

Water and Sewer
Rate Study
Recommendations

Michael Maker
Executive Consultant
December 2, 2020



Table of Contents

- Study Assumptions
- Revenue Requirements
- Current Charges and Rates
- Projected Charges and Rates
- Sample Bills and Comparison
- Discussion

Guiding Principles and Objective

- The water and sewer systems must each be financially self-supporting
- The utility should maintain reserves to provide for contingencies and unplanned expenses
- Water and sewer rates should be kept as low as possible *over time*

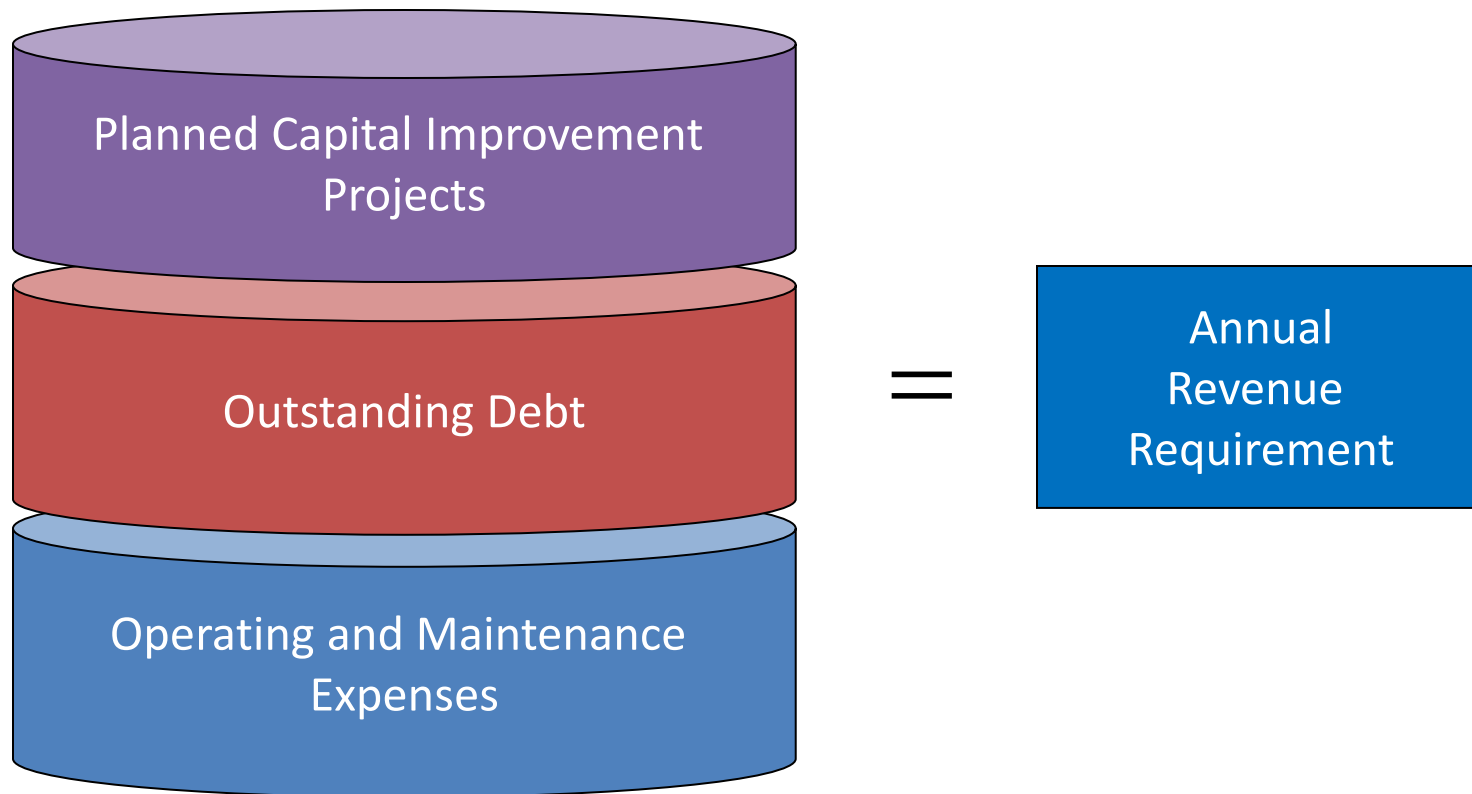
Objective: Ensure rates are stable through sound financial management and system maintenance

- ✓ Review water and sewer funds to maintain financial stability
- ✓ Prepare long-term financial plan that includes capital investments required for a sustainable system

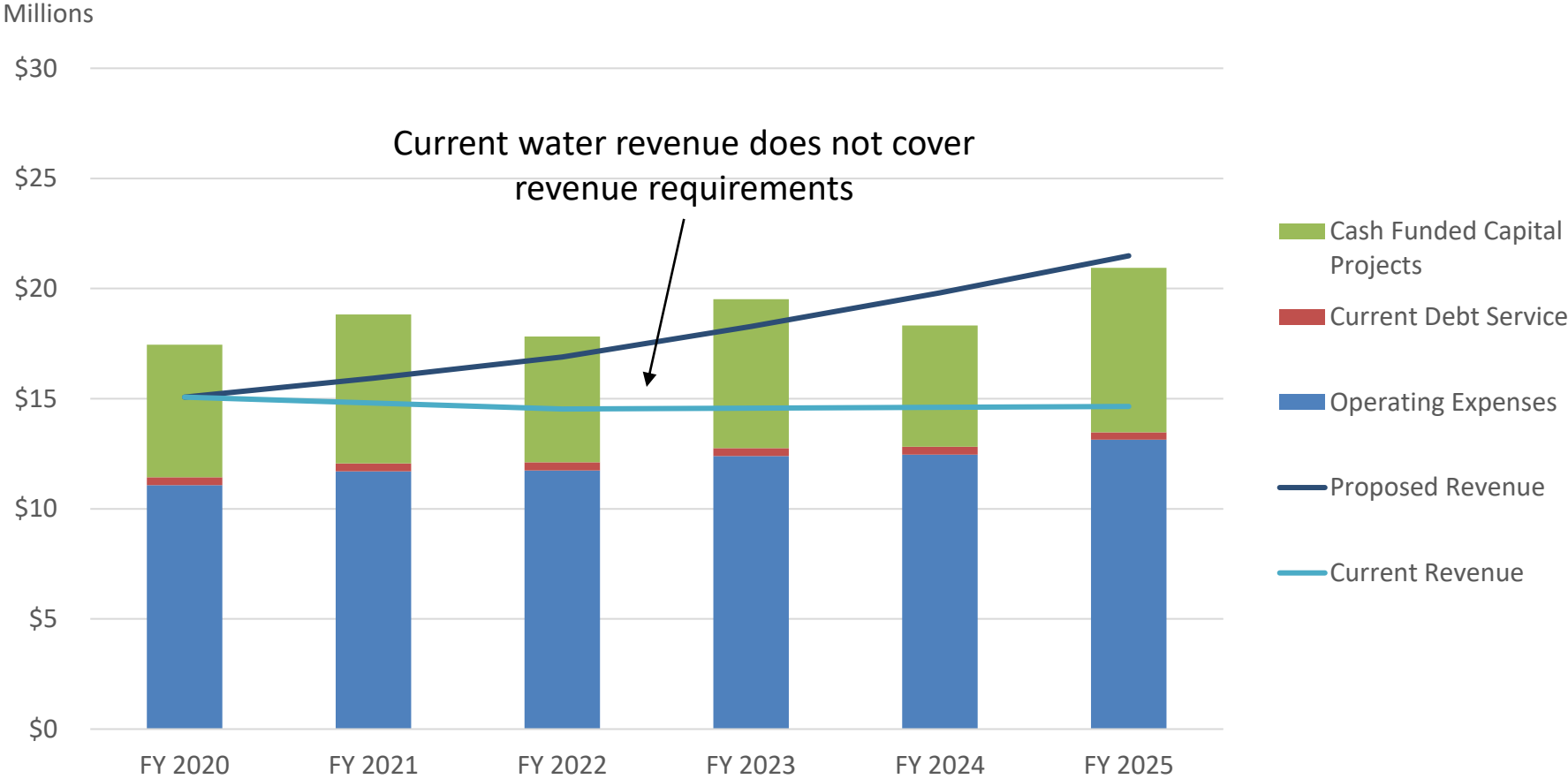
Factors Affecting Charges and Rates

- Operating and maintenance expense changes
 - 3.0% escalation rate per year
- Capital improvement plans
 - investment in the treatment, distribution and collection systems
- Debt service
 - existing and future debt
- Customer changes
 - 0.5% growth per year based on historical trend
- Water usage changes
 - no growth based on historical trend
- Sewage generation changes
 - no growth based on historical trend
- Miscellaneous revenue changes
 - no growth
- Minimum cash balance (operating and capital)
 - Maintain \$7.5 million for each water and sewer

What is the “Revenue Requirement”?

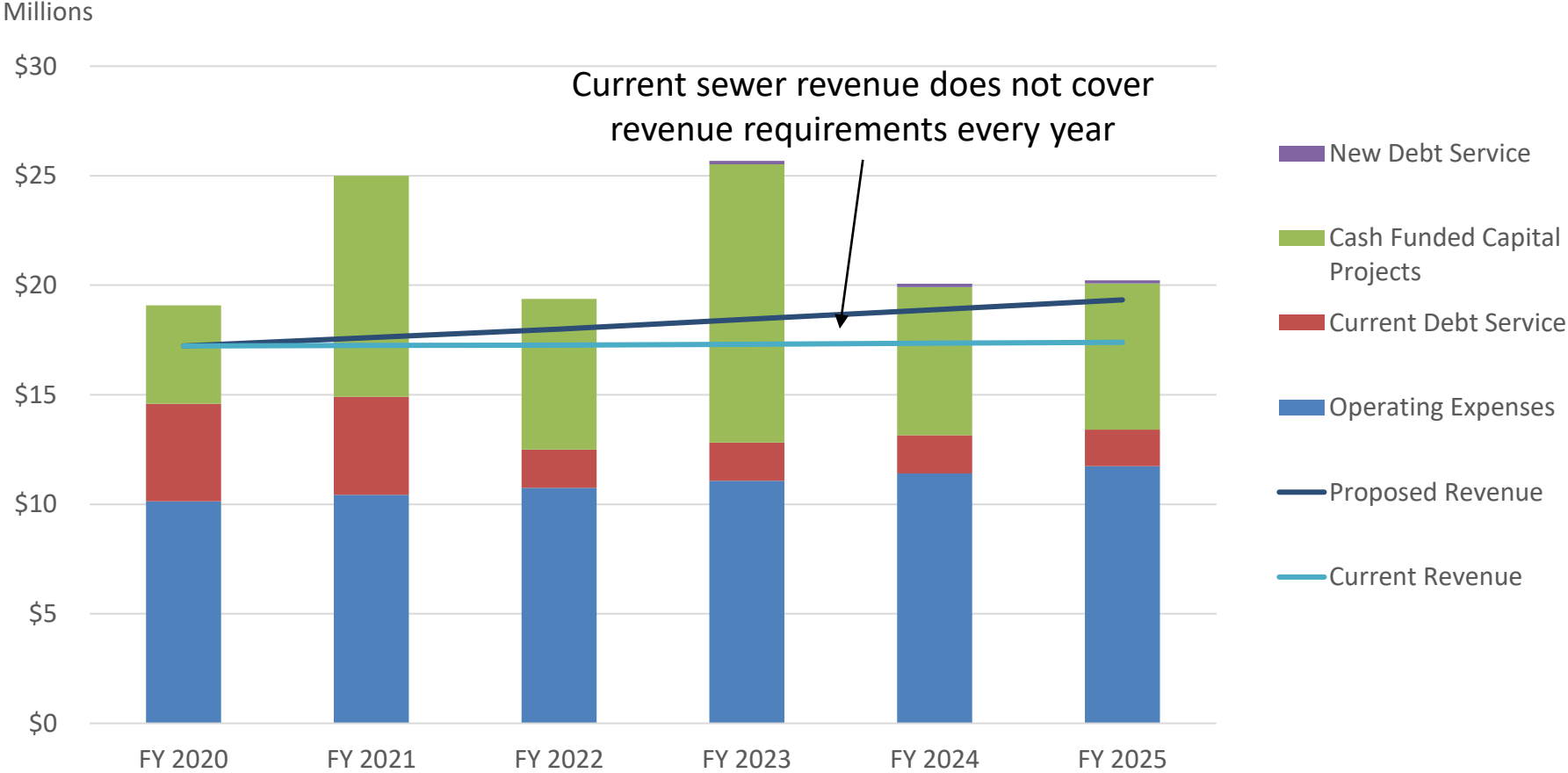


Revenue Requirements vs. Revenue - Water



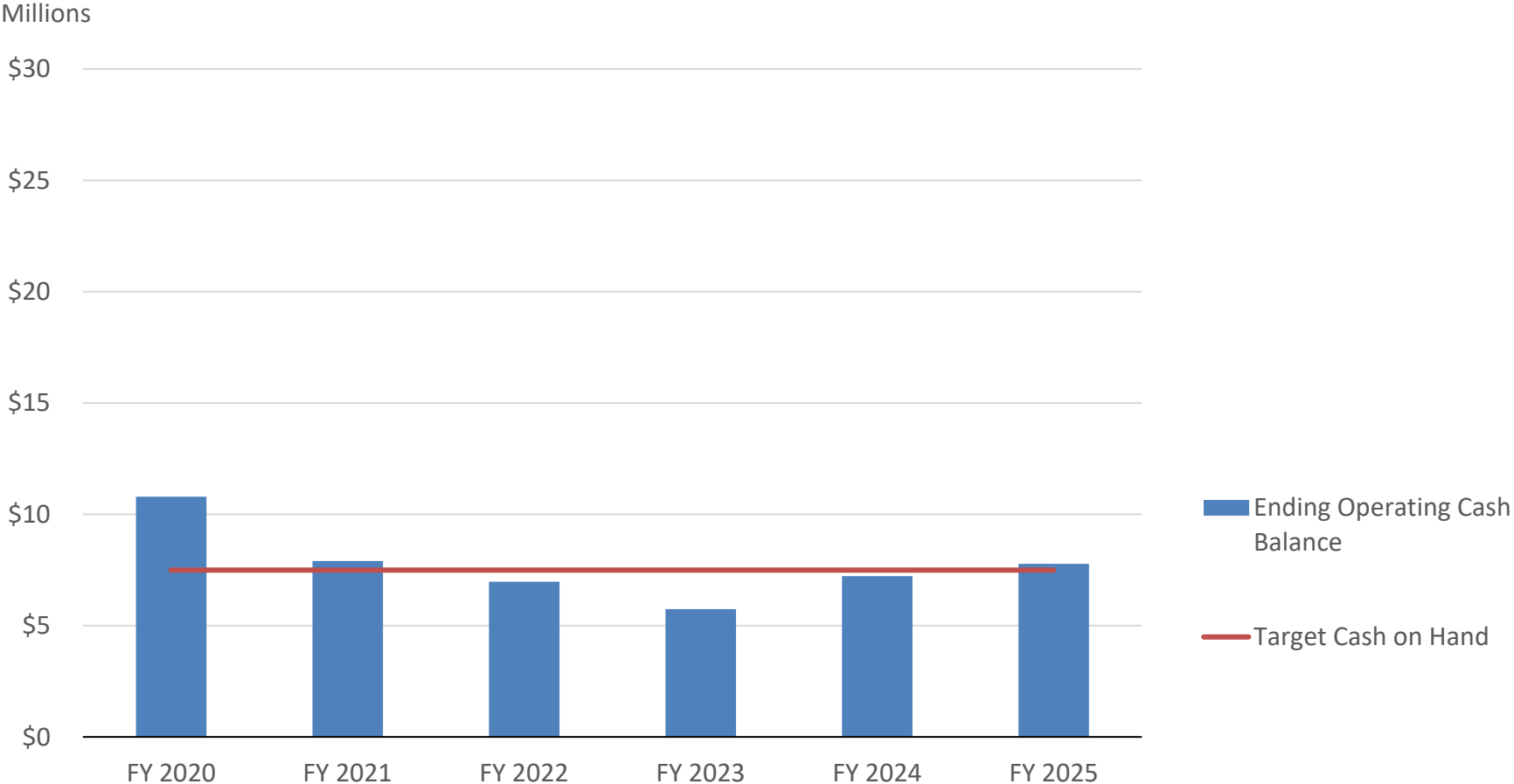
Proposed Revenue reflects a 9.5% increase in revenue each year from FY 2021 to FY 2025

Revenue Requirements vs. Revenue - Sewer

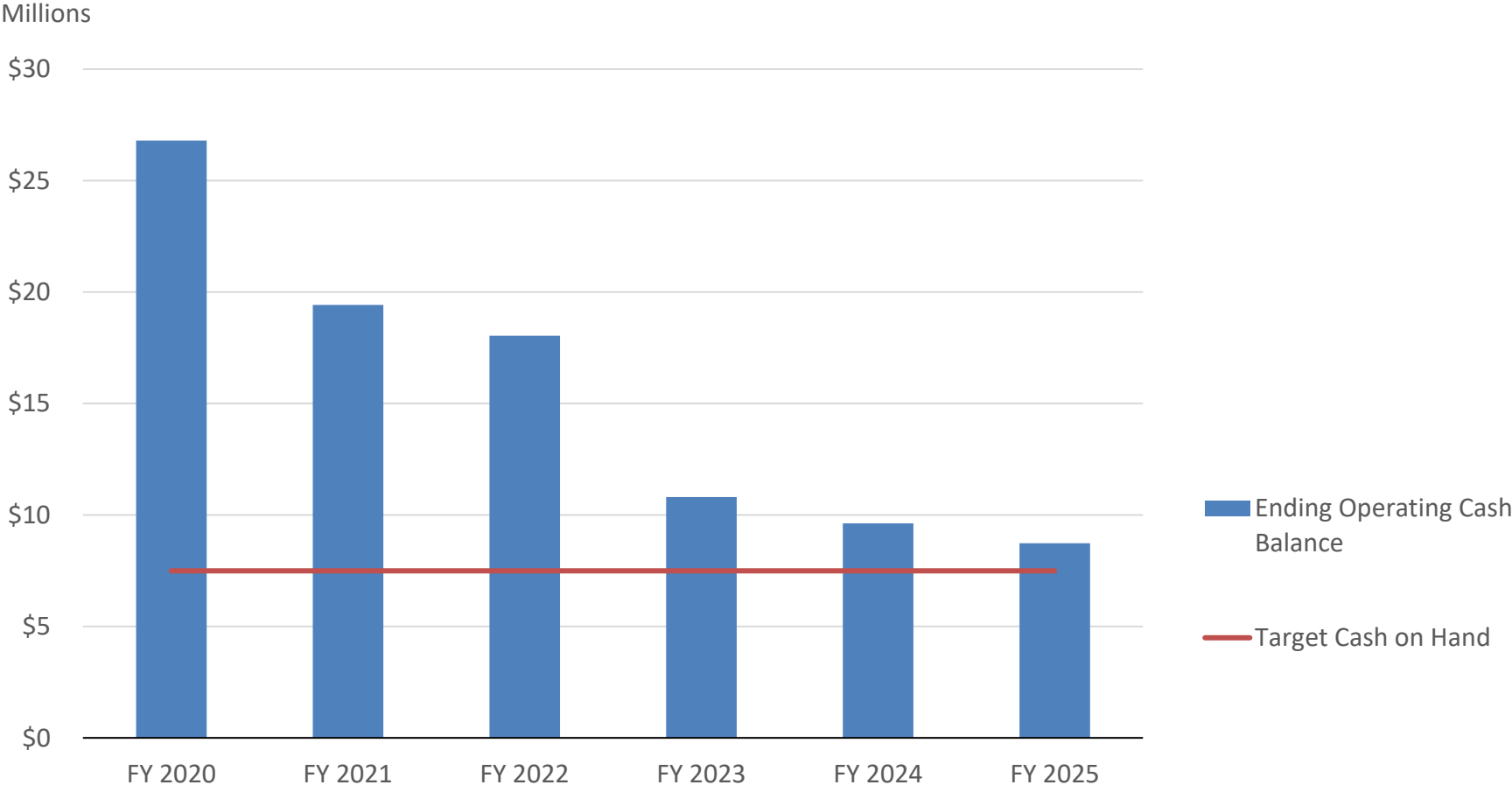


Proposed Revenue reflects a 3.0% increase in revenue each year from FY 2021 to FY 2025

Cash Balance - Water



Cash Balance - Sewer



FY 2020 (Current) Water Charges and Rates

Bi-Monthly Minimum Service Charges

Meter Size (inches)	Gallons Included	Charge
3/4 Residential	5,000	\$18.00
3/4 Commercial	8,000	\$28.80
1	20,000	\$72.00
1 1/2	40,000	\$144.00
2	64,000	\$230.40
3	128,000	\$460.80
4	200,000	\$720.00
6	400,000	\$1,440.00
8	640,000	\$2,304.00
10	920,000	\$3,312.00
Multifamily Unit	5,000	\$18.00

Volume Rates (per 1,000 gallons)

Tier	Rate
Bi-Monthly Minimum Rate ¹	\$3.60
Minimum to 1.5(x) ²	\$2.71
1.5(x) to 2.0(x)	\$3.92
Over 2.0(x)	\$5.36
Public Water ³	\$2.48

¹ included in the Minimum Service Charge

² x = greater of highest winter usage (Jan-Apr) or gallons included in Minimum Service Charge

³ subject to individual contract terms

FY 2020 (Current) Sewer Charges and Rates

Bi-Monthly Minimum Service Charges

Meter Size (inches)	Gallons Included	Charge
3/4 Residential	5,000	\$22.20
3/4 Commercial	8,000	\$35.52
1	20,000	\$88.80
1 1/2	40,000	\$177.60
2	64,000	\$284.16
3	128,000	\$568.32
4	200,000	\$888.00
6	400,000	\$1,776.00
8	640,000	\$2,841.60
10	920,000	\$4,084.80
Multifamily Unit	5,000	\$22.20

Volume Rates (per 1,000 gallons)

Tier	Rate
Bi-Monthly Minimum Rate ¹	\$4.44
Over Minimum	\$4.44

¹Included in the Minimum Service Charge

Rate Designs

Current Rate Design

- Water and Sewer: bi-monthly minimum service charges (vary by meter size)
- Water: three-tier volume rates (over minimum, per 1,000 gallons)
- Sewer: single unit volume rate (over minimum, per 1,000 gallons)
- Public Water: single unit volume rate (per 1,000 gallons)

Alternative Rate Design

- Water and Sewer: bi-monthly minimum service charges (vary by meter size)
- Water: three-tier volume rates (over minimum, per 1,000 gallons)
 - Revised “Minimum to 1.5(x)” rate so that it is higher than Minimum Rate
- Sewer: single unit volume rate (over minimum, per 1,000 gallons)
- Public Water: single unit volume rate (per 1,000 gallons)

Current and Alternative rate designs recover the same amount of revenue

Projected Water Charges and Rates (Current Design)

Charge/Rate	Gal. Inc.	Current	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Bi-Monthly Minimum Service Charges							
3/4 Residential	5,000	\$18.00	\$19.65	\$21.45	\$23.40	\$25.55	\$27.90
3/4 Commercial	8,000	\$28.80	\$31.44	\$34.32	\$37.44	\$40.88	\$44.64
1	20,000	\$72.00	\$78.60	\$85.80	\$93.60	\$102.20	\$111.60
1 1/2	40,000	\$144.00	\$157.20	\$171.60	\$187.20	\$204.40	\$223.20
2	64,000	\$230.40	\$251.52	\$274.56	\$299.52	\$327.04	\$357.12
3	128,000	\$460.80	\$503.04	\$549.12	\$599.04	\$654.08	\$714.24
4	200,000	\$720.00	\$786.00	\$858.00	\$936.00	\$1,022.00	\$1,116.00
6	400,000	\$1,440.00	\$1,572.00	\$1,716.00	\$1,872.00	\$2,044.00	\$2,232.00
8	640,000	\$2,304.00	\$2,515.20	\$2,745.60	\$2,995.20	\$3,270.40	\$3,571.20
10	920,000	\$3,312.00	\$3,615.60	\$3,946.80	\$4,305.60	\$4,701.20	\$5,133.60
Multi-Fam Unit	5,000	\$18.00	\$19.65	\$21.45	\$23.40	\$25.55	\$27.90
Volume Rates (per 1,000 gallons)							
Minimum Rate ¹		\$3.60	\$3.94	\$4.29	\$4.68	\$5.11	\$5.58
Minimum to 1.5(x) ²		\$2.71	\$2.97	\$3.23	\$3.52	\$3.85	\$4.20
1.5(x) to 2.0(x)		\$3.92	\$4.29	\$4.67	\$5.10	\$5.56	\$6.08
Over 2.0(x)		\$5.36	\$5.87	\$6.39	\$6.97	\$7.61	\$8.31
Public Water ³		\$2.48	\$2.72	\$2.97	\$3.26	\$3.57	\$3.90

¹ included in the Minimum Service Charge

² x = greater of highest winter usage (Jan-Apr) or gallons included in Minimum Service Charge

³ subject to individual contract terms

Projected Water Charges and Rates (Alternative Design)

Charge/Rate	Gal. Inc.	Current	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Bi-Monthly Minimum Service Charges							
3/4 Residential	5,000	\$18.00	\$17.25	\$18.80	\$20.55	\$22.45	\$24.50
3/4 Commercial	8,000	\$28.80	\$27.60	\$30.08	\$32.88	\$35.92	\$39.20
1	20,000	\$72.00	\$69.00	\$75.20	\$82.20	\$89.80	\$98.00
1 1/2	40,000	\$144.00	\$138.00	\$150.40	\$164.40	\$179.60	\$196.00
2	64,000	\$230.40	\$220.80	\$240.64	\$263.04	\$287.36	\$313.60
3	128,000	\$460.80	\$441.60	\$481.28	\$526.08	\$574.72	\$627.20
4	200,000	\$720.00	\$690.00	\$752.00	\$822.00	\$898.00	\$980.00
6	400,000	\$1,440.00	\$1,380.00	\$1,504.00	\$1,644.00	\$1,796.00	\$1,960.00
8	640,000	\$2,304.00	\$2,208.00	\$2,406.40	\$2,630.40	\$2,873.60	\$3,136.00
10	920,000	\$3,312.00	\$3,174.00	\$3,459.20	\$3,781.20	\$4,130.80	\$4,508.00
Multi-Fam Unit	5,000	\$18.00	\$17.25	\$18.80	\$20.55	\$22.45	\$24.50
Volume Rates (per 1,000 gallons)							
Minimum Rate ¹		\$3.60	\$3.45	\$3.76	\$4.11	\$4.49	\$4.90
Minimum to 1.5(x) ²		\$2.71	\$3.80	\$4.14	\$4.52	\$4.94	\$5.39
1.5(x) to 2.0(x)		\$3.92	\$4.14	\$4.51	\$4.93	\$5.39	\$5.88
Over 2.0(x)		\$5.36	\$4.49	\$4.89	\$5.34	\$5.84	\$6.37
Public Water ³		\$2.48	\$2.72	\$2.97	\$3.26	\$3.57	\$3.90

¹ included in the Minimum Service Charge

² x = greater of highest winter usage (Jan-Apr) or gallons included in Minimum Service Charge

³ subject to individual contract terms

Projected Sewer Charges and Rates (Current Design)

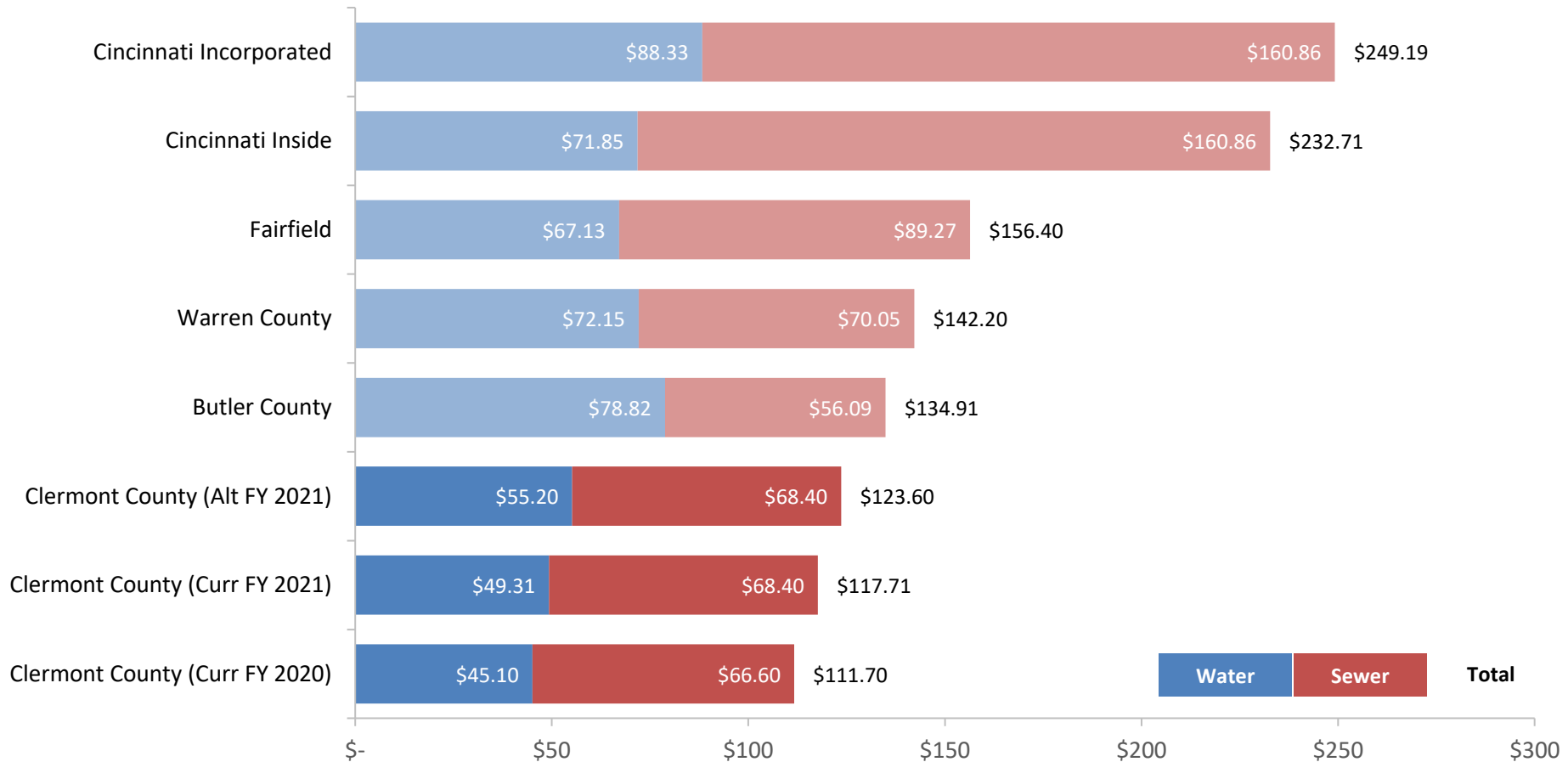
Charge/Rate	Gal. Inc.	Current	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Bi-Monthly Minimum Service Charges							
3/4 Residential	5,000	\$22.20	\$22.80	\$23.40	\$24.05	\$24.70	\$25.35
3/4 Commercial	8,000	\$35.52	\$36.48	\$37.44	\$38.48	\$39.52	\$40.56
1	20,000	\$88.80	\$91.20	\$93.60	\$96.20	\$98.80	\$101.40
1 1/2	40,000	\$177.60	\$182.40	\$187.20	\$192.40	\$197.60	\$202.80
2	64,000	\$284.16	\$291.84	\$299.52	\$307.84	\$316.16	\$324.48
3	128,000	\$568.32	\$583.68	\$599.04	\$615.68	\$632.32	\$648.96
4	200,000	\$888.00	\$912.00	\$936.00	\$962.00	\$988.00	\$1,014.00
6	400,000	\$1,776.00	\$1,824.00	\$1,872.00	\$1,924.00	\$1,976.00	\$2,028.00
8	640,000	\$2,841.60	\$2,918.40	\$2,995.20	\$3,078.40	\$3,161.60	\$3,244.80
10	920,000	\$4,084.80	\$4,195.20	\$4,305.60	\$4,425.20	\$4,544.80	\$4,664.40
Multi-Fam Unit	5,000	\$22.20	\$22.80	\$23.40	\$24.05	\$24.70	\$25.35
Volume Rates (per 1,000 gallons)							
Minimum Rate ¹		\$4.44	\$4.56	\$4.68	\$4.81	\$4.94	\$5.07
Over Minimum		\$4.44	\$4.56	\$4.68	\$4.81	\$4.94	\$5.07

¹ included in the Minimum Service Charge

What's the bill impact on typical customers (average usage by class)?

Class	User	Meter Size	Units	Bi-Monthly Usage (gallons)	Gallons Included	Highest Winter Usage (gallons)	Bi-Monthly Bill with FY 2020 Rates	Bi-Monthly Bill with FY 2021 Rates (Curr Des)	Bi-Monthly Bill with FY 2021 Rates (Alt Des)
Residential	Small	3/4	-	5,000	5,000	5,000	\$40.20	\$42.45	\$40.05
	Average	3/4	-	10,000	5,000	10,000	\$75.95	\$80.08	\$81.83
	<i>Survey</i>	3/4	-	15,000	5,000	15,000	\$111.70	\$117.71	\$123.60
Commercial	Average	3/4	-	12,000	8,000	12,000	\$92.92	\$98.02	\$97.50
	Average	2	-	90,000	64,000	90,000	\$700.46	\$739.03	\$729.87
Multi-Family	Average	2	20	120,000	64,000	120,000	\$914.96	\$964.81	\$980.52
	Average	per Unit	20	120,000	100,000	120,000	\$947.00	\$999.52	\$968.10

Combined Bi-Monthly Residential Water and Sewer Bill Comparison



smallest meter size and 15,000 gallons of usage

Recommendations

- Adopt the recommended alternative charges and rates for the planning period FY 2021 to FY 2025
- Review rates and charges on an annual basis and revise as needed; Consider a full cost of service study for all rates and charges every four to five years