

FY27 Water and Sewer Rate Study



Water and Sewer Rate Study City Council Work Session

January 14, 2025

Water Enterprise Fund

Sewer Enterprise Fund

Enterprise Funds

- Enterprise funds account for operations that are financed and operated in a manner similar to a private business.
- Enterprise funds have fees and/or charges sufficient to cover the cost of providing goods and services, including capital costs (i.e., system reinvestment and debt service).
- Property taxes **do not** subsidize the water and sewer enterprise funds.

Operational Costs

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



Capital Costs

- Regulatory compliance
 - Nitrogen
 - Disinfection byproducts
 - PFAS
- Deferred maintenance
- Ongoing infrastructure maintenance & rehabilitation
- System capacity improvements
- Treatment system upgrades



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.

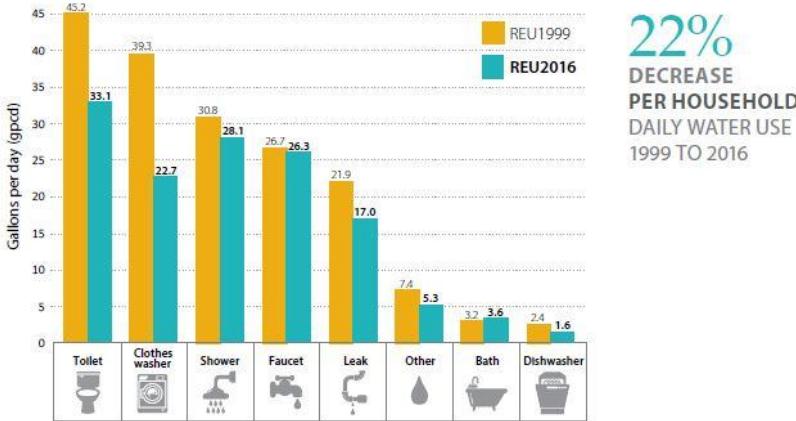
Summary of Initial Findings

- 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 fees is below industry standards.

Industry Challenges



Reductions in Use / Revenue Impacts



Aging Infrastructure



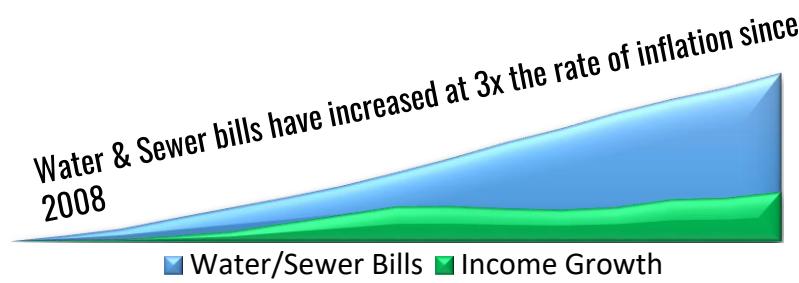
Regulatory / Resilience



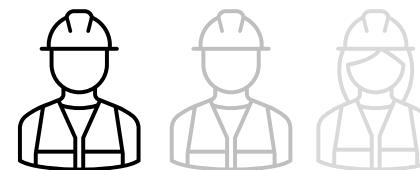
PFAS, LCR,
State
Legislation



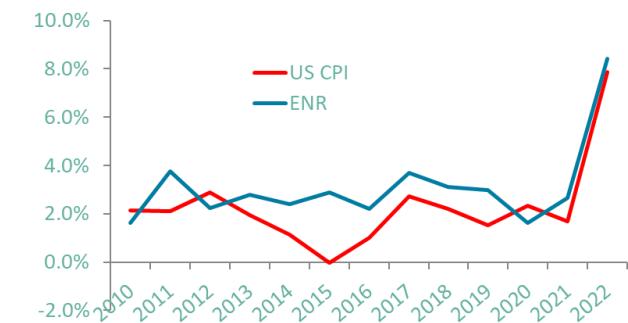
Customer Affordability



Aging Workforce



Cost Increases





Operational Cost Inflation: 2020-2024



National Commodity Index – Plastic Water Pipe

- Up 132% from Jan 2020 to June 2023

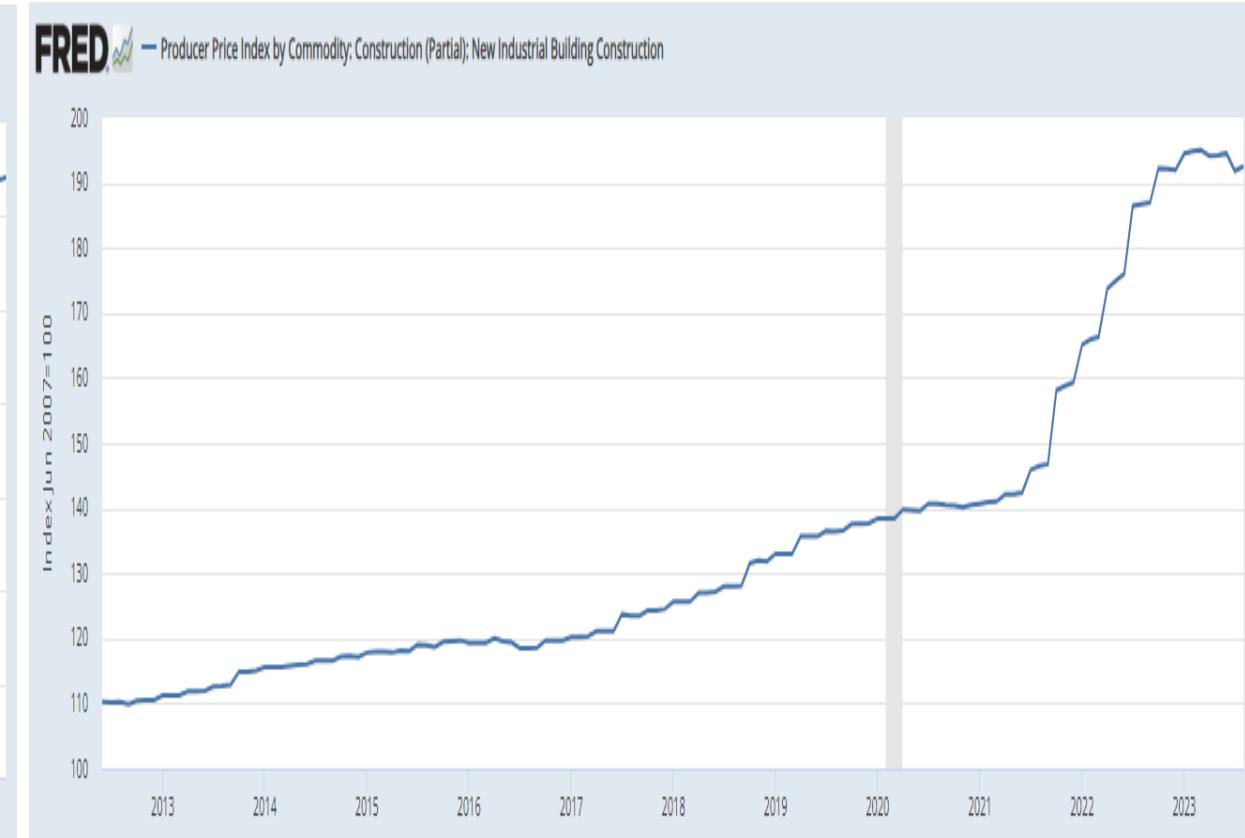
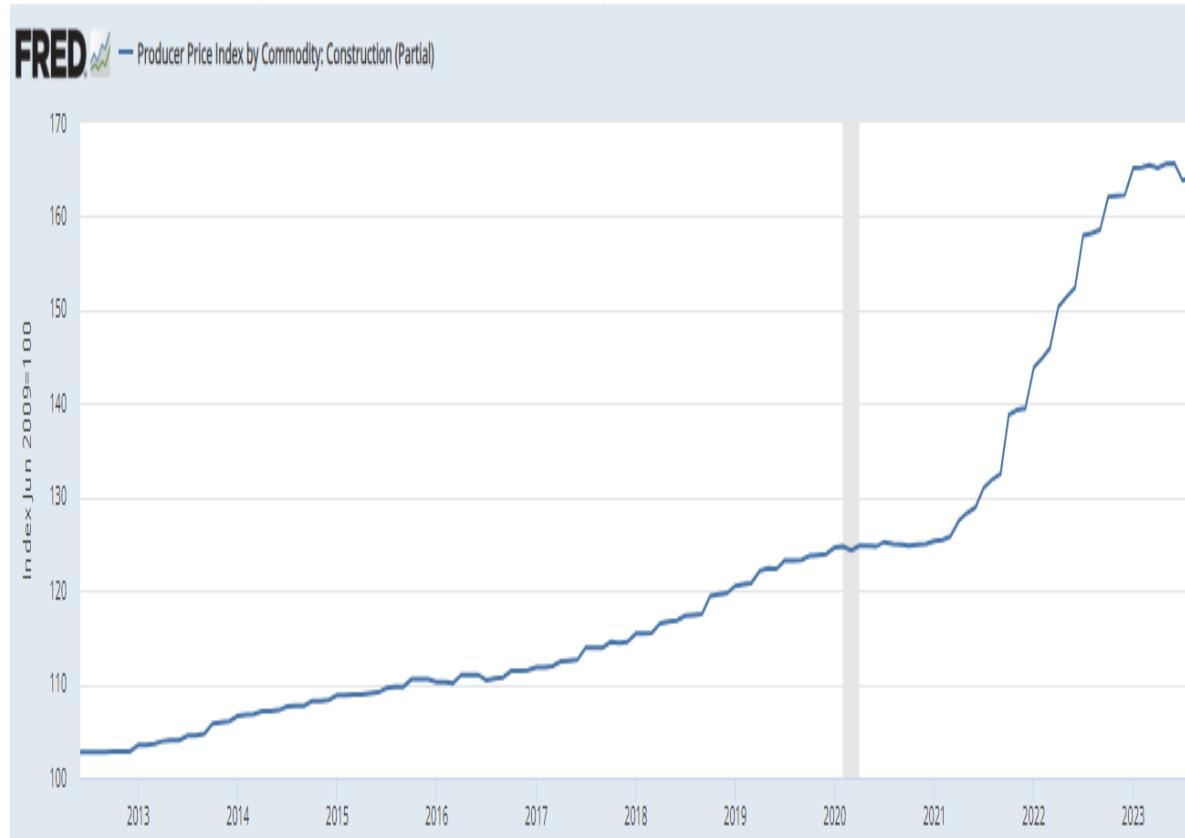


National Water Treatment Chemical Index

- Up 31% from Jan 2020 to June 2023



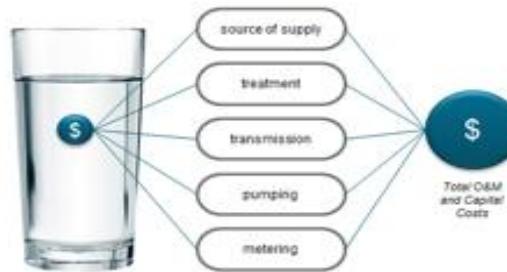
Construction Cost Inflation: 2020-2024



National Cost Index – Construction

- **General Construction** - Up 33% from Jan 2020 to June 2023
- **Industrial Construction** - Up 40% from Jan 2020 to June 2023

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

Financial Plan



Revenue Requirements

- Forecast of system operating expenditures
- Forecast of capital investments including existing debt obligations

Revenue Forecast

- Forecast of system demands and customer counts
- Development of revenue forecast with existing rates and fees

Evaluate Key Metrics

- Sufficiency of revenue to meet revenue requirements
- Ability to fall within range of reserve requirements
- Meet debt service coverage requirements

Capital Costs

Debt Service

Operating Costs

Financial Planning Assumptions - Expenditures

FY 2026 Budget

Used as starting point for financial modeling

- Expenditures inflated on a line-item level by expenditure type

Existing Debt Service

Multiple Water and Sewer debt issuances

- \$5M Water debt service payment in FY 2026
- \$12M Sewer debt service payment in FY 2026

Capital Plan

FY 2026 – FY 2032 Capital Plan to be Debt-Funded

- Water 7-Year total: \$76M
- Sewer 7-Year total: \$76M

Financial Planning Assumptions - Revenues

FY 2026 Budget

Used to forecast non-rate revenues

- Revenues adjusted on a line-item level by revenue type (majority held constant)

Customer Growth

Informed by historical actuals and trued up annually

- 1% annual increase in number of customer accounts for both Water and Sewer

Consumption

Informed by historical actuals and trued up annually

- 1% annual increase in consumption by customer class for both Water and Sewer

Financial Planning Capital Improvement Plan

Capital Funding FY 2026-FY 2032 (in Millions)

Fund	FY 26	FY 27	FY 28	FY 29	FY 30	FY 31	FY 32	Total
Water	\$9.0	\$9.3	\$4.8	\$24.8	\$4.3	\$18.0	\$6.2	\$76.3
Sewer	\$9.4	\$4.6	\$11.6	\$24.2	\$9.8	\$13.3	\$3.0	\$75.7

Notable Projects:

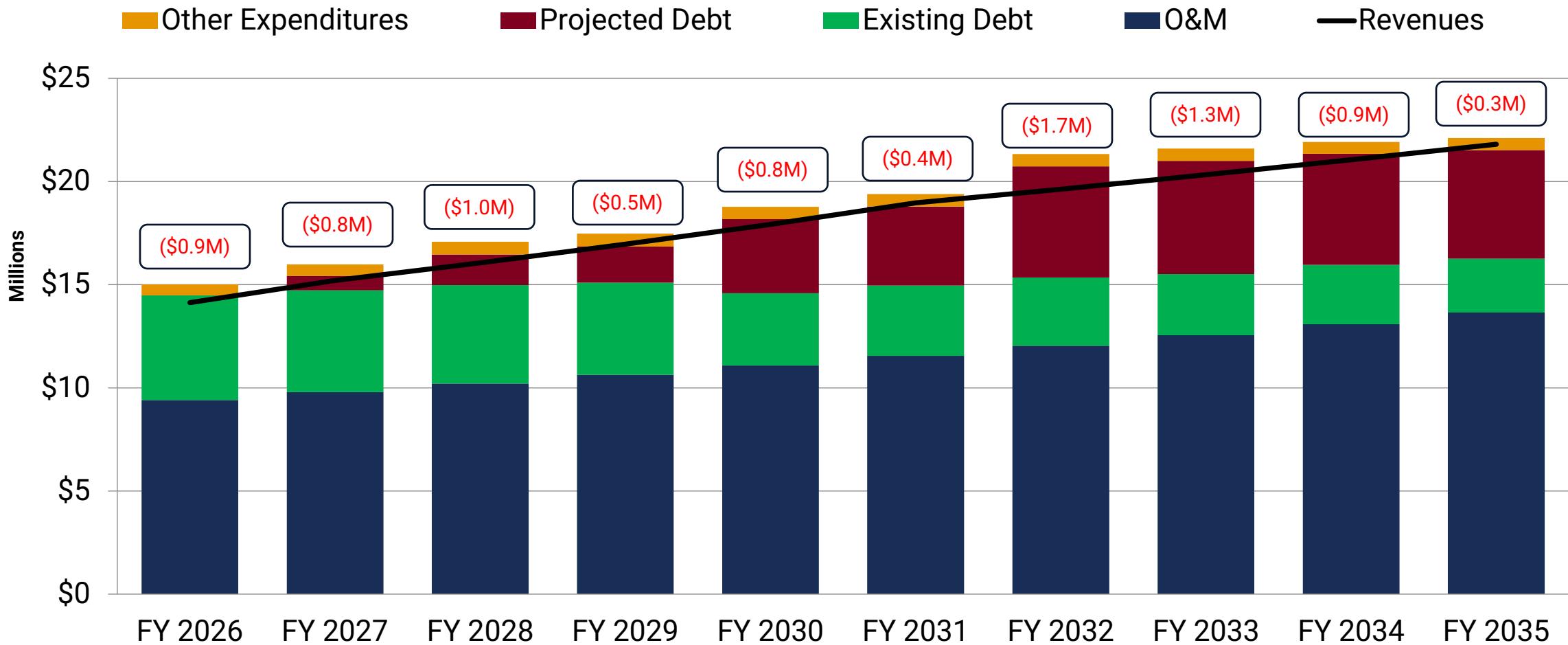
Water

- FY 2029 – Portsmouth and Collins Wells (\$13M)
- FY 2031 – Water Transmission Replacement (\$16M)

Sewer

- FY 2029 – Pease WWTP Upgrades (\$20M)
- FY 2030 – Fleet Street Utilities Upgrades and Streetscape (\$6M)
- FY 2031 – Mechanic Street Pumping Station Upgrades (\$10M)

Financial Planning Expenditures vs Revenues* - Water



*Based on prior year rate revenue increase estimates

Surplus / (Shortfall)

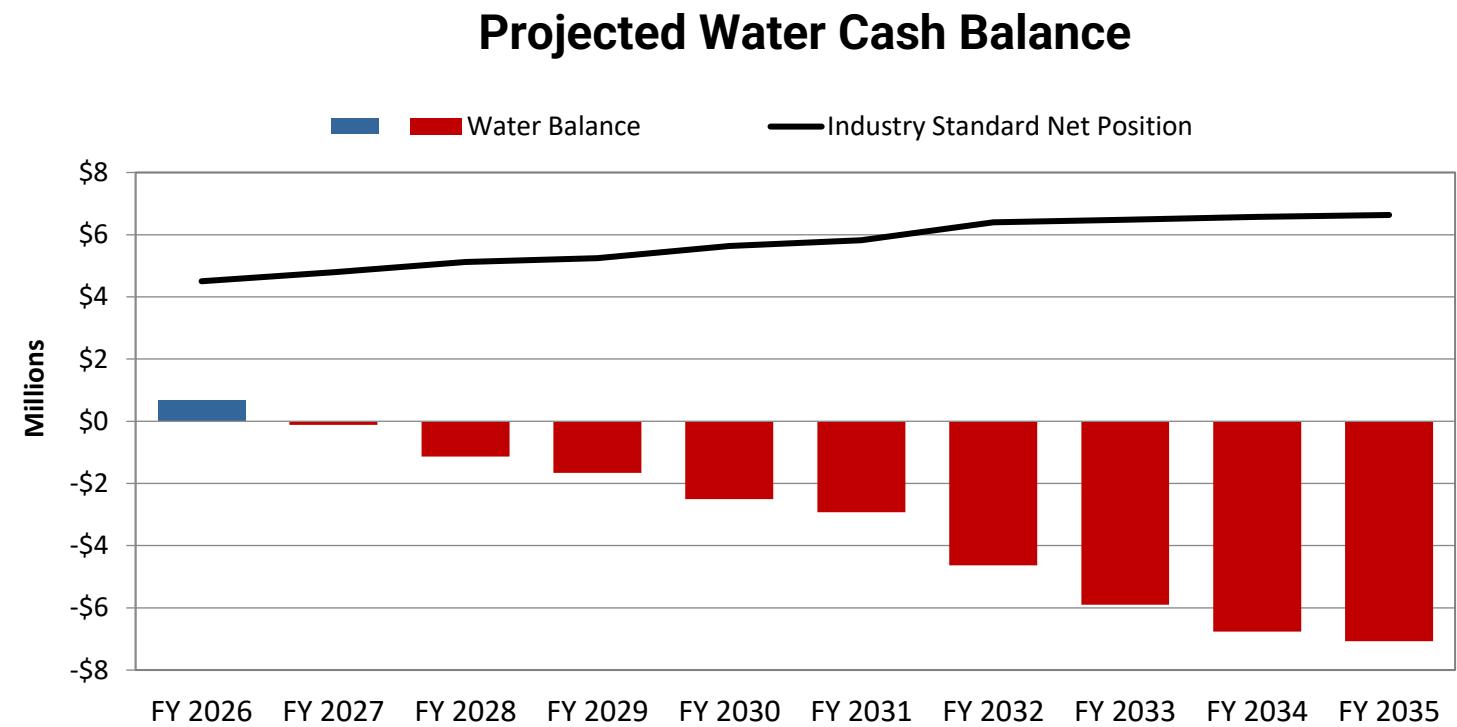
Net Position

- Maintenance of net position is essential for a sustainable utility by providing:
 - **Operational liquidity:** Ensures uninterrupted payment of routine operating expenses
 - **Revenue volatility:** Capacity to manage billing, collection and demand fluctuations
 - **Emergency response:** Immediate funding for unplanned repairs, failures or extreme events
 - **Rate stability:** Financial flexibility to avoid sudden or significant rate increases
- Industry standard to maintain 30% (3 to 4 months) of annual expenditures in net position

Water - Forecast with Prior Revenue Increase Estimates

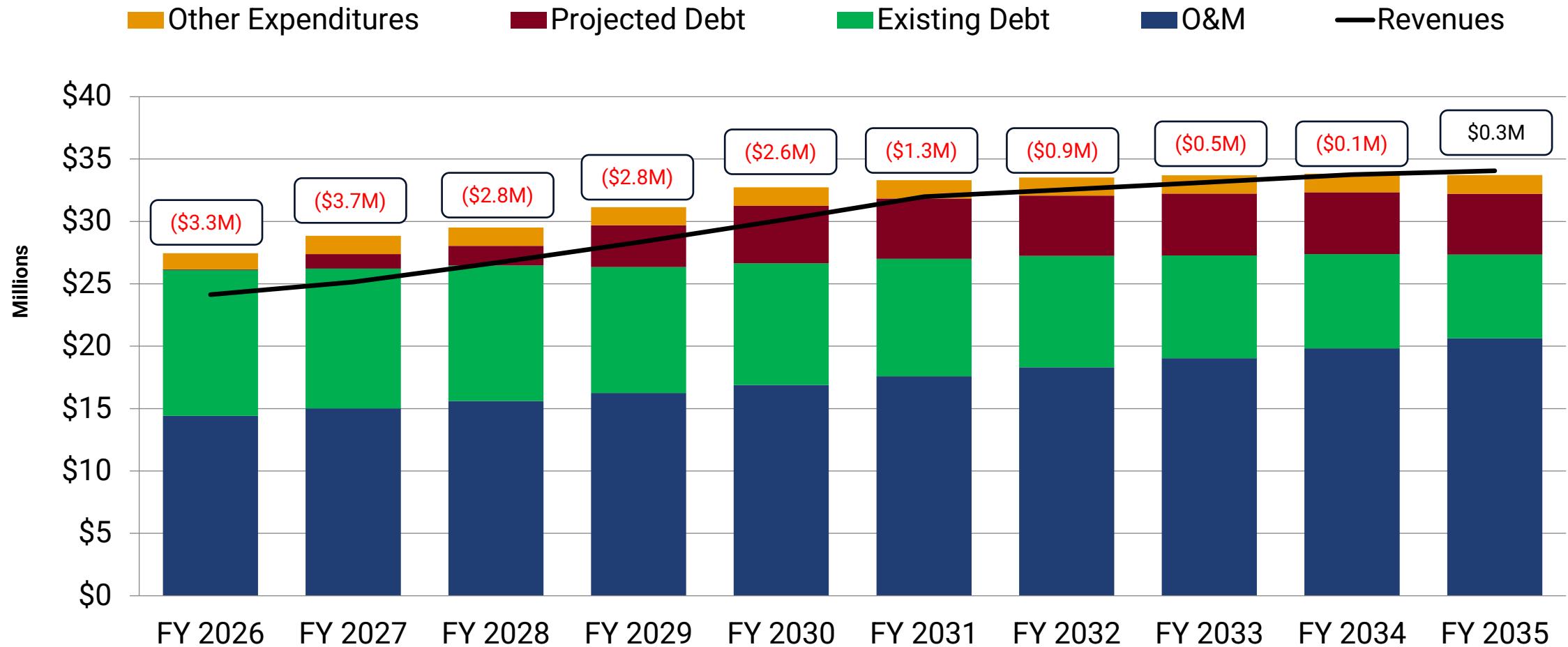
Fiscal Year	Forecasted Revenue Increase
2027	9%
2028	6%
2029	6%
2030	6%
2031	6%
2032	3%
2033	3%
2034	3%
2035	3%

10 Yr (2017-2026) Historical Avg Rate
Increase: 2.6%*



*Includes 4 years with no rate adjustments.

Financial Planning Expenditures vs Revenues* - Sewer



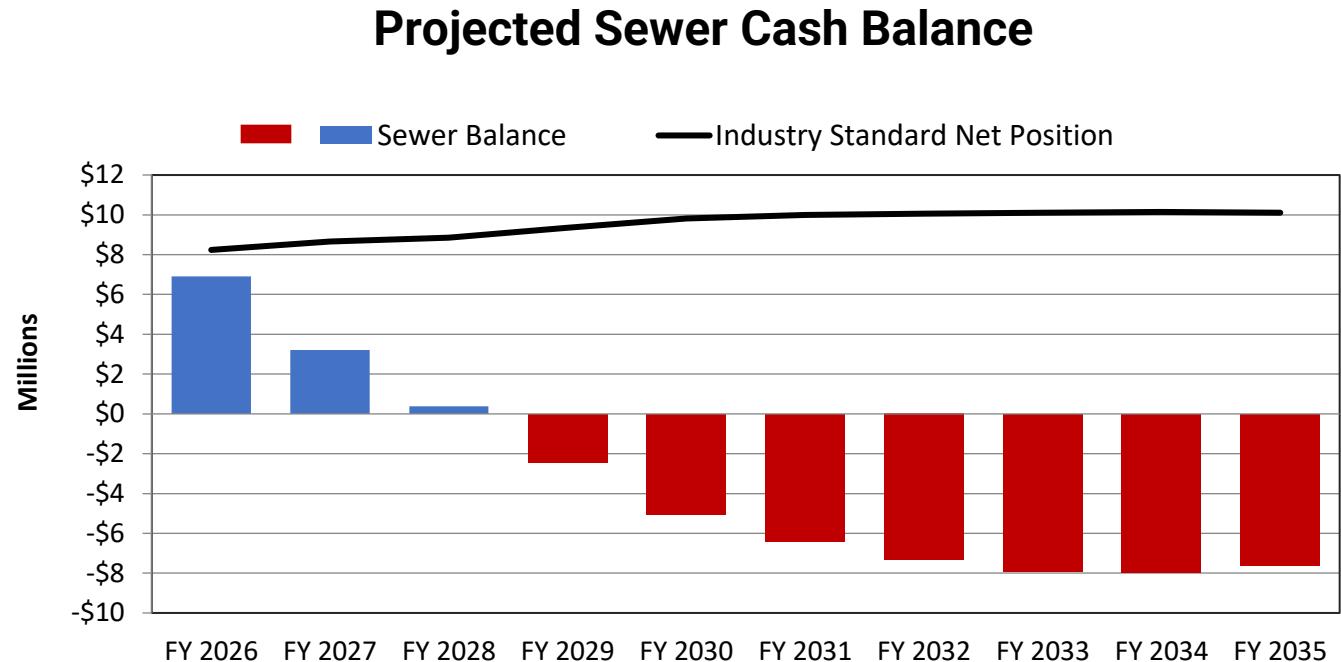
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Surplus / (Shortfall)

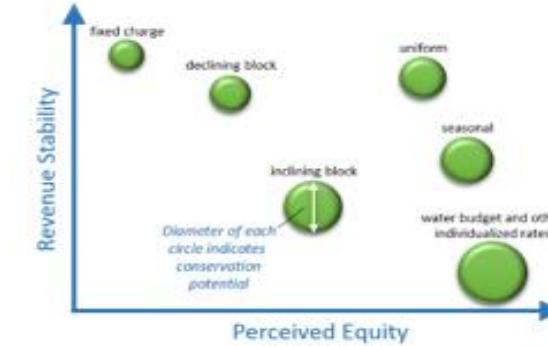
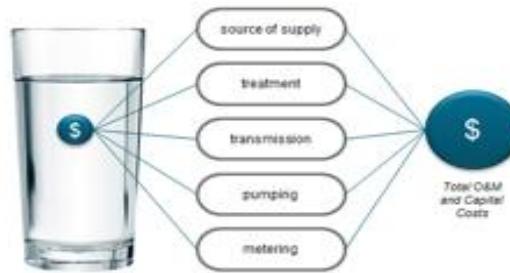
Sewer - Forecast with Prior Revenue Increase Estimates

Fiscal Year	Forecasted Revenue Increase
2027	4%
2028	6%
2029	6%
2030	6%
2031	6%
2032	1%
2033	1%
2034	1%
2035	1%

10 Yr (2017-2026) Historical Avg Rate
Increase: 4.4%



Rate Study Process



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How Much?

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Cost of Service

Goal

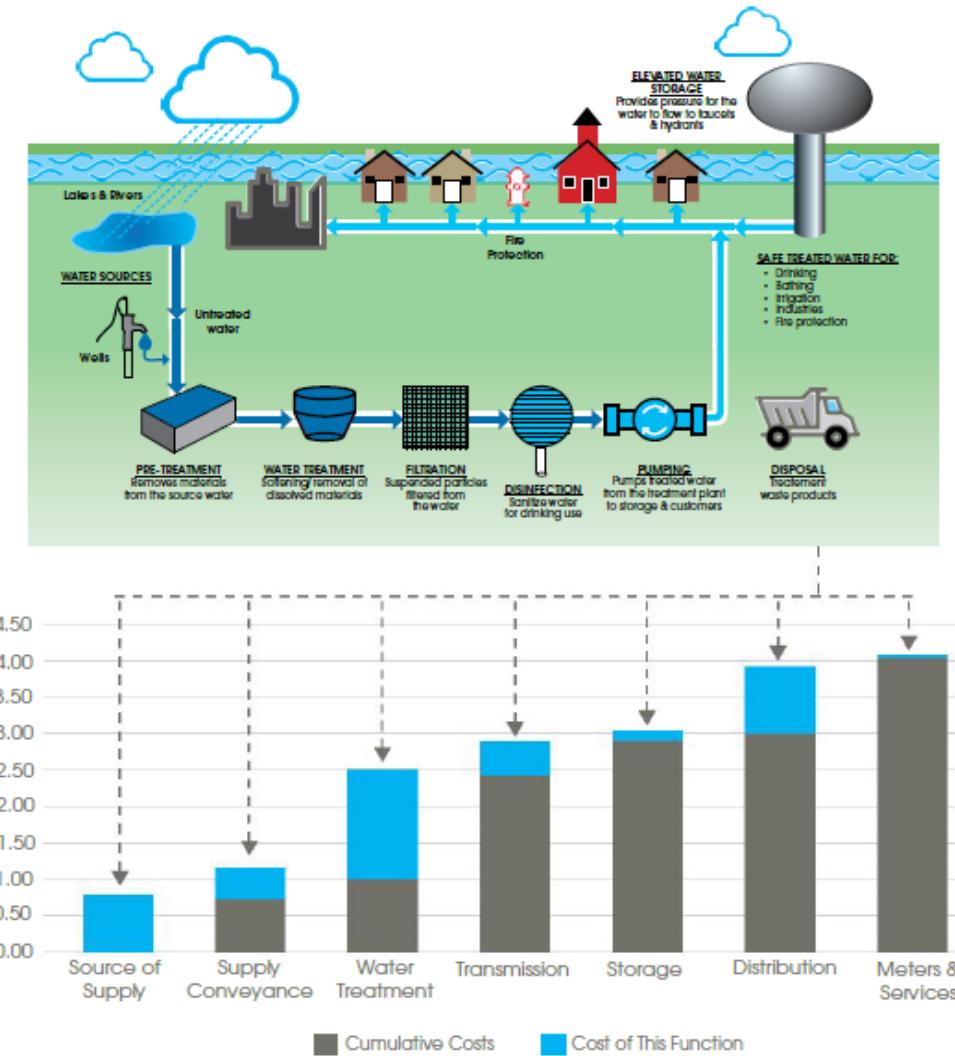
Water

Sewer

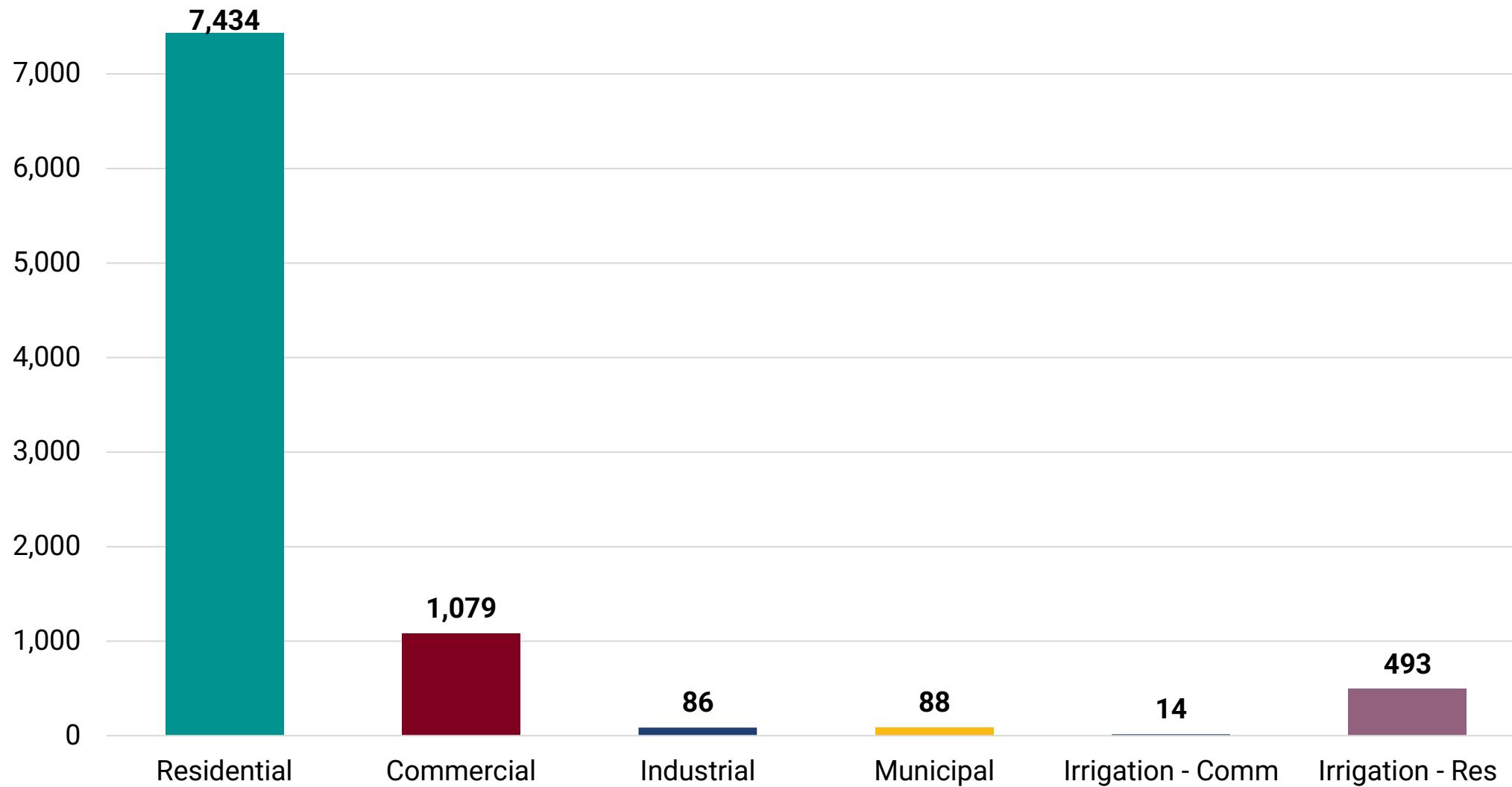
- Determine the appropriate distribution of revenue to be recovered by customer type based on the **cost to serve** each type

- Cost of service analysis completed based on customer class demands and peaking placed on water system

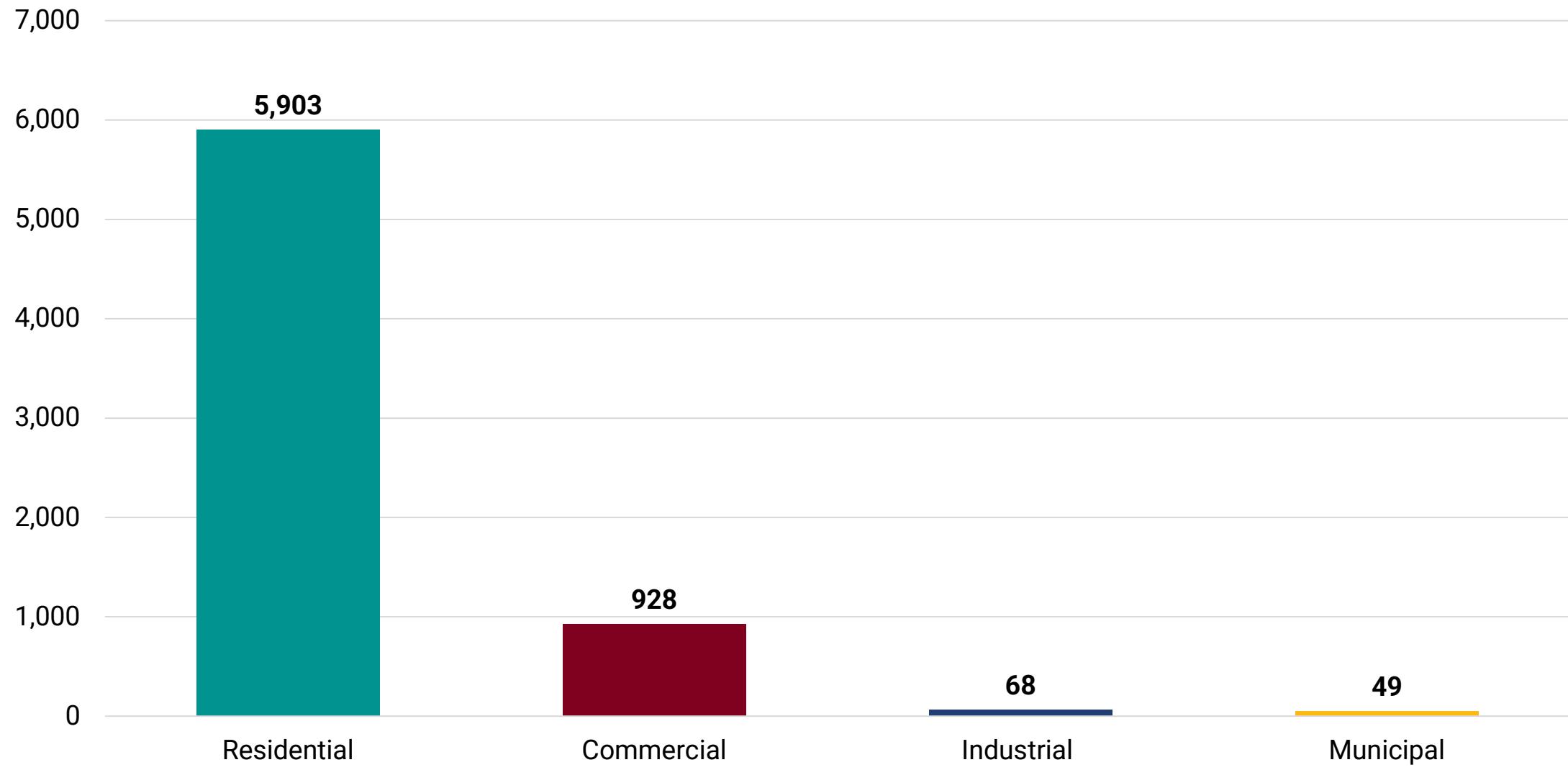
- Cost of service analysis completed based on customer class volume and loadings/strength



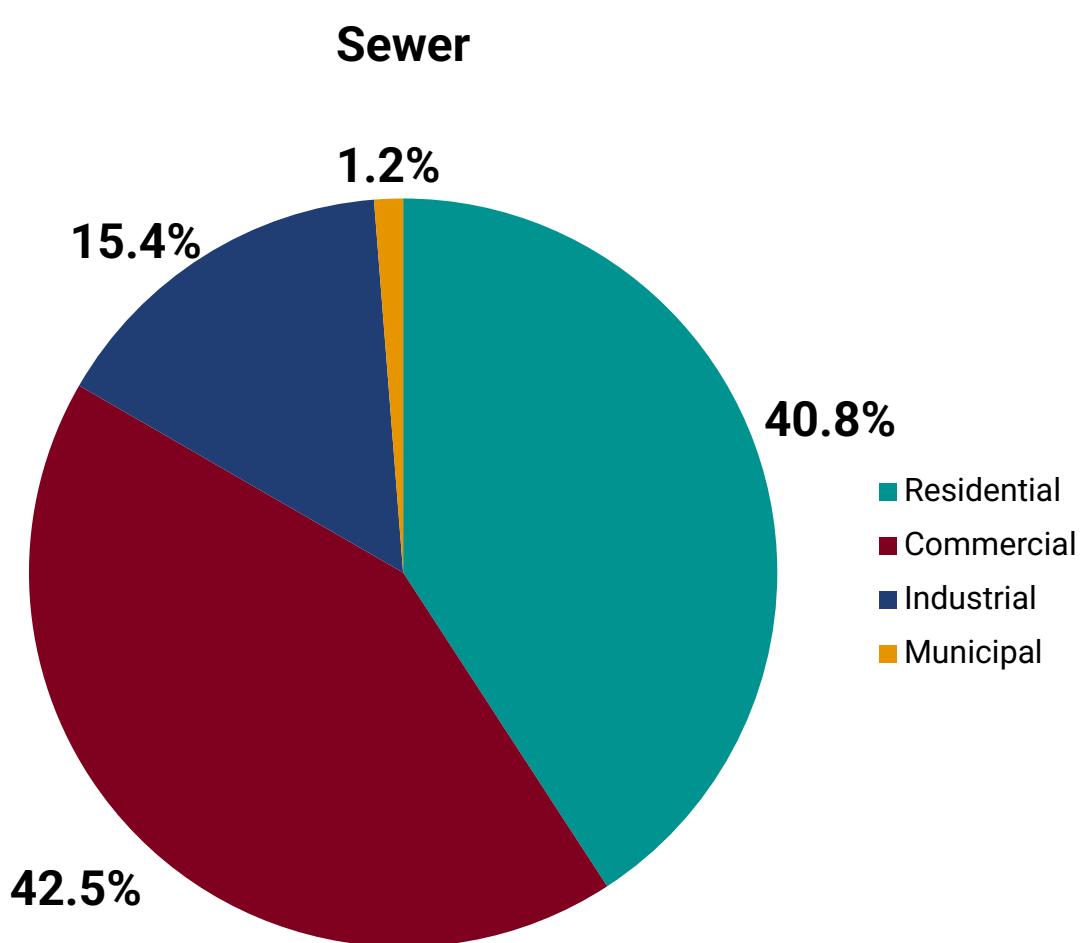
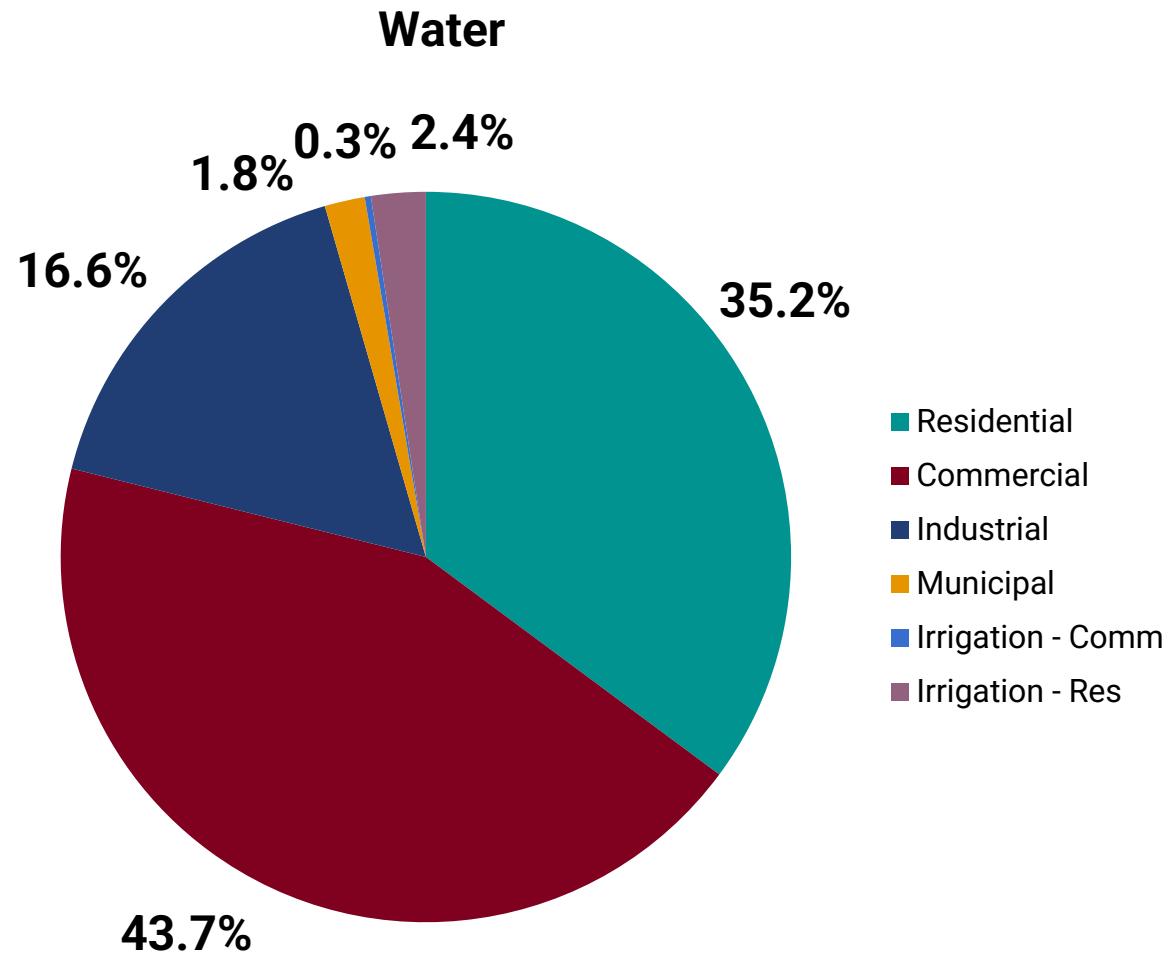
Customer Count by Class - Water



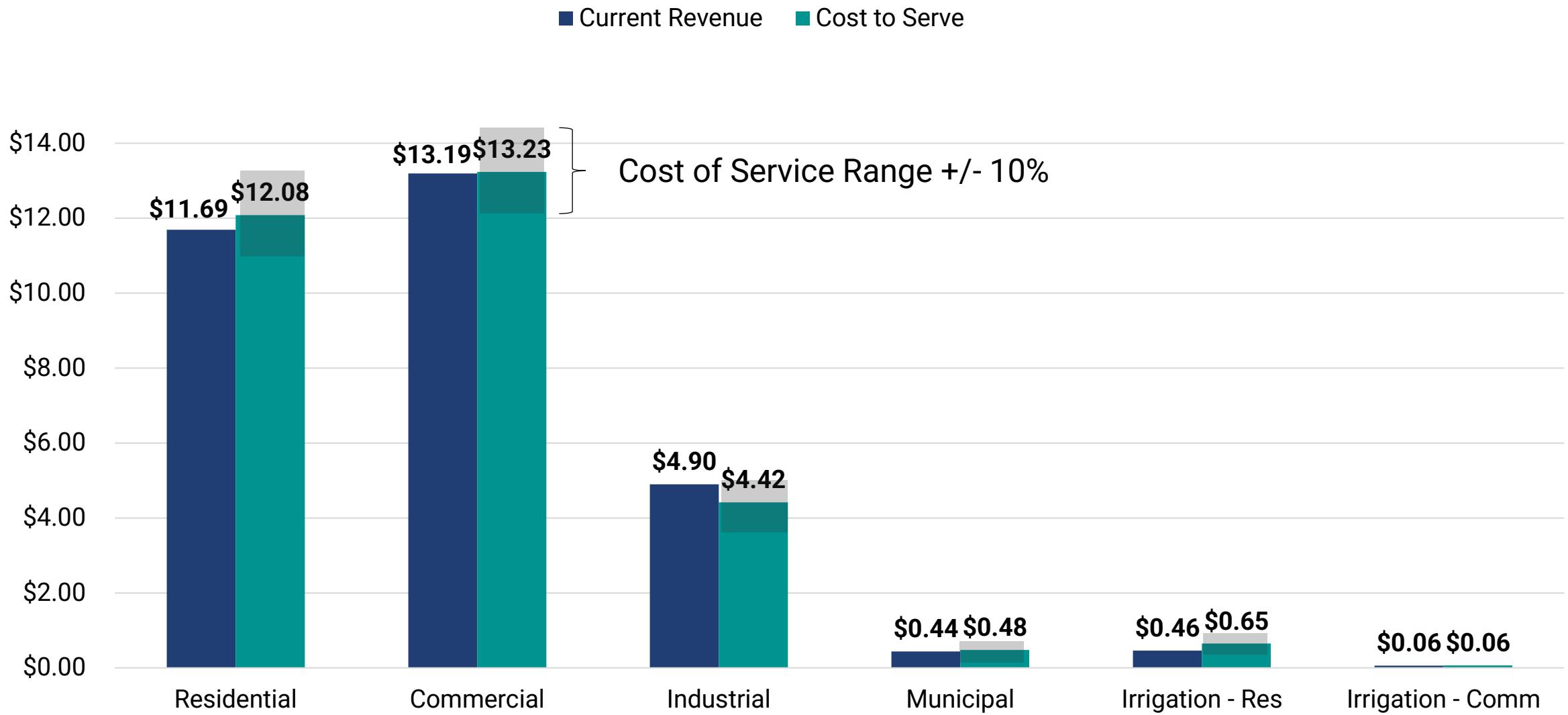
Customer Count by Class - Sewer



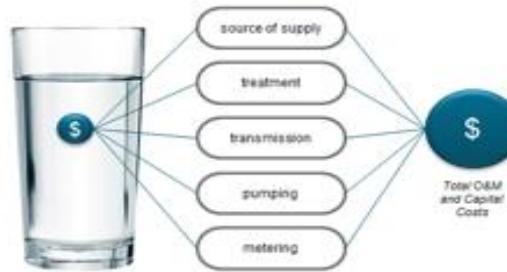
Usage by Class



Cost of Service vs. Current Revenue - Water & Sewer



Rate Study Process



Financial Plan

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How to Collect?

Structure of how revenues are recovered

Current Rate Structure

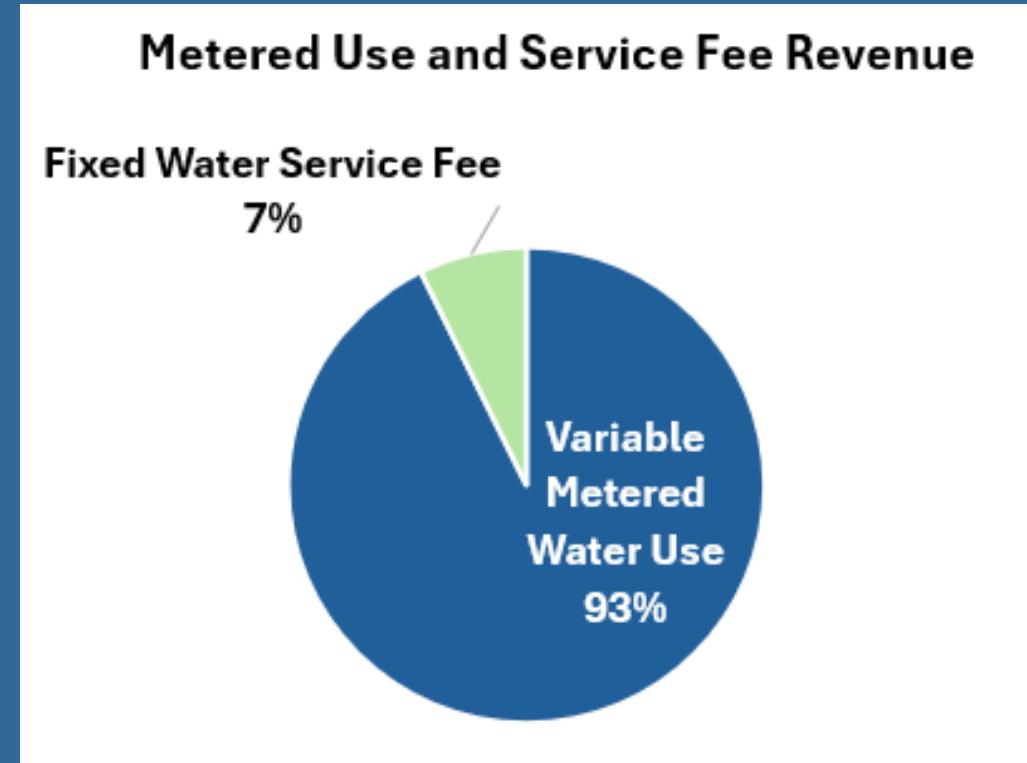
- Water Monthly Fixed Charge
 - Fixed charge scales by meter size
- Water and Sewer Usage Charge
 - Monthly per metered unit (1 Unit = 748 gallons)
 - Two Tiered Rates:
 - Tier 1 up to 10 Units per month
 - Tier 2 more than 10 Units per month
 - Three Tiered Irrigation Rates:
 - Tier 1 up to 10 Units per month
 - Tier 2 between 10 and 20 Units per month
 - Tier 3 Over 20 Units per month

Current Water and Sewer Rates

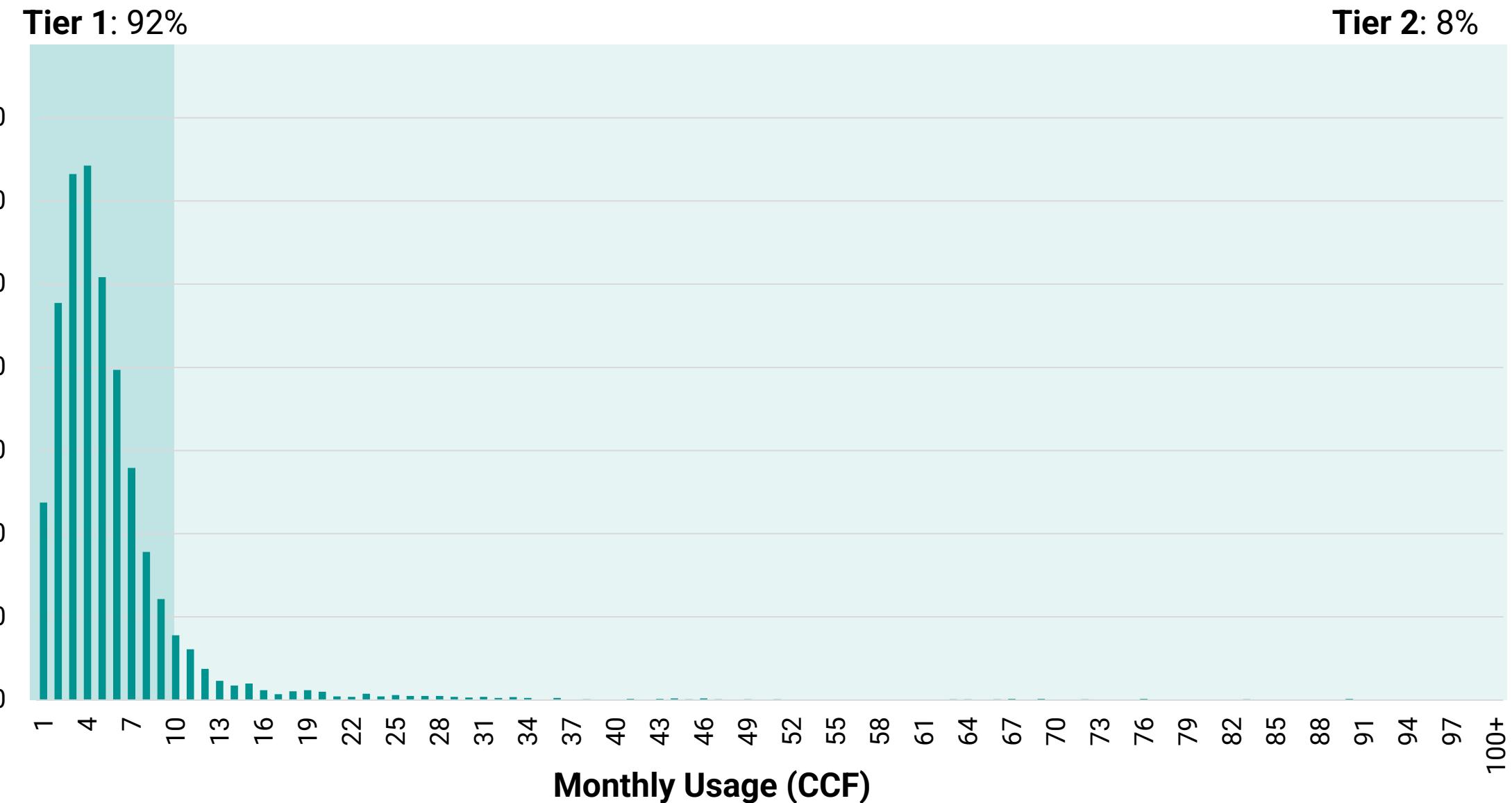
Item	Water		Sewer
Fixed Charge (Meter Size)	Retail	Irrigation	All Customers
5/8" & 3/4"	\$4.95	\$4.95	N/A
1"	\$8.27	\$8.27	N/A
1.5"	\$14.25	\$14.25	N/A
2"	\$22.91	\$22.91	N/A
3"	\$36.26	\$36.26	N/A
4"	\$68.74	\$68.74	N/A
6"	\$120.27	\$120.27	N/A
8"	\$168.01	\$168.01	N/A
10"	\$252.02	\$252.02	N/A
Usage 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

Fixed Charges - Observations

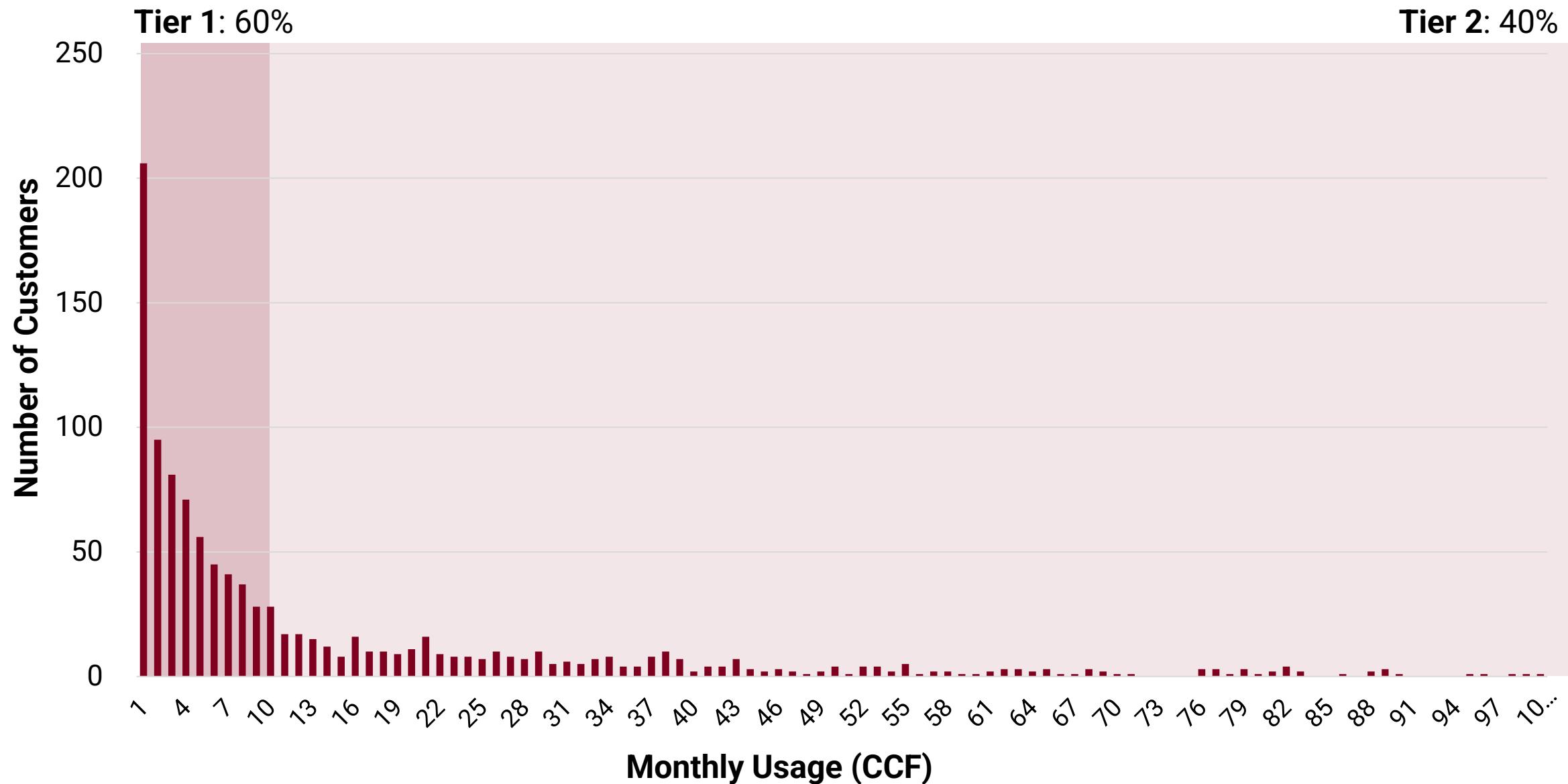
- Large portion of City's costs of providing Water and Sewer service are incurred regardless of customer use.
- Fixed charge only collected on Water service and has remained at same level for 24 years.
- Industry standard to collect 15 % to 30% of service revenues from fixed charges to provide revenue stability.
- Current scaling of Water fixed charges should be evaluated.



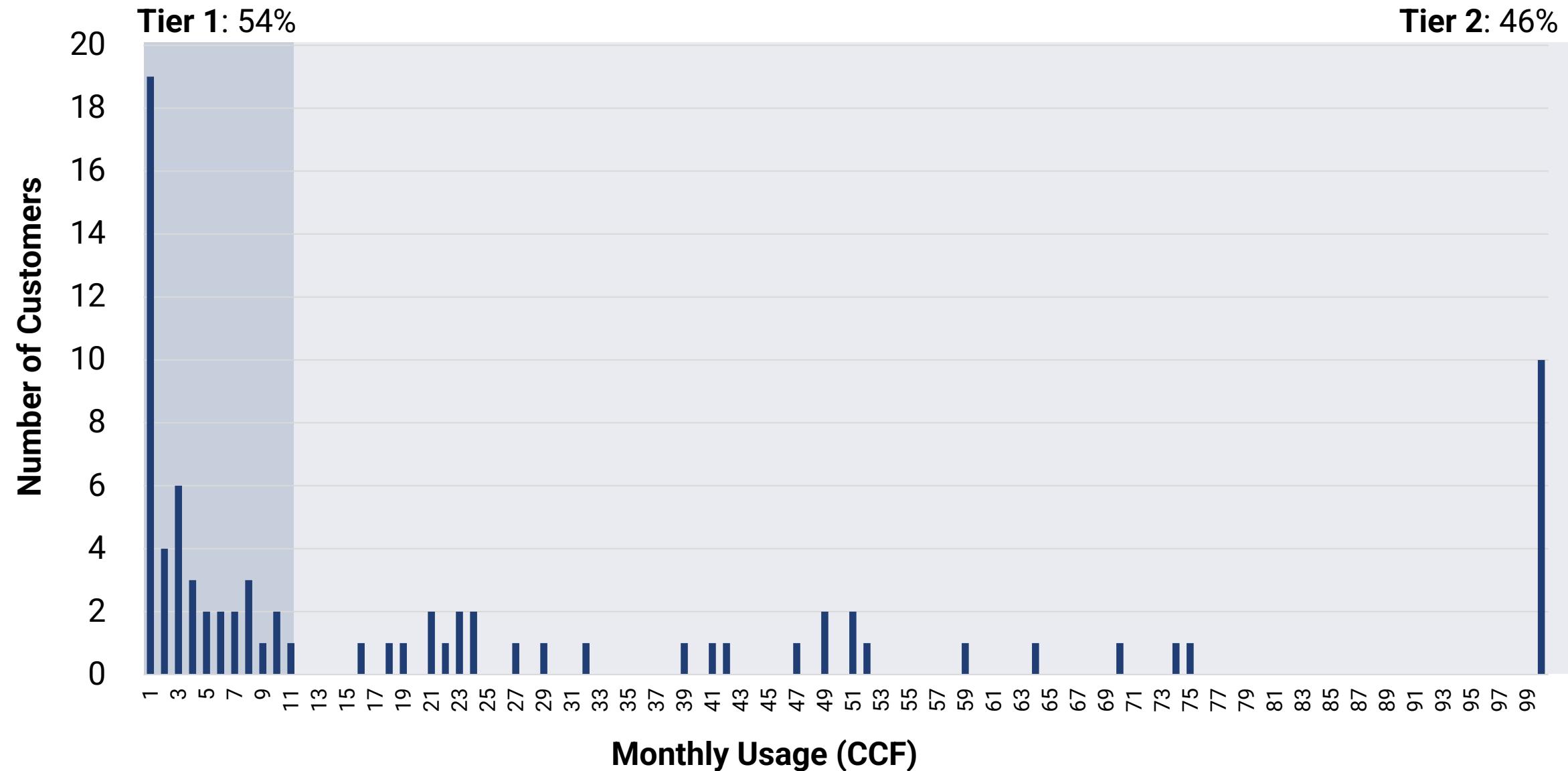
Current Usage Distribution – Residential Water



Current Usage Distribution – Commercial Water



Current Usage Distribution – Industrial Water



Current Usage Distribution – Irrigation* Water

Tier 1: 82% Tier 2: 11%

Tier 3: 7%

Number of Customers



*Includes both Residential Irrigation and Commercial Irrigation consumption

Usage Charges - Observations

- The majority of metered water usage falls within first tier (0 to 10 units), particularly for residential.
- Tier sizing should be evaluated to align with goals and objectives for pricing Water and Sewer service.
- The potential to add additional tier(s) to address customer affordability should be explored.

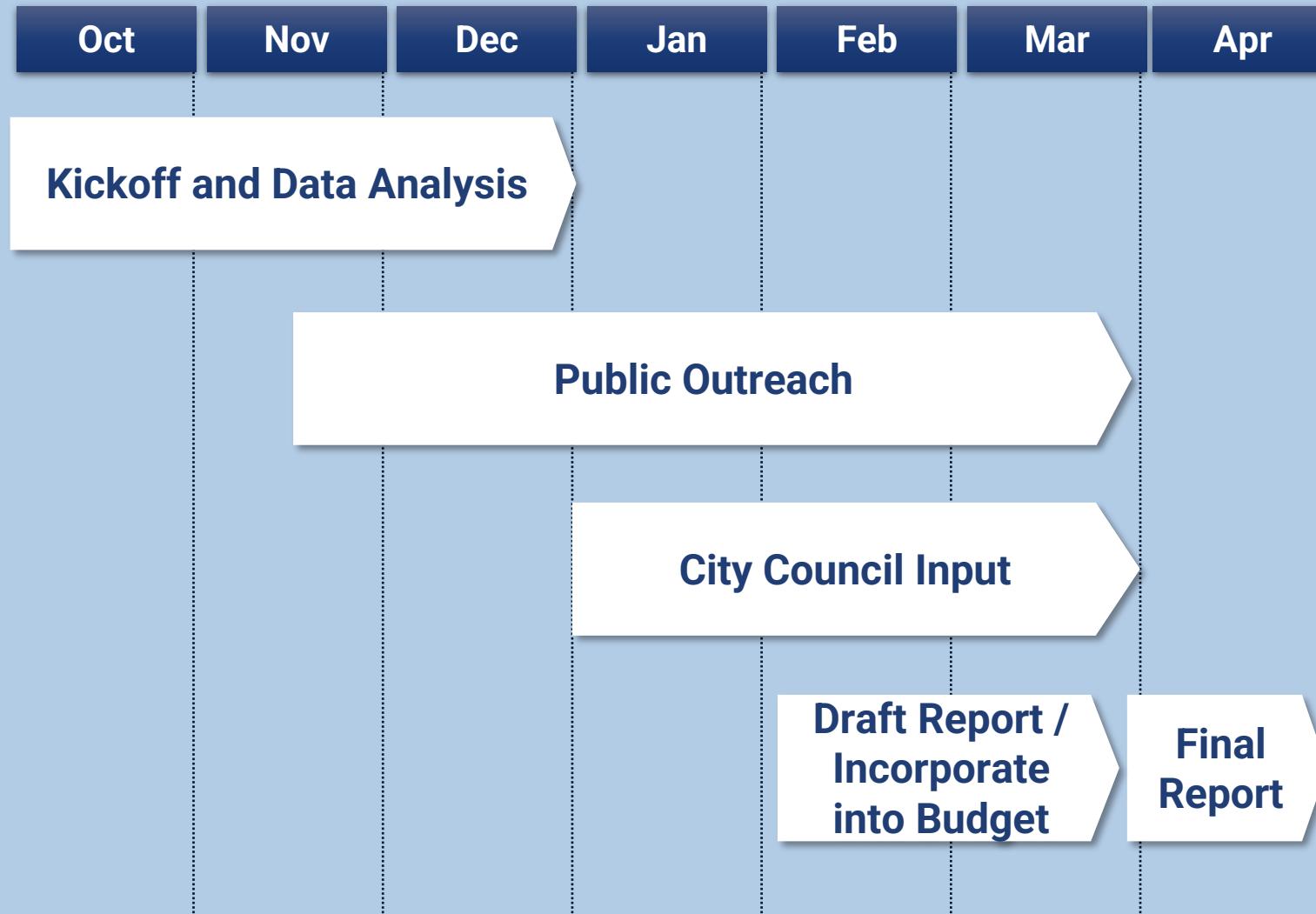
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- Revenue adjustments will be required to ensure sustainability of the utility funds.
- Cost of service results demonstrate modest misalignment between cost of service by class and current revenues (within industry standard).
- Revenue from fixed fees is below industry standards.

Next Steps

- Model Water and Sewer rate structure alternatives that:
 - Generate additional revenue
 - Address cost of service alignment
 - Increase revenue stability
 - Consider customer affordability
- Evaluate and recommend all other fees and charges (surcharges, fire protection fees, wholesale rates, etc.).
- Schedule a work session to present recommendations.

Rate Study Schedule



Questions and Discussion