



Budget & Charges Briefing

GLWA Board of Directors
October 9, 2024

Key Takeaways

1. Review timeline for budget and charges season
2. Economic outlook: moderate adjustments after era of historic increases
3. No new charges methodology impacts this year; declining water demand is under watch
4. Achievements in controlling budget and charges
5. Areas of focus – commodities, capital, and financing
6. Operations Report: Managing reliability at the water resource recovery facility and the tension between operating and capital spending
7. The ten-year financial plan forecast provides a roadmap to better understand and prepare for future challenges



Section 1 – Budget & Charges Timeline

Overall Budget & Charges Timing

- Tuesday, September 10, 2024 – Capital Planning Committee –CIP Spend Update
- Monday, September 30, 2024 – Internal Deadline for Operations & Maintenance Cost Center Budget Request
- **Wednesday, October 9, 2024 – Board of Directors Workshop Meeting**
 - **Economic Outlook Task Force Update**
 - **Budget and Charges Briefing**
- Tuesday, October 15, 2024 – Capital Planning Committee – CIP Version 1.0
- **Thursday, October 17, 2024 - Charges Rollout #1 – CIP Version 1.0**
- **Tuesday, November 12, 2024 - Charges Rollout #2 - Units of Service**
- Thursday, November 30, 2023 – Pencils Down to Compile Proposed Materials
- Tuesday, December 10, 2024 – Capital Planning Committee – CIP Version 2.0
- Friday, December 20, 2024 – Audit Committee - Proposed Budget and Charges Strategy

Overall Budget & Charges Timing

- **Thursday, January 9, 2025 – Charges Rollout #3 – Proposed Charges and Introduction of Proposed Budget**
- Monday, January 13, 2025 through Wednesday, January 15, 2025 – Member Partner One-on-One Meetings
- **Thursday, January 16, 2025 – Charges Rollout #4 – Feedback on Charges and Further Review of Proposed Budget**
- Wednesday, January 22, 2025 (Tentative) – Board Meeting Presentations
 - Proposed FY 2026 and 2027 Biennial Budget (Revenue Requirement) and Five-Year Financial Plan
 - Proposed FY 2026 Charges
 - Proposed FY 2026-2030 Capital Improvement Plan Presentation

Overall Budget & Charges Timing

- Wednesday, February 26, 2025 (Tentative) – Board Meeting
 - Public Hearing FY 2026 & FY 2027 Biennial Budget
 - Public Hearing FY 2026 Schedule of Revenues and Charges
 - Proposed Adoption of FY 2026 & FY 2027 Biennial Budget (subject to public comment)
 - Proposed Approval of the FY 2026 Schedule of Revenues and Charges (subject to public comment)
 - Proposed Approval of FY 2026–2030 Capital Improvement Plan
- Monday, July 1, 2025 – Effective date of budget, charges, and capital plan



Section 2 – Economic Outlook

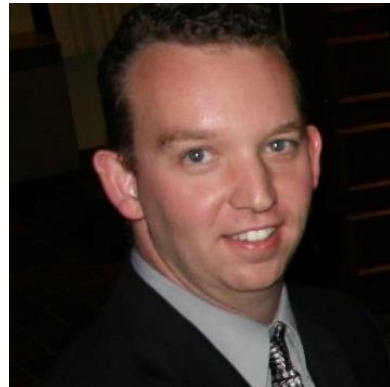


Section 3 – Charges Updates

New Charges Consultant – Willdan Financial Services



Jeff McGarvey
Vice President &
Managing Principal



Kevin Burnett
Principal Consultant

Not pictured: Michael Cronan, Lead Project Analyst



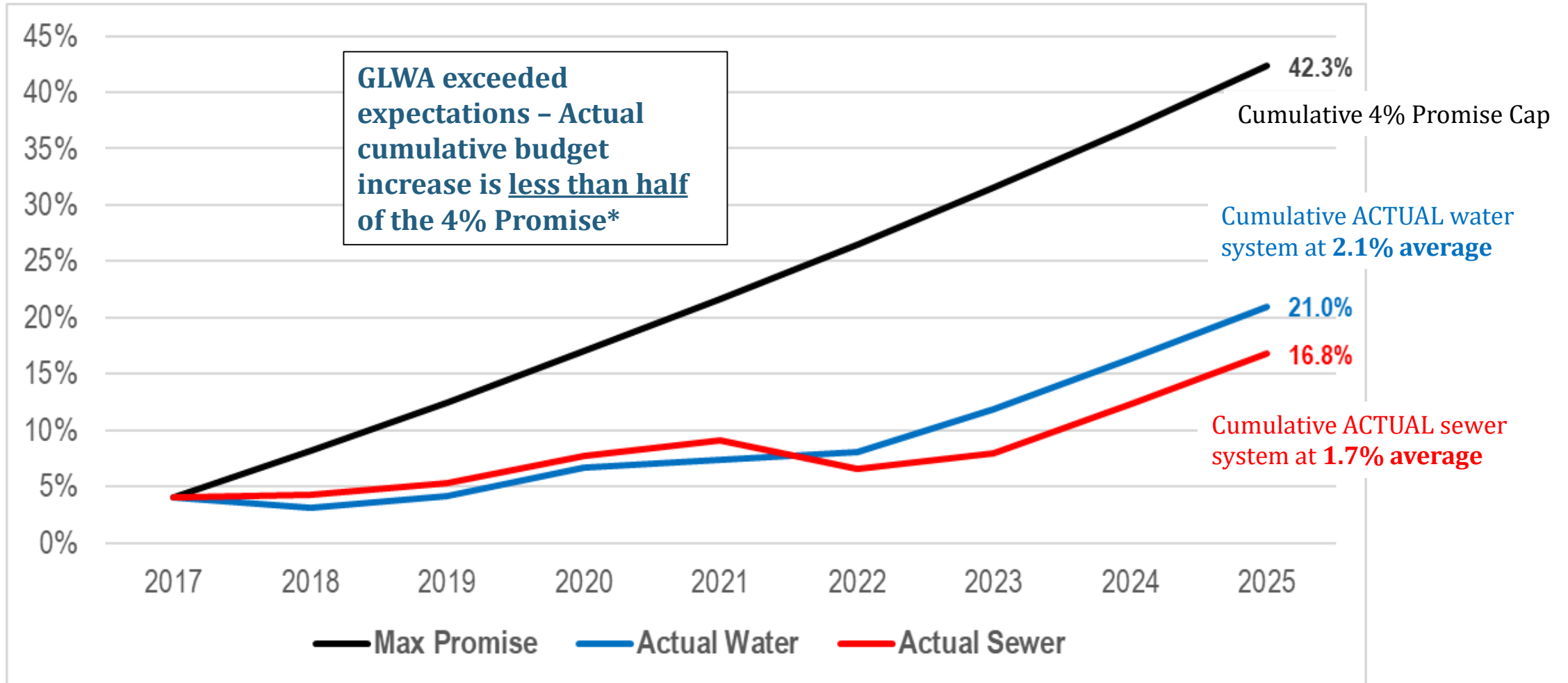
Jason Gray
Vice President &
Managing Principal

- ✓ Selected by a panel of GLWA team members and Member Partners
- ✓ Actively engaged in ramp-up with the Charges Outreach & Modeling Team (Matt Lane and Guy Belew) and transition of extensive modeling and historical information with retiring Bart Foster, The Foster Group
- ✓ Willdan is the lead for the FY 2026 Cost of Service Study
- ✓ Ideal time for transition as there are no significant methodology or core data updates such as Water Contract Alignment Process or Sewer Shares
 - ✓ All Member Partners should expect a System Average charge adjustment
 - ✓ Note: There are four water contract reopeners – impact to be determined



Section 4 – Achievements in Controlling Budget & Charges

✓ Cumulative Budget Well Under the 4% Promise



* Founding documents require that budget increase for first ten years (FY 2016 thru FY 2025) would not exceed 4%

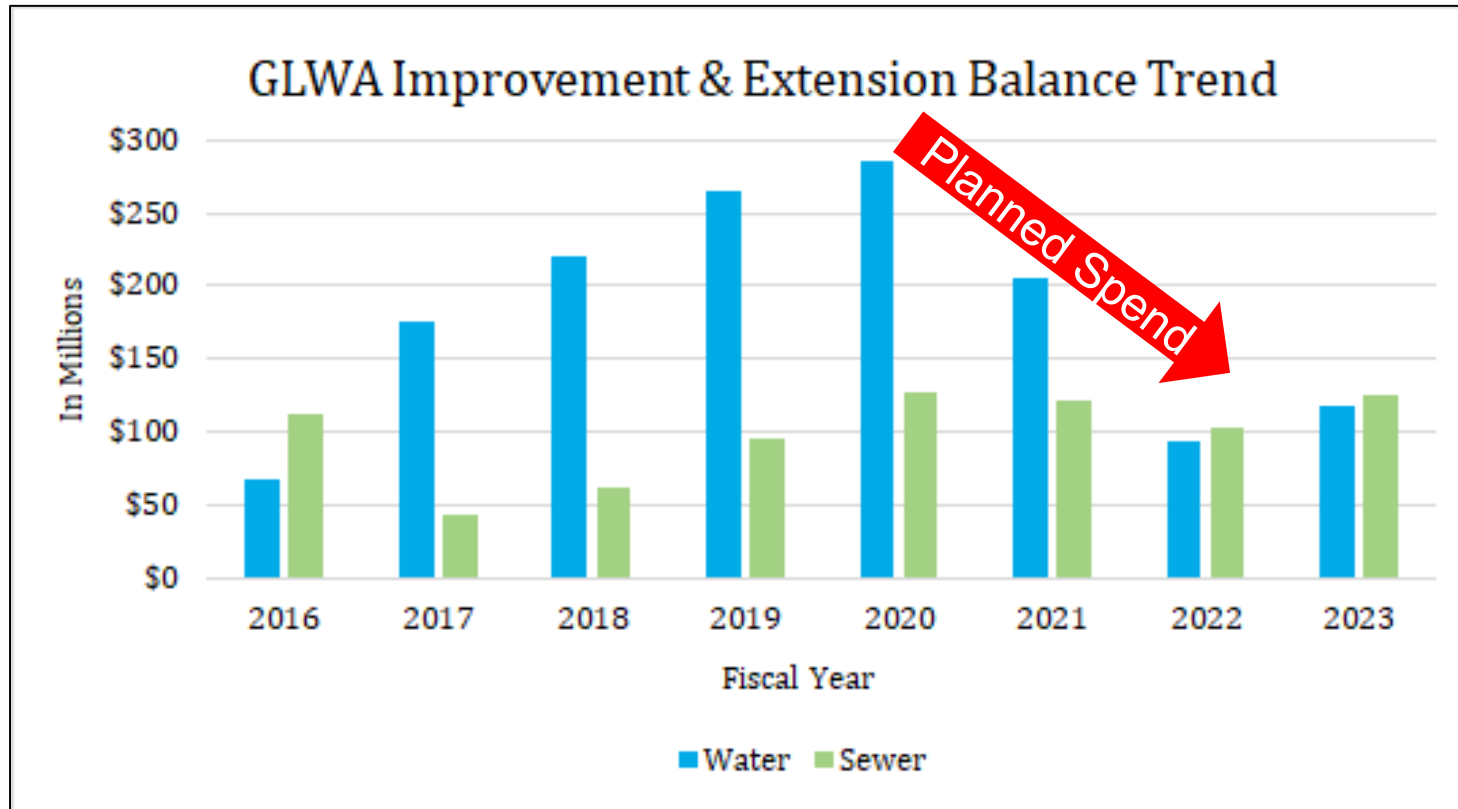
✓ Cumulative Charges Well Under the 4% Promise

- Significant Charge Stability
- Nine-year actual Average Annual Charges Increase
 - Water: 2.6%
 - Wastewater: 2.1%

Average System Charge Adjustments

Year	Water	Sewer
2017	4.5%	8.3%
2018	1.8%	-0.7%
2019	1.8%	0.1%
2020	0.6%	0.8%
2021	3.2%	2.0%
2022	1.5%	0.6%
2023	3.7%	2.4%
2024	2.8%	2.8%
2025	3.3%	3.0%
9-Year Average	2.6%	2.1%

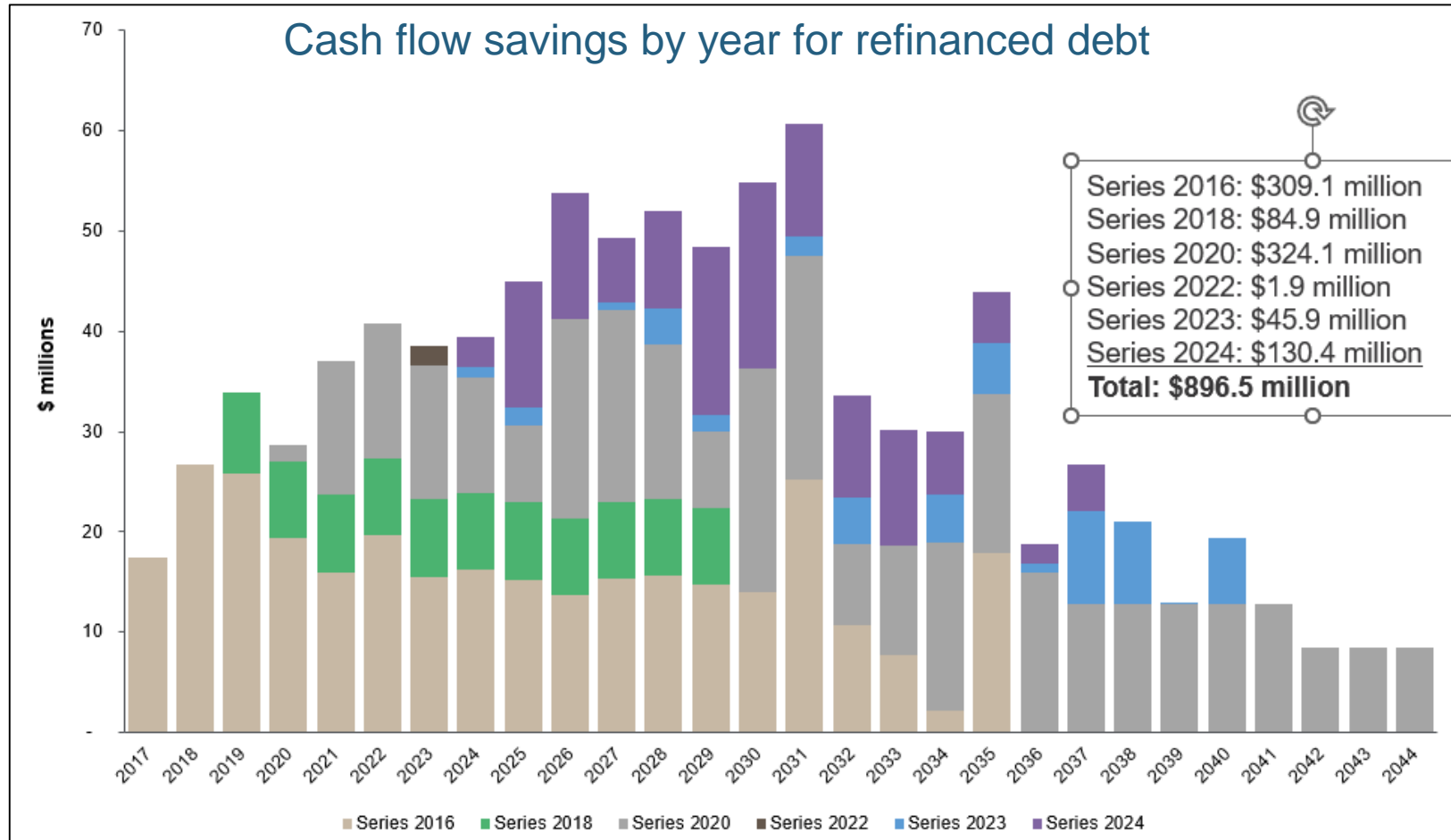
✓ Use Cash Reserves Wisely to Reduce Debt



Source: Great Lakes Water Authority Annual Financial Reports

- Years of positive budget variances and budget allocations increased cash balances in the Improvement & Extension Fund
- This allowed GLWA to have a “debt holiday” to fund the capital program at a time when investment rate of return on those funds would have been low
- Current and forecast levels are stabilized to maintain adequate reserves – a key point for rating agencies and investors

✓ Proactively Manage Debt to Secure Savings

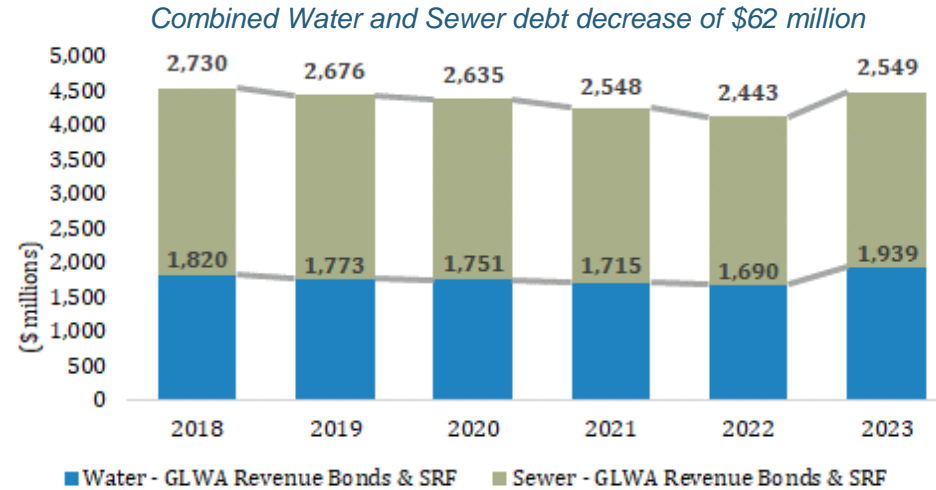


- GLWA has achieved nearly \$900 million in savings from future cash flow debt service requirements since the stand-up of GLWA
- Strategies have included taxable refunding, non-taxable refunding, and tender transactions
- Outstanding debt is monitored for optimal refunding opportunities

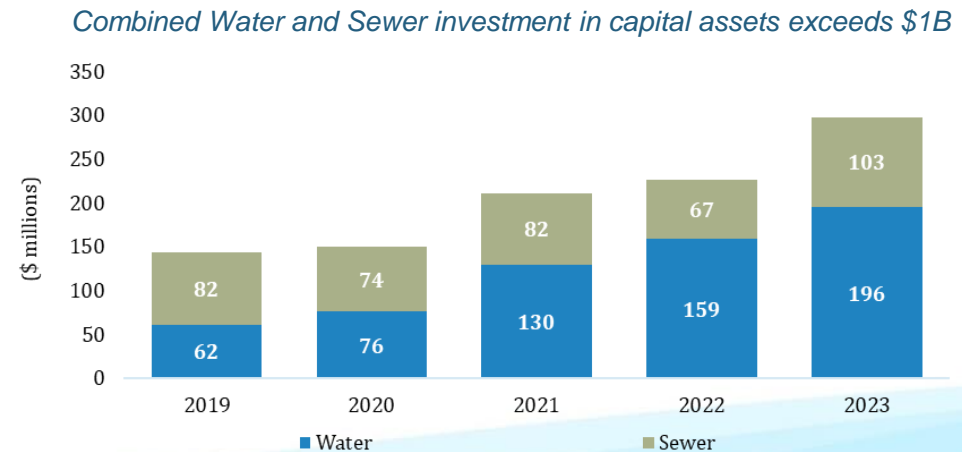
✓ Controlling Leverage While Investing in Capital Assets

- Because of success in limiting customer charge increases, conventional financial leverage metrics, such as debt to operating revenue (while improving), do not capture the full extent deleveraging and improvements to overall financial sustainability of GLWA
- GLWA's results over the last five years demonstrate significant progress in managing debt while investing in capital assets
 - Water system bonds and loans outstanding *increased* from year end 2018 to 2023 by \$119M while \$623M was invested in capital assets
 - Sewer system bonds and loans outstanding *decreased* from year end 2018 to 2023 by \$181M while \$408M was invested in capital assets

GLWA Water & Sewer Revenue Bonds & SRF Outstanding (Year End)



Capital Project Investments Activity



Source: GLWA financial statements
 *Outstanding debt net of current and non-current contract obligations

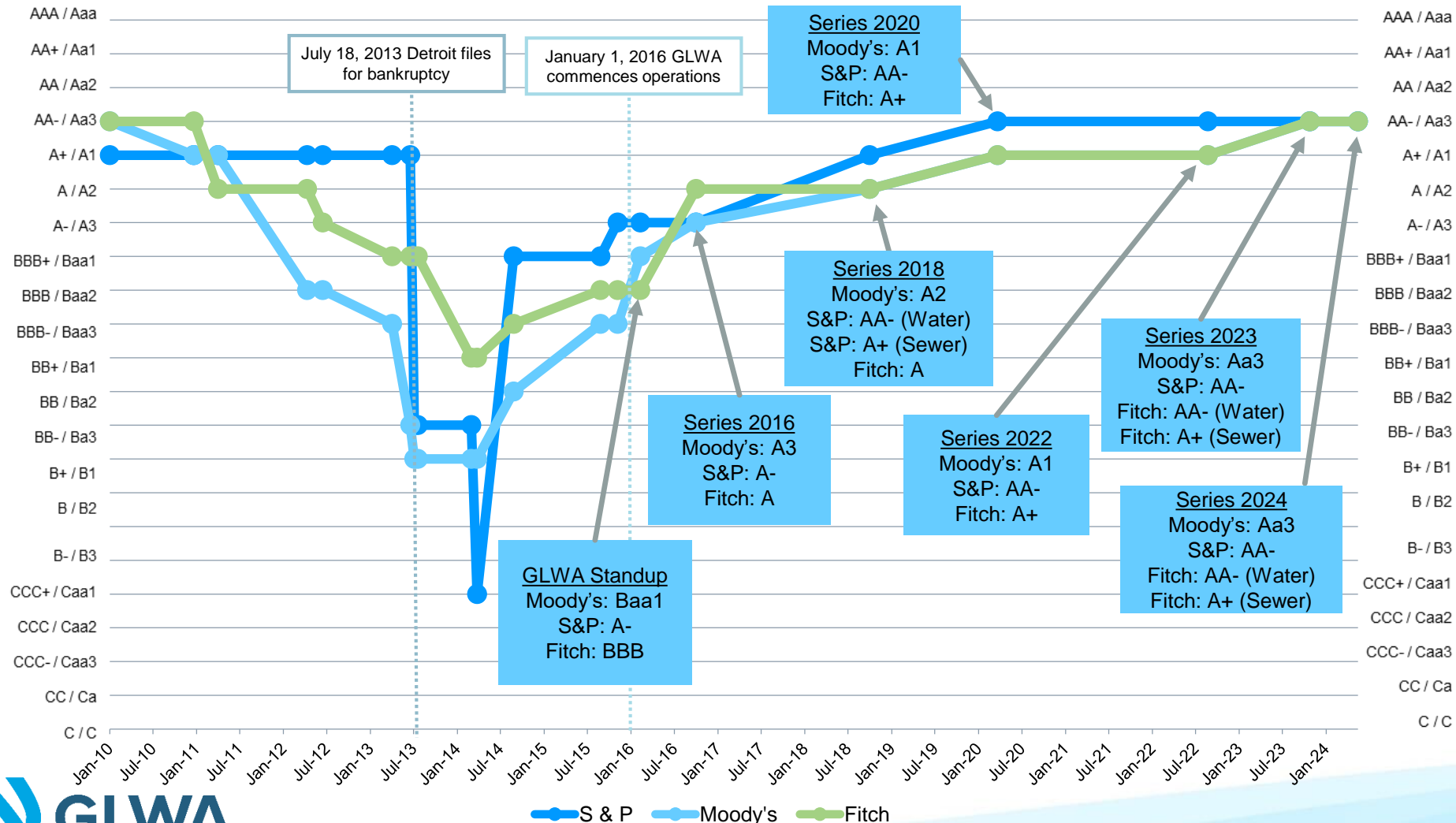
✓ Eliminate Reserve Fund Requirement for Current and Future Bonds

- Goal set in 2016 - Achieve a “AA” category rating from at least two rating agencies to reduce / eliminate the need to fund a debt reserve
- Accomplishments
 - October 2024 – Rating criteria goal achieved
 - May 2024 – Refunding bond transaction leveraged the new provision to reduce debt / enhance cash flow savings
 - \$16.1 million released from the Water System reserve accounts
 - \$16.1 million released from the Sewer System reserve accounts
 - Reduces future reserve requirement to zero
- Outcome - Overall lower cost of borrowing and more efficient cash management

**\$32.2
Million
Released**

History of Senior Lien Water and Sewer Ratings

GLWA Senior Lien Ratings History (DWSD Prior to January 1, 2016)

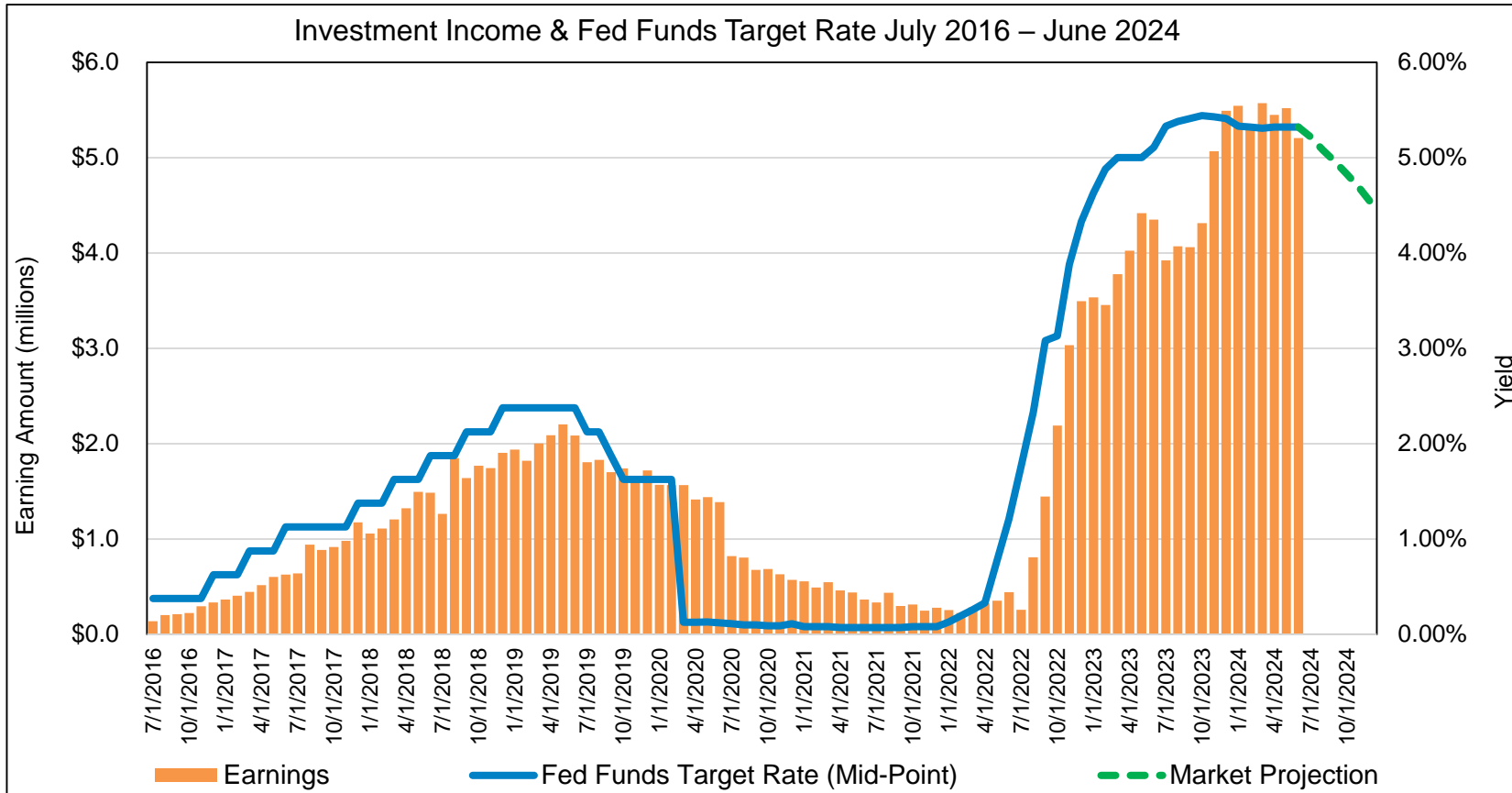


Note: in cases where a rating agency rates Water Senior and Sewer Senior Lien differently, chart displays highest of the two ratings

- Ratings can decline quickly, but the path to increased ratings is a long journey
- GLWA is committed to strengthening credit quality
- Key metrics align with the financial plan including
 - Debt Service Coverage
 - Days Cash on Hand
 - Steady Revenue Growth

✓ Optimize Investment Revenue

Monthly Investment Income & Fed Funds Rate



- ✓ Since inception, a professional investment management program strengthened the rate of return on investments
- ✓ Based on liquidity needs, 50% or more of the portfolio is for obligations that are 12 months or less. The result is a short-term duration of the portfolio and heavily impacted by changes in the Federal Funds target rate; the chart shows income consistently following the Fed Funds rate.
- ✓ Note: The pace and magnitude of future Fed rate cuts is uncertain. That While investment earning offset a significant portion if charges increase in recent years, that trend may weaken.

✓ Seek New Revenue Sources – Grant Activity

GLWA continues to expand efforts to pursue and track grant funding opportunities.

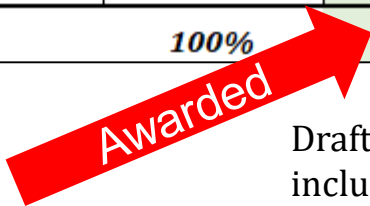
- The **pre-award phase** includes the grant application process and the period prior to the signing of the grant agreement between the awarding agency and GLWA.
 - Presently, this consists of **9 programs totaling \$45.8 million**
- The **award phase** reflects the period after the agreement is executed with the awarding agency. In this phase, GLWA becomes responsible for meeting the administrative, financial, and programmatic reporting requirements of the award.
 - Presently, this consists of **12 grants with \$29.5 million in total funding**
- The **post award** phase is the final stage of grant activity and includes final reporting requirements, auditing, and closeout. There are final financial and programmatic reports that must be submitted to formally close out the grant as defined in each grant agreement.
 - There currently **3 grants in this phase totaling \$400k.**
- The **award completion** phase tracks historic grant activity for reporting purposes.
 - Since FY 2020, GLWA successfully completed **19 grants totaling \$36.3 million**
- The **programs not awarded** category reflects programs that GLWA was not awarded, or alternatively, programs that will not continue to be pursued by GLWA.
 - Since FY 2020, this consists of **8 grant applications totaling \$548.3 million**



Section 5 – Areas of Focus

FY 2025 CWSRF Award at 14% of Submittals

CIP Project #	Description	Application Amount	Draft IUP Loan Amount	Not Within Fundable Range
211007	5837-01 Pumpstation #2 Bar Rack Replacements and Grit Collection System Improvements	\$201.60	\$0.00	\$201.60
216008	5839-01 Rehabilitation of Screened Final Effluent (SFE) Pump Station	\$101.00	\$0.00	\$101.00
211005	5859-01 Pump Station #2 Variable Frequency Drive (VFD) Replacement	\$13.00	\$0.00	\$13.00
270004	6001-01 Combined Sewer Overflow (CSO) Improvement Project - Oakwood & Lieb	\$57.10	\$57.10	\$0.00
260206	6003-01 Rehabilitation of 7 Mile Sewer System	\$30.00	\$0.00	\$30.00
260510	6004-01 CSO Outfall Rehabilitation Phase VI (Rouge River Outfalls and Associated Gravity)	\$10.00	\$0.00	\$10.00
CWSRF Total		\$412.70	\$57.10	\$355.60
<i>Percentage Awarded vs. Applications Submitted</i>		100%	14%	86%



Awarded

Draft award of \$57.1M includes 4.2M of loan forgiveness

- Historically, availability and award of Clean Water State Revolving Fund Loans (CWSRF) provided relief to sewer system financial demands.
- Declining funding overall and changing criteria are a concern
- For the State of Michigan’s FY 2025, the CWSRF Draft Intended Use Plan (IUP) indicates that only 14% of GLWA’s submitted projects will be funded
- Final CWSRF IUP is expected in October 2024

Declining Clean Water SRF Available

Last Year (FY 2024) CWSRF Funding

In summary, EGLE plans to award the following in FY2024:

Table 4 Proposed Total Funds in FY2024

Award	Amount
ARP Grant	\$202,968,158
CWSRF Loan	\$842,928,342
Traditional Forgiveness	\$13,900,000
BIL PFAS Forgiveness	\$9,144,000
BIL CWSRF loan	\$45,708,750
BIL CWSRF Forgiveness	\$43,916,250
Total	\$1,158,565,500

This Year (FY 2025) Draft IUP CWSRF Funding

In summary, EGLE plans to award the following in FY2025:

Table 3 Proposed Total Funds in FY2025

Award	Amount
CWSRF Loan	\$565,000,000
Traditional Forgiveness	\$14,040,800
BIL EC Forgiveness	\$9,227,000
BIL CWSRF Supplemental loan	\$49,869,840
BIL CWSRF Supplemental Forgiveness	\$47,914,160
Total	\$686,051,800

Less funding available



BIL: Bipartisan Infrastructure Law

Declining Drinking Water SRF Available

Last Year (FY 2024) DWSRF Funding

In summary, EGLE plans to award the following in FY2024:

Table 3 Proposed Total Funds in FY2024

Allocation	Amount
ARP SRF Grant	\$376,141,738
DWSRF Loan	\$116,430,961
DWSRF Loan Forgiveness	\$3,569,039
BIL Supplemental Loan	\$ 19,001,420
BIL Supplemental Loan Forgiveness	\$23,540,580
BIL Emerging Contaminants Loan Forgiveness	\$26,224,000
BIL LSLR Loan	\$55,742,258*
BIL LSLR Loan Forgiveness	\$53,556,287*
Drinking Water Infrastructure Grant	\$7,707,728
ARP LSLR/Watermain Grant	\$78,800,000
Total	\$760,714,011

*BIL DWSRF LSLR loan and PF categories have been overcommitted by \$7,354 and \$7,065 respectively. EGLE anticipates projects will drop/decline LSLR dollars. To spend 100% of BIL available dollars in FY24, these two buckets have been overcommitted on the PPL.

Draft DWSRF Funding Available as of August 2025

In summary, EGLE's available funds for FY2025:

Table 3 Proposed Total Funds in FY2024

Allocation	Amount
DWSRF Loan	\$280,800,000
DWSRF Principal Forgiveness	\$5,000,000
BIL DWSRF Supplemental Loan	\$38,980,554
BIL DWSRF Supplemental Principal Forgiveness	\$36,712,040
BIL DWSRF Emerging Contaminants Principal Forgiveness	\$22,152,890
BIL DWSRF LSLR Loan	\$43,706,853*
DWSRF Loan	\$280,800,000
DWSRF Principal Forgiveness	\$5,000,000
Total	\$514,495,514

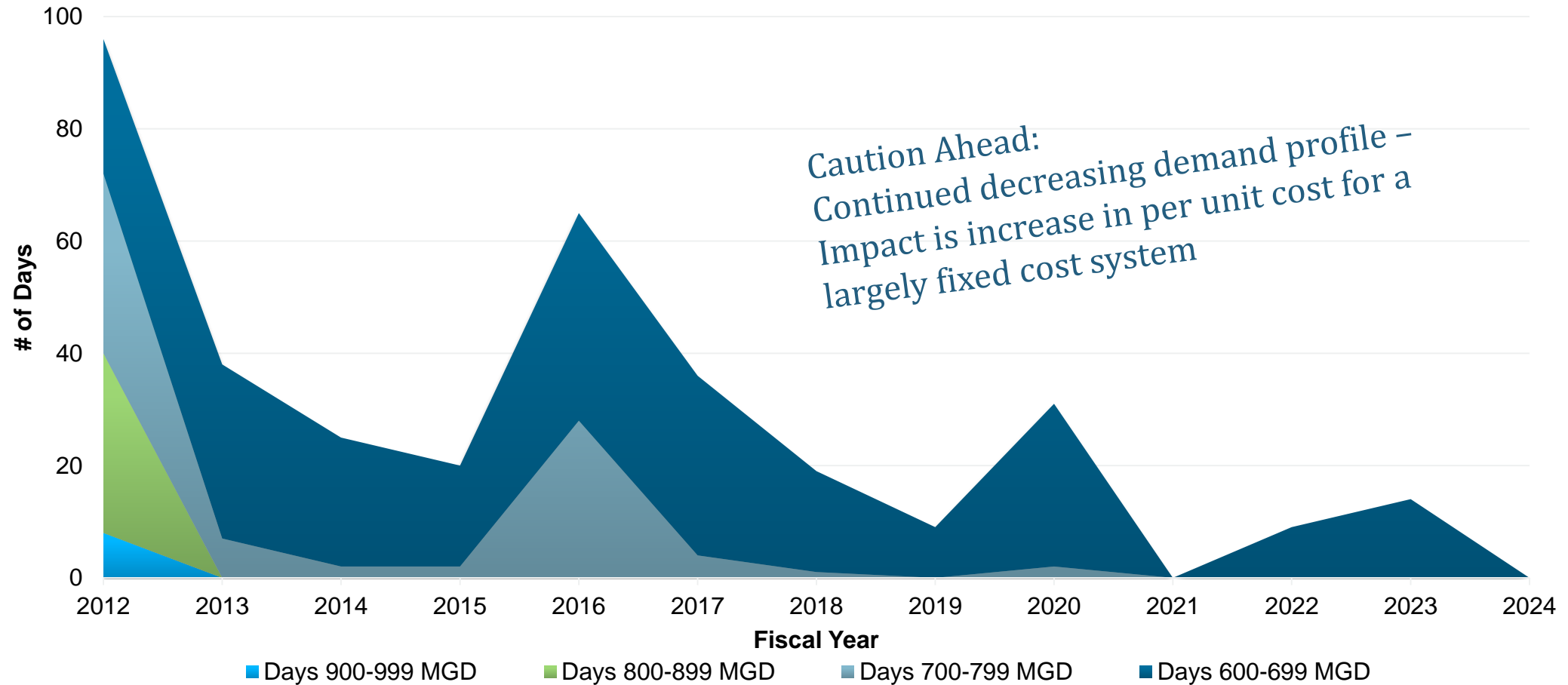
*Does not include \$1,300,000 being allocated for DWEHD set-aside use

Less funding available

Note: No Drinking Water SRF (DWSRF) projects submitted for FY 2025 due to active loans and construction activity underway

Declining Water Demands

Peak Demand Profile
2012-2024

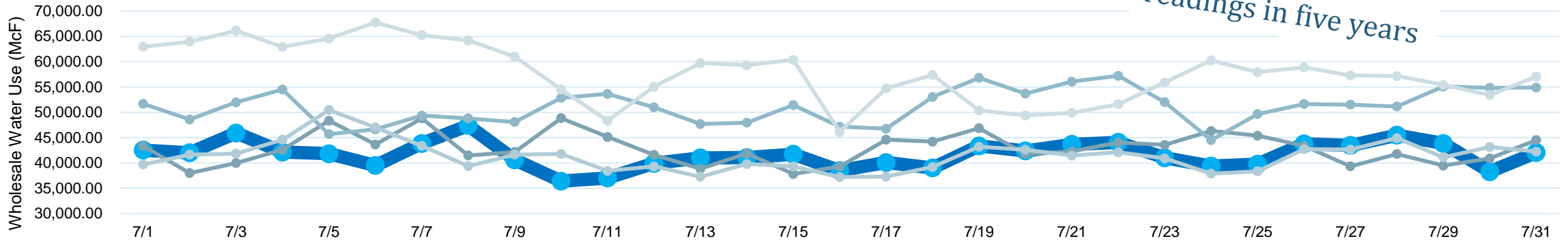


FY 2025 Monthly Usage

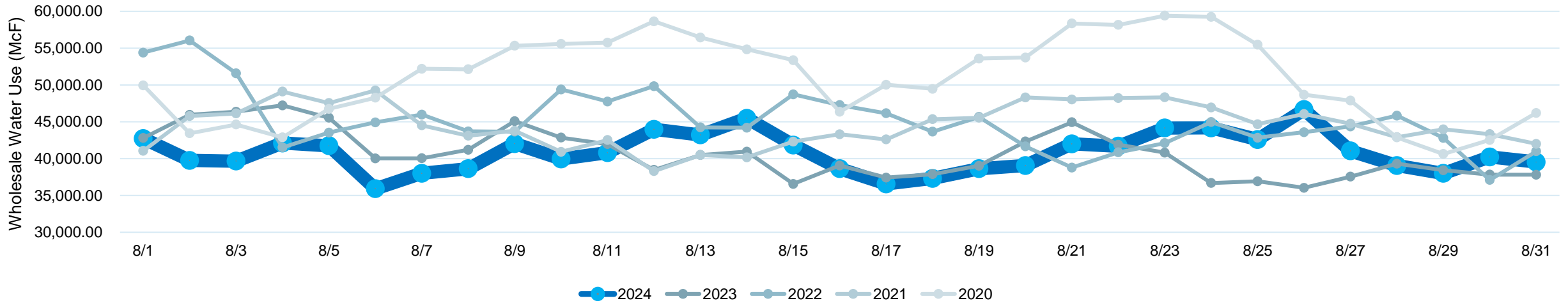
July & August 2024 among the lowest readings in five years

WAMR: Water Automatic Meter Reading system

July WAMR Usage 2020-2024



August WAMR Usage 2020-2024



● 2024 ● 2023 ● 2022 ● 2021 ● 2020



Utility & Commodity Cost Review

- 💧 Cross-functional report
- 💧 See separate slide deck



Section 6 – Managing Reliability: Tension Between Operating and Capital Spending

Wastewater Operational Complexity

- ◆ Level of Service
- ◆ Capital Portfolio of “NEEDS” not wants
- ◆ The compounding effects of aged equipment
- ◆ Regulatory complexity

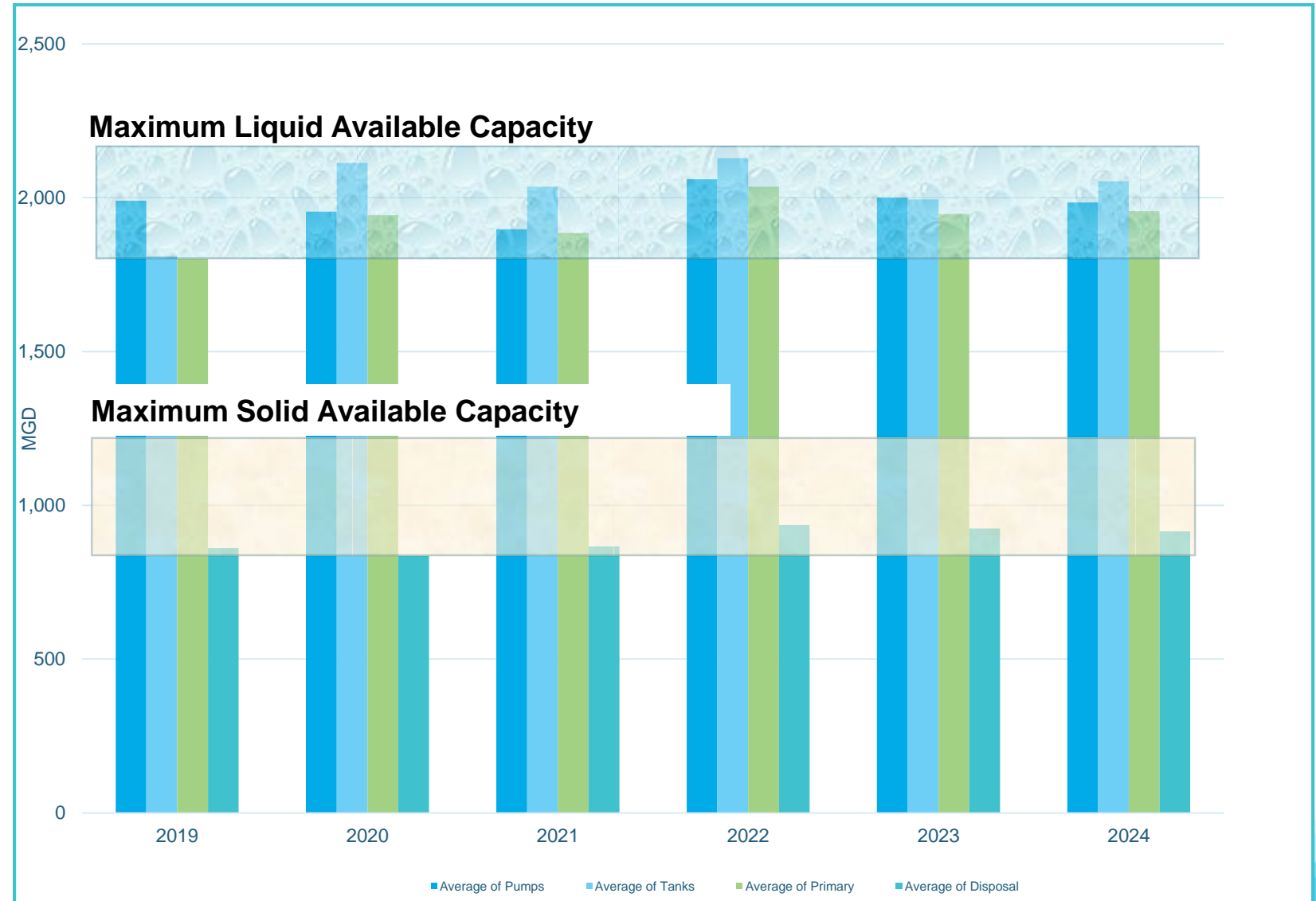
“Protect public health through resilient, sustainable, and efficient Operations, Maintenance and Engineering for Southeast Michigan”

Water Resource Recovery Facility Avail. Capacity

WRRF Capacity

WRRF Maintained 97% liquid stream Capacity compliance with its permit.

WRRF maintained 98% solids stream capacity* compliance with its permit.



* Solids Capacity is based on 10-day Average during a wet weather period.

Reliability Maintenance Engineering (RME)

- Improve equipment uptime and availability

- Facilities

 - Fire alarm system complex, aged and requires regular maintenance in wastewater condition.

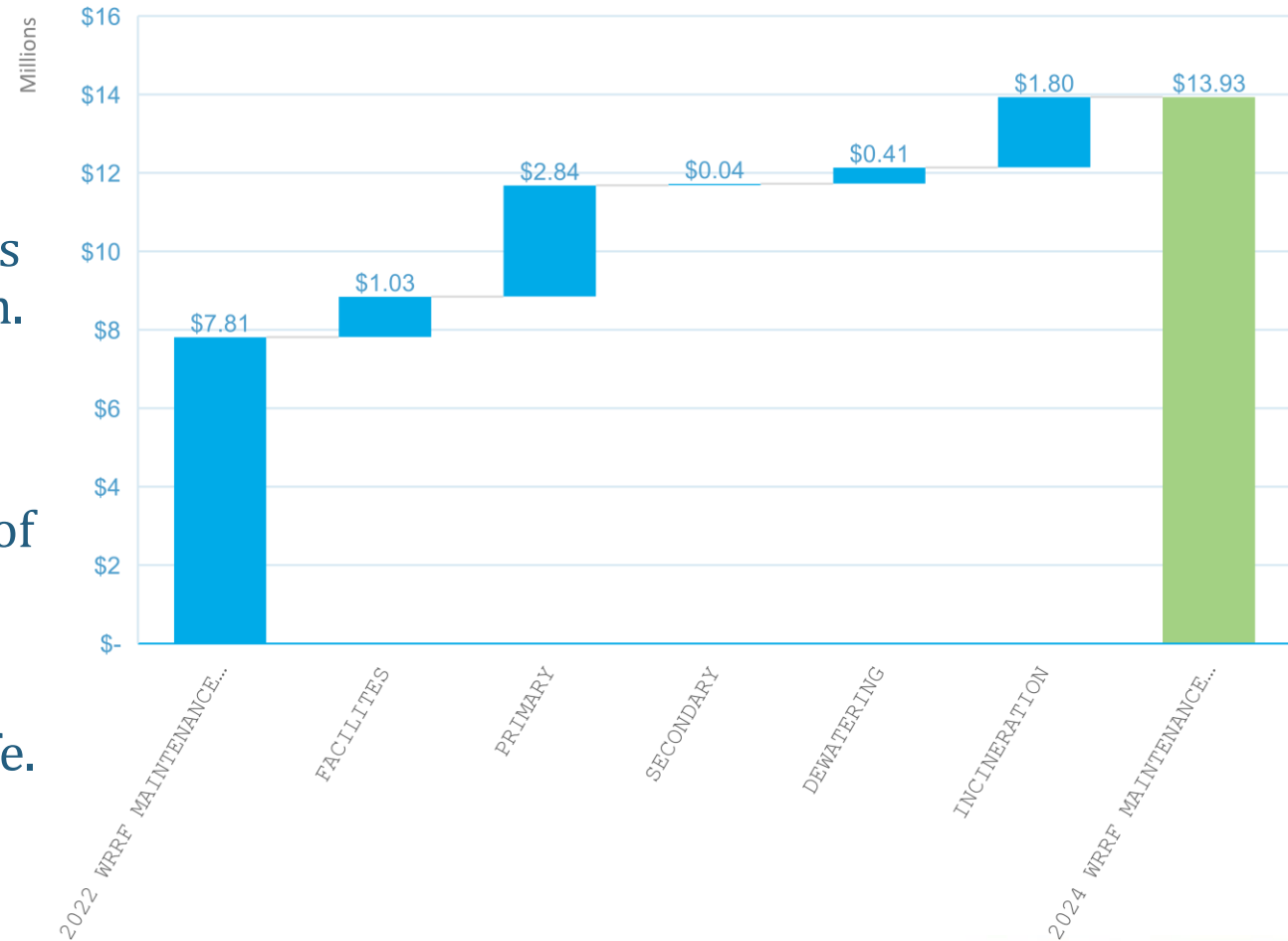
- Primary

 - Pump Station #1 regular failure on the chain and flight for the Grit System, regular failure of the screening conveyor.

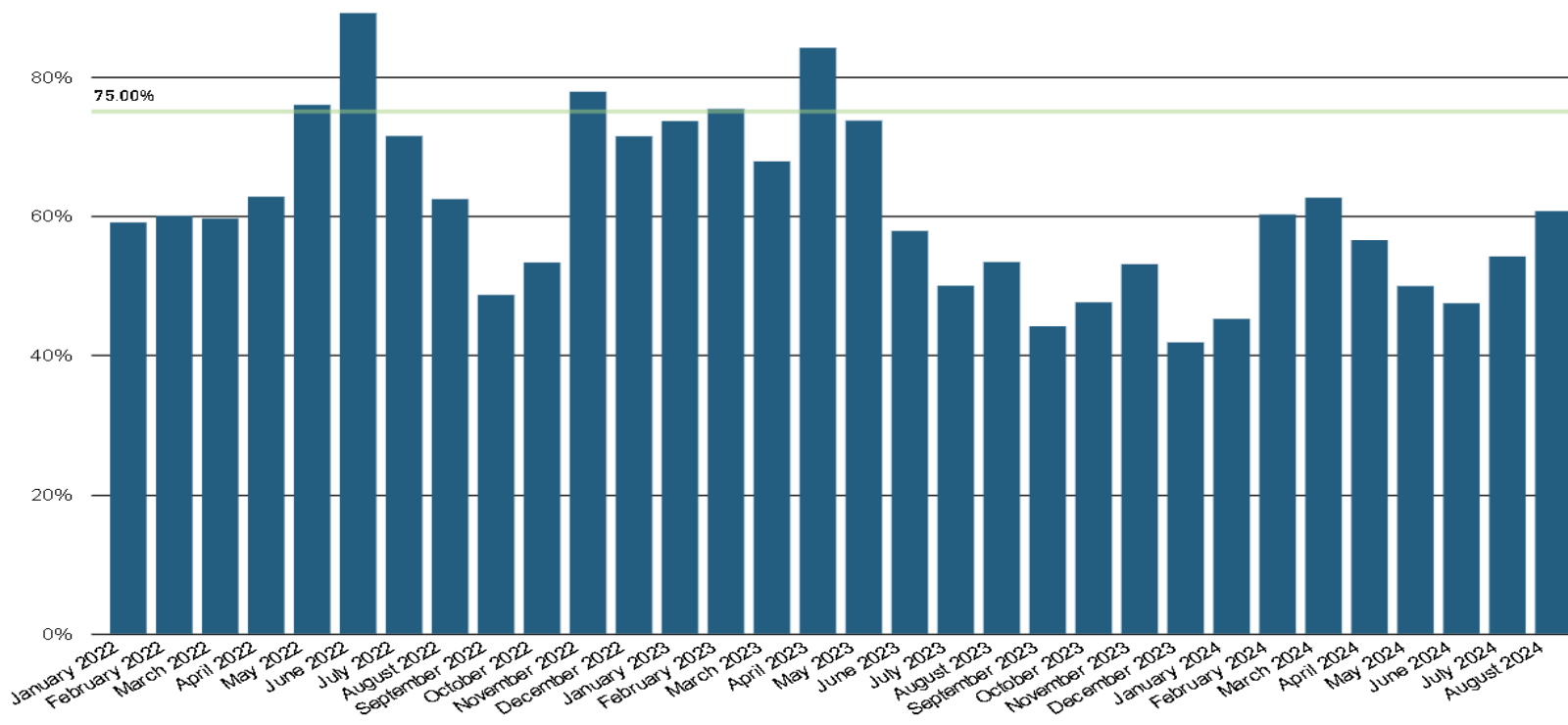
- Incineration

 - Much of the facility has exceeded its useful life. Year over year increase in hours of repair.

Wastewater Maintenance Cost Increase



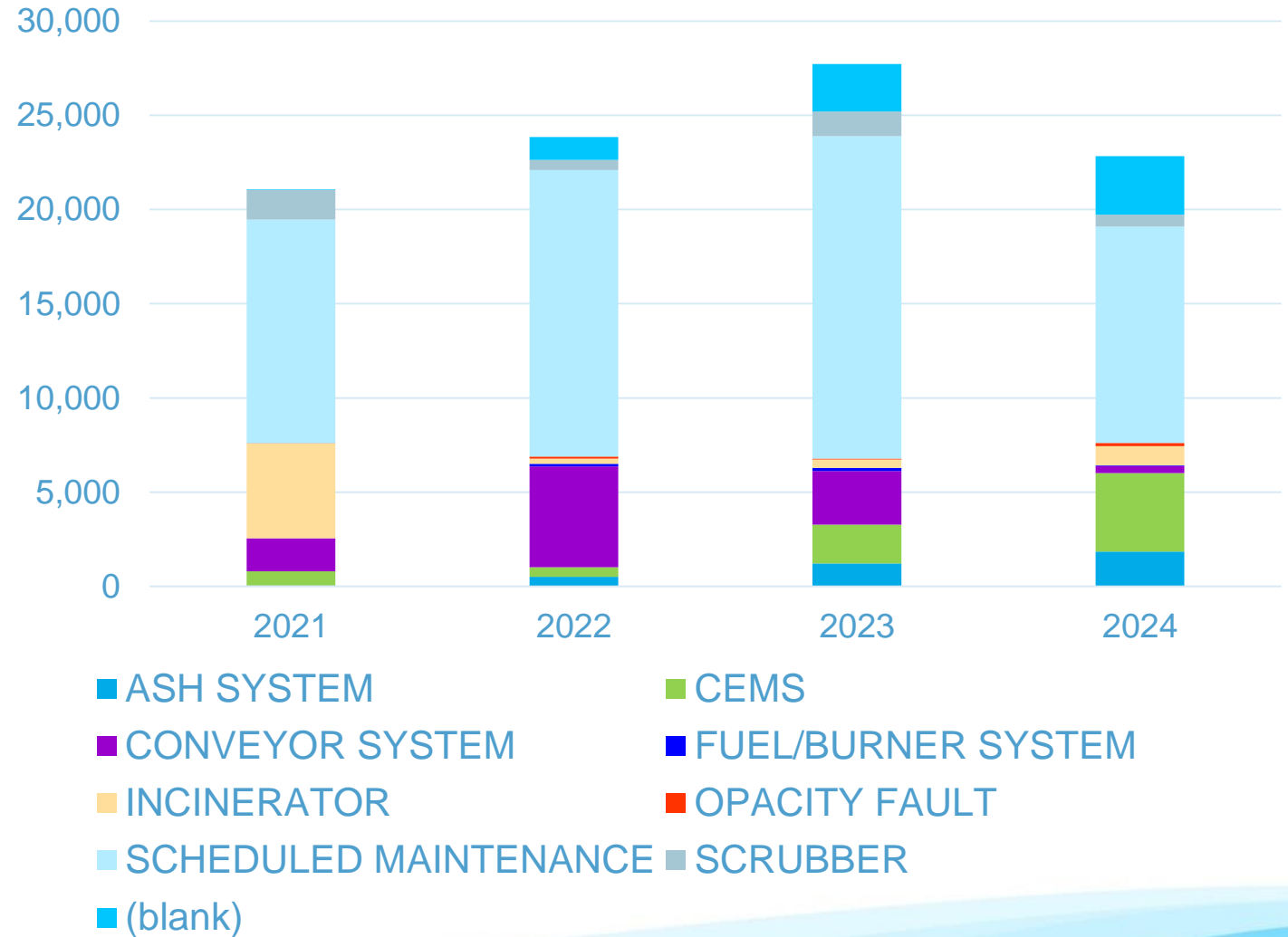
Wastewater Incineration Reliability



- Reliability of the incineration system continues to remain lower than desired performance
- The low availability requires operations to maintain additional units hot increasing facilities gas usage.

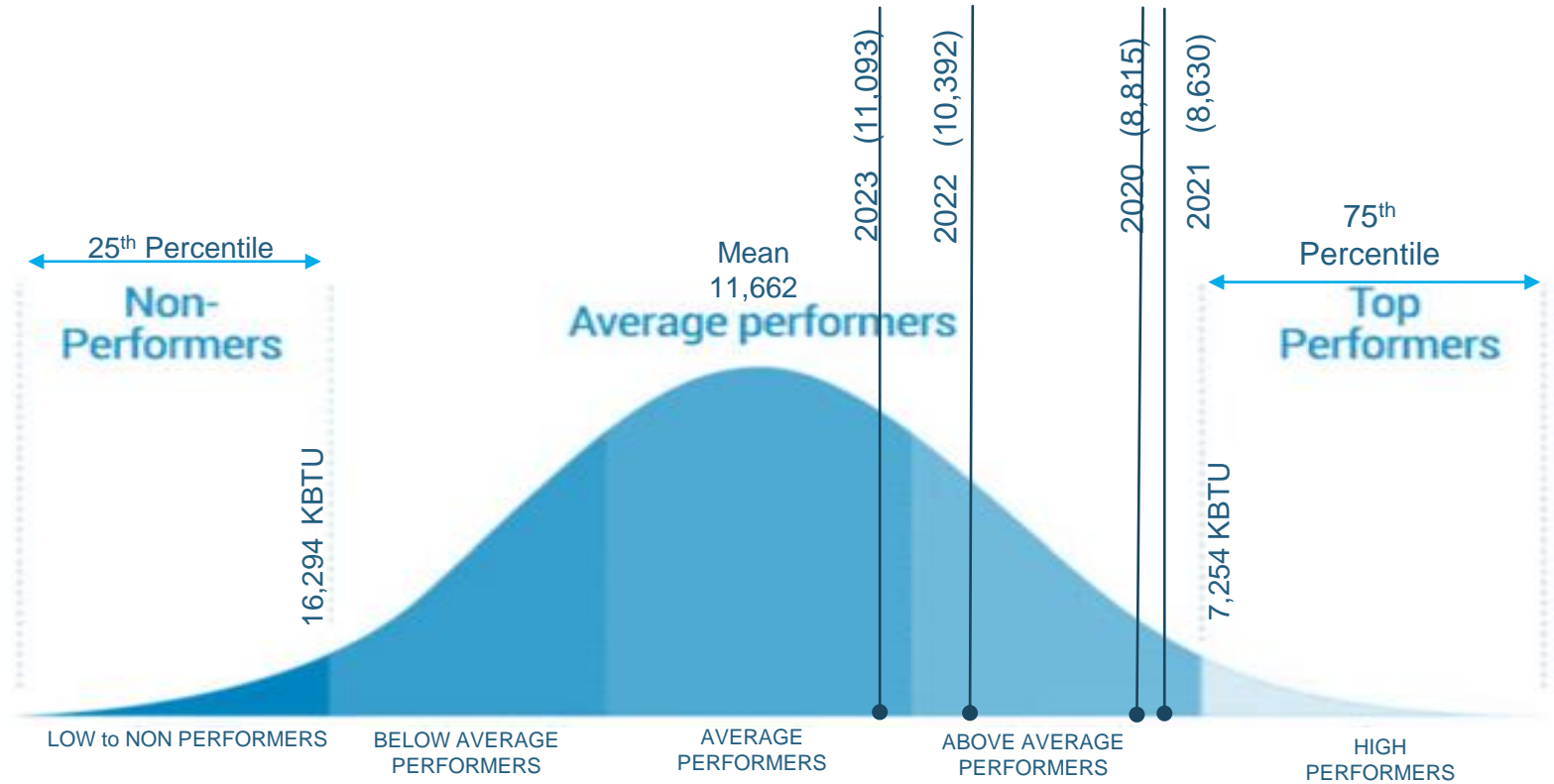
Wastewater Incineration Reliability

- 💧 Increase outage from Continues Emission Monitoring System failures.
- 💧 Increase scheduled Maintenance is necessary to combat the aging infrastructure.
- 💧 Complete overhaul of incineration can exceed \$600M.



Water Resource Recovery Operations

💧 The decrease in energy performance for treatment is contributed to the increase in gas usage.

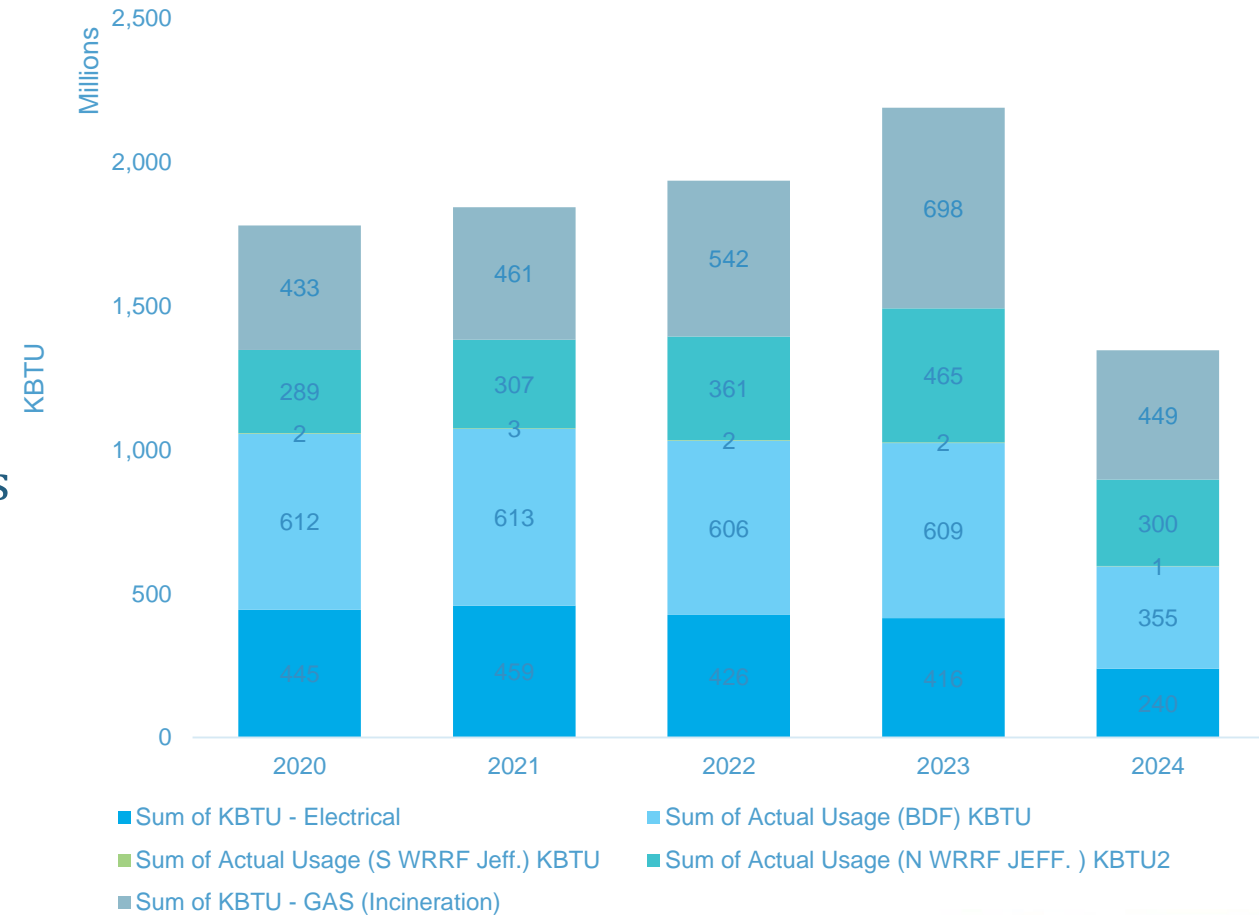


***Aggregate data from 2023 AWWA Energy Consumption for Wastewater – Based on 48 Utilities Normalized to production (kBTU/Year/MG)**

Water Resource Recovery Power Usage

- 💧 The decrease in energy performance for treatment is contributed to the increase in gas usage.
- 💧 Majority of the increase is contributed to the incineration operations and condition.
 - 💧 Average BDF to process 75% of the biosolids is around 609M KBTU
 - 💧 FY 24 Treatment Cost – approx. \$274 per Ton
 - 💧 Average Incineration for 25% of the biosolids processing is around 533 KBTU and rising
 - 💧 FY 24 Treatment Cost – approx. \$750 Per Ton

Wastewater Energy Usage



*2024 include up to July



Section 7 – Ten Year Financial Plan

Ten Year Financial Plan

- ◆ Present working financial plan is based on the May 2024 bond feasibility forecast published in conjunction with bond refunding transaction
- ◆ Internally, next 30 to 45 days, finalizing internal budget requests and realigning with that plan
- ◆ GLWA has utilized biennial budgeting published within a five-year financial plan that aligns with a ten-year forecast since inception
- ◆ This preferred practice forces reality in financial management to understand trends and the impact of decisions
- ◆ The goal is predictable and stable outcomes

Financial Plan Evolution: COVID / Post COVID

FY 2030 selected as a data point common to all forecasts to understand how economic news becoming an economic reality has impacted the budget and charges forecasts.

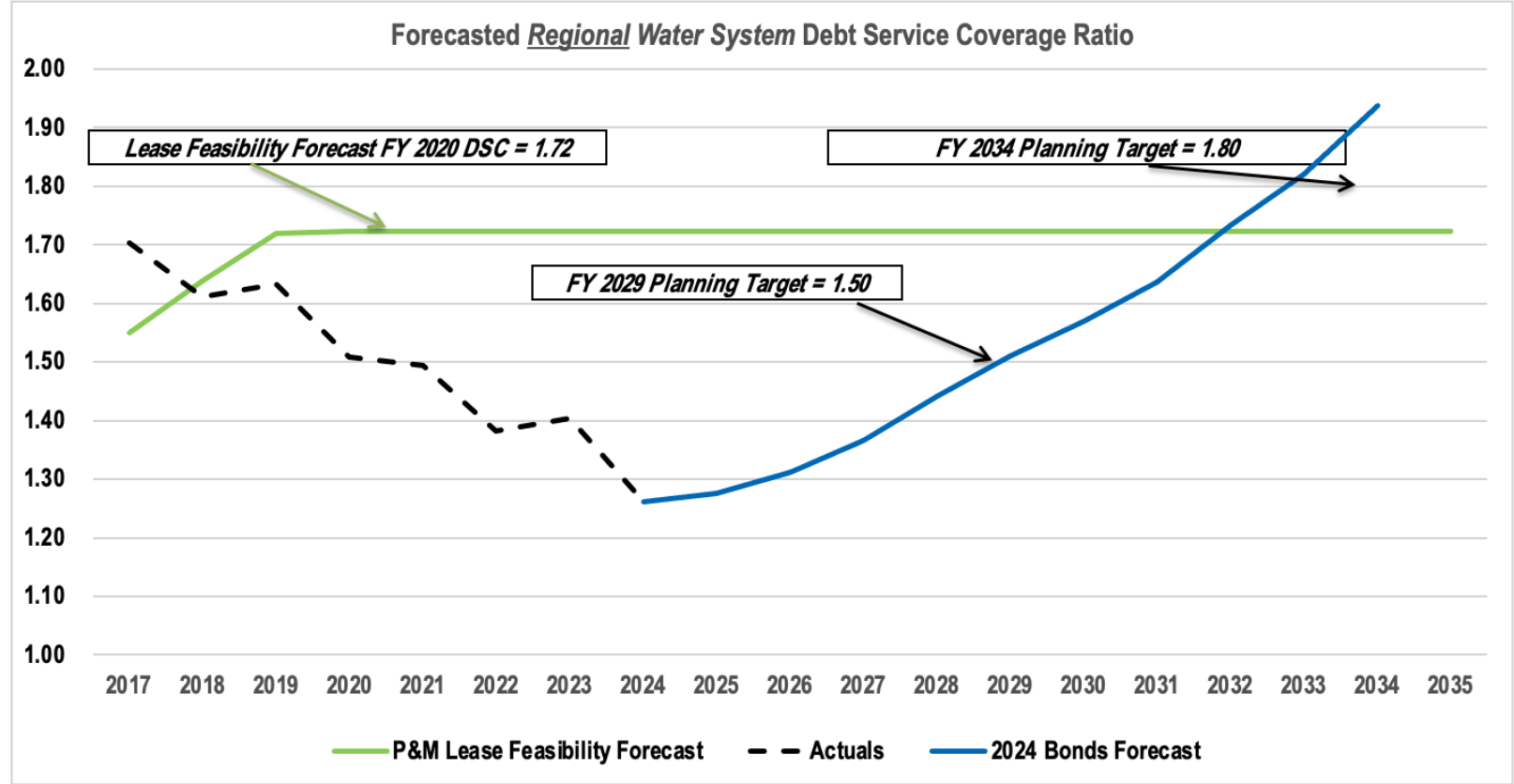
Published Forecast	Annual Water Budget Increase	Annual Water Charge Increase	FY 2030 Water Revenue (All Sources)	Annual Sewer Budget Increase	Annual Sewer Charge Increase	FY 2030 Sewer Revenue (All Sources)
July 2021 - Economic Outlook Task Force Initiated						
December 2021	3.50%	3.0% to 3.7%	\$453M	2.50%	2.1% to 3.7%	\$582M
July 2022	4.00%	2.1% to 4.1%	\$467M	4.00%	2.9% to 4.1%	\$634M
November 2022 - Economic Outlook Task Force - Phase I Report						
November 2022	4.00%	4.5% to 8%	\$530M or \$515M	3.0% to 5.0%	2.6% to 4.3%	\$639M
December 2022	4.0% to 6.0%	2.8% to 6.1%	\$515M	3.0% to 5.0%	2.8% to 5.1%	\$639M
February 2023	4.0% to 6.0%	2.8% to 6.1%	\$515M	3.0% to 5.0%	2.8% to 5.1%	\$639M
May 2024	6.0% to 7.5%	6.1% to 8.0%	\$547M	4.0% to 5.7%	4.0% to 5.9%	\$660M
Variance from December 2021 to May 2024			\$94M 21%			\$78M 13%

- The COVID shutdown occurred in March 2020.
- GLWA had many long-term contracts for commodities, engineering, and construction – this delayed the budget impact because costs were locked within contracts.
- Once new contracts were bid, the increased costs resulted in budget amendments and forecast assumption updates.
- The May 2024 forecast includes the debt service savings from the most recent bond transaction.

Water Ten Year Forecast Update In Progress

PRELIMINARY EXECUTIVE SUMMARY FORECAST UPDATE - WATER

Core Assumptions	2024 Bonds Forecast	Updated Forecast
BUDGET Adjustments		
FY 2026 - FY 2029	7.50%	TBD
FY 2030 - FY 2034	6.00%	TBD
10 Yr Avg FY 2026 - 2035	6.4%	TBD
Cum Avg Annual GLWA Launch	4.4%	TBD



Note - this chart illustrates forecasted **Regional System** Debt Service Coverage. "All in" Total Debt Service Coverage will likely be ~ 0.10 lower once debt service assigned to the Local System, and **Local System** Net Revenues are included.

Regional System Cumulative Avg Annual Budget Increase	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
If 4% Promise Was Fully Implemented	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%
Actual & 2024 Bonds Forecast (<i>current plan of record</i>)	4.0%	1.5%	1.3%	1.6%	1.4%	1.3%	1.6%	1.9%	2.1%	2.7%	3.1%	3.5%	3.8%	3.9%	4.1%	4.2%	4.3%	4.4%	4.5%
Regional Actual Budget Adjustments	4.0%	-0.9%	1.0%	2.5%	0.6%	0.7%	3.5%	4.0%	4.0%										
Regional Forecasted Budget Adjustments											7.5%	7.5%	7.5%	7.5%	6.0%	6.0%	6.0%	6.0%	6.0%

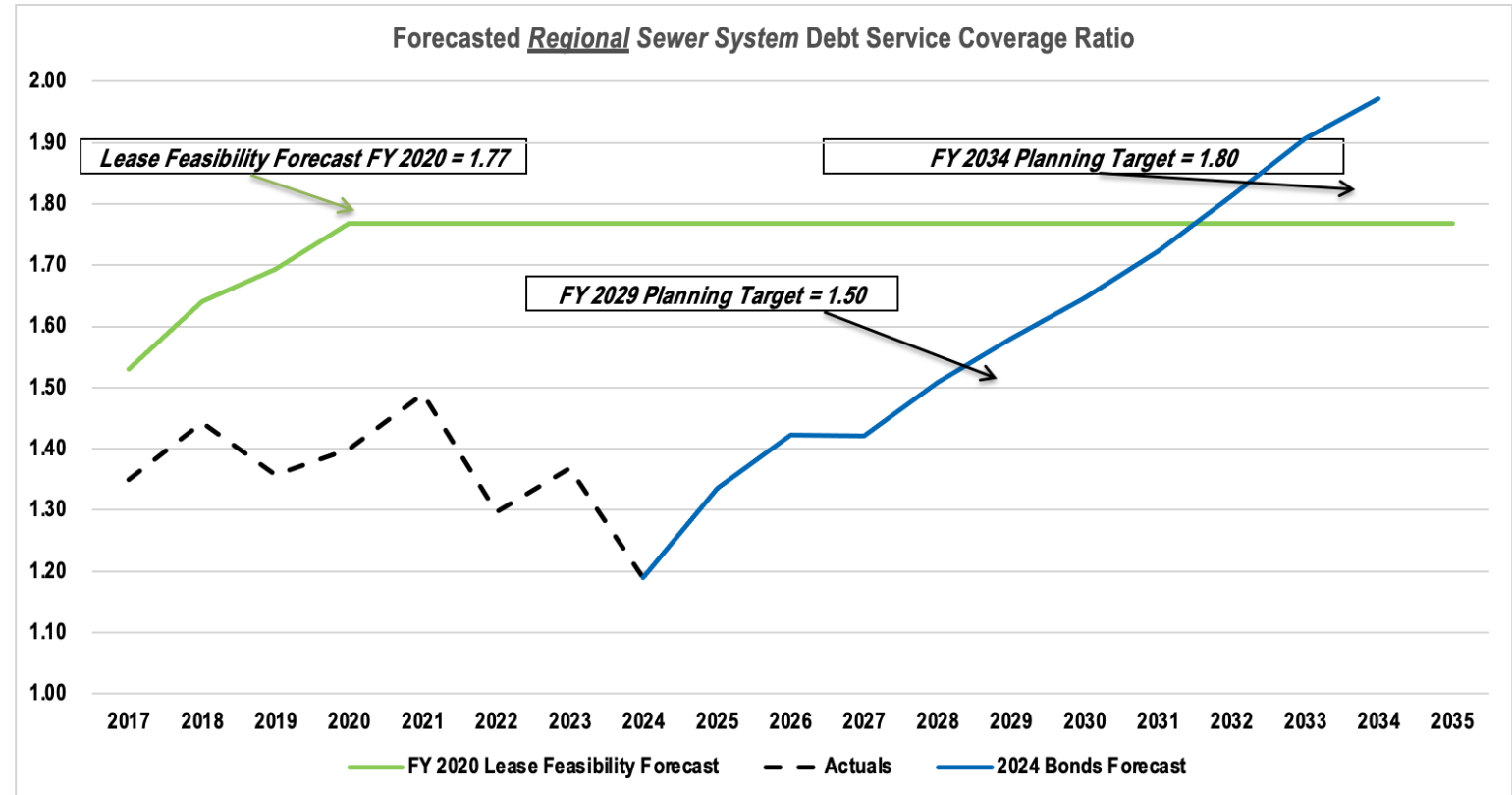


Sewer Ten Year Forecast Update In Progress

PRELIMINARY EXECUTIVE SUMMARY FORECAST UPDATE - SEWER

Core Assumptions	2024 Bonds Forecast	Updated Forecast
BUDGET Adjustments		
FY 2026 - FY 2029	5.50%	TBD
FY 2030 - FY 2034	4.00%	TBD
10 Yr Avg FY 2026 - 2035	4.6%	TBD
Cum Avg Annual GLWA Launch ->	3.2%	TBD

Note - this chart illustrates forecasted **Regional System** Debt Service Coverage. "All in" Total Debt Service Coverage will likely be ~ 0.10 lower once debt service assigned to the Local System, and **Local System** Net Revenues are included.

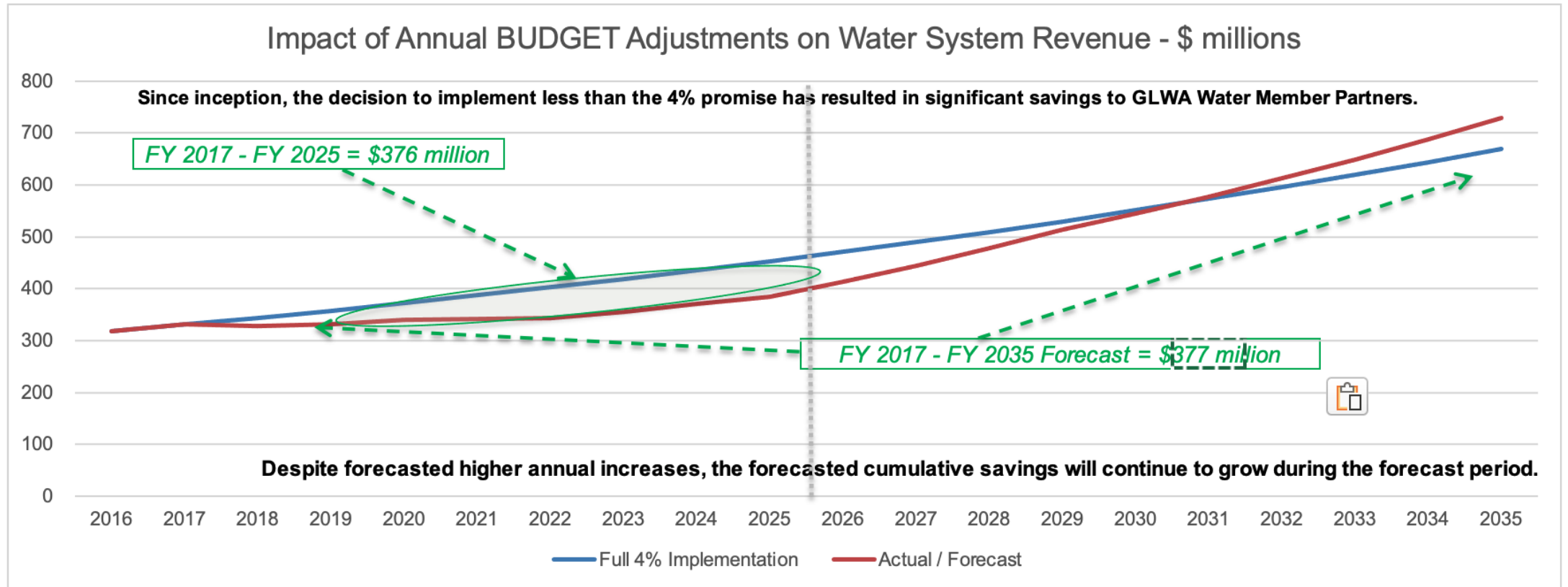


Regional System Cumulative Avg Annual Budget Increase

If 4% Promise Was Fully Implemented	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%
Actual & 2024 Bonds Forecast (current plan of record)	4.0%	2.1%	1.8%	1.9%	1.8%	1.1%	1.1%	1.5%	1.7%	2.1%	2.4%	2.7%	2.9%	3.0%	3.0%	3.1%	3.1%	3.2%	3.2%
Regional Actual Budget Adjustments	4.0%	0.3%	1.0%	2.2%	1.3%	-2.3%	1.3%	4.0%	4.0%										
Regional Forecasted Budget Adjustments										5.5%	5.5%	5.5%	5.5%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%
Regional Actual Charges Adjustments	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%										
Regional Forecasted Charges Adjustments										6.3%	6.6%	6.4%	6.9%	7.0%	6.7%	6.3%	6.7%	7.0%	4.2%

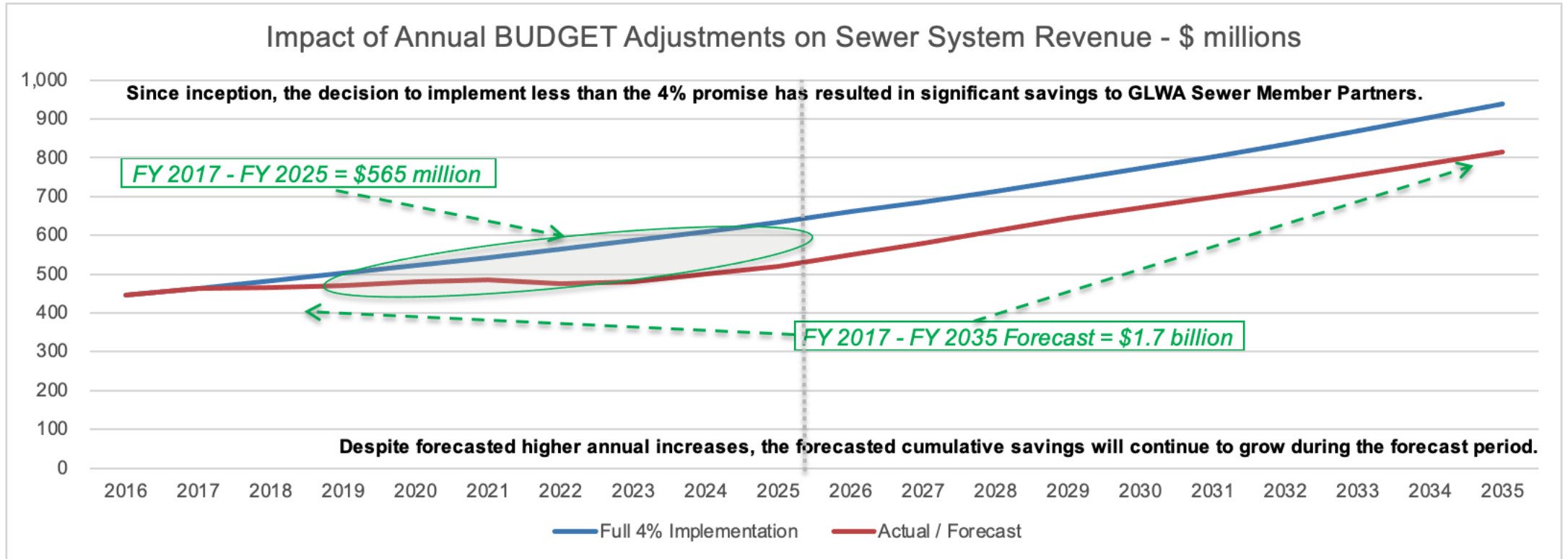


Water Forecast Update In Progress



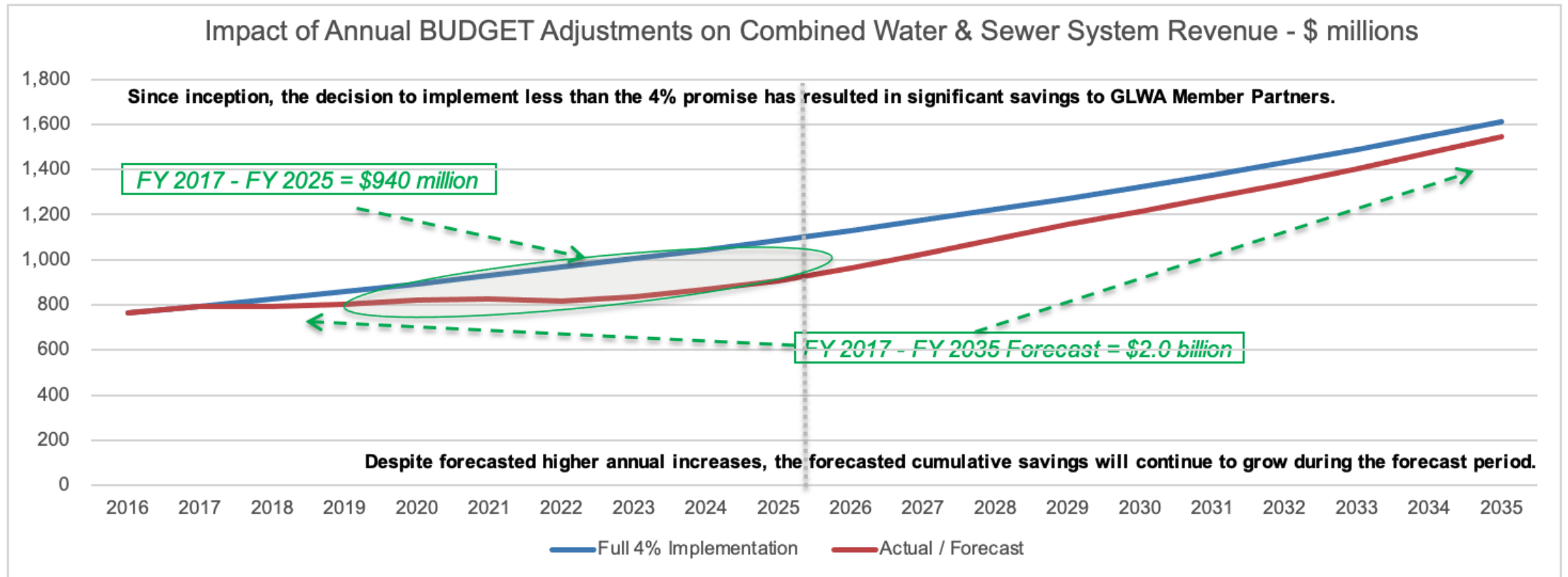
	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
Full 4% Implementation	318	331	344	358	372	387	402	418	435	453	471	490	509	529	551	573	596	619	644	670
Actual / Forecast	318	331	328	331	339	341	344	356	370	385	414	445	478	514	545	577	612	649	688	729
Revenue Variance	0	0	16	27	33	46	59	63	65	68	57	45	31	16	6	(5)	(16)	(29)	(43)	(59)
Cum Rev Variance	0	0	16	43	76	121	180	243	308	376	433	478	509	524	530	526	509	480	436	377

Sewer Forecast Update In Progress



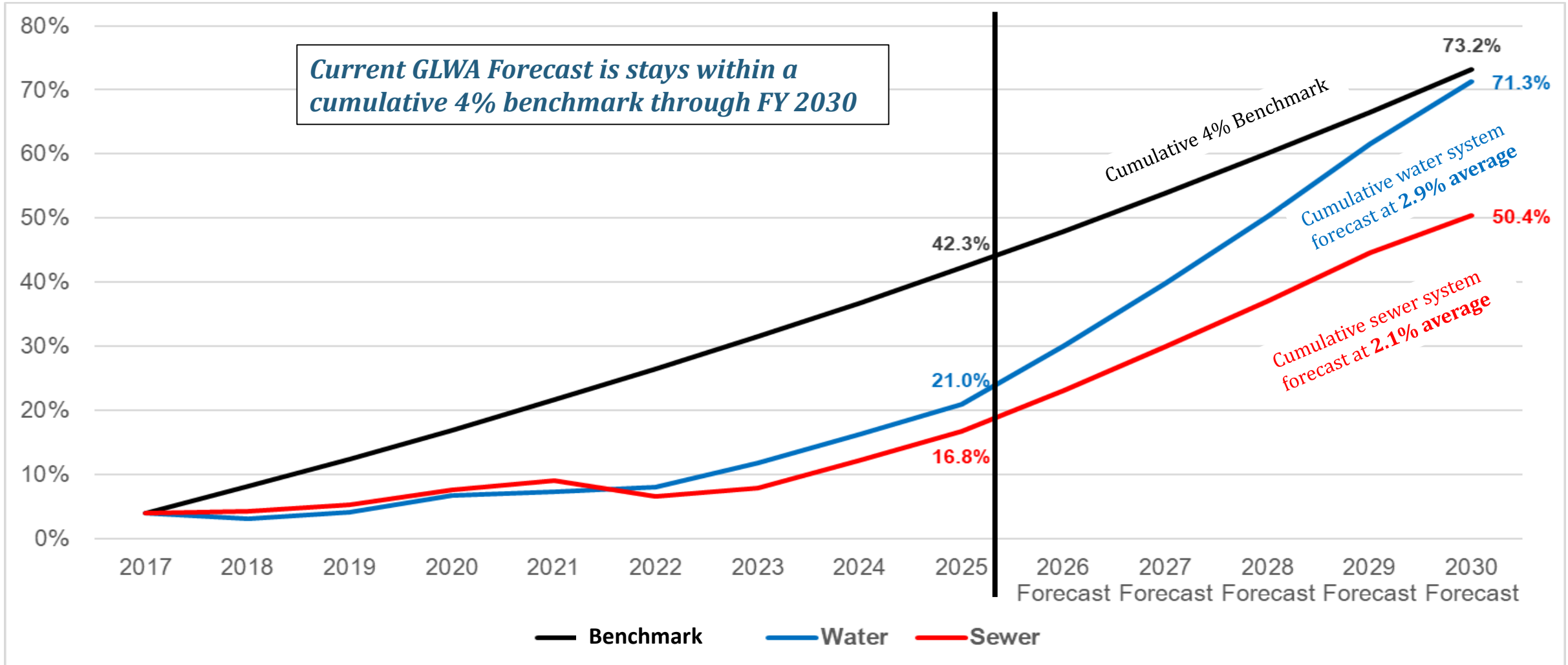
	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
Full 4% Implementation	446	464	482	502	522	543	564	587	610	635	660	687	714	743	772	803	835	869	904	940
Actual / Forecast	446	464	465	470	480	486	475	481	501	521	549	580	611	645	671	698	726	755	785	816
Revenue Variance	0	0	17	32	42	56	89	105	110	114	111	107	103	98	101	105	110	114	119	123
Cum Rev Variance	0	0	17	49	91	147	236	341	451	565	676	783	885	983	1,084	1,190	1,299	1,413	1,532	1,656

Total GLWA Forecast Update In Progress



	<u>2016</u>	<u>2017</u>	<u>2018</u>	<u>2019</u>	<u>2020</u>	<u>2021</u>	<u>2022</u>	<u>2023</u>	<u>2024</u>	<u>2025</u>	<u>2026</u>	<u>2027</u>	<u>2028</u>	<u>2029</u>	<u>2030</u>	<u>2031</u>	<u>2032</u>	<u>2033</u>	<u>2034</u>	<u>2035</u>
Full 4% Implementation	764	795	826	859	894	930	967	1,005	1,046	1,087	1,131	1,176	1,223	1,272	1,323	1,376	1,431	1,488	1,548	1,610
Actual / Forecast	764	795	793	801	820	828	819	837	871	906	963	1,024	1,089	1,159	1,216	1,275	1,338	1,403	1,473	1,545
Revenue Variance	0	0	33	58	74	102	148	168	175	182	168	152	134	113	107	101	93	85	75	64
Cum Rev Variance	0	0	33	92	166	268	416	584	759	940	1,108	1,260	1,394	1,507	1,615	1,715	1,809	1,893	1,969	2,033

✓ Actual + Forecast Budget Average < 4%



Forecast numbers based on feasibility study for 2024 bond issue

✓ Actual + Forecast Charges Average < 4%

- Significant Charge Stability
- Nine year actual plus five-year forecast
- 14-year Average Annual Charges Increase
 - Water: 4.0%
 - Wastewater: 3.3%

Average System Charge Adjustments

Year	Water	Sewer
2017	4.5%	8.3%
2018	1.8%	-0.7%
2019	1.8%	0.1%
2020	0.6%	0.8%
2021	3.2%	2.0%
2022	1.5%	0.6%
2023	3.7%	2.4%
2024	2.8%	2.8%
2025	3.3%	3.0%
2026 Forecast	6.3%	5.8%
2027 Forecast	6.6%	5.4%
2028 Forecast	6.4%	5.3%
2029 Forecast	6.9%	5.8%
2030 Forecast	7.0%	4.9%
14-Year Average	4.0%	3.3%

Forecast numbers based on feasibility study for 2024 bond issue



GLWA

Great Lakes Water Authority

Wrap-up

Affordability of Services

- Balancing service level needs through reasonable operating and capital investments in the system supports long-term affordability
- Maturity of GLWA as we approach our tenth year is reflected in talented team members committed to making the system better for the region - and more cost effective for the long-term
- Efforts to control budgets and charges to low single digits while experiencing medium to high double digit cost increases results in proposed budget and charges above the 4% benchmark
 - However, may still be able to achieve staying within the 4% cumulative benchmark through 2030 based on current forecast
- That being said, there are forces beyond our control
 - Infrastructure supply chain resources continue to be a concern – people and materials
 - Increasing focus on information technology and data system management
 - Prudent financial planning supports resiliency when facing challenges
 - Avoid spikes in budgets and charges by focus on smoothing out annual adjustments when possible

Key Takeaways

1. Review timeline for budget and charges season
2. Economic outlook: moderate adjustments after era of historic increases
3. No new charges methodology impacts this year; declining water demand is under watch
4. Achievements in controlling budget and charges
5. Areas of focus – commodities, capital, and financing
6. Operations Report: Managing reliability and expected levels of service at the water resource recovery facility and the tension between operating and capital spending
7. The ten-year financial plan forecast provides a roadmap to better understand and prepare for future challenges