



August 25th, 2020

DRAFT RESULTS AND RECOMMENDATIONS WATER AND WASTEWATER COST OF SERVICE AND RATE DESIGN STUDY

NewGen
Strategies & Solutions

AGENDA

PROJECT TEAM & RESOURCES

METHODOLOGY

DRAFT STUDY RESULTS

QUESTIONS

Project Team & Resources

NEWGEN STRATEGIES AND SOLUTIONS (NEWGEN)

Management and economic consulting company specializing in municipalities and municipal utilities.



NewGen applies our expertise and delivers high impact solutions through our diverse and integrated market perspectives, resulting in effective decision-making and implementation





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Project Team

Study Methodology

INTRODUCTION

- In April 2020, the Project Team was tasked by the City of Georgetown to conduct a comprehensive water and wastewater utility cost of service rate study.
- In simplest terms, determine cost projections and evaluate rate sufficiency to generate necessary revenues.
- FY 2020 Study Goals and Objectives:
 - Fiscal Policy Compliance
 - Revenue Sufficiency
 - Conservation
 - Equitable Cost of Service

WHAT IS A COST OF SERVICE STUDY?

- An analysis to equitably allocate the revenue requirements to the various customer classes of service to the utility
- Do cost differences exist between the types of customers served?
 - Facility requirements
 - Usage characteristics
- Test Year (FY 2021)



FUTURE CONSIDERATIONS

- Postponements to FY 2021 due to timing and data limitations
 - Cash-Needs/Utility Basis Hybrid Revenue Requirement approach to determine Outside City rate differential
 - Wastewater Cost of Service rates specific to Biological Oxygen Demand (BOD) and Total Suspended Solids (TSS)

Draft Study Results

KEY DRIVERS

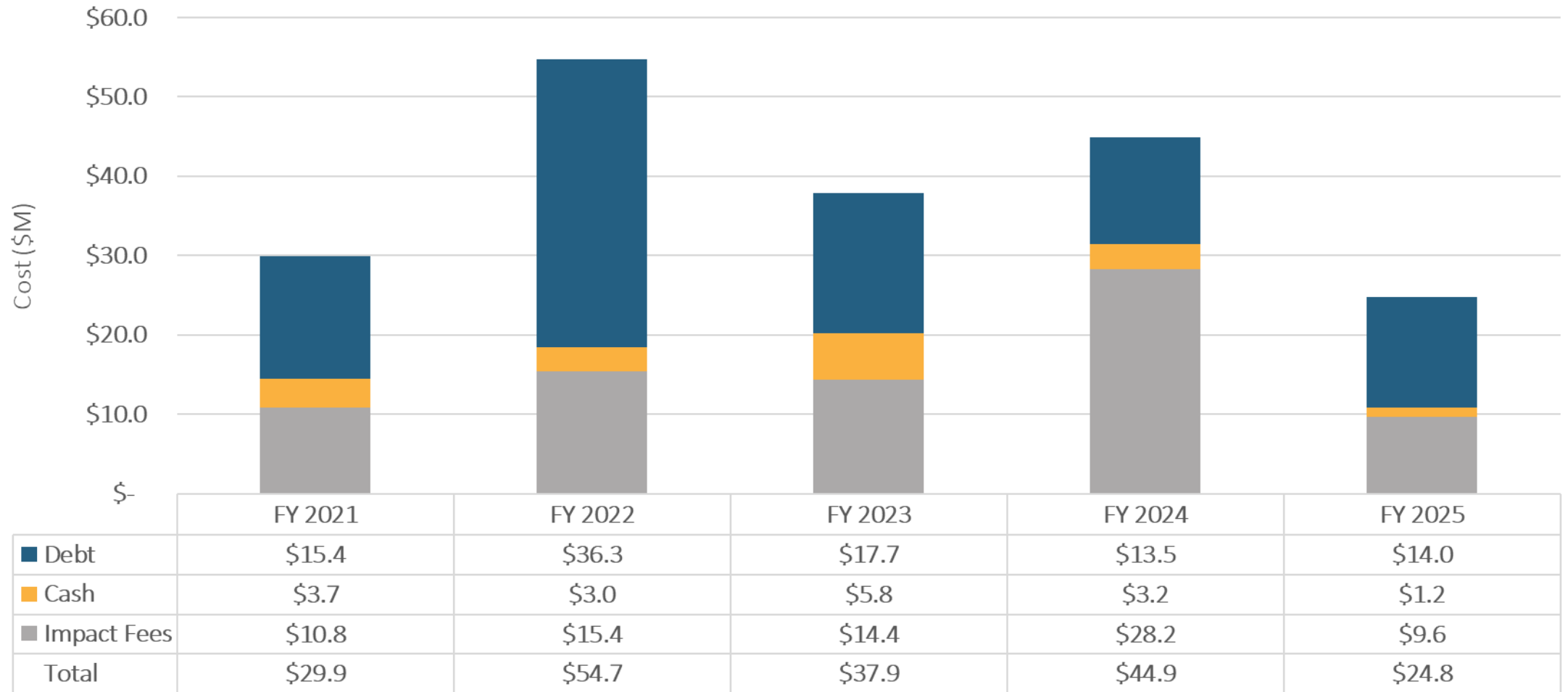
FY 2021 COST OF SERVICE

FY 2021 – FY 2025 SCENARIOS

KEY DRIVERS FOR FY 2021 AND BEYOND

- Residential Customer Growth
 - 2,800 Annual Water Accounts
 - 1,300 Annual Wastewater Accounts
- Long-Term Capital Needs
 - Approximately \$192.24M in Water/Wastewater Capital Needs (FY 2021 – FY 2025)
 - \$97.01M Debt Funded
 - \$16.78M Cash Funded
 - \$78.45M Impact Fee Funded
- New Program Operations & Maintenance
 - Future costs associated with growth

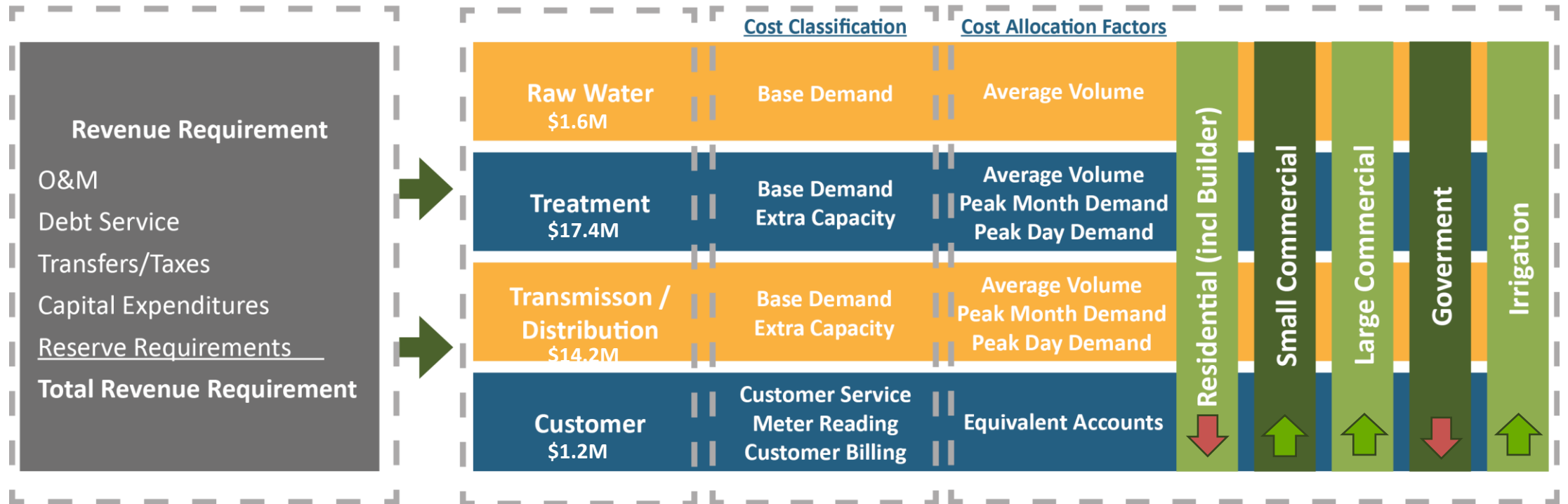
LONG-TERM CAPITAL FUNDING FORECAST



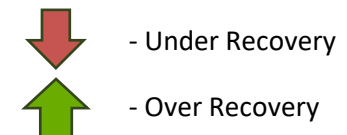
REVENUE REQUIREMENT FORECAST



COST OF SERVICE – WATER



Note: For illustrative purposes only. Functions and allocators may change to align with utility operations/services.



FY 2021 COST OF SERVICE

- Peaking Ratios represent **how consistently** customer classes use water
 - Peak Month Demand/Average Month Demand
 - A higher peaking ratio reflects greater variability
- General guidelines listed below:
 - Peaking Ratio > 2.0 less consistent system users
 - Ex: Residential, Irrigation customers
 - Peaking Ratio < 2.0 more consistent users
 - Ex: Commercial, Industrial customers

Per Utility Billing Data Extract (Oct 2018 – Sep 2019)		
Customer Class	Peaking Ratio	Customers
<i>Inside and Outside City</i>		
Residential (incl Builder)	2.08	41,450
Small Commercial	1.39	1,013
Large Commercial	1.26	274
Government	2.06	158
Irrigation	2.11	634
Total System	1.98	43,529

FY 2021 COST OF SERVICE REVENUE REQUIREMENT ALLOCATION

Customer Class	Peaking Ratio	Revenue Requirement (\$M)	Current Revenues (\$M)	Variance (\$M)	Variance (%)
<i>Inside/Outside City</i>					
Residential (incl Builder)	2.08	\$ 28.22	\$ 25.88	\$ (2.34)	(8.3%)
Small Commercial	1.39	0.89	0.98	0.09	10.1%
Large Commercial	1.26	2.10	2.37	0.27	12.9%
Government	2.06	0.74	0.68	(0.06)	(8.2%)
Irrigation	2.11	2.49	2.80	0.31	12.6%
Total System	1.98	\$ 34.44	\$ 32.71	\$ (1.73)	(5.0%)

- Residential and Government customer classes currently paying less than class cost of service
 - **Residential:** Estimated \$2.34M or 8.3% increase in Residential revenues to meet revenue requirement in FY 2021
 - **Government:** Estimated \$0.06M or 8.2% increase in Government revenues to meet revenue requirement in FY 2021

CURRENT RATES

WATER – BASE RATES

Base Rates	Inside City	Outside City
<i>5/8" Meter*</i>	<i>\$ 15.50</i>	<i>\$ 18.50</i>
<i>3/4" Meter*</i>	<i>23.00</i>	<i>27.50</i>
<i>1" Meter*</i>	<i>38.50</i>	<i>46.00</i>
<i>1 1/2" Meter*</i>	<i>76.50</i>	<i>91.50</i>
2" Meter	153.50	183.50
3" Meter	368.00	440.00
4" Meter	644.00	770.00
6" Meter	1,140.00	1,686.00
8" Meter	2,450.00	2,929.50

Source: City of Georgetown (<https://qus.georgetown.org/customercare/rates/>)

**No rate adjustments since 2014*

CURRENT RATES

WATER – RESIDENTIAL VOLUMETRIC RATES

Volumetric Rates	Inside/Outside City
0 – 10,000 gallons	\$ 1.75
10,001 – 20,000 gallons	2.40
20,001 – 40,000 gallons	4.00
40,001 – 60,000 gallons	6.50
60,001+ gallons	8.50

No adjustments to Residential Volumetric Water rates have been made since 2014

Source: City of Georgetown (<https://qus.georgetown.org/customercare/rates/>)

CURRENT RATES

WATER – NON-RESIDENTIAL VOLUMETRIC RATES

Customer Class	Meter Size	Tier 1 Rate	Tier 2 Rate	Tier 2 Threshold
Small Commercial	<2"	\$2.40	\$6.50	300,001 gallons
Large Commercial	2"	\$2.40	\$6.50	600,001 gallons
Large Commercial	3"	\$2.40	\$6.50	900,001 gallons
Large Commercial	4"	\$2.40	\$6.50	4M gallons
Large Commercial	6"	\$2.40	\$6.50	6M gallons
Large Commercial	8"	\$2.40	\$6.50	8M gallons
Manufacturing	<8"	\$2.40		
Municipal Interruptible		\$2.40		
Restaurant		\$2.40		
Evaporative Cooling		\$2.40		
Fire Flow		\$2.40		
Irrigation Only		\$4.00	\$8.50	500,001 gallons

Source: City of Georgetown (<https://qus.georgetown.org/customer-care/rates/>)

CURRENT RATES

WASTEWATER

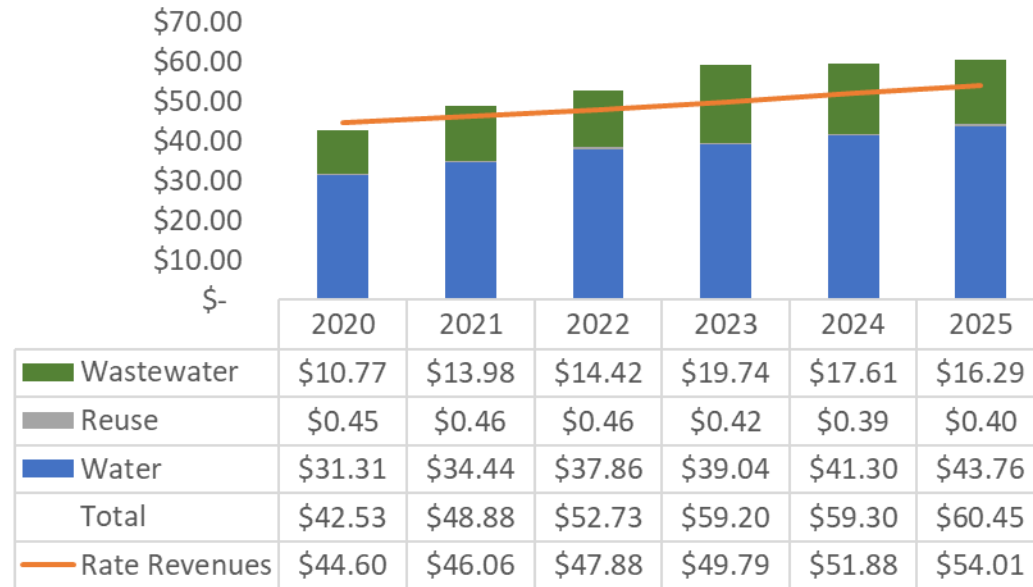
Customer Class	Base Charge (Inside)	Volume Charge (Inside)	Base Charge (Outside)	Volume Charge (Outside)
Residential (Single Family/Domestic)	\$ 32.00	N/A	\$ 36.75	N/A
Small Commercial (4" Sewer Line/ 3/4" Water Meter)	\$ 32.00	N/A	\$ 36.75	N/A
Commercial (<6" Sewer Line)	\$48.40	\$2.75	\$55.65	\$3.15
Commercial (>8" Sewer Line)	\$85.95	\$2.75	\$98.85	\$3.15
High Strength Commercial (>250 BOD/Food Processing)	\$48.40	\$4.50	\$55.65	\$5.20
Multi-Family Service (>3 Residential Units per Water Meter)	\$114.95	\$2.75	\$132.20	\$3.15

Source: City of Georgetown (<https://qus.georgetown.org/customer-care/rates/>)

FINANCIAL OBJECTIVES

- Goals for Combined Utility (Water/Wastewater):
 - Overall Revenue Sufficient
 - Meet Target Financial Policies
- Current Fiscal Policies:
 - Debt Service Coverage: **1.50x**
 - Days Cash on Hand: **90 Days**
 - Water Monthly Base Charge Fixed Cost of Service Recovery: **75%**
 - *“Water Rates will recognize at least **75%** of the fixed cost of service, including debt payments and ROI costs, within the monthly base charge determined by meter size.”*
 - *First adopted in 2013*

PROJECTED COMBINED UTILITY PERFORMANCE UNDER CURRENT REVENUES



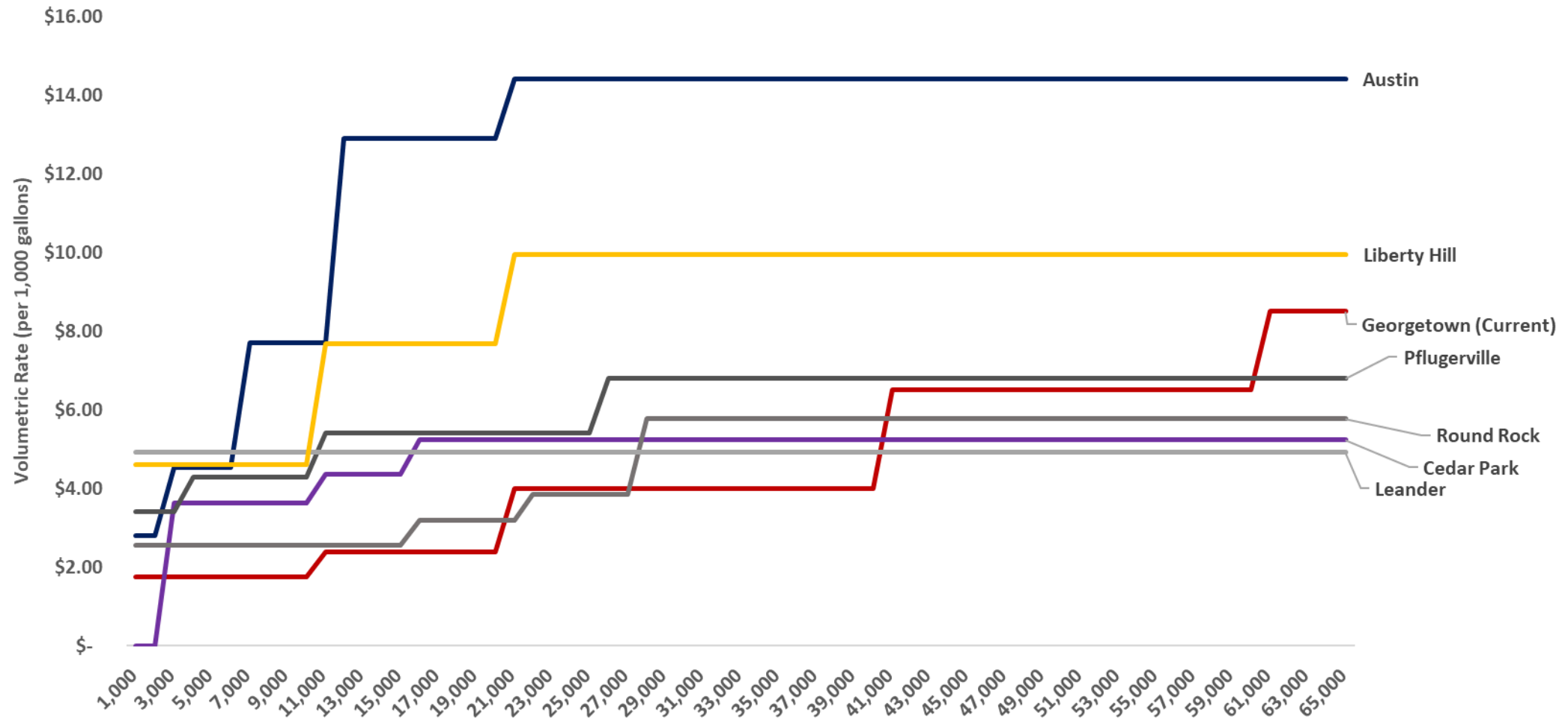
- Combined utility estimated to not recover revenue required as early as **FY 2021**
- Days Cash on Hand reserves drop below 90 Days as early as **FY 2023**
- Water Monthly Base Charge revenues estimated to not recognize Water Fixed Cost of Service as early as **FY 2021**

FY (Targets)	2021	2022	2023	2024	2025
DSC (1.50x)	3.82	3.07	2.44	2.27	2.07
Days Cash (90 Days)*	187	127	40	-24	-75
Fixed COS (75%)	71%	68%	69%	69%	68%

**Excludes \$10M Annual Non-Operating Contingency*

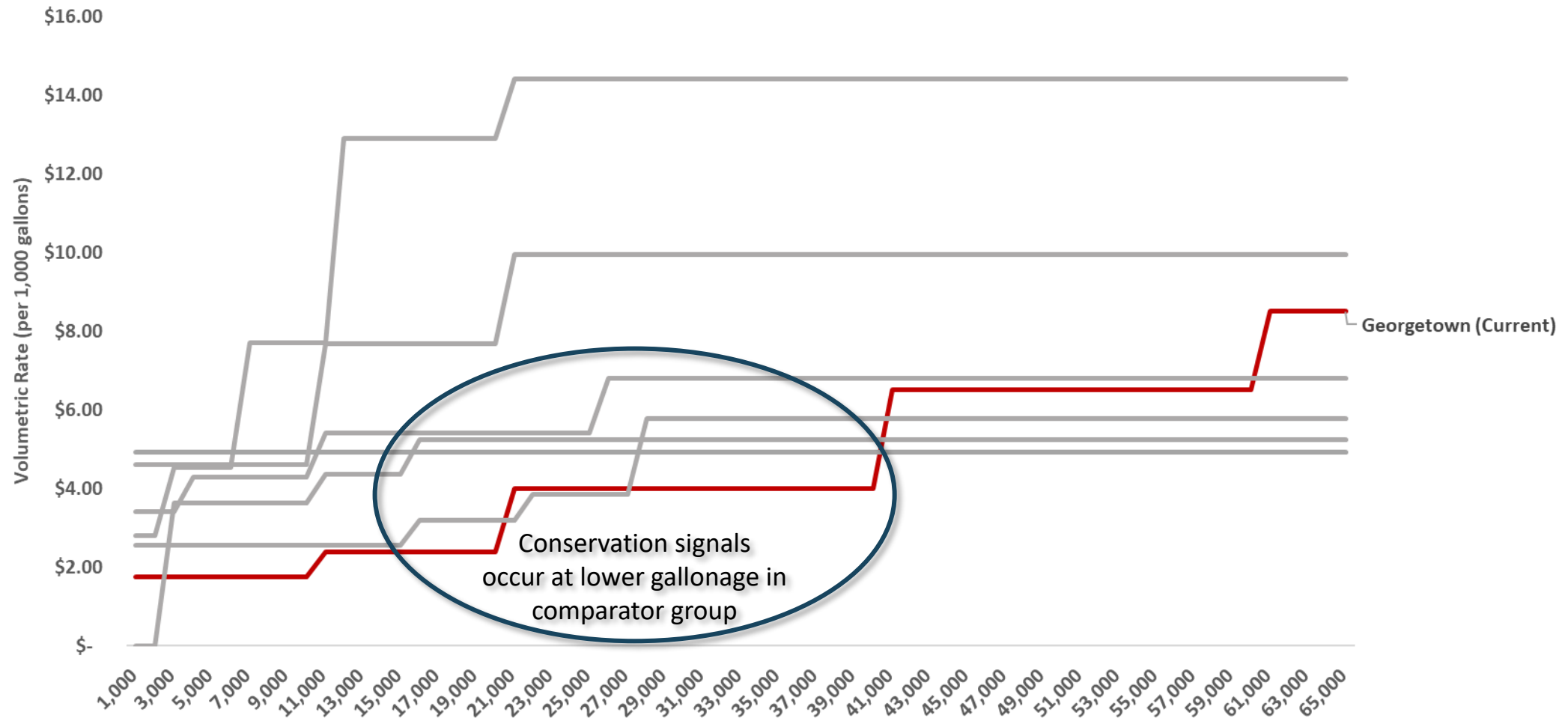
RESIDENTIAL VOLUMETRIC RATE DESIGN

CURRENT STRUCTURE



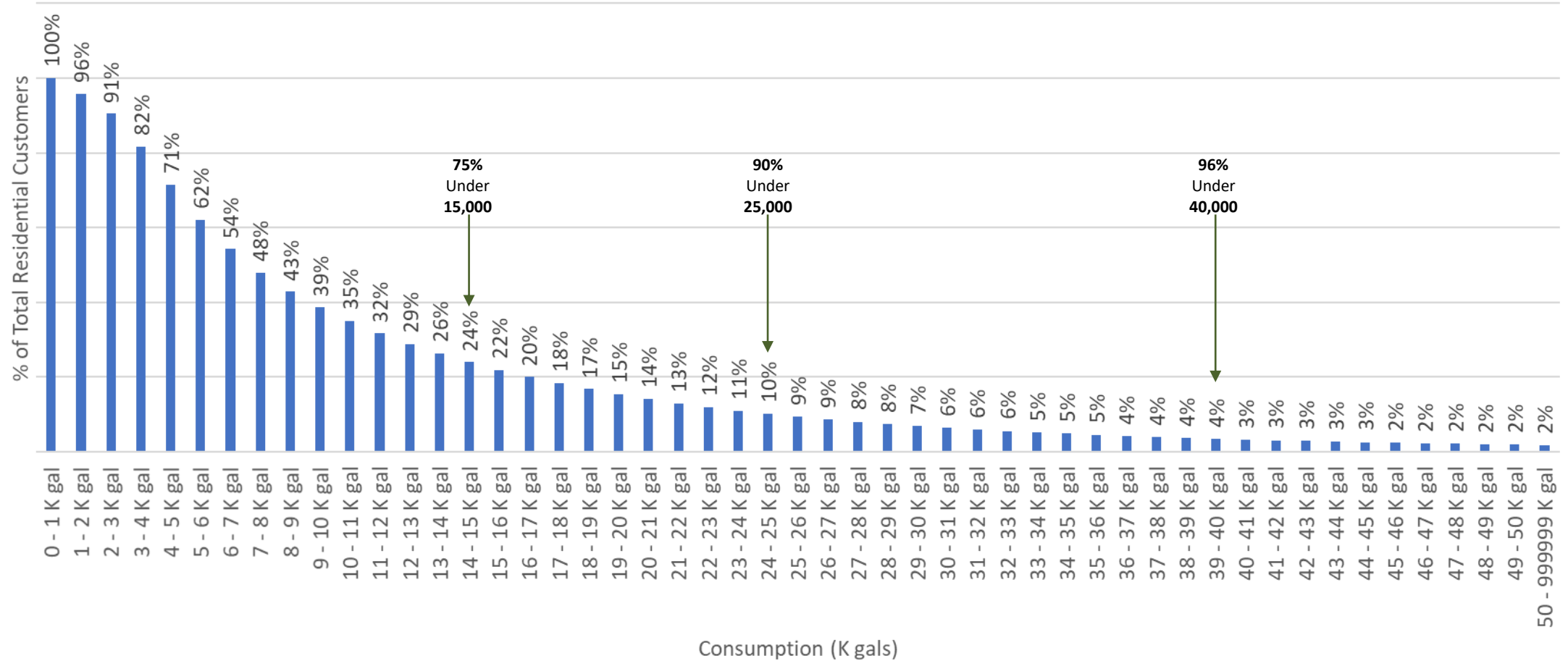
RESIDENTIAL VOLUMETRIC RATE DESIGN

CURRENT STRUCTURE



RESIDENTIAL VOLUMETRIC RATE DESIGN

CUSTOMER FREQUENCY DISTRIBUTION



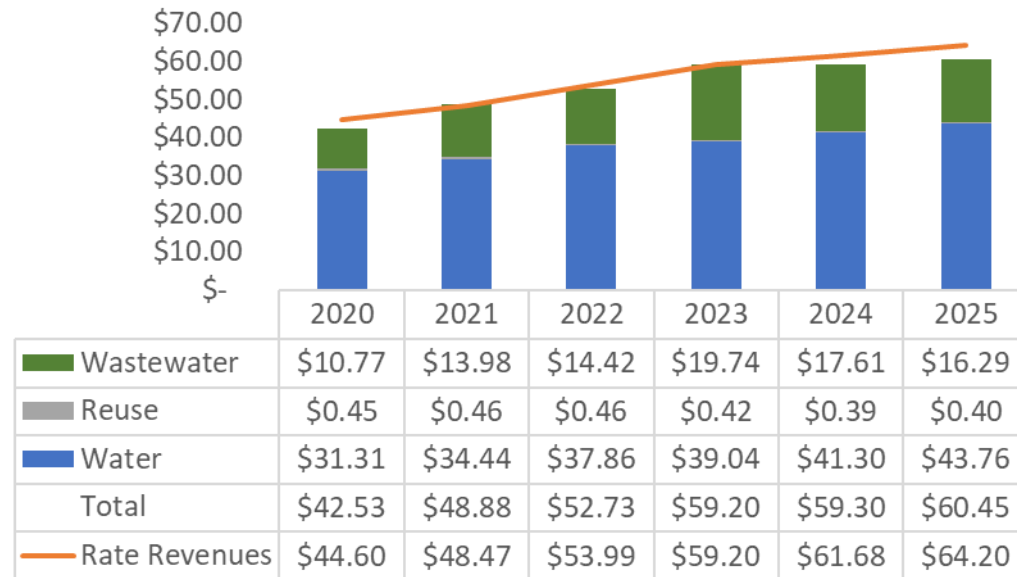
RESIDENTIAL VOLUMETRIC RATE DESIGN

- Based on historical customer usage characteristics and feedback from the City, the following Residential alternatives were determined:

Scenario 1: Current Volumetric Tiers	Scenarios 2 and 3: 25,000+ Gallons
0 – 10,000 gallons	0 – 5,000 gallons
10,001 – 20,000 gallons	5,001 – 15,000 gallons
20,001 – 40,000 gallons	15,001 – 25,000 gallons
40,001 – 60,000 gallons	25,001+ gallons
60,001+ gallons	

SCENARIO #1:

ADJUSTING REVENUES UNDER CURRENT RATE DESIGN



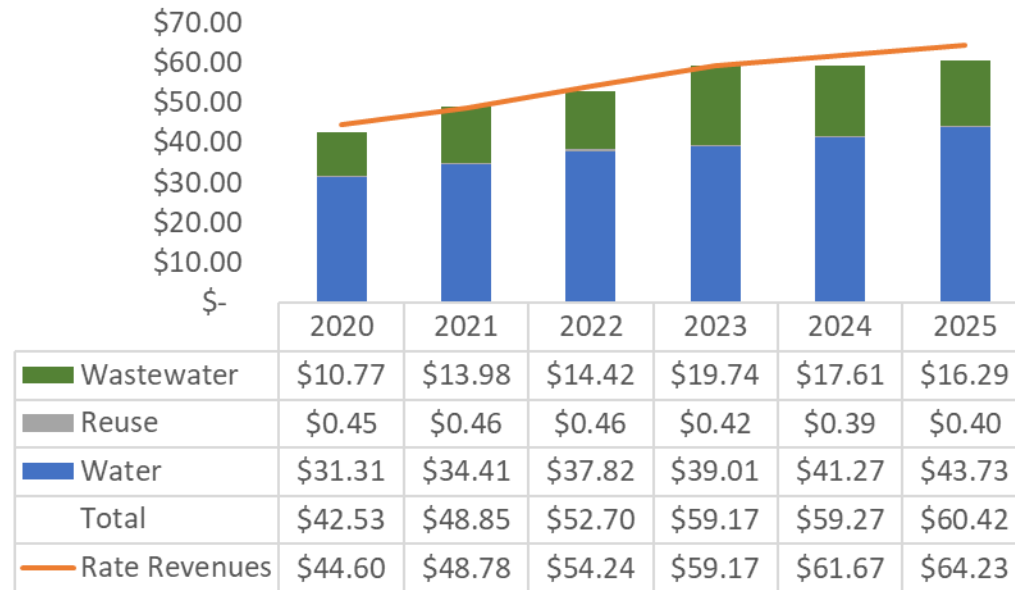
- Revenue adjustments driven by first debt payment for San Gabriel Interceptor (\$32.5M) in **FY 2023**
- Water rate adjustments applied evenly across all customer classes
 - Targeting Fixed COS metric
 - Mitigate significant Wastewater rate increases
- Wastewater rate adjustments applied evenly across all customer classes

FY (Targets)	2021	2022	2023	2024	2025
DSC (1.50x)	4.20	3.91	3.47	3.25	3.01
Days Cash (90 Days)*	211	205	197	210	231
Fixed COS (75%)	75%	76%	81%	80%	79%

Rate Adjustments	2021	2022	2023	2024	2025
Water (All %)	6.45%	4.50%	4.50%	-	-
Wastewater (All %)	7.85%	7.85%	7.85%	-	-

**Excludes \$10M Annual Non-Operating Contingency*

SCENARIO #2: REVISED RESIDENTIAL TIER DESIGN (25,000+ GALLONS)



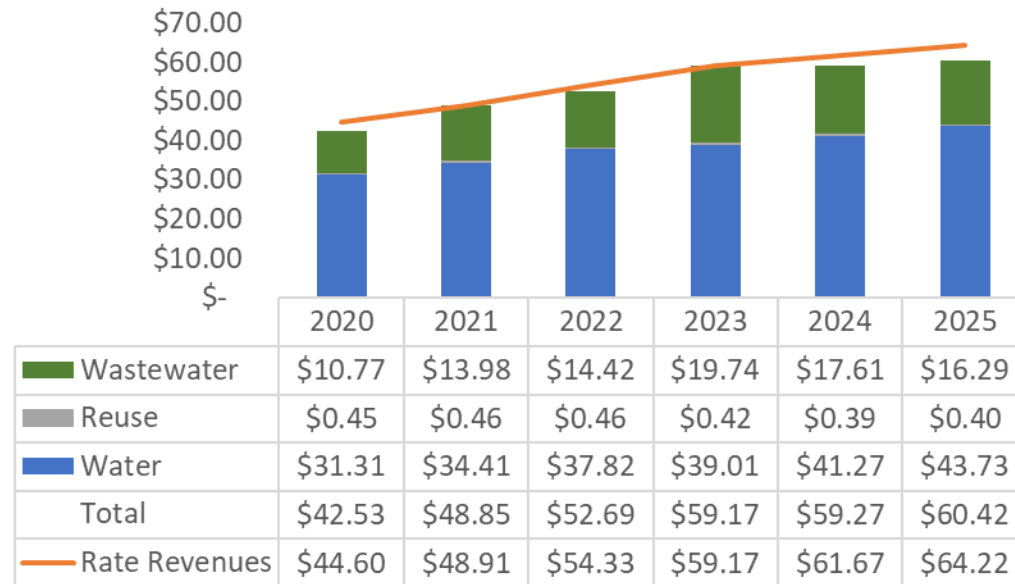
- Revenue adjustments driven by first debt payment for San Gabriel Interceptor (\$32.5M) in **FY 2023**
- Water Base rate adjustments targeting Fixed COS metric and to mitigate significant Wastewater rate increases
- No rate adjustments to Non-Residential Water Volumetric Rates

FY (Targets)	2021	2022	2023	2024	2025
DSC (1.50x)	4.25	3.95	3.47	3.25	3.01
Days Cash (90 Days)*	214	211	203	216	237
Fixed COS (75%)	75%	77%	83%	82%	81%

Rate Adjustments	2021	2022	2023	2024	2025
Water (Base \$ Only)	\$1.50	\$1.50	\$1.50	-	-
Water (Volumetric)	Varies	-	-	-	-
Wastewater (All %)	8.89%	8.89%	8.89%	-	-

**Excludes \$10M Annual Non-Operating Contingency*

SCENARIO #3: REVISED RESIDENTIAL TIER DESIGN (25,000+ GALLONS) AND NON-RESIDENTIAL VOLUMETRIC WATER RATE ADJUSTMENTS



- Revenue adjustments driven by first debt payment for San Gabriel Interceptor (\$32.5M) in **FY 2023**
- Water Base rate adjustments targeting Fixed COS metric and to mitigate significant Wastewater rate increases
- Other Water Rate Adjustments applied evenly across Non-Residential Water volumetric rates
 - Targeting revised Residential second tier rate in Non-Residential first tier rate adjustment (see attached rate schedule)

FY (Targets)	2021	2022	2023	2024	2025
DSC (1.50x)	4.27	3.97	3.47	3.25	3.01
Days Cash (90 Days)*	216	212	205	217	239
Fixed COS (75%)	75%	77%	83%	82%	81%

Rate Adjustments	2021	2022	2023	2024	2025
Water (Base \$ Only)	\$1.50	\$1.50	\$1.50	-	-
Water (Volumetric)	Varies	-	-	-	-
Wastewater (All %)	8.46%	8.46%	8.46%		

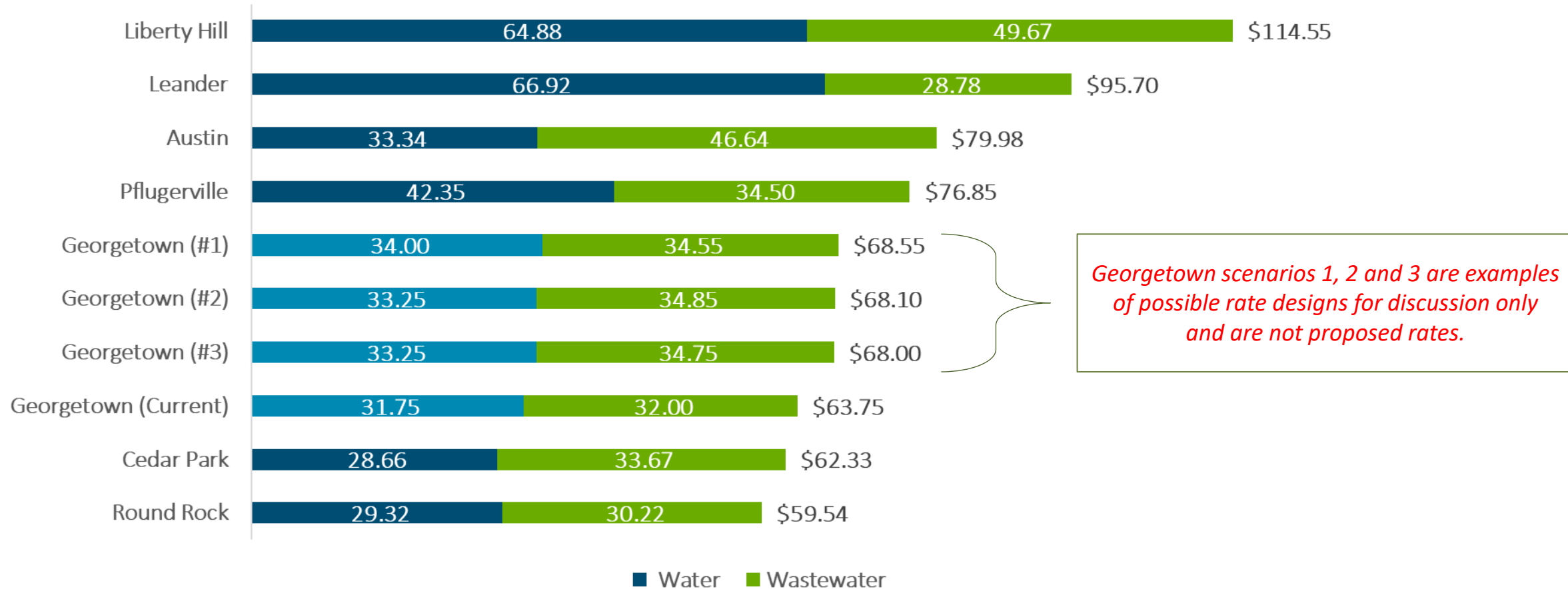
*Excludes \$10M Annual Non-Operating Contingency

COMMUNITY RATE COMPARISONS

- Comparisons between communities are very common, but may not tell the whole story.
- Each system is unique in geography, age of infrastructure, capital maintenance efforts, and typical usage patterns.

REGIONAL BILL COMPARISON

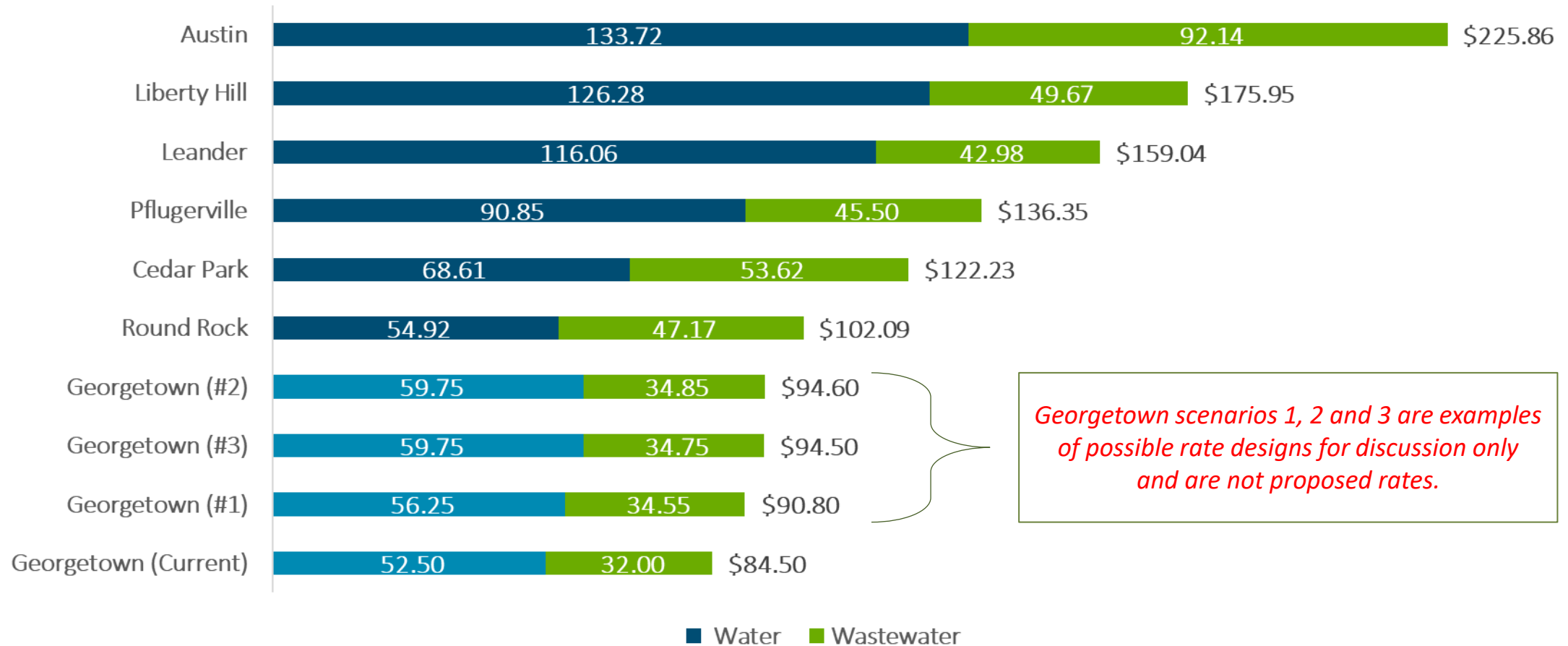
RESIDENTIAL USER BILL (5,000 GALLONS – WATER; FLAT SEWER*)



*Georgetown currently does not charge a variable rate based on billed Sewer flows. 5,000 gallons in Sewer flows assumed for surrounding cities

REGIONAL BILL COMPARISON

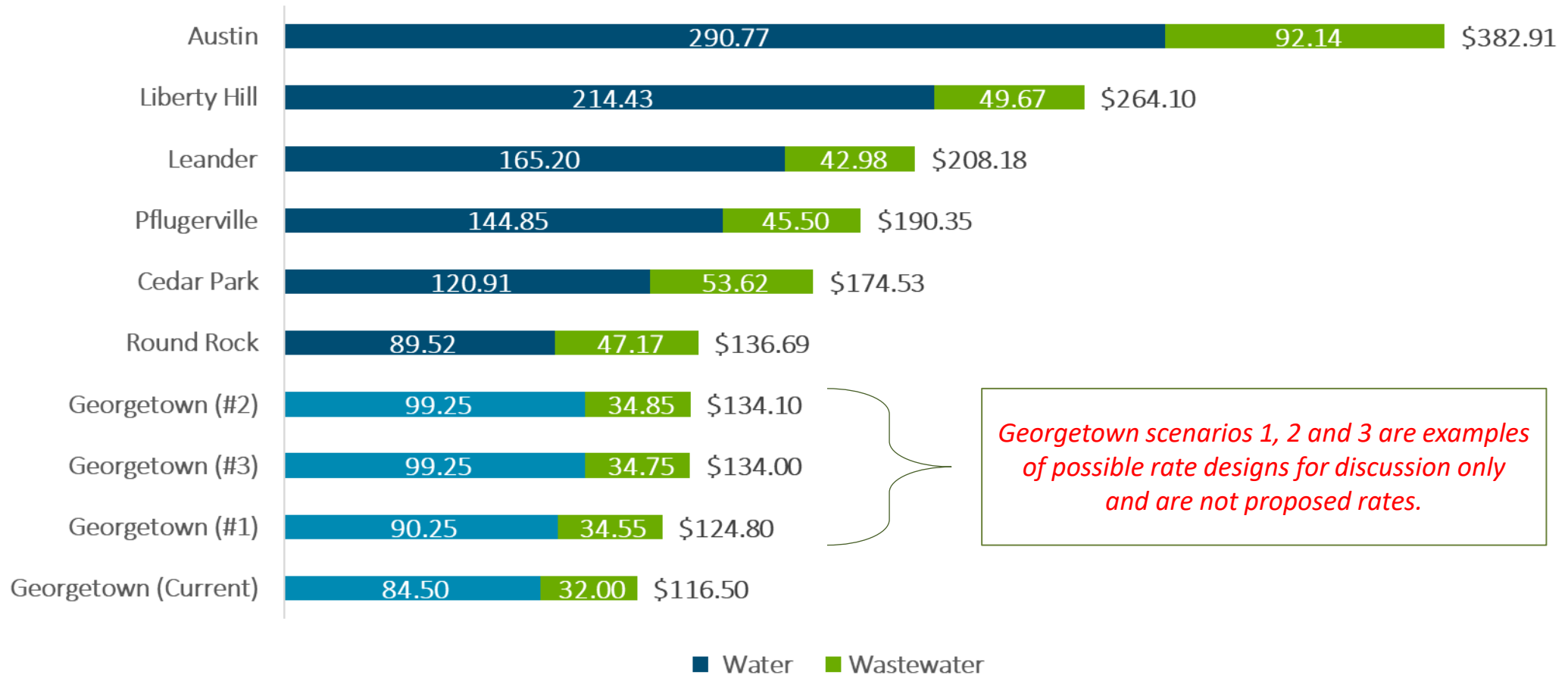
RESIDENTIAL USER BILL (15,000 GALLONS – WATER; FLAT SEWER*)



*Georgetown currently does not charge a variable rate based on billed Sewer flows. 10,000 gallons in Sewer flows assumed for surrounding cities

REGIONAL BILL COMPARISON

RESIDENTIAL USER BILL (25,000 GALLONS – WATER; FLAT SEWER*)



*Georgetown currently does not charge a variable rate based on billed Sewer flows. 10,000 gallons in Sewer flows assumed for surrounding cities

SCENARIO MATRIX

Policy Objectives

Objectives Supported	Scenario #1	Scenario #2	Scenario #3
Revenue Sufficiency	✓	✓	✓
Fiscal Policies	✓	✓	✓
Conservation		✓	✓
Equitable Cost of Service		✓	

CONCLUSIONS

- Summary
 - Current Rates Insufficient - Rate Increases are Needed
 - Current Residential Volumetric Tiered Structure Not Achieving Conservation Plan
 - Some Customer Classes Not Covering Cost of Service
- Guidance for Staff and Board is needed
 1. Which of the policy objectives below should guide rate recommendations?
 - Financial Policy
 - Rate Equity
 - Conservation Plan
 2. What (if any) additional analysis is needed to better inform or address Council objectives?

NEXT STEPS

- Tuesday, August 25th, 2020 – Receive Council Feedback
- Thursday, September 10th, 2020 – Next Water Utility Advisory Board meeting
- Tuesday, September 22nd, 2020 – City Council Workshop
- Tuesday, October 13th, 2020 – City Council Regular Agenda
- Friday, January 1st, 2021 – Water and Wastewater Rates Effective



THANK YOU! ANY QUESTIONS?

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