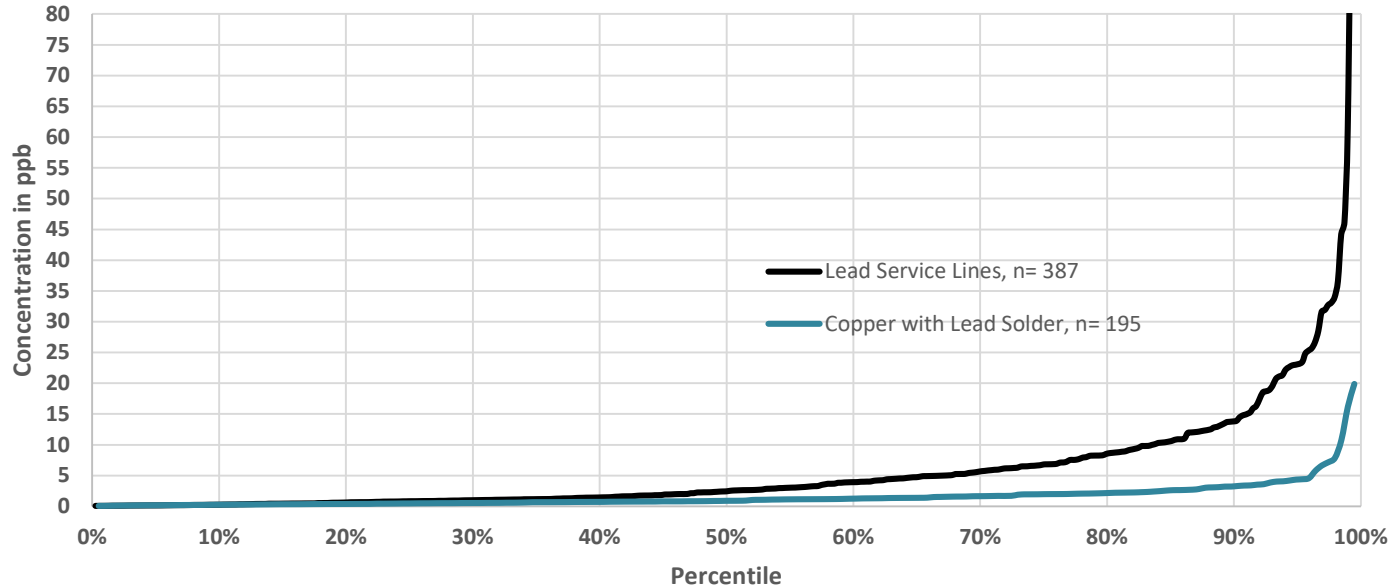
System – wide results





2023 Sampling Results – 10.8 ppb

2023 Sampling Round Results



| Type | Median | 75 th Percentile | 90 th Percentile | 95 th Percentile | % of Total |
|------|--------|-----------------------------|-----------------------------|-----------------------------|------------|
| LSL | 2 | 7 | 13 | 23 | 65 |
| CULS | 1 | 2 | 3 | 4 | 33 |



90th Percentile Results Significantly Lower for Non LSL Sites

| Year | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 |
|----------------------------------|------|------|------|------|------|------|
| 90th Percentile Full system | 10 | 8 | 6 | 9 | 7 | 11 |
| 90th Percentile Just LSL | 12 | 11 | 8 | 13 | 9 | 14 |
| 90th Percentile Just Lead Solder | 3 | 3 | 2 | 3 | 2 | 3 |

Red shows results over proposed new Action Level of 10 ppb



Most high values from sites with lead service lines

- In 2023 sampling round:
 - 35 of 595 samples were over the action level
 - 31 of the 35 were from sites with lead service lines
- In 2022 sampling round:
 - 18 of 595 samples were over the action level
 - 17 of the 18 were from sites with lead service lines



MWRA's Zero-Interest Lead Service Line Loan Program

- \$100 Million loan program approved in 2016
- Provided \$41 million in loans to 17 communities
- Current best estimate of remaining lead services is 15,400 (2.9%)
- Estimated total cost - \$150 million
- Better data available this October



Potential Program Changes to Accelerate Replacement

- Demonstrate MWRA commitment to full replacement
 - Fully fund program with additional \$100 million phase
- Facilitate private side replacement with 25 percent grant portion
 - Estimated cost \$40 million
- Significant outreach effort to ensure local participation
- Required completion date – 2033, assuming LCRI in effect in 2027



Presentation to

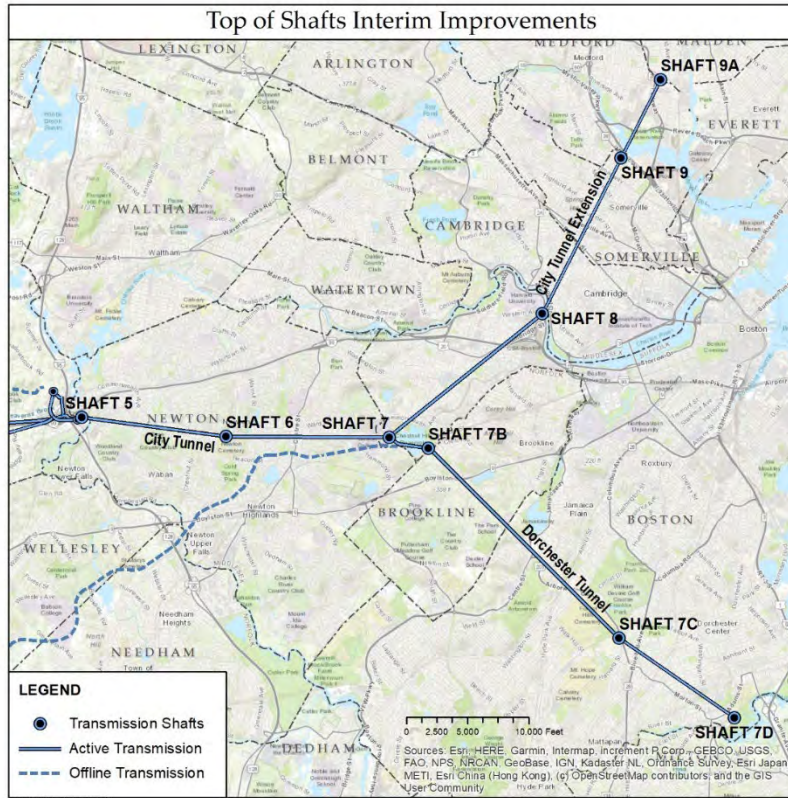
MWRA Board of Directors

Top of Shaft 5 Interim Improvements Contract 7671

February 21, 2024



Top of Shafts Interim Improvements – All Sites



Improve and protect critical facilities related to the existing tunnel system at nine shaft locations:

- **Shaft 5 – Weston (this contract)**
- *Shaft 6 – Newton (complete)*
- *Shaft 8 – Brighton (complete)*
- *Shaft 9A – Malden (complete)*
- Shaft 7 – Boston College (in design)
- Shaft 7B – Chestnut Hill (in design)
- Shaft 7C – Dorchester (in design)
- Shaft 7D – Dorchester (in design)
- Shaft 9 – Somerville (future)

*without taking system out of service



Top of Shaft 5 Interim Improvements



Multiple valve vaults (corrosion protection, bolt replacement, and vault waterproofing)



Underground pump room (abandoned with fill)

Significant Project Constraints: Work via confined space entry; No work during summer demand period; Labor intensive work



Top of Shaft 5 Interim Improvements – Procurement Process

Proposals Opened on January 24, 2024:

| <u>Bidder</u> | <u>Amount</u> |
|----------------------------|--------------------|
| R. Zoppo Corp. | \$5,361,500 |
| <i>Engineer's Estimate</i> | <i>\$5,483,000</i> |
| D'Allessandro Corp. | \$8,442,750 |
| WES Construction | \$11,440,750 |

Contract Duration: 30 Months



Presentation to

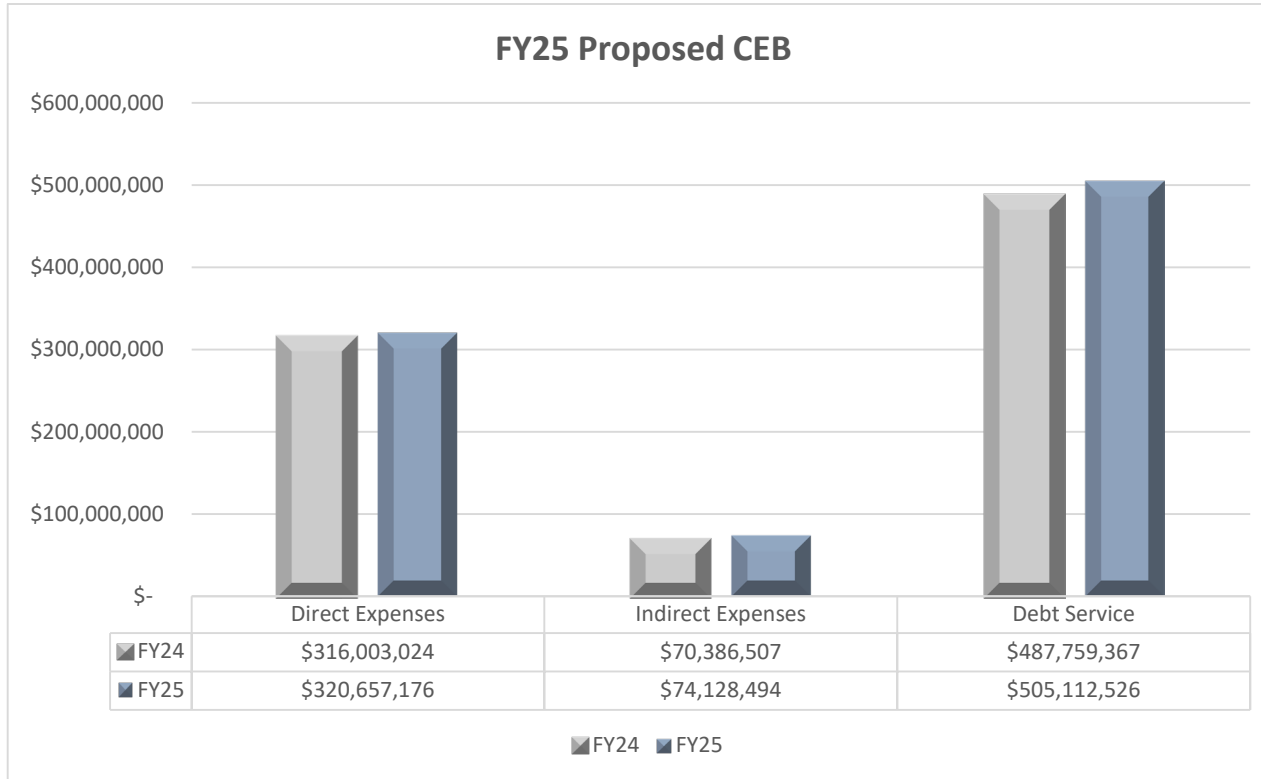
MWRA Board of Directors

*MWRA Fiscal Year 2025 Proposed
Current Expense Budget*

February 21, 2024



FY25 Proposed CEB – Budget Structure

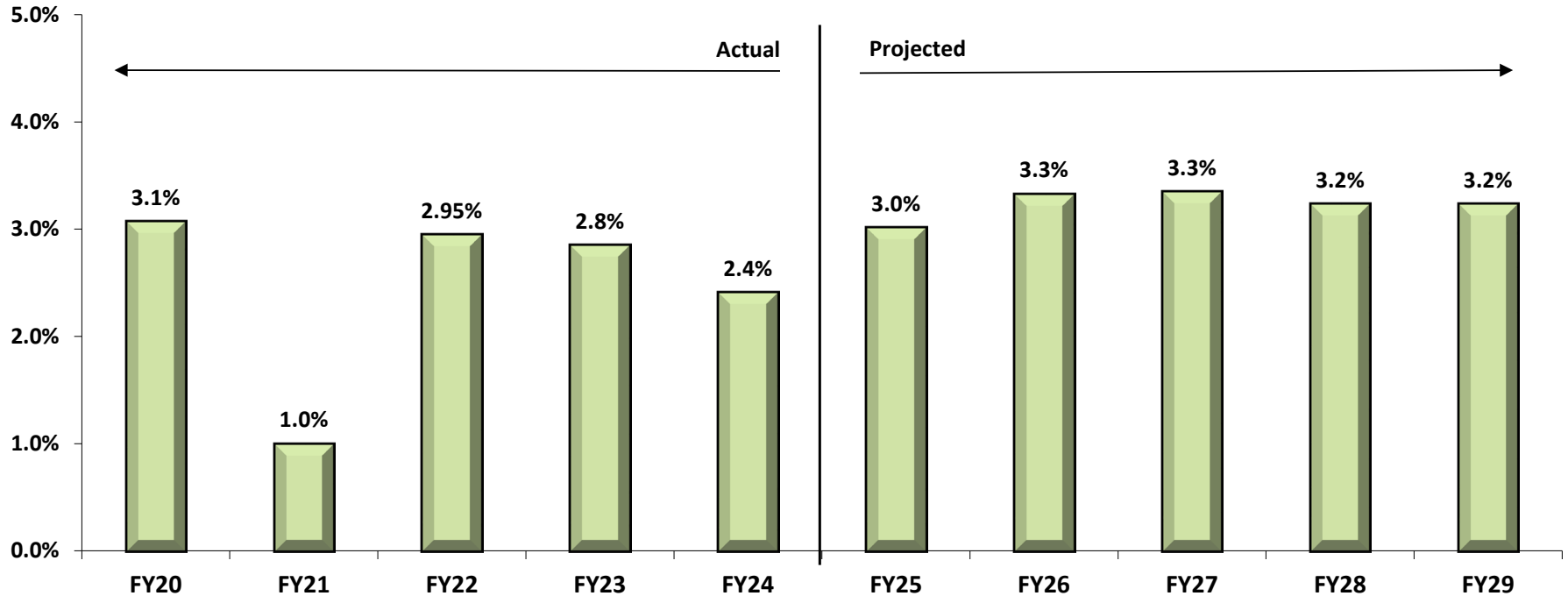



- **Direct Expenses:** Increase of \$4.7 million or 1.5% driven by Chemicals, Wages & Salaries, and Maintenance.
- **Indirect Expenses:** Increase of \$3.7 million or 5.3% driven by Pension, Reserve Changes, and Watershed Reimbursement.
- **Debt Service:** Increase of \$17.4 million or 3.6% driven by the structure of new and existing debt.



FY25 Proposed CEB – Rate Projections (Combined)

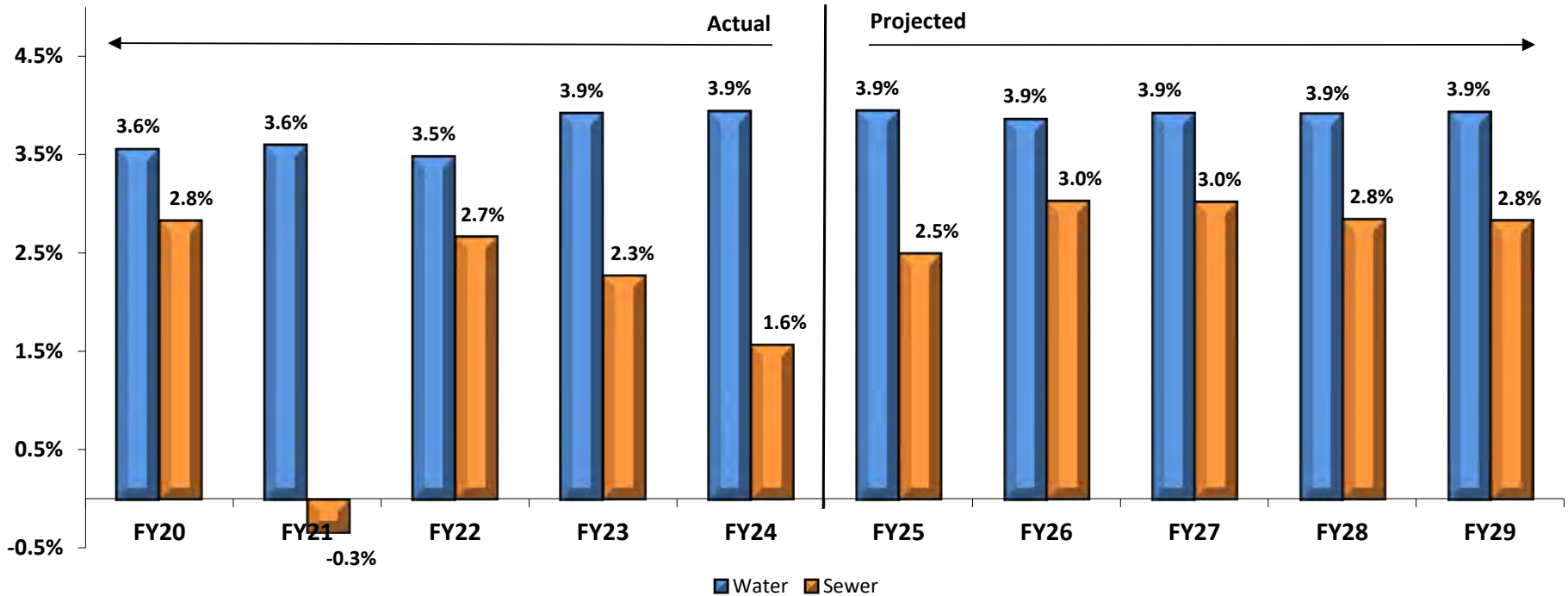
**MWRA Combined Utilities
Historical and Projected Rate Revenue Changes**





FY25 Proposed CEB – Rate Projections (By Utility)

MWRA Water & Sewer Utilities
Historical and Projected Rate Revenue Changes





FY25 Proposed CEB – Next Steps

- Transmit Proposed Budget to Advisory Board for their 60-day minimum comment and review period
- Spring Revisit Process/Provide briefings to Advisory Board Staff
- Public Hearing in April
- MWRA Board Hearing in May
- Staff anticipate FY25 Budget adoption in June



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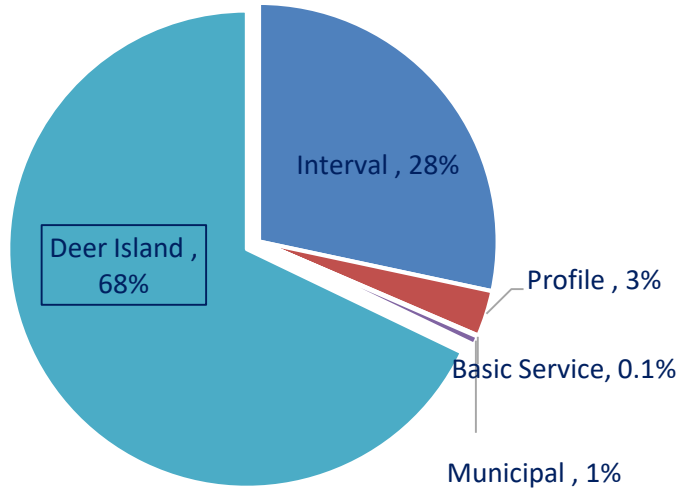
Purchase and Supply of Electricity for the Deer Island Treatment Plant

February 21, 2024

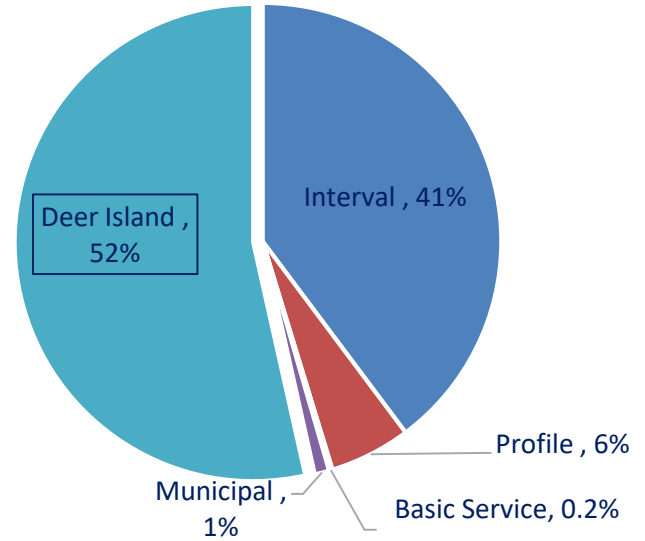


MWRA Electricity Contracts Overview

% Total MWRA Load (156M kWh/yr)



% Total MWRA Budget (\$22M)





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*Oxygen Generation Facility Services
Contract S587, Amendment 2*

February 21, 2024



DITP – Cryogenic Oxygen Generation Facility



- Provides oxygen to microorganisms in secondary treatment (95% Purity)
- Critical to core mission of NPDES permit compliance
- Specialized knowledge required for maintenance
- Hundreds of instruments requiring calibration for efficient operation



DITP – Cryogenic Oxygen Generation Facility



4 Large Air Compressors (2 @ 2,000hp, 2 @ 2500 hp)



2 Molecular Sieves



2 Cold Boxes



1,000 Ton Liquid Oxygen Storage



Instrumentation & Controls





Bidding History

- Limited qualified contractors bid in past
- Solutionwerks Inc. has held this contract from 2005-08, and then 2011-present
- Only other bidders:
 - Mixing & Mass Transfer Tech – awarded 2008 (No longer support Oxygen facility maintenance)
 - Ranch Cryogenics (last bid 2017)



Reasons for Extension

- Notice from existing vendor caused staff to re-evaluate contract strategy
- Successor contract will include additional maintenance/corrective work:
 - Bidding under C. 149
 - Potential to draw more contractors to bid
- Contract extended under delegated authority to develop bid documents
- Extra time needed:
 - to research specialty equipment requirements
 - to add Programmable Logic Controller upgrades