



King County

**Wastewater Treatment Division
WTD Staff Proposed 2024 Sewer Rate and Capacity Charge
MWWPAAC Rates and Finance
March 7, 2023**

Agenda

1. Update Summary and Background
2. WTD Staff Proposed 2024 Sewer Rate
3. Review changes to the Capital Improvement Program (CIP) and Funding
4. WTD Staff Proposed 2024 Capacity Charge & Assumptions Update

Appendices

Appendix A: CIP Cash Funding Strategy

Appendix B: Forecast Assumptions

Appendix C: CSO Costs Crosswalk

Appendix D: WTD Debt Balances and Coverage

Appendix E: Operating Savings

Important Upcoming Dates

March 9 – Exec Briefing Wastewater Rates

March 9 – WTD DO transmits 2024 Sewer Rate and Capacity Charge Legislative Package to DNRP DO

Update Summary and Background

Updated Assumptions From 2024 Preliminary Forecast

- Capital Improvement Program (CIP) project/ formulation forecasts have been updated
- Major change from previous CIP is to defer a number of CSI I/I investments out of the 10-year projection period
- The forecasted Accomplishment Rate (AR) has been modified to reflect more realistic lower near-term rates and 85% later in the projection
- Cash funding approach using original cost depreciation instead of more recent practice of 40% of CIP
- The rate smoothing pattern has been updated from two steps to three

Changes to CIP and AR are proposed to address affordability and discussed in more detail in the ‘Review changes to the Capital Improvement Program (CIP)’ section below.

Retained Assumptions

- Completion of Tier 1 Asset Management projects by 2033
- CSO projects completion date by 2040. MOD schedule accelerated and contingency pushed back to 2033 and 2034
- Only near-term nutrient reduction investments of \$50m

Recent Sewer Rate Forecasts (Reference)

2023 Adopted Rate – Sewer Rate Projection - 40% Cash Funding

2023 - 40% Cash Funding	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
Rate Increase %	5.75%	5.75%	5.75%	5.75%	5.75%	9.00%	9.00%	9.00%	9.00%	9.00%	
Monthly Sewer Rate	\$52.11	\$55.11	\$58.28	\$61.64	\$65.19	\$71.06	\$77.46	\$84.44	\$92.04	\$100.33	
All-In Debt Service Coverage	1.59x	1.63x	1.64x	1.65x	1.67x	1.69x	1.72x	1.70x	1.70x	1.71x	

Initial 2024 Preliminary Sewer Rate Projection – 40% Cash Funding, no changes to CIP, higher AR, two-step smoothing

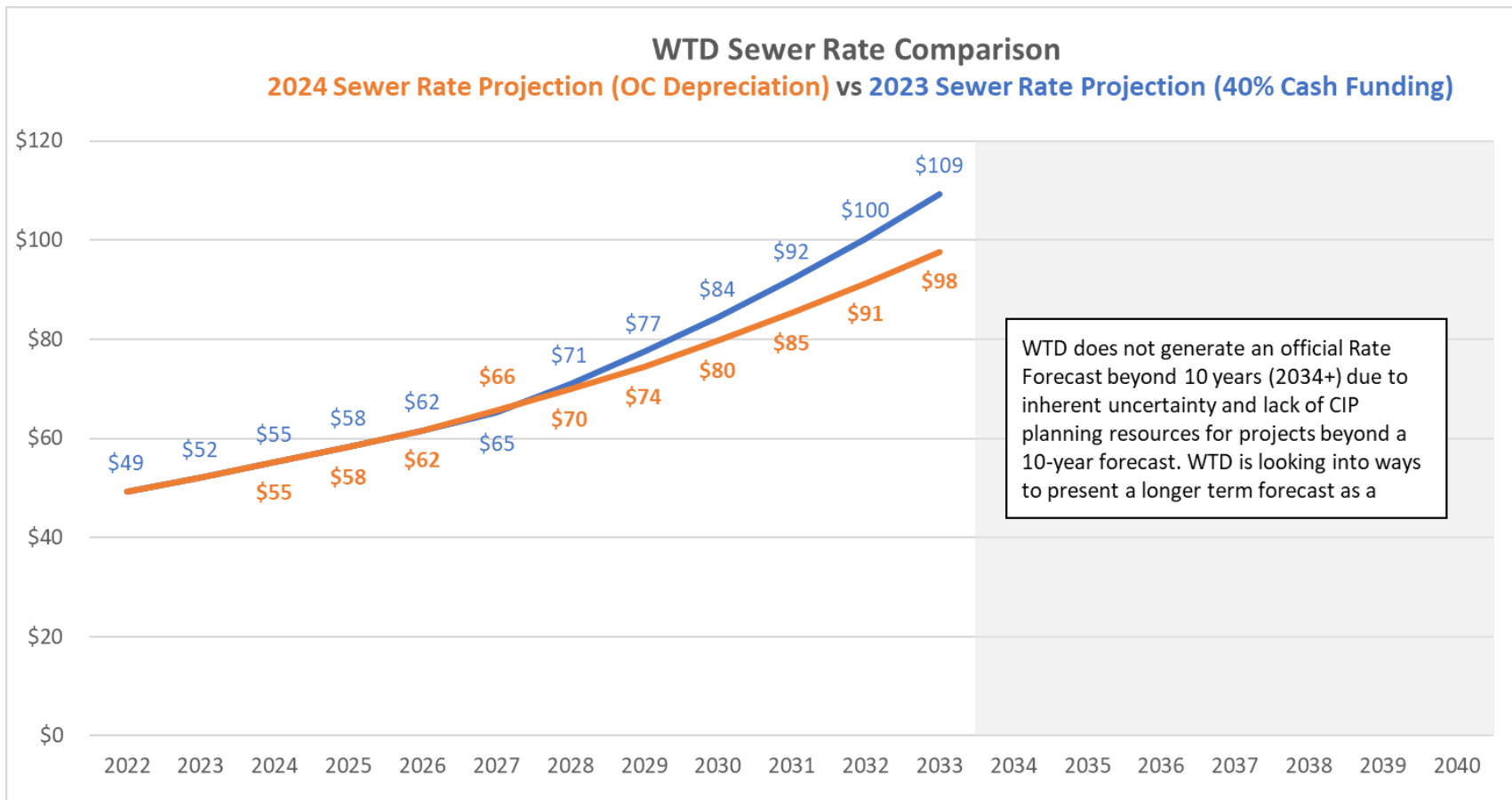
Preliminary 40%	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
Rate Increase %	5.75%	6.75%	6.75%	6.75%	6.75%	11.25%	11.25%	11.25%	11.25%	11.25%	11.25%
Monthly Sewer Rate	\$52.11	\$55.63	\$59.39	\$63.40	\$67.68	\$75.30	\$83.78	\$93.21	\$103.70	\$115.37	\$128.35
All-In Debt Service Coverage	1.56x	1.57x	1.55x	1.55x	1.56x	1.62x	1.66x	1.68x	1.74x	1.79x	1.96x

WTD Staff Proposed 2024 Sewer Rate

The proposed rate for **2024** is **\$55.11**.

2024 Proposed Sewer Rate and 2025-2033 Rate Projection – Original Cost Depreciation, modified CIP, revised AR, three-step smoothing

Base + CSI I/I Deferral & OC Dep	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
Rate Increase %	5.75%	5.75%	5.75%	5.75%	6.50%	6.50%	6.50%	7.00%	7.00%	7.00%	7.00%
Monthly Sewer Rate	\$52.11	\$55.11	\$58.28	\$61.64	\$65.65	\$69.92	\$74.47	\$79.69	\$85.27	\$91.24	\$97.63
All-In Debt Service Coverage	1.56x	1.73x	1.73x	1.67x	1.68x	1.65x	1.61x	1.53x	1.50x	1.47x	1.51x



Rationale for WTD Staff Proposed Sewer Rate and 10-year Projection

WTD's proposed 2024 sewer rate and associated 10-year projection was developed to accomplish our known and anticipated operating costs and capital program, using the most up-to-date information possible and incorporating reasonable financial assumptions.

We recognize that King County's sewer rate, along with local agency rates on top, presents an affordability challenge to lower socio-economic groups and that the problem is projected to worsen over time. For the proposed 2024 sewer rate, WTD examined a variety of scenarios to reduce costs and to help inform our recommendation to DNRP leadership, the County Executive and advisory groups. While each scenario presented pros and cons, WTD recommends:

- Deferral of conveyance system improvement (CSI) I/I with lower risk of capacity-related overflows – none within the last 10 years – this would reduce the CIP over the period by \$357M
- Setting CIP cash targets with Original Cost Depreciation (option 3 in Appendix A)
- Lower accomplishment rate near term and assume no spending catch-up in the future; keep accomplishment rate at or below 85%

We believe this recommendation optimizes across the following criteria:

- Meaningfully address affordability through holding the rate for 2024 consistent with the projection made last year and providing reductions to future rates compared to last year
- Minimize the likelihood and severity of overflows or other adverse environmental consequences, risks to health and safety, and risks to operating costs
- Reflect known and reasonably anticipated regulatory requirements
- Continue a focus on asset management projects and programs
- Retain WTD's Debt Service Coverage (DSC) ratio well above MWPAAC's 2017 recommended level with reasonable financial assumptions

Review changes to the Capital Improvement Program (CIP) and Funding

Incremental CIP Change between 2023 and 2024 10-Year Financial Forecast

Project Name	Driver	2023-2032 Impact
Mouth of the Duwamish (MOD)	New baseline design criteria	\$103m
Elliott West WWTS	Project design pause eliminated	\$308m
University CSO Storage Tank	Revised start date	\$193m
Montlake CSO Storage Tank	Revised start date	\$81m
Supplemental Compliance	Revised start date	\$37m
Total Change in CSO Projects		\$723m
Current projects in delivery	PMs annual forecast review	\$231m
Formulations (conceptual projects)	Scope development	\$273m
New conceptual projects or scope	Newly identified needs	\$291m
Revised assumptions	Conceptual project timing/estimate basis	\$236m
Placeholders	Replaced by new projects/scope	-\$529m
Total Change in Other Projects		\$503m
Capacity Improvement Projects	Defer CSI I/I with no capacity-related overflows	-\$316m
Total Changes		\$909m
Total Changes after Accomplishment Rate		\$185m
2023 Rate Forecast: CIP 2023-2032 (after accomplishment rates)		\$6,014m
2024 Proposed Rate Forecast: CIP 2023-2032 (after accomplishment rates)		\$6,200m
% Increase		3.1%

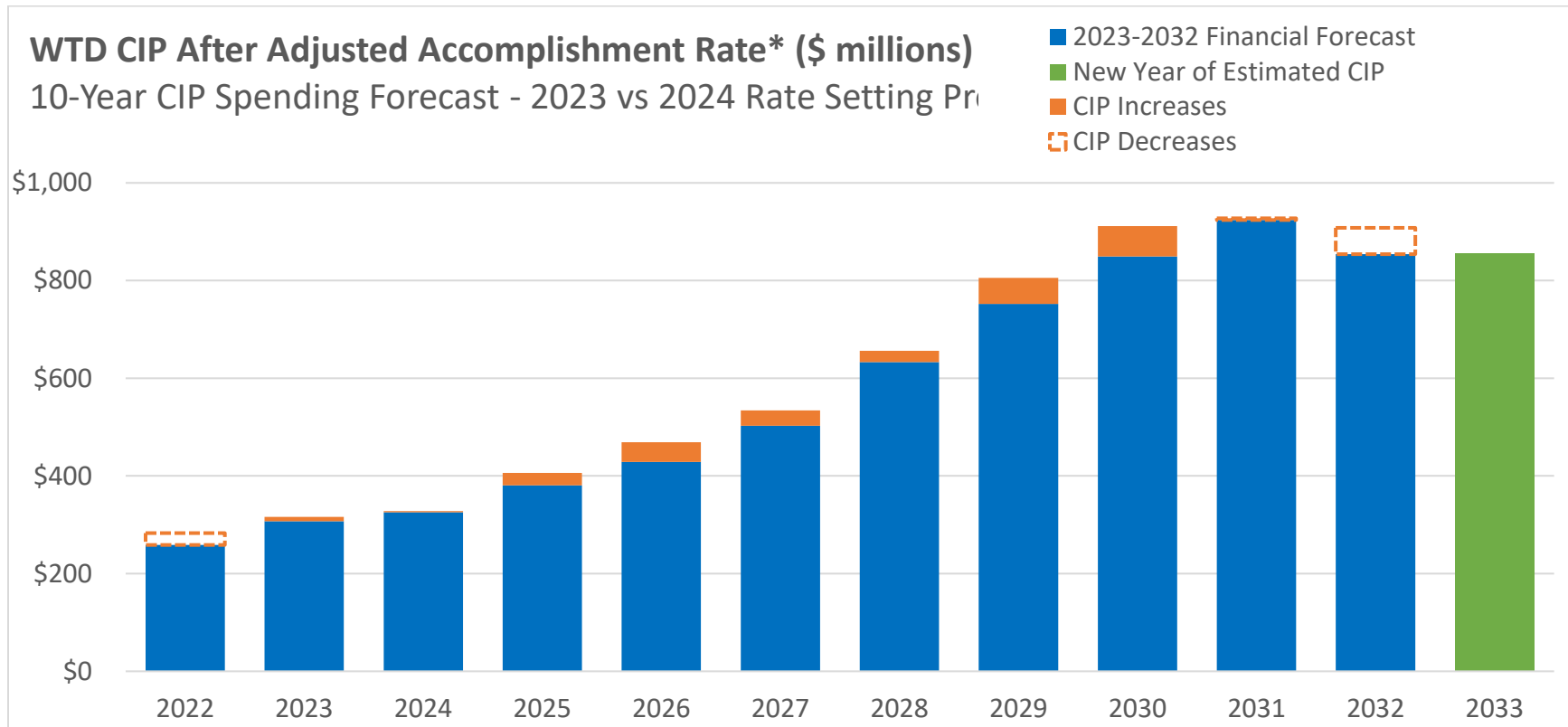
The updated CIP forecast, with accomplishment rate adjustments, is roughly \$785 million less than the preliminary 2024 sewer rate sensitivity forecast.

Third-party/independent reviews for CIP assumptions:

King County periodically uses third-party/independent reviews to validate existing capital processes, lessons learned and continuous improvement efforts. Given the significant increases in the WTD capital program, an independent, third-party review and feasibility assessment will be procured. WTD is in the process of identifying that scope of work to issue an RFP in mid-2023. The review would analyze WTDs capital portfolio approach, financial strategies, revenue/funding streams, resource needs and related market impacts, relevant timelines, and schedules.

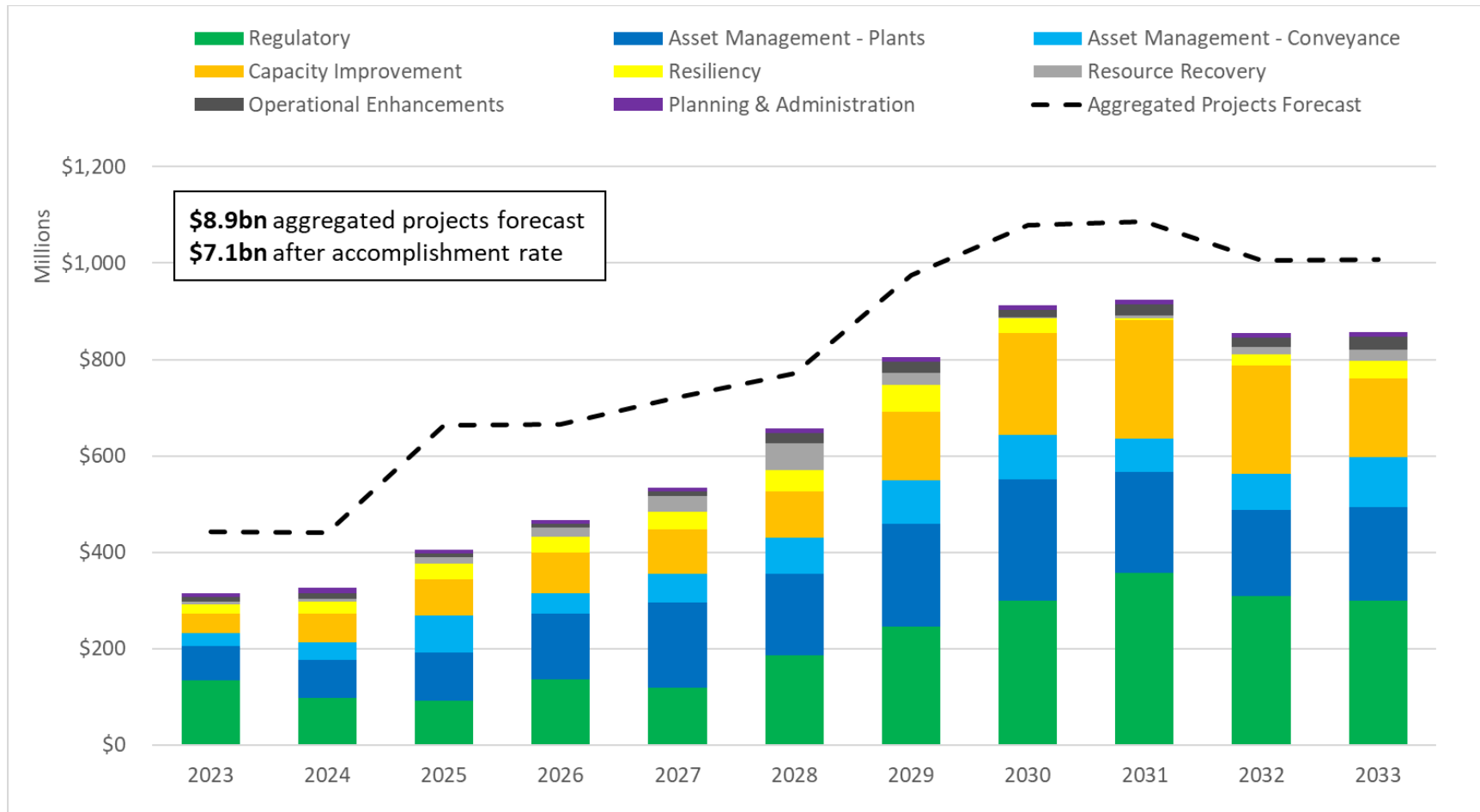
Updated CIP for 2023-2033

Capital spending based on estimated delivery capacity constraints, reduced accomplishment rate near-term, and an 85% accomplishment rate, long term. Changes (in orange) to baseline reflect accelerated CSO project schedules, MOD's revised cost estimate, new project formulations, updated formulations, and updated forecasts for existing projects in delivery.



*No 'catch up' for unaccomplished capital spending is included in the CIP amounts shown on this graphic.

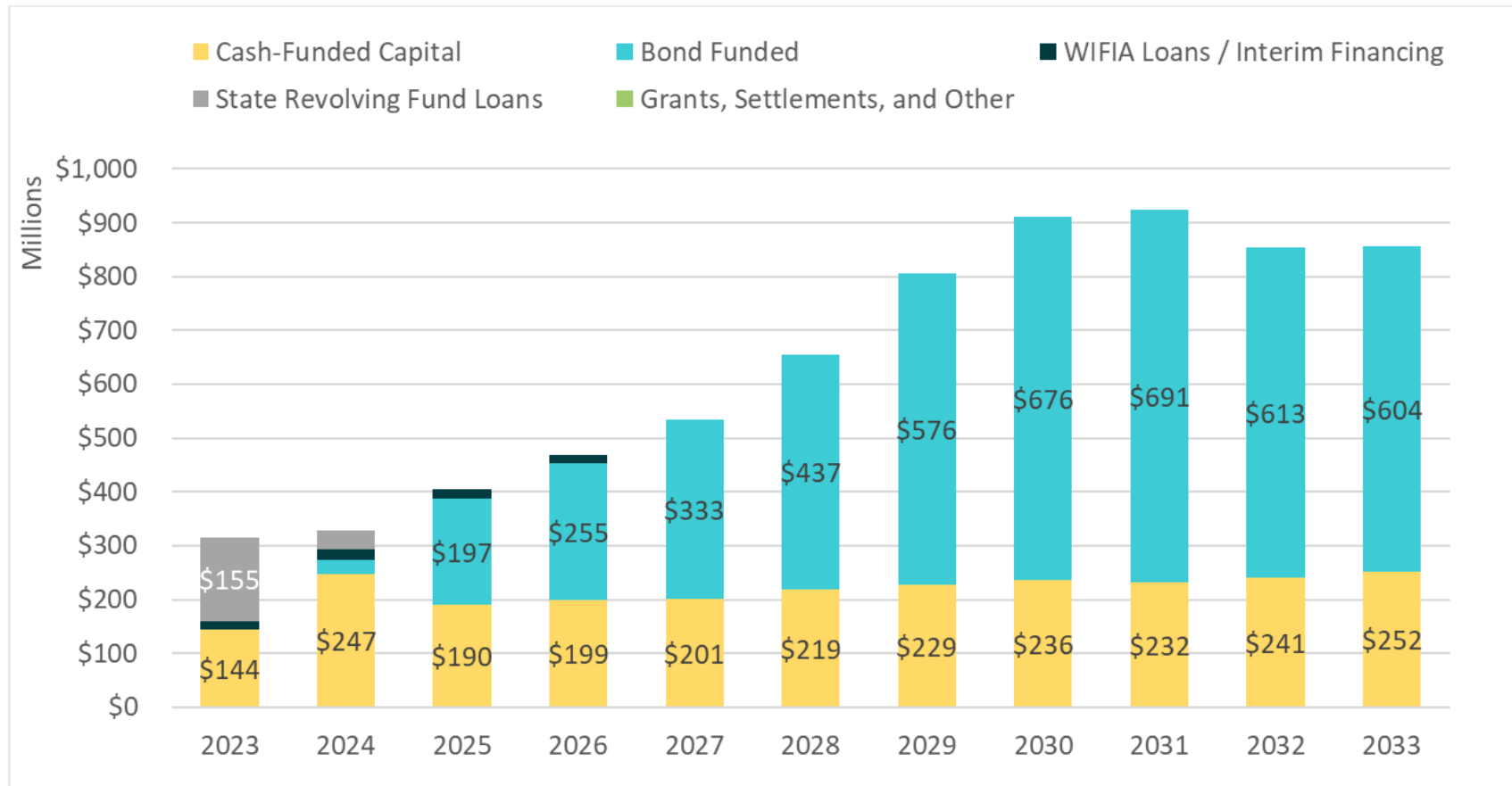
Capital Improvement Program and Accomplishment Rate (2023-2033)¹



2024 Baseline + CSI I/I Deferral	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2023-2033
Aggregated CIP Project Forecasts	\$443	\$440	\$663	\$666	\$721	\$772	\$975	\$1,079	\$1,087	\$1,005	\$1,007	\$8,858
Accomplishment Rate (AR)	71%	74%	61%	70%	74%	85%	83%	84%	85%	85%	85%	80%
Capital Spending after AR	\$316	\$328	\$406	\$469	\$534	\$656	\$805	\$912	\$924	\$854	\$856	\$7,060

¹ The average accomplishment rate assumption was reduced from 85% to 80% to account for economic conditions and staffing levels

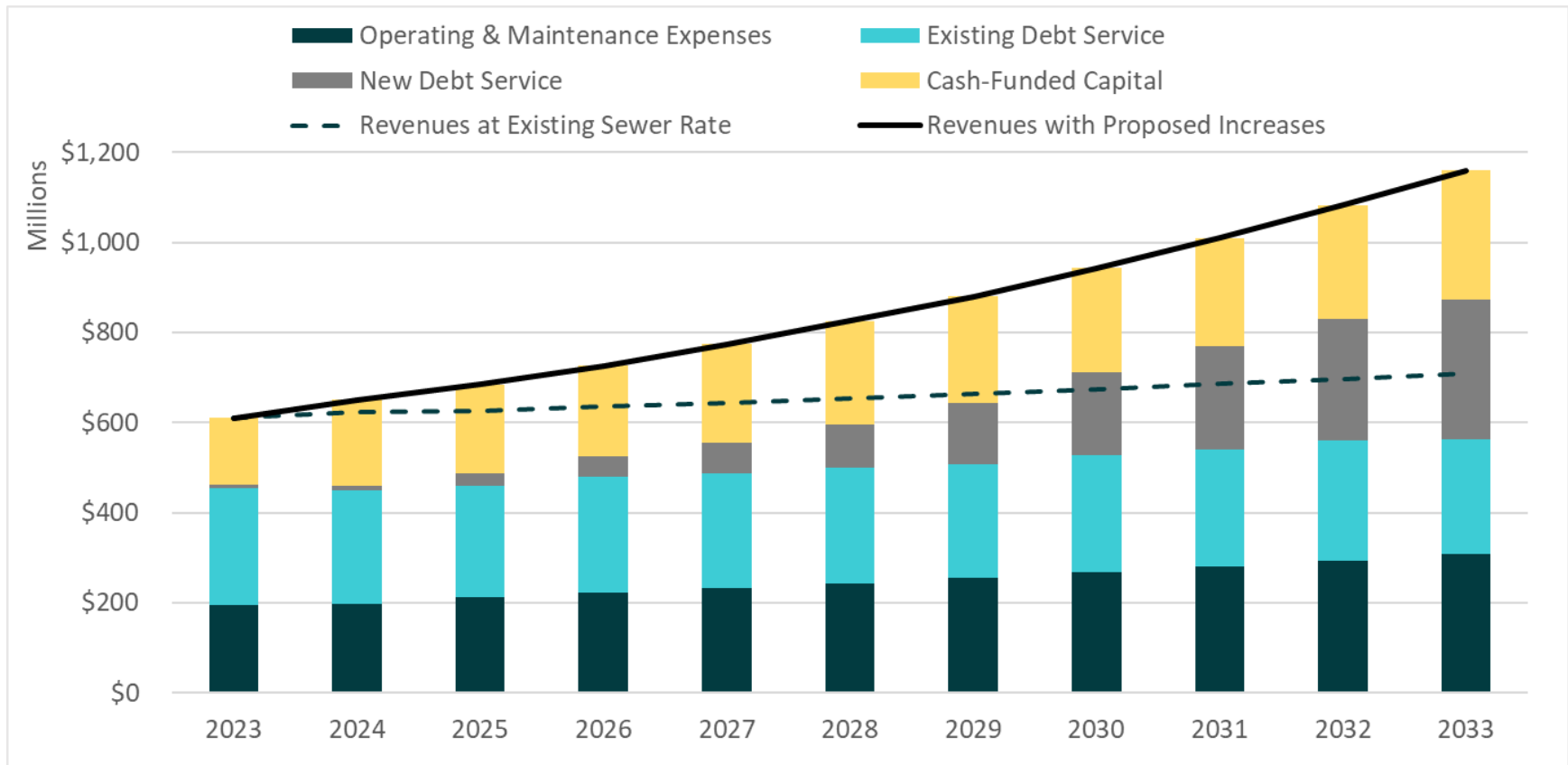
Capital Funding Projection (2023-2033)



WTD is working with the U.S. Environmental Protection Agency (EPA) on the Water Infrastructure Finance and Innovation Act (WIFIA) Master Agreement (MA) which will provide WTD with an estimated \$468.5 million in low interest loans. The impact of the MA has not been included in this financial forecast because there is no official agreement. Please note, WTD is choosing a 35-year term, in lieu of the standard 30 years, which we estimate will save WTD ratepayers an average of 15 cents on their monthly sewer rate over the next 10 years once interest payments start. Starting in 2023 WTD will use 35-year terms as a standard for WIFIA and leverage interest-only debt options, back-loaded debt. WTD is also looking to expand variable rate debt, currently 15.57% of our debt portfolio with a King County policy limit of 20%, in ways that will provide reduction in debt service.

In February 2023, the King County Council approved two modified State Revolving Fund (SRF) loan agreements to increase the loan amounts for the Georgetown and Joint Ship Canal projects, respectively. The SRF will replace some back-loaded WIFIA debt, reducing 2033 forecasted debt balance by roughly 40 million dollars while maintaining the WTD staff proposed sewer rate projection.

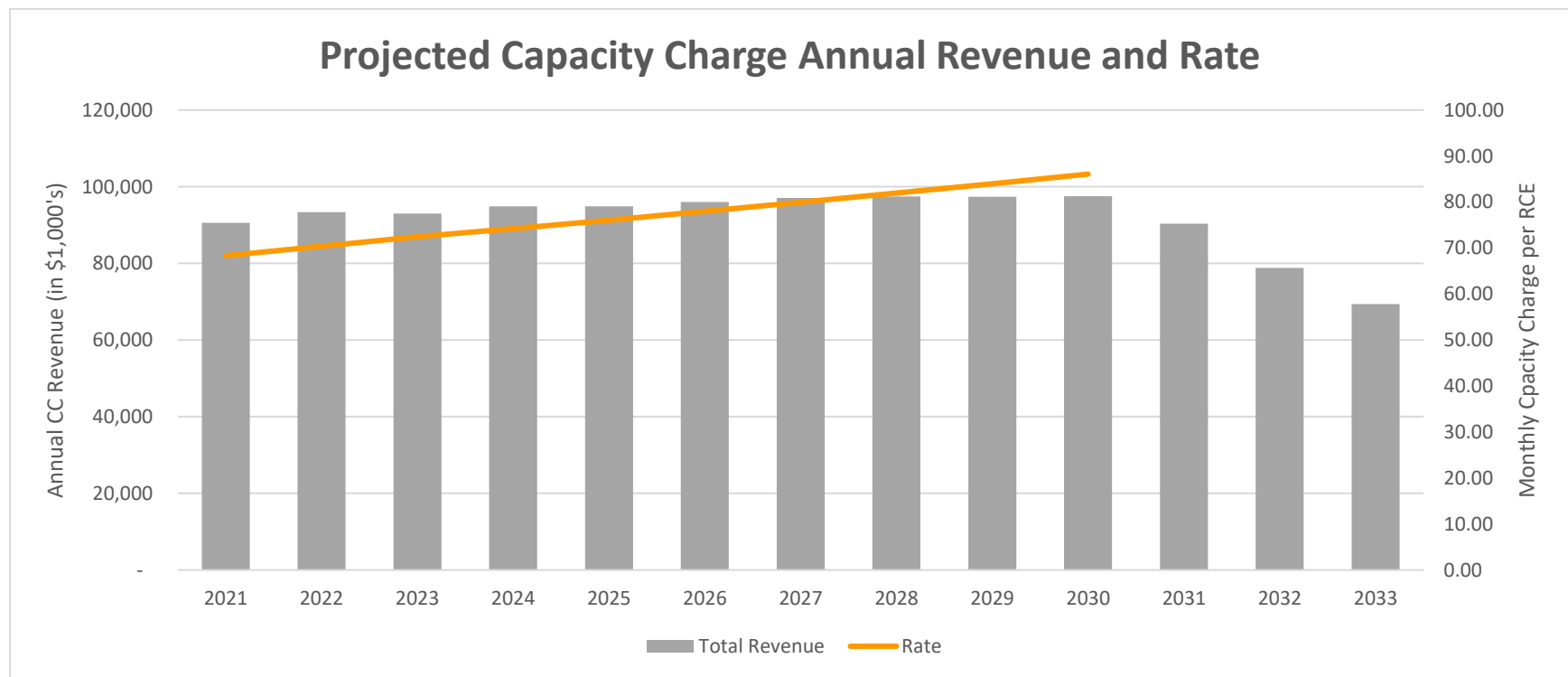
Revenue Requirement (2023-2033)



WTD Staff Proposed 2024 Capacity Charge & Assumptions Update

A description of the Capacity Charge (CC) can be found in 'Technical Memo – 2024', the document is a draft and being updated. Historically, the CC underlying assumptions are updated every three years. We are recommending a rate of **\$74.23**, a **2.4% increase**, for 2024 and **2.5%** rate increases for **2025** and **2026**. Please note, currently, the policies in King County Code do not extend the CC beyond 2030. Charts below forecast rates and revenue.

Capacity Charge	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
Rate	68.34	70.39	72.50	74.23	76.09	77.99	79.94	81.94	83.99	86.09			
Total Revenue (MM)	90,553	93,360	92,998	94,877	94,919	95,999	97,045	97,460	97,407	97,505	90,393	78,794	69,361



Capacity Charge Work Items for 2023

- Complete work with consultant in reviewing and updating Capacity Charge model/ methodology
- Continue working with Capacity Charge work group (MWPAAC)

Appendix A: CIP Cash Funding Strategy

How much of the CIP WTD funds with cash, versus debt, is a major driving force behind rate increases. Below are three forecasts using different funding strategies. For context, the 40% CIP cash funding strategy WTD currently uses was implemented in 2017 when the CIP outlook showed low to moderate growth long term versus the large regulatory increases that we are projecting in outer years today.

Cash-Funding Alternatives	Cash Funding Average	Debt Balance in 2033	Rate Increases (CSI I/I Deferral)	Scenario Alignment with Criteria
1. 40% of Total CIP (Current Practice)	40%	\$6,121M	5.75% / 7.50% / 9.50%	
2. 30% of Total CIP	30%	\$6,581M	5.50% / 5.75% / 6.00%	Reduce Rate Increases <input checked="" type="checkbox"/> >= DSC 1.40x <input checked="" type="checkbox"/> Reduces Volatility <input checked="" type="checkbox"/>
3. Original Cost Depreciation	34%	\$6,386M	5.75% / 6.50% / 7.00%	Reduce Rate Increases <input checked="" type="checkbox"/> >= DSC 1.40x <input checked="" type="checkbox"/> Reduces Volatility <input checked="" type="checkbox"/>
4. Repair & Replacement	36%	\$6,295M	5.75% / 7.00% / 7.50%	Reduce Rate Increases <input checked="" type="checkbox"/> >= DSC 1.40x <input checked="" type="checkbox"/> Reduces Volatility <input type="checkbox"/>
5. Replacement Cost Depreciation	57%	\$5,311M	5.75% / 11.75% / 13.00%	Reduce Rate Increases <input checked="" type="checkbox"/> >= DSC 1.40x <input checked="" type="checkbox"/> Reduces Volatility <input checked="" type="checkbox"/>

2023 Adopted Rate – Sewer Rate Forecast – 40% Cash Funding

2023 Adopted Rate	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
Rate Increase %	5.75%	5.75%	5.75%	5.75%	5.75%	9.00%	9.00%	9.00%	9.00%	9.00%	
Monthly Sewer Rate	\$52.11	\$55.11	\$58.28	\$61.64	\$65.19	\$71.06	\$77.46	\$84.44	\$92.04	\$100.33	
All-In Debt Service Coverage	1.59x	1.63x	1.64x	1.65x	1.67x	1.69x	1.72x	1.70x	1.70x	1.71x	

1. 2024 Sewer Rate Projection with 40% Cash Funding (Current practice)

Base + CSI I/I Deferral & 40%	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
Rate Increase %	5.75%	5.75%	5.75%	5.75%	7.50%	7.50%	7.50%	9.50%	9.50%	9.50%	9.50%
Monthly Sewer Rate	\$52.11	\$55.11	\$58.28	\$61.64	\$66.27	\$71.25	\$76.60	\$83.88	\$91.85	\$100.58	\$110.14
All-In Debt Service Coverage	1.56x	1.73x	1.73x	1.67x	1.70x	1.69x	1.67x	1.63x	1.65x	1.68x	1.80x
Total Debt Balance (\$m)	\$ 3,587	\$3,512	\$3,593	\$3,721	\$3,915	\$4,192	\$4,596	\$5,072	\$5,528	\$5,859	\$6,121

2. 2024 Sewer Rate Projection with 30% Cash Funding

Base + CSI I/I Deferral & 30%	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
Rate Increase %	5.75%	5.50%	5.50%	5.50%	5.75%	5.75%	5.75%	6.00%	6.00%	6.00%	6.00%
Monthly Sewer Rate	\$52.11	\$54.98	\$58.01	\$61.21	\$64.73	\$68.46	\$72.40	\$76.75	\$81.36	\$86.25	\$91.43
All-In Debt Service Coverage	1.56x	1.72x	1.72x	1.65x	1.65x	1.61x	1.55x	1.45x	1.40x	1.35x	1.37x
Total Debt Balance (\$m)	\$ 3,587	\$3,512	\$3,594	\$3,725	\$3,923	\$4,216	\$4,649	\$5,170	\$5,705	\$6,153	\$6,581

3. 2024 Sewer Rate Projection with Original Cost Depreciation (WTD Staff Proposed)

Projected 34% of CIP - Decreases with growing CIP

Base + CSI I/I Deferral & OC Dep	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
Rate Increase %	5.75%	5.75%	5.75%	5.75%	6.50%	6.50%	6.50%	7.00%	7.00%	7.00%	7.00%
Monthly Sewer Rate	\$52.11	\$55.11	\$58.28	\$61.64	\$65.65	\$69.92	\$74.47	\$79.69	\$85.27	\$91.24	\$97.63
All-In Debt Service Coverage	1.56x	1.73x	1.73x	1.67x	1.68x	1.65x	1.61x	1.53x	1.50x	1.47x	1.51x
Total Debt Balance (\$m)	\$ 3,587	\$3,512	\$3,593	\$3,721	\$3,915	\$4,198	\$4,615	\$5,114	\$5,615	\$6,018	\$6,386

Appendix B: Forecast Assumptions

Forecast Assumptions: 2024-2033 Rate Forecast	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
Single-Family Residences RCE Growth	0.7%	0.7%	0.7%	0.7%	0.7%	0.7%	0.7%	0.7%	0.7%	0.7%	0.7%
Multi-Family & Commercial RCE Growth	2.7%	2.0%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%
Capacity Charge Regular Payments	3.0%	3.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%
Capacity Charge Prepayments	3.0%	3.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%
General Cost Inflation	Biennial Budget + 2024 Decision Packages		3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%
Labor Cost Inflation			4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%
Expenditure Growth			1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%
Capital Cost Escalation	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%
CIP Effective Accomplishment Rate	71.4%	74.5%	61.3%	70.4%	74.0%	85.0%	82.6%	84.5%	85.0%	85.0%	85.0%
Revenue Bond Rate (30 Year Term)	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%
Blended Variable Rate	2.54%	3.04%	3.04%	3.50%	3.50%	3.50%	3.50%	3.50%	3.50%	3.50%	3.50%
Investment Pool Earnings Rate	2.40%	2.70%	2.90%	2.88%	2.81%	2.77%	2.76%	2.75%	2.75%	2.75%	2.75%

Appendix C: CSO Costs Crosswalk

In the last couple of years, changes in CSO schedules and forecasts have had a large impact in WTD’s 10-year capital spending plans and the rate forecast. These changes and its impact to the sewer rate can be grouped in three categories:

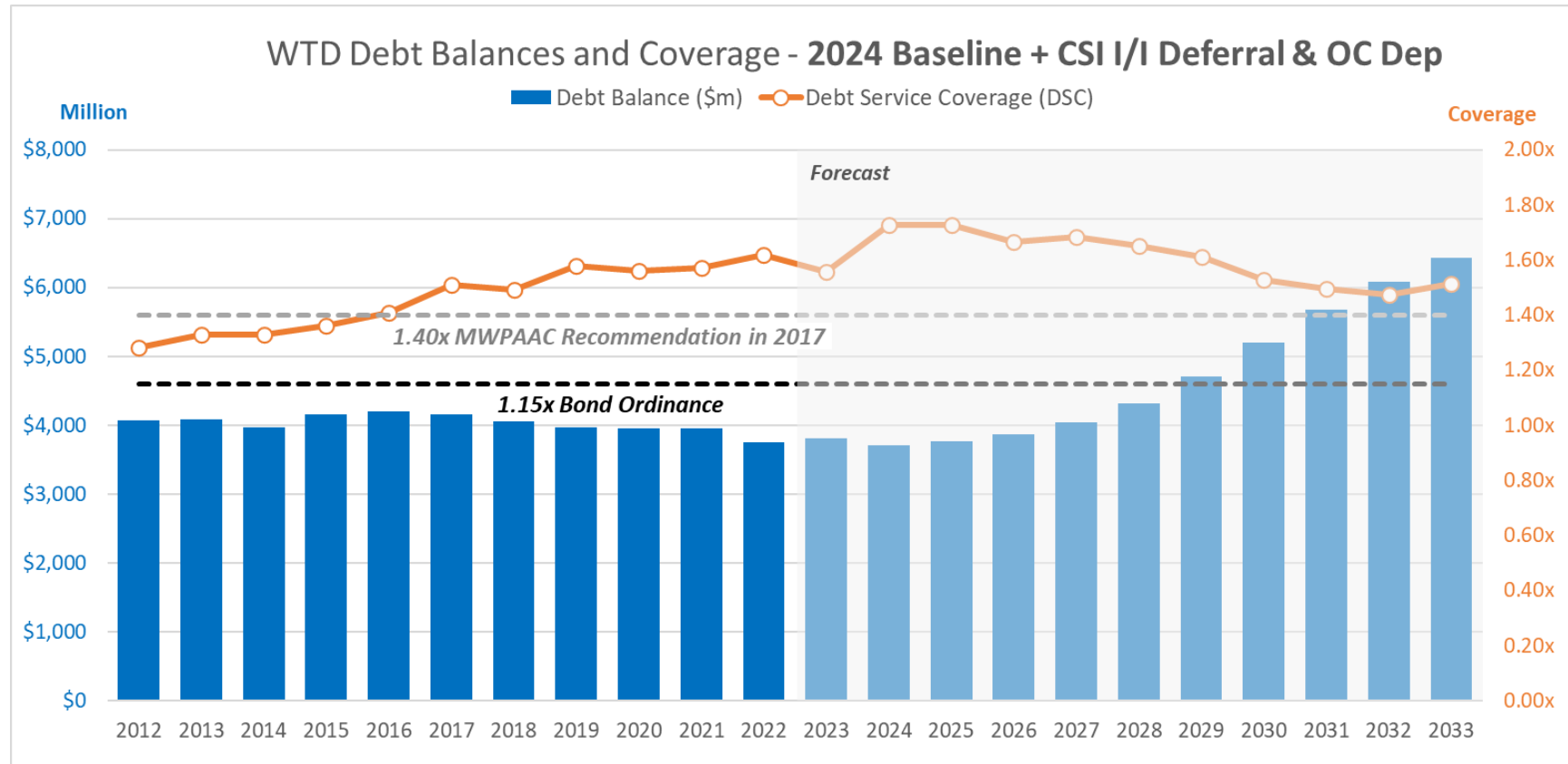
1. **Updated cost estimates:** many of the large CSO projects are only in very preliminary planning stages, meaning their cost estimates are less accurate and are likely to evolve as the projects get better defined and new information becomes available
2. **Revised schedules:** ongoing consent decree negotiations with EPA and approaching milestones for certain CSO projects have required the acceleration of some timelines
3. **Additional years included into the rate’s 10-year forecast:** every rate cycle the CIP forecast moves forward one year—it drops the last year of the previous forecast and adds one more year at the end of it (e.g., this new sewer rate forecast includes 2033 costs for the first time). A large portion of CSO spending used to be outside of the forecast just a few years ago, but now the majority of CSO spending falls within the sewer rate 10-year forecast



*Escalated costs before accomplishment rate

Appendix D: WTD Debt Metrics and Financial Health

WTD debt balance has remained stable for the last 10 years, and it is expected to be around \$200 million lower in 2022 than it was in 2012. At the same time, WTD debt service coverage has been steadily increasing every year and has stabilized above 1.5 times. This healthy level of debt service coverage is significantly higher than 1.15x, the minimum coverage adopted by RWQC (Resolution RWQ 2001-0002) and in WTD Bond Ordinances, and comfortably higher than the minimum recommended by MWPAAC’s Debt Review Team in December of 2015 (1.40x).



Appendix E: Operating Savings

Minimal FTE growth in the last decade:

In 2012, WTD had 379 operating FTEs and ended 2022 with 391. That is an increase of only 12 operating FTEs over a 11-year span, before adding 96 FTEs in 2023. By deferring significant FTE growth for such a long period of time, our operating fund should have inherently realized sizable savings.

Past FTE Count and Future FTE Projections																			
	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
WTD Total FTE	586	590	590	604	606	624	624	648	651	668	699	795	868	892	916	940	952	964	976
WTD Capital FTE	207	224	229	240	243	239	250	266	279	290	318	378	432	444	456	468	474	480	486
WTD Operating FTE	379	366	361	364	363	385	374	382	372	378	381	417	436	448	460	472	478	484	490
WTD Total FTE Change	-	4	0	14	2	18	0	24	3	17	31	96	73	24	24	24	12	12	12
WTD Capital FTE Change	-	17	5	11	3	-4	11	16	13	11	28	60	54	12	12	12	6	6	6
WTD Operating FTE Change	-	-13	-5	3	-1	22	-11	8	-10	6	3	36	19	12	12	12	6	6	6
WTD Total FTE Change %	-	0.7%	0.0%	2.4%	0.3%	3.0%	0.0%	3.8%	0.5%	2.6%	4.6%	13.7%	9.2%	2.8%	2.7%	2.6%	1.3%	1.3%	1.2%
WTD Capital FTE Change %	-	8.2%	2.2%	4.8%	1.3%	-1.6%	4.6%	6.4%	4.9%	3.9%	9.7%	18.9%	14.3%	2.8%	2.7%	2.6%	1.3%	1.3%	1.3%
WTD Operating FTE Change %	-	-3.4%	-1.4%	0.8%	-0.3%	6.1%	-2.9%	2.1%	-2.6%	1.6%	0.8%	9.4%	4.6%	2.8%	2.7%	2.6%	1.3%	1.3%	1.2%

**FTE projections are estimates only. FTE estimates may include collaborative delivery implementation and recommendations from the third-party/independent review of the capital program in the future. The actual number of new FTE requests for each year will be determined in the annual sewer rate-setting process.*

Facilities Management Division (FMD) cost savings:

Thanks to Green Where We Work (GWWW), annual space cost incurred by our operating fund decreased by almost \$800k, when comparing the 2019-2020 biennium (\$1.2M each year) to the 2023-2024 biennium (\$0.4M each year).

Year	FMD Cost	Note
2019	\$ 1,218,780	Actual
2020	\$ 1,218,780	Actual
2021	\$ 713,985	Actual (reflects refund of \$560k received in Feb 2023)
2022	\$ 383,968	Actual
2023	\$ 426,820	Projected (Budgeted by FMD)
2024	\$ 426,820	Projected (Budgeted by FMD)

Energy Rebates:

WTD actively pursues energy rebates:

	2019	2020	2021	2022
Energy Rebate	465,501.00	279,182.00	77,356.00	65,000.00

Chemical savings:

In mid-2020, Brightwater switched from using sodium hydroxide (aka caustic soda) to magnesium hydroxide on a trial basis. Per calculations using rough assumptions, this resulted in a decrease of \$700k in operating costs when comparing the total cost of the two chemicals in 2019 (\$2M) to 2022 adjusted for inflation (\$1.3M).

E-TYPE	ITEM	2019 Actual	2020 Actual	2021 Actual	2022 Actual	2022 (after removing inflation - assumed at 33.6%)
52274	SUPPLIES CHEMICAL OTHER (magn hydroxide)	\$ 62,800	\$ 748,364	\$ 1,770,393	\$ 1,678,610	\$ 1,256,444
52280	SUPPLIES CHEMICAL CAUSTIC SODA (sodium hydroxide)	\$ 1,966,619	\$ 1,118,590	\$ 195,771	\$ 108,216	\$ 81,000
		\$ 2,029,419	\$ 1,866,954	\$ 1,966,165	\$ 1,786,826	\$ 1,337,445

Innovations:

WTD is investing in a wide range of technologies that are improving workflows. These include drones, workflow automation, document management, and work order management. The savings are hard to quantify at this point, but they are in line with continuous improvement, similar to the chemical savings.