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Utility Cost Review

October 2025 | Cost Review Tactical Team

Cost Review Tactical Team

- Charges Outreach & Modeling
  - Matt Lane and Guy Belew
- Energy & Resiliency
  - Mini Panicker and Juhi Nitin Gujarathi
- Financial Planning & Analysis
  - Robert Arbaugh, Laurie Echols, Ben Keller and Michael Stark
- Project Support
  - Liz Duncan and Phyllis Walsh

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Project Overview

- This team began analyzing budget recommendations to actual costs in 2023
- Annually this material is updated to illustrate the impact of cost adjustments (typically increases) in non-discretionary purchases of these commodities
  - ***Collectively, the total costs of these commodities in FY 2026 are anticipated to be approximately 64.6% higher than costs experienced in FY 2020 (base FY for comparison)***
- In each of the exhibits in this Executive Summary;
  - Budget figures represent original budget as adopted by the GLWA Board of Directors
  - FY 2025 "Actuals" represent the unaudited activity through June 30, 2025
  - FY 2026 "Forecast" represents projected FY 2025 "Actuals" with an inflation factor of 2.5% (unless otherwise noted in the presentation)
  - FY 2027 "Forecast" represents projected FY 2026 "Forecast" with an inflation factor of 2.5% (Unless otherwise noted in the presentation)
- Each section highlights talking points to explain drivers behind the increases observed

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Commodity Costs – Usage and Costs

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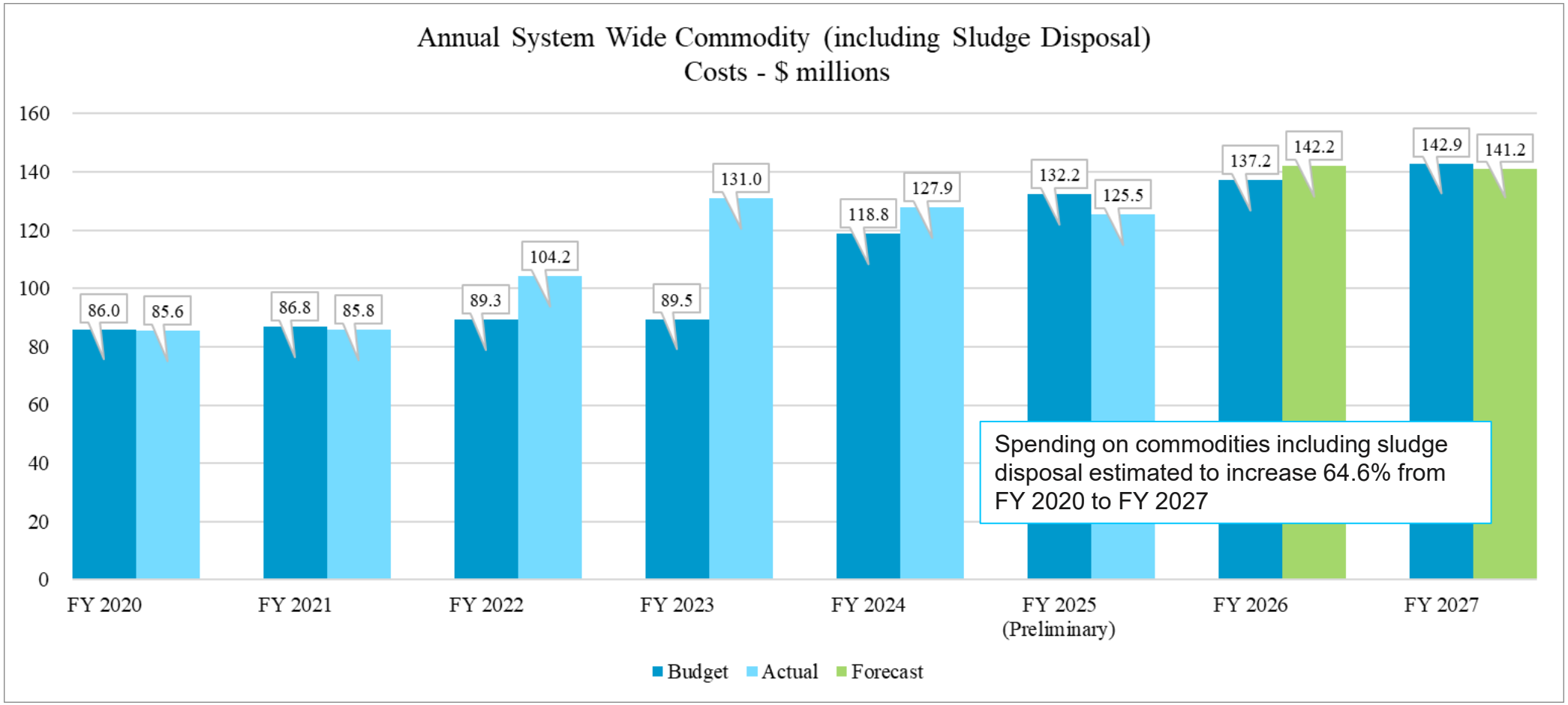
Commodities – Executive Summary



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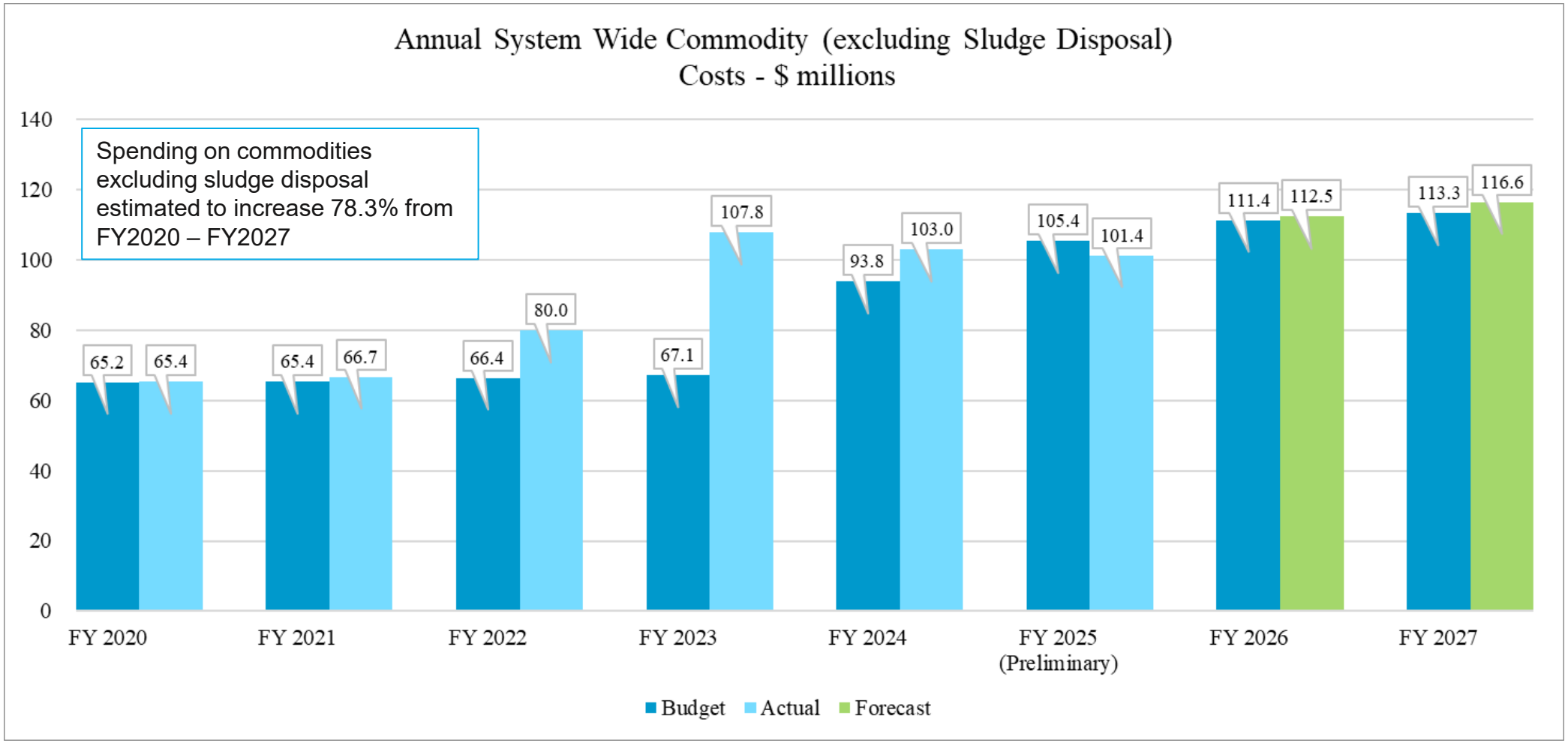
Commodities – Executive Summary



Commodities – Executive Summary

Since FY 2020 the commodities outlined below have had a greater impact on GLWA's annual budget

Fiscal Year Actuals ……	FY 2020	FY 2025
Percent of Total Commodity Costs		
Electricity	48%	37%
Chemicals	17%	27%
WW Sludge	16%	14%
Water	4%	8%
Gas	6%	6%
Water Alum Sludge	7%	5%
Sewer	2%	2%

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Commodities – Executive Summary

- Excluding the sludge disposal items, "commodities" have historically only reflected roughly 8% of the total GLWA revenue requirement budget
  - Meaning that only ~ 8% of the GLWA total revenue requirement is impacted by commodity costs, based on how much water we produce and deliver and how much wastewater we collect, treat and dispose of
- During FY 2023 the ratio increased and is reflected in the FY 2024 and after budgets

Fiscal Year	FY 2023	FY 2024	FY 2025	FY 2026
Percent of Revenue Requirement				
Excluding sludge disposal	8%	11%	12%	12%
Including sludge disposal	10%	14%	15%	14%

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Electric Usage and Costs

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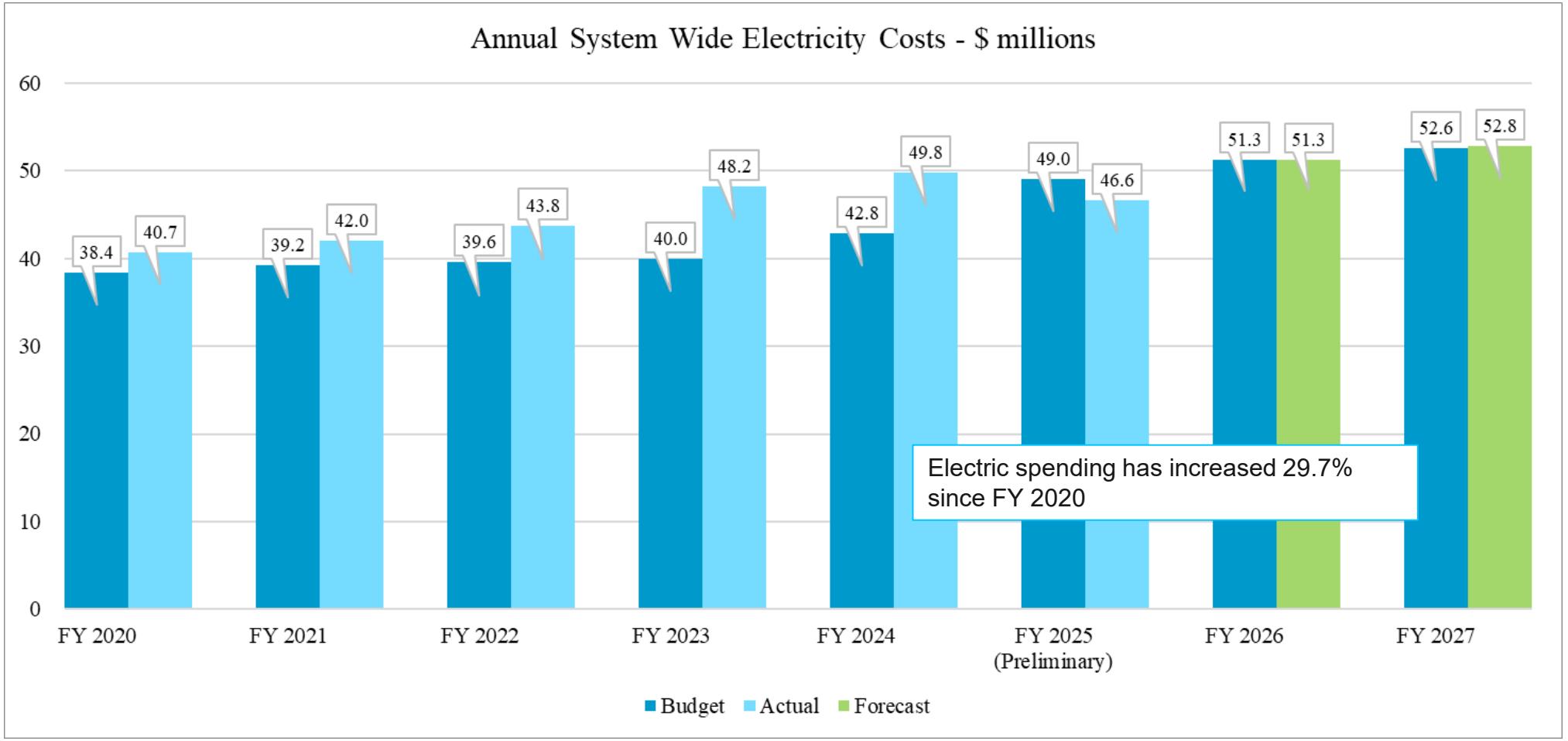
Electric – Executive Summary



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System Wide – Electric Usage and Costs

- Electric costs have increased 14.5% from FY 2020 through FY 2025
- In FY 2025 a charge that is set by the Michigan Public Service Commission was reduced
  - The Power Supply Cost Recovery Factor (PSCR) fell from 1.127 cents per kWh to .250 cents per kWh
  - This reduction was effective in November 2024 which resulted in a cost reduction totaling approximately $3.1 million through June 2025
- Without the PSCR reduction electric costs would have been $49.7 million for FY 2025

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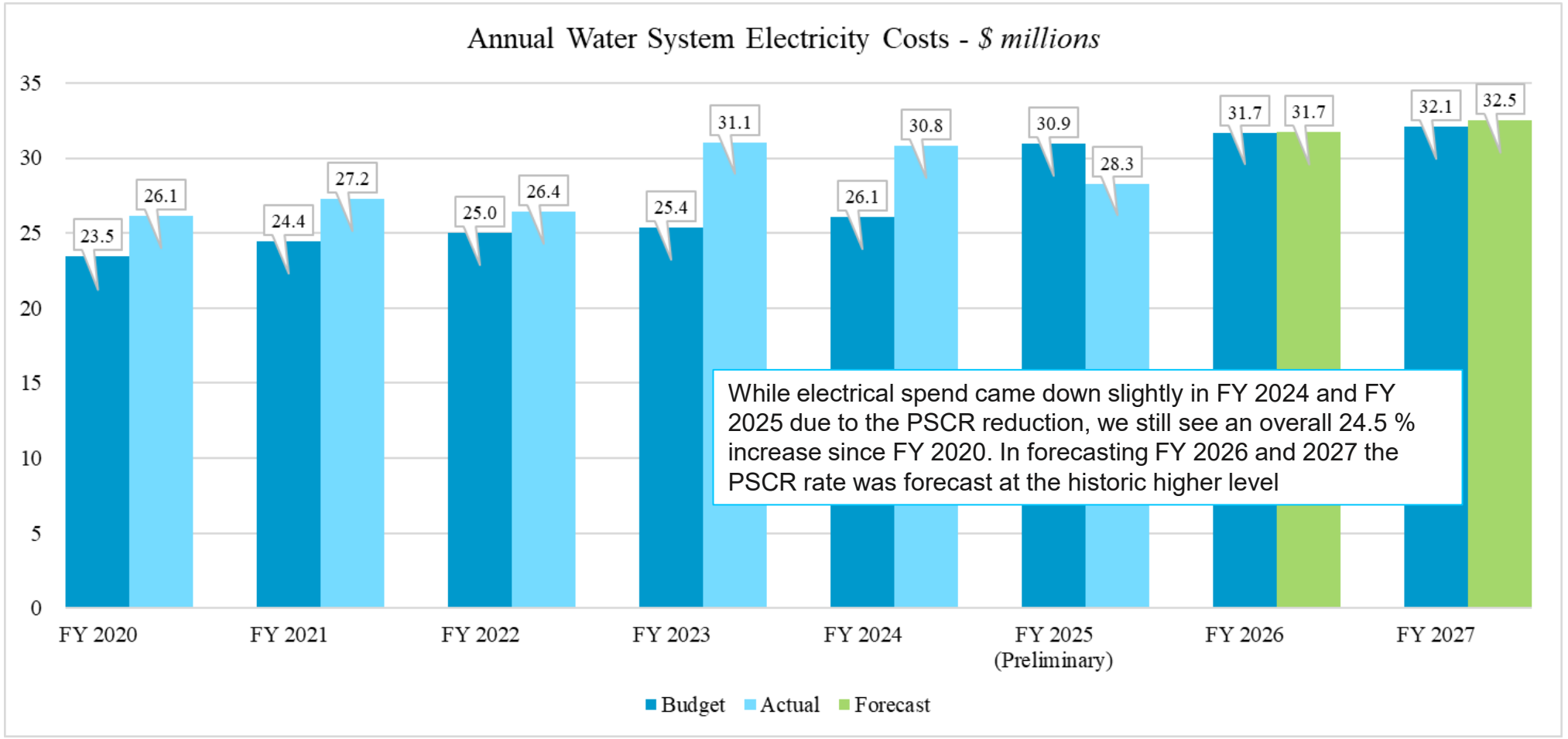
Water System – Adopted Electrical Budget



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Water System – Electricity Usage

- Electrical usage is primarily associated with water production and distribution
- Peak production season (summer) results in higher electrical usage at the Water Treatment Plants (WTPs) and Pump Stations (Treated Water Transmission System)
- Cost per kWh had been increasing steadily since FY 2020 from $0.079 per kWh to FY 2024 $0.095 per kWh but decreased to $0.085 per kWh in FY 2025.
- Based on a review of budget-to-actual data, the budget for power costs has not been sufficient for several years; the variability of power costs (both usage and unit cost) is a forecasting challenge

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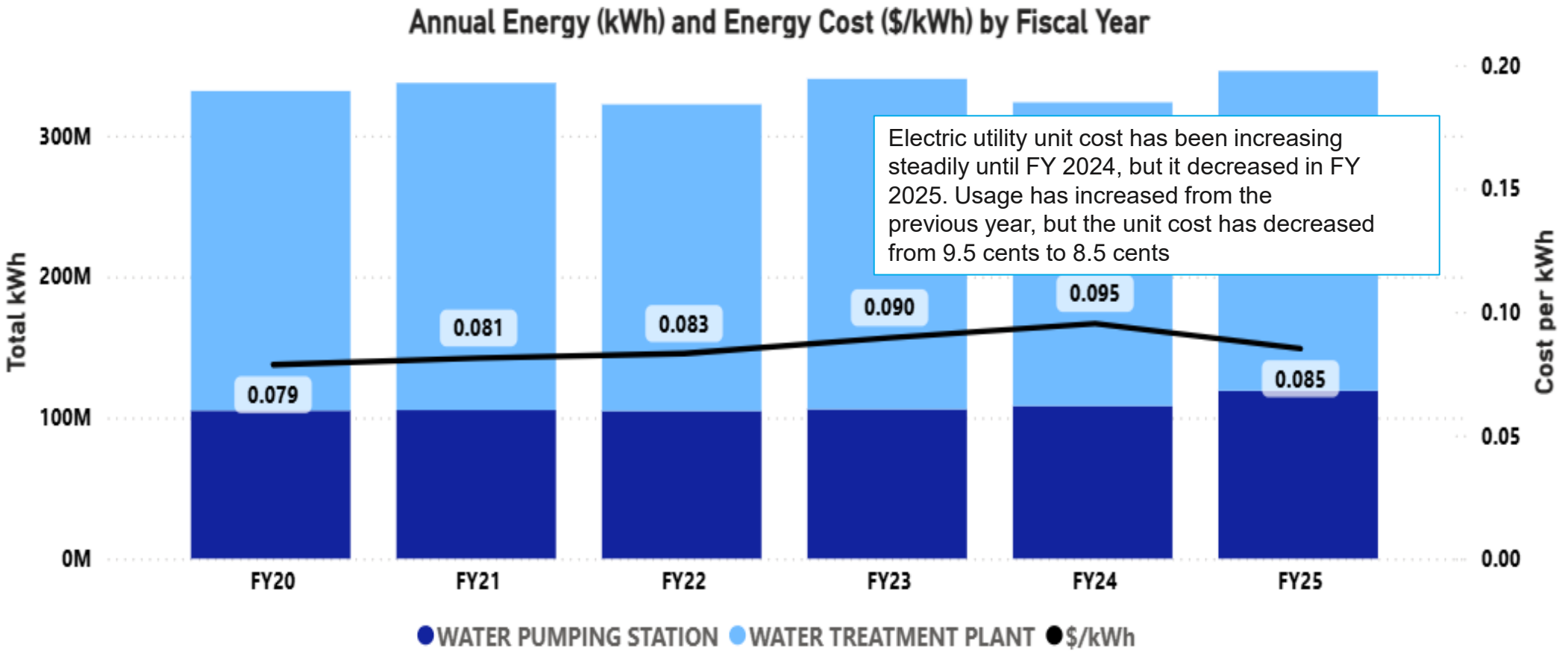
Water System Electric Usage and Unit Cost



Electric utility unit cost has been increasing steadily until FY 2024, but it decreased in FY 2025. Usage has increased from the previous year, but the unit cost has decreased from 9.5 cents to 8.5 cents

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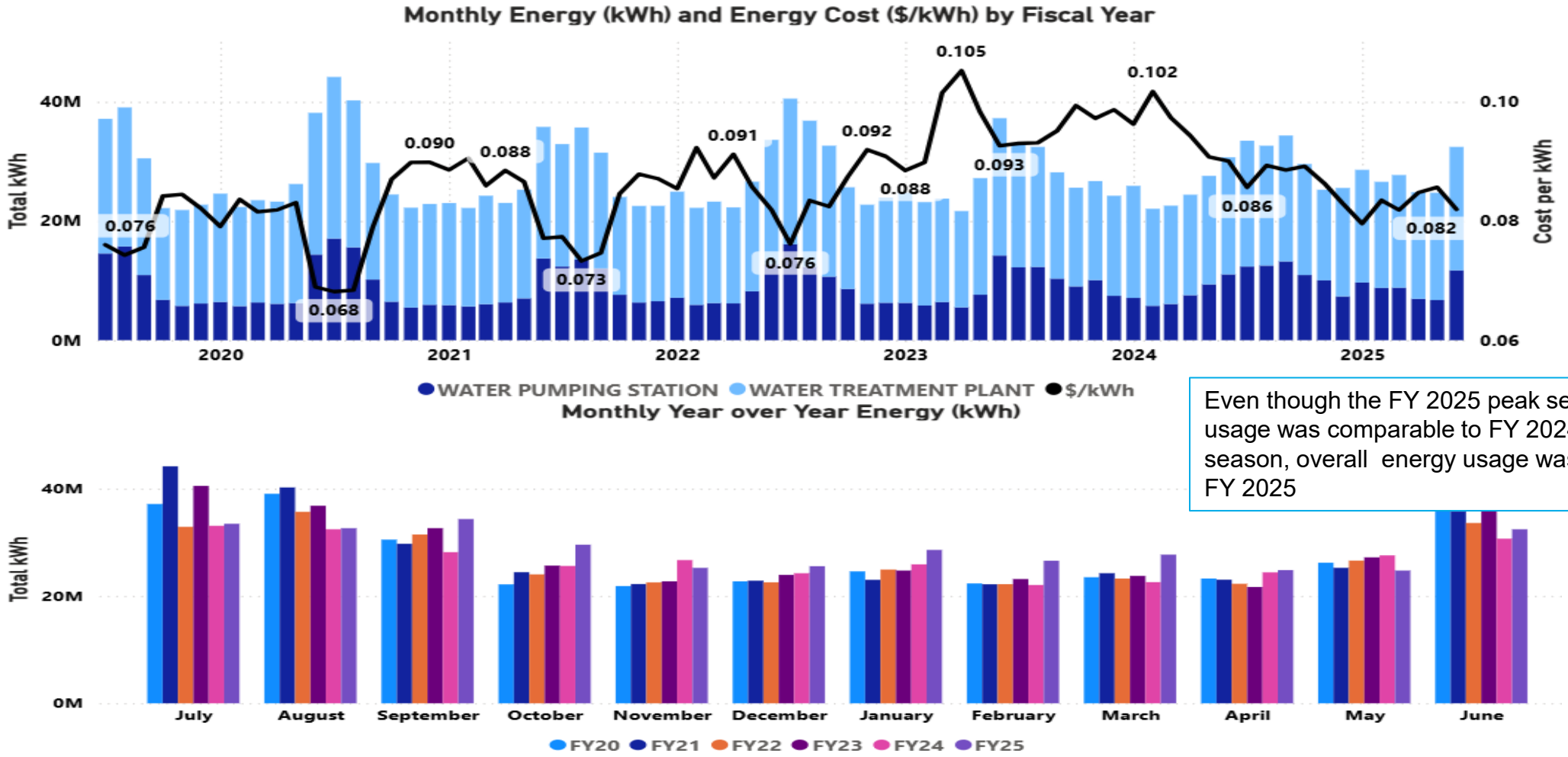
Water System Monthly Electric Usage



Even though the FY 2025 peak season usage was comparable to FY 2024 peak season, overall energy usage was higher in FY 2025

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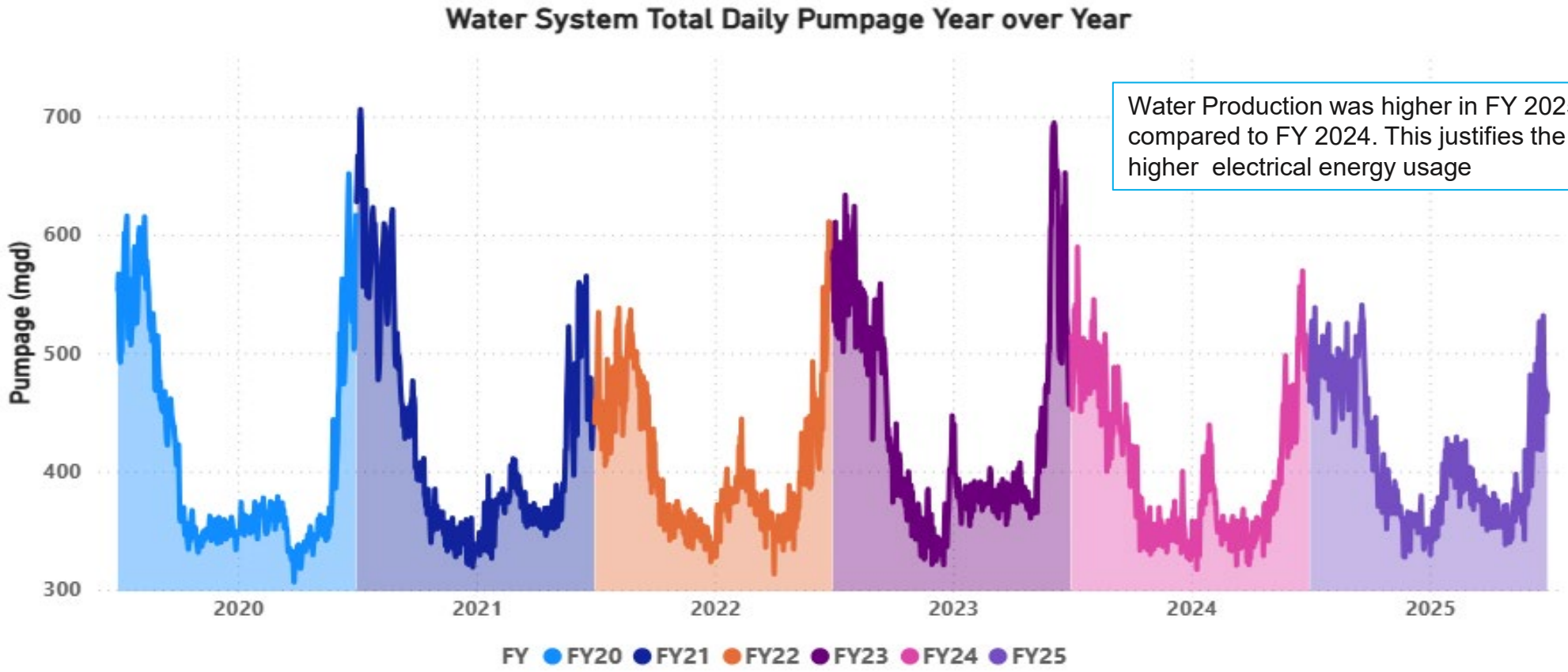
Water System Total Daily Pumpage Year Over Year



Water Production was higher in FY 2025 compared to FY 2024. This justifies the higher electrical energy usage

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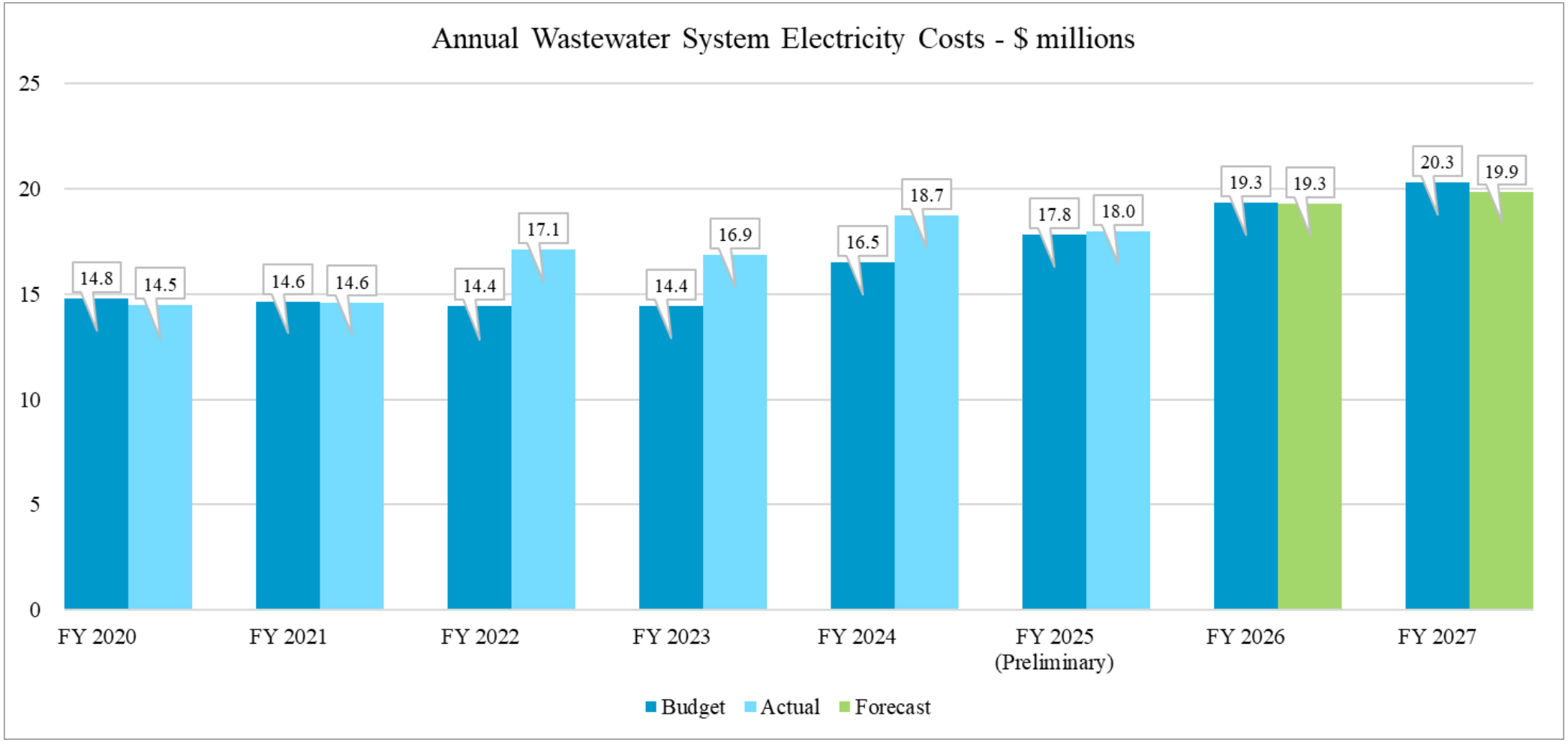
Wastewater– Adopted Electrical Budget



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Wastewater System Electrical Summary

- Wastewater Electrical usage is more consistent than the water system
- Cost per kWh had been increasing steadily since FY 2020 from $0.075 per kWh to FY 2024 $0.091 per kWh, but decreased to $0.082 per kWh in FY 2025

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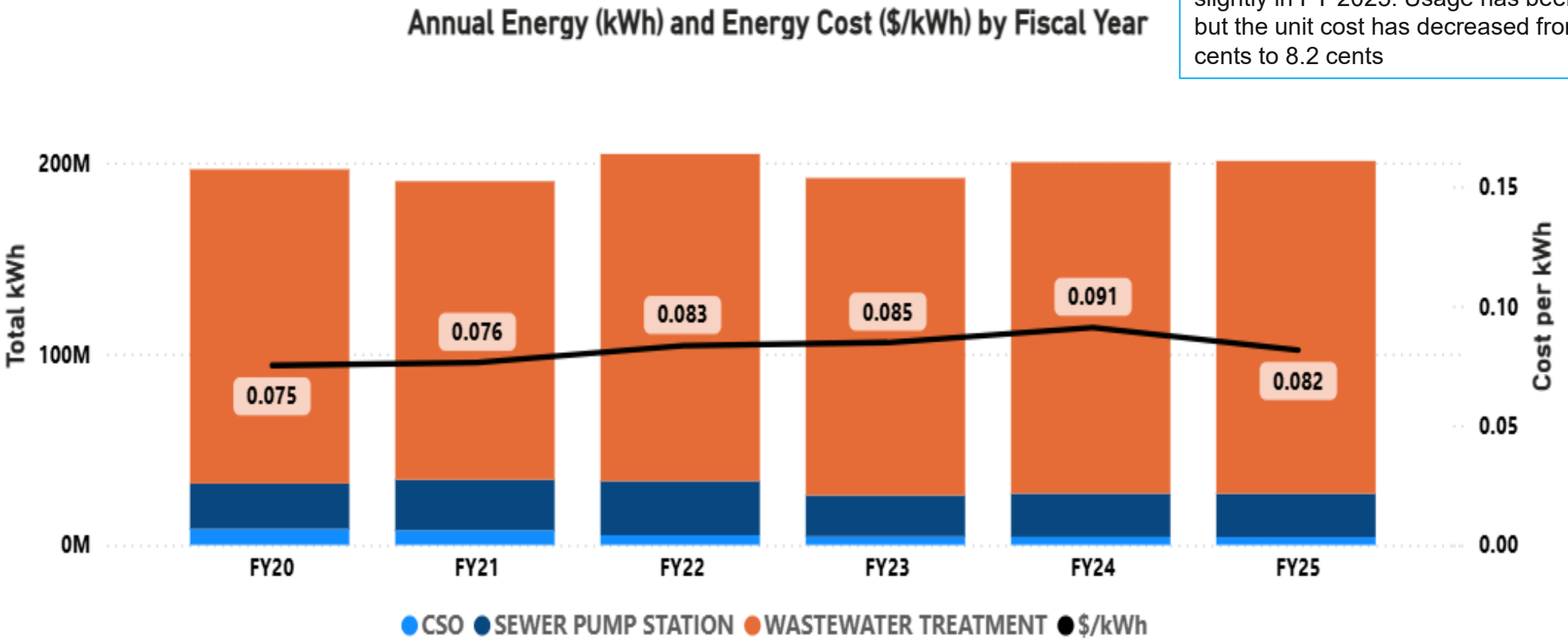
Wastewater Electric Usage and Unit Cost

Electric utility unit cost has been increasing steadily until FY 2024, but it decreased slightly in FY 2025. Usage has been stable, but the unit cost has decreased from 9.1 cents to 8.2 cents



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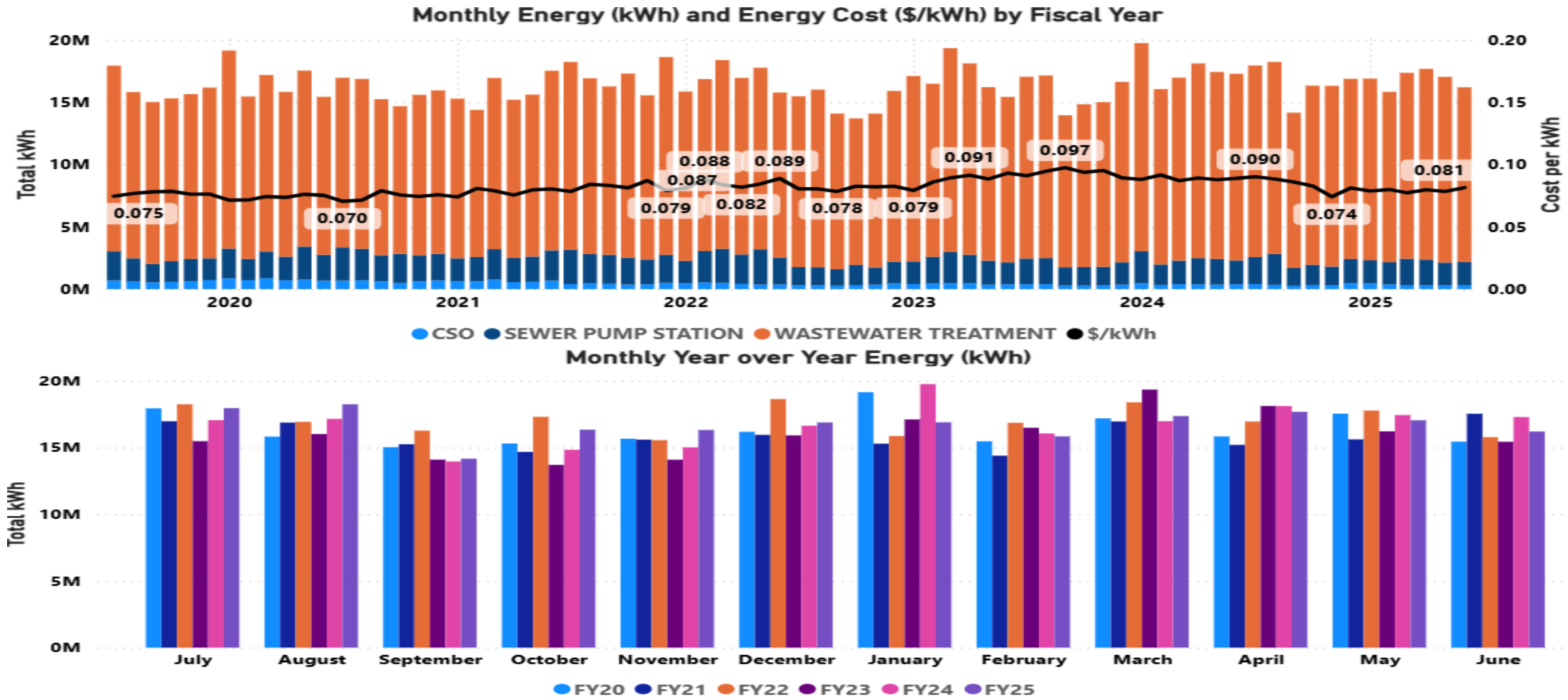
Wastewater Monthly Electric Usage



Most electrical usage is driven by WRRF. FY 2025 electrical energy usage was comparable to FY 2024 usage

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Natural Gas Usage and Costs

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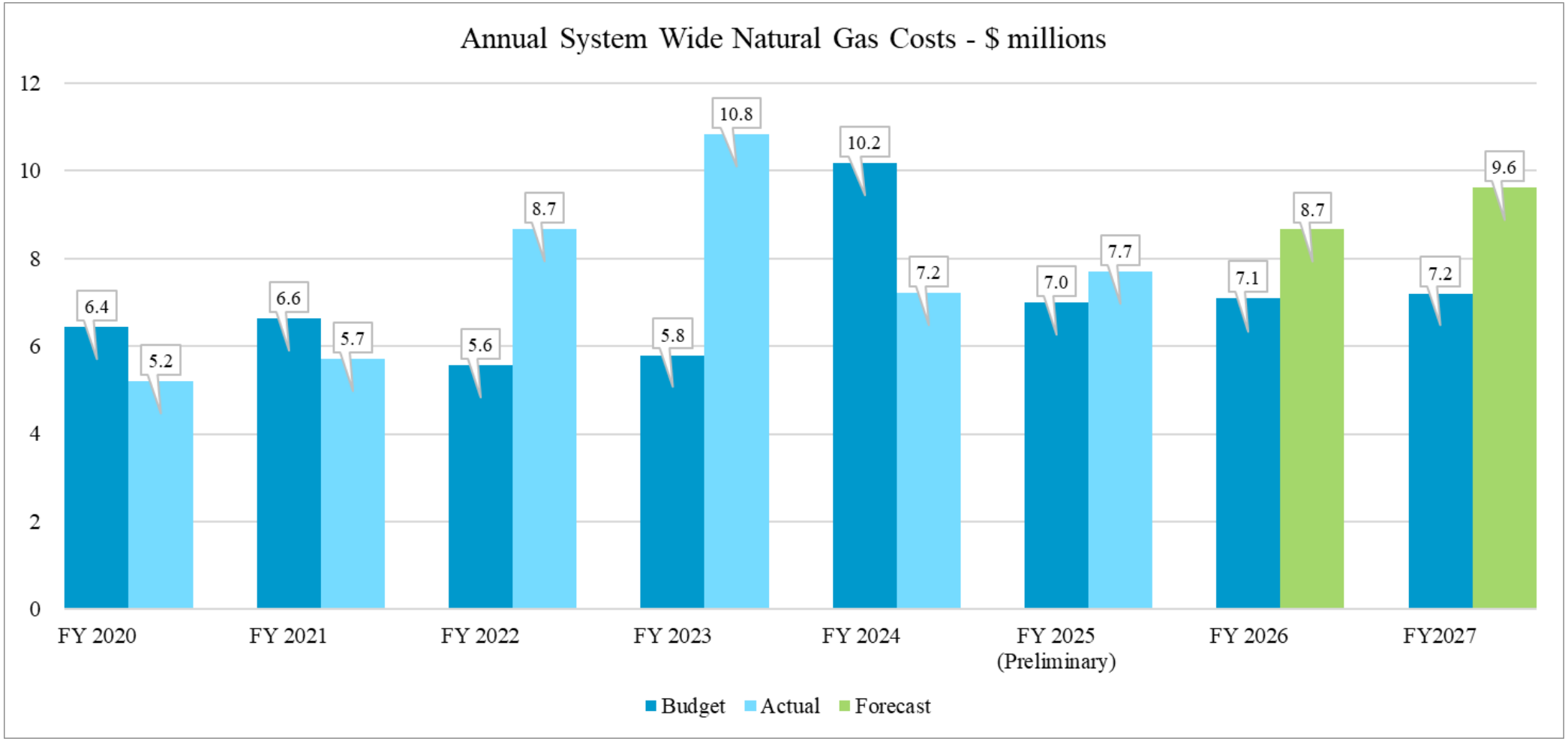
Natural Gas – Executive Summary



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System Wide – Natural Gas Usage

- GLWA has negotiated and locked in gas pricing for fixed periods (1 – 2 years), minimizing the effect of market volatility
- 80% of anticipated volume for FY 2026 has been locked in at an average rate of $4.03 per MMBtu, $1.03 higher than the rate locked in for FY 2025
- GLWA can effectively estimate anticipated annual volume due to the majority of usage being process driven and consistent year over year
- On September 9th 2025 the U.S. Energy Information Administration released the most recent report on natural gas. There are three take aways to consider:
  - Natural gas production in the U.S. is forecast to be relatively flat
  - The U.S. is increasing its export of liquified natural gas (LNG)
  - The price forecast is potentially double in 2026 than the cost in 2024
  - Short-Term Energy Outlook - U.S. Energy Information Administration (EIA)

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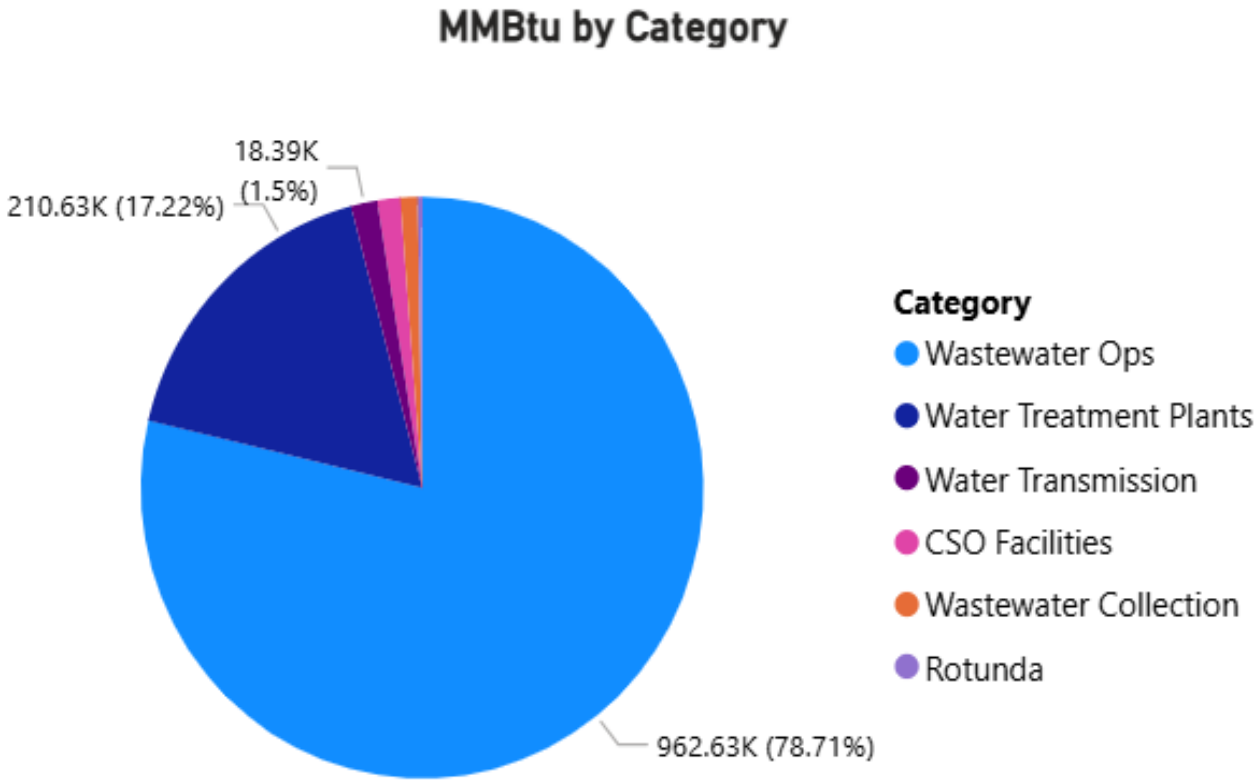
Natural Gas Usage

- The chart to the right represents Natural Gas usage by location type for FY 2025
- Two Major Uses
  - **Wastewater** Operations accounts for **78.71%** of GLWA's natural gas usage (Process Use)
  - **Water Treatment Plants** account for **17.22%** (Heating)
- Average Natural gas unit cost for FY 2025 was $4.29 per MMBtu



Note: MMBtu, or Million British Thermal Units, is a standard unit of energy measurement in the global energy market, particularly for natural gas

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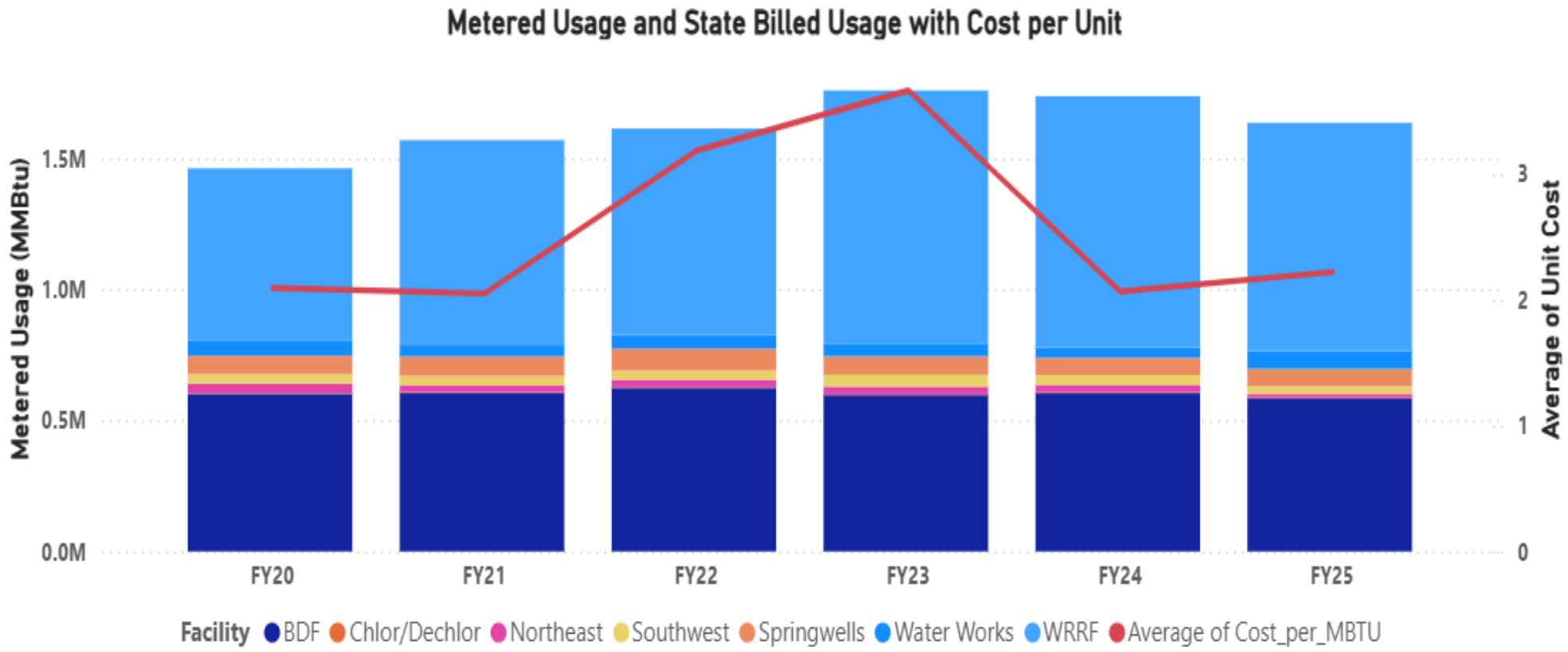
Natural Gas Usage and Unit Cost

Unit cost slightly increased in FY 2025 compared to FY 2024



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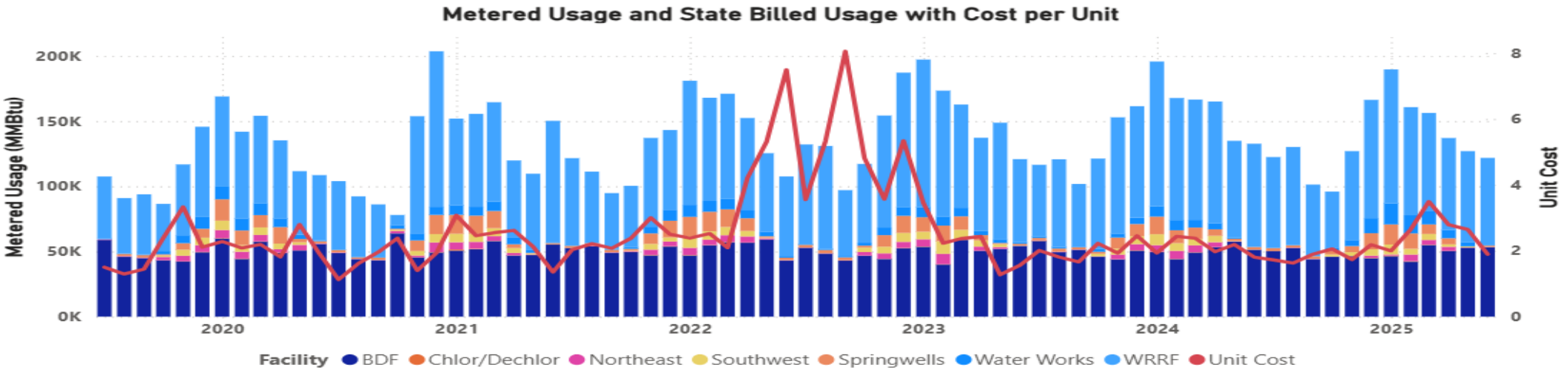
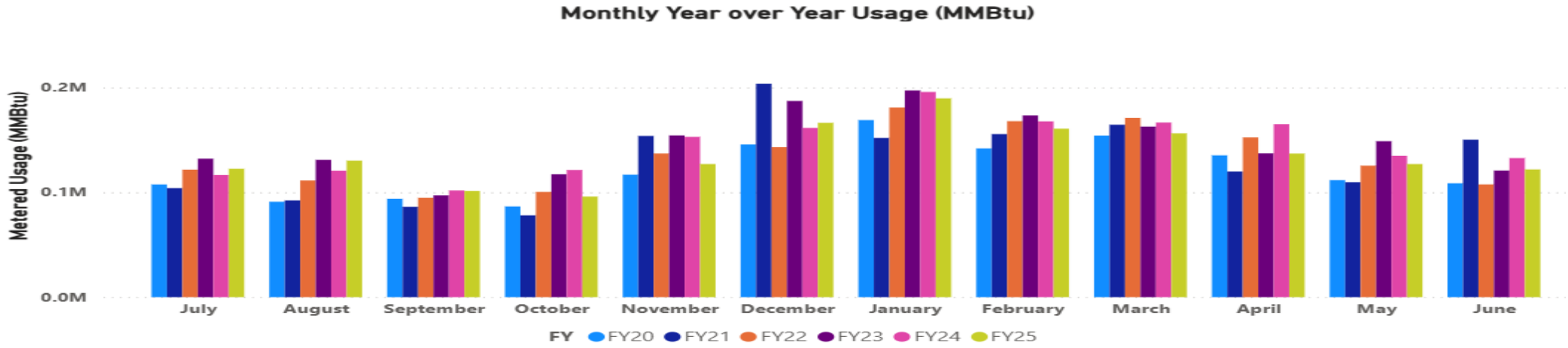
Natural Gas Monthly Usage (MMBtu)





Most of the natural gas usage is by WRRF & BDF. Natural gas usage in FY 2025 was comparable to FY 2024

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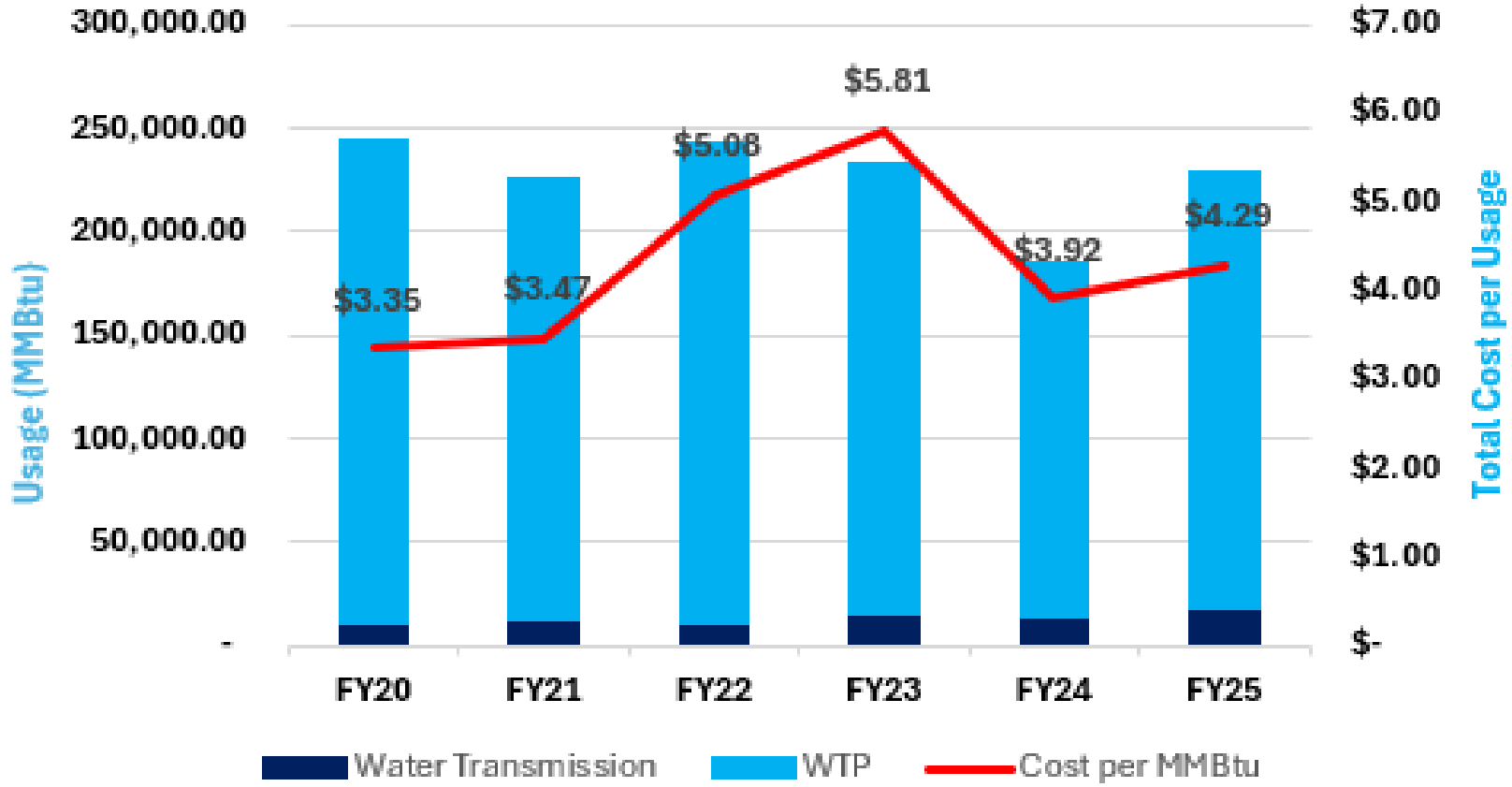
Water System – Natural Gas Usage & Unit Cost



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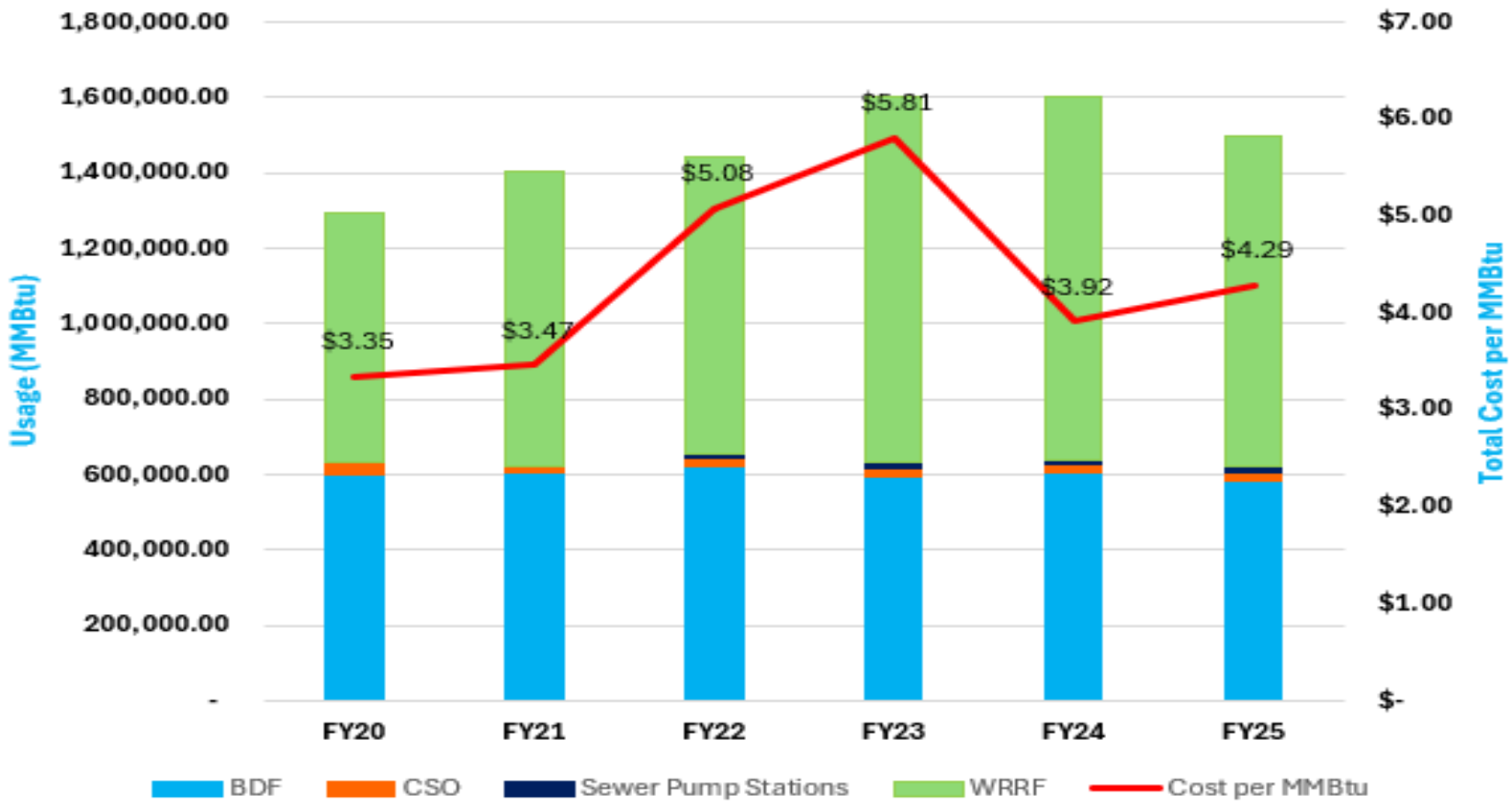
Wastewater System – Natural Gas Usage & Unit Cost



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Water Usage and Costs

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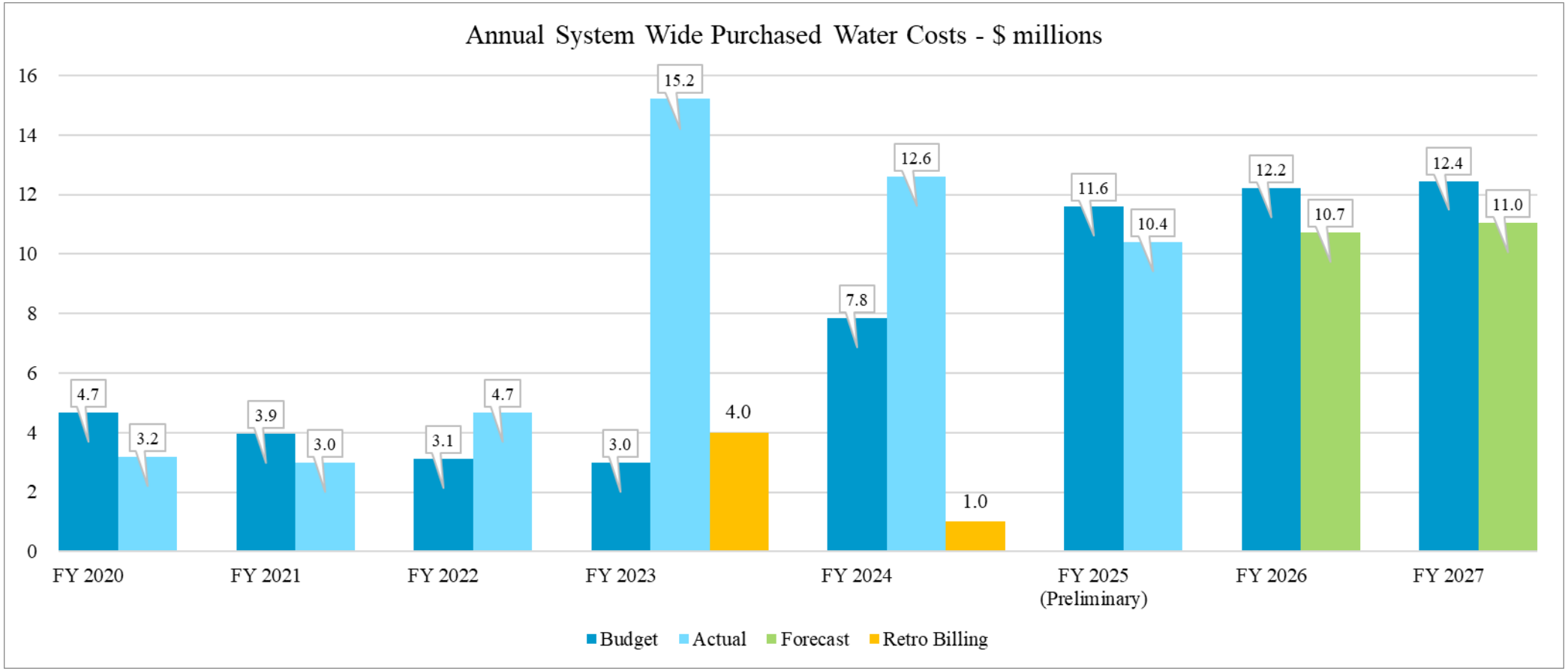
Water – Executive Summary



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System Wide – Water Usage

- GLWA has recognized the need for accurate flow metering, both on water provided and water consumed
- Since FY 2021 GLWA has been working with DWSD to resolve metering issues for all facilities serviced
- Meters have been replaced at the Chlorination/De-chlorination facility and WRRF to ensure correct reads and billing
- GLWA is currently working through a review of all water/sewer connections for facilities in the city of Detroit to ensure accurate billing and metering
- The forecast reduction in water use is due to a planned project to replace potable water use with screen final effluent (SFE) in the treatment process near the end of FY 2027

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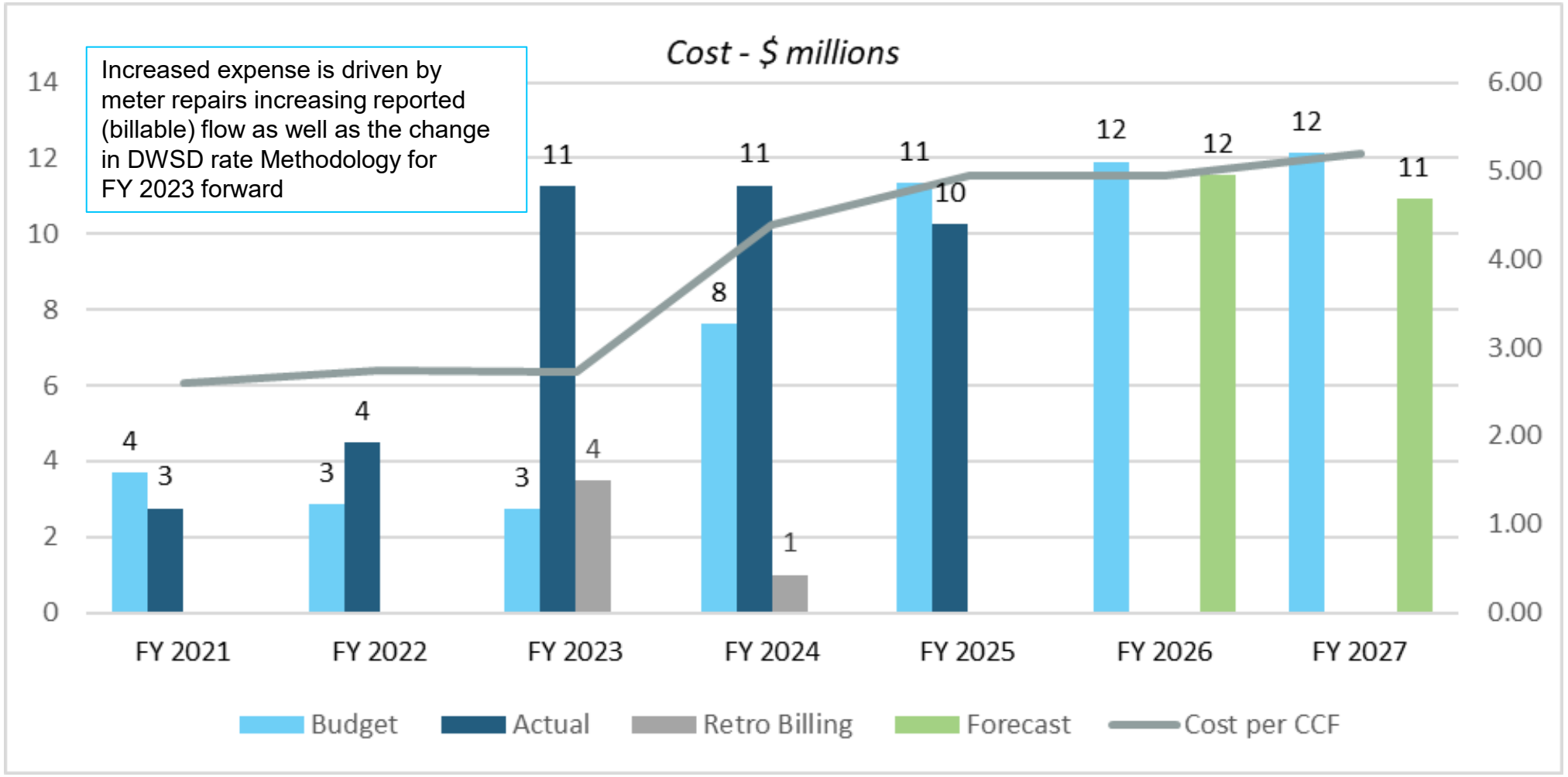
Wastewater – Adopted Water Budget



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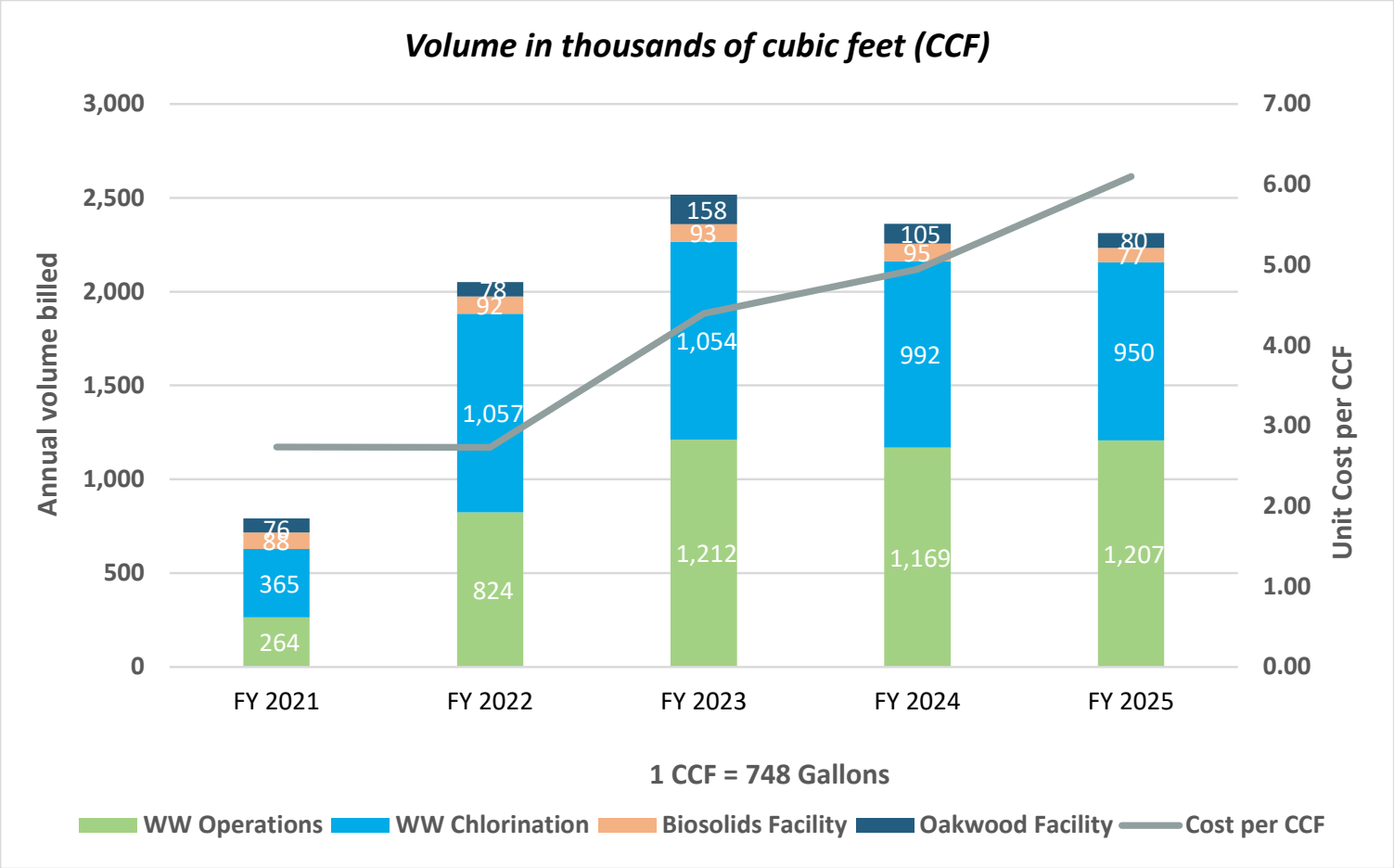
Wastewater – Water Volume Change



Wastewater volume changes due to meter repairs, leak repairs and the impact of commodity cost change

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Chemical Usage and Costs

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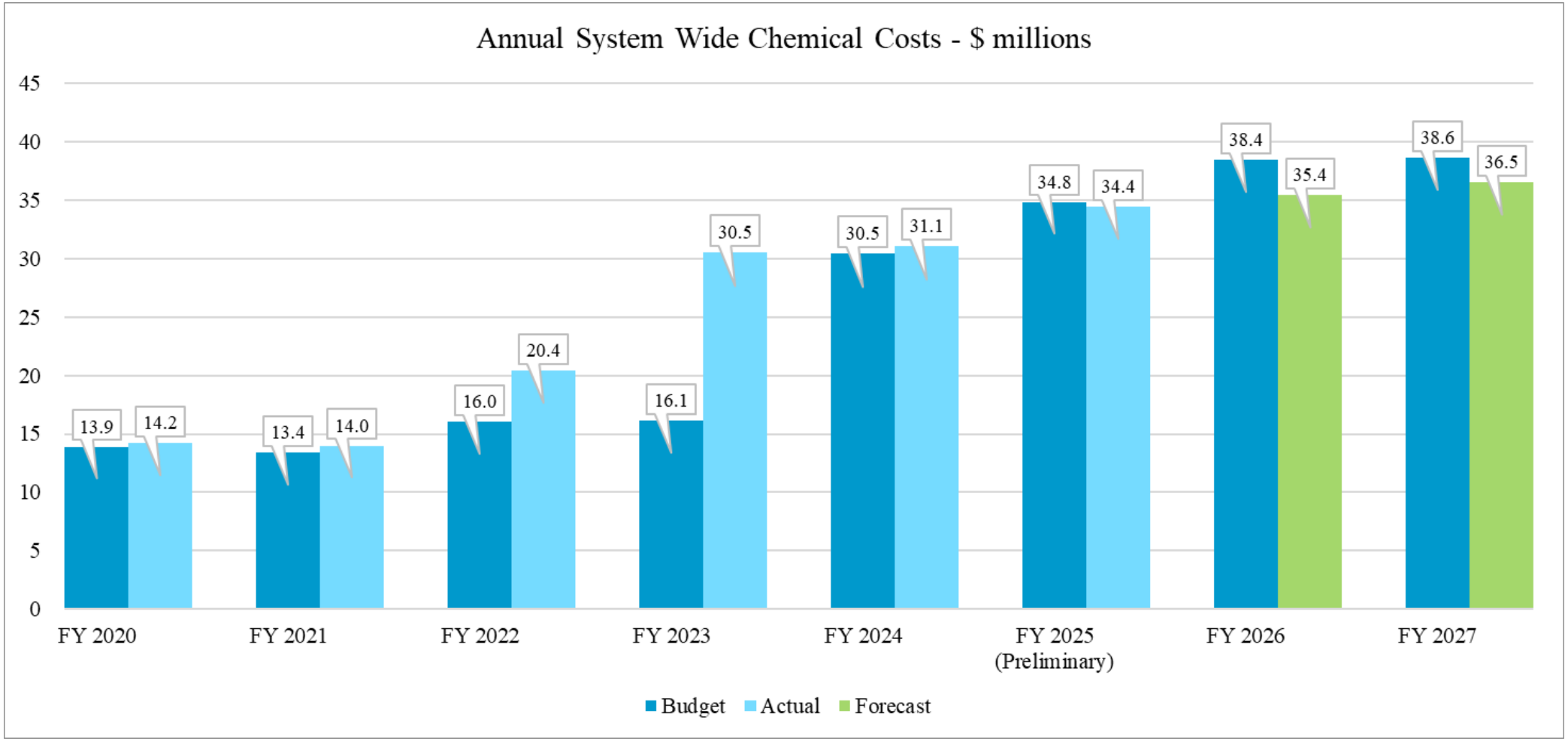
Chemical – Executive Summary



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Changes That Affected FY 2026 and FY 2027 Budgets

- Beginning in January 2025 new Federal Lead & Copper Rule Revisions (LCRR) required budget amendments for FY 2025 and increases to the budgets presented in the following slides
  - These changes affect all water plant budgets and wastewater budget at the Water Resource Recovery Facility for primary processing
  - The budget increases were forecast to be significant, rising 36% and 59% for the water plants orthophosphate and wastewater ferric chloride chemicals
  - Since the January start of the LCRR, the additional orthophosphate required to meet the regulations has been less than the original estimate
    - Less was required due the condition of the source water which required less chemicals than budgeted for treatment

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Changes That Affected FY 2026 and FY 2027 Budgets
(continued)

- The unit cost for ferric chloride and orthophosphate have recently increased 1.5% and 7.9% respectively
- The historic graphs for water and sewer that follow include the original forecast for orthophosphate and ferric chloride for comparative purposes
- Though the current use is less than expected, several of factors could impact the future use
- The “Forecast Plus Federal LCRR” is still presented as a risk for further budget increase until further data points are gathered

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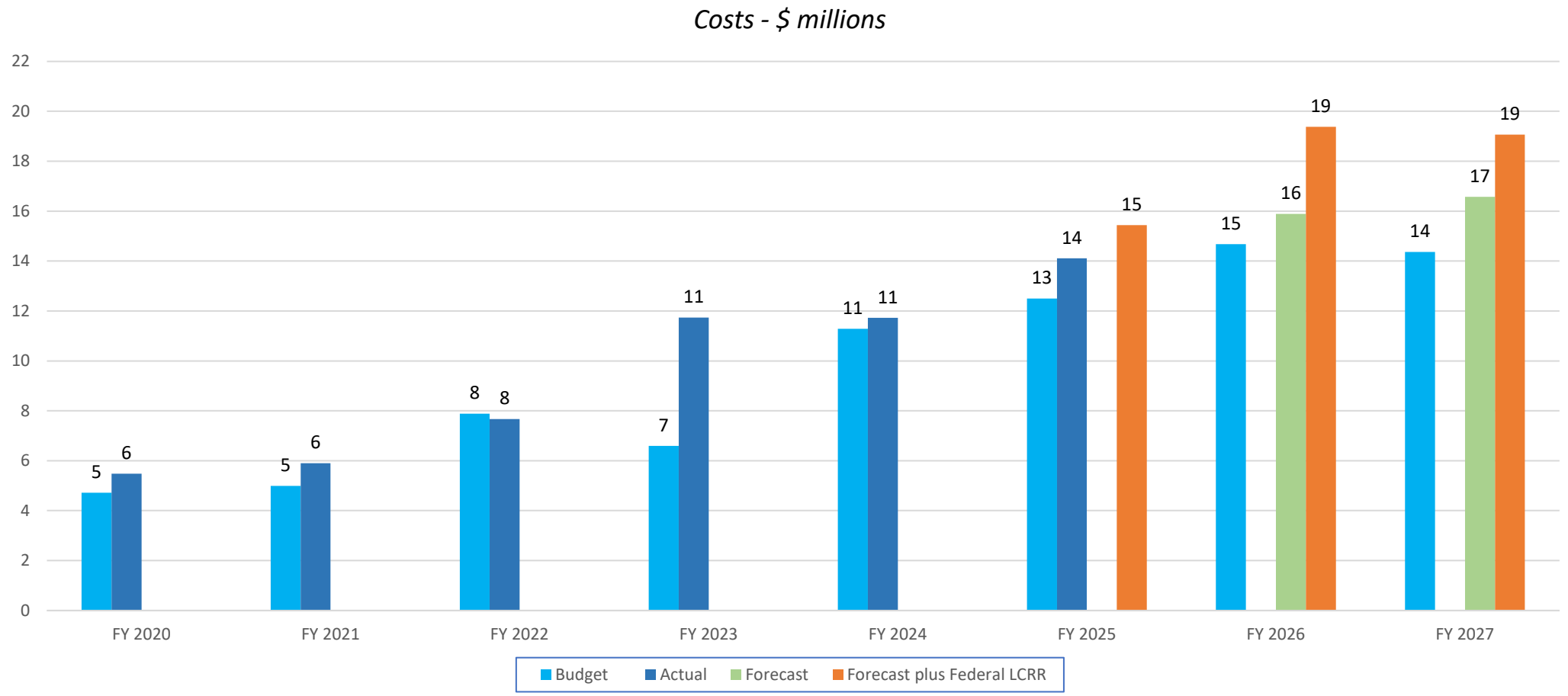
Water System – Adopted Chemical Budget



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Water Chemical Summary

- As shown in the graph on the previous page, expenditures for chemicals used in water treatment were relatively stable through FY 2021. Beginning that year and into FY 2022 & FY 2023 costs increased significantly. In FY 2024 and FY2025 prices have mostly stabilized. Below are examples of significant increases experienced from FY 2021 to FY 2023
  - Chlorine –annual average unit cost increased 372% - No recent changes
  - Orthophosphate – annual average unit cost increased 103% - Recent 7.9% increase
  - Fluoride – annual average unit cost increased 176% - Recent 33.1% reduction
  - Aluminum Sulfate – annual average unit cost increased 57% - No recent changes

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Water Chemical Summary *(continued)*

- Beginning in FY 2024 we have seen stability in the chlorine prices
  - The chlorine sector has seen a decrease in domestic demand resulting in an oversupplied environment which contributes to the stability in prices
- Three chemicals made up 91% of the adopted $14.5M FY 2026 Budget; Aluminum Sulfate 40%, Chlorine 40% and Orthophosphate 11.%

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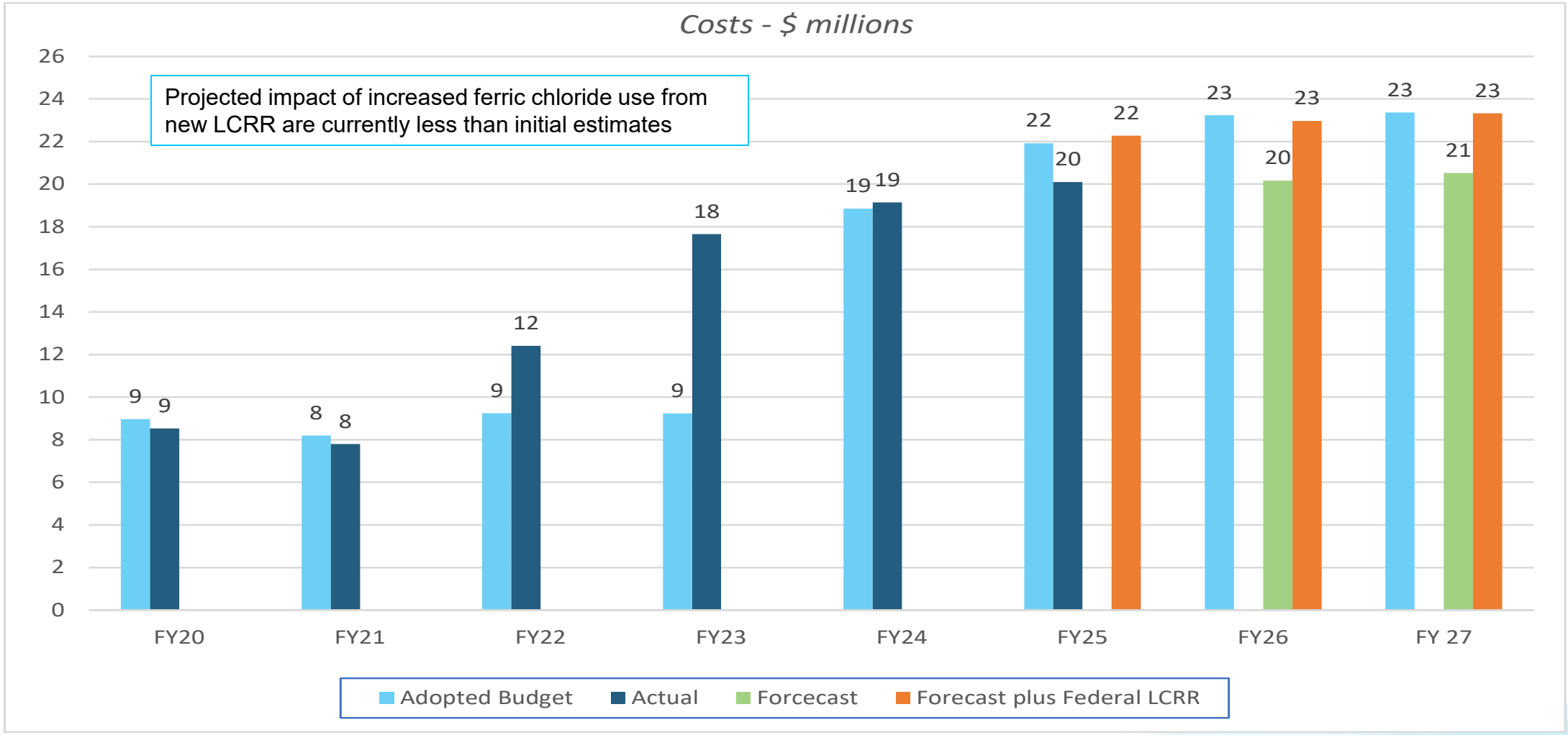
Wastewater System – Adopted Chemical Budget



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Wastewater Chemical Summary

- As shown in the graph on the previous page, expenditures for chemicals used in wastewater treatment were relatively stable through FY 2021. Beginning that year and into FY 2022 & FY 2023 costs increased significantly. In FY 2024 and FY 2025 prices have mostly stabilized. Below are examples of significant increases experienced from FY 2021 to FY 2023
  - Chlorine based products – annual average unit cost increased 296% - Recent increase in ferric chloride of 1.5%
  - Oxygen (gaseous & liquid) - annual average unit cost increased 25% - Recent decrease, see below*

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Wastewater Chemical Summary *(continued)*

- The approved FY 2025 and FY 2026 budgets were based on forecast supply chain constraints impacting chlorine-based chemical pricing. As noted above these constraints have eased and consequently had a smaller impact than what was anticipated. As such the current FY 2026 budget may be adequate to address the impact of the additional LCRR ferric chloride expenditures
- Recently announced unit cost decreases and *Oxygen & Nitrogen totaling 5.3% from December, in January and July 2025

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Biosolids and Sludge Usage and Costs

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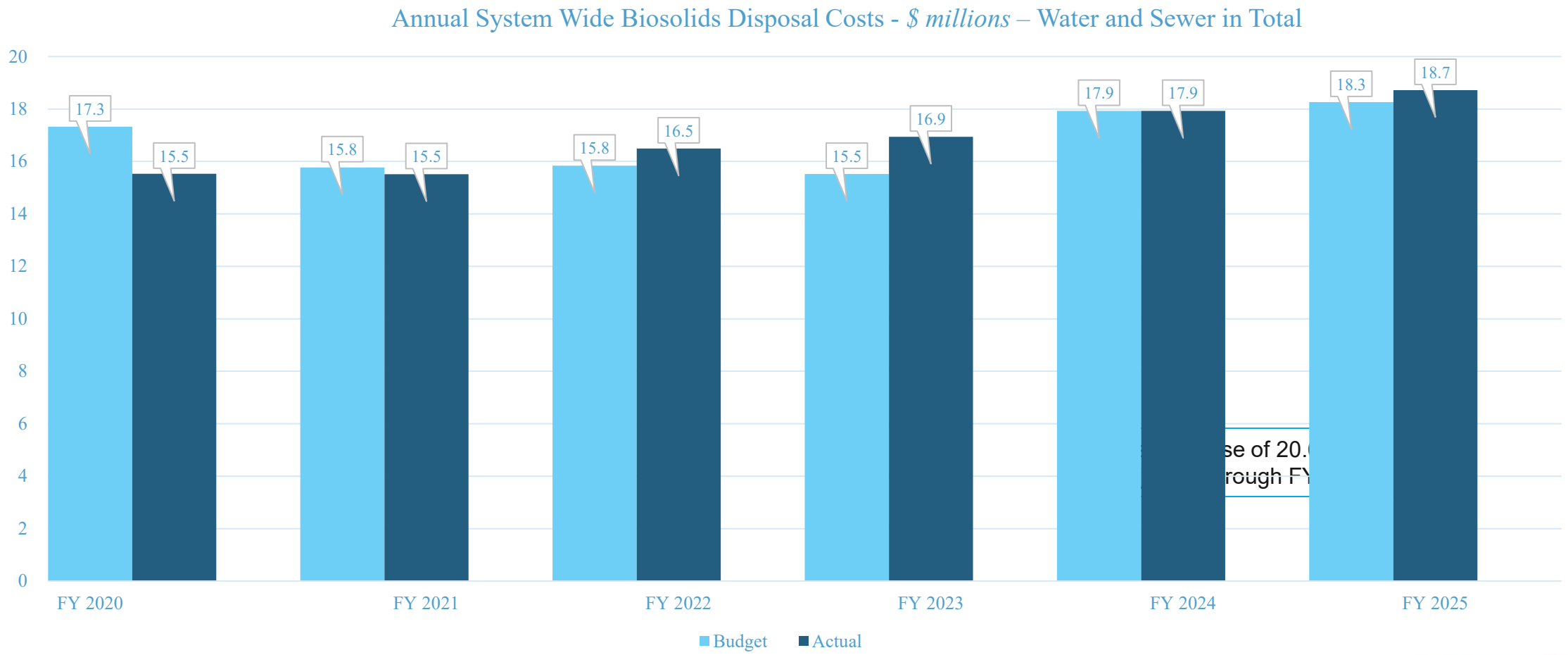
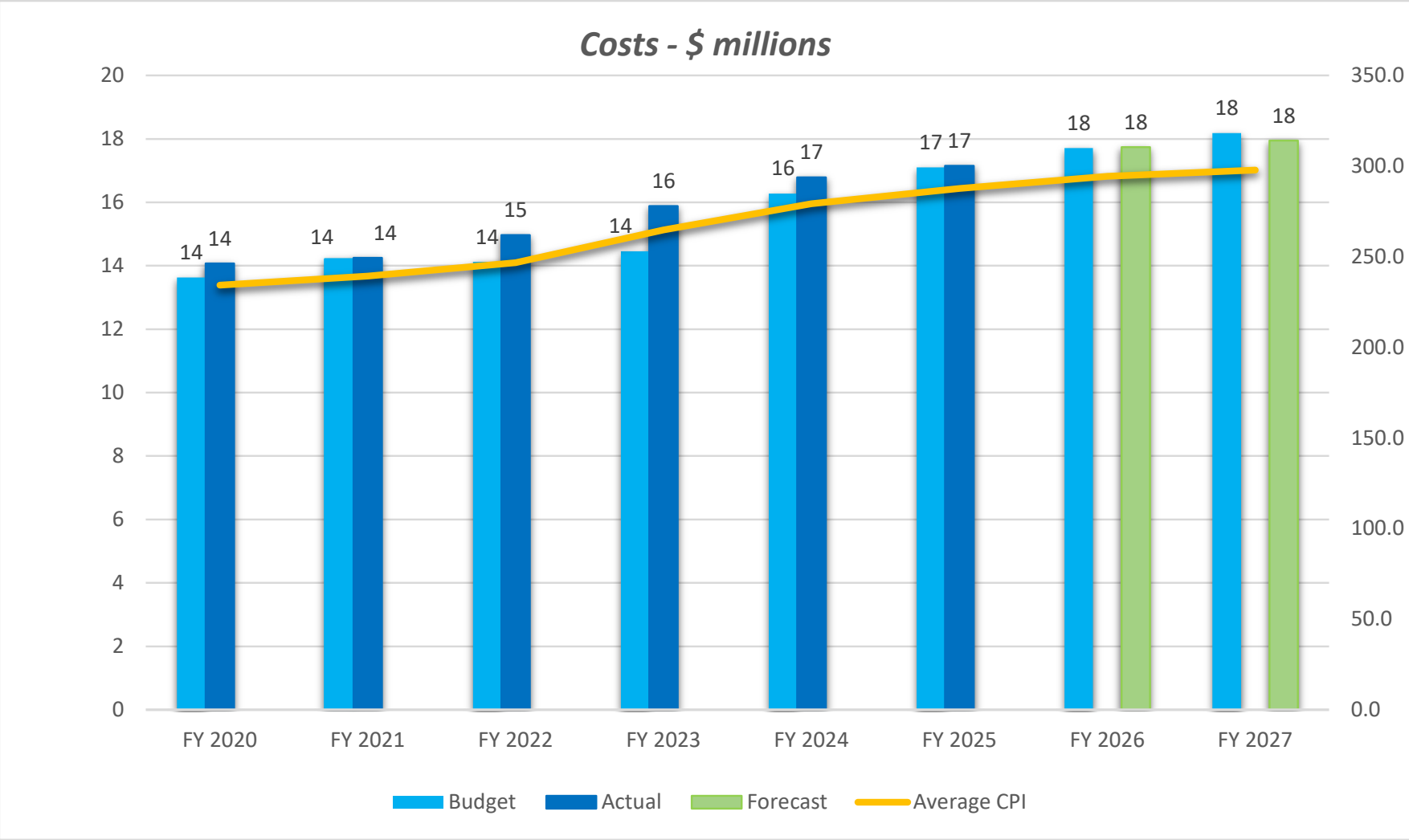
Biosolids – Executive Summary



Wastewater System – BDF Budget & Forecast



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Wastewater Biosolids Summary

- GLWA has contracted with the New England Fertilizer Company (NEFCO) to operate the Biosolids Dryer Facility adjacent to the Water Resource Recovery Facility (WRRF) (Contract approved in 2013; became operational in 2015)
- The current cost is subject to adjustments annually (in March) based on the Consumer Price Index for All Urban Consumers (CPIU) – All Items in Detroit-Warren-Dearborn, MI as published by the U.S. Bureau of Labor Statistics
- Inflationary impact on the CPIU has caused this adjustment to increase from an average of 2.0% annual increase to an average 7.25% increase in both FY 2022 and FY 2023 resulting in an increased cost in excess of $1.0M in each of these years

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Wastewater Biosolids Summary (continued)

- The Detroit specific inflation rate rose in FY 2025 by 3.3% from 2.8% increase in FY 2024
- This adjustment to the annual expenses was an increase of approximately $559,300
- For FY 2026, the most recent Bureau of Labor Statistics report through August, indicates a change of 2.0% from February 2025, the last value use to reset the contract

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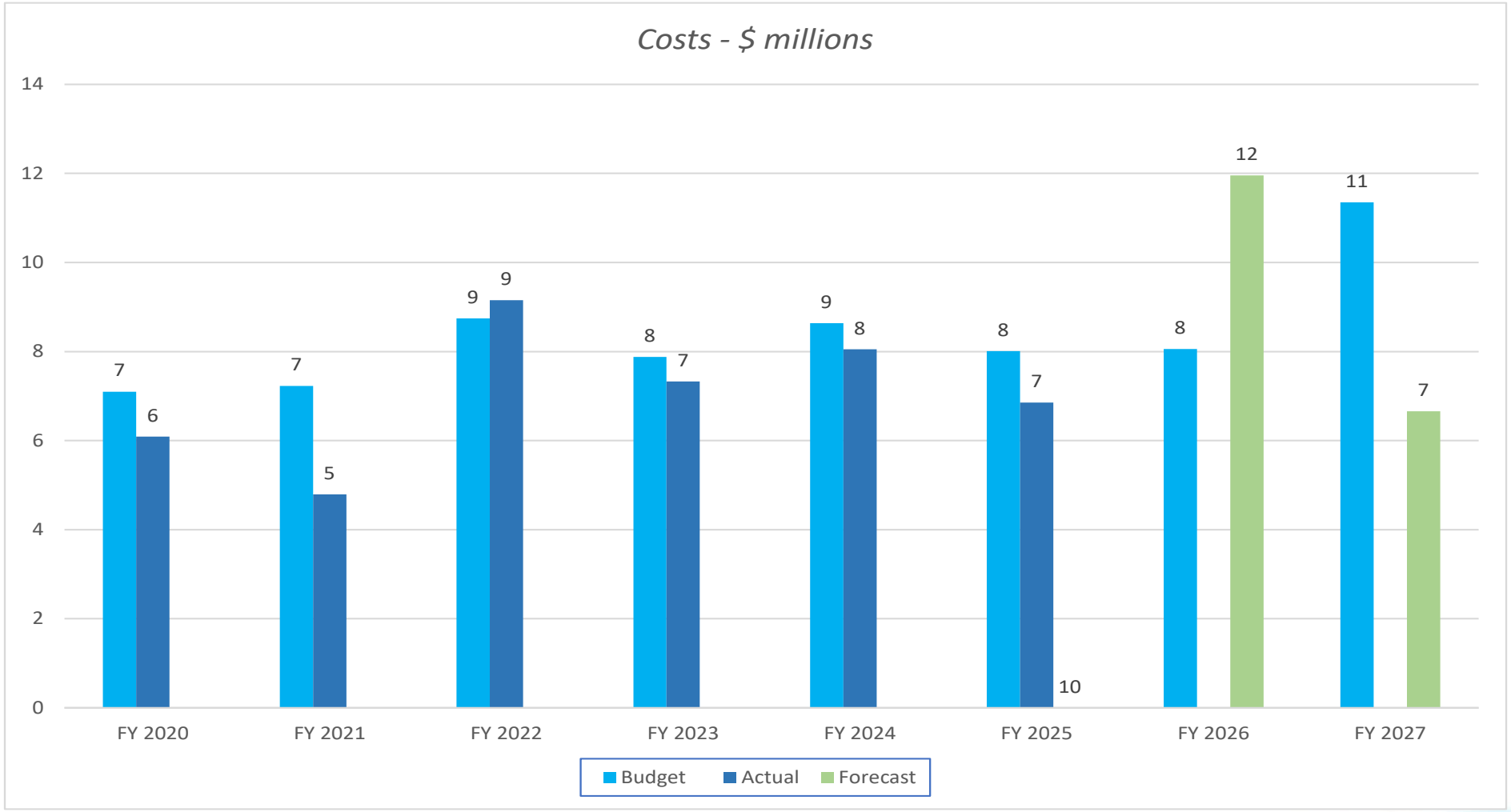
Water System –Sludge Budget & Forecast



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Water Sludge Summary

- The accumulated sludge is a byproduct of the water treatment process. The process collects the suspend particles (turbidity) and settles within the basins. The sludge is then removed from the basins and is disposed of under the contract of both services
- Volumes of sludge removal varies from year to year depending on the quality of source waters
- The FY 2026 forecast reflects increase due to contract changes for Springwells, Northeast, and Southwest Treatment Plants:
  - The Board approved extension of the current supplier contract to October 1, 2025 – May 1, 2026, with a cost impact of $4.9M while coinciding with a new supplier contract that was negotiated for the sludge removal and hauling scheduled to begin November 1, 2025

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Water Sludge Summary

- The reduction for the FY 2027 forecast is due to:
  - A new supplier contract that was negotiated for the sludge removal and hauling for Springwells, Northeast, and Southwest Water Treatment plants
  - Additional savings were from a new sludge removal contract negotiated for Lake Huron

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