



Town of Belmont

FY2024 Water and Sewer Rate Study

DRAFT – Subject to Change

April 10, 2023

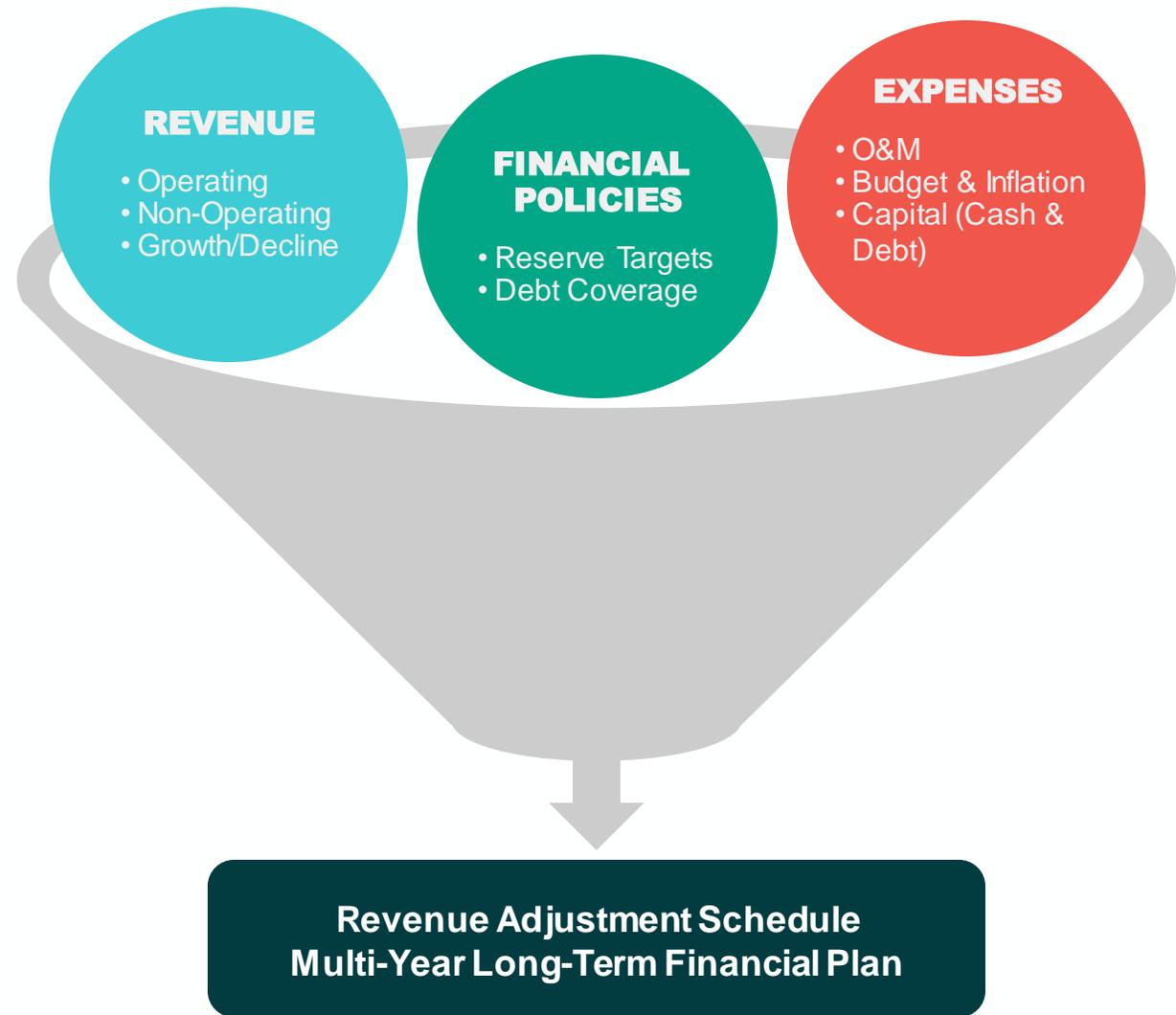


Overview of Rate Study

- Purpose of Rate Study
 - › Ensure long-term financial sustainability and viability for the Town's Water and Sewer Funds
 - › Analyze impacts of rate structural changes on revenue and customers
- Current Industry Trends and Challenges
 - › Water rates across the country are increasing by 5% per year, on average
 - › Sewer rates across the country are increasing by 6% per year, on average
 - › Inflationary impacts, aging infrastructure, and declining consumption are some of the biggest challenges impacting utilities throughout the country

Financial Plan

Financial Plan models yearly cash flow and reserve balances



Water and Sewer Rate History

		<u>FY 2014</u>	<u>FY 2015</u>	<u>FY 2016</u>	<u>FY 2017</u>	<u>FY 2018</u>	<u>FY 2019</u>	<u>FY 2020</u>	<u>FY 2021</u>	<u>FY 2022</u>	<u>FY 2023</u>
		<i>Actual</i>									
Water Rates (Monthly)											
<u>Volumetric Rate (per CCF)</u>											
<u>Tier</u>											
Regular Rate											
Block 1	0 - 30	\$ 5.68	\$ 5.91	\$ 6.06	\$ 6.35	\$ 6.52	\$ 6.62	\$ 6.62	\$ 6.62	\$ 6.62	\$ 6.62
Block 2	> 30	6.53	6.79	6.96	7.29	7.48	7.59	7.59	7.59	7.59	7.59
Lifeline Rate		\$ 3.98	\$ 4.14	\$ 4.25	\$ 4.45	\$ 4.57	\$ 4.64	\$ 4.64	\$ 4.64	\$ 4.64	\$ 4.64
Irrigation Rate		\$ 6.85	\$ 7.12	\$ 7.30	\$ 7.65	\$ 7.85	\$ 7.97	\$ 7.97	\$ 7.97	\$ 7.97	\$ 7.97
<u>Fixed Charge</u>											
5/8"		\$ 6.38	\$ 6.38	\$ 6.38	\$ 6.69	\$ 6.86	\$ 6.95	\$ 6.95	\$ 6.95	\$ 6.95	\$ 6.95
3/4"		6.38	6.38	6.38	6.69	6.86	6.95	6.95	6.95	6.95	6.95
1"		6.84	6.84	6.84	7.17	7.35	7.46	7.46	7.46	7.46	7.46
1.5"		8.38	8.38	8.38	8.78	9.01	9.14	9.14	9.14	9.14	9.14
2"		9.28	9.28	9.28	9.73	9.98	10.11	10.11	10.11	10.11	10.11
3"		9.81	9.81	9.81	10.28	10.55	10.70	10.70	10.70	10.70	10.70
4"		15.77	15.77	15.77	16.52	16.95	17.18	17.18	17.18	17.18	17.18
6"		20.97	20.97	20.97	21.98	22.55	22.85	22.85	22.85	22.85	22.85
8"		27.67	27.67	27.67	28.99	29.75	30.15	30.15	30.15	30.15	30.15
Lifeline Rate		4.47	4.47	4.47	4.68	4.81	4.86	4.86	4.86	4.86	4.86
Sewer Rates (Monthly)											
<u>Volumetric Rate (per CCF)</u>											
Regular Rate		\$ 11.25	\$ 11.81	\$ 12.12	\$ 12.68	\$ 12.91	\$ 12.91	\$ 12.91	\$ 12.91	\$ 12.91	\$ 12.91
Lifeline Rate		\$ 7.88	\$ 8.27	\$ 8.49	\$ 8.88	\$ 9.04	\$ 9.04	\$ 9.04	\$ 9.06	\$ 9.06	\$ 9.06
<u>Fixed Charge</u>											
5/8"		\$ 5.30	\$ 5.56	\$ 5.71	\$ 5.97	\$ 6.08	\$ 6.08	\$ 6.08	\$ 6.08	\$ 6.08	\$ 6.08
3/4"		5.68	5.96	6.12	6.40	6.51	6.51	6.51	6.52	6.52	6.52
1"		6.27	6.58	6.75	7.06	7.19	7.19	7.19	7.20	7.20	7.20
1.5"		8.25	8.66	8.88	9.29	9.46	9.46	9.46	9.47	9.47	9.47
2"		9.42	9.88	10.14	10.61	10.80	10.80	10.80	10.80	10.80	10.80
3"		10.10	10.59	10.87	11.37	11.57	11.57	11.57	11.58	11.58	11.58
4"		17.76	18.63	19.12	20.00	20.36	20.36	20.36	20.36	20.36	20.36
6"		24.47	25.67	26.34	27.55	28.05	28.05	28.05	28.05	28.05	28.05
8"		33.09	34.71	35.62	37.26	37.93	37.93	37.93	37.93	37.93	37.93
Lifeline Rate		3.71	3.89	4.00	4.18	4.26	4.26	4.26	4.25	4.25	4.25

Water & Sewer Financial Plans



Water Fund Overview

- Operation & Maintenance (O&M) expenses are projected to decrease by 1% from FY2023 to FY2024, which reflects the revised indirect calculation, with annual 3% increases thereafter
 - › MWRA Assessment accounts for ~53% of the O&M Budget
- From FY2024 to FY2028, the Water Fund is expected to spend ~\$1.36 million annually on capital improvements
 - › These expenditures require additional funds for PAYGO and new debt service
- The Water Fund has not had a rate increase since FY2019
- Retained earnings are expected to approach \$0 by the end of FY2026
 - › Additional revenue is needed immediately in FY2024 to ensure financial sufficiency and viability

Water Fund Overview - Operations

Budget Area	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028
Wages	\$1,109,406	\$1,113,063	\$1,146,455	\$1,180,849	\$1,216,274	\$1,252,762
Benefits	\$394,887	\$455,411	\$469,073	\$483,146	\$497,640	\$512,569
Other Expenses	\$982,241	\$1,081,910	\$1,114,367	\$1,147,798	\$1,182,232	\$1,217,699
MWRA Assessment	\$3,234,847	\$3,279,924	\$3,378,322	\$3,479,671	\$3,584,062	\$3,691,583
Transfers (Indirect/OPEB)	\$526,500	\$251,666	\$259,216	\$266,992	\$275,002	\$283,252
Cash-Funded Capital	\$669,275	\$940,100	\$739,600	\$819,720	\$865,817	\$932,634
Debt Service	\$854,188	\$844,488	\$834,720	\$825,088	\$815,850	\$855,225
TOTAL WATER BUDGET:	\$7,771,343	\$7,966,562	\$7,941,753	\$8,203,263	\$8,436,877	\$8,745,724
		2.5%	-0.3%	3.3%	2.8%	3.7%

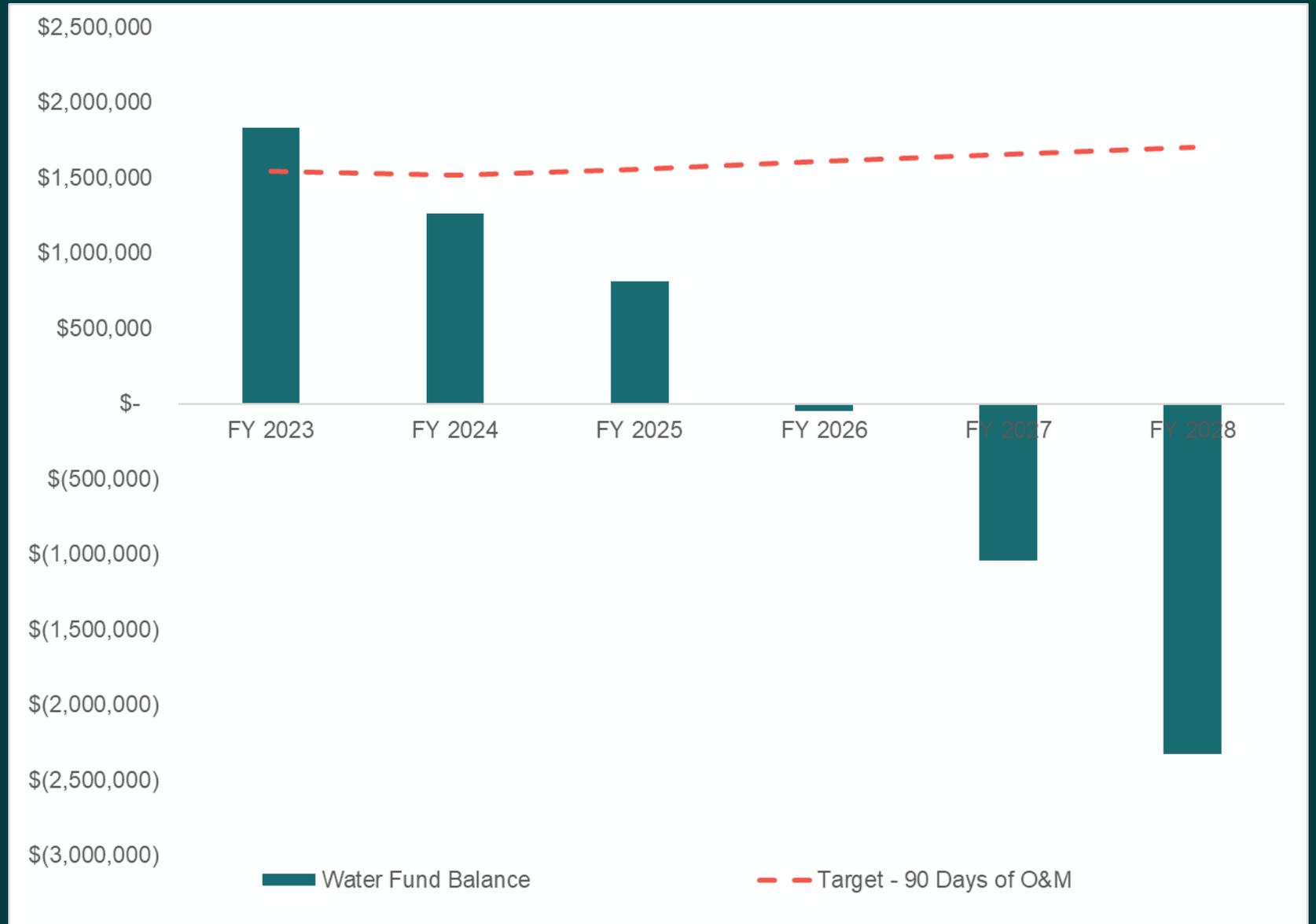
Water Fund Overview – Capital Improvements

Project Name	Funding Method	FY2024	FY2025	FY2026	FY2027	FY2028
Water Main Replacement	Debt – MWRA	\$500,000	\$500,000	\$500,000	\$500,000	\$500,000
Water Main Replacement	PAYGO	\$256,000	\$580,000	\$666,400	\$759,712	\$860,489
Vactor Truck	PAYGO	\$500,000				
GIS Updates	PAYGO	\$87,700				
Hydraulic Modeling	PAYGO	\$96,400				
Closed Utility 4WD Truck	PAYGO		\$79,800	\$79,800		
40,000 GVW Dump Truck	PAYGO			\$153,320		
Emergency Service Van	PAYGO				\$59,410	
Admin Electric Vehicle	PAYGO				\$46,695	\$46,695
Emergency Lighting Plant	PAYGO					\$25,450
TOTAL DEBT:		\$500,000	\$500,000	\$500,000	\$500,000	\$500,000
TOTAL PAYGO:		\$940,100	\$659,800	\$899,520	\$865,817	\$932,634
TOTAL WATER CAPITAL:		\$1,440,100	\$1,159,800	\$1,399,520	\$1,365,817	\$1,432,634

Projected Water Cash Flow with No Rate Increases



Projected Water Fund Balance with No Rate Increases



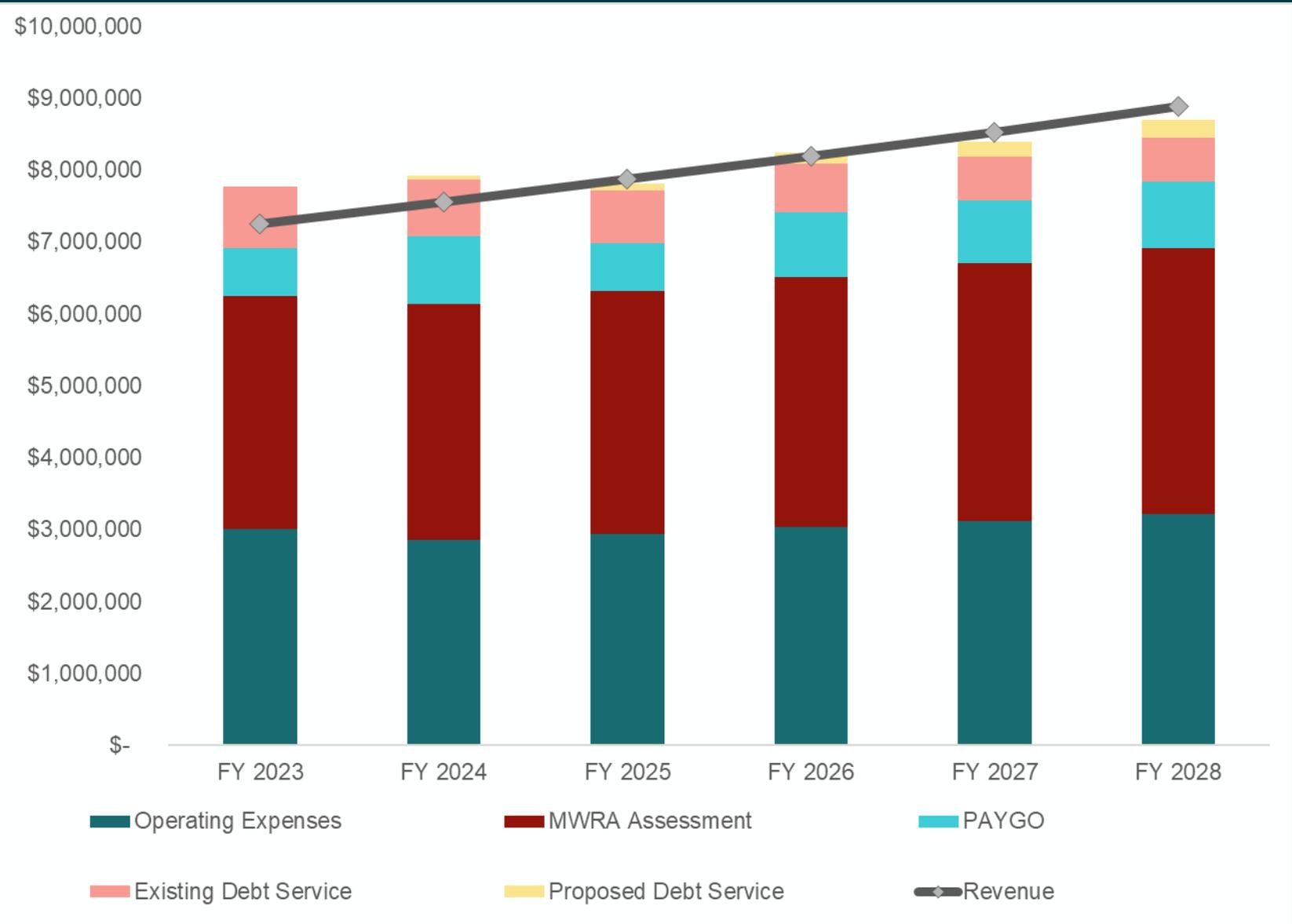
Recommended Rate Increases

- To ensure financial sufficiency, the Water Fund requires the following rate increases:

	<u>FY2024</u>	<u>FY2025</u>	<u>FY2026</u>	<u>FY2027</u>	<u>FY2028</u>
Water Rates	4.0%	4.0%	4.0%	4.0%	4.0%

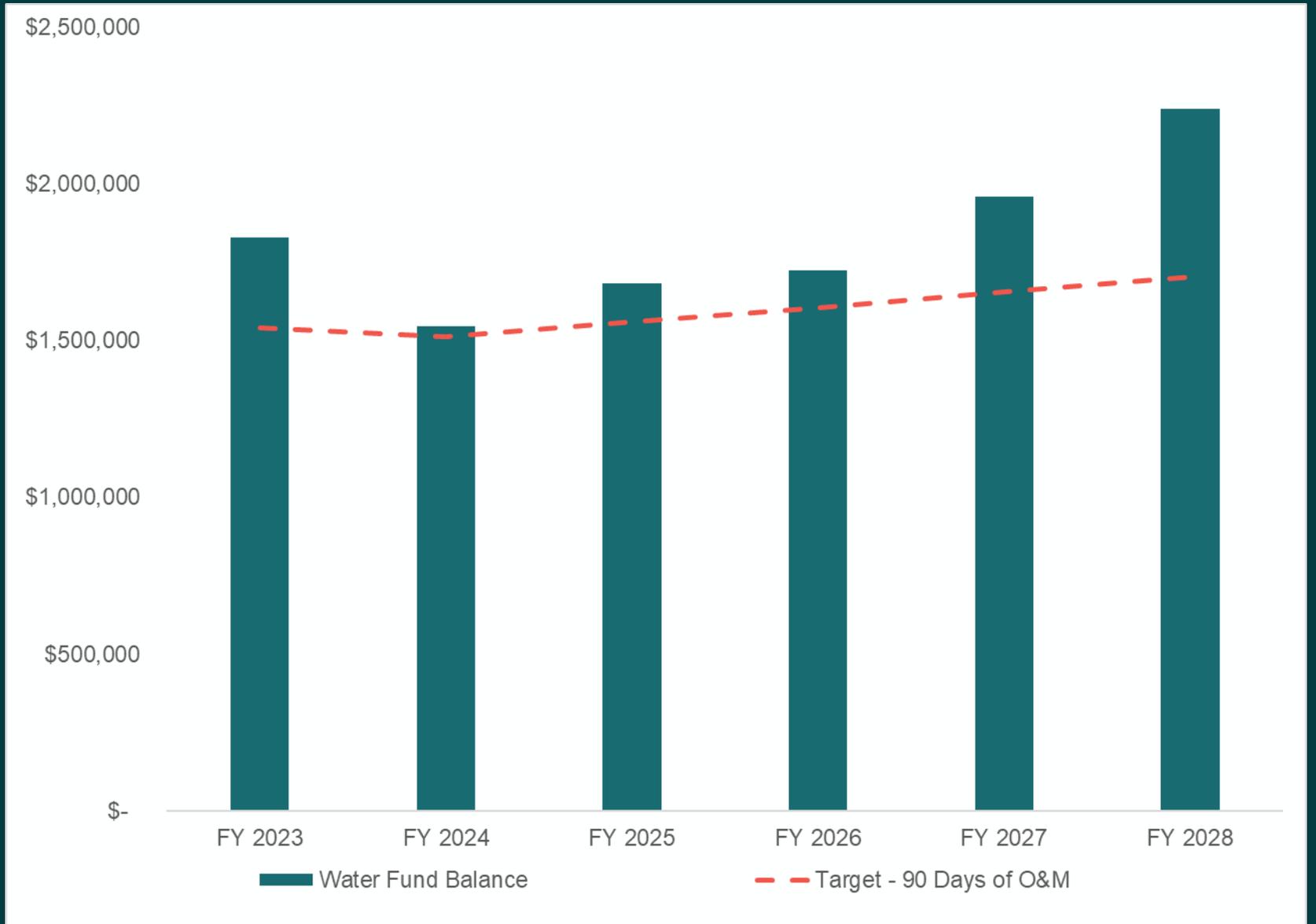
- Although the volumetric and fixed charges could be increased by different amounts, it is recommended to maintain the Water Fund's existing revenue from minimum charges to ensure revenue stability
- Fixed rate structural changes will create varying customer impacts

Projected Water Cash Flow with Recommended Rate Increases



Projected Water Fund Balance with Recommended Rate Increases

With the recommended rate increases, the Water Fund is projected to maintain sufficient balances (red line) to remain self-sufficient in the event of a bad year.



Sewer Fund Overview

- Operation & Maintenance (O&M) expenses are projected to increase by approximately 1% in FY2024, followed by 3% annual increases in the fiscal years thereafter. FY2024 incorporates the updated indirect calculation.
 - › MWRA Assessment accounts for ~71% of the O&M Budget
- From FY2024 to FY2028, the Sewer Fund is expected to spend approximately \$1.10 million annually on capital improvements
 - › These expenditures require additional funds for PAYGO
- The Sewer Fund has not had a rate increase since FY2018
- Retained earnings are expected to approach \$0 by the end of FY2025
 - › Additional revenue is needed immediately in FY2024 to ensure financial sufficiency and viability

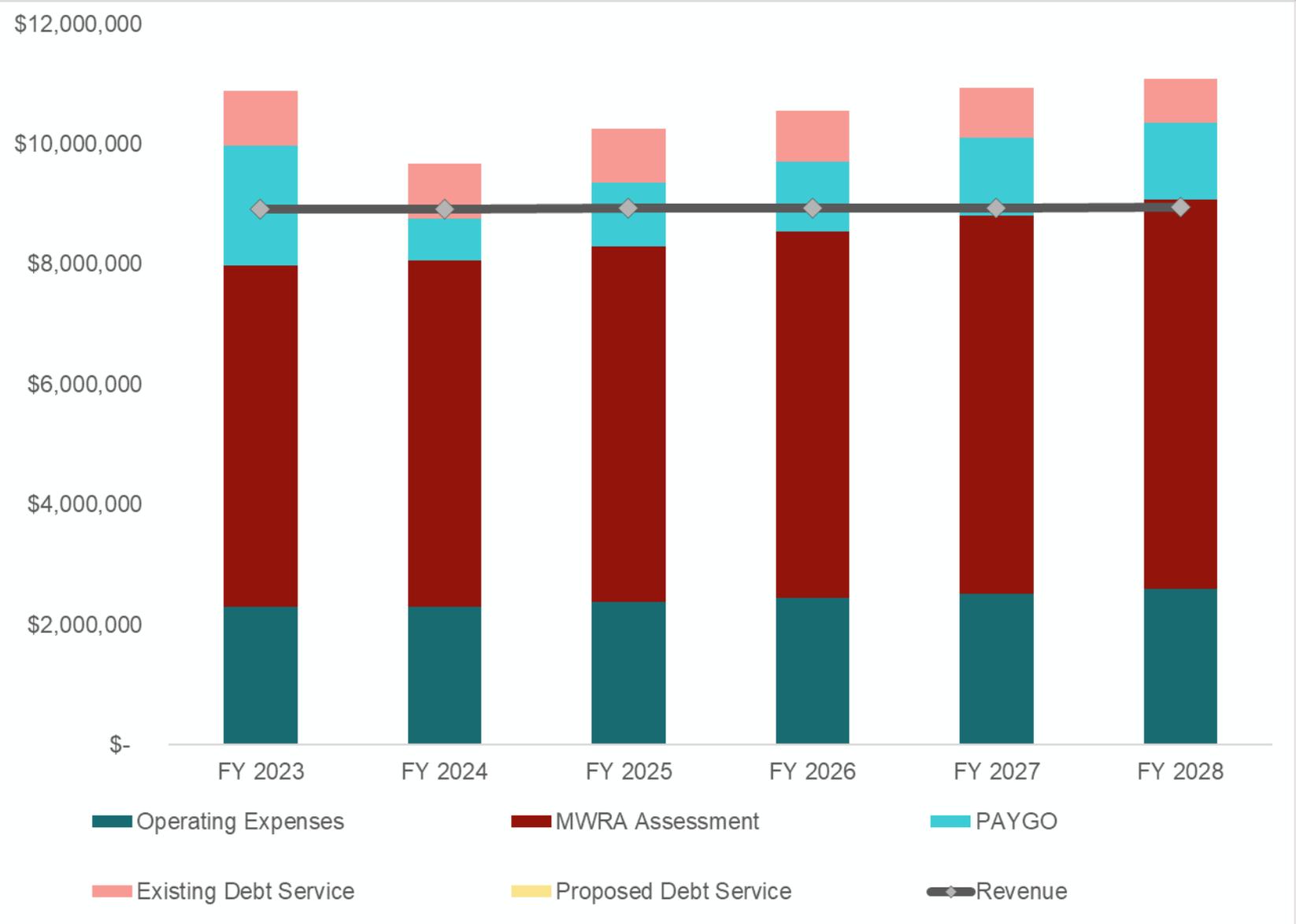
Sewer Fund Overview - Operations

Budget Area	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028
Wages	\$837,975	\$863,337	\$889,237	\$915,914	\$943,392	\$971,693
Benefits	\$181,927	\$432,221	\$445,188	\$458,543	\$472,300	\$486,469
Other Expenses	\$761,780	\$758,393	\$781,145	\$804,579	\$828,717	\$853,578
MWRA Assessment	\$5,678,000	\$5,750,128	\$5,922,632	\$6,100,311	\$6,283,320	\$6,471,820
Transfers (Indirect/OPEB)	\$523,500	\$252,821	\$260,406	\$268,218	\$276,264	\$284,552
Cash Funded Capital	\$1,985,700	\$700,000	\$1,053,035	\$1,157,765	\$1,306,825	\$1,293,625
Debt Service	\$915,700	\$911,413	\$902,119	\$843,891	\$820,922	\$722,966
TOTAL SEWER BUDGET:	\$10,884,582	\$9,668,313	\$10,253,761	\$10,549,222	\$10,931,740	\$11,084,703
		-11.2%	6.1%	2.9%	3.6%	1.4%

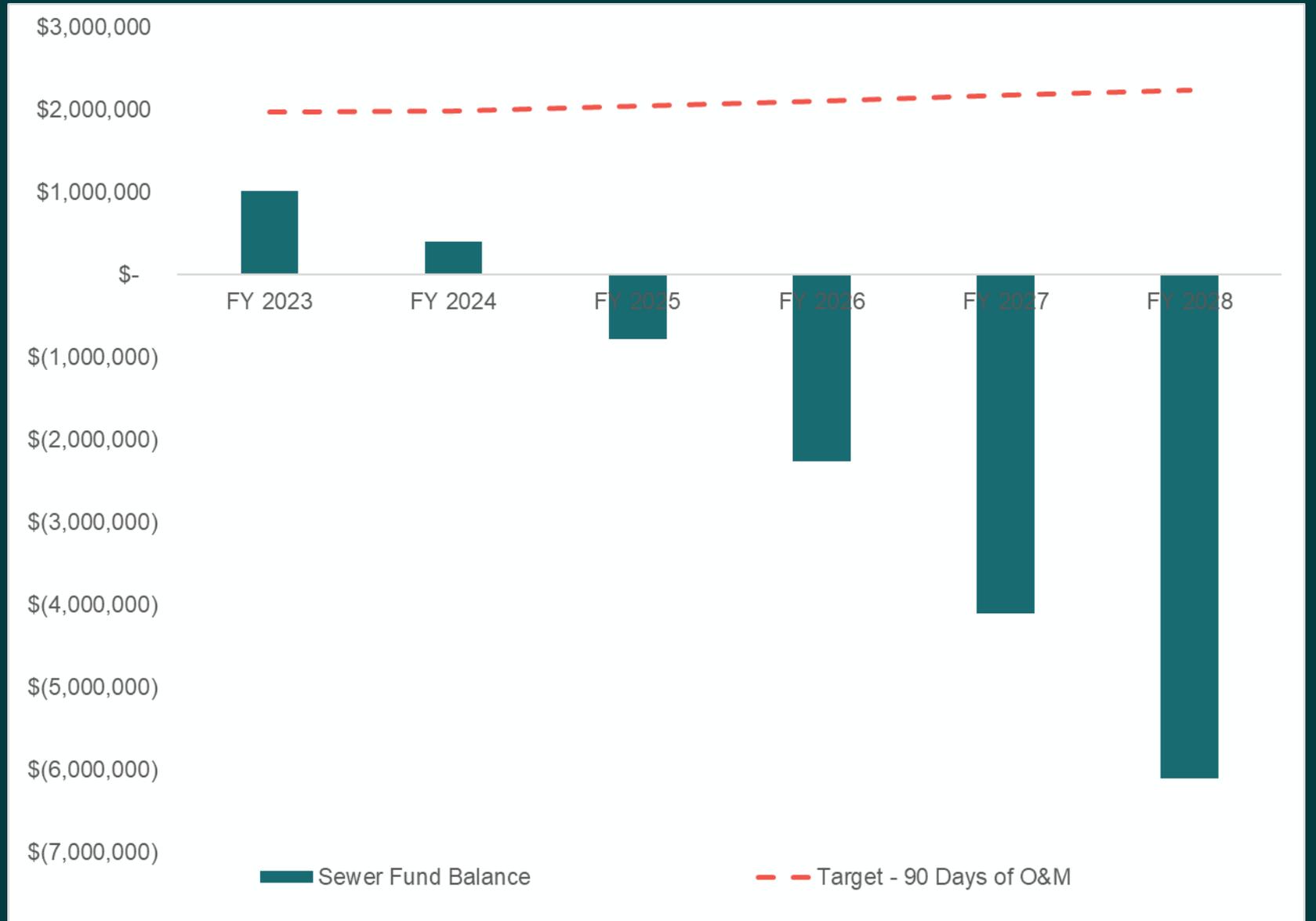
Sewer Fund Overview – Capital Improvements

Project Name	Funding Method	FY2024	FY2025	FY2026	FY2027	FY2028
Sewer and Drain Rehabilitation	PAYGO	\$700,000	\$800,000	\$900,000	\$1,000,000	\$1,100,000
Emergency Electric Service Van	PAYGO		\$59,410			
40,000 GV Dump truck	PAYGO		\$193,625	\$193,625		\$193,625
1 Ton 4WD Pick Up Truck	PAYGO			\$64,140	\$64,140	
Front End Loader	PAYGO				\$242,685	
TOTAL DEBT:		\$-	\$-	\$-	\$-	\$-
TOTAL PAYGO:		\$700,000	\$1,053,035	\$1,157,765	\$1,306,825	\$1,239,625
TOTAL SEWER CAPITAL:		\$700,000	\$1,053,035	\$1,157,765	\$1,306,825	\$1,239,625

Projected Sewer Cash Flow with No Rate Increases



Projected Sewer Fund Balance with No Rate Increases



Recommended Rate Increases

- To ensure financial sufficiency, the Sewer Fund requires the following rate increases:

	<u>FY2024</u>	<u>FY2025</u>	<u>FY2026</u>	<u>FY2027</u>	<u>FY2028</u>
Sewer Rates	8.0%	8.0%	3.0%	3.0%	3.0%

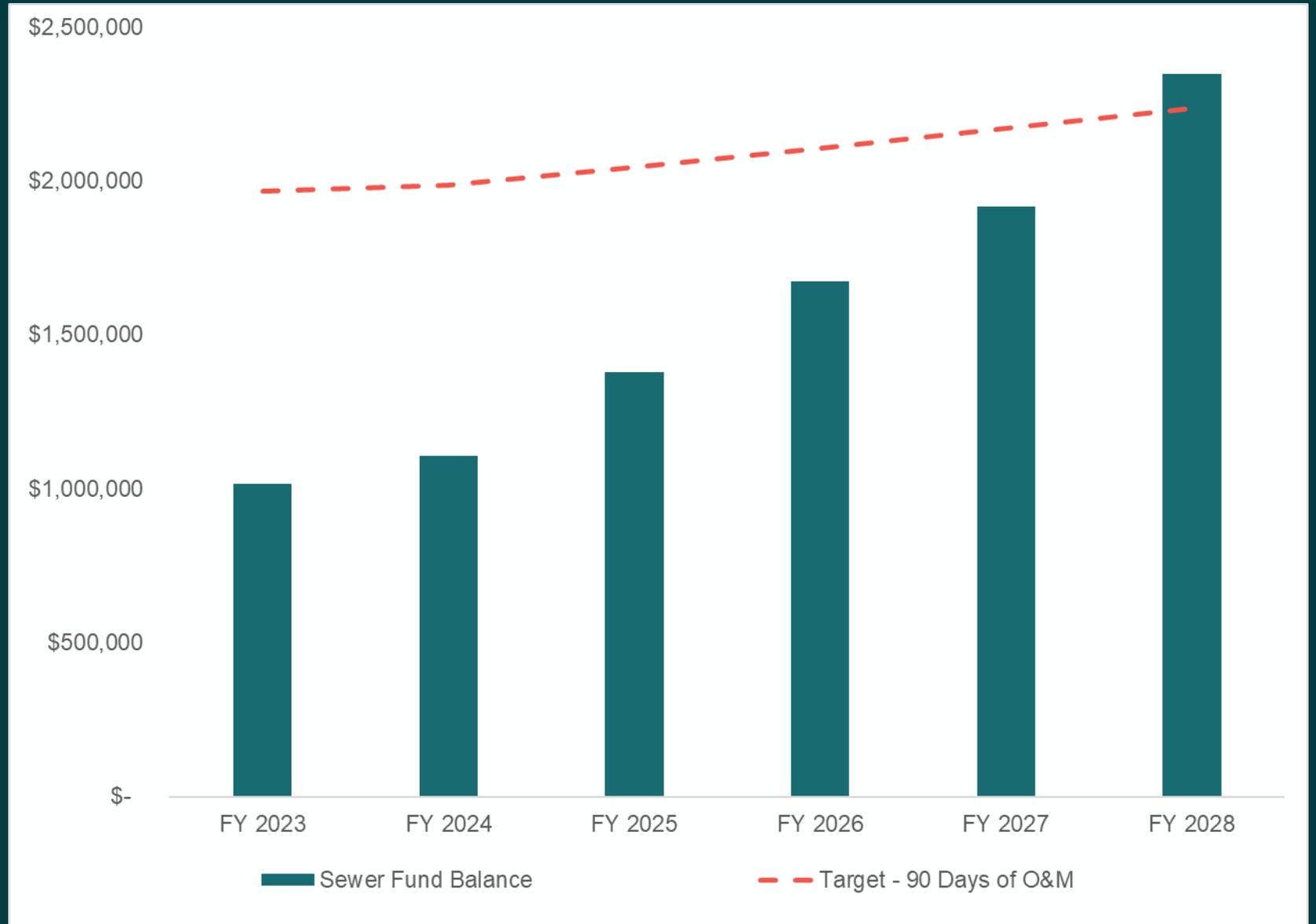
- Although the volumetric and fixed charges could be increased by different amounts, it is recommended to maintain the sewer fund's existing revenue from minimum charges to ensure revenue stability
- Fixed rate structural changes will create varying customer impacts

Projected Sewer Cash Flow with Recommended Rate Increases



Projected Sewer Fund Balance with Recommended Rate Increases

With the recommended rate increases, by FY2028, the Sewer Fund is projected to achieve sufficient balance (red line) to remain self-sufficient in the event of a bad year.



Proposed Rate Design



FY2024 Rate Design Overview

- Maintain existing *volumetric* rate structure and escalate to ensure financial sufficiency
- Restructure water and sewer fixed charges
 - › Industry best practices suggest scaling fixed charges based on AWWA capacity ratios, but the impacts to customers of fully making that shift are unpalatable

Meter Size	AWWA (capacity)	AWWA Factors based on 5/8	Existing Belmont Water Factors based on 5/8"	Existing Belmont Sewer Factors based on 5/8"	Recommended Water Factors based on 5/8"	Recommended Sewer Factors based on 5/8"
5/8"	20	1.00	1.00	1.00	1.00	1.00
3/4"	30	1.50	1.00	1.07	1.25	1.29
1"	50	2.50	1.07	1.18	1.79	1.84
1 1/2"	100	5.00	1.32	1.56	3.16	3.28
2"	160	8.00	1.45	1.78	4.73	4.89
3"	300	15.00	1.54	1.90	8.27	8.45
4"	500	25.00	2.47	3.35	13.74	14.17
6"	1,000	50.00	3.29	4.61	26.64	27.31
8"	1,600	80.00	4.34	6.24	42.17	43.12

- Municipal accounts charged a wholesale volumetric rate to recover MWRA assessment costs; eliminate monthly fixed charges for municipal accounts.

Water Rate Design Recommendation– FY2024

	Current	Recommended	\$ Change	% Change
<u>Volumetric Charges - per Hundred cubic feet (Ccf)</u>				
0-30 Ccf	\$6.62	\$6.91	\$0.29	4.4%
> 30 Ccf	\$7.59	\$7.92	\$0.33	4.4%
Lifeline Rate	\$4.64	\$4.84	\$0.20	4.3%
Irrigation Rate	\$7.97	\$8.32	\$0.35	4.4%
<u>Minimum Charges (Monthly)</u>				
5/8"	\$6.95	\$6.62	(\$0.33)	-4.7%
3/4"	\$6.95	\$8.28	\$1.33	19.1%
1"	\$7.46	\$11.83	\$4.37	58.6%
1.5"	\$9.14	\$20.91	\$11.77	128.8%
2"	\$10.11	\$31.31	\$21.20	209.7%
3"	\$10.70	\$54.77	\$44.07	411.8%
4"	\$17.18	\$90.97	\$73.79	429.5%
6"	\$22.85	\$176.45	\$153.60	672.2%
8"	\$30.15	\$279.26	\$249.11	826.2%
Lifeline Rate	\$4.86	\$4.63	(\$0.23)	-4.7%

Sewer Rate Design Recommendation– FY2024

	Current	Recommended	\$ Change	% Change
<u>Volumetric Charges - per Hundred cubic feet (Ccf)</u>				
All Ccf	\$12.91	\$13.98	\$1.07	8.3%
Lifeline Rate	\$9.06	\$9.79	\$0.73	8.0%
<u>Minimum Charges (Monthly)</u>				
5/8"	\$6.08	\$6.00	(\$0.08)	-1.4%
3/4"	\$6.52	\$7.71	\$1.19	18.3%
1"	\$7.20	\$11.05	\$3.85	53.4%
1.5"	\$9.47	\$19.66	\$10.19	107.7%
2"	\$10.80	\$29.32	\$18.52	171.5%
3"	\$11.58	\$50.70	\$39.12	337.8%
4"	\$20.36	\$85.02	\$64.66	317.6%
6"	\$28.05	\$163.79	\$135.74	483.9%
8"	\$37.93	\$258.64	\$220.71	581.9%
Lifeline Rate	\$4.25	\$4.20	(\$0.05)	-1.2%

Example

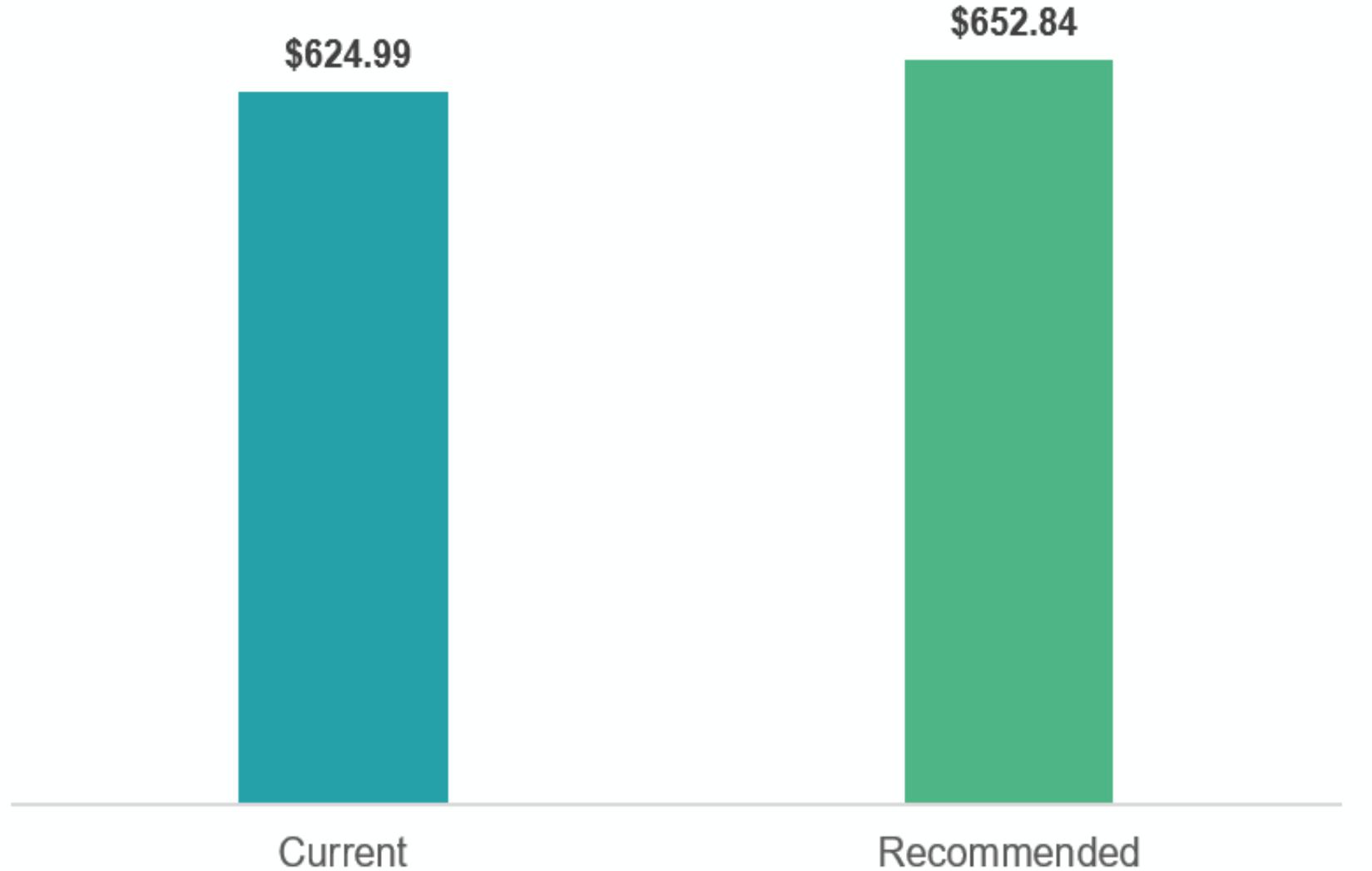
Customer Impacts



1-Person Household

– 2 Ccf/month;
5/8" meter

Combined Annual Water and Sewer Bill

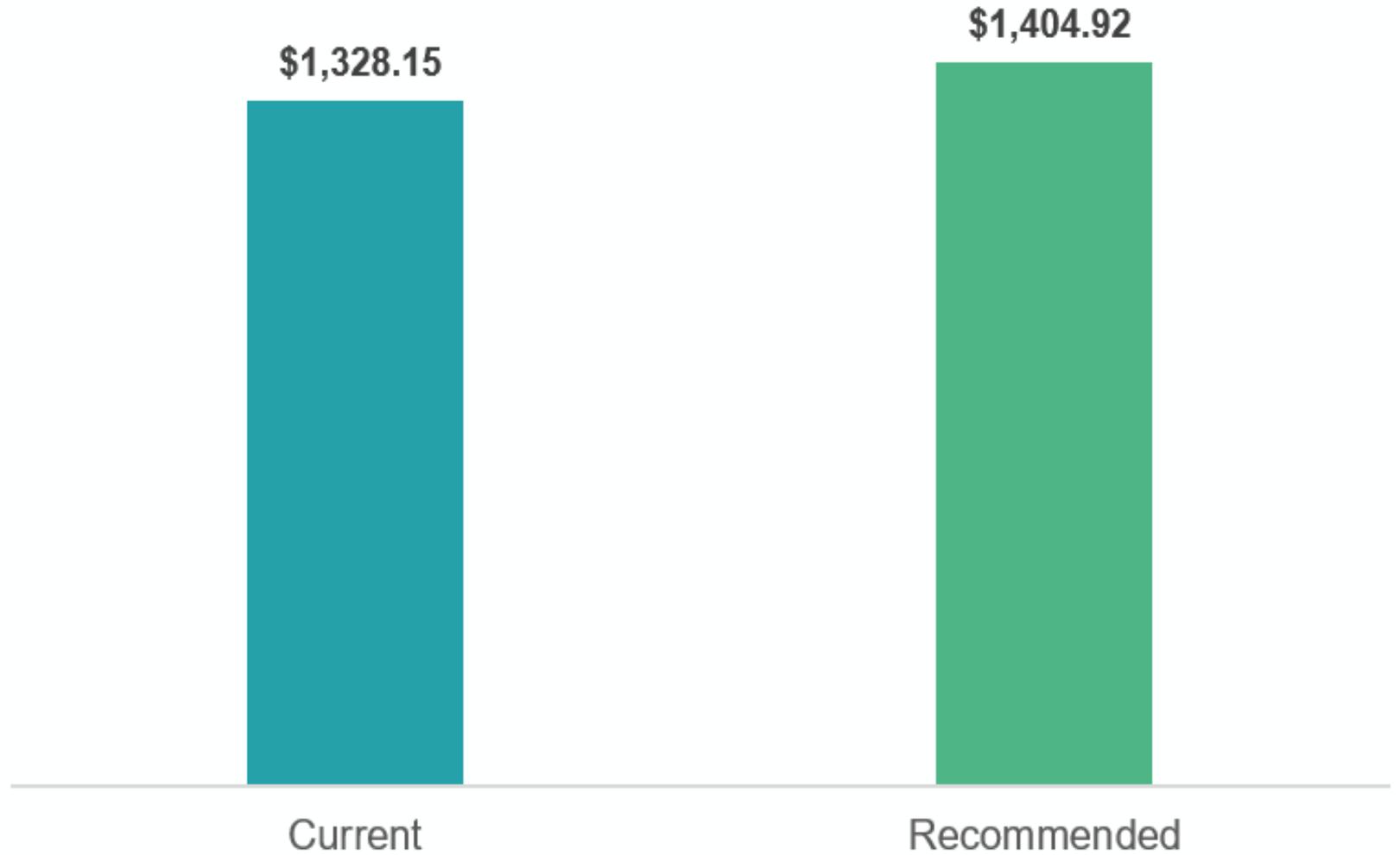


Recommended Rate Increase	
\$ Change	\$27.84 per year
% Change	4.5%

2-Person Household

– 5 Ccf/month;
5/8” meter

Combined Annual Water and Sewer Bill



Recommended Rate Increase	
\$ Change	\$76.77 per year
% Change	5.8%

4-Person Household

– 10 Ccf/month;
5/8" meter

Combined Annual Water and Sewer Bill

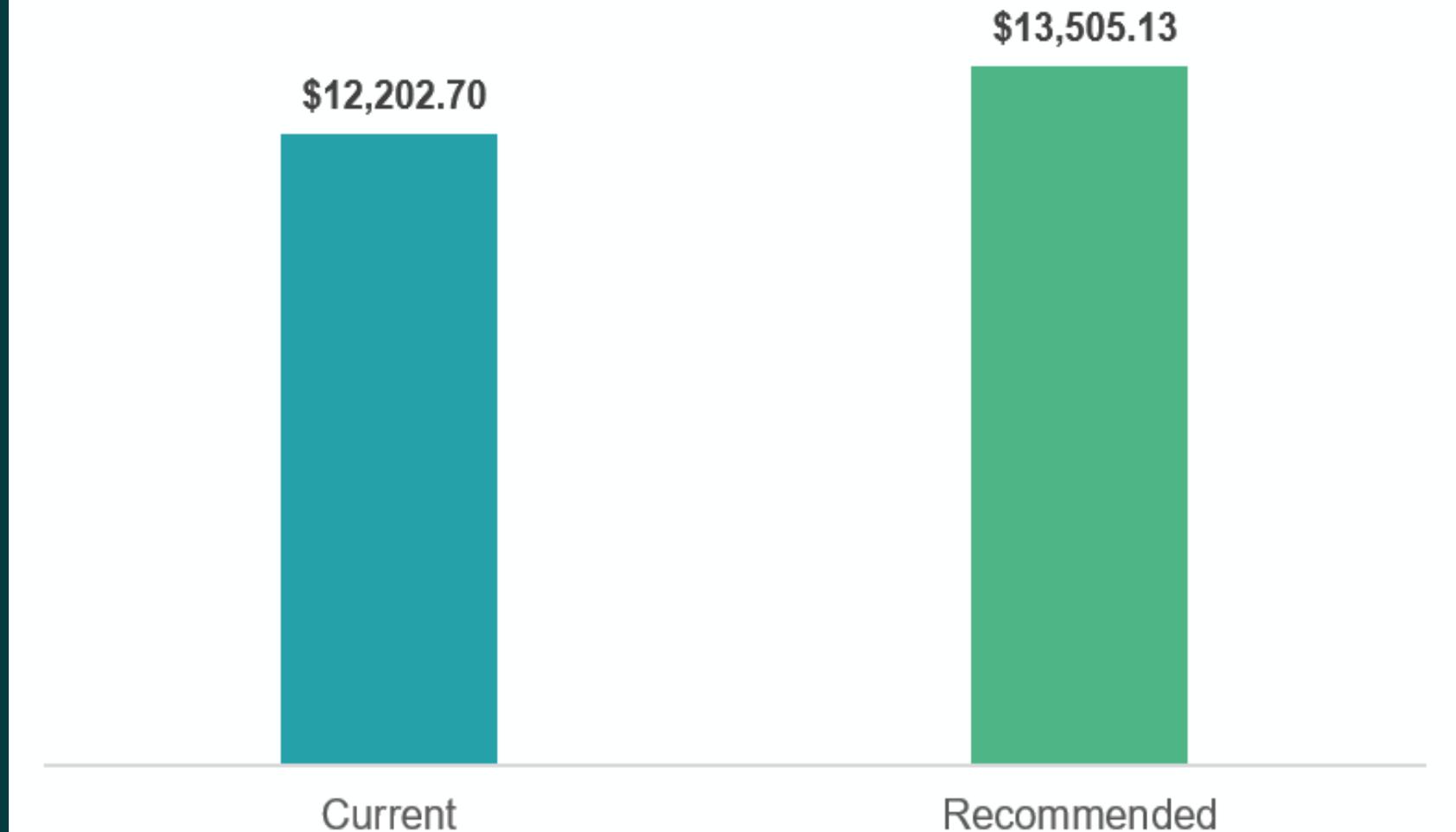


Recommended Rate Increase	
\$ Change	\$158.33 per year
% Change	6.3%

Combined Annual Water and Sewer Bill

Average - Volume Commercial

– 50 Ccf/month;
2” meter

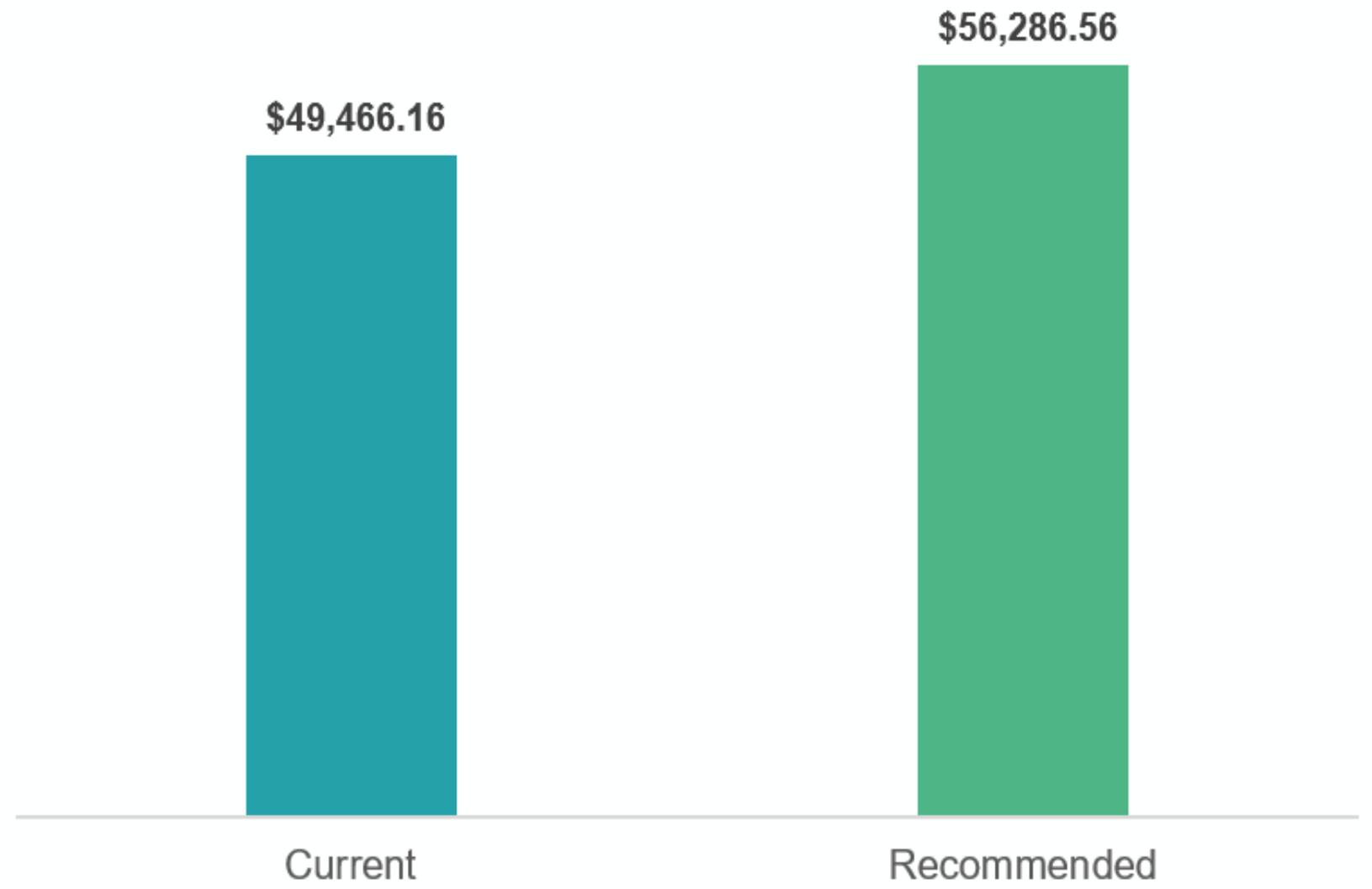


Recommended Rate Increase	
\$ Change	\$1,302.44 per year
% Change	10.7%

High - Volume Commercial

– 200 Ccf/month;
6” meter

Combined Annual Water and Sewer Bill



Recommended Rate Increase	
\$ Change	\$6,820.40 per year
% Change	13.8%

What's Next?



Step 1: Receive feedback on rate increases and structures



Step 2: Finalize Rate Recommendations



Step 3: Communicate need and impetus



Step 4: Implement rates and update model frequently



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Thank you!

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