



Water and Sewer Rate Study City Council Work Session 2

March 2, 2026

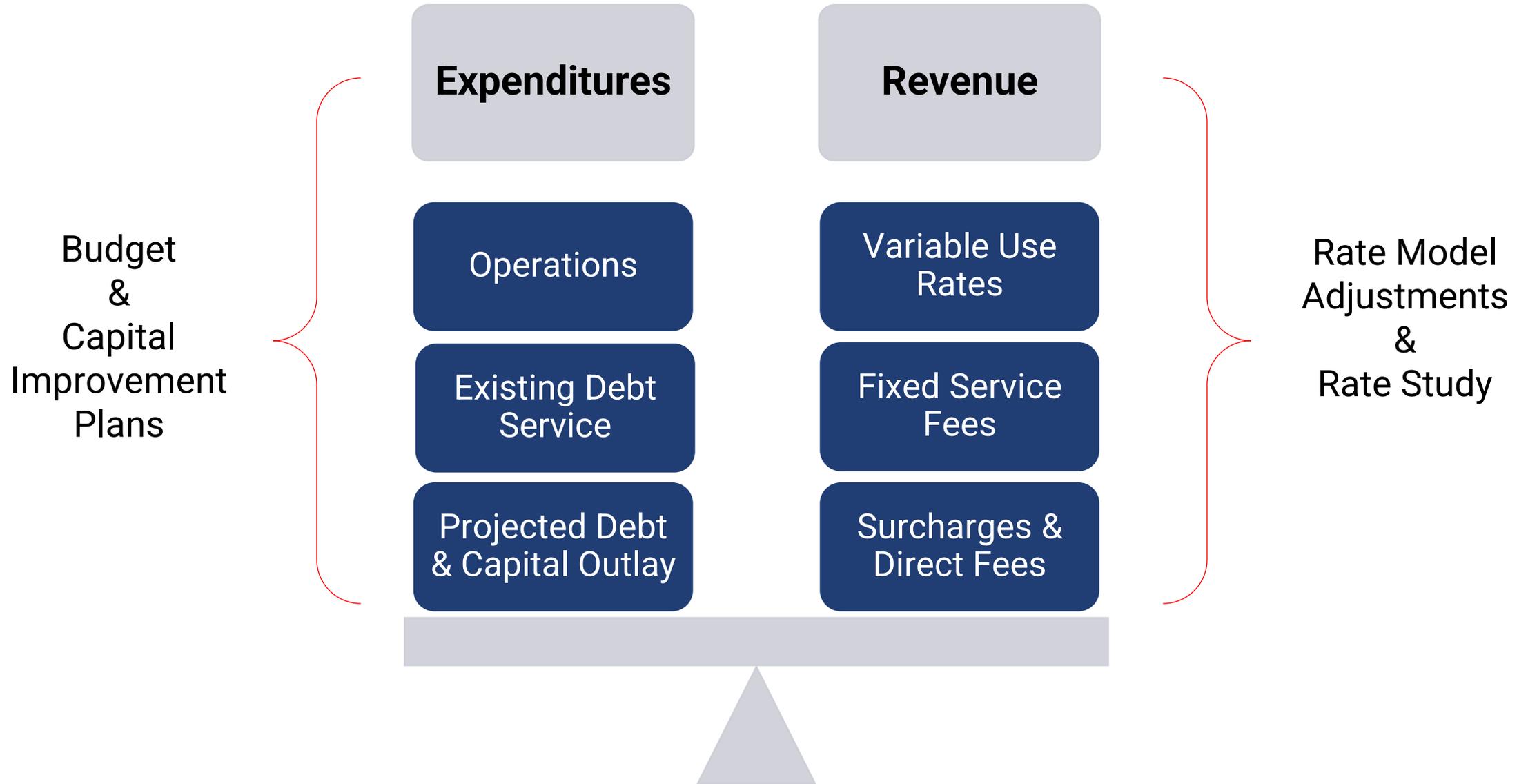
Water Enterprise Fund

Sewer Enterprise Fund

Reasons for Rate Study

- Customer types and water usage have changed.
 - Reduction in industrial users
 - Increase in multi-unit residential customers
 - Increase in commercial users and residential users with seasonal water use
- Additional revenue is required to recover net position reserve.
 - Regulatory requirements
 - Economic impacts
 - Rates have not matched cost increases

Enterprise Fund Management



Water and Sewer Operations

Water System

- Madbury Water Treatment Facility
- Pease Water Treatment Facility
- 192 miles of Water Mains
- Bellamy Reservoir
- 10 Wells
- 5 Storage Tanks
- Two Pressure Zones



Wastewater System

- Peirce Island Treatment Facility
- Pease Treatment Facility
- 115 miles of Collection System
- Combined Stormwater & Sanitary Flow
- 22 Pumping Stations
- 1,650 Manholes



Water and Sewer Operations

- Personnel Salary and Benefits
- Equipment Repairs
- Building Maintenance
- Materials and Supplies
- Administrative
- Residuals Disposal
- Chemicals
- Electricity
- Fuel
- Contracted Services
- Property Taxes
- Training



Capital Improvement Plan FY27 - Water

Regulatory Compliance

- PFAS Treatment



Critical Infrastructure

- Storage Tank Rehabilitation
- Transmission Main Improvements



Priority Projects

- Madbury WTP Repairs
- Water Main Replacement



Capital Improvement Plan FY27 - Sewer

Regulatory Compliance

- Sagamore Extension
- Peirce Island WWTP
- CSO Consent Decree
- Pease WWTP Upgrade



Critical Infrastructure

- Deer Street Force Main
- Mechanic Street Pumping Station



Priority Projects

- Sewer Separation Improvements
- Sewer Main Replacements



Existing Debt Service - Water

Capital Improvement Project Examples (2008 – 2025)

- Surface Water Treatment Facility – Madbury
- Newington Booster Pumping Station
- Greenland Well Replacement
- Islington Street Water Main
- Water Transmission Main – Phase 1
- Hobbs Hill Water Tank
- Union Street Water Main
- Little Bay Road Water Main
- Willard Avenue Water Main
- Reservoir Management and Dam Maintenance



Existing Debt Service - Sewer

Capital Improvement Project Examples (2008 – 2025)

- Peirce Island Wastewater Treatment Facility Upgrade
- Mechanic Street Force Main
- Pease Wastewater Treatment – Headworks
- Sewer Extension for Sagamore Avenue
- Pumping Stations Upgrades
- Islington Street Sewer Main
- Willard Avenue Sewer Main
- Union Street Sewer Main
- Marjorie Street Pumping Station
- Bartlett Street Sewer Main
- Fleet Street Sewer Main



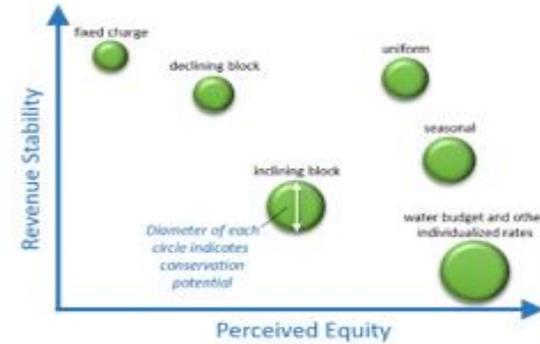
Goals of Rate Study

- Update rate model to assure financial health, stability, and predictability of the City's Water and Sewer Enterprise Funds.
- Support plan to ensure adequate net position/fund balance.
- Appropriately price Water and Sewer services based on the costs required to provide them.
- Balance rate and fee structures to reflect service needs across all customer types.

Recap of Findings from Work Session #1

- Current Water and Sewer revenues are not sufficient to meet current or projected expenditures within each fund.
- Rate revenue adjustments will be required to ensure sustainability of the utility funds.
- Cost of service results demonstrate modest misalignment between cost of service by class and current revenues (within industry standards).
- Revenue from fixed charges are well below industry standards.

Rate Study Process



Financial Plan

How Much?

Defines how much total revenue is needed each year

Cost of Service

From Whom?

Defines proportional revenue recovery between customer types

Rate Design

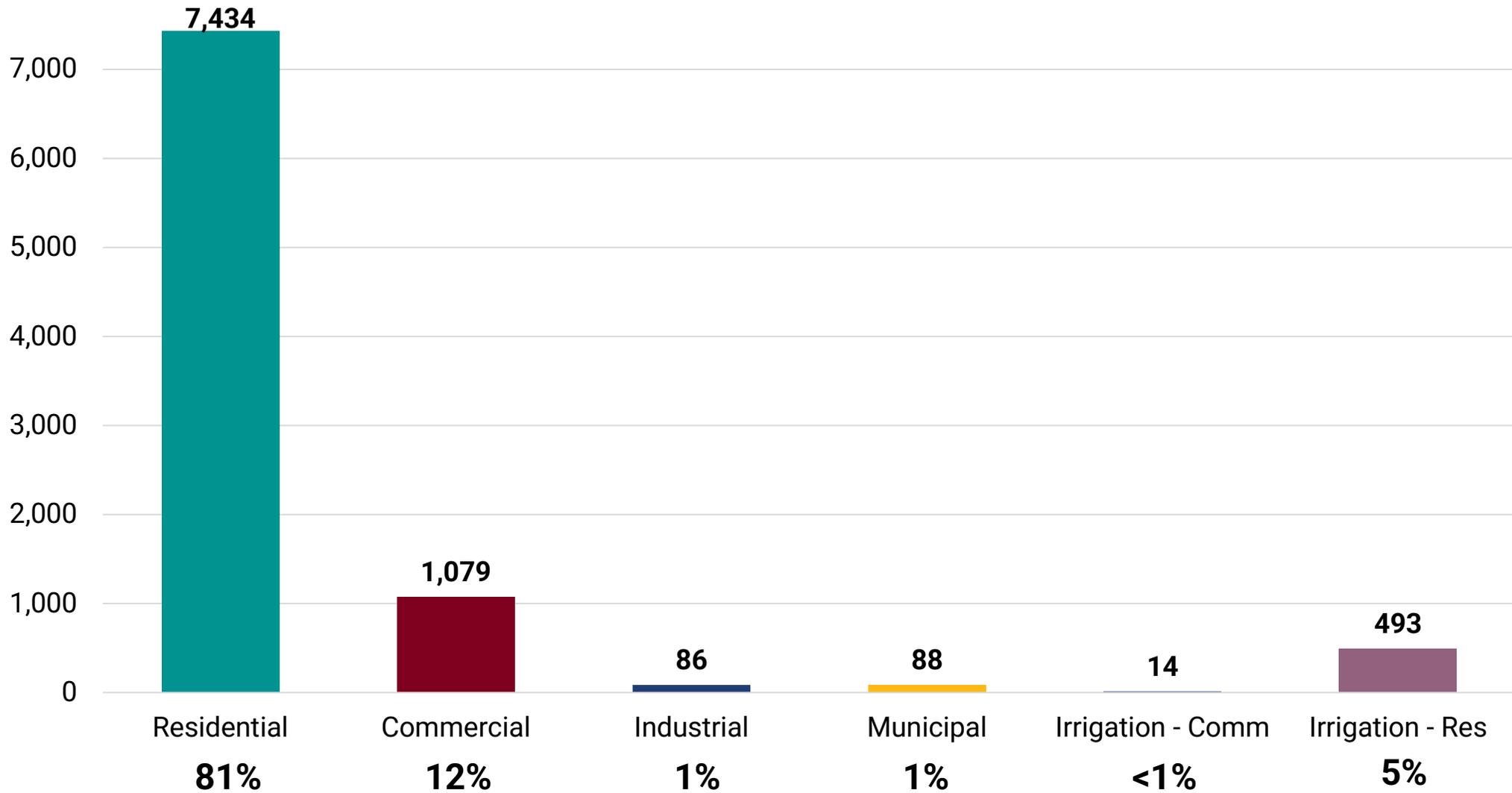
How to Collect?

Structure of how revenues are recovered

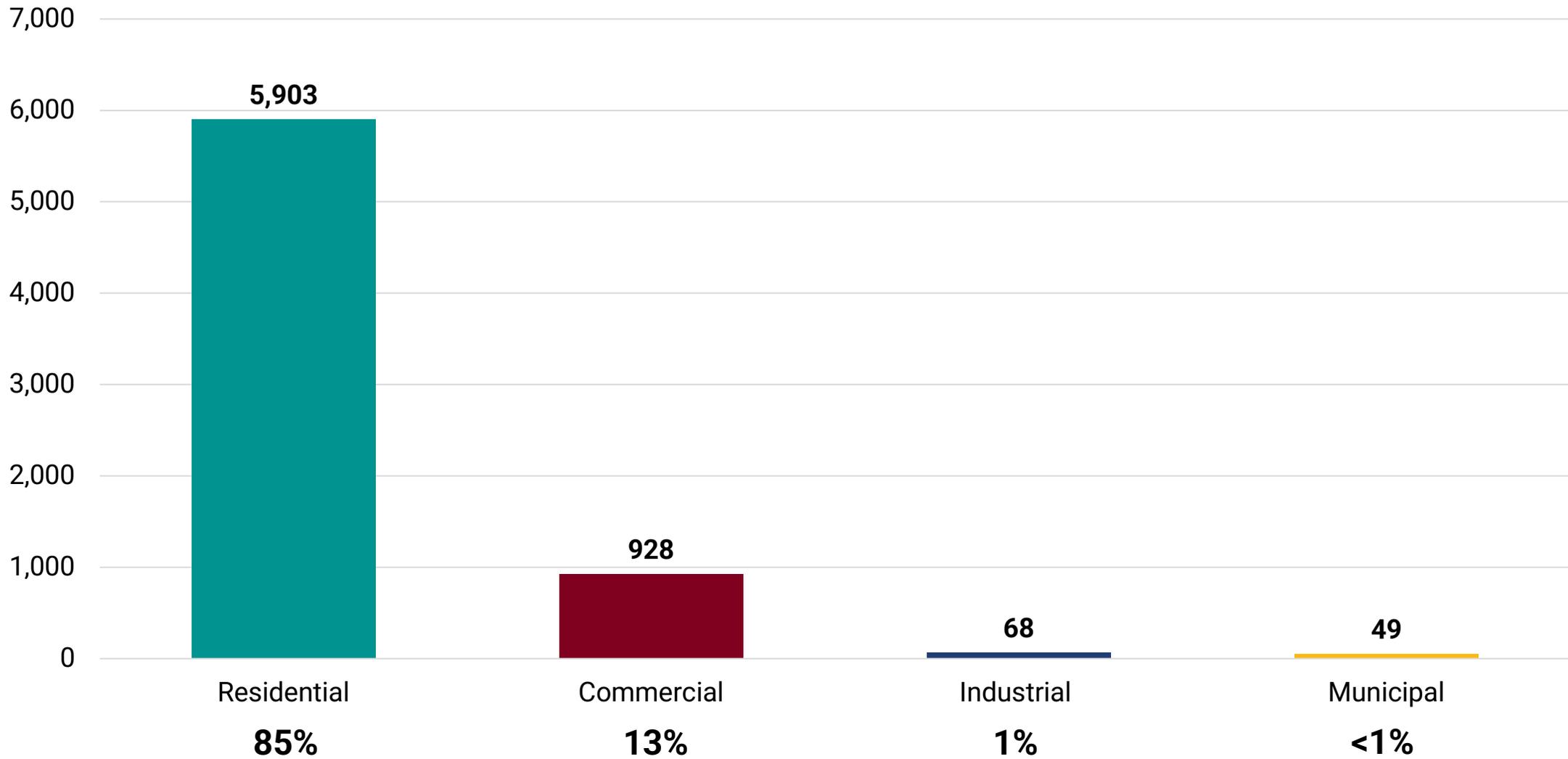
Summary of Recommendations

- Adopt a new water and sewer rate structure
 - Provides additional revenue
 - Incorporates higher water fixed charges and addition of sewer fixed charge
 - Modifies usage rate tiers to provide essential quantity of service at lower rate
 - Updates irrigation rates to align with cost of service
- Adjust ancillary fees and charges related to providing water and sewer services to match cost of service
 - Capacity use surcharges, wholesale rates, and sewer surcharges
- Continue to monitor financial condition of water and sewer system to maintain stability and financial resiliency

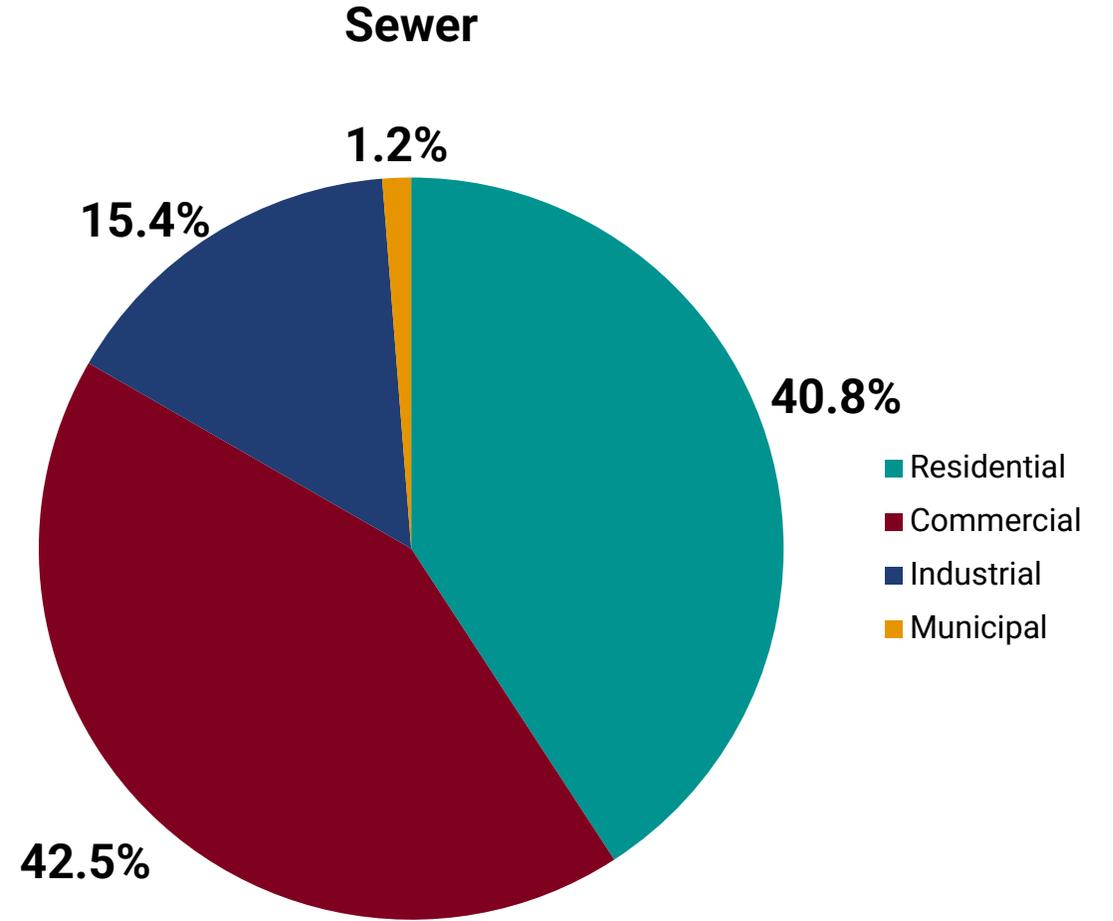
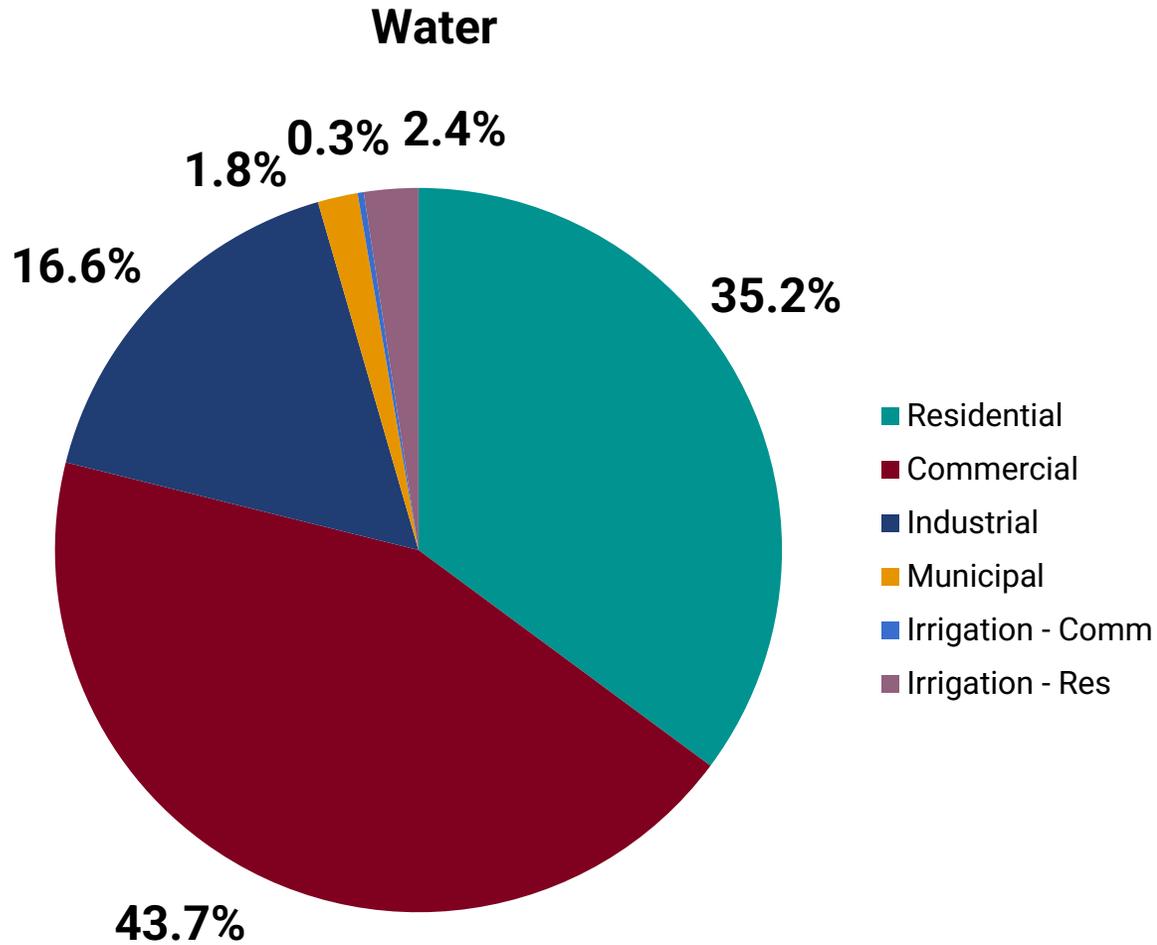
Customer Count by Class - Water



Customer Count by Class - Sewer



Usage by Class



Current Water and Sewer Rate Structure

Item	Water		Sewer
Fixed Charge (Meter Size)	<i>Retail</i>	<i>Irrigation</i>	<i>All Customers</i>
5/8" & 3/4"	\$4.95	\$4.95	-
1"	\$8.27	\$8.27	-
1.5"	\$14.25	\$14.25	-
2"	\$22.91	\$22.91	-
3"	\$36.26	\$36.26	-
4"	\$68.74	\$68.74	-
6"	\$120.27	\$120.27	-
8"	\$168.01	\$168.01	-
10"	\$252.02	\$252.02	-
Usage Charges (per unit)			
Tier 1	\$5.47	\$6.58	\$18.01
Tier 2	\$6.58	\$12.43	\$19.81
Tier 3	N/A	\$15.34	N/A

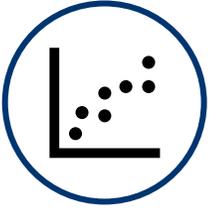
Rate Structure Pricing Goals and Objectives



Customer Affordability - Ability to provide service for basic needs at affordable prices



Rate and Revenue Stability - Limit volatility in annual revenues and rate adjustments



Cost of Service Based - Alignment between use of service and utility bill



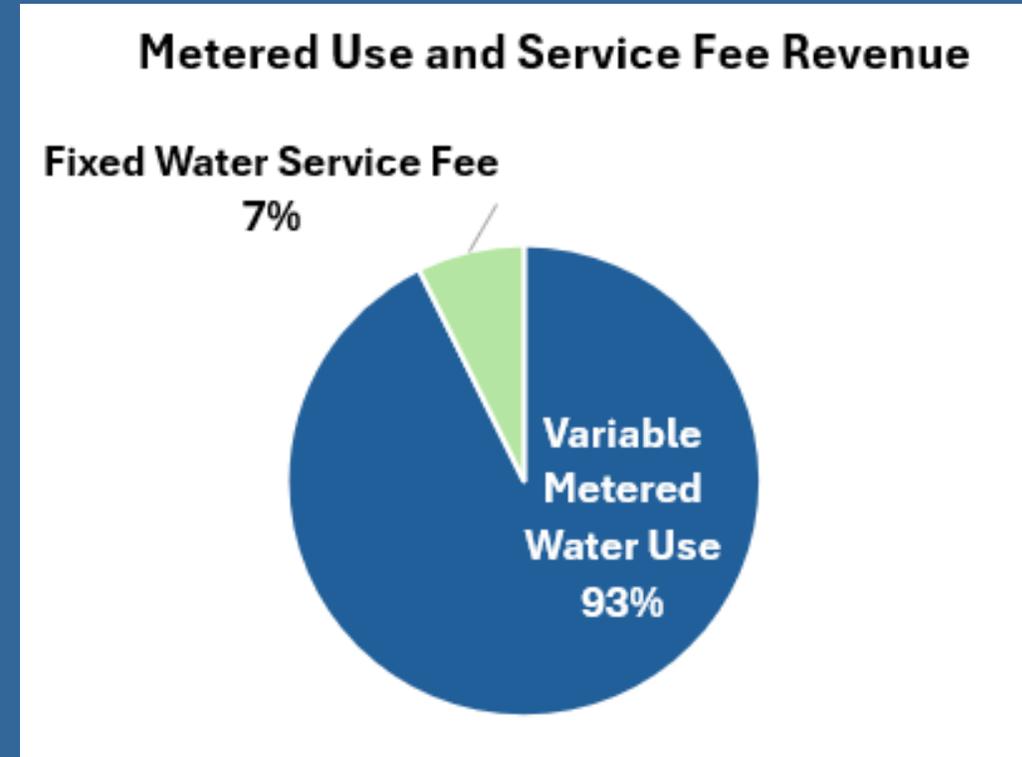
Administrative and Customer Understanding - Ability to administrate and customer to understand



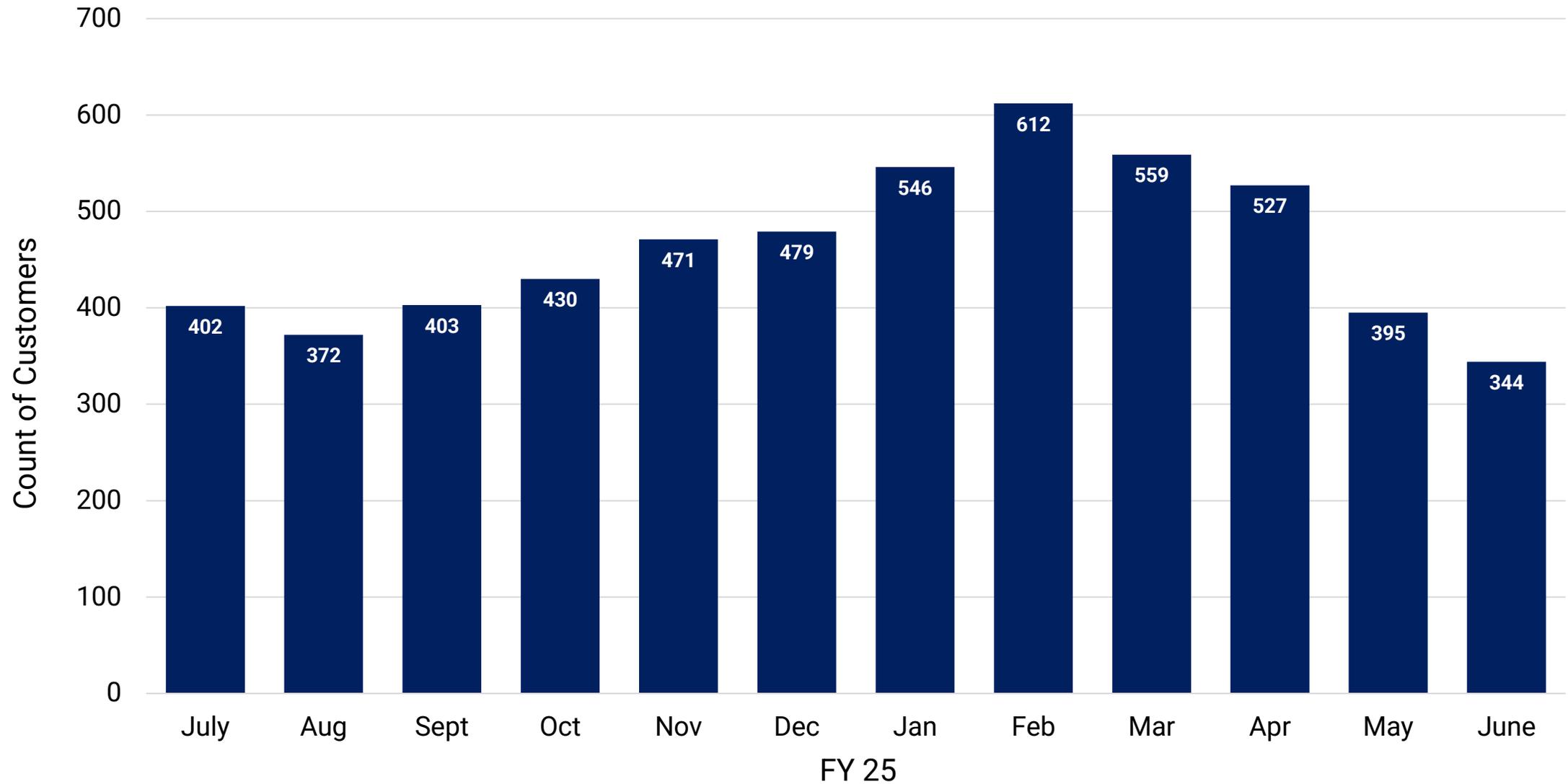
Legal Defensibility - Comply with industry standard and legal requirements

Fixed Charges

- A large portion of the City's costs for providing Water and Sewer service are incurred regardless of customer use.
- A fixed charge is only collected on Water service and has remained at the same level for 24 years.
- Industry standard is to collect 15% to 30% of service revenues from fixed charges to provide revenue stability.
- Current fixed charges are not scaled consistently with industry standards.



Residential Customers with Zero Usage



FY 27 Rate Structure Options

Component	Status Quo	Recommended Alternative
Fixed Charges	✓ Maintain current water fixed charge	✓ Increase the portion of revenues from water fixed charge ✓ Add a sewer fixed charge ✓ Scale fixed charges consistent with industry standards
Water and Sewer Usage Rates	✓ Maintain current tiers and increase rates to generate sufficient revenues	✓ Modify the tier quantities and differences in pricing between tiers <ul style="list-style-type: none">• Creation of a new tier – increase customer affordability• Enhance conservation incentive – align with cost of service
Ancillary Fees and Charges	✓ Update fees and charges to recover costs for capital surcharges, wholesale rates and sewer surcharges	

Fixed Charges

Count of Meters	Meter Size	Water		Sewer	
		<i>FY 27 Status Quo</i>	<i>FY 27 Recommended*</i>	<i>FY 27 Status Quo</i>	<i>FY 27 Recommended*</i>
7,667	5/8" & 3/4"	\$4.95	\$10.94	-	\$8.04
1,362	1"	\$8.27	\$18.23	-	\$13.40
182	1.5"	\$14.25	\$36.47	-	\$26.81
228	2"	\$22.91	\$58.35	-	\$42.89
46	3"	\$36.26	\$127.64	-	\$93.83
27	4"	\$68.74	\$218.82	-	\$160.85
10	6"	\$120.27	\$492.33	-	\$361.92
7	8"	\$168.01	\$583.51	-	\$428.94
-	10"	\$252.02	\$1,531.71	-	\$1,125.97
<i>Percent of Rate Revenue**</i>		7%	16%	0%	4%

**Recommended fixed charges scaled by meter size consistent with meter capacity, as published by American Water Works Association*

***Industry standard is between 15% and 30%*

Usage Rates - Addition of New Tier

Addition of an initial quantity of water and sewer service for basic indoor water and sanitation needs at a lower rate



Tier 1 = 0 - 5 units**

* PPPD = Per Person Per Day

**1 Unit = 748 Gallons

Source: Census Bureau (2.1 ppl household in Portsmouth), Residential End Use of Water Survey

Usage Rates - Recommended Tiers

Current Monthly Water and Sewer Tiers



Recommended Monthly Water and Sewer Tiers



Rate Structure Options - Usage Rates

FY 27 Status Quo - Retail Rates*

Usage Rate (per Unit)	Water	Sewer
Tier 1 (0 to 10 units)	\$6.51	\$20.18
Tier 2 (over 10 units)	\$7.84	\$22.20

FY 27 Recommended - Retail Rates

Usage Rate (per Unit)	Water	Sewer
Tier 1 (0 to 5 units)	\$4.56	\$17.47
Tier 2 (6 to 10 units)	\$6.17	\$20.03
Tier 3 (over 10 units)	\$7.61	\$23.01

FY 27 Status Quo - Irrigation*

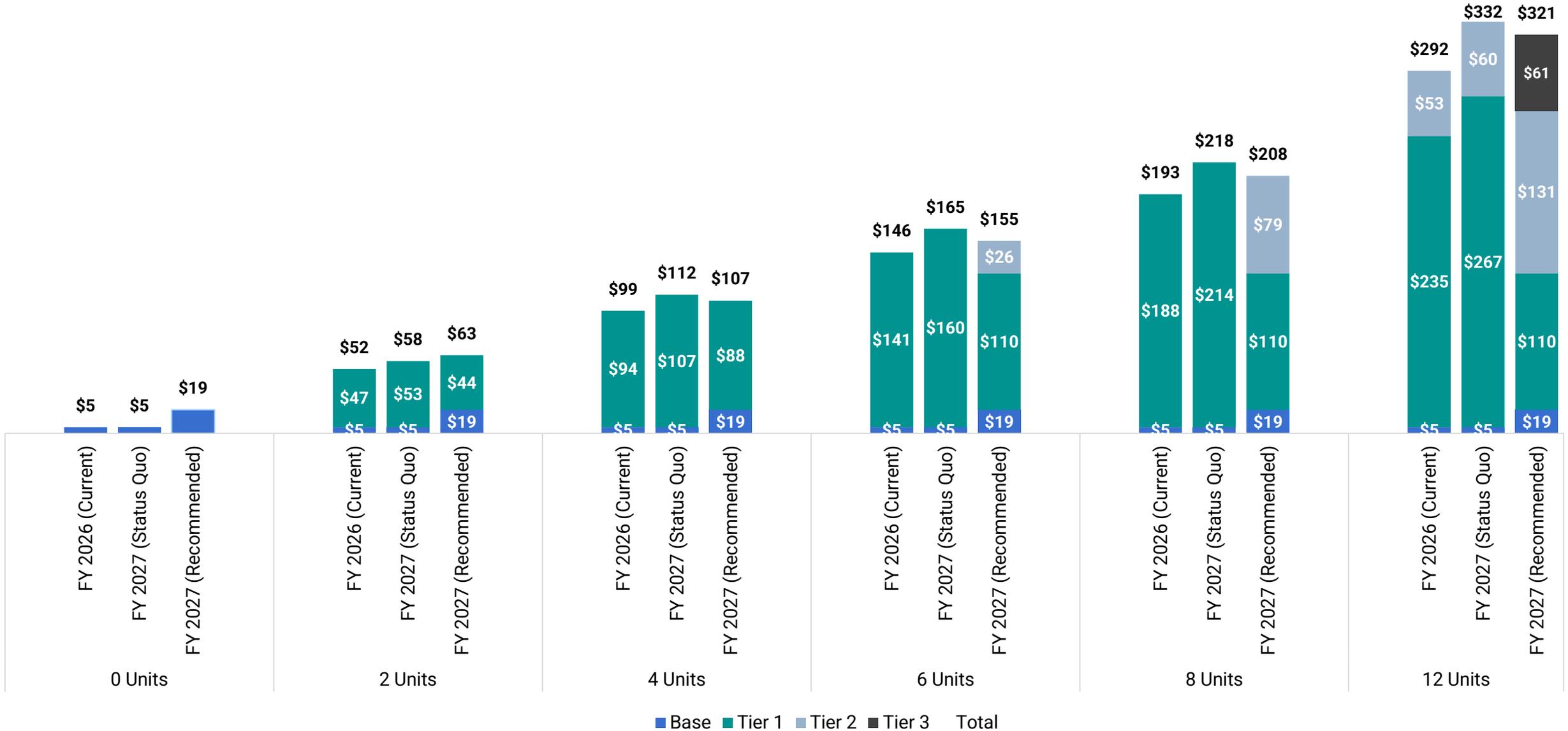
Usage Rate (per Unit)	Water
Tier 1 (0 to 10 units)	\$7.84
Tier 2 (11 to 20 units)	\$14.81
Tier 3 (over 20 units)	\$18.28

FY 27 Recommended - Irrigation

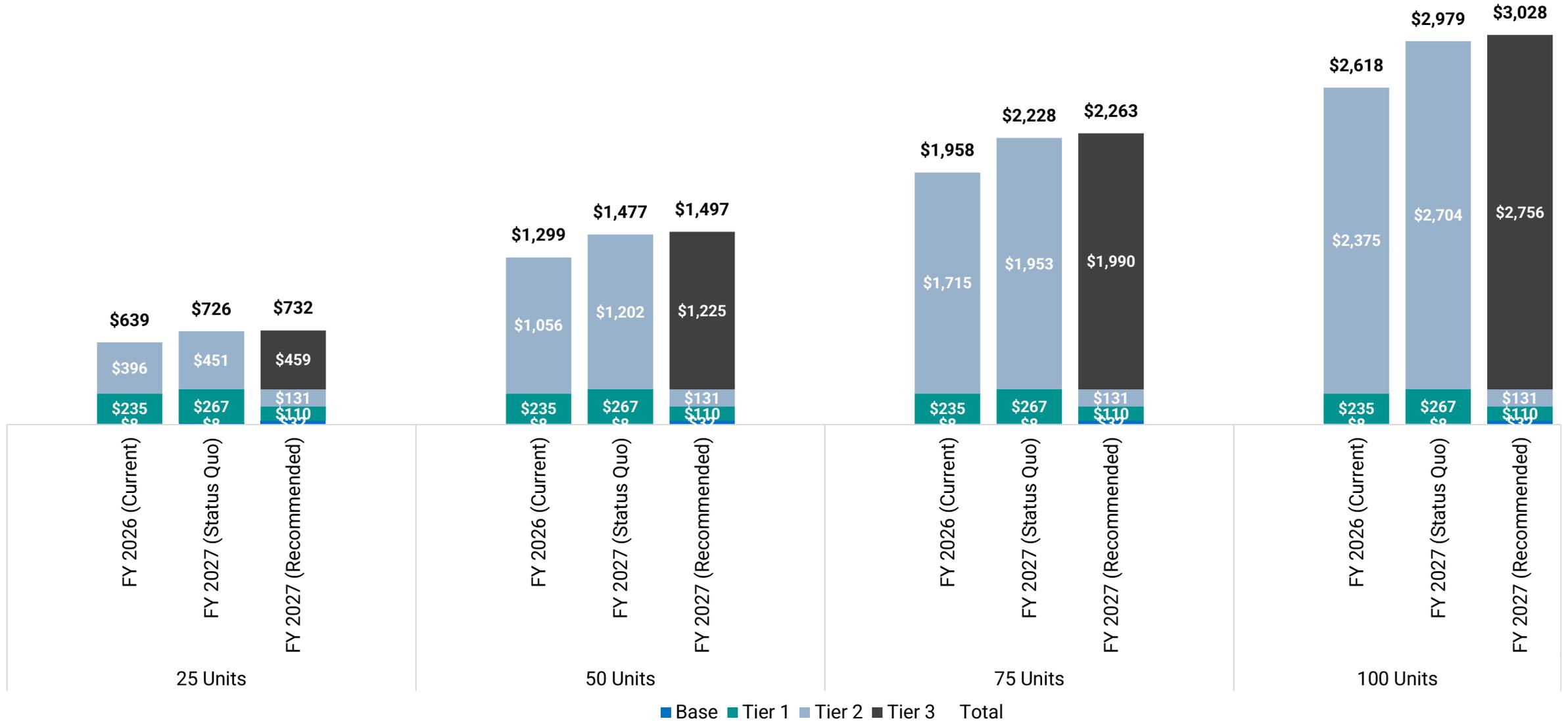
Usage Rate (per Unit)	Water
Tier 1 (0 to 10 units)	\$8.91
Tier 2 (11 to 20 units)	\$14.48
Tier 3 (over 20 units)	\$17.27

**Water fixed charge remains at current levels and no sewer fixed charge*

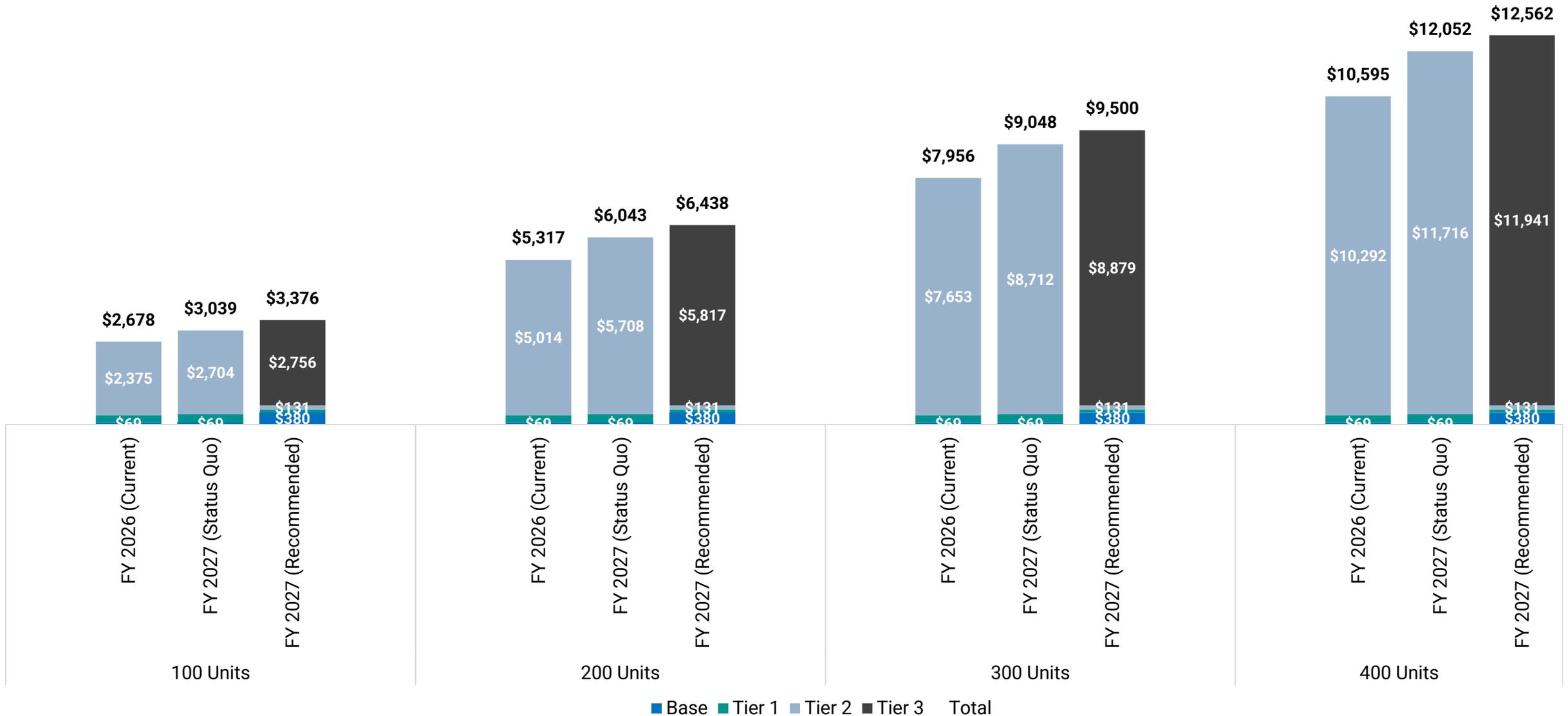
Residential Monthly Combined Water and Sewer Bills



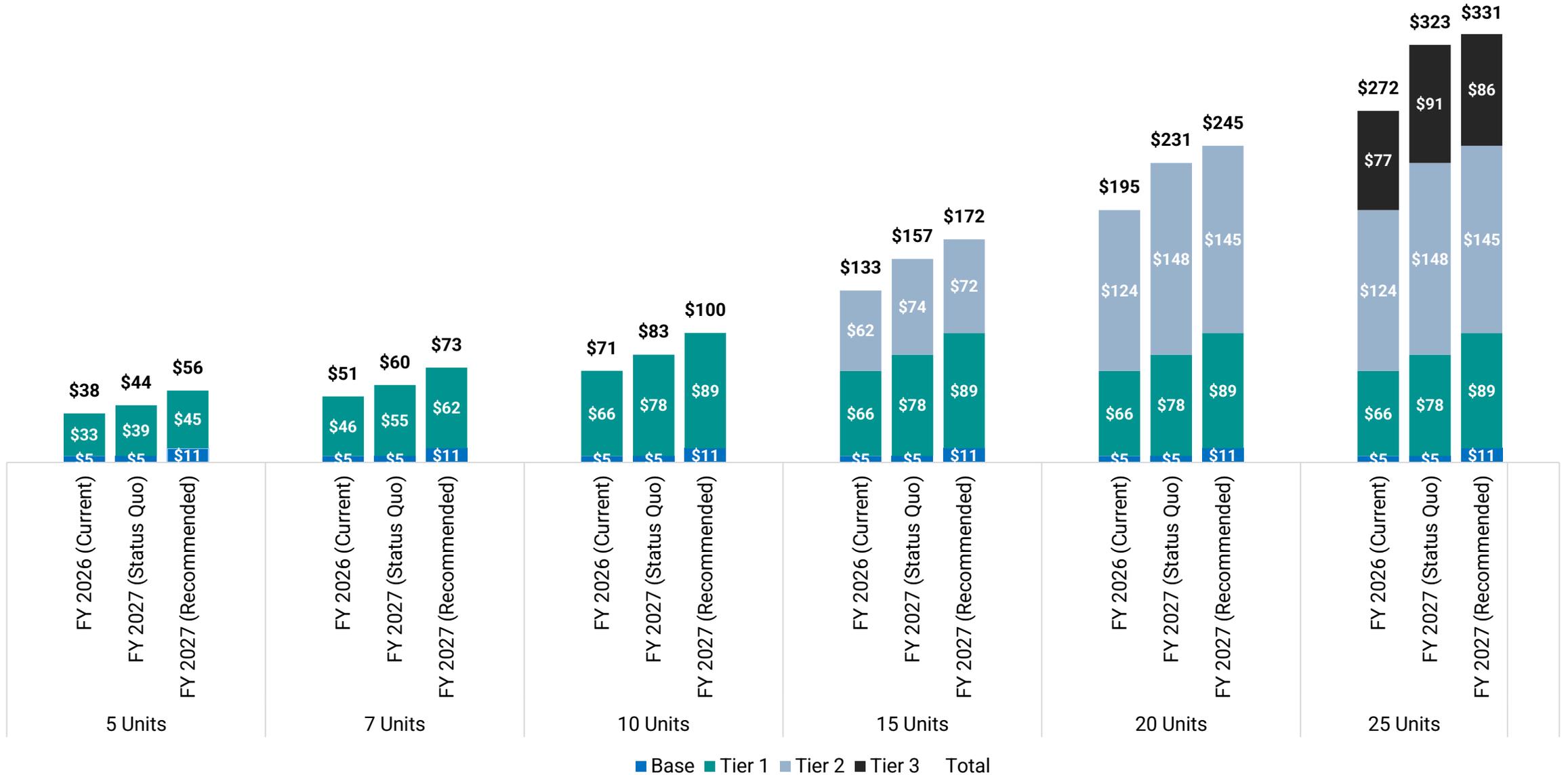
Commercial (1" Meter) Monthly Water and Sewer Bills



Commercial (4" Meter) Monthly Water and Sewer Bills



Irrigation Monthly Water Bills



Capacity Use Surcharges

- Charges for new connections joining the water and sewer system & connections requiring additional system capacity
- Intended to recover the cost of constructing water and sewer capacity
- Capacity use surcharges are not impact fees which are limited given requirements to tie to specific capital projects and time limitations of use
- Charges are applied based on units of service (potential demand on utility system)

$$\text{Capacity Use Surcharges} = \frac{\text{Value of System} - \text{Credit}^*}{\text{System Capacity}}$$

**Credits include outstanding principal on debt and contributed assets*

***Consistent with the Buy-In Methodology per the AWWA M1 Manual*

Capacity Use Surcharges

Meter Size	Water		Sewer	
	<i>Current</i>	<i>Recommended*</i>	<i>Current</i>	<i>Recommended*</i>
Up to 1"	\$1,434	\$3,378	\$3,985	\$7,957
1.5"	\$2,868	\$6,756	\$7,970	\$15,914
2"	\$4,589	\$10,810	\$12,752	\$25,462
3"	\$9,178	\$23,646	\$25,504	\$55,699
4"	\$14,340	\$40,536	\$39,850	\$95,484
6"	\$28,680	\$91,206	\$79,700	\$214,839
8"	\$45,888	\$108,096	\$127,520	\$254,624
10"	\$68,832	\$283,752	\$191,280	\$668,388

**Recommended charges scaled by meter size consistent with meter capacity, as published by American Water Works Association*

Wholesale Water Rates

- Calculated based on cost of providing service to wholesale customers.
- Reflects the fact that wholesale customers do not use the entire water system.

Water Wholesale Analysis

Water Cost Component	Total FY 27	Allocation Factor	Wholesale Portion
Supply	\$461,540	3.64%*	\$16,808
Treatment	\$5,759,626	3.64%*	\$209,752
Transmission / Distribution	\$6,502,621	2.15%**	\$140,051
Storage	\$413,383	3.64%*	\$15,054
Total	\$13,137,170		\$381,665

*Ratio of volume used by wholesale customers to system total use

**Portion of transmission system used by wholesale customers

Water Customer	Current Rate per Unit	Calculated Rate per Unit FY 27	% Change
New Castle	\$3.52	\$6.50	85%
Rye	\$4.25	\$6.50	53%

Wholesale Sewer Rates

- Calculated based on cost of providing service to wholesale customers.
- Reflect the fact that wholesale customers do not use the entire sewer system.

Sewer Wholesale Analysis

Sewer Cost Component	Total FY 27	Allocation Factor	Wholesale Portion
Treatment	\$11,193,027	2.73%*	\$305,545
Collection	\$6,806,337	0.81%**	\$55,387
Pumping	\$1,527,517	2.73%*	\$41,698
Total	\$19,526,881		\$402,631

**Ratio of volume used by wholesale customers to system total use*

***Portion of collection system used by wholesale customers*

Sewer Customer	Current Rate per Unit	Calculated Rate per Unit FY 27	% Change
New Castle	\$11.39	\$13.74	21%

Sewer Surcharges

- City assess sewer surcharges for customers that send high strength sewerage to the City's wastewater treatment plants.
- Surcharges recover the cost of treating higher strength sewerage.
- Cost of service analysis determined current surcharges are not set at appropriate level and should be increased to align with cost of treatment.

Sewer Surcharge Component	Current per Pound	Proposed FY 27 per Pound
BOD Portsmouth Plant	\$0.20	\$0.77
BOD Pease Plant	\$0.20	\$0.77
TSS Portsmouth Plant	\$0.17	\$0.65
TSS Pease Plant	\$0.17	\$0.65

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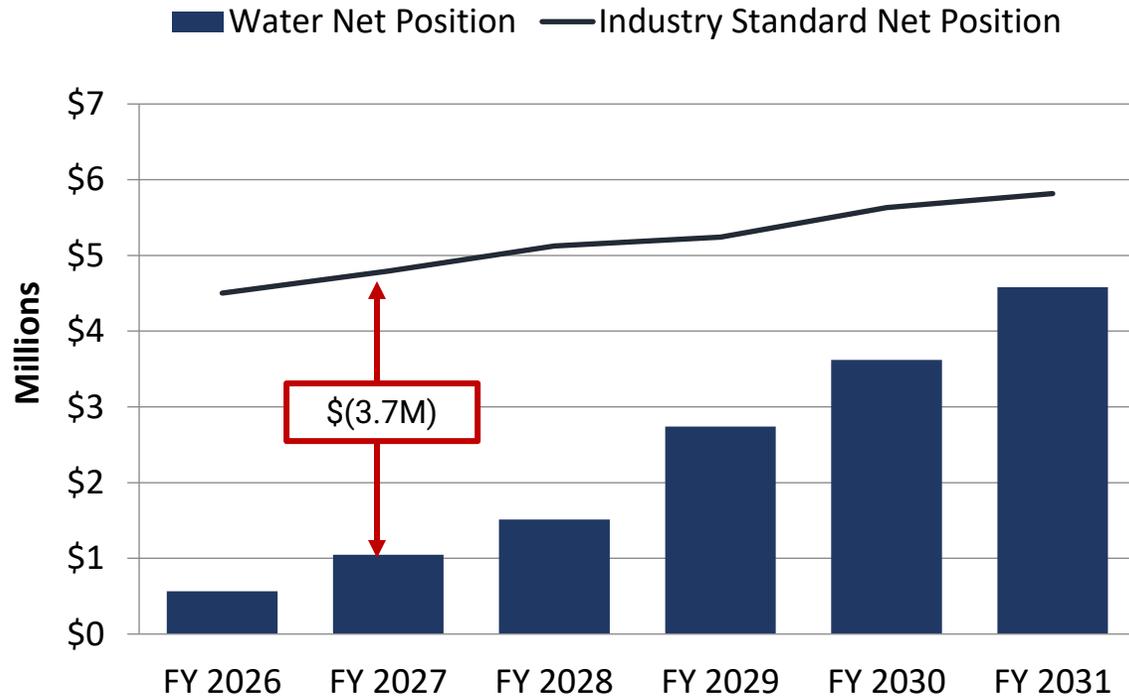
Monthly Bill Impact - Average Residential Customer (6 Units)

Rate Component	Current FY 26	Recommended FY 27	\$ Change
Fixed Charge	\$4.95	\$10.94	\$5.99
Water Usage Charge	\$32.81	\$28.95	(\$3.86)
Total Monthly Water Bill	\$37.76	\$39.89	\$2.13
Sewer Fixed Charge	\$ -	\$8.04	\$8.04
Sewer Usage Charge	\$108.05	\$107.37	(\$0.68)
Total Monthly Sewer Bill	\$108.05	\$115.41	\$7.36
Combined Water and Sewer Bill	\$145.81	\$155.30	\$9.49

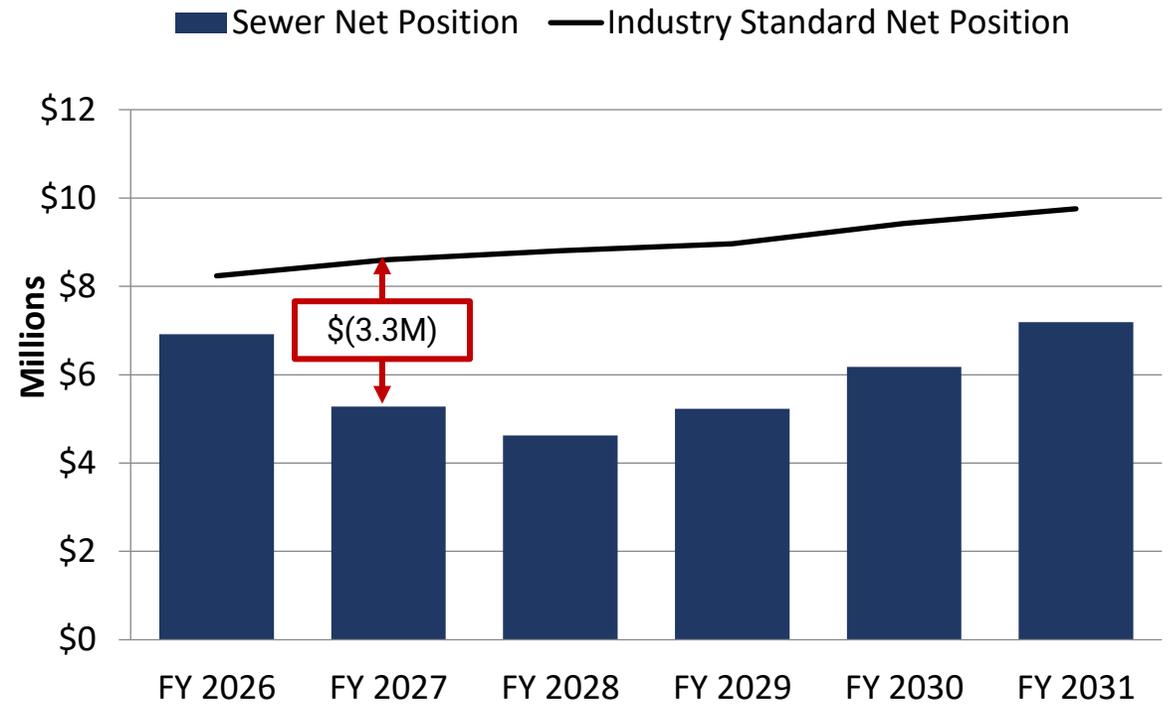
+6.5%

Recommended Glide Paths

Projected Water Cash Balance



Projected Sewer Cash Balance



Next Steps

- Consideration at Fee Committee
- Notify Rye and New Castle of recommended wholesale rates
- Amend Sewer Ordinance to allow for fixed fee
- Approve through budget process

Questions and Discussion