MASSACHUSETTS WATER RESOURCES AUTHORITY

Board of Directors Report

on

Key Indicators of MWRA Performance

Second Quarter FY2025

Q1	Q2	Q3	Q4

Frederick A. Laskey, Executive Director
David Coppes, Chief Operating Officer
February 12, 2025

Board of Directors Report on Key Indicators of MWRA Performance

2nd Quarter – FY25

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This quarterly report is prepared by MWRA staff to track a variety of performance measures for routine review by the Board of Directors. The content and format of this report is expected to develop as time passes. Information is reported on a preliminary basis as appropriate and available for internal management use and is subject to correction and clarification.

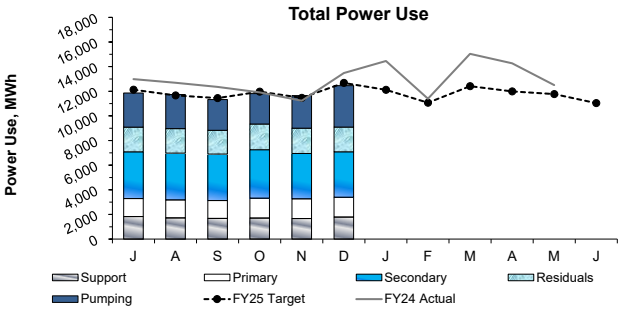
Frederick A. Laskey, Executive Director
David Coppes, Chief Operating Officer

February 12, 2025

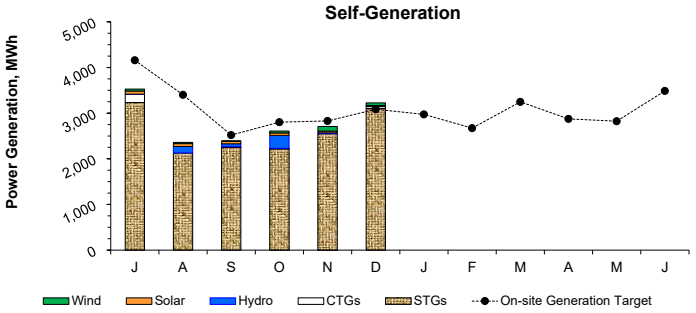
OPERATIONS AND MAINTENANCE

Deer Island Operations

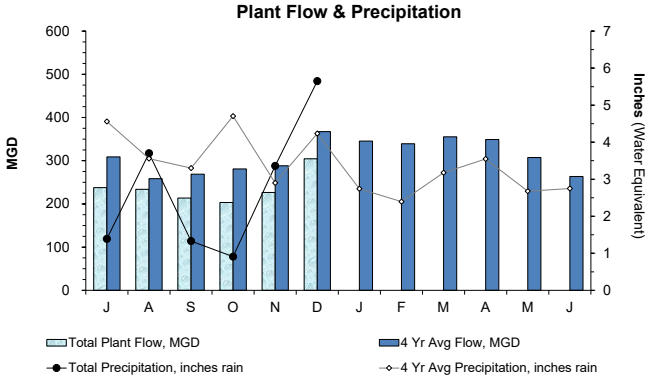
2nd Quarter - FY25



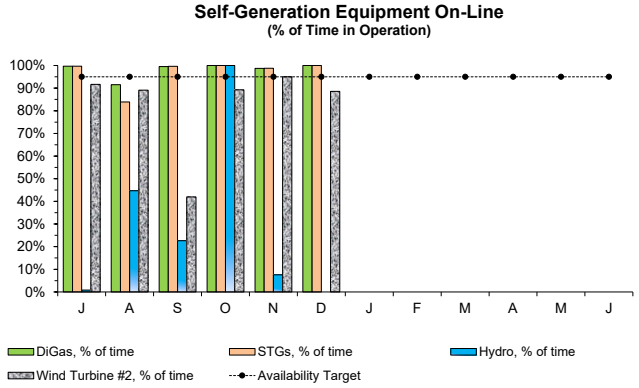
Total power usage in the 2nd Quarter was on target (-0.5%) with budgetary estimates even though plant flow was 21.6% lower than the historical (4 year average) estimate used to generate the electricity model, a remaining impact of the lengthy period of severe drought. Power used for raw wastewater pumping was 15.2% below target due to the lower plant flows, including 31.4% lower-than-expected power usage for the pumping of the South System flows which were 26.6% below target. However, power used in other areas and major treatment processes (such as for secondary treatment with the higher cryogenic oxygen production demand) were up to 6.2% above their respective targets as a result of the much lower-than-expected plant flows.



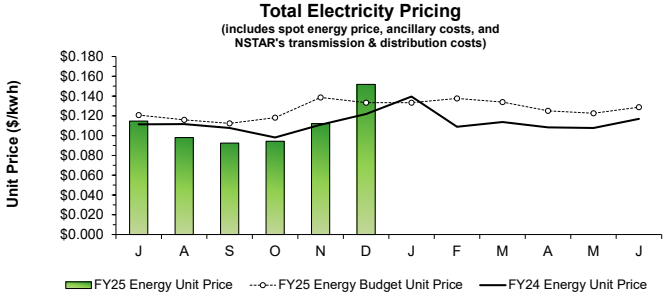
Power generated on-site during the 2nd Quarter was within 2% of target as STGs generation was 17.8% above budgetary estimates due to supplemental fuel oil usage for boiler operation during periods of lower or unstable digester gas production, and during certain maintenance activities, allowing for much greater generation by the main STG. CTGs generation was lower than budgeted as the CTGs were operated for an ISO-NE Demand Response winter audit event in December and only briefly during maintenance/checkout activities several times in the quarter. Hydro Turbine generation was 79.1% below target as turbine availability fell to 35.9% this quarter due to wicket gate issues with Turbine #2 which has been out of service since November 3. The wicket gates for Turbine #1 are in the process of being rehabilitated. Staff determined the best course of action for Turbine #2 was to suspend all temporary repairs in favor of proceeding with a complete wicket gate rehabilitation once the Turbine #1 rehabilitation is completed approximately June 2025. Solar Panel generation was within 2.4% of target and Wind Turbine generation was 16.1% below target as Turbine #2 availability was 90.9%.



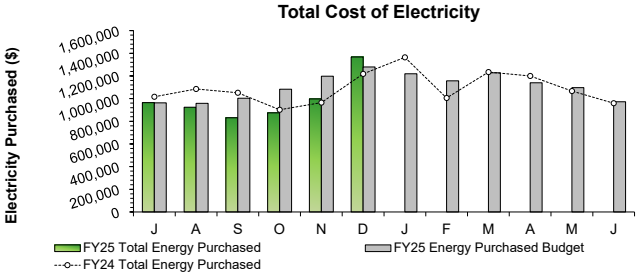
Total Plant Flow for the 2nd Quarter was 21.6% below target with the budgeted 4 year average plant flow (244.7 MGD actual vs 312.2 MGD expected) as precipitation was 16.2% lower than target this quarter (9.92 inches actual vs. 11.84 inches expected). Plant flows have been well below target since July as the region had been experiencing a period of severe drought due to a lengthy stretch with little to no rain. It was only recently, since late November, that several storms passed through the region resulting in increased plant flows during the storm events. Average dry weather plant flows, however, continue to remain below target levels.



The DiGas System and STGs availability both exceeded the 95% availability target in the 2nd Quarter, while Hydro Turbine availability was only 35.9% due mainly to wicket gate issues with Turbine #2, which has kept the turbine out of service since November 3. Turbine #1 remains out of service as the contractor performs wicket gate rehabilitation and replaces the failed gearbox and bearings. Wind Turbine availability was 90.9% this quarter as Turbine #2 experienced several electrical issues and turbulent winds blowing through the digesters prevented the turbine from operating for periods of time during several storm events. Wind Turbine #1 is awaiting re-installation and is not included in the FY25 tracking of turbine availability.



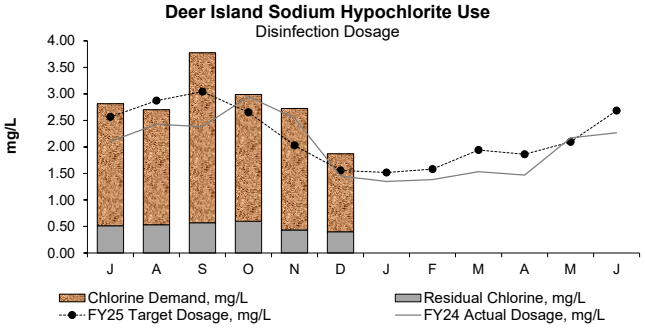
Under the current energy supply contract, a block portion of DI's energy is a fixed rate and the variable load above the block is purchased in real time. The Total Energy Unit Price for November and December are estimated pending receipt of the Direct Energy invoices. Overall, the average unit prices are estimated to be 10.5% lower than the budgetary estimate through December. The Total Energy Unit Price includes a fixed block price, spot energy price, transmission & distribution charges, and ancillary charges.

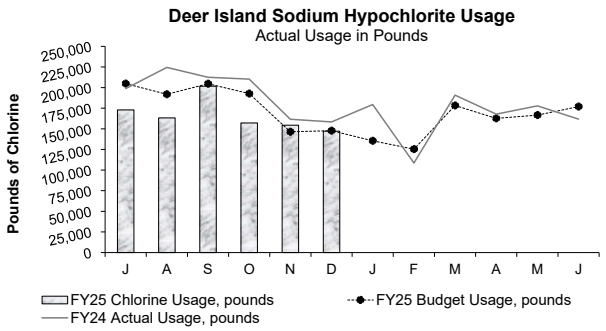


Year-to-date Total Cost of Electricity is estimated to be $525,975 (8.1%) lower than budgeted through December. The Total Cost of Electricity depicted for November and December are estimated pending receipt of the Direct Energy invoices. The Total Cost of Electricity is estimated to be lower than budgeted as the estimated Total Energy Unit Price is 10.5% lower than target while the Total Volume of Electricity Purchased was 2.7% above target as a result of lower-than expected onsite self-generation for each month in FY25-to-date except for December.

Deer Island Operations

2nd Quarter - FY25





The disinfection dosing rate in the 2nd Quarter was 22% above target with budgetary estimates while plant flow was 21.6% lower-than-expected which results in a more concentrated wastewater that exerts a higher chlorine demand. Nevertheless, sodium hypochlorite usage in pounds of chlorine was 5.8% lower-than-target due to the lower plant flows. DITP maintained an average disinfection chlorine residual of 0.48 mg/L in the 2nd Quarter with an average dosing rate of 2.53 mg/L as chlorine demand was 2.05 mg/L. From March through October, the disinfection basin effluent total chlorine residual target for dry weather flows was increased from 0.30 mg/L to greater than or equal to 0.50 mg/L in preparation for potential new NPDES seasonal permit limits for indicator bacteria. The purpose for the higher chlorine residual target (and higher sodium hypochlorite dosing) was to continue developing operating strategies for the new permit, an effort that was also undertaken in 2023. The disinfection basin effluent total residual chlorine target was returned to 0.30 mg/l in November for dry day flow conditions and 0.50 mg/l during elevated wet weather flows to target the treatment for fecal coliforms as the permit season for Enterococcus treatment in the new proposed permit would be ending.

The overall disinfection dosing rate (target and actual) is dependent on plant flow, target effluent total chlorine residual levels, effluent quality and NPDES permit levels for fecal coliform (or the proposed seasonal Enterococcus bacteria).

Secondary Blending Events

Month	Count of Blending Events	Count of Blending Events Due to Rain	Count of Blending Events Due to Non-Rain-Related Events	Secondary, as a Percent of Total Plant Flow	Total Hours Blended During Month
July	0	0	0	100.0%	0.00
August	0	0	0	100.0%	0.00
September	0	0	0	100.0%	0.00
October	0	0	0	100.0%	0.00
November	0	0	0	100.0%	0.00
December	2	2	0	98.4%	14.00
Total	2	2	0	99.7%	14.00

99.3% of all flows were treated at full secondary during the 2nd Quarter as there were two (2) separate secondary blending events in December, both due to high plant flows from heavy precipitation. These blending events resulted in 14.0 hours of blending and a total of 149.03 MGal of primary-only treated effluent blended with secondary effluent. The Maximum Secondary Capacity during the entire quarter was 700 MGD.

Secondary permit limits were met at all times during the 2nd Quarter.

Deer Island Operations & Maintenance Report

Environmental/Pumping:
The plant achieved an instantaneous peak flow rate in the 2nd Quarter of 1,169.5 MGD during the height of a storm event on December 11. This peak flow occurred during a storm event that brought 2.84 inches of total precipitation to the metropolitan Boston area. The Total Plant Flow was 21.6% below the 4 year average plant flow target for the quarter as precipitation was 16.2% lower than the 4 year average (9.92 inches actual vs. 11.84 inches expected). Plant flows have been well below target since July as the region had been experiencing a period of severe drought due to a lengthy stretch with little to no rain. It was only recently, since late November, that several storms passed through the region resulting in increased plant flows during the storm events. Average dry weather plant flows, however, continue to remain below target levels.

Due to these recent severe drought conditions, new monthly low flow records were set for the months of October and November, as well as a new all-time monthly average low flow record for the North System Influent. Additionally, The monthly average total plant flow for October (203.29 MGD) was the second lowest average monthly flow of all time since plant startup in July 1998. The current lowest monthly plant flow record is 201.73 MGD set in August 2022. The table below summarizes these flow statistics with the new and near new records displayed in the yellow highlighted boxes.

October and November Low Plant Flow Records

	New October Low Flow Record (set 2024)	New November Low Flow Record (set 2024)	Current All-Time Monthly Low Flow Record (since plant startup July 1998)
Total Plant Influent Flow	203.29 MGD (also 2nd Lowest All-Time Low Flow Record)	226.49 MGD	201.73 MGD (August 2022) 2nd All-time Lowest Flow: 203.29 MGD (October 2024)
North System Influent Flow	137.78 MGD (also New All Time Low Flow Record)	No new record set 158.13 MGD	**New record: 137.78 MGD (October 2024)** Previous record: 138.78 MGD (Sept. 2020)
South System Influent Flow	65.50 MGD	68.35 MGD	62.28 MGD (Sept. 2016)

Deer Island Operations & Maintenance Report (continued)

Disinfection/Dechlorination:
MWRA uses sodium hypochlorite to destroy pathogens in plant effluent after primary and secondary treatment. Indicator bacteria such as Fecal Coliform, E. coli, and Enterococcus are used to measure the presence of potential pathogens. To provide a proper pathogen kill, sodium hypochlorite, a disinfectant, is added to meet a chlorine demand, then regulated by maintaining a chlorine residual. From March through October, the disinfection basin effluent total chlorine residual target for dry weather flows was increased from 0.30 mg/L to greater than or equal to 0.50 mg/L in preparation for potential new NPDES seasonal permit limits for indicator bacteria. The purpose for the higher chlorine residual target (and higher sodium hypochlorite dosing) is to continue developing operating strategies for the new permit, an effort that was also undertaken in 2023. In the 2nd Quarter of FY25, DITP maintained an average disinfection chlorine residual of 0.48 mg/L with an average dosing rate of 2.53 mg/L as chlorine demand was 2.05 mg/L., with the adjusted higher target. Higher usage of both sodium hypochlorite and sodium bisulfite, used for removing the residual chlorine before discharging the effluent, will be necessary in order to comply with the more stringent indicator bacteria limits in the proposed new NPDES permit. The disinfection basin effluent total residual chlorine target was returned to 0.30 mg/l in November for dry day flow conditions and 0.50 mg/l during elevated wet weather flows to target the treatment for fecal coliforms as the permit season for Enterococcus treatment in the new permit would be ending.

Primary and Secondary Treatments:
The contractor completed the first several phases of the Clarifier Rehabilitation Project (Contract #7395) with the rehabilitation of the Primary Batteries A, B, and C Influent and Effluent Channels by the end of December. The work included putting primary influent gates in place, installing new aeration header systems, completing the installation of lower aeration systems, Linabond repair work in the clarifiers, installing drains between Batteries A and B, replacing effluent gates, completing hatch and grating modifications, and expansion joint repairs, in addition to other work. Work on Primary Battery D began in late December. The contractor is also replacing the secondary scum influent gates and other equipment in the secondary clarifiers. The plan is to target maintenance on one (1) secondary clarifier in each of the three (3) Secondary Batteries at a time. There are 18 clarifiers in each battery, totaling 54 clarifiers. The contractor is currently working on the first three (3) secondary clarifiers. MWRA plans to maintain a secondary process limit of 700 MGD, which is the capacity of 50 clarifiers in operation. This work is currently proceeding on target with the schedule.

Residuals Treatment:
Sludge feed to the Module #3 digesters #1 and #2 was temporarily suspended, one at a time, for several days each, starting on December 9 for digester #1 and on December 16 for digester #2, to allow the contractor to perform routine scheduled maintenance on each of the digester's sludge overflow line. This maintenance is performed on only one (1) digester at a time and continues until this maintenance is completed for all eight (8) online digesters. This work will resume starting with digester #3 in January to avoid disruptions during the holiday period. This routine preventative maintenance was last performed in May 2023.

Odor Control Treatment:
All four (4) carbon adsorber (CAD) units in the North Pumping Odor Control (NPOC) Facility were emptied and refilled with new regenerated activated carbon media in November as part of routine maintenance to replace spent activated carbon.

Energy and Thermal Power Plant:
Overall, total power generated on-site accounted for 23.8% of Deer Island's total power use in the 2nd Quarter. Renewable power generated on-site (by Solar, Wind, STGs, and Hydro Turbines) accounted for 23.6% of Deer Island's total electrical power use for the quarter.

DITP took delivery of 250,000 gallons of #2 fuel oil, a total of 25 oil tanker trucks, without incident from October 28 through November 1. This fuel oil is used for CTG operation, for boiler startup operations, and for supplemental fuel for boiler operation during periods of low or unstable digester gas production.

Annual scheduled maintenance on CTG-1A was successfully completed by staff and contractors during the week of December 9. The scope of this work consisted of routine maintenance and calibrations. During the work, CTG-2B was available on standby to act as DITP's emergency backup power. The single CTG is fully capable of providing sufficient power to maintain all of DITP's systems up to a capacity of 850 MGD.

Regulatory:
Based on the DITP's performance in 2024, Deer Island is qualified to receive NACWA's (National Association of Clean Water Agencies) Platinum Award for Peak Performance which recognizes member agency facilities for outstanding compliance of their National Pollutant Discharge Elimination System (NPDES) permit limits. The Platinum award is given to agencies in recognition of 100% compliance with NPDES permits over a consecutive five year period. Deer Island is qualified for a Platinum18 Award for having operated with no permit violations for 18 consecutive years.

Clinton Operations & Maintenance Report

Dewatering Building
Operations staff and the Facilities Specialist unclogged the polymer feed system and also repaired a leak in the polymer system. The M&O and Facilities Specialist pressure washed the belts on #2 belt filter press. The electrical contractor cleaned and filed the brushes on the #2 polymer pump motor and also installed two (2) recirculation pumps for the heating system. Operations staff cleaned the scum trough and the feed tube on gravity thickener #1.

Chemical Building
Maintenance staff and the Facilities Specialist installed safety bollards in front of the sodium bisulfite pumps and installed braces for the sodium hypochlorite lines. They also completed jetting out soda ash line B. Plumbers from Deer Island repaired leaks on the sodium hypochlorite piping. The contractor replaced the 8 inch suction valve for the clarifier #1 and a one-half-inch valve on the seal water for RAS pump #4.

Aeration Basins
Operations staff cleaned the pH and D.O. probes and hosed down all three (3) aeration basins.

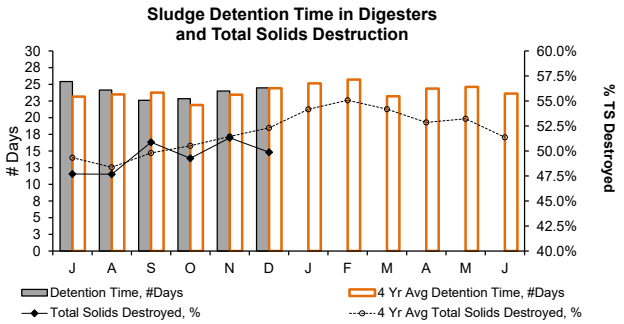
Phosphorus Building
Operations and Maintenance staff completed acid wash on #1, #2 and #3 disk filters and cleaned the troughs for all three (3) filters. The Phosphorus Reduction Facility(PRF) disk filters were taken off line in November and will remain off line until April when permit requires phosphorus discharge limits to be lower. Operations staff cleaned and changed the reagents in both CL17 chlorine analyzers and cleaned the PRF polymer pumps by flushing them with mineral oil. M&O's and the Facilities Specialist removed the rapid mixer from train #1. Operations staff also drained and washed the #2 filter and probe to verify whether fluctuating readings persist.

Headwork's Building
M&O's and the Facilities Specialist removed and replaced drive bolt in grit classifier #2, cleaned the influent mechanical bar rack, and greased the upper and lower pin racks. FOD staff replaced the flushing hydrant in front of the grit tanks.

Digester Building
M&O's checked equipment for proper operation and greased the floating Ovivo mixer cover. The contractor worked on the #2 sludge boiler, found and repaired a faulty pump. They also installed a new three-quarter inch backflow preventer.

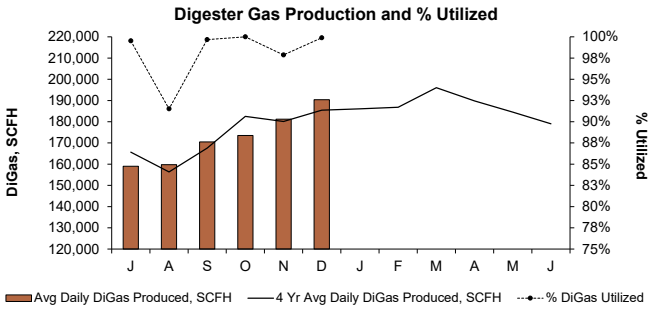
Deer Island Operations and Residuals

2nd Quarter - FY25



Total solids (TS) destruction following anaerobic sludge digestion averaged 50.2% during the 2nd Quarter, within 2.5% of the 4 year average. Sludge detention time in the digesters was 23.8 days, with an average of 8.0 digesters in service, similar to the 4 year average of 23.2 days detention time.

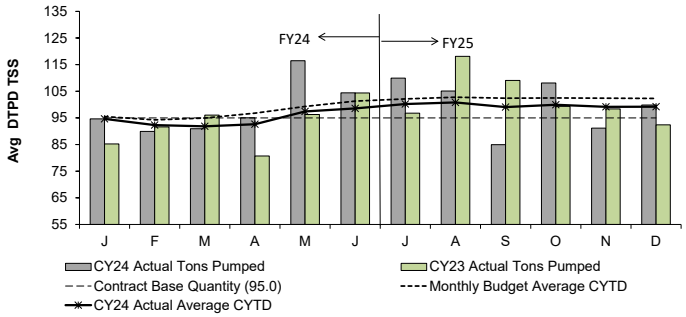
Total solids (TS) destruction is dependent on sludge detention time which is determined by primary and secondary solids production, plant flow, and the number of active digesters in operation. Solids destruction is also significantly impacted by changes in the number of digesters and the resulting shifting around of sludge.



The Avg Daily DiGas Production in the 2nd Quarter was on target with the 6 Year Avg Daily DiGas Production. 99.3% of the Digas produced this quarter was utilized at the Thermal Power Plant.

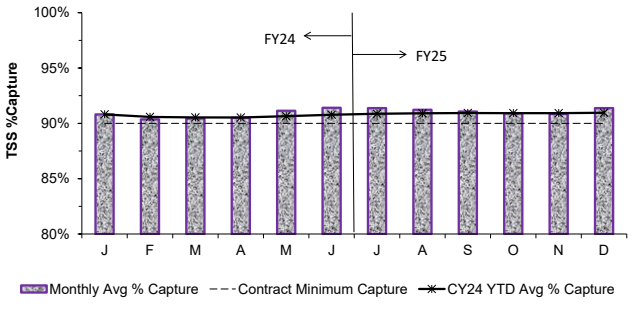
Residuals Pellet Plant

New England Fertilizer Company (NEFCO), a wholly-owned, indirect subsidiary of Synagro Technologies, Inc., operates the MWRA Biosolids Processing Facility (BPF) in Quincy under contract. MWRA pays a fixed monthly amount for the calendar year to process up to 95.0 DTPD/TSS as an annual average (for the extended contract period of January 1, 2024 through December 31, 2034). The monthly invoice is based on 95.0 DTPD/TSS (Dry Tons Per Day/Total Suspended Solids) times 365 days divided by 12 months. At the end of the year, the actual totals are calculated and additional payments are made on any quantity above the base amount. On average, MWRA processes more than 95.0 DTPD/TSS each year (FY24's budget is 103.2 DTPD/TSS and the FY25 budget is 99.9 DTPD/TSS).



The average quantity of sludge pumped to the Biosolids Processing Facility (BPF) in the 2nd Quarter was 99.7 TSS Dry Tons Per Day (DTPD), 2.2% below target with the FY25 budget of 102.0 TSS DTPD for the same period. The slightly lower amount of sludge sent to the BPF this quarter can be partially attributed to lower overall sludge production at DITP, due to the lower plant flows.

The CY24 average quantity of sludge pumped was 99.2 TSS DTPD, 1.2% below target compared to the CY24 average budget of 102.3 TSS DTPD for the year.



The contract requires NEFCO to capture at least 90.0% of the solids delivered to the Biosolids Processing Facility. The average capture for the 2nd Quarter was 91.05%.

The CY24 average capture rate of solids was 90.96%.

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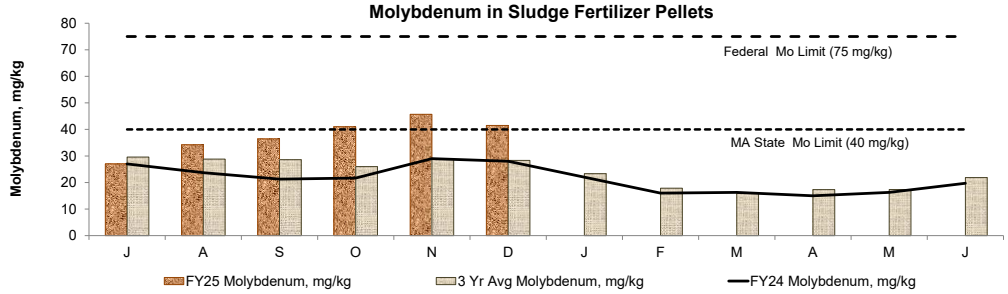


Copper, lead, and molybdenum (Mo) are metals of concern for MWRA as their concentrations in its biosolids have, at times, exceeded regulatory standards for unrestricted use as fertilizer. Molybdenum-based cooling tower water is a significant source of Mo in the sludge fertilizer pellets. The Federal standard for Mo is 75 mg/kg. The Massachusetts Type I biosolids standard for molybdenum was changed from 25 mg/kg to 40 mg/kg in 2016, allowing MWRA to sell its pellets in-state for land application whereas the previous limits forced several months' worth of pellets to be shipped out of state.

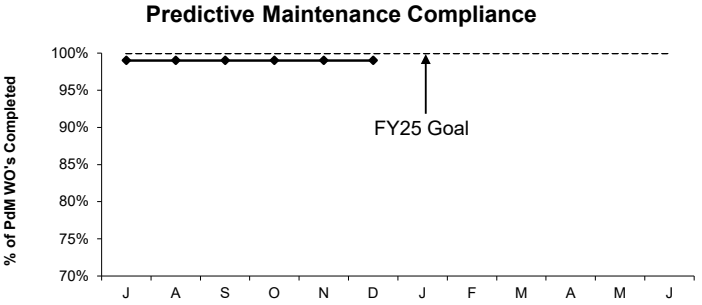
The levels were below the DEP Type 1 limit for copper and lead during the 2nd Quarter. For Mo, the preliminary level in the MWRA sludge fertilizer pellets for the 2nd Quarter averaged 42.7 mg/kg, 54% above the 3 year average, 7% above the MA State Limit, and 43% below the Federal Limit. The 41.5 mg/kg average Mo for December is a preliminary figure pending final approval of reportable Mo results from the laboratory. If the final Mo level for December remains above 40 mg/kg, the Mo level for each month in the 2nd Quarter will have been above the DEP Type 1 limit.

Deer Island Maintenance

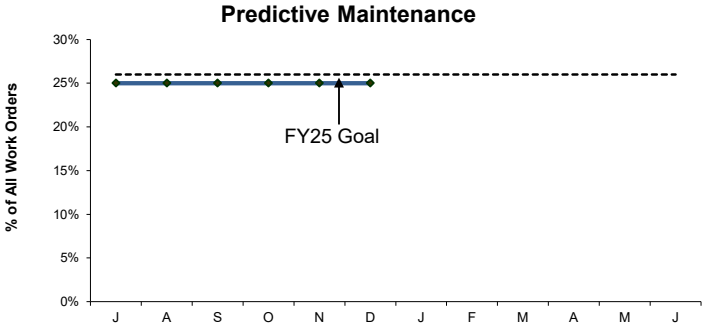
2nd Quarter - FY25

Productivity Initiatives

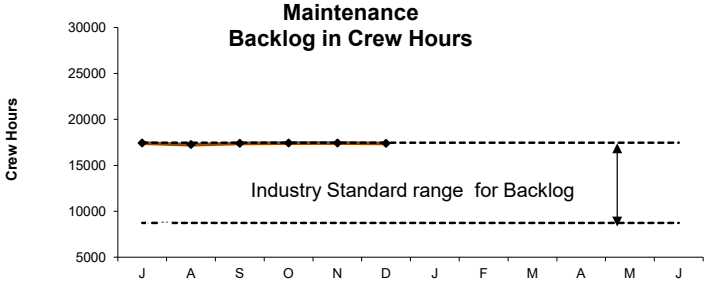
Productivity initiatives include increasing predictive maintenance compliance and increasing PdM work orders. Accomplishing these initiatives should result in a decrease in overall maintenance backlog.



Deer Island's FY25 predictive maintenance goal is 100%. DITP completed 99% of all PdM work orders this quarter. DITP is continuing with an aggressive predictive maintenance program. Deer Island is slightly below our goal this quarter.



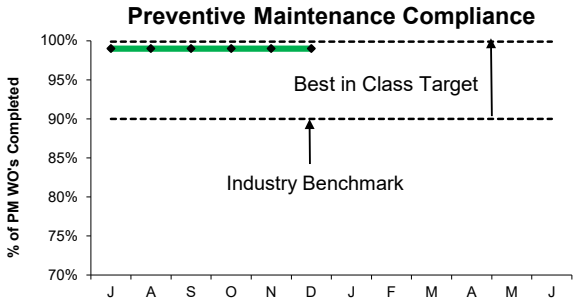
Deer Island's increased FY25 predictive maintenance goal is 26% of all work orders to be predictive. 25% of all work orders were predictive maintenance this quarter. The industry is moving toward increasing predictive maintenance work to reduce downtime and better predict when repairs are needed.



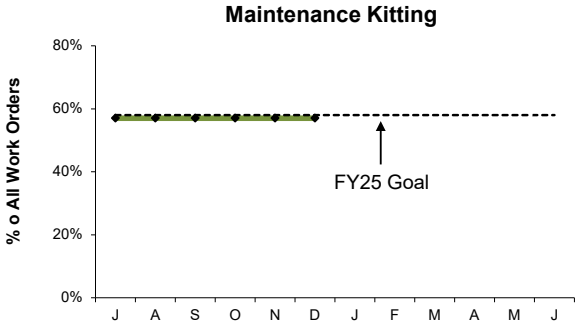
DITP's maintenance backlog at Deer Island is 17,390 hours this quarter. DITP is below the industry average for backlog. The industry Standard for maintenance backlog with 97 staff (currently planned staffing levels) is between 8,730 hours and 17,460 hours. Backlog is affected by (8) Vacancies; (1) Electrician, (1) HVAC Technician and (6) I&C Staff. Management continues to monitor backlog and to ensure all critical systems and equipment are available.

Proactive Initiatives

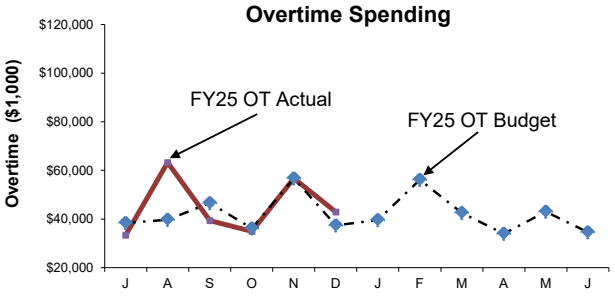
Proactive initiatives include completing 100% of all preventative maintenance tasks and increasing preventative maintenance kitting. These tasks should result in lower maintenance costs.



Deer Island's FY25 preventative maintenance goal is 100% completion of all work orders from Operations and Maintenance. DITP completed 99% of all PM work orders this quarter. Deer Island was slightly below our goal, but within Best in Class Target.



Deer Island's increased FY25 maintenance kitting goal is 58% of all work orders to be kitted. 57% of all work orders were kitted this quarter. Kitting is staging of parts or material necessary to complete maintenance work. This has resulted in more wrench time and increased productivity.

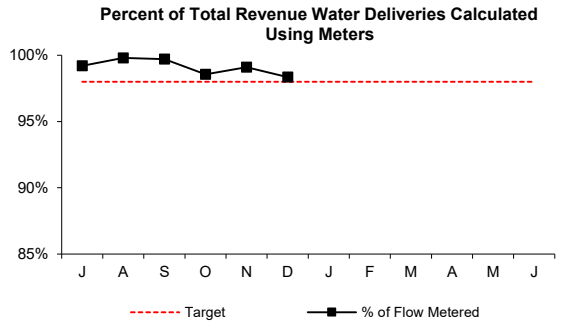


Maintenance overtime was over budget by $5K this quarter and $16k over for the year. Management continues to monitor backlog and to ensure all critical equipment and systems are available. This quarter's overtime was predominately used for Storm Coverage/High Flows, Pump and Grinder Clogging Issues, Instrumentation PM/CM Work, Relining Centrifuge #7, Grit Conveyor #6 Belt Replacement, and Miscellaneous Tank Work.

Operations Division Metering & Reliability

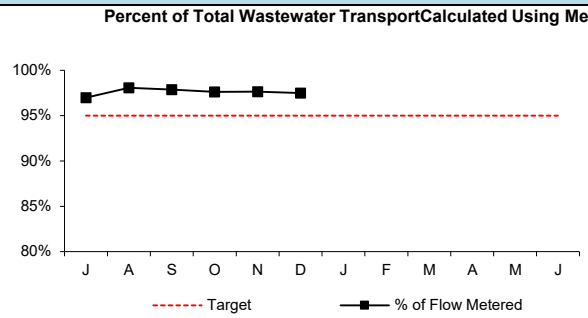
2nd Quarter - FY25

WATER METERS



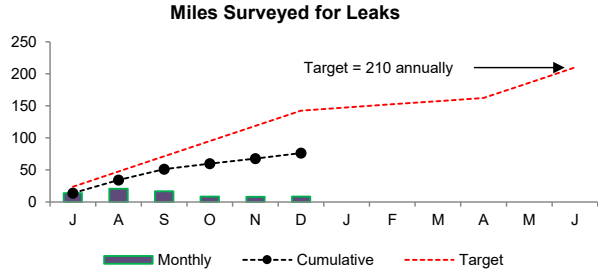
The target for revenue water deliveries calculated using meters is 98%. Estimates are generated for meters that are out of service due to instrumentation problems or in-house and capital construction projects. During Q4 2024, 98.6% of the water billed was metered flow.

WASTEWATER METERS



The wastewater metering system is now operating in a typical mode following closeout of the replacement project. The target for revenue collection meters is a 95% capture rate which has been achieved consistently since the new meters have been online. In Q4 2024, 2.5% of the data required estimates, while 97.5% was metered.

WATER DISTRIBUTION SYSTEM PIPELINES



During Q4 - FY25, 25.18 miles of water mains were inspected. The total inspected for the fiscal year to date is 76.36 miles.

Leak Backlog Summary													
Month	July	Aug	Sept	Oct	Nov	Dec	Jan	Feb	March	April	May	June	Totals
Leaks Detected	1	2	2	2	2	2							11
Leaks Repaired	0	2	3	2	2	1							10
Backlog	1	1	0	0	0	1							n/a

During Q4 - FY25 6 leaks were detected, and 5 was repaired. Refer to FY25 Leak Report below for details. Also, community service ranging from individual leak location to surveys were conducted for Medford, Boston, Watertown, Newton, Revere, Milton, Saugus, Waltham, Wilmington and Canton.

2nd Quarter - FY25

Date Detected	Location of Leaks	Repaired
08/20/24	Morton St @ Wellington Hill Rd Mattapan	08/21/24
08/29/24	Felton St @ Water St Waltham	08/30/24
09/18/24	Second St @ Carter St Chelsea	09/18/24
07/31/24	Broadway @ Richardson Lynn	09/30/24
09/26/24	Bryant St @ Shute St Everett	09/30/24
10/21/24	40 Lynn Fells Pkwy Saugus	10/23/24
10/17/24	Mt Vernon Ave @ Shaft 9 Somerville	11/05/24
11/07/24	Common St @ Washington St Belmont	12/03/24
11/08/24	Benninton St @ Walley St East Boston	11/08/24
12/12/24	Felton @ Water St Waltham	12/14/24

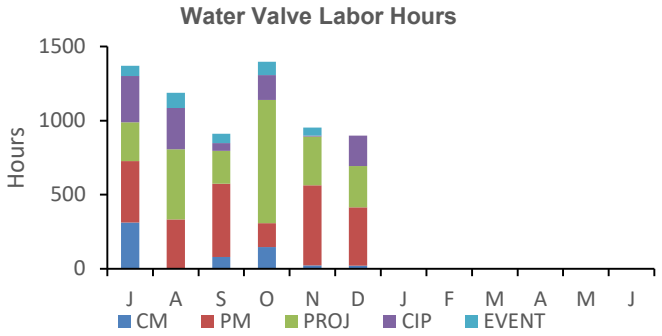
Date Detected	Location of Leaks/Unrepaired
12/04/16	710 Ashland St Lynn
12/18/24	Leo Birmingham Pkwy @ Market St Allston

Water Distribution System Valves

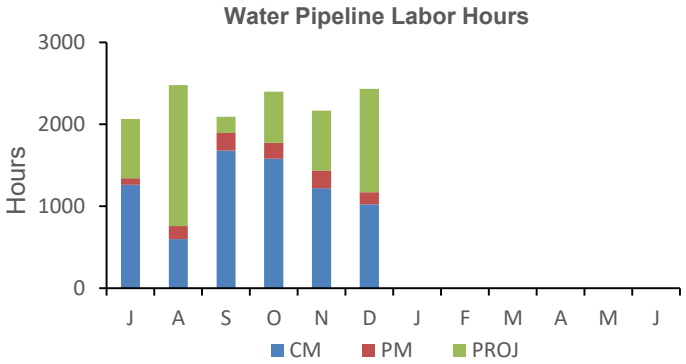
2nd Quarter - FY25

Background

Valves are exercised, rehabilitated, or replaced in order to improve their operating condition. This work occurs year round. Valve replacements occur in roadway locations during the normal construction season, and in off-road locations during the winter season. Valve exercising can occur year round but is often displaced during the construction season. This is due to the fact that a large number of construction contracts involving rehabilitation, replacement, or new installation of water lines, requires valve staff to operate valves and assist with disinfection, dechlorination, pressure-testing, and final acceptance. Valve exercising can also be impacted due to limited redundancy in the water system; valve exercising cannot be performed in areas where there is only one source of water to the community meters or flow disruptions will occur.

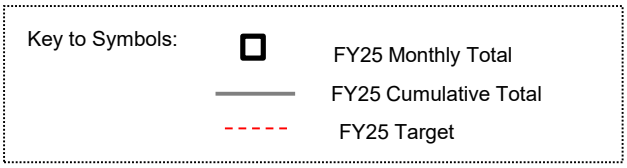


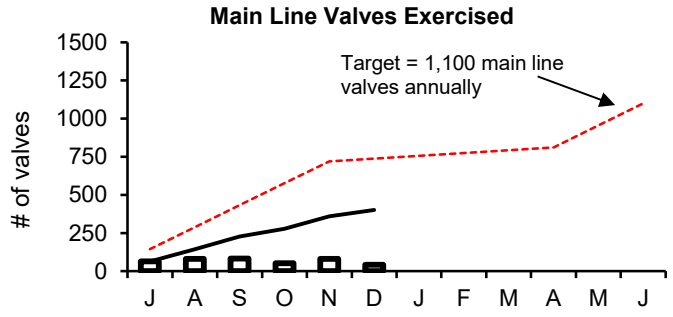
During 2nd Quarter of FY25 there was a total of 3,250 hours worked. Percentage breakdown; Corrective Maintenance 6%, Preventative Maintenance 34%, Project 44%, Capital Improvement Project 12%, Event - Wtr Fountain 4%



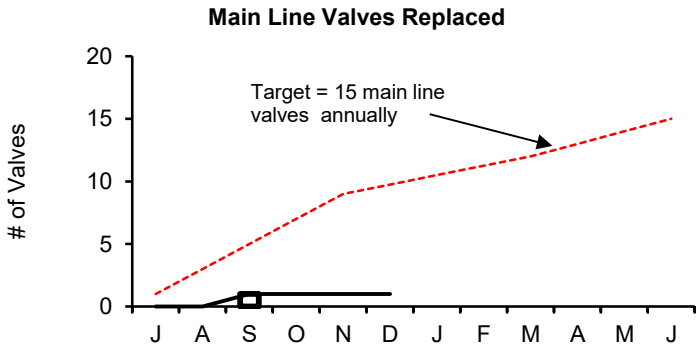
During 2nd Quarter of FY25 there was a total of 7,000 hours worked. Percentage breakdown; Corrective Maintenance 55%, Preventative Maintenance 8%, Project 37%

Type of Valve	Inventory #	Operable Percentage	
		FY24 to Date	FY24 Targets
Main Line Valves	2,255	97.5%	95%
Blow-Off Valves	1,747	98.8%	95%
Air Release Valves	1,546	96.7%	95%
Control Valves	49	100.0%	95%

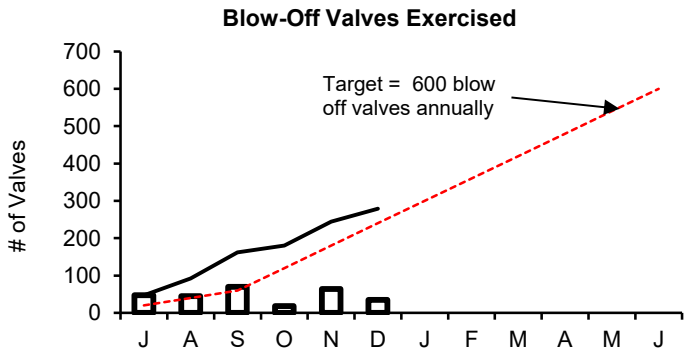




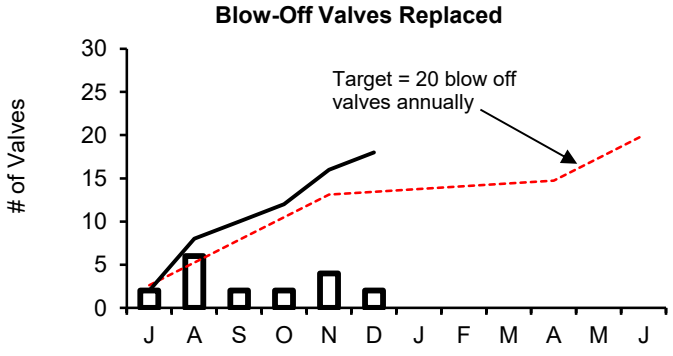
During 2nd Quarter of FY25, 174 main line valves were exercised. The total exercised for the fiscal year to date is 401.



During 2nd Quarter of FY25, there was 0 main line valves replaced. The total replaced for the fiscal year to date is 1.



During 2nd Quarter of FY25, 117 blow off valves were exercised. The total exercised for the fiscal year to date is 279.



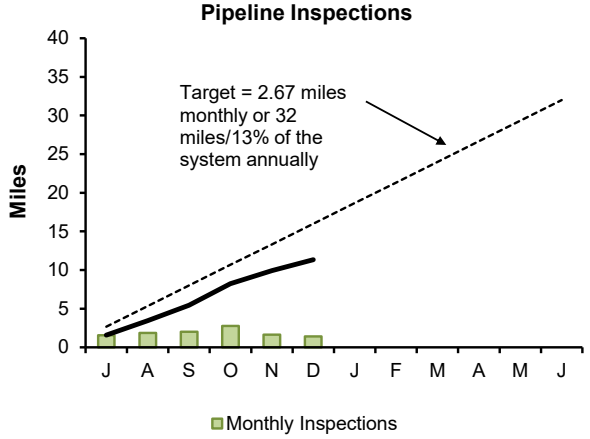
During 2nd Quarter of FY25, there were 8 blow off valves replaced. The total replaced for the fiscal year to date is 18.

Wastewater Pipeline and Structure Inspections and Maintenance

2nd Quarter - FY25

Inspections

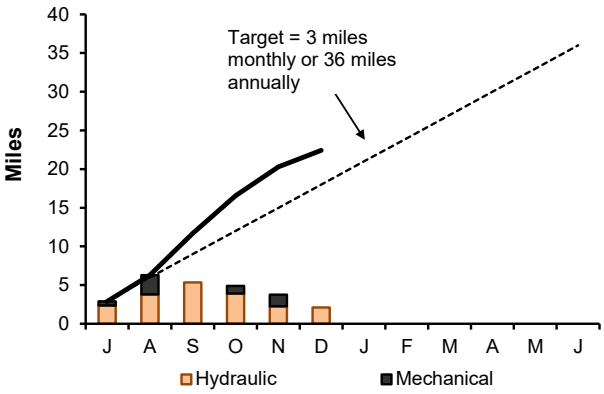
Pipeline Inspections



Staff internally inspected 5.45 miles of MWRA sewer pipe during this quarter.The year to date total is 5.45 miles. No Community Assistance was provided.

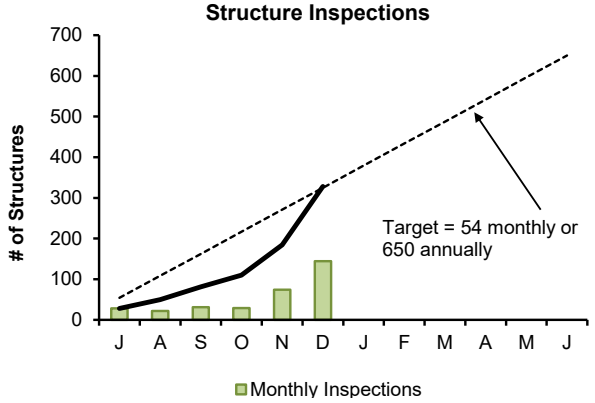
Maintenance

Pipeline Cleaning



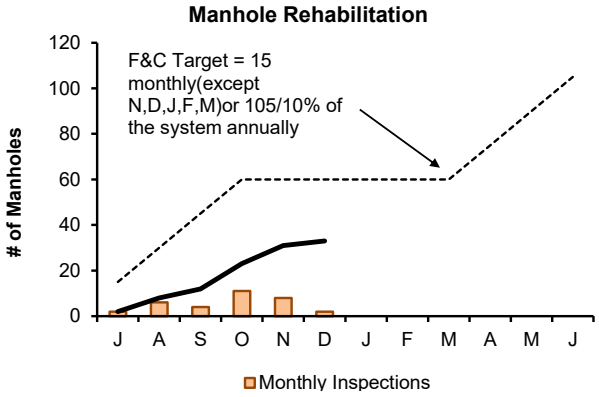
Staff cleaned 14.54 miles of MWRA sewer pipe, and removed 15.25 yards of grit. The year to date total is 14.54 miles. No Community Assistance was provided.

Structure Inspections



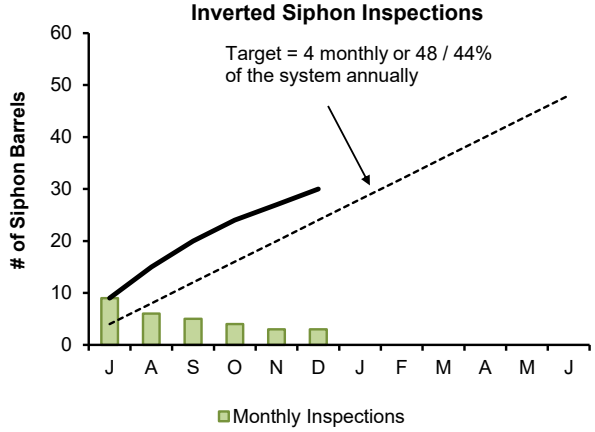
Staff inspected the 36 CSO structures and performed 45 other additional manhole/structure inspections during this quarter. The year to date total is 81 inspections.

Manhole Rehabilitation



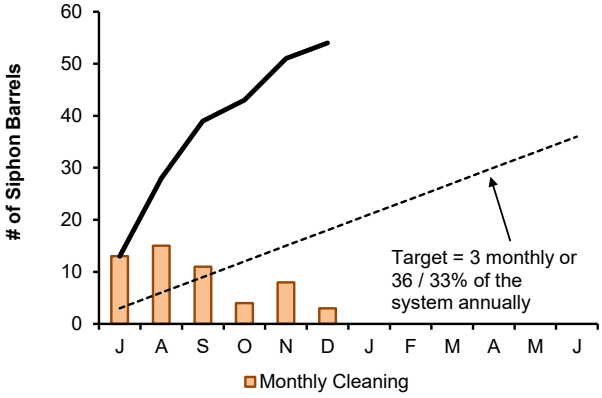
Staff replaced 12 frame and cover replacement this quarter.The year to date total is 12 .

Inverted Siphon Inspections



Staff inspected 20 siphon barrels this quarter. The year total is 20 inspections.

Inverted Siphon Cleaning

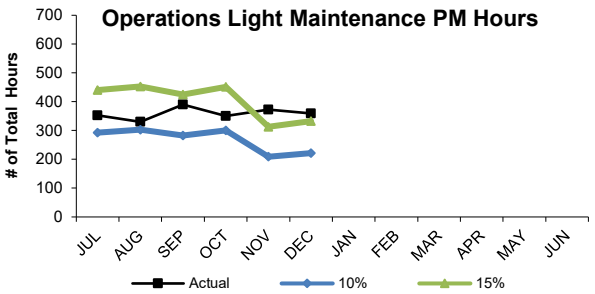


Staff cleaned 39 siphon barrels this quarter.

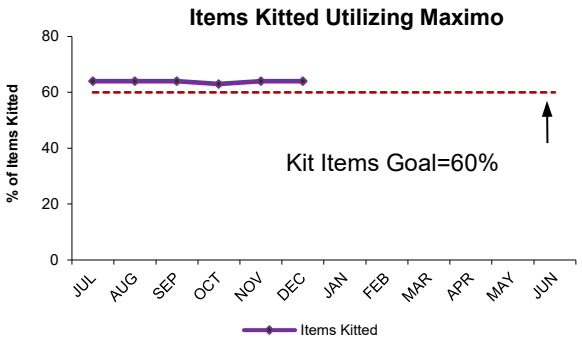
Field Operations' Metropolitan Equipment & Facility Maintenance

2nd Quarter - FY25

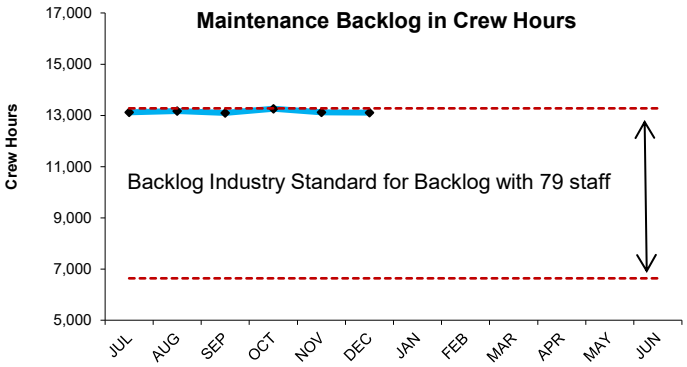
Several maintenance and productivity initiatives are in progress. The goal for the Overall PM completion and the Operator PM completion is 100%. The Operator PM and kitting initiatives frees up maintenance staff to perform corrective maintenance and project work, thus reducing maintenance spending. Backlog and overtime metrics monitor the success of these maintenance initiatives.



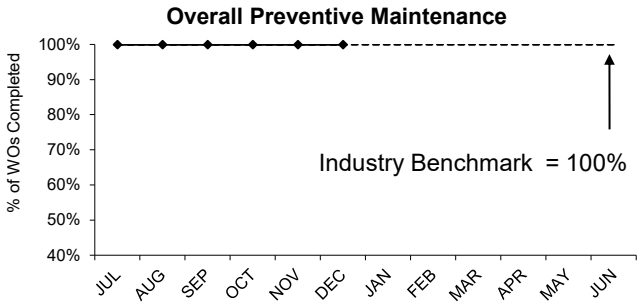
Operations staff averaged 360 hours per month of preventive maintenance during the 2nd Quarter of FY25, an average of 15% of the total PM hours for the 2nd Quarter, which is within the industry benchmark of 10% to 15%.



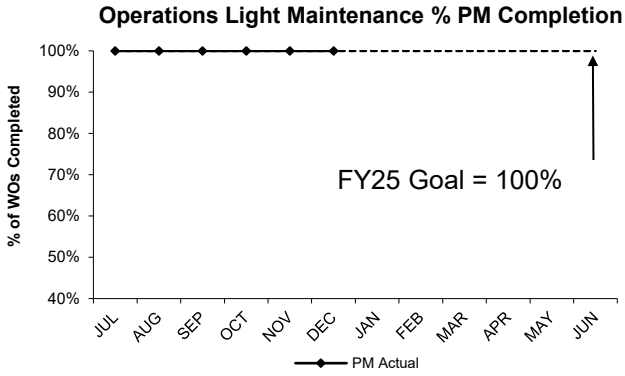
Operations' FY25 maintenance kitting goal has been set at 60% of all work orders to be kitted. Kitting is the staging of parts or material neccesary to complete maintenance work. In the 2nd Quarter of FY25, 64% of all applicable work orders were kitted. This resulted in more wrench time and increased productivity.



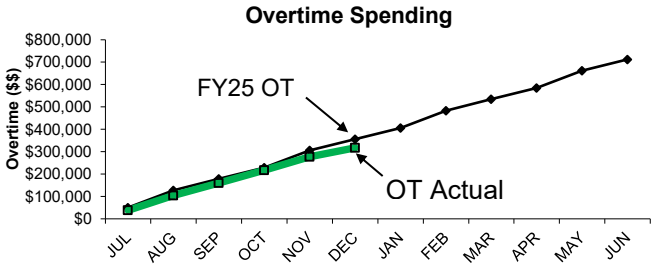
The 2nd Quarter of FY25 backlog average is 13,159 hours. Which is within the industry benchmark of 6,636 to 13,275 hours.The current backlog is due to vacancies and several large maintenance projects.



The Field Operations Department (FOD) preventive maintenance goal for FY25 is 100% of all PM work orders. Staff completed 100% of all PM work orders in the 2nd Quarter of FY25.



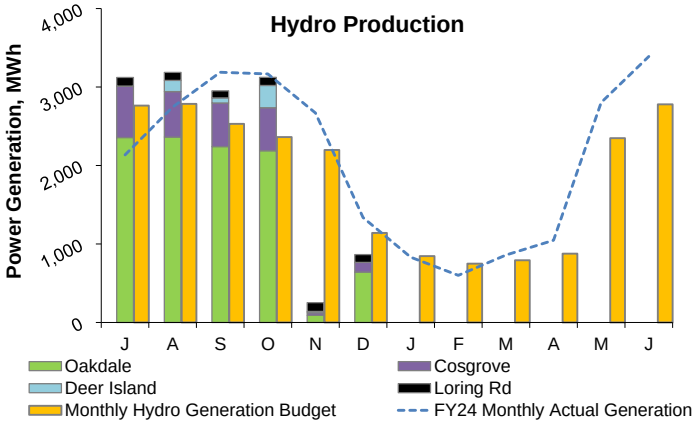
Wastewater Operations complete light maintenance PM's which frees up maintenance staff to perform corrective maintenance. Operations' FY25 PM goal is completion of 100% of all PM work orders assigned. Operations completed 100% of PM work orders in the 2nd Quarter of FY25.



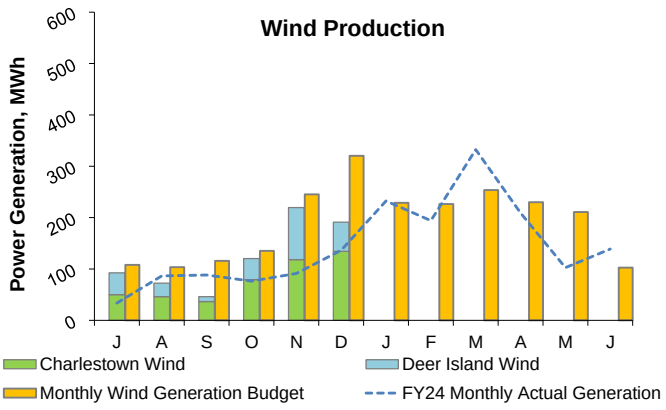
Maintenance overtime was $6,846 under budget on average, per month, for the 2nd Quarter of FY25. Overtime is used for critical maintenance repairs and wet weather events. The overtime budget through the 2nd Quarter of FY25 is $356,230 Overtime spending was $317,316 which is $38,914 under budget for the fiscal year.

Renewable Electricity Generation: Savings and Revenue

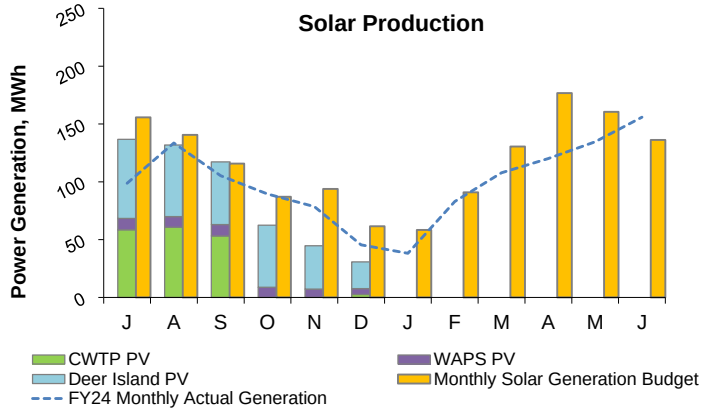
2nd Quarter - FY25



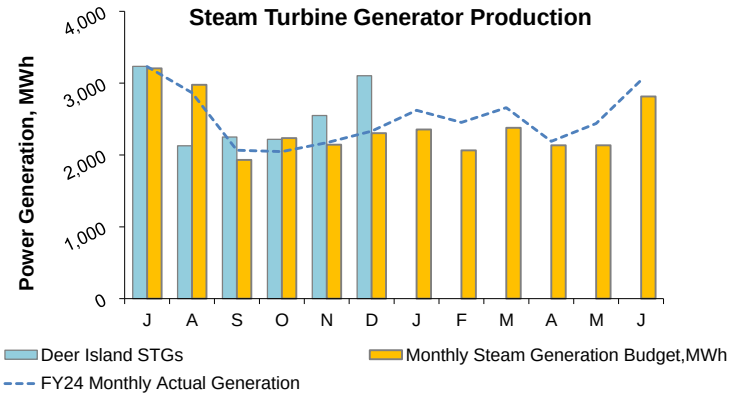
In Quarter 2, renewable energy produced from hydroelectric turbines totaled 4,349 MWh, 24% below budget. Deer Island Turbine #1 is offline and currently being refurbished. Turbine #2 was offline in Nov/Dec due to ongoing wicket gate issues. Cosgrove was offline for most of December due to rehab work at the Wachusett Dam Lower Gatehouse, and will remain offline through Spring. Oakdale was offline for part of December to facilitate removal of the Quinapoxet



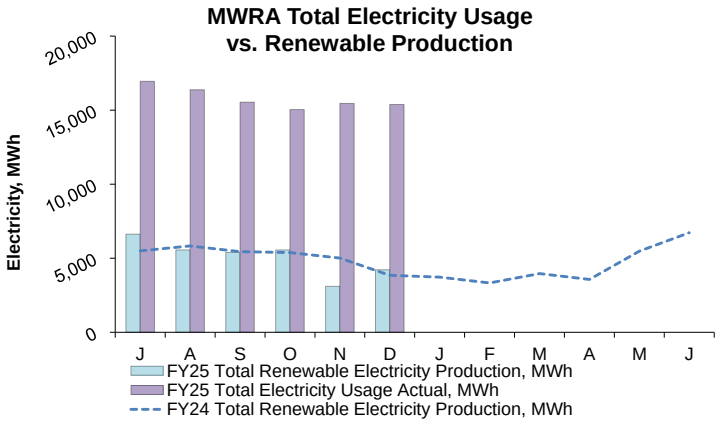
In Quarter 2, wind turbine production totaled 531 MWh, 24% below budget. Deer Island Turbine #1 has been out of service since April 2022, and was heavily damaged following a braking failure on May 29, 2023.

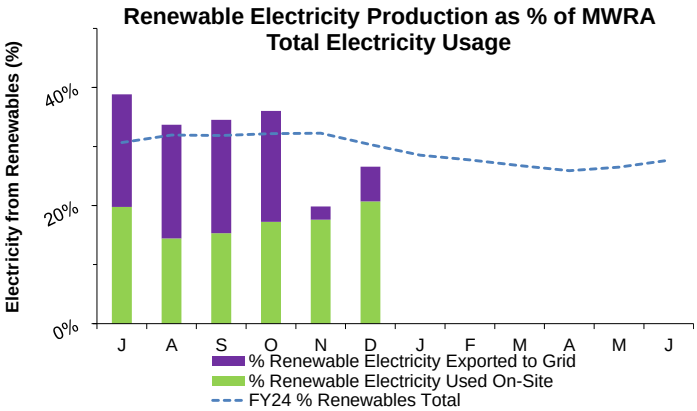


In Quarter 2, energy production from all solar PV systems totaled 138 MWh; 43% below budget[1]. The Deer Island Residuals Odor Control roof mounted array has been offline since September 2022 due to a failed inverter. The system will remain offline pending full replacement. The Carroll Water Treatment Plant PV system has been offline since Sept 21st due to a failed



In Quarter 2, the renewable energy produced from Deer Island's steam turbine generators totaled 7,872 MWh; 18% above budget[1].





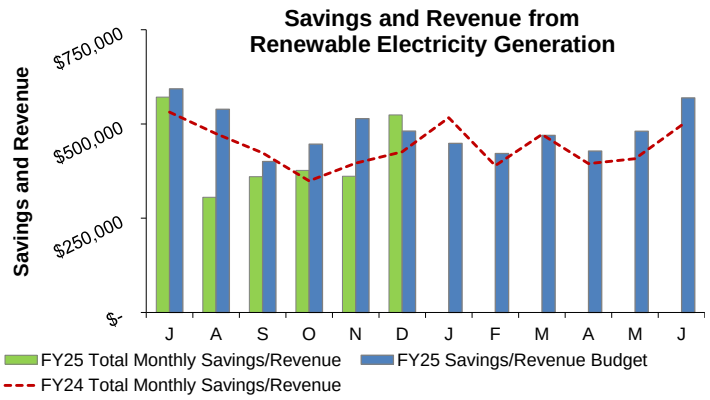
In Quarter 2, total renewable electricity production is estimated to be 12,890 MWh, 3% below budget. Downtime of several renewable energy assets in Quarter 2 affected electricty exported to the grid, but above budget production by Deer Island's steam turbine generators partly offset this effect in terms of total power generation. Final production data for some hydroturbines have not yet been received. Final electricity use data have not been received for all facilities at time of publication. The MWRA total electricity usage is the sum of all electricity purchased for Deer Island and FOD plus electricity produced and used on-site at these facilities. Approximately 99% of FOD electrical accounts are accounted for by actual billing statements; minor accounts that are not tracked on a monthly basis such as meters and cathodic protection systems are estimated based on this year's budget.

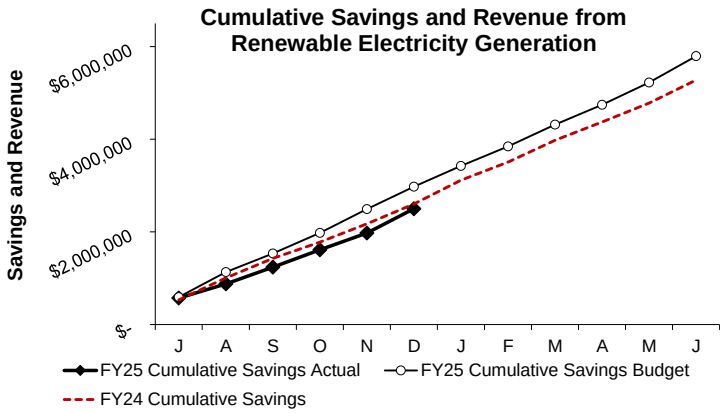
All renewable electricity generated on DI is used on-site (this accounts for more than 50% of MWRA renewable generation). Almost all renewable electricity generated off-DI is exported to the grid.

Notes: 1. Budget values are based on historical averages for each facility and include operational impacts due to maintenance work.

Renewable Electricity Generation: Savings and Revenue

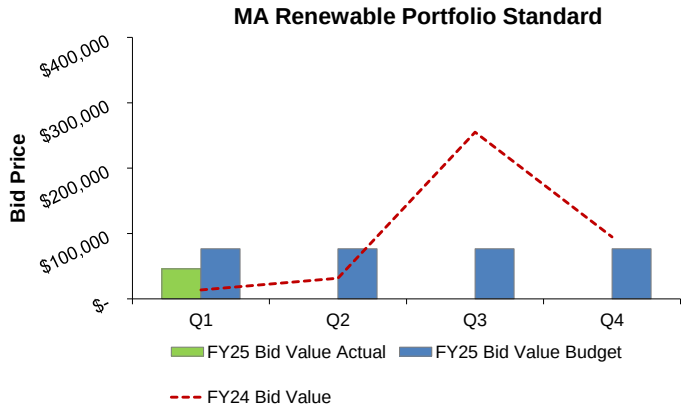
2nd Quarter - FY25

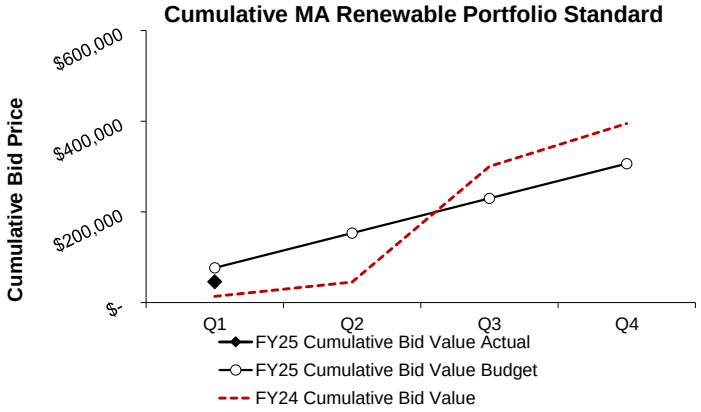




Savings and revenue from renewable sources is estimated at $1,257,304 in Quarter 2, 13% below budget. However, final invoices have not been received for all facilities at time of publication.

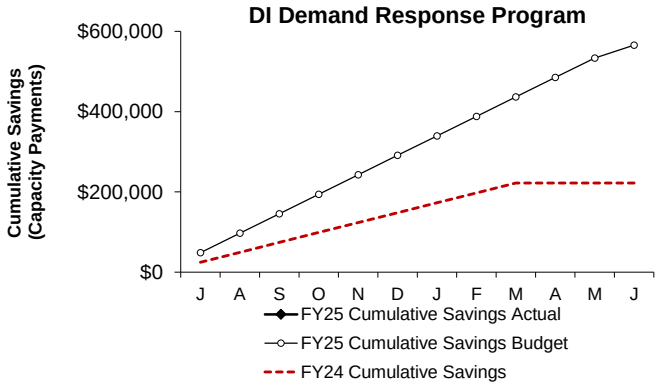
Savings and revenue[1] from all renewable energy sources include wind turbines, hydroelectric generators, solar panels, and steam turbines (DI). This includes savings and revenue due to electricity generation (does not include avoided fuel costs and RPS RECs).

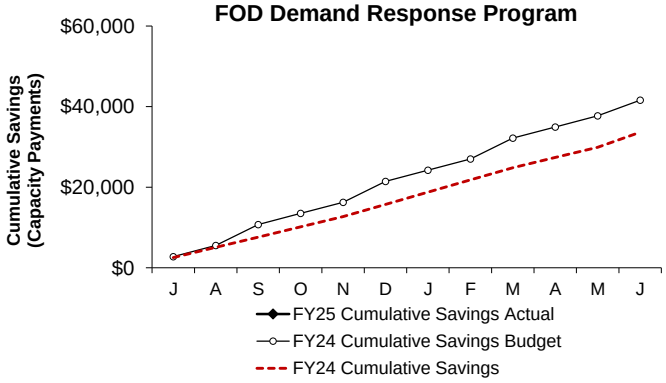




Bids were awarded during the 1st Quarter[2] of FY25 from MWRA's renewable energy assets; 1,412 Q4 FY24 Class I Renewable Energy Certificates (RECs) were sold for a total value of $46,033 RPS revenue; which was 40% below budget[3] for the Quarter. No Class II RECs are sold during Q1 and are instead banked for future sale. REC values reflect the bid value on the date that bids are accepted. Cumulative bid values reflects the total value of bids received to date.

*MWRA's SRECs have transitioned to the Class 1 REC category starting in FY23.



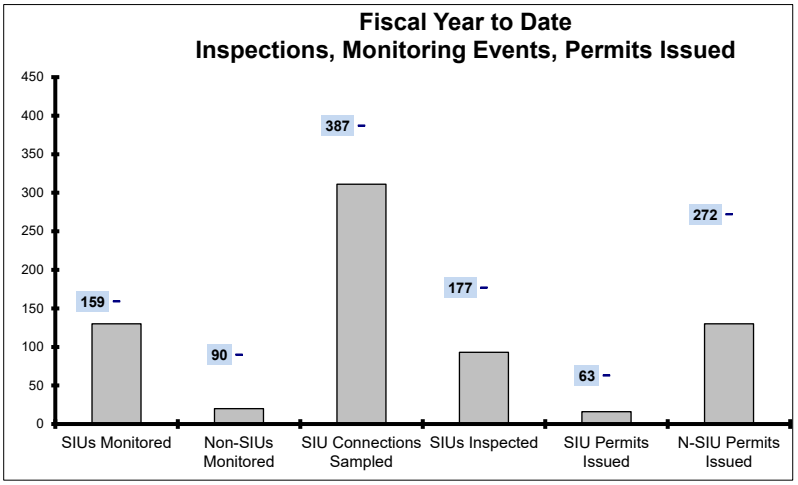


No capacity payments have been received in FY25. Currently Deer Island, Loring Rd, Brutsch Hydro, and JCWTP participate in the ISO-New England Demand Response Programs. By agreeing to reduce demand and operate the facility generators to help reduce the ISO New England grid demand during periods of high energy demand, MWRA receives monthly Capacity Payments from ISO-NE. When MWRA operates the generators during an ISO-NE called event, MWRA also receives energy payments from ISO-NE.

Notes:
1. Savings and Revenue: Savings refers to any/all renewable energy produced that is used on-site therefore saving the cost of purchasing that electricity, and revenue refers to any value of renewable energy produced that is sold to the grid.
2. Only the actual energy prices are being reported. Therefore, some of the data lags up to 3 months due to timing of invoice receipt.
3. Budget values are based on historical averages for each facility and include operational impacts due to maintenance work.

Toxic Reduction and Control

2nd Quarter - FY25



EPA Required SIU Monitoring Events
for FY25: 159
YTD : **130**

Required Non-SIU Monitoring Events
for FY25: 90
YTD : **20**

SIU Connections to be Sampled
For FY25: 387
YTD: **311**

EPA Required SIU Inspections
for FY25: 177
YTD: **93**

SIU Permits due to Expire
In FY25: 63
YTD: **16**

Non-SIU Permits due to Expire
in FY25: 272
YTD: **130**

Significant Industrial Users (SIUs) are MWRA's highest priority industries due to their flow, type of industry, and/or their potential to violate limits. SIUs are defined by EPA and require a greater amount of oversight. EPA requires that all SIUs *with flow* be monitored at least once during the fiscal year.

The "SIU Monitored" data above, reflects the number of industries monitored; however, many of these industries have more than one sampling point and the "SIU Connections Sampled" data reflect samples taken from multiple sampling locations at these industries.

EPA requires MWRA to issue or renew 90 percent of SIU permits within 120 days of receipt of the application or the permit expiration date - whichever is later. EPA also requires the remaining 10 percent of SIU permits to be issued within 180 days.

Number of Days to Issue a Permit								
	0 to 120		121 to 180		181 or more		Permits Issued	
	SIU	Non-SIU	SIU	Non-SIU	SIU	Non-SIU	SIU	Non-SIU
Jul	4	20	0	0	0	11	4	31
Aug	2	14	1	0	0	3	3	17
Sep	1	14	0	1	0	4	1	19
Oct	3	16	0	1	0	0	3	17
Nov	3	15	0	1	0	5	3	21
Dec	2	19	0	0	0	9	2	28
Jan	0	0	0	0	0	0	0	0
Feb	0	0	0	0	0	0	0	0
Mar	0	0	0	0	0	0	0	0
Apr	0	0	0	0	0	0	0	0
May	0	0	0	0	0	0	0	0
Jun	0	0	0	0	0	0	0	0
% YTD	94%	74%	6%	2%	0%	24%	16	133

TRAC's annual monitoring and inspection goals are set at the beginning of each fiscal year but they can fluctuate due to the actual number of SIUs.

In addition to the Annual SIU inspections required under TRAC's EPA approved Industrial Pretreatment Program, other inspections are usually undertaken, including for enforcement, permit renewal, follow up, temporary construction dewatering sites, group/combined permit audits, spot, sampling locations, visit only and out of business facility.

Monitoring of SIUs and Non-SIUs is dynamic for several reasons, including: newly permitted facilities; sample site changes requiring a permit change; changes in operations necessitating a change in SIU designation; non-discharging industries; a partial sample event is counted as an event even though not enough sample was taken due to the discharge rate at the time; and sometimes increased/decreased inspections lead to permit category changes requiring additional monitoring events

This is the second quarter of the MWRA fiscal year, FY25.

In this quarter, 80 permits issued.
There were 8 SIUs, of which 8 were issued on time.
There were 66 non-SIUs of which 50 were issued on time, with 14 late beyond 180 days.

All of the SIU permits were issued within the 120-day timeframe.

In FY24, there have been 31 completely new permits issued: 7-LFLP, 5-02 N-SIUs, 10-Dental, 1-DEW, 1 One-Time

For the Clinton Sewer Service area, there was 0 SIU permits issued during the FY24 fiscal year.

TRAC completed 41 first time SIU monitoring events and 7 first time NSIU monitoring events.

Permit Categories, as defined in CMR 10.101(2):

SIU- Significant Industrial User

DEW - Category 12 Temporary Construction Site Dewatering Permit

LFLP - Category 10 Non-Significant Industrial User with Low Flow and Low Pollutant

02 N-SIU - Category 2 Non-Significant Industrial User

Dental - Category D1 Dental Group Permit

G2 - Category G2 Group Permit for Food Processing

One- Time - One Time Discharge Permit

METRO WATER OPERATIONS AND MAINTENANCE

- Valve Program: In-house isolations for blow off replacements on Sections 58, 73, 20, 19, 21, and for leak repairs on Sections 70, WASM10, WASM15. CIP Contractors were supported by isolation and dewatering of portions of Section 29 and 89 (Contract 7117), Section 101 (Contract 7457), Section 23, 24 & 47 (Contract 6392) and W14 & W16 (Contract 7563). Other work included the Dorchester Tunnel Isolation for emergency leak, replacement of hatches on the Fells Storage Tank, the replacement of a by-pass valve on WASM3 and mainline valve exercising of 12 water main sections.
- Water Pipeline Program: Staff completed Blow-Off replacements in Quincy (Section 21) and Mattapan (Sections 58, 19, 20 and 73). Completed hatch replacement on the Fells Water Storage Tank as well as leak repairs on Section 70 (36-inch main) in Saugus, Waltham (WASM10), Brighton (WASM15) and Canton (New Neponset Pump Station). Leak detection was performed on over 20 miles of MWRA water main and assistance was provided to eleven customer communities.

SCADA

Water System Work

- Continued technical support for JCWTP PLC replacement project; continued work on network management improvements in the JCWTP water system; Continued on support for the PRV improvement project; Continued support for the Wachusett Lower Gate House Project and Steel Tank Project; made improvements to Fells S:CAN control logic; installed radios at Singletree, Newton Covered Storage, and Waban Hill; improved SCADA performance at Reservoir Rd and Lexington Pump Stations; repaired SCADA node at Southboro.

Wastewater System Work

- Configured and hardened SCADA Operating system; continued work on network management improvements; continued work on Braintree/Weymouth Pump Station Improvements Project; continued testing the network monitoring system; improved SCADA code at Alewife; improved alarming on Nut Island Odor Control System; improved HMI configuration at South Boston and Hayes Pump Stations; reconfigured test network to connect to PI system.

ENVIRONMENTAL QUALITY-WATER

- Algae: MWRA's algae monitoring season for 2024 ended in October. DCR staff continued to collect algae samples at Wachusett Reservoir and Quabbin Reservoirs for the rest of the year. In early October, the *Chrysosphaerella* algae bloom in Quabbin reservoir dissipated.
- Regulatory Sampling: Staff performed sampling for all quarterly monitoring programs including EPA's Unregulated Contaminant Monitoring Rule 5, Disinfection Byproducts Rule, and Optimal Water Quality Parameters. Sampling occurred for the Wachusett Aqueduct Pump Station Geothermal NPDES permit and Carroll treatment plant NPDES permit this quarter. Staff completed DEP-required volatile organic compound (VOC) monitoring, at LMS and CWTP Fin B sample taps. All sampled compounds were non-detect except for the routine and typical disinfection byproduct components that comprise the VOC testing suite. Sampling staff collected samples for the Optimum Water Quality Parameters (OWQP) program on December 9-13, measuring pH and alkalinity at 27 sites. All samples met DEP required limits. Staff performed UCMR5 training for partial MWRA-member communities on December 9.
- Non-Regulatory: As part of the future EPA Lead & Copper Rule revisions, MWRA voluntarily sampled at locations near residences with lead results over the lead action level. All samples met pH and alkalinity targets. Staff assisted a consultant with annual sampling of MWRA's emergency back-up reservoirs. Staff conducted monthly sampling of MWRA's compliance taps for the nitrification-monitoring program. Staff performed routine monitoring of dam seepage weirs from five locations at three MWRA standby reservoirs. Staff met with Water Research Foundation staff on December 20 as part of study, "*Evaluating U.S. Drinking Water*

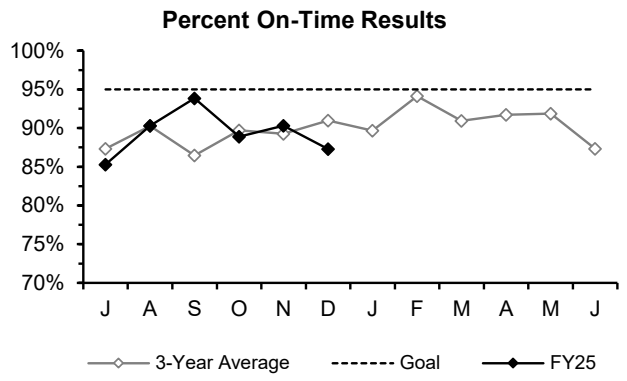
Sources, Harmful Algal Bloom (HAB) Mitigation and Guidance to Optimize Algaecide Application". Staff discussed MWRA's HAB monitoring and response plan at this meeting.

- Community Support: Staff provided UCMR5 training for partial MWRA-member communities. Drinking water sampler training provided to sampling staff from Hanscom Air Force Base. On December 6, staff assisted Revere with sampling associated with a single *E.coli* positive. Repeat samples from three sites were clear of total coliform and *E.coli*, and no boil water order was issued. Staff provided virtual coliform sampler training to 16 attendees from three communities. Staff assisted Chicopee with Disinfection Byproduct Rule Operation Evaluation Level Report due to elevated HAA5 results at three monitoring sites in Q3. Staff provided two presentations on water quality during an MWRA-led Emergency Response Planning training.
- Projects: Staff performed sampling for Legionella as part of a collaborative research study with Georgia Tech and the University of Texas.
- Contaminant Monitoring System (CMS): Staff responded to twelve CMS alarms and followed routine response protocols. Staff continued the installation and rollout of new routers and modems at 18 CMS sites. On October 10, staff responded to a CMS alarm on the Bellevue tank due to a drop in tank elevation, and increase in turbidity, caused by the reconfiguration of water supply from the Chestnut Hill pump station for the Dorchester Tunnel break incident. On October 28, staff completed review and provided comments on a task order contract for the rehabilitation of the Route 12 intake. On December 13, staff responded to a CMS alarm at Delauri Pump Station following a sensor replacement earlier that day. On December 14, staff responded to a CMS alarm at Chelsea Headquarters. The alarm was caused by a main break on Marginal Street (within Chelsea's distribution system) resulting in elevated turbidity at the panel.
- Wachusett & Quabbin Buoys: All buoys continued to conduct scheduled profiles on both reservoirs until December when the buoys were removed from the reservoirs. Water quality profiling resumed once the maintenance work was completed on the buoys. On October 29, staff in coordination with YSI Vendor were at Quinapoxet River to install a new fixed depth-monitoring buoy for water quality monitoring during the Quinapoxet dam removal project. In November, staff continued water quality monitoring of the Wachusett reservoir on the fixed depth buoy at the Quinapoxet River Basin and set up turbidity alarm notifications. Staff responded to turbidity alarm notifications from the fixed depth buoy on December 12-13 following standard response protocol. The last quarterly dive inspection of the Route 12 sampling intake line was performed on December 31. The 2025 diving contract has been posted for bidding.
- Data Management Group (http://wqdmgdev.mwra.net/): Staff submitted monthly DEP and DPH reports on schedule and fulfilled nine data requests. Total coliform Rule (TCR) data from Chicopee and data collected from water quality buoys were migrated to PostgreSQL databases. Programming to automate the Weekly water quality report continued.
- Permitting/Environmental Compliance: The Southborough Stage I Vapor recovery report was submitted, with no issues found. Annual SPCC inspection was conducted at Oakdale and Lonergan. Staff arranged for removal and disposal of sediment at Weir A in the Sudbury Aqueduct.
- Chemical Contract Management: On October 10, in response to the Dorchester Tunnel Break Incident, staff ordered an emergency delivery of sodium hypochlorite to the Chestnut Hill Emergency Pump Station. Staff also investigated potential, temporary chemical storage tanks for emergency scenarios. Staff visited a tank rental company for further information. This quarter, staff reviewed the upcoming 2-year liquid oxygen contract bid document. Fire Department permits were posted at Cosgrove and Wachusett dam lower gatehouse.

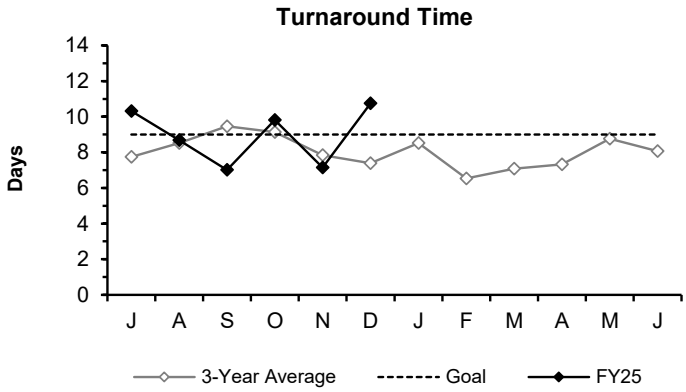
Laboratory Services

2nd Quarter - FY25

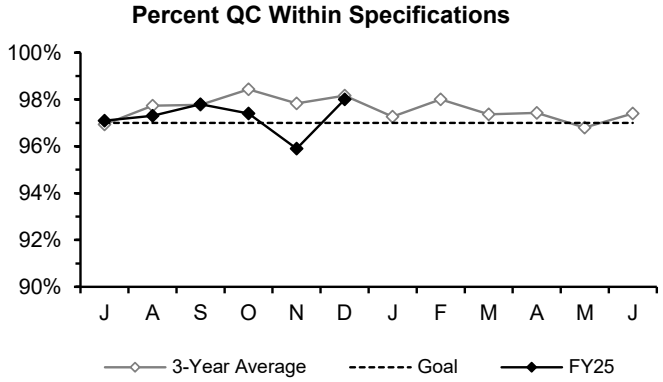
Laboratory Services supports the laboratory sampling, testing, and consulting needs of various client groups primarily in the Operations Division. This includes drinking water transmission and treatment, wastewater collection and treatment, wastewater residuals management, industrial-pretreatment monitoring, and environmental quality.



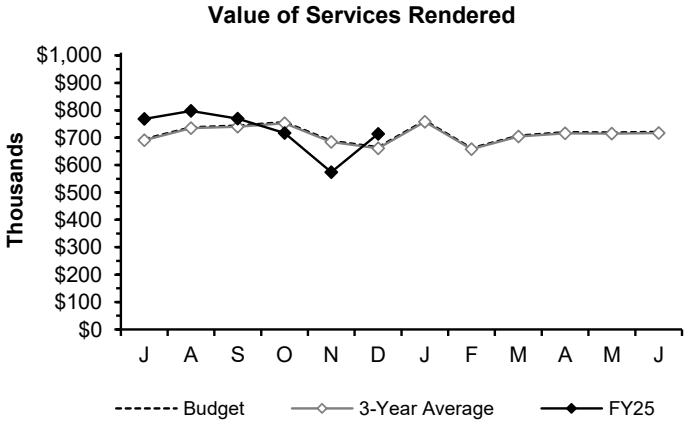
The Percent On-Time measurement assesses performance against internal client due dates. These due dates are shorter than the compliance reporting requirements to allow for internal review of the data.



Turnaround Time measures the average time from sample receipt to sample completion.



Percent QC Within Specifications measures the fraction of Quality Control tests that met required limits during the month.

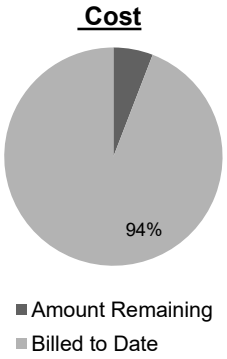


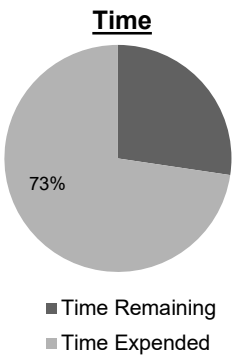
Value of Services Rendered models the true cost of the lab work performed, including fringe benefits that are not a part of the Laboratory Services budget.

School Lead Program: During the 2nd quarter of FY25, MWRA's lab completed 104 tests from 26 schools and childcare facilities in 14 communities. Since 2016, MWRA's Laboratory has conducted over 44,900 tests from 668 schools and daycares in 45 communities. We have also completed 1055 home lead tests under the DPH sampling program since 2017.

CONSTRUCTION PROGRAMS

Engineering & Construction
Projects In Construction
2nd Quarter - FY25



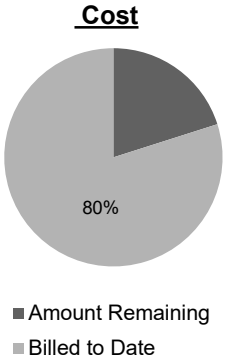


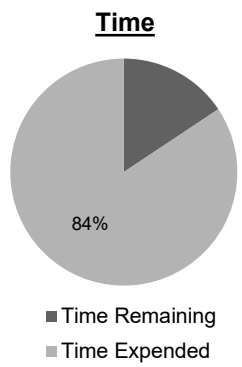
Carroll Water Treatment Plant SCADA Improvements

Project Summary: The current SCADA control equipment has reached the end of its useful life, and future vendor support for the installed PLC base is no longer guaranteed. This contract includes the supply and installation of replacement instrumentation panels, PLC's, UPS backup power, fiber-optic communication network, wiring between the existing panels, and new equipment and refurbishment of the operator control room. In addition, a new server room equipped with HVAC and fire suppression is being constructed to house redundant computer hardware supporting active and backup SCADA systems.

Contract Amount: $13,681,336.62 *Contract Duration:* 1,675 Days

Notice to Proceed: 1-Sep-21 *Contract Completion:* 3-Apr-26



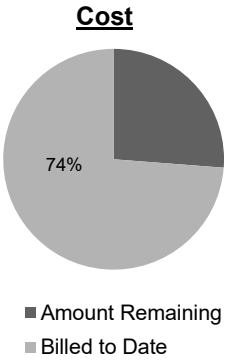


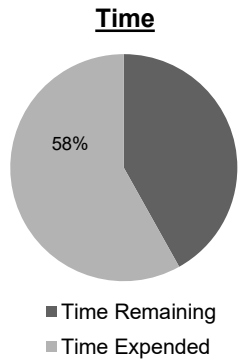
Section 89 Replacement Pipeline

Project Summary: This project will include replacement of a 10,500-foot portion of PCCP with class IV reinforcing wire, line valves and appurtenances, and abandonment of the 118-year old, 24-inch diameter cast iron Section 29 pipeline.

Contract Amount: $36,242,127.69 *Contract Duration:* 1,475 Days

Notice to Proceed: 5-Aug-21 *Contract Completion:* 19-Aug-25



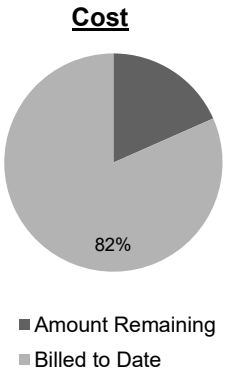


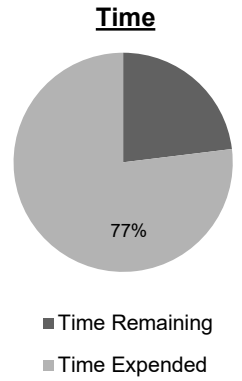
Intermediate High Pipeline Improvements CP2

Project Summary: This contract includes replacement and hydraulic pipe size increase from 16 to 20 inches of 5,900 linear feet for Section 25 and the cleaning and lining rehabilitation of 3,300 linear feet of Section 24 along with replacement of revenue Meters 2 and 40 (both serving Watertown). The majority of this work is located in Watertown with minor work in Newton at the crossing of the Charles River. This project also reroutes Section 25 from Common Street in Watertown, to Bellevue Road, Russell Avenue and extending along Mount Auburn Street per the request of the City of Watertown following road reconstruction work in Common Street.

Contract Amount: $20,406,180.82 *Contract Duration:* 912 Days

Notice to Proceed: 20-Jul-23 *Contract Completion: 17*-Jan-26





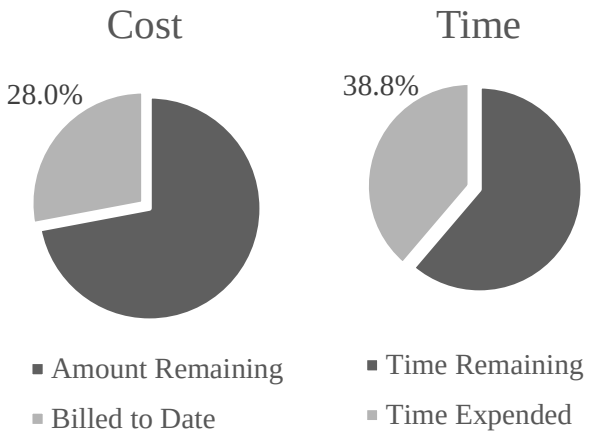
Construction of Water Mains – Section 101

Project Summary: This construction contract consists of a new 36-inch diameter water main and appurtenances extending from MWRA's Meter 182 at the Waltham/Lexington town line down Lexington Street to Totten Pond Road, where it will connect to Waltham's water system. This new water main will provide sufficient capacity to maintain water service to Waltham during the anticipated shutdown of MWRA's WASM 3 pipeline and the Lexington Street Pumping Station for future rehabilitation.

Contract Amount: $35,881,736.35 *Contract* Duration: 1175 Days

Notice to Proceed: 12-Jul-22 *Contract Completion: 29*-Sep-25

Deer Island Wastewater Treatment Plant
Projects In Construction
2nd Quarter – FY25

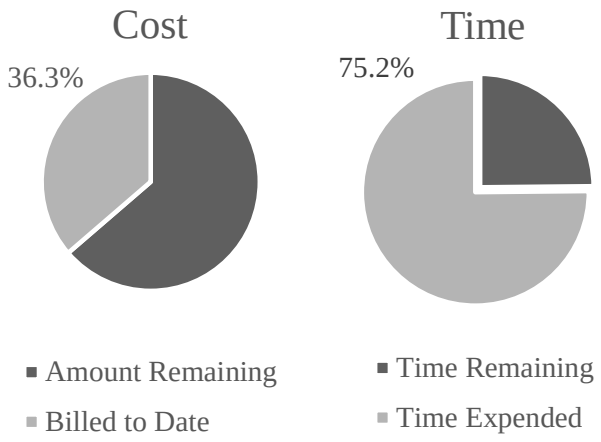


7395 - Clarifier Rehabilitation Phase 2

Project Summary: This project involves the replacement of the original remaining scum and sludge equipment, as follows: over 400 Primary Clarifier influent, effluent, and dewatering gates; 384 primary effluent cross channel gate actuators; approximately 450 secondary scum influent gates and actuators; wear strip rails,768 head shaft and idler sprockets; over 3000 linear feet of influent channel aerations piping systems; 360 head shafts collector drives and chains; return sludge line vent piping; approximately 400 concrete and aluminum hatches and associated electrical and control systems.

Contract Amount: $289,595,007 *Contract Duration:* 1710 Days

Notice to Proceed: 10-Mar-23 *Contract Completion:* 14-Nov-27



7734 - Deer Island Treatment Plant Roofing Replacement at Various Buildings

Project Summary: This project includes the removal and replacement of 86,500 square feet of roofing on the following buildings: Cryogenic Compressor; Gravity Thickener Complex; Thermal/Power Plant; Main Switchgear; and Digester Complex Modules 1, 2 and 3. Buildings to be reroofed in the Digester Complex include: Module 1- Digester Equipment Complex Roof, Elevator/Stair Lobby Roof and Elevator Penthouse Roof; Module 2 - Digester Equipment Complex Roof; and Module 3- Digester Equipment Complex Roof and Elevator Penthouse Roof.

Contract Amount: $8,873,000 *Contract Duration:* 487 Days

Notice to Proceed: 28-Dec-2023 *Contract Completion: 28-Apr-2025*

CSO CONTROL PROGRAM

2nd Quarter – FY25

Overview

In compliance with milestones in the Federal District Court Order, all 35 projects in the CSO Long-Term Control Plan (LTCP) were complete as of December 2015. Subsequently, MWRA completed a multi-year CSO post-construction monitoring program and performance assessment, filing the Final CSO Post Construction Monitoring Program and Performance Assessment Report with the Court and submitted copies to EPA and DEP in December 2021. April 2024 Annual report shows an 88% reduction in CSO in a typical year, from 3.3 billion gallons to 397 million gallons, with 78 of 86 outfalls meet or materially meet the LTCP goals for CSO activation frequency and volume. MWRA and its member CSO communities are moving forward with plans to bring 6 CSOs in line with the LTCP goals. With respect to the remaining CSO outfalls, MWRA and its CSO Consultant (AECOM) continue to investigate alternative to move closer to LTCP goals.

MWRA CSO Performance Assessment

- In November 2017, MWRA signed a contract for CSO Post-Construction Monitoring and Performance Assessment with AECOM Technical Services, Inc. The contract includes CSO inspections, overflow metering, hydraulic modeling, system performance assessments and water quality impact assessments, culminating in the submission of a report to EPA and MassDEP in December 2021 verifying whether the LTCP goals are attained.
- AECOM continues to support efforts to advance projects identified not to meet performance goals the CSOs and evaluate alternatives for these challenging sites.
- MWRA submitted a Supplement to the Post-Construction Monitoring and Performance Assessment report in December 2024, completing its court order obligations.

Court Ordered Levels of CSO Control

In this quarter MWRA held its last scheduled meetings with CLF and the DEP/EPA . The last meeting was jointly held with CLF and DEP/EPA on 12/13/2024.

Ongoing Projects as of December 31, 2024

- *East Boston CSO Control*: As part of the East Boston CSO a FAA/MOU was executed in June 2021 for $2.1M, BWSC design and construction. Plans for Phase 4 sewer separation with five new contracts starting summer 2024 (through 2030) will result in most of East Boston being separated.
- *Somerville Marginal New Pipe Connection* came out of the variance optimization study that recommended adding a new pipe from the facility's CSO influent conduit to the interceptor with an added control gate. The $4.4m construction project is expected to be completed by December 2025.
- *Fort Point Channel and Mystic Confluence* – BOS013, BOS062, BOS065, BOS070 DBC and BOS017: The FAA/MOU was amended on December 13, 2023 to include BOS013. The FAA/MOU was amended again on 1/29/2024 to increase the amount to $11.9 million to accommodate the greater than anticipated construction cost.
- *CAM005 weir raising and lengthening* for reducing CSO activation and frequency volume. Draft Preliminary Design workshop was held on 12/19/2024 and included members from Cambridge DPW and Mount Auburn Hospital.

CSO variances

MassDEP has issued a series of multi-year CSO variances that allow MWRA, Cambridge, and Somerville to continue to have limited CSO discharges to Alewife Brook and the Upper Mystic River, as well as the Charles River lower basin. The most recent variances, issued in 2024, require the development of Updated LTCP. The Updated LTCPs must include a description of the existing level of CSO control, an evaluation of the costs and the performance and water quality improvements achieved by additional CSO control alternatives, a public participation plan, and an affordability analysis. Draft Updated Control Plan due December 2025 and the Final Plan due December 2027.

- MassDEP and EPA conditionally approved MWRA's Updated CSO Control Plan Scope of Work on 5/11/2022.
- Schedule Extension Request for Deliverables Associated with Updated CSO Control Plan was submitted 9/22/22. In May 2023 EPA/MassDEP advised that MWRA, Cambridge and Somerville proceed according to our revised schedule.
  - As identified in the variance the progress is reported at monthly meetings with EPA/MassDEP. Last meeting held on 12/11/2024. Next meeting to be held on 1/8/2025. Key elements of the Updated CSO Control Plan are discussed including the ongoing development of alternatives to be evaluated using the Unified Hydraulic Model and provide updates on the public engagement process.
- The 3rd of 8 planned meetings was held on 11/15/2023. The next Public Meeting is scheduled for **January 22, 2025** (Alternatives Development and Financial Capability Analysis).
- Development and Submittal of Studies as required under variance included the following:
  - Alewife PS Optimization Evaluation was submitted on 4/27/2021
  - Somerville Marginal CSO Reduction, Study and Preliminary Design was submitted on 12/27/2021
  - Alewife Brook and Charles River System Optimization Evaluation was submitted on 12/28/2022
  - MWRA CSO Variances Additional System Optimization Measures Report was submitted on 1/31/2023.
  - **Odor control feasibility study due June 1, 2025.**
  - **Real time notification study due August 31, 2025.**
  - **Evaluation of floatables control study due October 1, 2025.**

CIP Expenditures
2nd Quarter – FY25

FY25 Capital Improvement Program Expenditure Variances through December by Program - ($ in thousands)				
Program	FY25 Budget Through December	FY25 Actual Through December	Variance Amount	Variance Percent
Wastewater	$77,308	$39,864	($37,444)	-48%
Waterworks	$46,900	$30,409	($16,491)	-35%
Business and Operations Support	$9,151	$4,991	($4,160)	-46%
Total	$133,359	$75,264	($58,095)	-44%

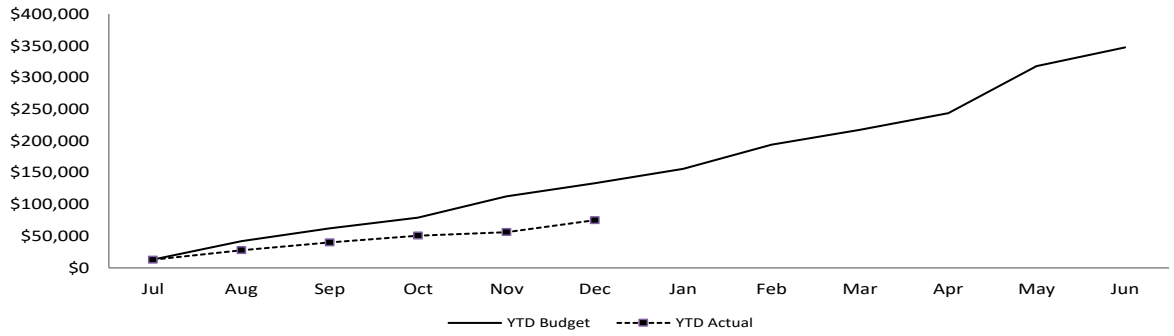
Wastewater:

- Spending was less than planned in Wastewater primarily due to less than anticipated loan distributions for the I/I Local Financial Assistance program, and later than planned Community Managed CSO payments for the Fort Point Channel & Mystic project.
- This less than planned spending was partially offset by greater than planned contractor progress for Deer Island Treatment Plant Clarifier Rehabilitation Phase 2 Construction.

Water:

- Spending was less than planned in Waterworks primarily due to less than anticipated loan distributions for Local Water System Assistance Program, lower than projected spending for Metro Water Tunnel Program Administration, Legal & Public Outreach, later than anticipated contract award for the Metropolitan Water Tunnel Program Final Design/ESDC , and Section 75A and 47 Extension CP-1, longer lead-time on some larger items and a change in design for the multi-orifice valve for the Wachusett Gatehouse Pipe Replacement project, lower than projected task order work for CWTP Technical Assistance, less than planned consultant work for the WASM 3 MEPA/Design/CA/RI contract, additional change order work delayed completion date for Sudbury Dam Improvements Construction, and less than anticipated contractor progress for Section 89/29 Replacement.
- This less than planned spending was partially offset by contractor progress for Waltham Section 101 Pipeline Construction, and FY24 planned work performed in FY25 for Northern Extra High CP-1 Improvements and New Connecting Mains CP3 (Sections 23, 24 & 47) Rehabilitation.

Budget vs. Actual CIP Expenditures ($ in thousands)
Total FY25 CIP Budget of $347,348



Construction Fund Management

All payments to support the capital program are made from the Construction Fund. Sources of fund in-flows include bond proceeds, commercial paper, SRF reimbursements, loan repayments by municipalities, and current revenue. Accurate estimates of cash withdrawals and grant payments (both of which are derived from CIP spending projections) facilitate planning for future borrowings and maintaining an appropriate construction fund balance.

Cash Balance as of 12/28/24	$102.1 billion
Unused capacity under the debt cap:	$2.6 billion
Estimated date for exhausting construction fund without new borrowing:	Jan 2025
Estimated date for debt cap increase to support new borrowing:	Not anticipated at this time
Commercial paper/Revolving loan outstanding: Commercial paper capacity / Revolving Loan	$ 0 million $ 250 million
Budgeted FY25 Cash Flow Expectancy*:	$245 million

DRINKING WATER QUALITY AND SUPPLY

Source Water – Microbial Results and UV Absorbance

2nd Quarter – FY25

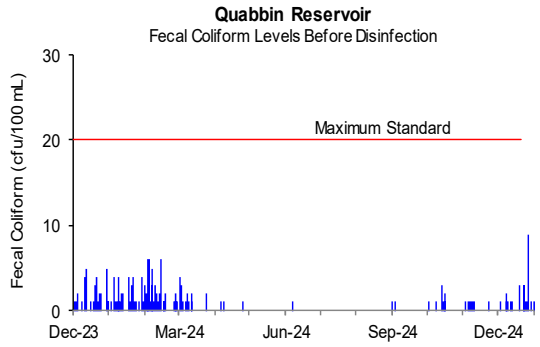
Source Water – Microbial Results

Total coliform bacteria are monitored in both source and treated water to provide an indication of overall bacteriological activity. Most coliforms are harmless. However, fecal coliforms, a subclass of the coliform group, are identified by their growth at temperatures comparable to those in the intestinal tract of mammals. They act as indicators of possible fecal contamination. The Surface Water Treatment Rule for unfiltered water supplies allows for no more than 10% of source water samples prior to disinfection over any six-month period to have more than 20 fecal coliforms per 100mL.

Sample Site: Quabbin Reservoir

Quabbin Reservoir water is sampled at the William A. Brutsch Water Treatment Facility raw water tap before being treated and entering the CVA system.

All samples collected during the quarter were below 20 cfu/100mL. **For the current six-month period, 0.0% of the samples have exceeded a count of 20 cfu/100mL.**

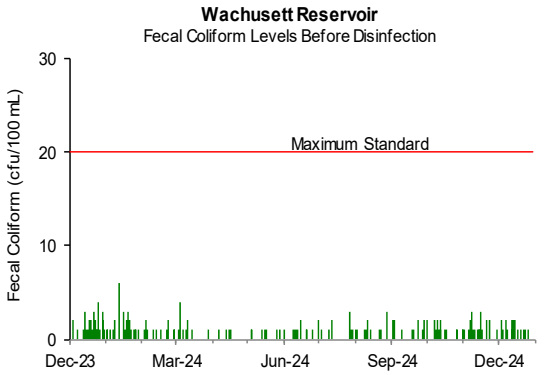


Sample Site: Wachusett Reservoir

Wachusett Reservoir water is sampled at the CWTP raw water tap in Marlborough before being treated and entering the MetroWest/Metropolitan Boston systems.

In the wintertime when smaller water bodies near Wachusett Reservoir freeze up, many waterfowl will roost in the main body of the reservoir - which freezes later. This increased bird activity tends to increase fecal coliform counts. DCR has an active bird harassment program to move the birds away from the intake area.

All samples collected during the quarter were below 20 cfu/100mL. **For the current six-month period, 0.0% of the samples exceeded a count of 20 cfu/100mL.**

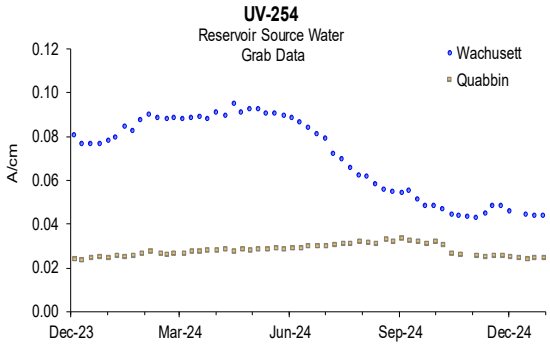


Source Water – UV Absorbance

UV Absorbance at 254nm wavelength (UV-254), is a measure of the amount and reactivity of natural organic material in source water. Higher UV-254 levels cause increased ozone and chlorine demand resulting in the need for higher ozone and chlorine doses, and can increase the level of disinfection by-products. UV-254 is impacted by tributary flows, water age, sunlight and other factors.

Quabbin Reservoir UV-254 levels averaged 0.026 A/cm for the quarter.

Wachusett Reservoir UV-254 levels averaged 0.045 A/cm for the quarter.



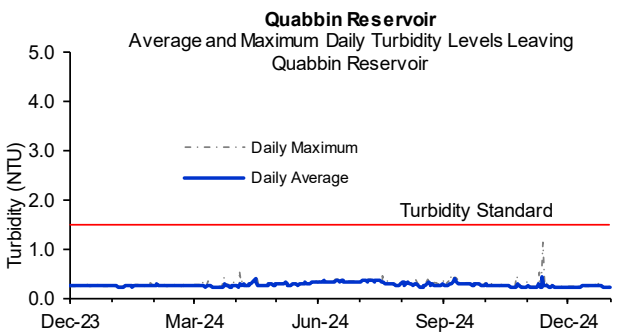
Source Water – Turbidity

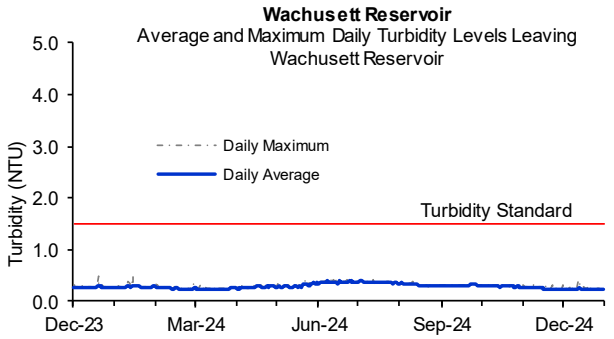
2nd Quarter – FY25

Turbidity is a measure of suspended and colloidal particles including clay, silt, organic and inorganic matter, algae and microorganisms. The effects of turbidity depend on the nature of the matter that causes the turbidity. High levels of particulate matter may have a higher disinfectant demand or may protect bacteria from disinfection effects, thereby interfering with the disinfectant residual throughout the distribution system.

There are two standards for turbidity: all water must be below five NTU (Nephelometric Turbidity Units), and water only can be above one NTU if it does not interfere with effective disinfection.

Turbidity of Quabbin Reservoir water is monitored continuously at the Brutsch Water Treatment Facility (BWTF) before UV and chlorine disinfection. Turbidity of Wachusett Reservoir is monitored continuously at the Carroll Water Treatment Plant (CWTP) before ozonation and UV disinfection. Maximum turbidity results at Quabbin and Wachusett were within DEP standards for the quarter.



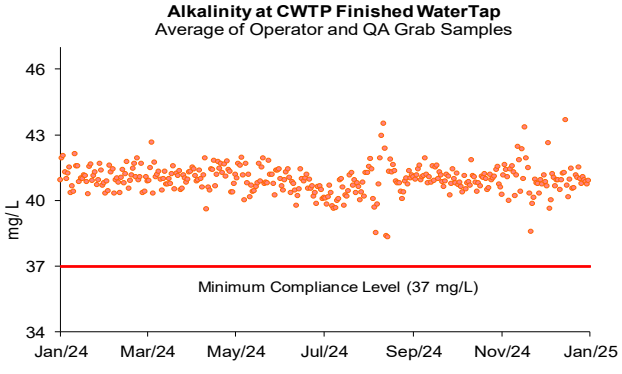


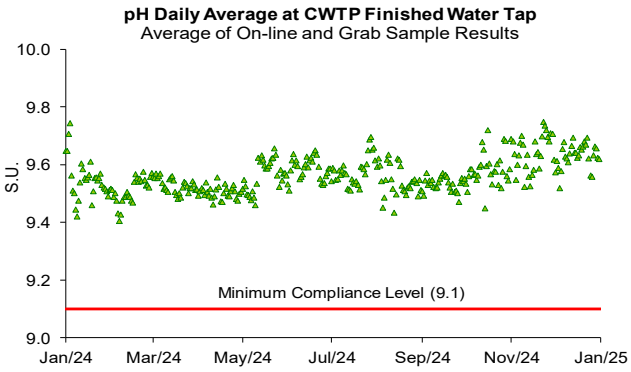
Treated Water – pH and Alkalinity Compliance

MWRA adjusts the alkalinity and pH of Wachusett water at CWTP to reduce its corrosivity, which minimizes the leaching of lead and copper from service lines and home plumbing systems into the water. MWRA tests finished water pH and alkalinity daily at the CWTP's Fin B sampling tap. MWRA's target for distribution system pH is 9.3; the target for alkalinity is 40 mg/l. Per DEP requirements, CWTP finished water samples have a minimum compliance level of 9.1 for pH and 37 mg/L for alkalinity. Samples from 27 distribution system locations have a minimum compliance level of 9.0 for pH and 37 mg/L for alkalinity. Results must not be below these levels for more than nine days in a six month period. Distribution system samples are collected in March, June, September, and December.

Each CVA community provides its own corrosion control treatment. See the CVA report: https://www.mwra.com/node/6548.

Quarterly distribution system samples were collected during one week in December. Distribution system sample pH ranged from 9.4 to 9.7 and alkalinity ranged from 40 to 42 mg/L. No sample results were below DEP limits for this quarter.





Treated Water – Disinfection Effectiveness

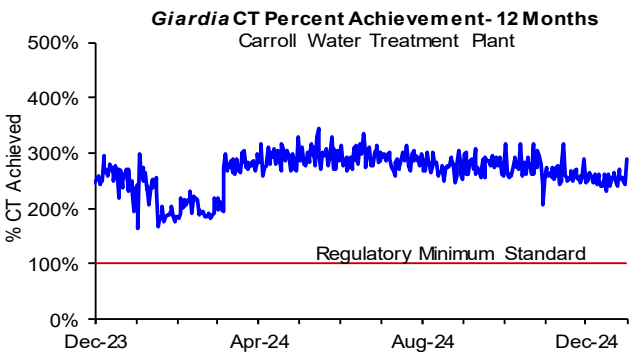
2nd Quarter – FY25

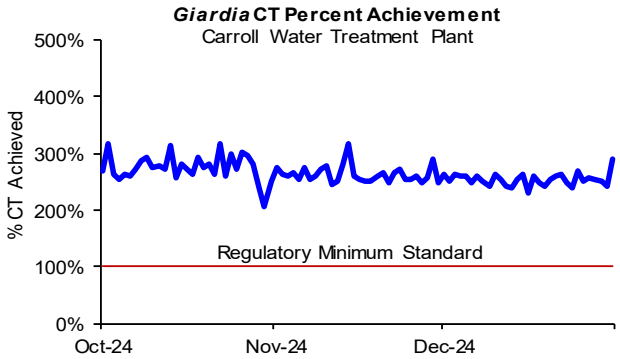
At the Carroll Water Treatment Plant (CWTP), MWRA meets the required 99.9% (3-log) inactivation of *Giardia* using ozone (reported as CT: concentration of disinfectant x contact time) and the required 99% (2-log) inactivation of *Cryptosporidium* using UV (reported as IT: intensity of UV x time). MWRA calculates inactivation rates hourly and reports *Giardia* inactivation at maximum flow and *Cryptosporidium* inactivation at minimum UV dose. MWRA must meet 100% of required CT and IT.

CT achievement for *Giardia* assures CT achievement for viruses, which have a lower CT requirement. For *Cryptosporidium*, there is also an "off-spec" requirement. Off-spec water is water that has not reached the full required UV dose or if the UV reactor is operated outside its validated ranges. No more than 5% off-spec water is allowed in a month.

Wachusett Reservoir – MetroWest/Metro Boston Supply:

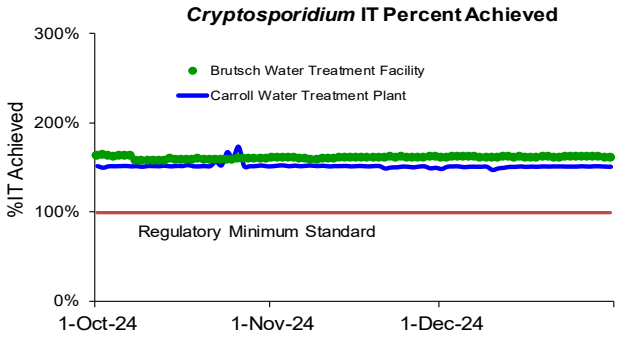
- The chlorine dose at the CWTP varied between 3.15 and 3.65 mg/L for the quarter.
- Ozone dose at the CWTP varied between 1.3 to 1.4 mg/L for the quarter.
- *Giardia* CT was maintained above 100% at all times the plant was providing water into the distribution system this quarter, as well as every day for the last fiscal year.
- *Cryptosporidium* IT was maintained above 100% for the quarter. Off-spec water was less than 5%.

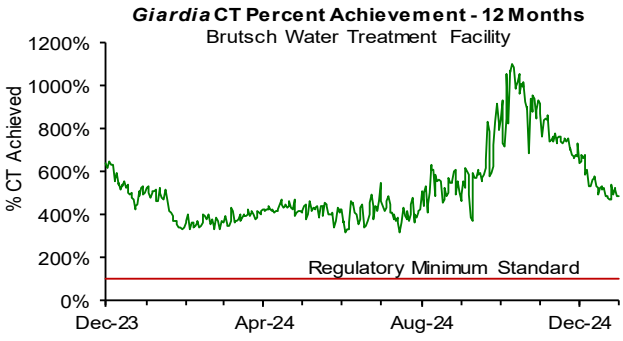


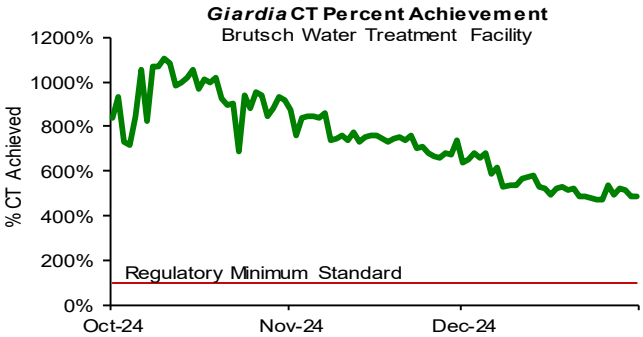


Quabbin Reservoir (CVA Supply) at: Brutsch Water Treatment Facility

- The chlorine dose at BWTF is adjusted in order to achieve MWRA's seasonal target of 0.75 - 0.85 mg/L (November 1 – May 31) and 0.85 - 1.05 mg/L (June 1 – October 31) at Ludlow Monitoring Station.
- The chlorine dose at BWTF varied between 1.45 to 2.00 mg/L for the quarter.
- *Giardia* CT was maintained above 100% at all times the plant was providing water into the distribution system for the quarter.
- *Cryptosporidium* IT was maintained above 100% for the quarter. Off-spec water was less than 5%.







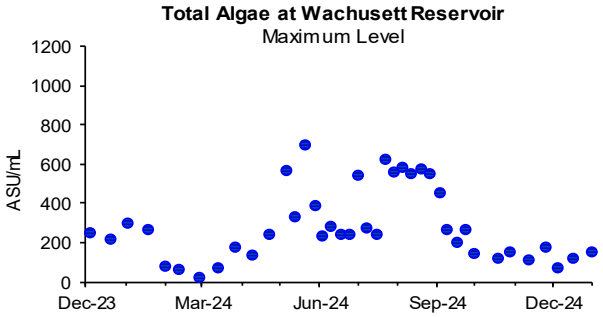
Source Water - Algae

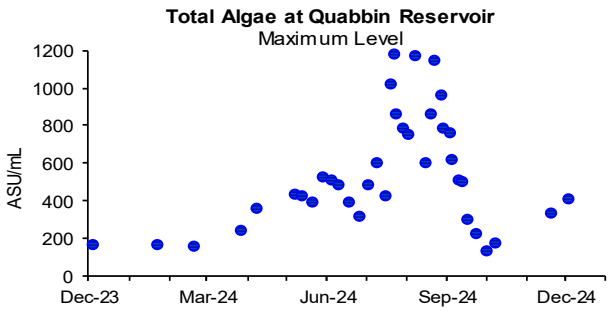
2nd Quarter – FY25

Algae levels in the Wachusett and Quabbin Reservoir are monitored by DCR and MWRA. These results, along with taste and odor complaints, are used to make decisions on source water treatment for algae control.

Taste and odor complaints at the tap may be due to algae, which originate in source reservoirs, typically in trace amounts. Occasionally, a particular species grows rapidly, increasing its concentration in water. When *Synura*, *Anabaena*, or other nuisance algae bloom, MWRA may treat the reservoirs with copper sulfate, an algaecide. During the winter and spring, diatom numbers may increase. While not a taste and odor concern, consumers that use filters may notice a more frequent need to change their filters.

In the first quarter, fourteen metallic taste complaints which may be related to algae were reported from the CVA communities. In July, the Levels of *Chrysosphaerella* were elevated in the Quabbin Reservoir. Levels decreased towards the end of the quarter.





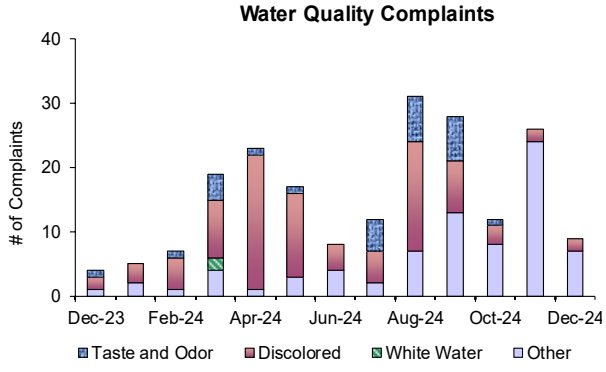
Drinking Water Quality Customer Complaints: Taste, Odor, or Appearance

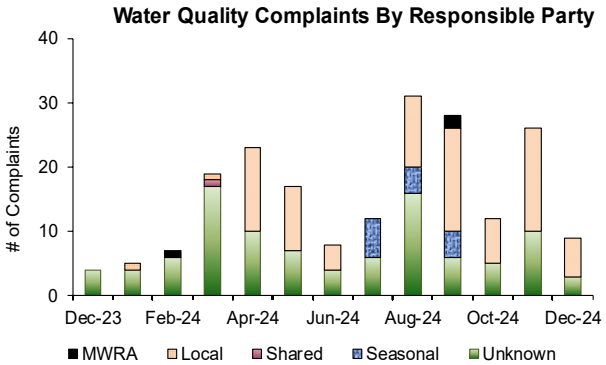
MWRA collects information on water quality complaints that typically fall into four categories: 1) discoloration due to MWRA or local pipeline work; 2) taste and odor due to algae blooms in reservoirs or chlorine in the water; 3) white water caused by changes in pressure or temperature that traps air bubbles in the water; or 4) "other" complaints including no water, clogged filters or other issues.

MWRA routinely contacts communities to classify and tabulate water complaints from customers. This count, reflecting only telephone calls to towns, probably captures only a fraction of the total number of customer complaints. Field Operations staff have improved data collection and reporting by keeping track of more kinds of complaints, tracking complaints to street addresses and circulating results internally on a daily basis.

Communities reported 47 complaints during the quarter compared to 28 complaints from 2nd Quarter of FY24. Of these complaints, 7 were for "discolored water", 1 was for "taste and odor"', and 39 were for "other". Of these complaints, 29 were local community issues and 18 were unknown in origin.

- In December, three low water pressure complaints in Somerville were reported due to a water main break.
- In November, Somerville reported eighteen no water complaints when they were repairing a water main leak.





Bacteria & Chlorine Residual Results for Communities in MWRA Testing Program

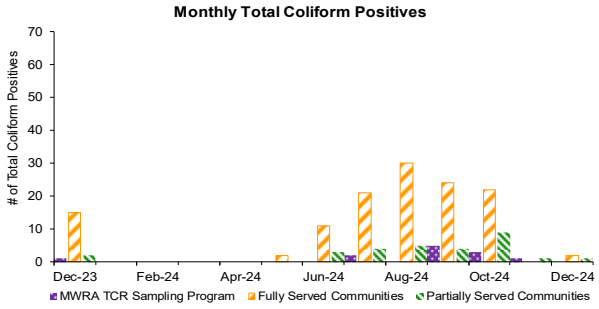
2nd Quarter – FY25

While all communities collect bacteria samples and chlorine residual data for the Total Coliform Rule (TCR), data from the 44 systems that use MWRA's Laboratory are reported below.
The MWRA TCR program has 144 sampling locations. These locations include sites along MWRA's transmission system, water storage tanks and pumping stations, as well as a subset of the community TCR locations.
Samples are tested for total coliform and *Escherichia coli (E.coli)*. *E.coli* is a specific coliform species whose presence likely indicates potential contamination of fecal origin.
If *E.coli* are detected in a drinking water sample, this is considered evidence of a potential public health concern. Public notification is required if repeat tests confirm the presence of *E.coli* or total coliform.
Total coliform provide a general indication of the sanitary condition of a water supply. If total coliform are detected in more than 5% of samples in a month (or if more than one sample is positive when less than 40 samples are collected), the water system is required to investigate the possible source/cause with a Level 1 or 2 Assessment, and fix any identified problems.
A disinfectant residual is intended to maintain the sanitary integrity of the water; MWRA considers a residual of 0.2 mg/L a minimum target level at all points in the distribution system.

Highlights

In the second quarter, thirty-four of the 6,555 fully and partially served samples (0.5%) tested positive for total coliform. Three of the 1839 Shared Community/MWRA samples (0.2%) tested positive for total coliform. One of the 407 CVA/MWRA community samples (0.2%) tested positive for total coliform. These communities were required to conduct Level Assessments in October: Bedford and Winthrop. One sample in Revere tested positive for *E.coli*. 0.5% of the Fully Served community quarterly samples had chlorine residuals lower than 0.2 mg/L.

NOTES:
a) MWRA total coliform and chlorine residual results include data from community locations. In most cases these community results are indicative of MWRA water as it enters the community system; however, some are strongly influenced by local pipe conditions. Residuals in the MWRA system are typically between 1.0 and 2.8 mg/L.
b) The number of samples collected depends on the population served and the number of repeat samples required.
c) These communities are partially supplied, and may mix their chlorinated supply with MWRA chloraminated supply.
d) Part of the Chicopee Valley Aqueduct System. Free chlorine system.



			Total Coliform # Samples (b)	Total Coliform # (%) Positive	*E.coli* # Positive	Assessment Required
MWRA		MWRA Locations	338	1 (0.3%)	0	
	a	Shared Community/MWRA sites	1501	2 (0.1%)	0	
		Total: MWRA	1839	3 (0.2%)	0	No
Fully Served		ARLINGTON	167	0 (0%)	0	
		BELMONT	104	0 (0%)	0	
		BOSTON	798	1 (0.1%)	0	No
		BROOKLINE	237	0 (0%)	0	
		CHELSEA	169	0 (0%)	0	
		DEER ISLAND	52	0 (0%)	0	
		EVERETT	169	0 (0%)	0	
		FRAMINGHAM	273	0 (0%)	0	
		LEXINGTON	154	3 (1.9%)	0	No
		LYNNFIELD	18	0 (0%)	0	
		MALDEN	240	2 (0.8%)	0	No
		MARBLEHEAD	72	0 (0%)	0	
		MARLBOROUGH	156	1 (0.6%)	0	No
		MEDFORD	219	1 (0.5%)	0	No
		MELROSE	126	0 (0%)	0	
		MILTON	102	0 (0%)	0	
		NAHANT	33	1 (3.0%)	0	No
		NEWTON	279	0 (0%)	0	
		NORTHBOROUGH	48	0 (0%)	0	
		NORWOOD	99	0 (0%)	0	
		QUINCY	331	0 (0%)	0	
		READING	143	0 (0%)	0	
		REVERE	237	1 (0.4%)	1	No
		SAUGUS	112	0 (0%)	0	
		SOMERVILLE	258	2 (0.8%)	0	No
		SOUTHBOROUGH	30	0 (0%)	0	
		STONEHAM	91	0 (0%)	0	
		SWAMPSCOTT	60	1 (1.7%)	0	No
		WALTHAM	216	0 (0%)	0	
		WATERTOWN	143	0 (0%)	0	
		WESTON	45	0 (0%)	0	
		WINTHROP	78	11 (14.1%)	0	Yes
		Total: Fully Served	*5259*	*24 (0.5%)*		
Partially Served		BEDFORD	72	8 (11.1%)	0	Yes
		BURLINGTON	140	0 (0%)	0	
		CANTON	90	0 (0%)	0	
		HANSCOM AFB	33	1 (3.0%)	0	No
		NEEDHAM	123	0 (0%)	0	
	c	PEABODY	215	0 (0%)	0	
		WAKEFIELD	137	1 (0.7%)	0	No
		WELLESLEY	105	0 (0%)	0	
		WILMINGTON	87	0 (0%)	0	
		WINCHESTER	99	0 (0%)	0	
		WOBURN	195	0 (0%)	0	
		Total: Partially Served	*1296*	*10 (0.8%)*		
		Total: Fully and Partially Served	*6555*	*34 (0.5%)*		
CVA		MWRA CVA Locations	104	0 (0%)	0	
	d	CHICOPEE	195	0 (0%)	0	
		SOUTH HADLEY FD1	63	1 (1.6%)	0	No
		WILBRAHAM	45	0 (0%)	0	
		Total: CVA	*407*	*1 (0.2%)*		

Chlorine Residuals in Fully Served Communities

	2023		2024											
	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
% <0.1	0.2	0.3	0.1	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0
% <0.2	1.2	1.0	0.5	0.4	0.1	0.1	0.1	0.2	0.4	0.2	0.2	0.4	0.7	0.4
% <0.5	5.7	3.2	2.4	1.9	0.6	1.0	0.8	1.2	1.8	2.0	1.5	2.0	2.5	2.2
% <1.0	14.4	8.4	5.8	3.7	2.6	2.9	3.1	5.2	5.8	7.3	5.6	7.6	7.3	5.2
% ≥1.0	85.6	91.6	94.2	96.3	97.4	97.1	96.6	94.5	93.5	91.8	93.9	92.0	92.7	94.8

Treated Water Quality: Disinfection By-Product (DBP) Levels in Communities

2nd Quarter – FY25

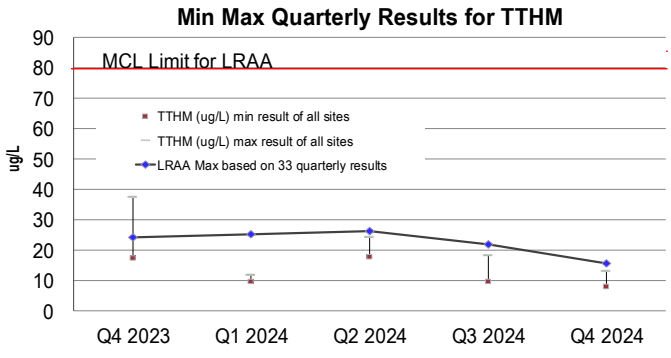
Total Trihalomethanes (TTHMs) and Haloacetic Acids (HAA5s) are by-products of disinfection treatment with chlorine. They are of concern due to their potential adverse health effects at high levels. EPA's locational running annual average (LRAA) standard, using the most recent four quarterly results, is 80 µg/L for TTHMs and 60 µg/L for HAA5s. The locational running annual average at each individual sampling location must be below the standard.

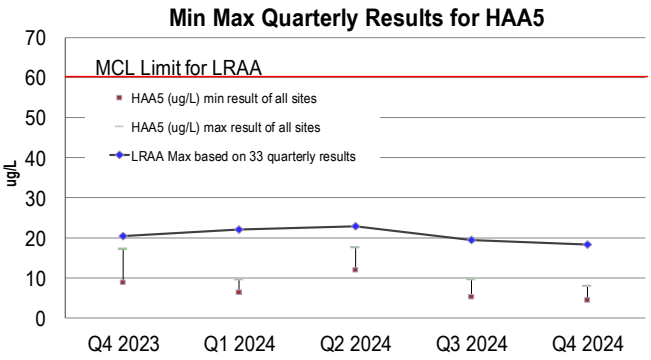
Bromate is tested monthly as required for water systems, like CWTP, that treat with ozone. EPA's RAA Maximum Contaminant Level (MCL) standard for bromate is 10 µg/L. The current RAA for Bromate at the CWTP finished water tap is 0.0 µg/L.

MWRA's TTHM and HAA5 sampling program includes sampling at 33 MetroWest and Metro Boston communities sites. Partially served and CVA communities are responsible for their own compliance monitoring and are regulated individually.

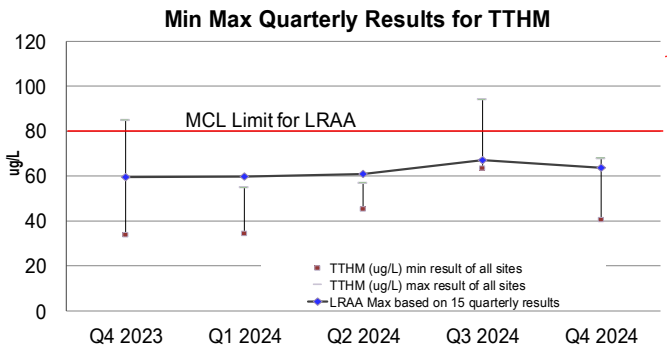
The LRAA for TTHMs and HAA5s for MWRA's Compliance Program (represented as the line in the top two graphs below) remains below current standards. The Max LRAA in the quarter for TTHMs = 15.7 µg/L; HAA5s = 18.3 µg/L. No LRAA exceedances or violations occurred this quarter for MetroBoston and for any of the CVA communities.

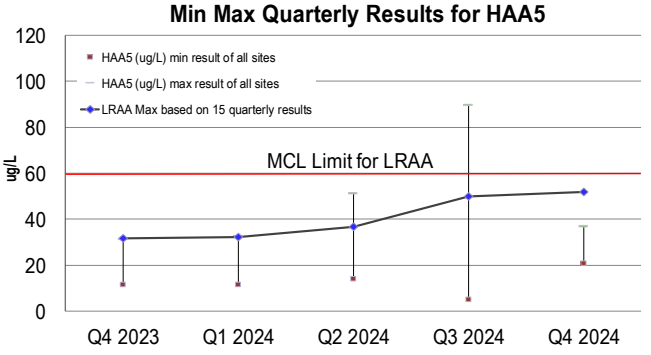
MetroBoston Disinfection By-Products





CVA Disinfection By-Products (Combined Results Chicopee, Wilbraham, & South Hadley FD1)





Water Supply and Source Water Management

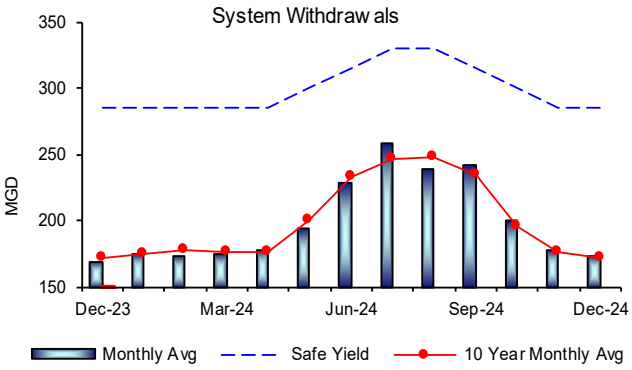
2nd Quarter – FY25

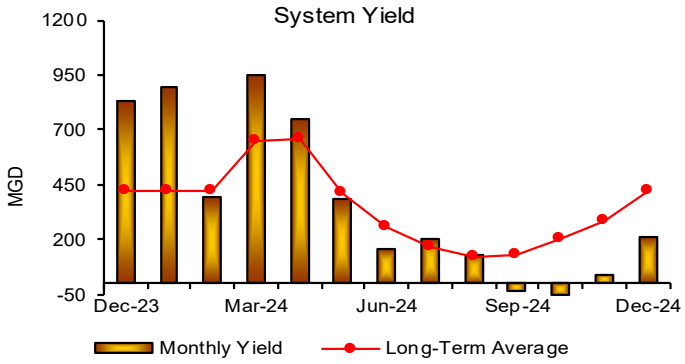
Background

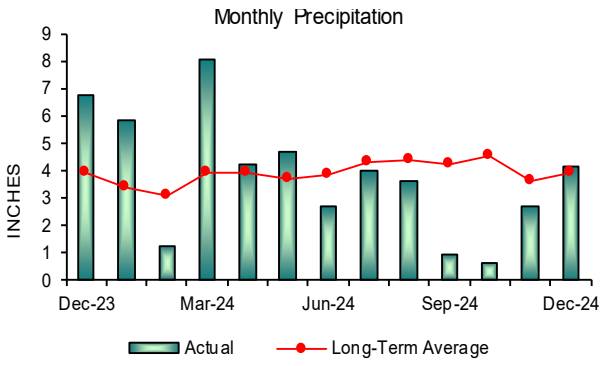
A reliable supply of water in MWRA's reservoirs depends on adequate precipitation during the year and seasonal hydrologic inputs from watersheds that surround the reservoirs. Demand for water typically increases with higher summer temperatures and then decreases as temperatures decline. Quabbin Reservoir was designed to effectively supply water to the service areas under a range of climatic conditions and has the ability to endure a range of fluctuations. Wachusett Reservoir serves as a terminal reservoir to meet the daily demands of the Greater Boston area. A key component to this reservoir's operation is the seasonal transfer of Quabbin Reservoir water to enhance water quality during high demand periods. On an annual basis, Quabbin Reservoir accounts for nearly 50% of the water supplied to Greater Boston. The water quality of both reservoirs (as well as the Ware River, which is also part of the System Safe Yield) depend upon implementation of DCR's DEP-approved Watershed Protection Plans. System Yield is defined as the water produced by its sources, and is reported as the net change in water available for water supply and operating requirements.

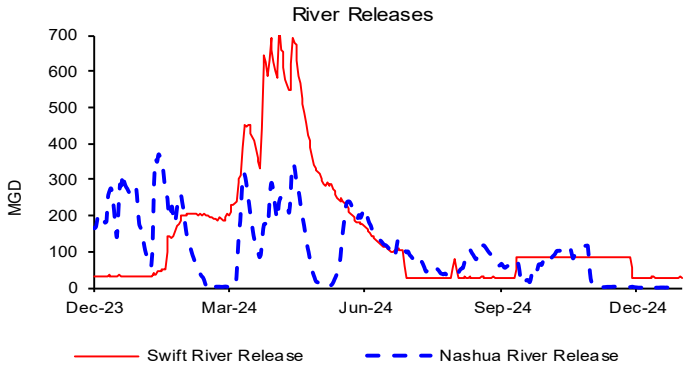
Outcome

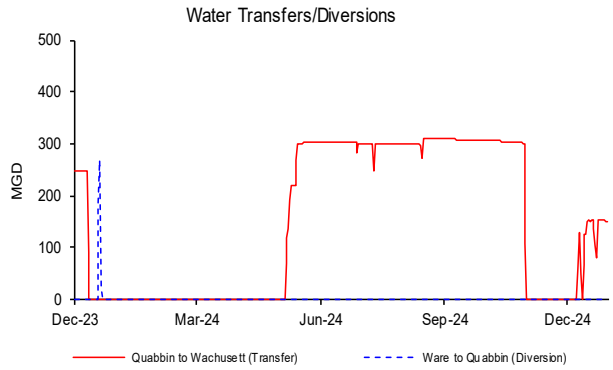
The volume of the Quabbin Reservoir was at 85.5% as of December 31, 2024; a 7.1 % decrease for the quarter, which represents a loss of more than 29.2 billion gallons of storage and a decrease in elevation of 3.89'. System withdrawal, precipitation and yield were below their long term quarterly averages. Quabbin is in normal operating range for this time of year.

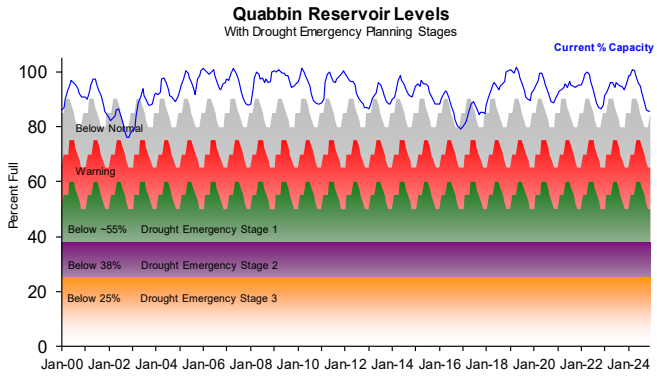












WASTEWATER QUALITY

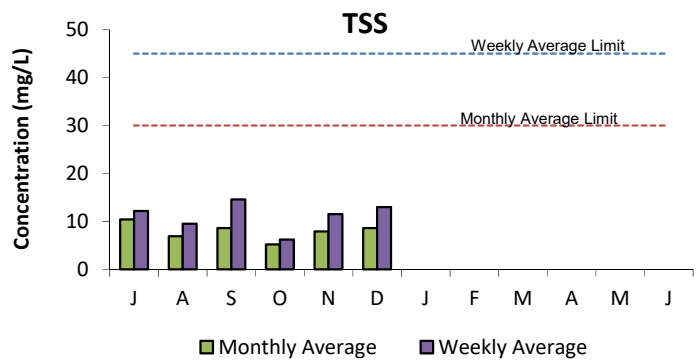
NPDES Permit Compliance: Deer Island Treatment Plant

2nd Quarter - FY25

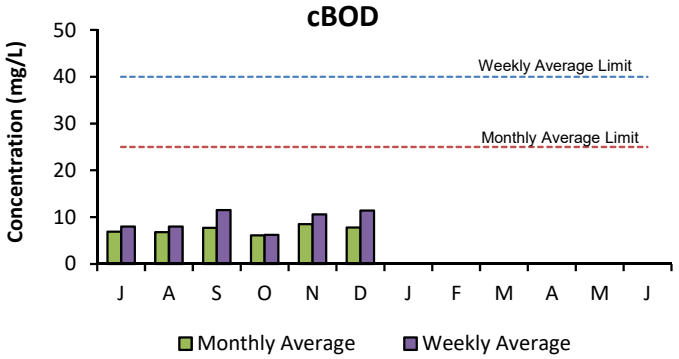
NPDES Permit Limits

Effluent Characteristics		*Units*	*Limits*	*October*	*November*	*December*	*2nd Quarter Violations*	*FY25 YTD Violations*
Dry Day Flow (365 Day Average):		MGD	436	280.1	275.7	268.5	0	0
cBOD:	Monthly Average	mg/L	25	6.1	8.5	7.8	0	0
	Weekly Average	mg/L	40	6.2	10.6	11.4	0	0
TSS:	Monthly Average	mg/L	30	5.2	7.9	8.6	0	0
	Weekly Average	mg/L	45	6.2	11.5	13.0	0	0
TCR:	Monthly Average	ug/L	456	0.0	0.0	0.0	0	0
	Daily Maximum	ug/L	631	0.0	0.0	0.0	0	0
Fecal Coliform:	Daily Geometric Mean	col/100mL	14000	9	19	17	0	0
	Weekly Geometric Mean	col/100mL	14000	6	7	6	0	0
	% of Samples >14000	%	10	0	0	0	0	0
	Consecutive Samples >14000	#	3	0	0	0	0	0
pH:		SU	6.0-9.0	6.4-6.8	6.4-6.85	6.45-7.05	0	0
PCB, Aroclors:	Monthly Average	ug/L	0.000045	UNDETECTED			0	0
Acute Toxicity:	Inland Silverside	%	≥50	>100	>100	>100	0	0
	Mysid Shrimp	%	≥50	>100	>100	>100	0	0
Chronic Toxicity:	Inland Silverside	%	≥1.5	25	50	50	0	0
	Sea Urchin	%	≥1.5	100	100	100	0	0

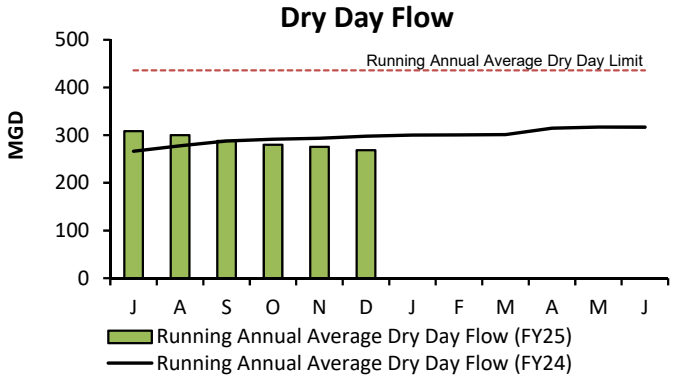
There have been no permit violations in FY25 to date at the Deer Island Treatment Plant (DITP).



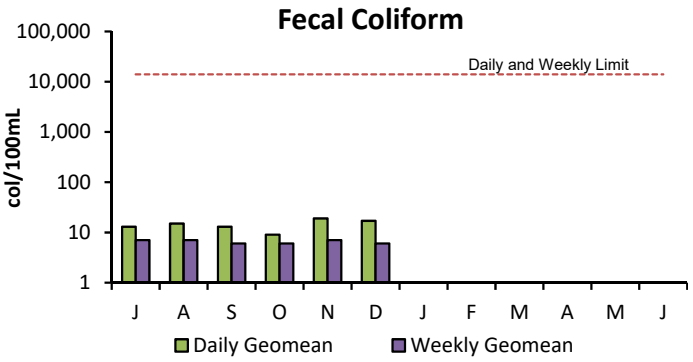
Total Suspended Solids (TSS) in the effluent is a measure of the amount of solids that remain suspended after treatment. All TSS measurements for the 2nd Quarter were within permit limits.



Carbonaceous Biochemical Oxygen Demand (cBOD) is a measure of the amount of dissolved oxygen required for the decomposition of organic materials in the environment. All cBOD measurements for the 2nd Quarter were within permit limits.



Running Annual Average Dry Day Flow is the average of all dry weather influent flows over the previous 365 days. The Dry Day Flow for the 2nd Quarter was well below the permit limit of 436 MGD.



Fecal Coliform is an indicator for the possible presence of pathogens. The levels of these bacteria after disinfection show how effectively the plant is inactivating many forms of disease-causing microorganisms. In the 2nd Quarter, all permit conditions for fecal coliform were met.

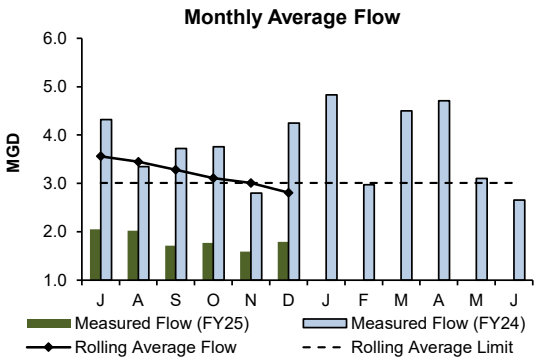
NPDES Permit Compliance: Clinton Wastewater Treatment Plant

2nd Quarter - FY25

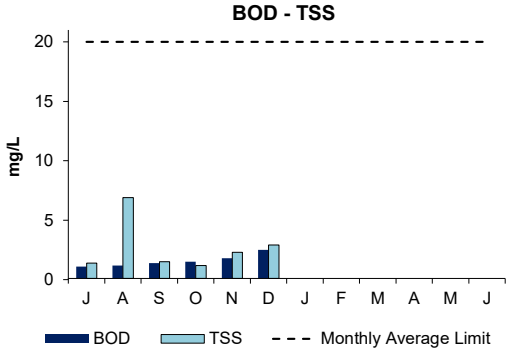
Effluent Characteristics		Units	Permit Limits	October	November	December	2nd Quarter Violations	FY25 YTD Violations
Dissolved Oxygen	Daily Minimum	mg/L	6	8.8	9.1	10.0	0	0
BOD	Monthly Average Load	lb/d	500	21.0	23.0	37.0	0	0
	Weekly Average Load	lb/d	500	24.0	26.0	59.0	0	0
	Monthly Average	mg/L	20	1.5	1.8	2.5	0	0
	Weekly Average	mg/L	20	1.6	2.1	3.8	0	0
BOD % removal	Monthly Average Minimum	%	85	99.4	99.4	99.1	0	0
pH	Monthly Minimum	S.U.	6.5	7.10	7.38	7.46	0	0
	Monthly Maximum	S.U.	8.3	7.60	7.72	7.75	0	1
TSS	Monthly Average Load	lb/d	500	17.0	30.0	44.0	0	0
	Weekly Average Load	lb/d	500	27.0	32.0	55.0	0	0
	Monthly Average	mg/L	20	1.2	2.3	2.9	0	0
	Weekly Average	mg/L	20	1.8	2.5	3.6	0	0
TSS % removal	Monthly Average Minimum	%	85	99.6	99.5	99.0	0	0
Total Ammonia Nitrogen November 1st - March 31st	Monthly Average	mg/L	6.6	0.02	<0.1	<0.1	0	0
	Daily Maximum	mg/L	35	0.05	<0.1	<0.1	0	0
Total Phosphorus November 1st - March 31st	Monthly Average	lb/d	25.1	0.4	2.8	3.0	0	0
	Monthly Average	mg/L	1	0.02	0.22	0.20	0	0
Copper	Monthly Average	ug/L	11.6	12.15	11.2	10.2	1	1
	Daily Maximum	ug/L	14	15.25	11.2	10.2	1	1
Flow	12 -month Rolling Average	MGD	3.01	3.11	3.01	2.81	1	4
TCR	Monthly Average	ug/L	20	<20	<20	<20	0	0
	Daily Maximum	ug/L	30.4	<20	<20	<20	0	0
E. Coli	Monthly Geometric Mean	cfu/100mL	126	5.0	5.0	5.0	0	0
	Daily Maximum	cfu/100mL	409	7.0	9.0	5.0	0	0
Acute Toxicity[1]	Monthly Average Minimum	%	100	>100	N/A	N/A	0	0
Chronic Toxicity[1]	Monthly Average Minimum	%	62.5	100	N/A	N/A	0	0

There have been seven permit violations in FY25 at the Clinton Treatment Plant.
1st Quarter: There were four permit violations in the first quarter, three for 12 month rolling-average flow and one for pH.
2nd Quarter: There were three permit violations in the second quarter, one for 12 month rolling-average flow; one each for copper monthly average and daily maximum.

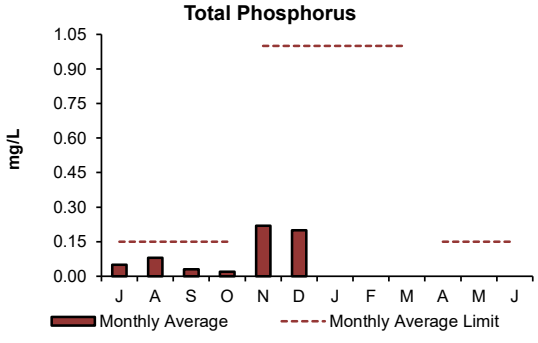
[1] Toxicity testing at the Clinton Treatment Plant is conducted on a quarterly basis.



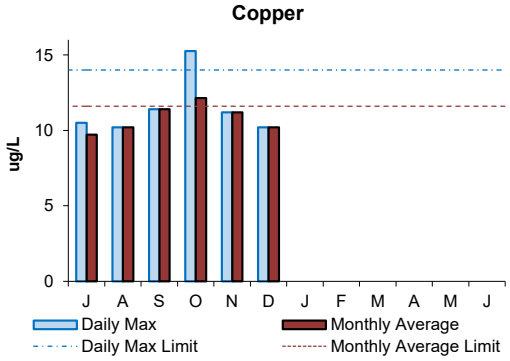
The graph depicts the rolling annual average monthly flow, measured in million gallons per day, exiting the plant.
The 12-month rolling average flows during the 2nd Quarter were above the permit limit.



Monthly average concentrations of BOD and TSS were below permit limits in the 2nd Quarter. The permit monthly limit for both parameters is 20 mg/L.



Total phosphorus limits are most stringent during the growing season from April to October.
The 2nd Quarter's monthly average concentrations for total phosphorus were below permit limits.

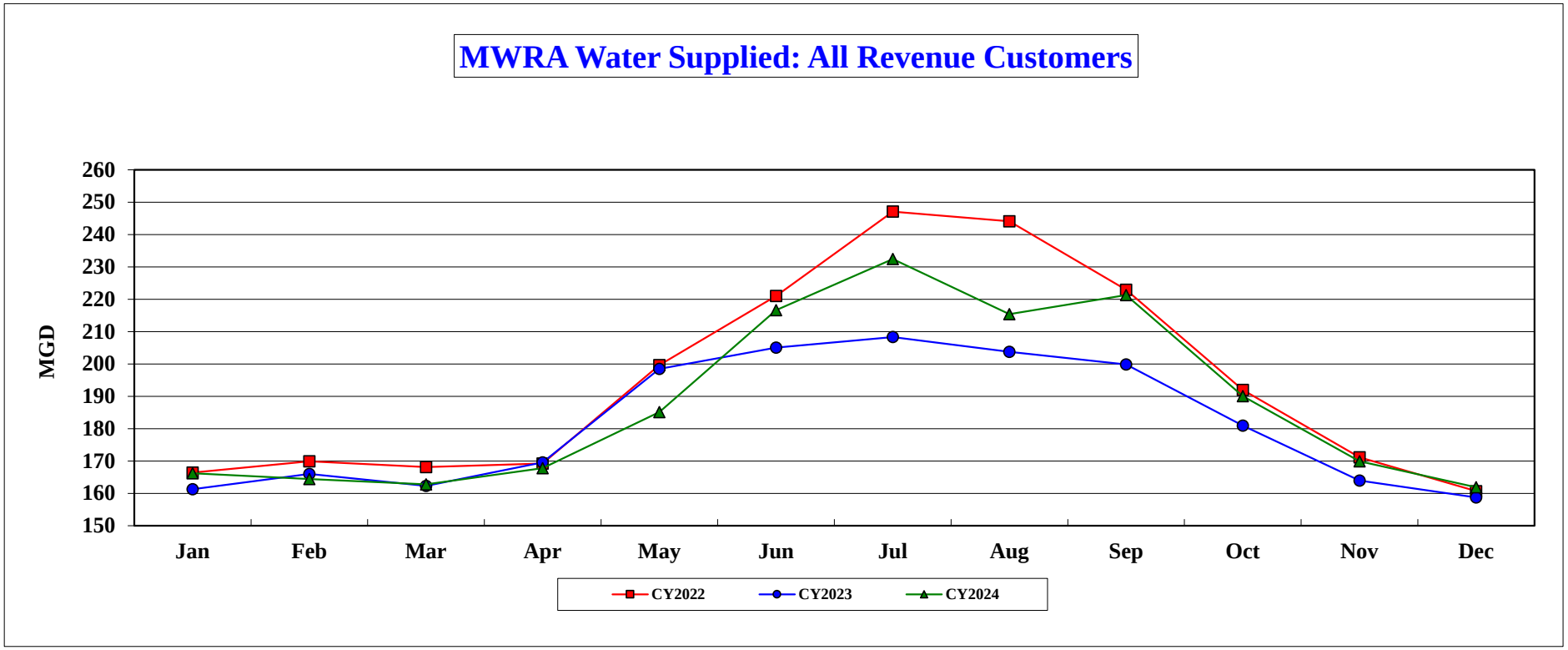


Daily maximum and monthly average concentrations of copper were below permit limits in the 2nd Quarter. Permit daily and monthly limits are 14.0 ug/L and 11.6 ug/L respectively.

COMMUNITY FLOWS AND PROGRAMS

Customer Water Use

2nd Quarter - FY25



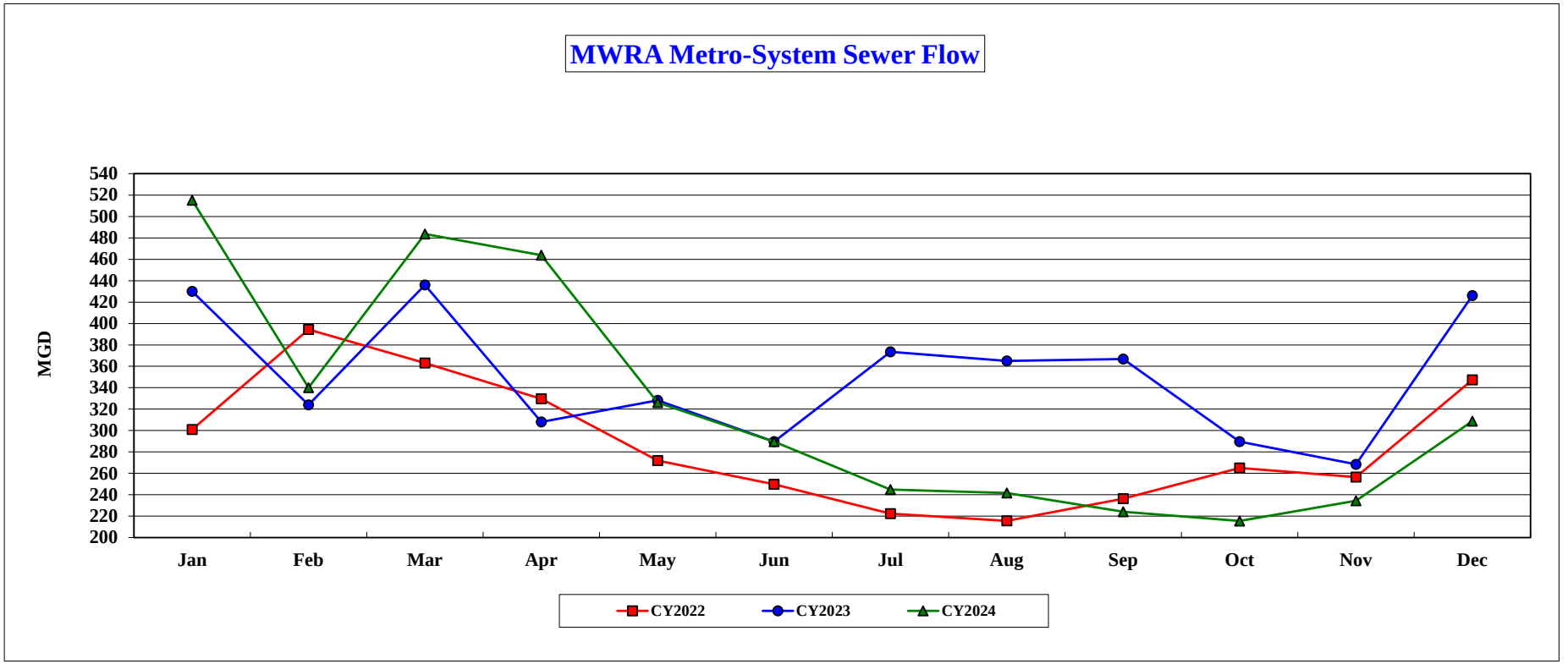
	Water Use (million gallons per day)													
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	YTD Average	Annual Average
CY2022	166.445	169.923	168.101	169.253	199.626	221.002	247.075	244.069	222.906	192.000	171.170	160.697	194.537	194.537
CY2023	161.272	165.989	162.292	169.594	198.499	205.042	208.304	203.762	199.844	180.948	163.937	158.736	181.612	181.612
CY2024	166.216	164.428	162.771	167.755	185.117	216.637	232.419	215.396	221.314	190.060	169.898	161.886	187.886	187.886

The December 2024 Community Water Use Report was recently distributed to communities and customers served by the MWRA's Metropolitan and Chicopee Valley waterworks systems. Each community's annual water use relative to the system as a whole is the primary factor in allocating the annual water rate revenue requirement to MWRA water communities. Calendar year 2024 water use will be used to allocate the FY2026 water utility rate revenue requirement.

MWRA customers used an average of 174.0 mgd in the 2nd quarter (Oct-Dec 2024) of FY2025. This is an increase of 6.1 mgd or 3.6% compared to the 2nd quarter of FY2024.

Community Sewer Flow

YTD - FY25



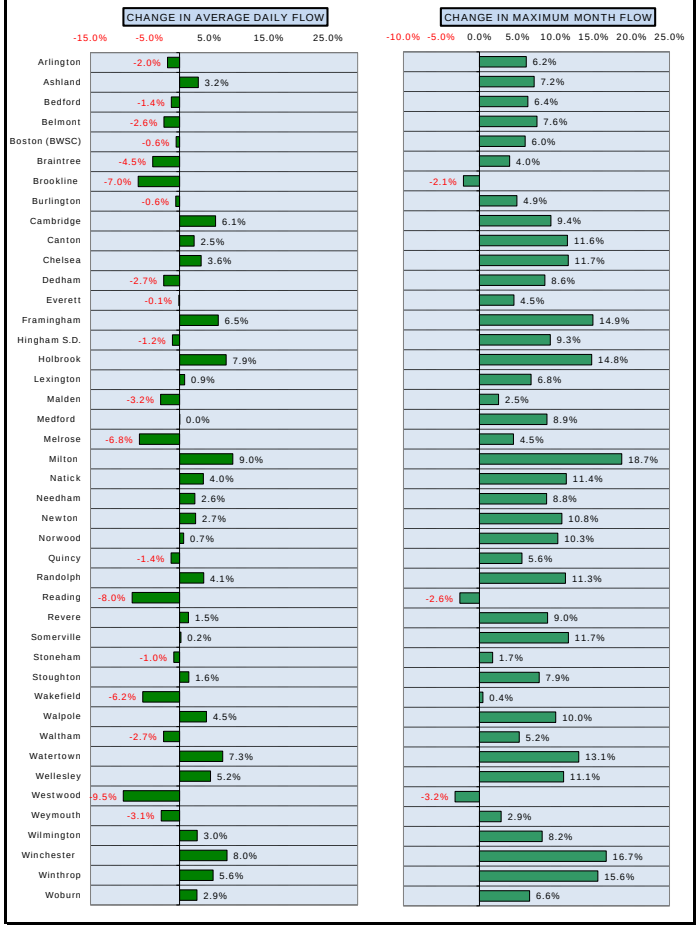
	Sewer Flow (million gallons per day)													
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	YTD Average	Annual Average
CY2022	300.930	394.400	363.110	329.710	271.890	249.840	222.280	215.600	236.380	264.960	256.590	347.420	287.098	287.098
CY2023	430.060	323.980	435.990	308.110	328.160	289.710	373.540	365.130	366.840	289.680	268.470	426.070	351.159	351.159
CY2024	515.140	340.120	483.590	463.770	326.090	289.640	244.870	241.730	224.160	215.540	234.450	308.770	324.130	324.130

The 2024 12-Month Community Sewer Flow Report was recently distributed to the 43 communities served by the MWRA's Metropolitan sewer system. Each community's share of sewer flow relative to the system as a whole is used to allocate the annual sewer rate revenue requirement to MWRA sewer communities. The average of calendar year 2022-2024 sewer flow will be used to allocate the FY2026 sewer utility rate revenue requirement.

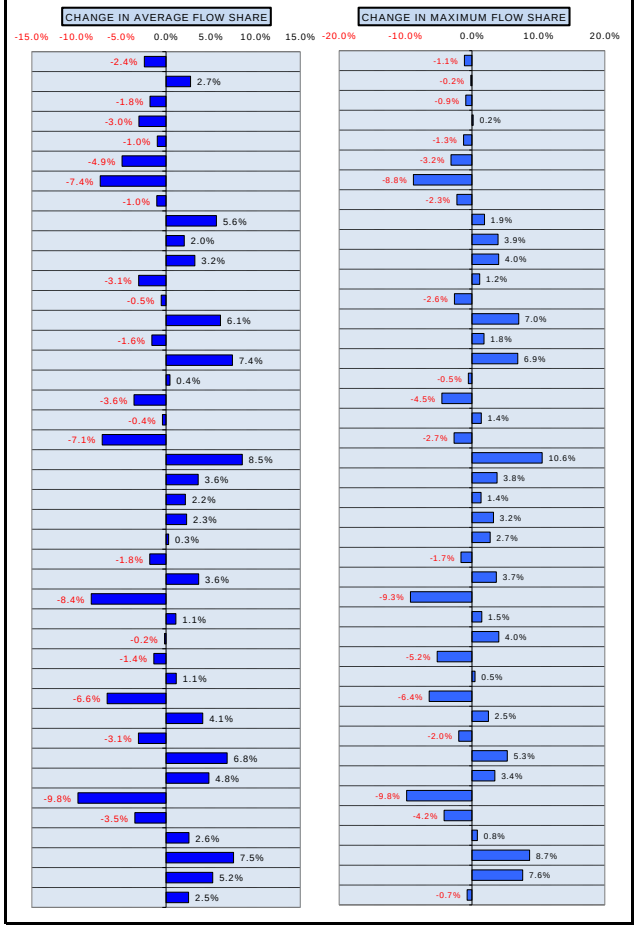
MWRA customer sewer flow averaged 324.1 mgd in CY2024. This is a decrease of 27.0 mgd or 7.7% compared to CY2023.

How CY2022-24 Community Wastewater Flows Could Effect FY2026 Sewer Assessments [1,2,3]

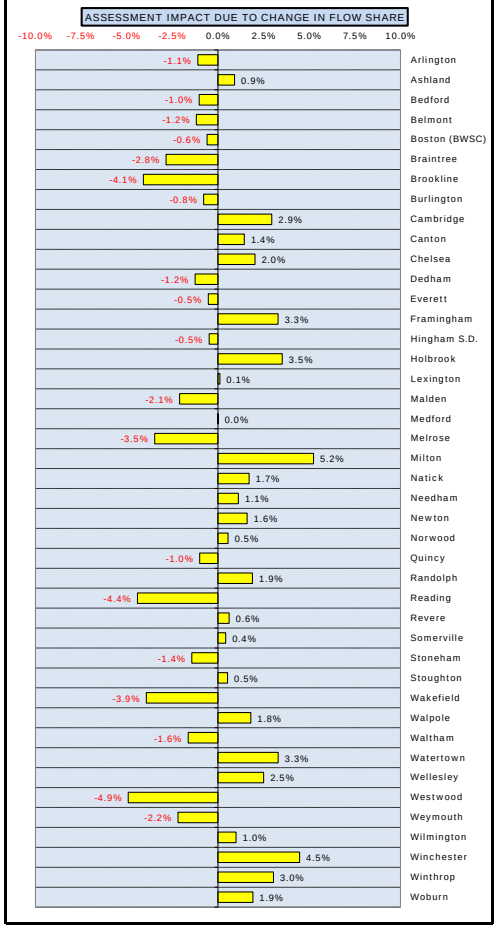
The flow components of FY2026 sewer assessments will be calculated using a 3-year average of CY2022 to CY2024 wastewater flows compared to FY2025 assessments that will use a 3-year average of CY2021 to CY2023 wastewater flows.



But as MWRA's sewer assessments are a ZERO-SUM calculation, a community's assessment is strongly influenced by the RELATIVE change in CY2022 to CY2024 flow share compared to CY2021 to CY2023 flow share, compared to all other communities in the system.



The chart below illustrates the change in the TOTAL BASE assessment due to FLOW SHARE CHANGES. [4]



[1] MWRA uses a 3-year flow average to calculate sewer assessments. Three-year averaging smoothes the impact of year-to-year changes in community flow share, but does not eliminate the long-term impact of changes in each community's relative contribution to the total flow.

[2] Based on actual flows through December 2024.

[3] Flow data is preliminary and subject to change pending additional MWRA and community review.

[4] Represents ONLY the impact on the total BASE assessment resulting from the changes in average and maximum wastewater FLOW SHARES.

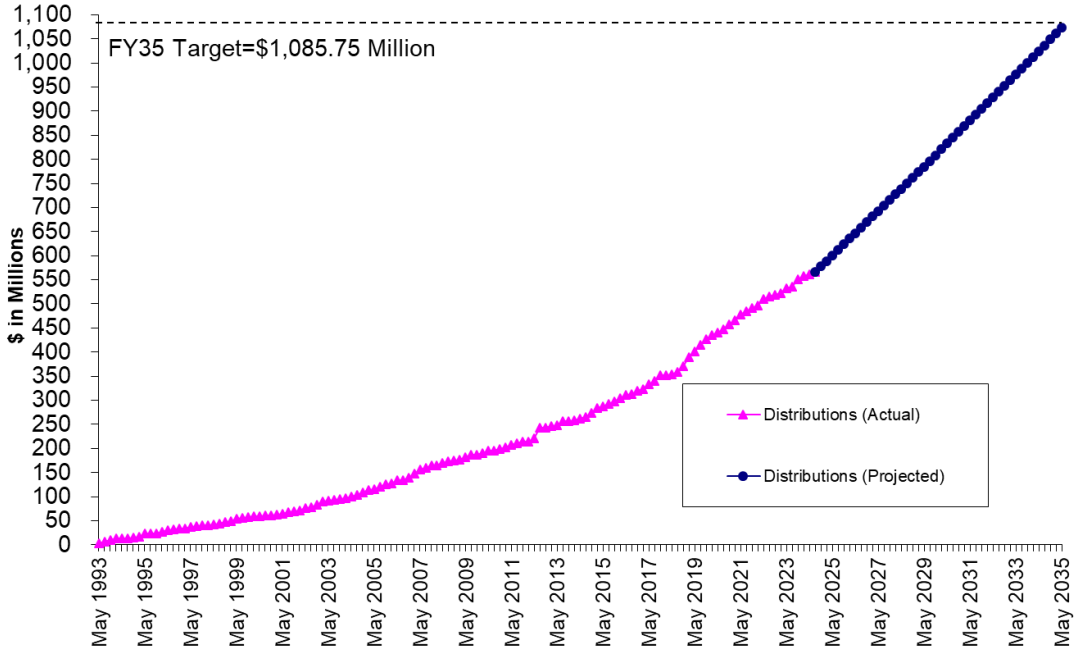
Community Support Programs

2nd Quarter – FY25

Infiltration/Inflow Local Financial Assistance Program

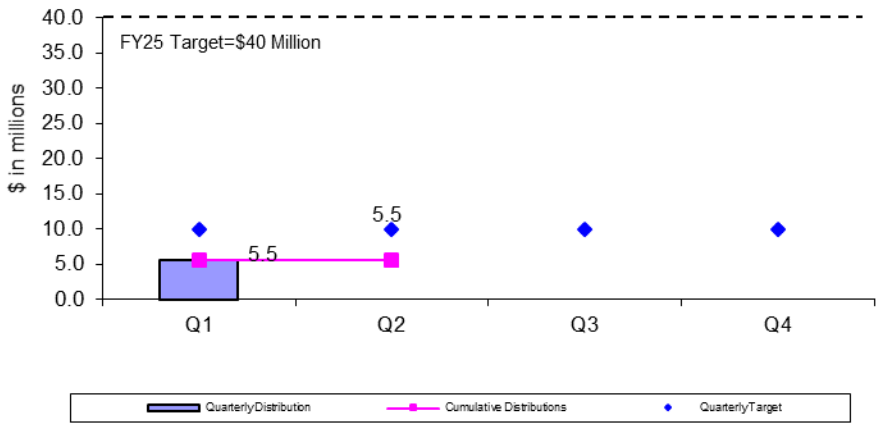
MWRA's Infiltration/Inflow (I/I) Local Financial Assistance Program provides $1085.75 million in grants and interest-free loans (average of about $22 million per year from FY93 through FY35) to member sewer communities to perform I/I reduction and sewer system rehabilitation projects within their locally-owned collection systems. Eligible project costs include: sewer rehabilitation construction, pipeline replacement, removal of public and private inflow sources, I/I reduction planning, engineering design, engineering services during construction, etc. I/I Local Financial Assistance Program funds are allocated to member sewer communities based on their percent share of MWRA's wholesale sewer charge. Phase 1-8 funds (total $300.75 million) were distributed as 45% grants and 55% loans with interest-free loans repaid to MWRA over a five-year period. Phase 9 through 12 funds (total $360 million) are distributed as 75% grants and 25% loans with interest-free loans repaid to MWRA over a ten-year period. Phase 13 funds of $100 million are distribution as ten-year interest-free loan-only funds. Phase 14 funds (total $100 million) are distributed as 75% grants and 25% loans with interest-free loans repaid to MWRA over a ten-year period. Phase 15 provides an additional $100 million in ten-year interest-free loan-only funds. Phase 16 funds (total $125 million) are programmed in the budget beginning in FY26 and will be distributed as 75% grants and 25% loans with interest-free loans repaid to MWRA over a ten-year period.

I/I Local Financial Assistance Program Distribution FY93-FY35



During the 2nd Quarter of FY25, no I/I Local Financial Assistance Program distributions were made. Total grant/ loan distribution to date for FY25 is $5.5 million. From FY93 through the 2nd Quarter of FY25, all 43 member sewer communities have participated in the program and $565 million has been distributed to fund 688 local I/I reduction and sewer system rehabilitation projects. Distribution of the remaining funds has been approved through FY35 and community loan repayments will be made through FY45. All scheduled community loan repayments have been made.

FY25 Quarterly Distributions of Sewer Grant/Loans



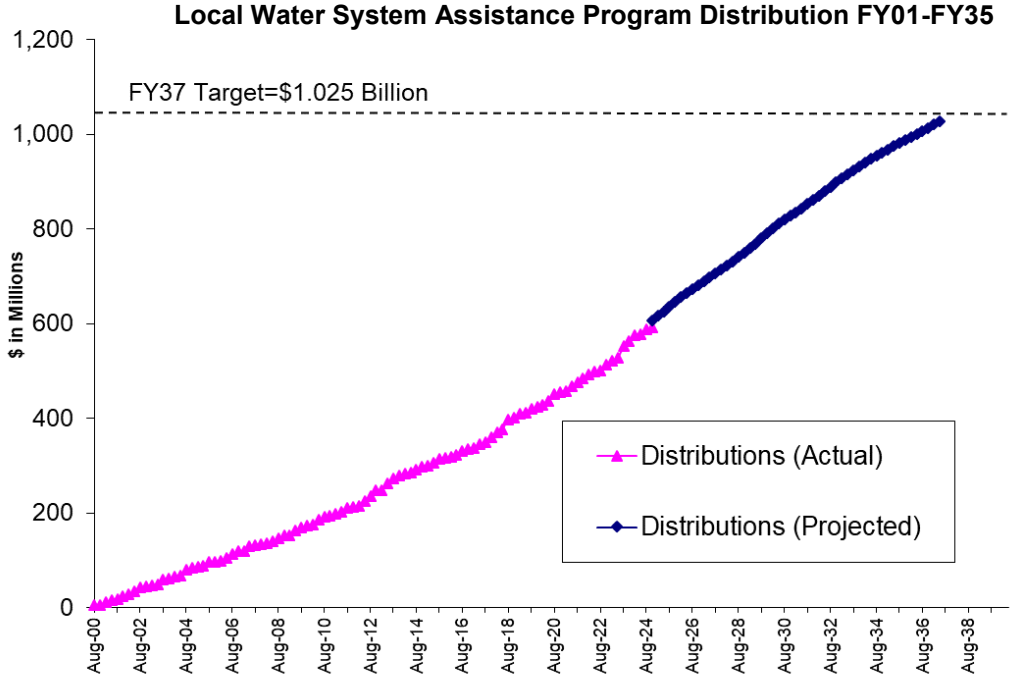
Community Support Programs

2nd Quarter – FY25

Local Water System Assistance Program

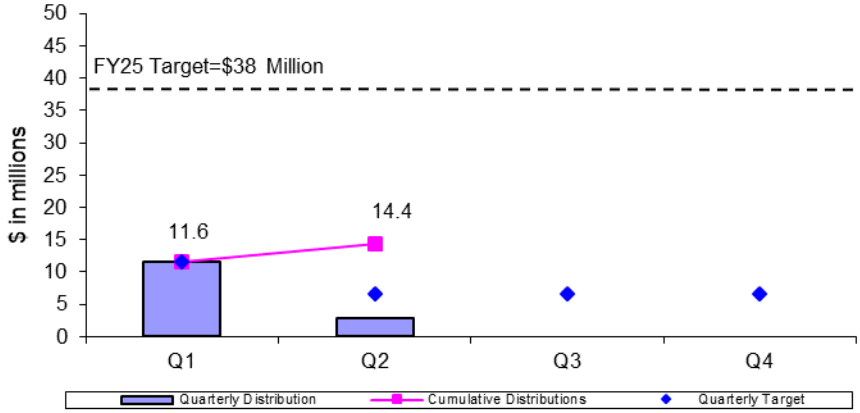
MWRA's Local Water System Assistance Programs (LWSAP) provides $1.025 billion in interest-free loans (an average of about $24 million per year from FY01 through FY35) to member water communities to perform water main rehabilitation projects within their locally-owned water distribution systems. There have been four (3) funding phases: Phase 1 at $222 Million, Phase 2 at $210 Million, and Phase 3 at $293 Million. Eligible project costs include: water main cleaning/lining, replacement of unlined water mains, lead service replacements, valve, hydrant, water meter, tank work, engineering design, engineering services during construction, etc. MWRA partially-supplied communities receive pro-rated funding allocations based on their percentage use of MWRA water. Interest-free loans are repaid to MWRA over a ten-year period beginning one year after distribution of the funds. The Phase 1 water loan program concluded in FY13 with $222 million in loan distributions. The Phase 2 - LWSAP continues distributions through FY25. The Phase 3 LWSAP is authorized for distributions from FY18 through FY30. And the Phase 4 – LWSAP is authorized for distributions from FY25 through FY35.

Local Water System Assistance Program Distribution FY01-FY35



During the 2nd Quarter of FY25, $2.8 million in interest-free loans was distributed to fund a local water project in Milton. Total loan distribution to date for FY25 is $14.4 million. From FY01 through the 2nd Quarter of FY25, $591 million has been distributed to fund 539 local water system rehabilitation projects in 43 MWRA member water communities. Distribution of the remaining funds has been approved through FY35 and community loan repayments will be made through FY45. All scheduled community loan repayments have been made.

FY25 Quarterly Distributions of Water Loans



Community Support Programs

2nd Quarter – FY25

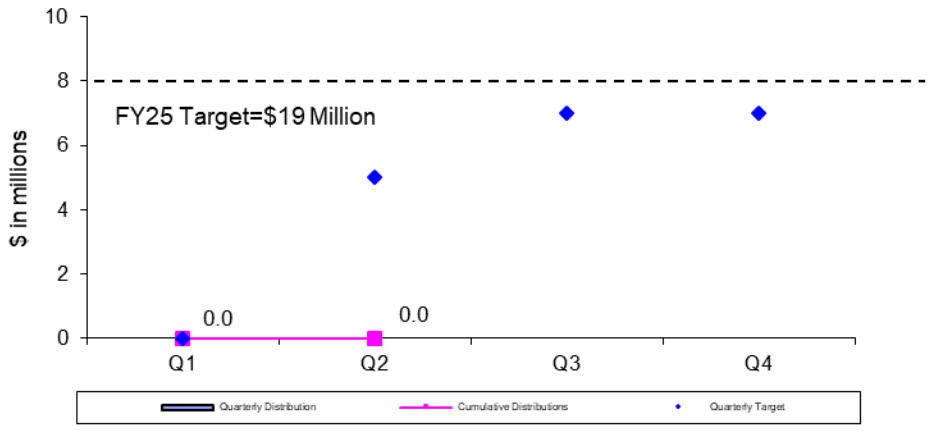
Lead Service Line Replacement Loan Program

By its vote on March 16, 2016, the Board approved an enhancement to the Local Water System Assistance Program to provide up to $100 million in 10-year zero-interest loans to communities solely for efforts to fully replace lead service lines. The Lead Service Line Replacement Loan Program is also referenced as the Lead Loan Program or LLP. Each community can develop its own program, tailored to their local circumstances. MWRA's goal in providing financial assistance to member communities is to improve local water systems so that the high quality water MWRA delivers can make it all the way to the consumer's tap. The presence of a lead service line connecting a home to the main in the street can lead to elevated lead levels in tap water, especially if that water sits stagnant for an extended period. MWRA's stable water quality and effective corrosion control treatment reduce the risk that a lead service line will cause elevated lead levels, and measured lead levels in high risk homes have decreased by 90 percent since corrosion control was brought on-line in 1996. However, the risk of elevated levels remains as long as lead service lines are in use. From the inception of the program through FY24, 46 loans have been made to 17 communities totaling $43.8 million dollars. No lead loans were made in the first two quarters of FY25.

Summary of Lead Loans:

Quincy in FY24	$1.50 Million	Somerville in FY22	$1.60 Million	Everett in FY20	$1.0 Million
Winthrop in FY24	$0.98 Million	Revere in FY22	$1.30 Million	Somerville in FY20	$0.90 Million
Chelsea in FY24	$0.30 Million	Chelsea in FY22	$0.30 Million	Chelsea in FY20	$0.30 Million
Melrose in FY24	$1.04 Million	Watertown in FY21	$0.60 Million	Marlborough in FY19	$1.0 Million
Lexington in FY24	$3.88 Million	Marlborough in FY21	$2.0 Million	Winthrop in FY19	$0.50 Million
Watertown in FY24	$0.30 Million	Everett in FY21	$1.50 Million	Chelsea in FY19	$0.10 Million
Malden in FY24	$0.50 Million	Boston in FY21	$2.60 Million	Everett in FY19	$1.0 Million
Chelsea in FY23	$0.50 Million	Winthrop in FY21	$0.80 Million	Needham in FY18	$1.0 Million
Watertown in FY23	$0.30 Million	Chelsea in FY21	$0.30 Million	Winchester in FY18	$0.50 Million
Winthrop in FY23	$0.70 Million	Winchester in FY21	$0.60 Million	Revere in FY18	$0.20 Million
Reading in FY23	$1.50 Million	Everett in FY20	$0.50 Million	Winthrop in FY18	$0.30 Million
Watertown in FY23	$0.30 Million	Marlborough in FY20	$1.0 Million	Marlborough in FY18	$1.0 Million
Winchester in FY23	$0.60 Million	Winchester in FY20	$0.60 Million	Newton in FY17	$4.0 Million
Everett in FY22	$1.5 Million	Winthrop in FY20	$0.70 Million	Quincy in FY17	$1.5 Million
Boston in FY22	$0.90 Million	Weston in FY20	$0.20 Million	Winchester in FY17	$0.50 Million
Winthrop in FY22	$0.80 Million			**TOTAL**	**$43.80 Million**

FY25 Quarterly Distributions of Lead Service Line Replacement Loans

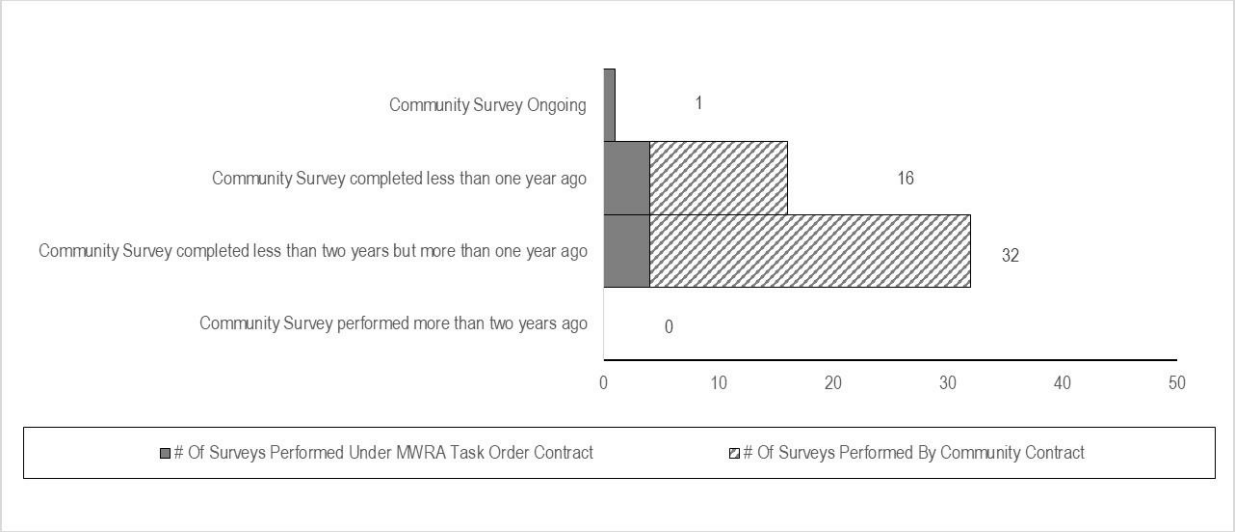


Community Support Programs

2nd Quarter – FY25

Community Water System Leak Detection

To ensure member water communities identify and repair leaks in locally-owned distribution systems, MWRA developed leak detection regulations that went into effect in July 1991. Communities purchasing water from MWRA are required to complete a leak detection survey of their entire distribution system at least once every two years. Communities can accomplish the survey using their own contractors or municipal crews, or alternatively, using MWRA's task order leak detection contract. MWRA's task order contract provides leak detection services at a reasonable cost that has been competitively procured (3-year, low-bid contract) taking advantage of the large volume of work anticipated throughout the regional system. Leak detection services performed under the task order contract are paid for by MWRA and the costs are billed to the community the following year. During the 2nd Quarter of FY25, all member water communities were in compliance with MWRA's Leak Detection Regulation.



Community Water Conservation Outreach

MWRA's Community Water Conservation Program helps to maintain average water demand below the regional water system's safe yield of 300 mgd. Current 5-year average water demand is less than 200 mgd. The local Water Conservation Program includes distribution of water conservation education brochures (indoor - outdoor bill-stuffers) and low-flow water fixtures and related materials (shower heads, faucet aerators, and toilet leak detection dye tabs), all at no cost to member communities or individual customers. The Program's annual budget is $25,000 for printing and purchase of materials. Annual distribution targets and totals are provided in the table below. Distributions of water conservation materials are made based on requests from member communities and individual customers.

	Annual Target	Q1	Q2	Q3	Q4	Annual Total
Educational Brochures	100,000	16,504	6,456			**22,960**
Low-Flow Fixtures (showerheads and faucet aerators)	10,000	1,352	700			**2,052**
Toilet Leak Detection Dye Tablets	------	2,517	524			**3,041**

BUSINESS SERVICES

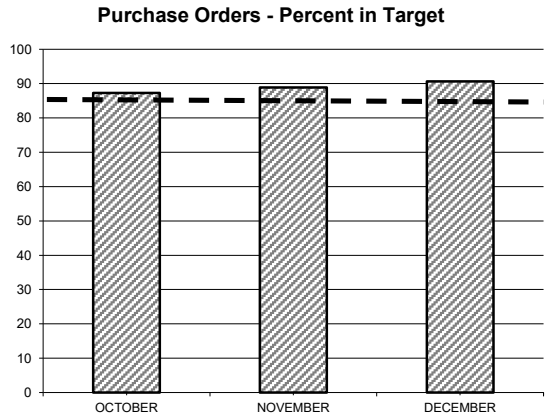
Procurement: Purchasing and Contracts

2nd Quarter - FY25

Background: Goal is to process 85% of Purchase Orders and 80% of Contracts within Target timeframes.

Highlights: Processed 95% of purchase orders within target; Average Processing Time was 4.37 days vs. 4.23 days in Qtr 2 of FY24. Processed 73% (11 of 15) of contracts within target timeframes; Average Processing Time was 106 days vs. 172 days in Qtr 2 of FY24.

Purchasing



	No.	TARGET	PERCENT IN TARGET
$0 - $500	506	3 DAYS	89.9%
$500 - $2K	640	7 DAYS	97.6%
$2K - $5K	340	10 DAYS	98.5%
$5K - $10K	202	25 DAYS	99.0%
$10K - $25K	51	30 DAYS	94.1%
$25K - $50K	27	60 DAYS	85.1%
Over $50K	28	90 DAYS	92.8%

The Purchasing Unit processed 1794 purchase orders, 130 more than the 1664 processed in Qtr 2 of FY24 for a total value of $14,829,414 versus a dollar value of $7,668,533 in Qtr 2 of FY24.

The purchase order processing target was met for all categories.

Contracts, Change Orders and Amendments

Procurement executed fifteen contracts with a value of $152,446,690 and seven amendments with a value of $3,904,427. Four contracts were not executed within the target timeframes. One contract was delayed due to additional time needed in the procurement process to monitor the electricity market over time. After an initial qualifying stage, MWRA received interim pricing from qualified suppliers for three months until the market was favorable, then received formal bids. Another contract was delayed due to the need to delay the execution of the contract for approximately 60 days for the award of a grant from the Dept. of Energy Resources. The grant needed to be awarded before the contract could be signed. A third contract was delayed due to additional procurement requirements necessary for Insurance services. Insurance for all categories of coverage was obtained timely and according to schedule. The final contract was delayed due to the nature, magnitude and complexity of the tunnel redundancy project, a two-step procurement process was utilized, and an extensive scope review with representatives from various departments was conducted. Upon receipt of proposals, interviews were also held with the 3 proposed design teams to better understand their proposal.

Staff reviewed 29 proposed change orders and 23 draft change orders.
Sixteen change orders were executed during the period. The dollar value of all non-credit change orders during Qtr 2 was $3,548,899 and the value of credit change orders was ($65,431).

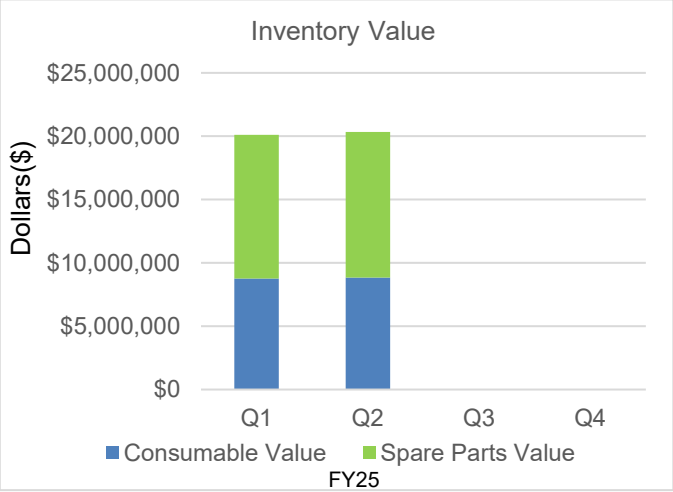
Materials Management

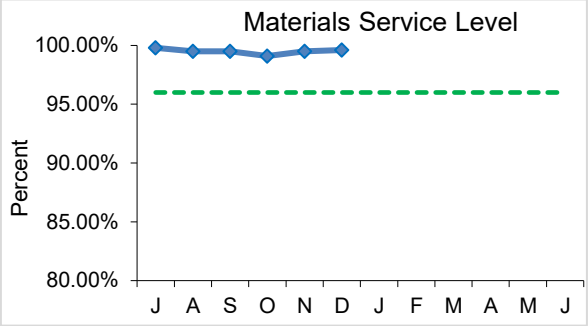
2nd Quarter - FY25

The Materials Management department manages the three regional warehouses (Chelsea, Deer Island and Southboro). This includes the replenishment and receipt of both consumable and spare parts items to meet the needs of the MWRA. Additionally, MWRA tools and equipment are safeguarded through the Property Pass unit within the Materials Management department.

Inventory goals focus on:

- Maintaining optimum levels of consumables inventory (office supplies, electrical, safety, etc.) and spare parts inventory (critical items such as actuators, motors, muffin monsters, etc.) necessary to support MWRA Operations and Maintenance. Typically spare parts carry longer lead times.
- Adding new items to inventory to meet changing business needs.
- Reviewing consumables and spare parts for obsolescence.
- Managing and controlling valuable equipment and tools via the Property Pass Program.

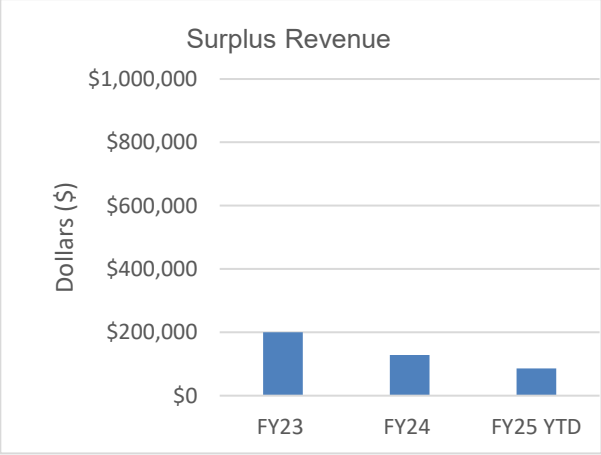


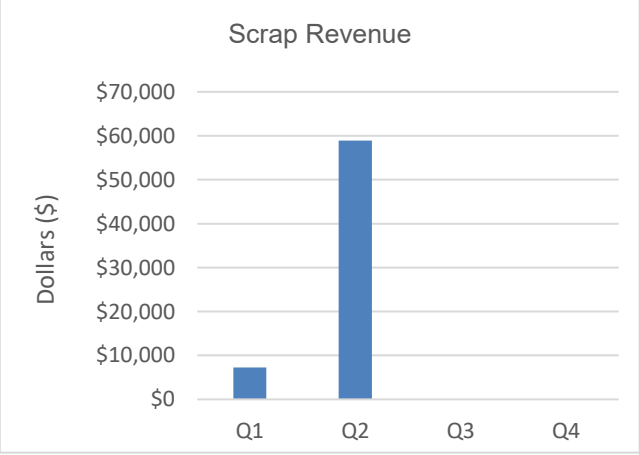


The service level is the percentage of stock requests filled. The goal is to maintain a service level of 96%. Staff issued 7,746 (99.5%) of the 7,710 items requested in Q2 from the inventory locations for a total dollar value of $1,931,431

Property Pass Program:

- Conducts audits of tools and equipment to ensure the safeguarding of MWRA assets.
- Manages the disposition and sale of surplus tools and equipment through GovDeals, an online auction site.
- Manages the surplusing of scrap metals and materials generating revenue to the MWRA staff.





MIS Program

2nd Quarter – FY25

Project Updates

Infrastructure & Security

SD-WAN: Implementation in Needham and Belchertown complete. Awaiting secondary circuit installation on DITP.

Distributed Antenna System: Staff continue to work with vendors to troubleshoot signal issues. A follow up meeting is scheduled with both CSquare and Verizon in January.

VMWare WorkspaceONE: Migration of end points to WorkspaceONE is now complete.

M365 Migration: Synchronization of Active Directory to Entra is complete. Additional licenses needed for Microsoft FastTrack engagement have been received. Online training resources shared with MIS staff and a meeting was held with the Tunnel department to outline migration steps for their SharePoint site.

Server/Database Version Upgrades: Staff continue to meet monthly to review and identify migration paths of infrastructure to maintain support.

Live Stream Webcam: Awaiting installation schedule from vendor.

AWIA: DMZ server logging implemented. Monthly Web Application Scanning was added to CISA vulnerability assessments. Completed CISA National Cybersecurity Review self assessment. Staff are reviewing all assessments in preparation for re-certification.

CUCM VOIP Upgrade: Professional services being procured to assist with the upgrade. Anticipated project kick off in February.

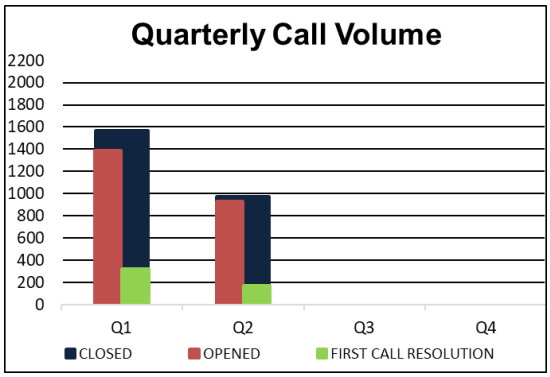
Library, Record Center, & Training

Library: Completed 11 research requests and provided access to 30 new books/reports, 14 articles, and 2 new standards (outside subscriptions). The MWRA Library Portal supported 735 user searches (significantly less than last quarter but still greater than any quarter in FY2024) on topics including construction contracts, odor control, and reservoir history.

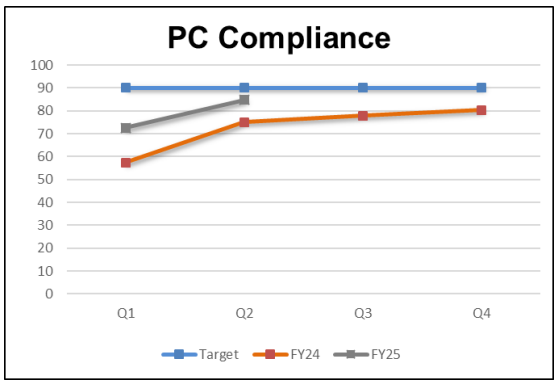
Record Center (RC): Added 24 new boxes to the RC and handled 242 total boxes. The RC Manager attended 2 virtual RCB meetings, worked with multiple departments on Dispositioning records, and held 14 class sessions for staff on Record Management training. The RC performed database/physical box searches for various departments. Research included Engineering documents, staff summaries, personnel files, Law requests, invoices, and various construction contracts/projects.

MIS Training: In Q2, 20 online IT lessons were taken (30 YTD), by 28 employees (46 YTD).

Numbers & Statistics



Summary of calls managed by the Helpline.



Percentage of user endpoints that are in compliance with system updates. These numbers are a direct reflection of accessibility to these systems. Daytime patching began in January for mobile devices.

Applications

ECM/Electronic Document Management: Vendor completed build and Internal testing has begun for all three Staff Summary types (Purchasing, Professional and Construction/Non-Professional). MIS finalized the business requirements for the Contract Requisition process and submitted them to the vendor to begin work. Continued to gather requirements for the Policy workflow and working to migrate the remaining InfoStar data into ECM in the hopes of formally retiring InfoStar at the end of this project.

Infor Upgrade/Migration: MIS development staff continued to work through the project tasks, developing the reports, integrations and configurations required by MWRA end users. Systems Integration Testing continued thru December and is progressing in a satisfactory manner. MIS also continued to perform the analysis and development related to integrating the MWRA Custom applications and Maximo Asset Management application with the cloud version of Infor Lawson (CloudSuite). MIS, end users and the project vendor (RPI) also identified requested functionality not in the original project scope so that a decision to allocate resources to their development can be made by management.

Maximo/Lawson Interface: MIS worked with the vendor (IBM) and end users to resolve issues related to the implementation of the Maximo-Lawson interfaces and Maximo Upgrade projects and will continue to work with them to resolve any remaining open issues. MIS and the Infor CloudSuite project vendor (RPI) have also continued developing the integrations needed with Maximo when Lawson is migrated to the SaaS environment (CloudSuite).

PI ProcessBook Upgrade (dataParc): After reviewing product demonstrations, Operations selected dataParc to replace the obsolete ProcessBook application. The procurement was completed in October, the project kick off was held and the infrastructural requirements and design are now being established.

Debt Management Application upgrade: Finance has selected the DebtBook application to replace the obsolete Munease application to manage MWRA bond issues. Procurement was completed in September and implementation work is now occurring with the Finance team and vendor (DebtBook).

Legal Matters

2nd Quarter - FY25

PROJECT ASSISTANCE

Real Estate, Contract, Energy, Environmental, and Other Support:

- **8(m) Permits and License Agreements**: Reviewed seventy-eight (78) 8(m) permits, including any related MEPA Section 61 Findings. Drafted and finalized third amendment to MWRA and Massachusetts Institute of Technology License Agreement. Reviewed Direct Connection Permit 24-10-205DC - proposed 8-inch PVC gravity sanitary line to connect into MWRA System at Station 113+59 of MWRA Section 52 in Arlington.

- **Real Property**: Revised MOA between MWRA, the City of Lynn, and a developer with respect to certain easements and underground stormwater storage units on a parcel of land in Lynn where easements are needed for Contract 7454 - Section 56 Water Pipeline Replacement Project. Revised eminent domain orders of takings, revised grant of easement documents, and drafted staff summaries related to property rights, which are needed for Contract 7454 - Section 56 Water Pipeline Replacement Project. Revised grant of easements document from MBTA to MWRA related to MWRA Contract No. 7722 – Northern Extra Sections 45 and 63 in Lexington, MA. Reviewed draft easement plans for Contract 7216, Interceptor Renewal No. 7 Malden-Melrose (Sections 41/42/49/54/65). Reviewed easement areas needed for MWRA Contract No. 6543 - WASM 3 CP-2 project in Waltham. Reviewed and finalized package for Quabbin Watershed WPR Acquisition W-001258 in Barre, MA and verified acreage, parcel references and corrections to various instruments in preparation for closing and recording. Reviewed various property interests for Metropolitan Water Tunnel Program and prepared summaries and property maps. Reviewed lease and supplementary documents for Core Storage Shed and drafted correspondence. Assisted staff concerning parcel of land in Framingham under MWRA's care, custody, and control. Drafted template for notices of offer for Contract 7216, Interceptor Renewal No. 7 Malden-Melrose (Sections 41/42/49/54/65). Revised confirmatory release deed for property in Chelsea.

- **Environmental**: Assisted environmental program in securing a Wetlands Protection Act Order of Conditions for the Section 56 Water Pipeline Replacement Project. Reviewed EPA *Designation of Certain Stormwater Discharges in the Commonwealth of Massachusetts*; and *Draft Permit under the National Pollutant Discharge Elimination System of the Clean Water Act.* Reviewed and revised draft Water Supply Continuation Agreements with nine (9) municipalities including Cambridge, Canton, Framingham, Lynn Water and Sewer, Needham, Northborough, Peabody, Weston, and Winchester. Assisted with preparation of the Supplemental Report and related filings in the Boston Harbor Case.

- **Energy**: Assisted energy program and finalized contract terms regarding electricity supply for MWRA profile accounts. Assisted Internal Audit with review of the anticipated capacity and support filing for calendar year 2025. Prepared necessary filings and correspondence concerning the Harbor Electric Energy Corporation proposed 2025 Capacity and Support Charge filing, D.P.U. 24-175. Assisted with responses to requests for Tax Code Section 179D allocations regarding certain design work at MWRA facilities.

- **Miscellaneous**: Reviewed documents for submission to Records Conservation Board for disposition. Updated information for records management training materials. Drafting verification

form for departmental use in records management review. Reviewed terms of construction contract and various documents concerning dispute and provided assistance to staff. Finalized revisions to agreement and exhibits for Turkey Hill permit renewal. Revised watershed land acquisition program memorandum. Drafted first amendments to the Memoranda of Understanding with the City of Quincy and the Town of Winthrop. Reviewed records management documents; preparing procedures and verification form for departmental use in records management review. Reviewed correspondence, construction contract and various documents concerning dispute. Reviewed draft regulations for Open Space Act and discussed provisions with staff for anticipated MWTP property acquisitions. Drafted letter for title exam services. Reviewed correspondence, construction contract and prepared documents for dispute resolution.

- **Public Records Requests:** During the 2nd Quarter FY 2025, MWRA received and responded to one hundred sixty-two (162) public records requests.

LITIGATION/CLAIMS

- **New Lawsuits:**

There are six new cases in 2nd Quarter FY 2025.

IPC Lydon, LLC v. MWRA; Suffolk Superior Court C.A. No. 2484CV02946
This action involves claims for alleged extra time and compensation by the Plaintiff contractor IPC Lydon, LLC ("IPCL") related to MWRA Contract 7704, Clinton Influent Screw Pumps, Clinton Wastewater Treatment Plant. IPCL alleges Breach of Contract, Breach of Implied Covenant of Good Faith and Fair Dealing seeks an order compelling the MWRA to issue a decision on IPCL's outstanding claim. IPCL seeks damages in the amount of $448,305.53.

Gritstone Bio, LLC; District of Delaware, Chapter 11 Case No. 24-12305 (KBO)
This is a bankruptcy action in which MWRA received a Ch. 11 Notice of Proposed Sale on Nov 26th. The debtor is a TRAC permittee. The Deadline to Object to the Debtor's Request to Approve the Sale of Purchased Assets free and clear of all encumbrances was December 4, 2024.

Perry Fiberglass Products, Inc. v. MWRA; Suffolk Superior Court C.A. No. 2484CV02841
Perry Fiberglass, a subcontractor to General Contractor Walsh Construction, filed a lawsuit against the Authority on October 29, 2024 alleging that it is due additional compensation for the increased cost of materials it provided in connection with Contract 7548 – Nut Island Headworks Odor Control and HVAC Improvements. Perry Fiberglass alleges breach of contract and seeks damages of $1,721,440.00.

KP Advisory Group Brady ABC; Brady Enterprises, Inc.
On October 17, 2024, MWRA received Brady Enterprises, Inc.'s Assignment for the Benefit of Creditors. After investigation, MWRA determined that it has no claim against this debtor.

Massachusetts Water Resources Authority v. Massachusetts Department of Environmental Protection, Suffolk Sup. Ct. No. 2484CV02837
On October 28, 2024, the Authority filed a certiorari action in Superior Court to challenge the discharge limit set forth in DEP's Final Determination to Adopt a Water Quality Standards Variance for Combined Sewer Overflow Discharges to Alewife Brook/Upper Mystic River Basin and Final Determination to Adopt a Water Quality Standards Variance for Combined Sewer

Overflow Discharges to Lower Charles River/Charles Basin with respect to certain CSO outfalls. Related are *In the Matters of Massachusetts Water Resources Authority Challenge to Certain Conditions in Alewife Brook/Upper Mystic River Basin and Lower Charles River/Charles River Basin Variances*, OADR Nos. 2024-029 and 2024-030 in which the Authority filed notices of claim for adjudicatory appeal and requests for adjudicatory hearing with DEP's Office of Appeal and Dispute Resolution.

Mozynski, Azurde, USBC- District of MA, Case No. 24-41210
On December 30, the Authority received a Notice of Chapter 13 Bankruptcy.

- **New Claims:**

  There was one new claim in 2nd Quarter FY 2025.

  Adrian Danemayer, MVA. Law Division received a Demand package on October 28, 2024 claiming alleged personal injuries and property damage arising out of a motor vehicle accident involving an MWRA vehicle and a bicycle near Storrow Drive on May 9, 2024. The claim was settled by MWRA paying $35,000 in exchange for a full release of all claims.

- **Significant Developments:**

  MWRA v. Baldwin Energy, LLC & Hanover Insurance Co.; Suffolk Superior Court C.A. No.2484CV01019-BLS2. The Court scheduled a Litigation Control Conference for February 11, 2025.

  Barletta Heavy Division, Inc. ("BHD") v. MWRA; Suffolk Superior Court C.A. No. 2484CV02185 BLS2. The Court scheduled a Litigation Control Conference for January 8, 2025.

  Perry Fiberglass Products, Inc. v. MWRA; Suffolk Superior Court C.A. No. 2484CV02841. On December 11, MWRA served a Motion Dismiss on Plaintiff, Perry Fiberglass. Perry's Opposition to MWRA's Motion to Dismiss is due on January 6, 2025.

  United States of America v. Metropolitan District Commission, et al., USDC No. 85-0489- RGS (Boston Harbor Case)
  On December 27, MWRA filed its Supplement to 2021 Final Combined Sewer Overflow Post Construction Monitoring Program and Performance Assessment Report.

- **Closed Cases**:

  KP Advisory Group Brady ABC; Brady Enterprises, Inc.
  On October 17, 2024, MWRA received Brady Enterprises, Inc.'s Assignment for the Benefit of Creditors. There is no MWRA claim.

  In re: Invivo Therapeutics Corp., et al.; District of Delaware, Case No. 24-10137 (MFW) This is a Chapter 11 bankruptcy matter. On July 26, 2024, MWRA received Notice of Entry of the Order approving disclosure statement. There is no MWRA claim.

- **Closed Claims:**

  There is one Closed Claim to report.

  Adrian Danemayer, MVA
  Law Division received a Demand package on October 28, 2024 claiming alleged personal injuries and property damage arising out of a motor vehicle accident involving an MWRA vehicle and a bicycle near Storrow Drive on May 9, 2024. This claim settled for $35,000 in November 2024.

- **Subpoenas:**

  During the 2nd Quarter of FY 2025, one new subpoena was received. There are two pending subpoenas.

SUMMARY OF PENDING LITIGATION MATTERS

TYPE OF CASE/MATTER	As of Dec 2024
Construction/Contract/Bid Protest	5
Tort/Labor/Employment	1
Environmental/Regulatory/Other	3
Eminent Domain/Real Estate	0
TOTAL	**9**
Other Litigation matters (restraining orders, etc.) - Class Action suits	5
TOTAL – all pending lawsuits	**14**
Claims not in suit	0
Bankruptcy	7
Wage Garnishment	1
TRAC/Adjudicatory Appeals	2
Subpoenas	2
TOTAL – ALL LITIGATION MATTERS	**26**

TRAC/MISC. ADMIN. APPEALS

- **Appeals Pending**:

  There are two pending TRAC appeals in 2nd Quarter FY 2025:

  1058 Beacon Street, Newton, MA; MWRA Docket No. 22-01

  Tri-Town Regional Water District; MWRA Docket No. 23-03

Settlement by Agreement of Parties	There was one Settlement by Agreement of the Parties during the 2nd Quarter FY 2025. Courtyard Marriott Boston Downtown; MWRA Docket No. 23-04.
Stipulation of Dismissal	No Stipulations of Dismissal in 2nd Quarter FY 2025.
Notice of Dismissal Fine paid in full	No Notices of Dismissal, Fines Paid in Full in 2nd t Quarter FY 2025.
Tentative	No Decisions were issued in 2nd Quarter FY 2025.
Final Decisions	No Final Decisions were issued in 2nd Quarter FY 2025.

LABOR AND EMPLOYMENT

New Matters

- An employee filed a charge of discrimination based upon age and race at the Equal Employment Opportunities Commission.
- A union filed a request for arbitration of a grievance asserting that MWRA's issuance of a 10 day suspension to an employee violated the collective bargaining agreement.

Significant Developments

- The MCAD issued a finding of lack of probable cause and dismissed an employee's charge of discrimination based upon sexual orientation, gender identity and retaliation.

Matters Concluded

- A union withdrew a grievance and request for arbitration in which the Union alleged that the MWRA did not offer an employee overtime in violation of the collective bargaining agreement.

- The Department of Unemployment Assistance modified it prior determination after hearing to reflect that a former employee is eligible for unemployment benefits thereby ruling against the MWRA and awarding the former employee unemployment benefits.

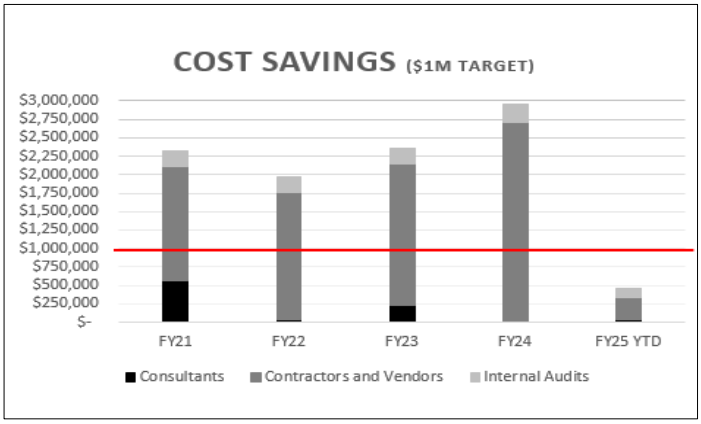
INTERNAL AUDIT AND CONTRACT AUDIT ACTIVITIES

2nd Quarter - FY25

Purpose

Internal Audit evaluates the effectiveness of internal controls and procedures and monitors the quality, efficiency and integrity of the Authority's operating and capital programs. Through our audits and reviews, we assess whether internal controls are functioning as intended and that only reasonable, allowable and allocable costs are paid to consultants, contractors and vendors.

Cost Savings	FY25 YTD
Consultants	$33,798
Contractors and Vendors	$303,514
Internal Audits	$122,972
Total	$460,284



Highlights

During the 2nd quarter FY25, Internal Audit (IA) completed a consultative analysis of telework compliance. In addition, an audit of MWRA Inflow/Infiltration (I/I) Local Financial Assistance Program is progressing.

In addition, IA completed 1 incurred cost audit and 2 labor burden reviews. There are 6 incurred cost audits, 1 labor burden review, and 2 consultant preliminary review in process. IA also issued 30 indirect cost rate letters to consultants following a review of their consultant disclosure statements.

A review of Needham Core Shed lease for 2023 is being finalized.

Status of Recommendations

During FY25, 6 recommendations were closed.

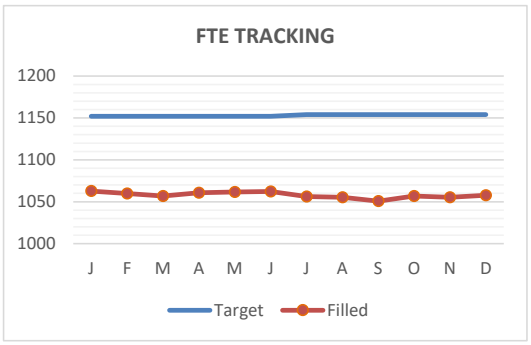
IA follows-up on open recommendations on a continuous basis. All open recommendations have target dates for implementation and are generally targeted to be closed within 12 months of the audit report issue date.

Report Title (issue date)	Audit Recommendations		
	Open	Closed	Total
Accounts Payable Process (3/14/2024)	2	4	6
MWRA Payroll (3/19/2024)	1	2	3
MIS Asset Management (6/28/2024)	2	5	7
Total Recommendations	**5**	**11**	**16**

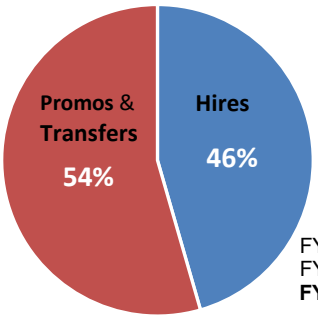
OTHER MANAGEMENT

Workforce Management

2nd Quarter - FY25



Position Filled by Hires/Promos & Transfer for YTD



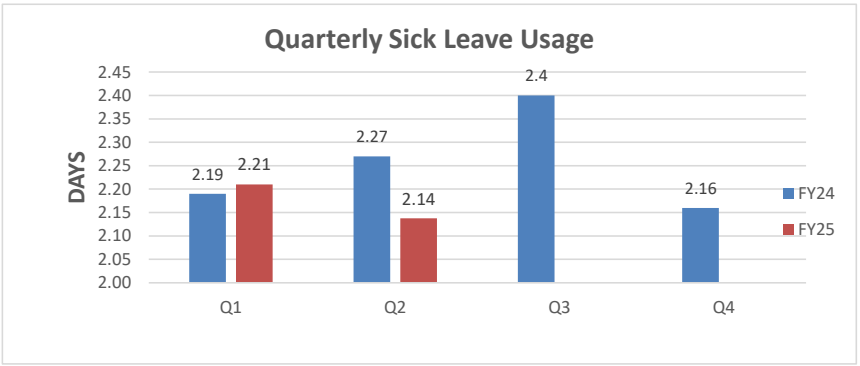
	Pr/Trns	Hires	Total
FY23	133 (59%)	91(41%)	224
FY24	117 (56%)	93 (44%)	210
FY25	55 (54%)	46 (46%)	101

FY25 Budget for FTE's = 1154
FTE's as of Dec = 1057.7
Tunnel Redundancy as of Dec 2024 = 8

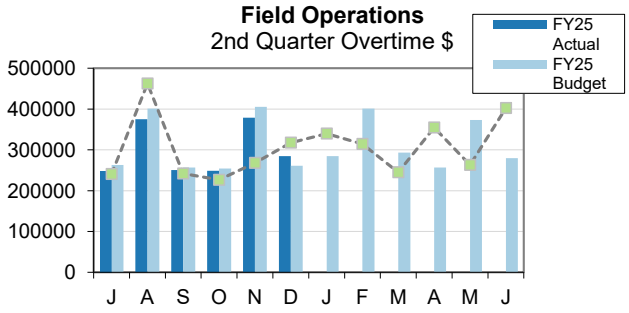
POSITION CHANGE by FY

FY	HIRES	PROMOS	TRANSFER	RETIRE	RESIGN	DISMISS	DECEASED
FY21	64	66	15	58	15	2	2
FY22	65	108	30	82	45	2	3
FY23	91	118	15	46	31	5	5
FY24	93	97	20	48	30	5	4
FY25*	46	45	10	39	12	3	1

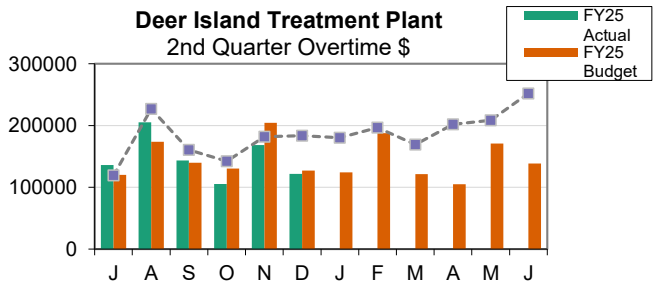
*** as of 12/31/2024**



Average quarterly sick leave for the 2nd Quarter of FY25 has decreased compared to the 2nd Quarter of FY24 (2.14 from 2.27)



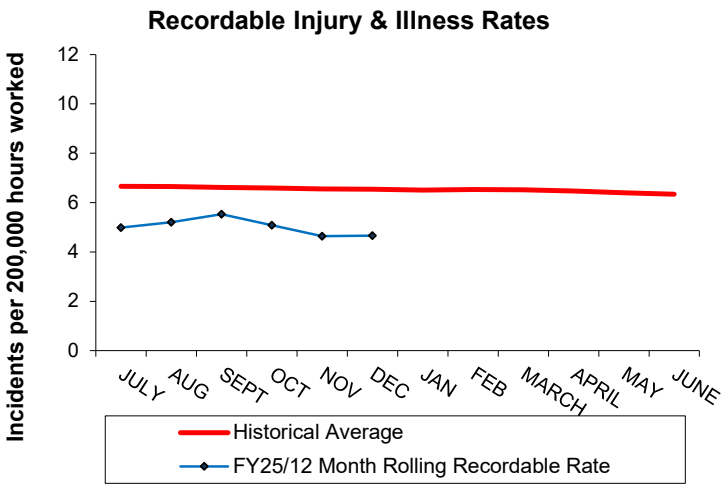
Total Overtime for Field Operations for Second Quarter (Q2) (FY25) was $912k, which is $8.7k or 1% under budget. Lower than anticipated rain events contributed to lower spending in Q2. Rain events totaled $99k, or 21% of Emergency for FOD in Q2.Total Planned Scheduled Maintenance was $464k, which was comprised of Work Completion OT of $37k; Planned Off Hours OT of $153k. Operator Coverage OT for Q2 was $194k; Community Assistance, i.e., community water fountain support and as-needed cities and towns emergency

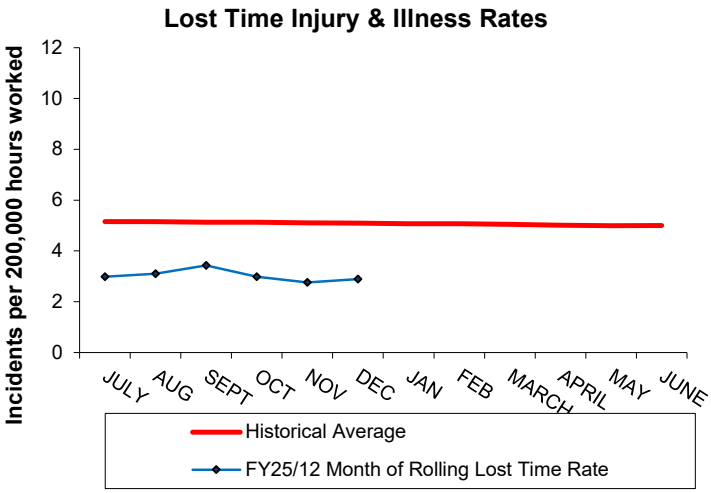


Total overtime for Deer Island for the second quarter (Q2) (FY25) was $395k, which is ($67k) or (14.4%) under budget - due to **($44k) Shift Coverage** - driven by ($41k) Thermal & ($3k) Wastewater Ops. **($25k) Storm Coverage**.
Offset by **$2.1k Planned/Unplanned**.

Workplace Safety

2nd Quarter - FY25





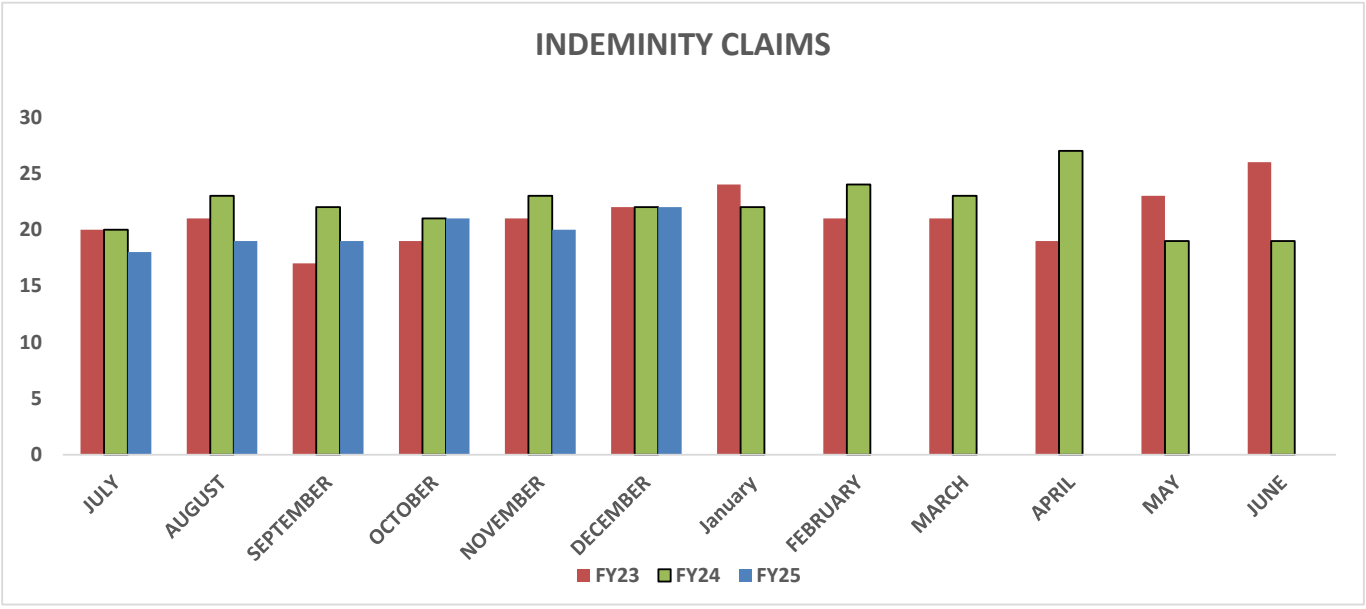
1 “Recordable" incidents are all work-related injuries and illnesses which result in death, loss of consciousness, restriction of work or motion, transfer to another job, or require medical treatment beyond first aid. Each month this rate is calculated using the previous 12 months of injury data.

2 "Lost-time" incidents, a subset of the recordable incidents, are only those incidents resulting in any days away from work, days of restricted work activity or both - beyond the first day of injury or onset of illness. Each month this rate is calculated using the previous 12 months of injury data.

3 The “Historical Average” is computed using the actual MWRA monthly incident rates for FY04 through FY24

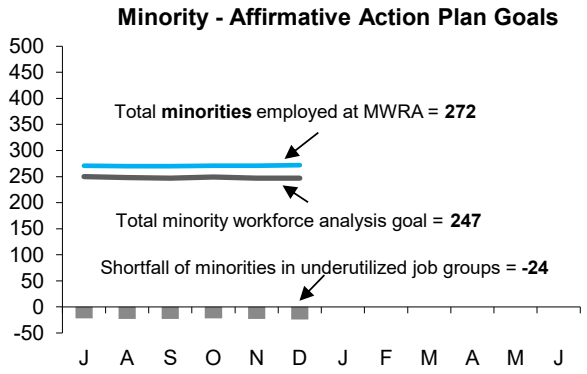
WORKERS COMPENSATION HIGHLIGHTS

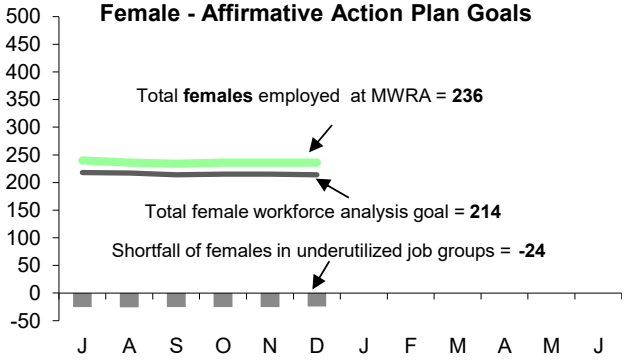
	2nd Quarter Info as of 12.31.24		
	New	Closed	Open Claims
Lost Time	3	2	27
Medical Only	3	0	107
Report Only	3	2	
	QYTD		FYTD
Regular Duty Returns	5		5
Light Duty Returns	1		1
Indeminity payments as of December 2024 included in open claims listed			22



MWRA Job Group Representation

2nd Quarter - FY25





Highlights:

At the end of Q2 FY25, 5 job groups or a total of 24 positions are underutilized by minorities as compared to 6 job groups for a total of 28 positions at the end of Q2 FY24; for females 8 job groups or a total of 24 positions are underutilized by females as compared to 6 job groups or a total of 26 positions at the end of Q2 FY24. During Q2, 7minorities and 8 females were hired. During this same period 5 minorities and 6 females were terminated.

Underutilized Job Groups - Workforce Representation

Job Group	Employees as of 12/31/2024	Minorities as of 12/31/2024	Achievement Level	Minority Over or Underutilized	Females As of 12/31/2024	Achievement Level	Female Over or Underutilized
Administrator A	23	4	3	1	10	6	4
Administrator B	25	4	6	-2	7	10	-3
Clerical A	21	9	4	5	16	15	1
Clerical B	23	6	3	3	4	6	-2
Engineer A	81	16	20	-4	18	22	-4
Engineer B	58	20	14	6	20	11	9
Craft A	114	19	24	-5	0	4	-4
Craft B	125	25	25	0	0	5	-5
Laborer	58	14	15	-1	6	2	4
Management A	86	19	19	0	31	25	6
Management B	35	10	7	3	6	8	-2
Operator A	63	4	16	-12	4	7	-3
Operator B	69	24	11	13	4	2	2
Professional A	28	8	7	1	14	13	1
Professional B	168	54	50	4	71	58	13
Para Professional	43	16	11	5	18	12	6
Technical A	47	18	11	7	6	7	-1
Technical B	4	2	1	1	1	1	0
Total	**1071**	**272**	**247**	**49/-24**	**236**	**214**	**46/-24**

AACU Candidate Referrals for Underutilized Positions

Job Group	Job Title	# of Vacancies	Requisition Internal/ External	Promotions/ Transfers	AACU Referral External	Position Status = New Hire/Promotion
Administrator B	Director WW Operations & Maint	1	Int./Ext.	1	0	PROMO = WM
Clerical B	Records Coordinator, TRAC	1	Ext.	0	0	NH = WF
Engineer A	Sr Monitoring & Control Eng	1	Ext.	0	0	NH = WM
Engineer A	Project Engineer (Ops Eng)	1	Ext.	0	0	NH = WM
Engineer A	Program Mgr, Structural Eng	1	Int./Ext.	1	0	PROMO = WF
Craft A	Chief Pipeline Maintenance	1	Int.	1	0	PROMO = WM
Craft A	Unit Supervisor-HVAC	1	Int.	1	0	PROMO = AM
Craft A	M & O Specialist - Wastewater	1	Int./Ext.	1	0	PROMO = WM
Craft A	WDS General Foreman	1	Int.	1	0	PROMO = WM
Craft A	WSS Foreman	1	Int.	1	0	PROMO = HM
Craft B	Med Volt Electrical Specialist	1	Int./Ext.	1	0	PROMO = WM
Craft B	Facilities Specialist	4	Int./Ext.	2	2	NH = 2WM, PROMO= 1WM, 1BM
Laborers	OMC Laborer	2	Ext.	0	0	NH = 2WM
Laborers	Building/Grounds Worker	4	Ext.	0	0	NH = 2WM, 1HM, 1WF
Management B	Project Manager	1	Int./Ext.	1	0	PROMO= WF
Operator A	Transmission & Treatment Opera	1	Int./Ext.	0	0	NH= WM
Technical A	Super Water/WW Meter Maint	1	Int./Ext.	1	0	PROMO= WM
Technical A	Technical Superv, Meter Maint	1	Int.	1	0	PROMO= BM

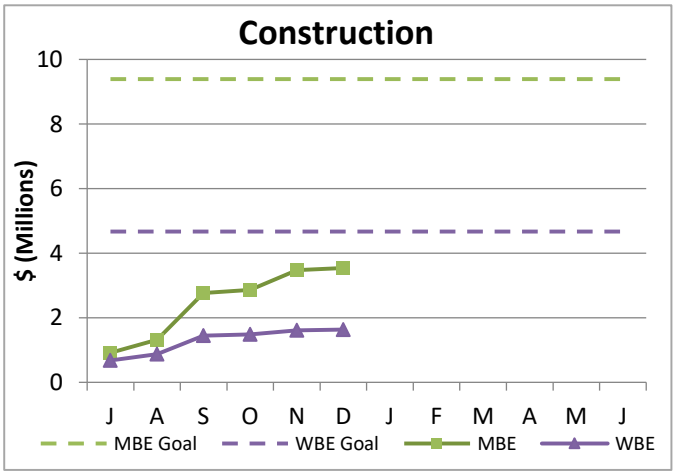
Minority/Women-Owned Business Enterprise (MBE/WBE) Expenditures

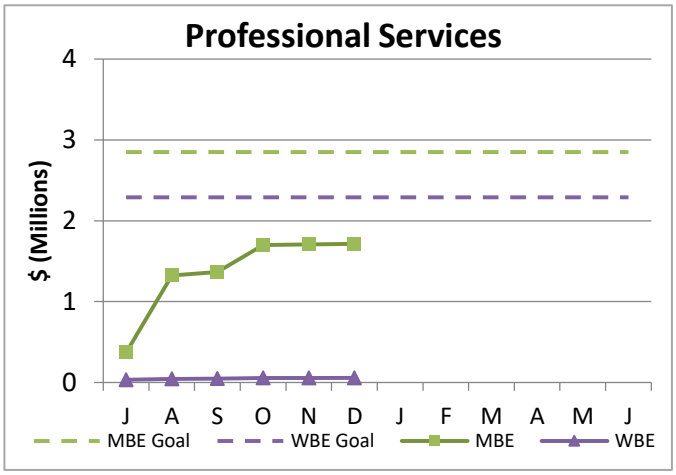
2nd Quarter – FY25

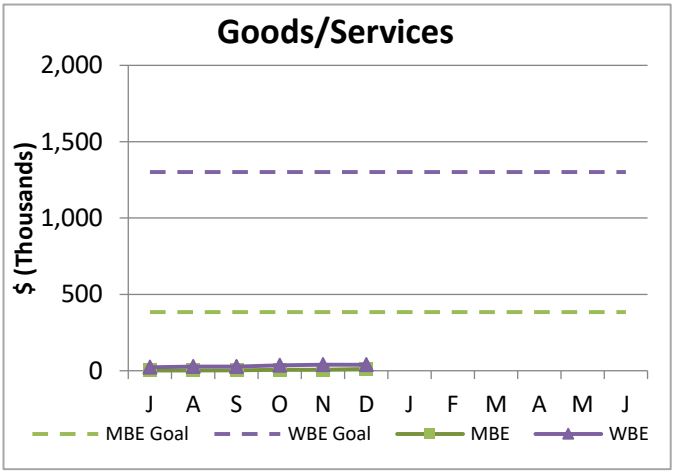
MBE/WBE targets are set based on annual MWRA expenditure forecasts for construction, professional services, and goods/services. Percentage goals are applied to 85% of the total construction and 75% of the total professional services projected spending for the year. Certain projects that do not meet the established monetary thresholds and/or have limited opportunities for subcontracting have been excluded as they have no MBE/WBE spending goals.

Construction: 7.24% MBE / 3.6% WBE Professional Services: 7.18% MBE / 5.77% WBE

Spending goals for Goods and Services are based on the average spending of MBE/WBE dollars during the previous 5 years. MBE/WBE percentage goals are established according to an internal 2002 Availability Analysis and MassDEP's annual Availability Analysis. Consistent with this guidance, Non-Professional Services are included in Goods/Services category.







MBE					WBE			
FY25 YTD		FY24 YTD			FY25 YTD		FY24 YTD	
Amount	% of goal	Amount	% of goal		Amount	% of goal	Amount	% of goal
$3,540,101	37.7%	$1,701,938	22.1%	Const.	$1,633,212	35.0%	$3,086,463	80.5%
$1,714,343	60.2%	$1,366,350	29.7%	Prof. Svcs.	$56,899	2.5%	$201,066	5.4%
$11,619	2.5%	$123,536	30.3%	Goods/Svcs.	$39,040	3.0%	$1,031,507	75.7%
$5,266,063	41.7%	$3,191,824	25.1%	**Totals**	$1,729,151	20.9%	$4,319,036	48.6%

MWRA FY25 CEB Expenses

2nd Quarter – FY25

As of December 2024, total expenses are $407.5 million, $12.3 million or 2.9% lower than budget, and total revenue is $452.4 million, $1.9 million or 0.4% over the estimate, for a net variance of $14.2 million.

Expenses –

Direct Expenses are $146.0 million, $10.0 million or 6.5% under budget.

- **Wages & Salaries** were $9.4 million under budget or 14.5%. Regular pay is $9.5 million under budget, largely due to lower head count. YTD through December, the average Full Time Equivalent (FTE) positions were 1,066 or 102 below the 1,168 FTE's budgeted.
- **Ongoing Maintenance** expense was $2.6 million over budget or 11.5% due to higher than anticipated project spending as Plant & Machine Services were $3.0 million over budget primarily due to greater than anticipated work for Deer Island Treatment Plant annual boiler maintenance and earlier than anticipated hydro wicket gate replacement work for the Deer Island Treatment Plant (DITP) Thermal Plant, Hydro Power and Wind Turbine maintenance contract, and also Deer Island Treatment Plant centrifuge maintenance.
- **Other Services** expense was $1.2 million under budget or 7.1% primarily due to lower sludge palletization and lower grit screening expense of $489k and $331k, respectively, both due to lower quantities.
- **Professional Services** expense was $912k under budget or 16.6% primarily due to lower than anticipated spending on Other Professional Services and Engineering, which are under budget by $649k and $158k, respectively. Lab Testing & Analysis was also under budget by $163k.
- **Fringe Benefits** expenses are $799k under budget or 5.8%, primarily due to lower spending for Health Insurance of $743k, reflecting the lower than budgeted head count. As of December FTEs were 102 below budget.
- **Utilities** are under budget by $487k or 3.3%, driven by lower electricity spending of $659k. This underspending is due to lower T&D pricing from Eversource at DITP of $501k and reduced demand in Field Operations of $226k due to fewer wet weather events. Spending on water was $200k over budget primarily due to greater than projected water usage at DITP through December.

Indirect Expenses were $40.1 million, $562k or 1.4% below budget driven by lower than budgeted Watershed Reimbursement of $733k.

Capital Finance Expenses totaled $221.4 million, $1.8 million under budget or 0.8%. The positive variance was a result of lower than budget variable interest expense of $1.8 million due to lower than anticipated interest rates.

Revenue and Income –

Total Revenue and Income is $452.4 million, $1.9 million or 0.4% over the estimate. The favorable variance was driven by Investment Income of $14.3 million, $1.3 million over the estimate due to higher than budgeted interest rates in addition to Other Revenue which was $456k over budget.

	Dec 2024 Year-to-Date			
	Period 6 YTD Budget	Period 6 YTD Actual	Period 6 YTD Variance	%
EXPENSES				
WAGES AND SALARIES	$ 65,077,326	$ 55,648,066	$ (9,429,260)	-14.5%
OVERTIME	3,071,741	2,863,105	(208,636)	-6.8%
FRINGE BENEFITS	13,677,443	12,878,203	(799,240)	-5.8%
WORKERS' COMPENSATION	1,036,717	1,199,178	162,461	15.7%
CHEMICALS	10,434,270	10,497,945	63,675	0.6%
ENERGY AND UTILITIES	14,936,649	14,449,368	(487,281)	-3.3%
MAINTENANCE	22,446,498	25,025,780	2,579,282	11.5%
TRAINING AND MEETINGS	328,410	175,683	(152,727)	-46.5%
PROFESSIONAL SERVICES	5,506,323	4,594,567	(911,756)	-16.6%
OTHER MATERIALS	2,478,268	2,901,279	423,011	17.1%
OTHER SERVICES	16,981,459	15,780,428	(1,201,031)	-7.1%
TOTAL DIRECT EXPENSES	**$ 155,975,104**	**$ 146,013,602**	**$ (9,961,503)**	**-6.4%**
INSURANCE	$ 2,235,523	$ 2,370,892	$ 135,369	6.1%
WATERSHED/PILOT	10,531,407	9,798,435	(732,972)	-7.0%
HEEC PAYMENT	4,725,101	4,761,181	36,080	0.8%
MITIGATION	911,782	911,782	-	0.0%
ADDITIONS TO RESERVES	953,139	953,139	-	0.0%
RETIREMENT FUND	21,264,519	21,264,519	-	0.0%
POST EMPLOYEE BENEFITS	-	-	-	---
TOTAL INDIRECT EXPENSES	**$ 40,621,471**	**$ 40,059,948**	**$ (561,522)**	**-1.4%**
STATE REVOLVING FUND	$ 40,075,151	$ 40,075,151	$ -	0.0%
SENIOR DEBT	149,070,903	149,070,903	-	0.0%
DEBT SERVICE ASSISTANCE	-	-	-	---
CURRENT REVENUE/CAPITAL	-	-	-	---
SUBORDINATE MWRA DEBT	32,434,234	32,434,234	-	0.0%
LOCAL WATER PIPELINE CP	-	-	-	---
CAPITAL LEASE	1,608,530	1,608,530	-	0.0%
VARIABLE DEBT	-	(1,765,600)	(1,765,600)	---
DEFEASANCE ACCOUNT	-	-	-	---
DEBT PREPAYMENT	-	-	-	---
TOTAL CAPITAL FINANCE EXPENSE	**$ 223,188,818**	**$ 221,423,218**	**$ (1,765,600)**	**-0.8%**
TOTAL EXPENSES	**$ 419,785,393**	**$ 407,496,768**	**$ (12,288,625)**	**-2.9%**
REVENUE & INCOME				
RATE REVENUE	$ 427,744,000	$ 427,744,000	$ -	0.0%
OTHER USER CHARGES	5,367,690	5,520,646	152,956	2.8%
OTHER REVENUE	4,325,472	4,781,842	456,370	10.6%
RATE STABILIZATION	-	-	-	---
INVESTMENT INCOME	13,056,720	14,323,529	1,266,809	9.7%
TOTAL REVENUE & INCOME	**$ 450,493,882**	**$ 452,370,017**	**$ 1,876,136**	**0.4%**

Cost of Debt
2nd Quarter – FY25

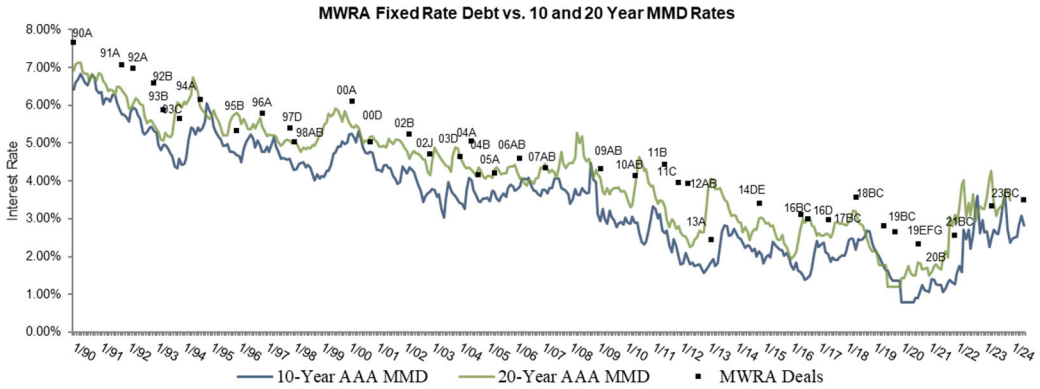
MWRA borrowing costs are a function of the fixed and variable tax exempt interest rate environment, the level of MWRA's variable interest rate exposure and the perceived creditworthiness of MWRA. Each of these factors has contributed to decreased MWRA borrowing costs since 1990.

Average Cost of MWRA Debt FYTD

Fixed Debt ($2.76 billion)	3.25%
Variable Debt ($334.8 million)	3.71%
SRF Debt ($675.81 million)	1.78%
Weighted Average Debt Cost ($3.77 billion)	3.03%

Most Recent Senior Fixed Debt Issue
April 2024

2024 Series B and C ($445.5 million) 3.49%

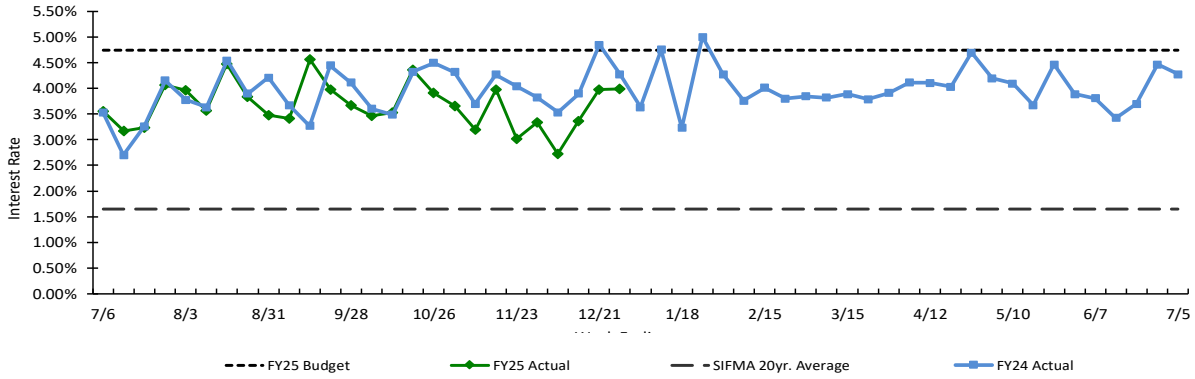


Bond Deal	1998AB	2000A	2000D	2002B	2002J	2003D	2004A	2004B	2005A	2006AB	2007AB	2009AB	2010AB	2011B
Rate	5.04%	6.11%	5.03%	5.23%	4.71%	4.64%	5.05%	4.17%	4.22%	4.61%	4.34%	4.32%	4.14%	4.45%
Avg Life	24.4 yrs	26.3 yrs	9.8 yrs	19.9 yrs	19.6 yrs	18.4 yrs	19.6 yrs	13.5 yrs	18.4 yrs	25.9 yrs	24.4 yrs	15.4 yrs	16.4 yrs	18.8 yrs

Bond Deal	2011C	2012AB	2013A	2014D-F	2016BC	2016D	2017BC	2018BC	2019BC	2019EFG	2020B	2021BC	2023BC	2024BC
Rate	3.95%	3.93%	2.45%	3.41%	3.12%	2.99%	2.98%	3.56%	2.82%	2.66%	2.33%	2.56%	3.35%	3.49%
Avg Life	16.5 yrs	17.9 yrs	9.9 yrs	15.1 yrs	17.4 yrs	18.8yrs	11.2 yrs	11.7yrs	11.9yrs	9.73 yrs.	15.6 yrs	12.2 yrs	10.45 yrs	10.53 yrs

Weekly Average Variable Interest Rates vs. Budget

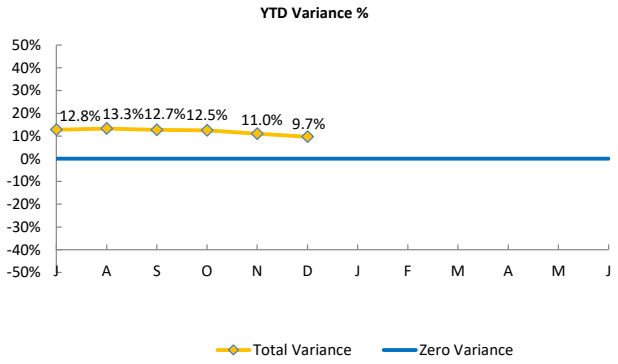
MWRA currently has eight variable rate debt issues with $334.8 million outstanding, excluding commercial paper. Variable rate debt has been less expensive than fixed rate debt in recent years as short-term rates have remained lower than long-term rates on MWRA debt issues. In December, the Securities Industry and Financial Markets Association rate ranged from a high of 3.620% to a low of 2.150% for the month. MWRA's issuance of variable rate debt, although consistently less expensive in recent years, results in exposure to additional interest rate rise as compared to fixed rate debt.



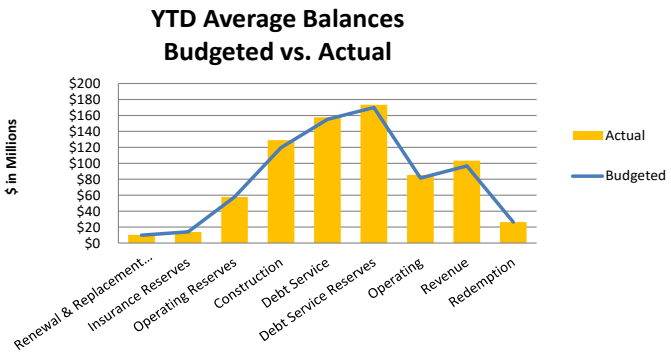
Investment Income

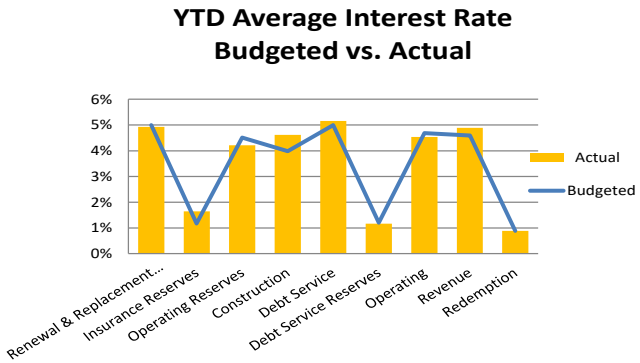
2nd Quarter – FY25

- YTD variance is 9.7%, $1.3 million, over budget primarily due to higher than budgeted interest rates.



	YTD BUDGET VARIANCE ($000)			
	BALANCES IMPACT	RATES IMPACT	TOTAL	%
Renewal & Replacement Reserves	$6	-$4	$3	1.0%
Insurance Reserves	$0	$33	$33	40.2%
Operating Reserves	$0	-$85	-$85	-6.6%
Construction	$181	$454	$635	26.8%
Debt Service	$62	$127	$190	4.9%
Debt Service Reserves	$22	-$37	-$15	-1.5%
Operating	$92	$111	$204	10.8%
Revenue	$146	$157	$304	13.8%
Redemption	$0	$0	$0	-0.2%
Total Variance	$510	$757	$1,267	9.7%





Monthly