

# 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.



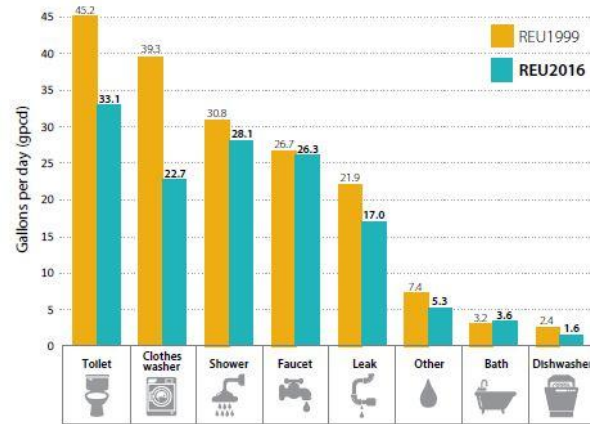
# Summary of Initial Findings

- 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

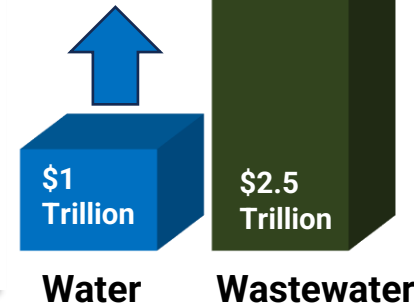
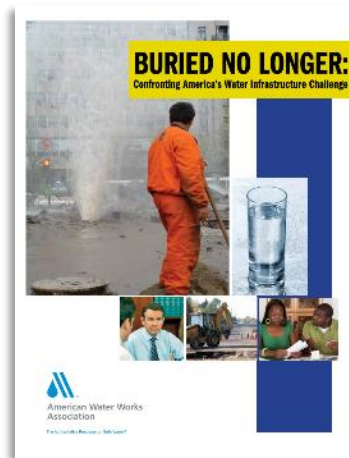


## Reductions in Use / Revenue Impacts



**22%**  
DECREASE  
PER HOUSEHOLD  
DAILY WATER USE  
1999 TO 2016

## Aging Infrastructure



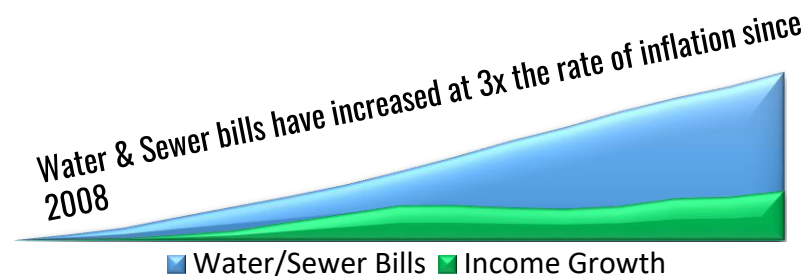
## Regulatory / Resilience



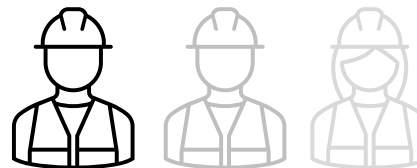
**PFAS, LCR,  
State  
Legislation**



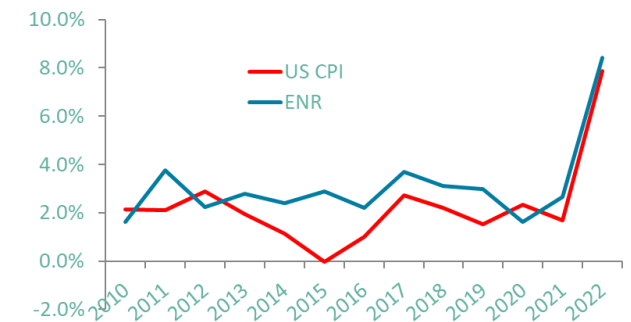
## Customer Affordability



## Aging Workforce



## Cost Increases



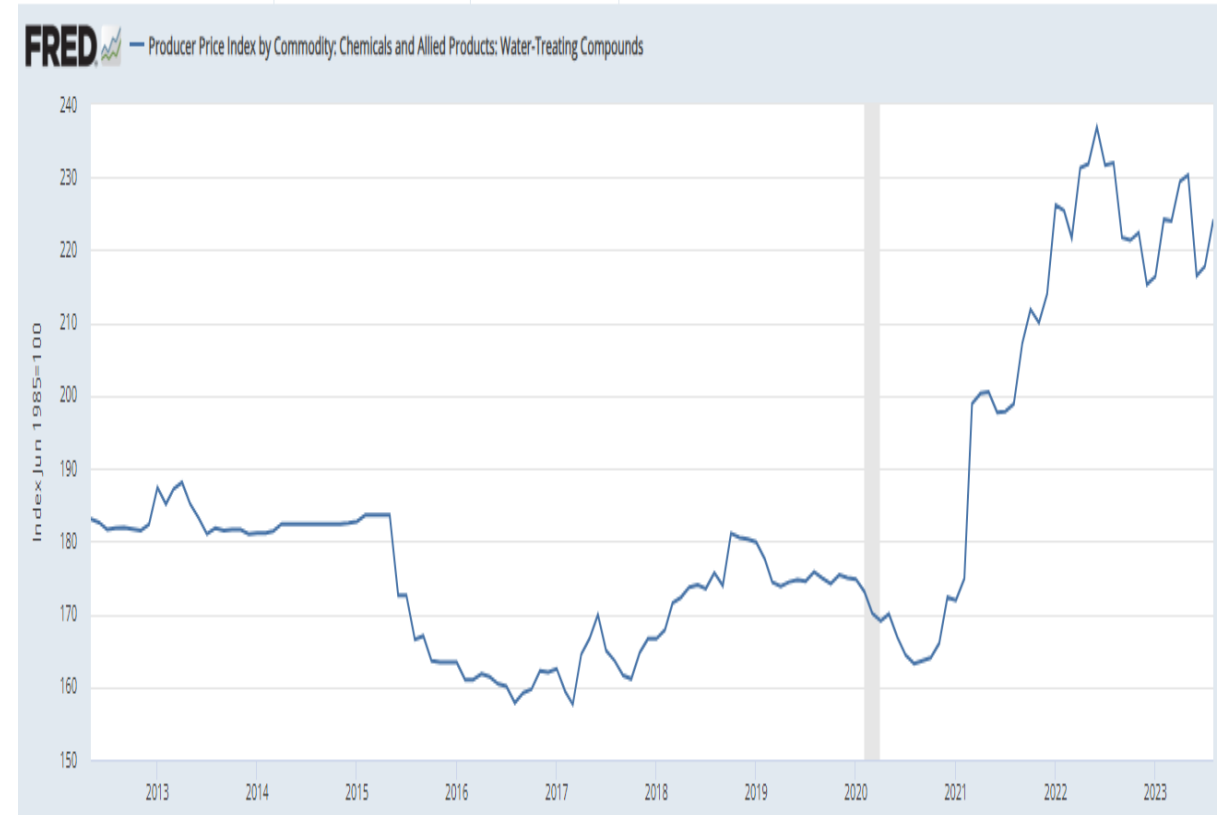


# Operational Cost Inflation: 2020-2024



## National Commodity Index – Plastic Water Pipe

- Up 132% from Jan 2020 to June 2023



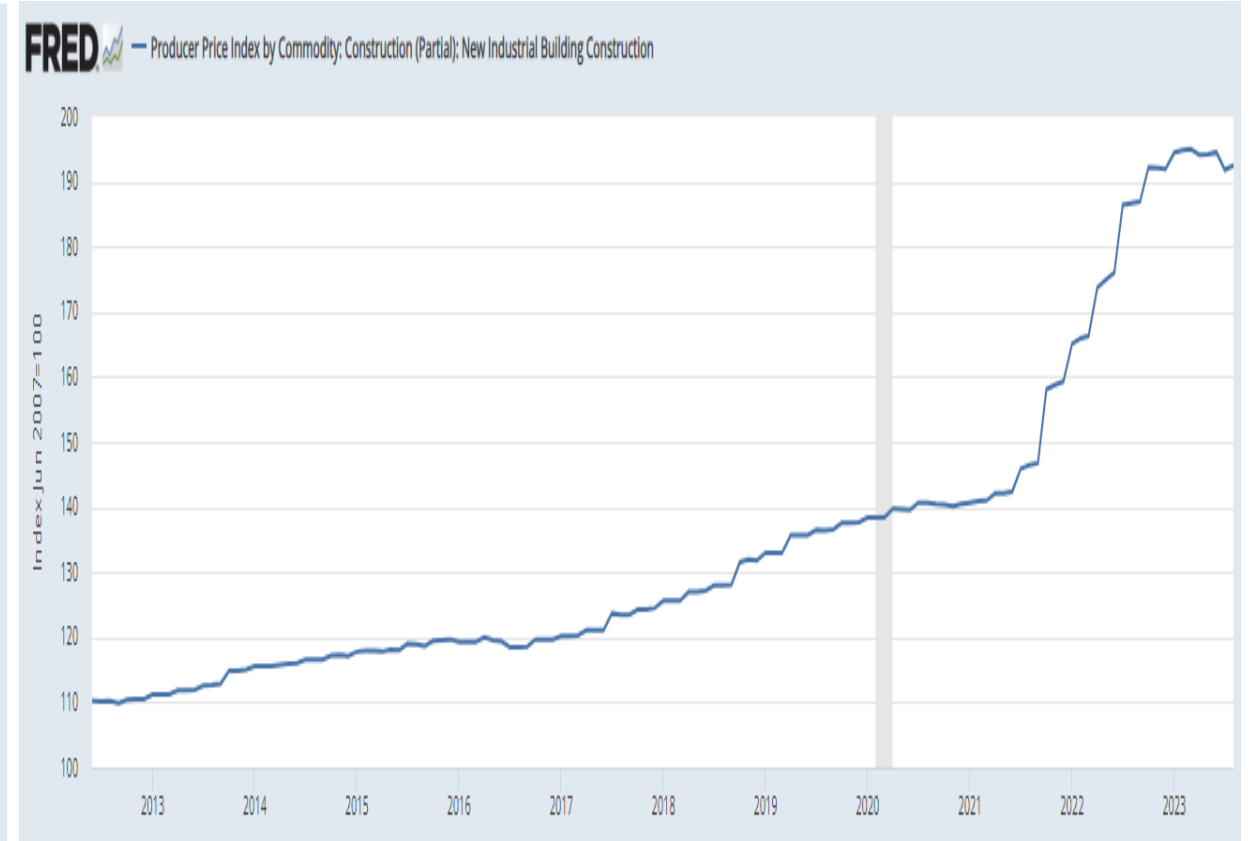
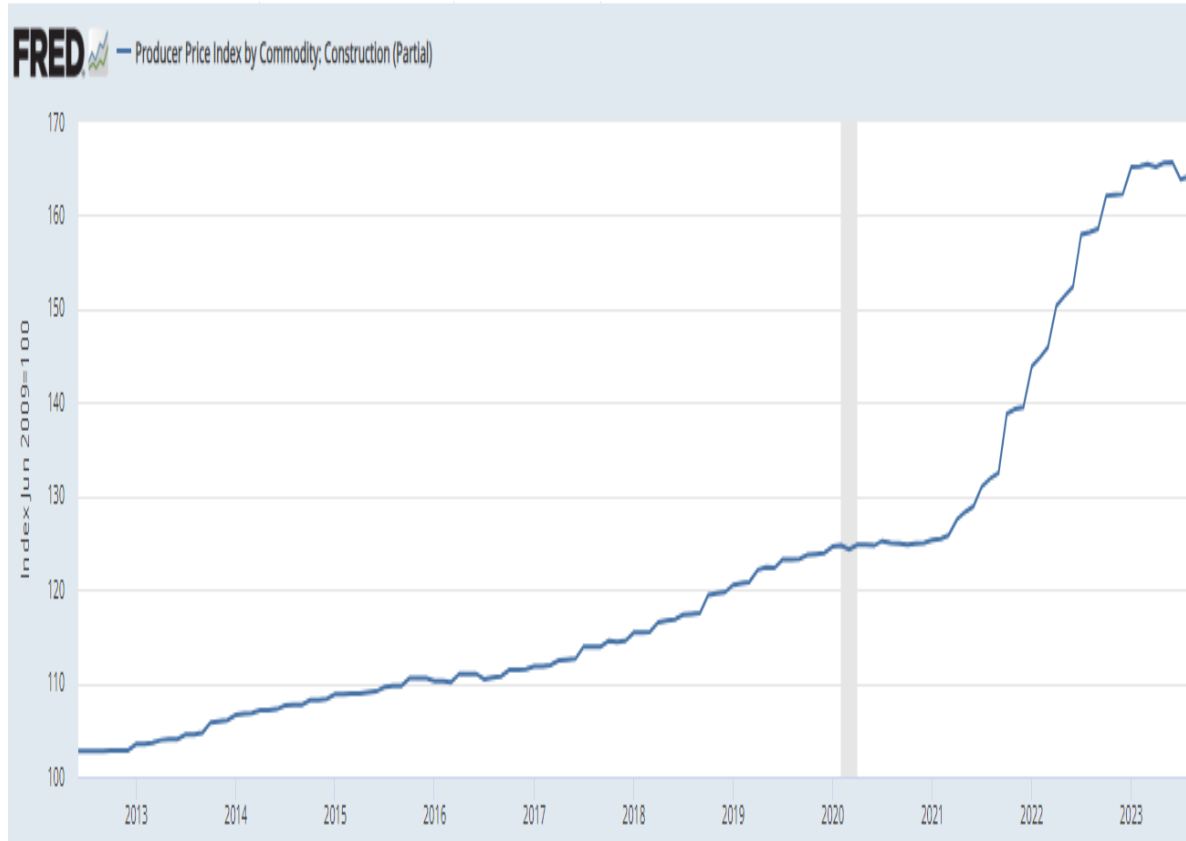
## National Water Treatment Chemical Index

- Up 31% from Jan 2020 to June 2023





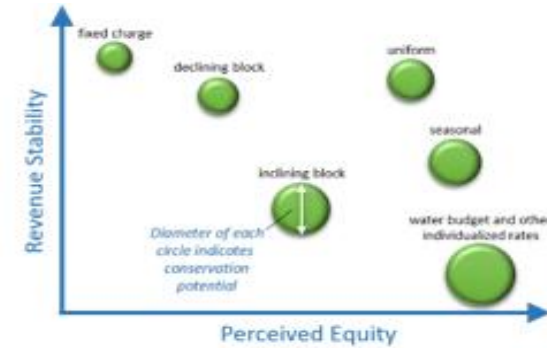
# Construction Cost Inflation: 2020-2024



## 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

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

## **Existing Debt Service**

Multiple Water and Sewer debt issuances

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- \$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

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

# Financial Planning Assumptions - Revenues

## **FY 2026 Budget**

Used to forecast non-rate revenues

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

## **Customer Growth**

Informed by historical actuals and trued up annually

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

## **Consumption**

Informed by historical actuals and trued up annually

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- 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*

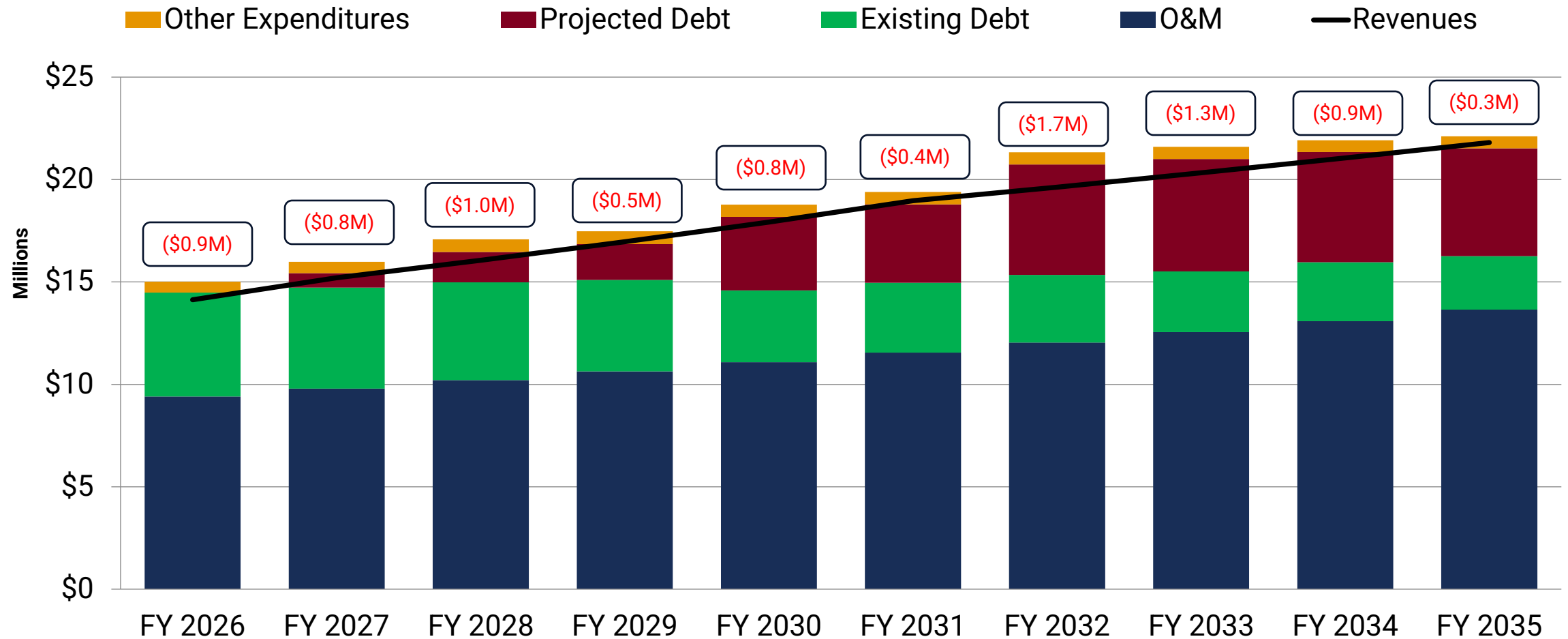
- FY 2029 – Portsmouth and Collins Wells (\$13M)
- FY 2031 – Water Transmission Replacement (\$16M)

### *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)

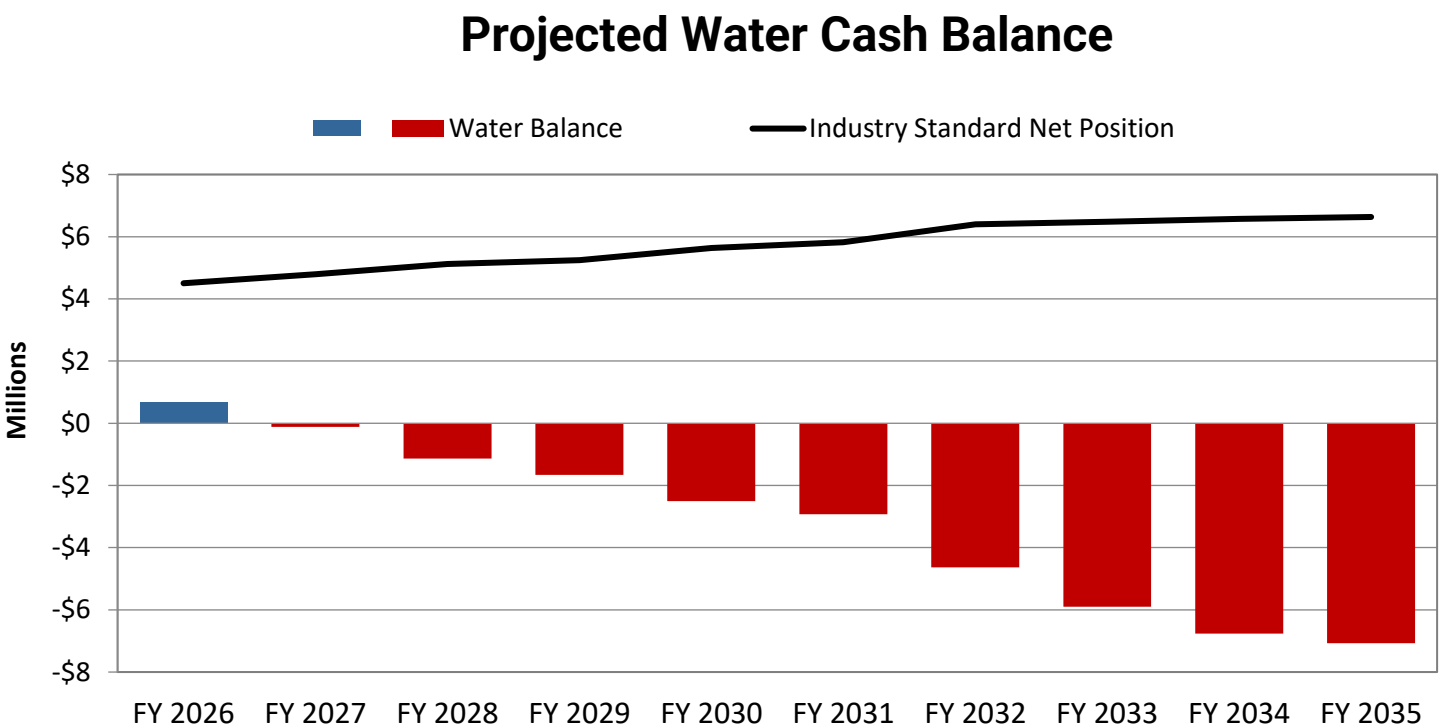
# Net Position

- 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

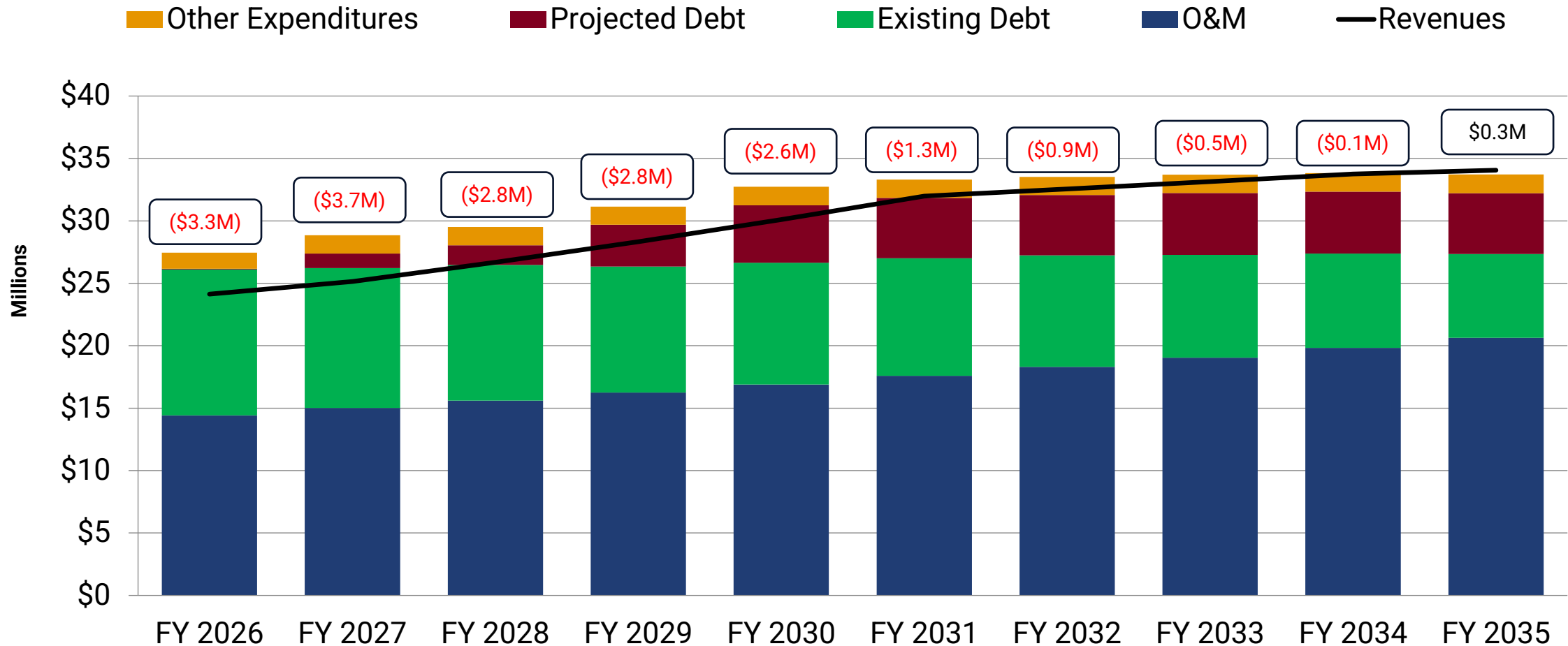
Fiscal Year	Forecasted Revenue Increase
2027	9%
2028	6%
2029	6%
2030	6%
2031	6%
2032	3%
2033	3%
2034	3%
2035	3%

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



\*Includes 4 years with no rate adjustments.

# Financial Planning Expenditures vs Revenues\* - Sewer



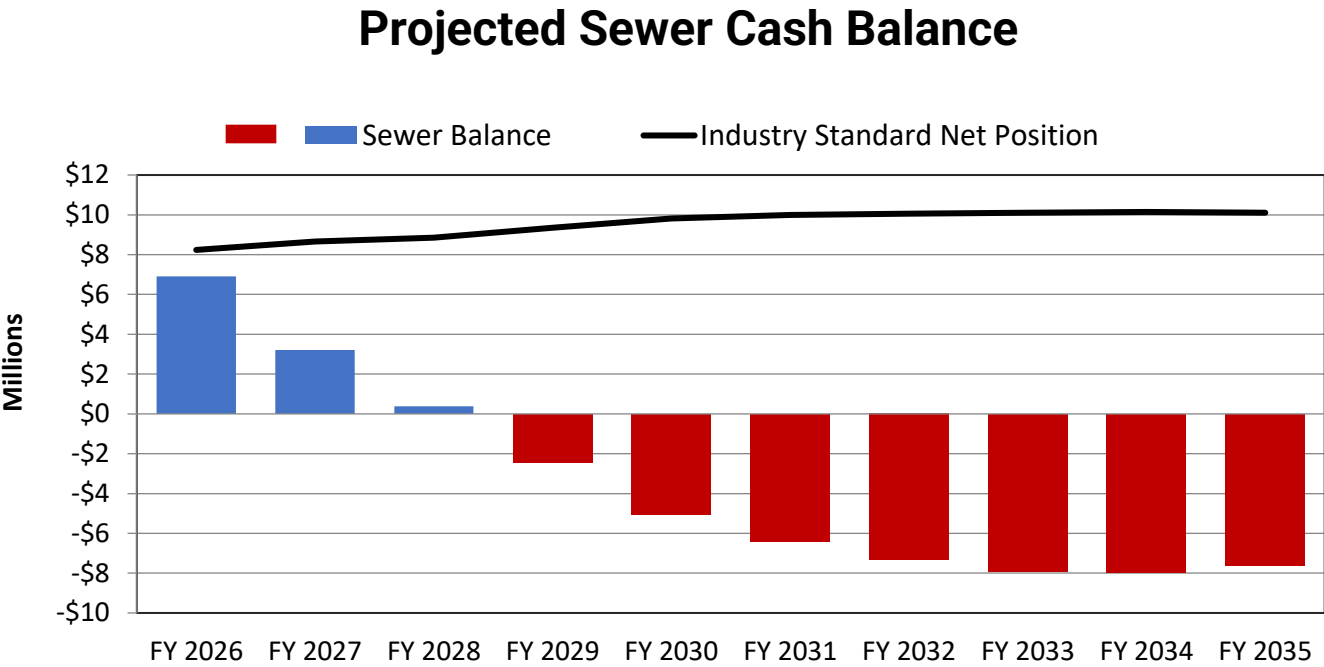
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Surplus / (Shortfall)

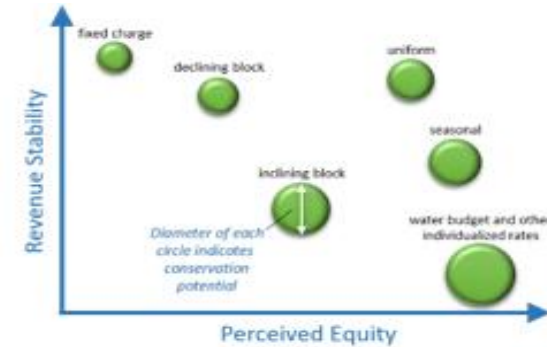
# Sewer - Forecast with Prior Revenue Increase Estimates

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



## 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

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# Cost of Service

## Goal

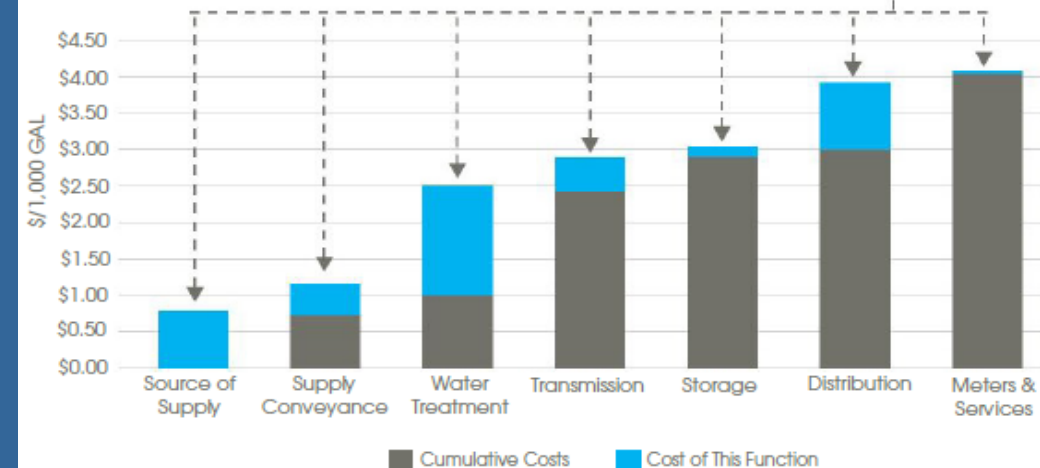
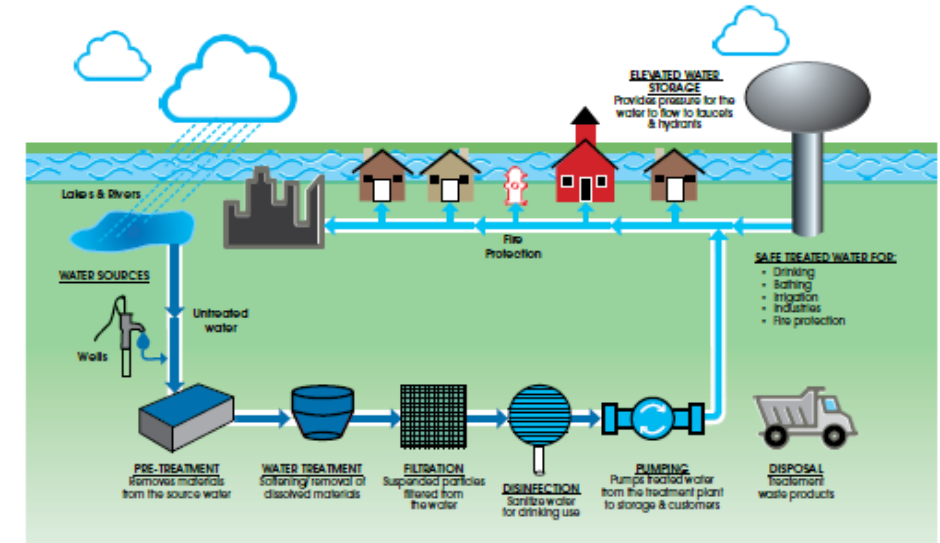
- Determine the appropriate distribution of revenue to be recovered by customer type based on the **cost to serve** each type

## Water

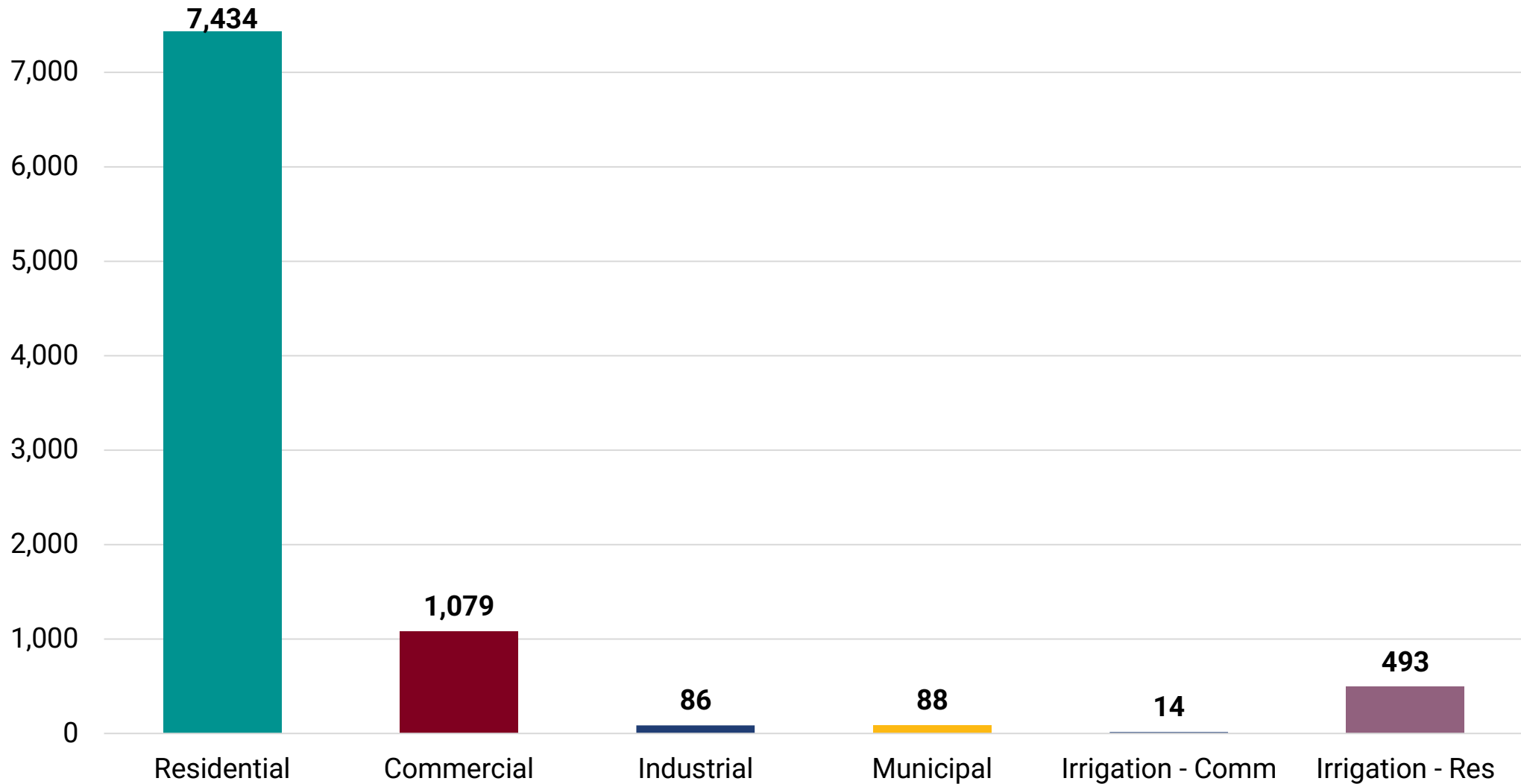
- Cost of service analysis completed based on customer class demands and peaking placed on water system

## Sewer

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

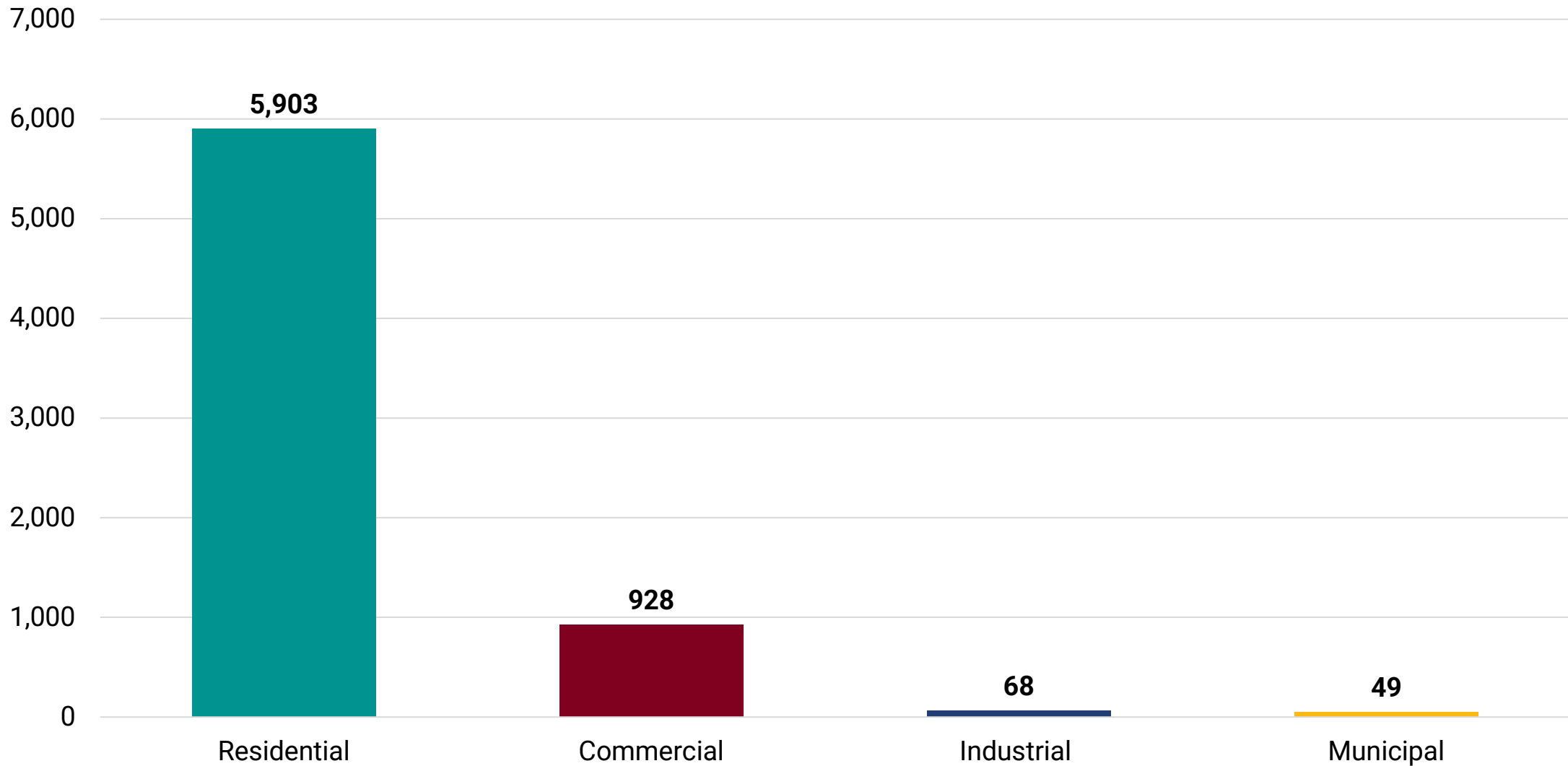


# Customer Count by Class - Water



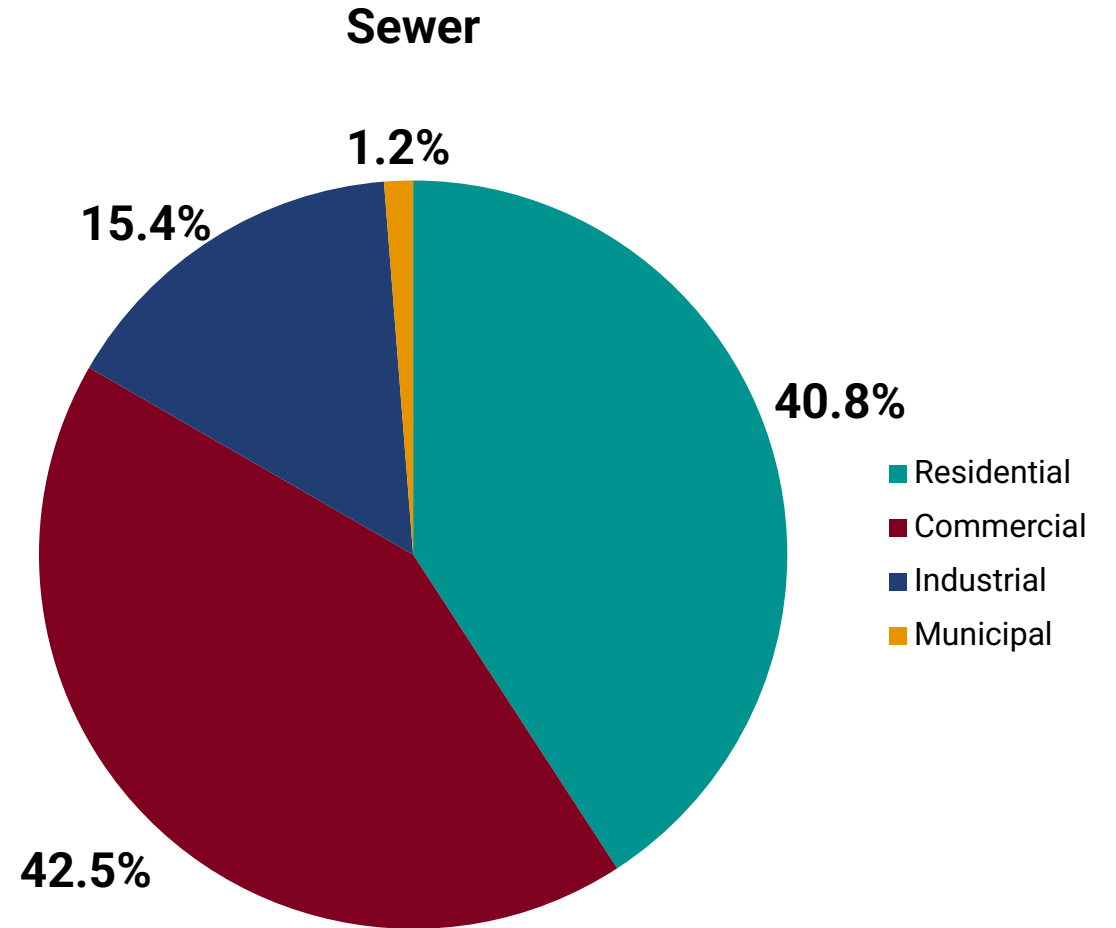
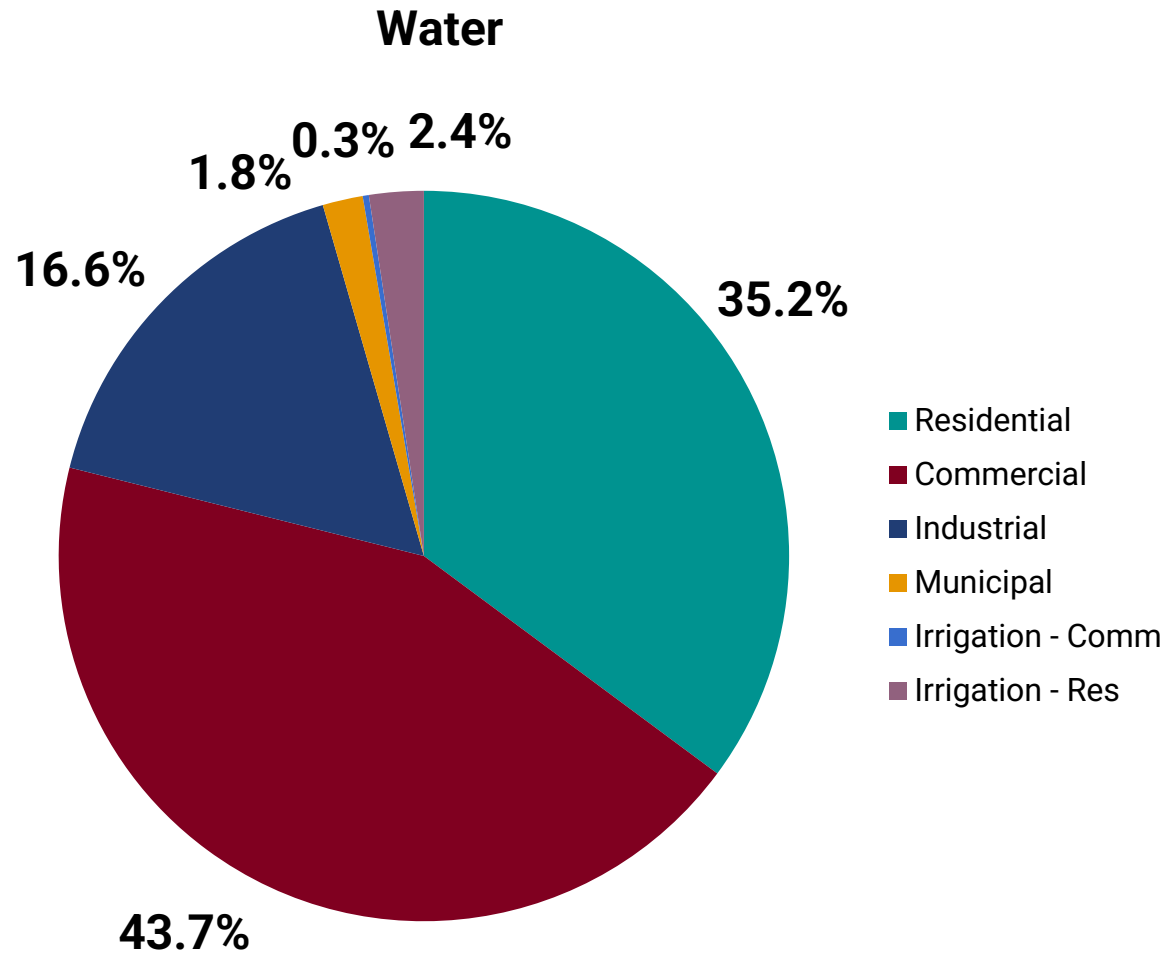
*FY 2025 Actuals*

# Customer Count by Class - Sewer

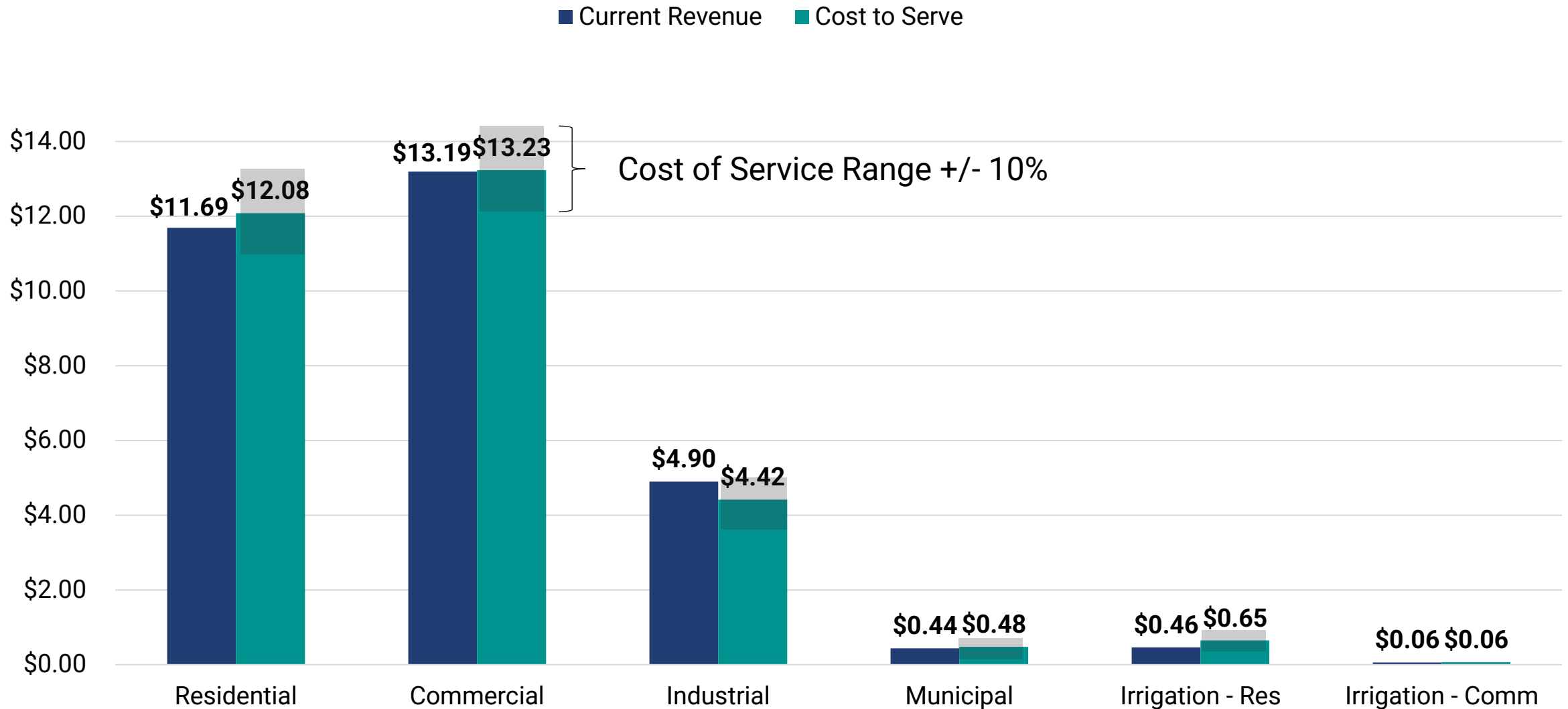


*FY 2025 Actuals*

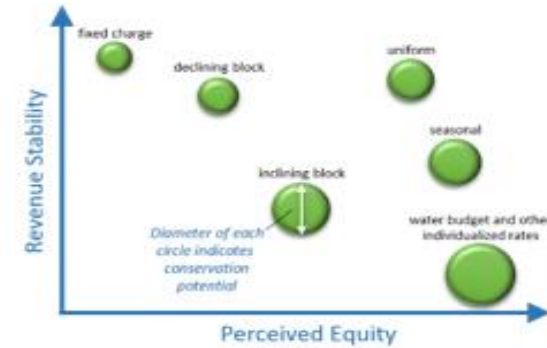
# Usage by Class



# Cost of Service vs. Current Revenue - Water & Sewer



# Rate Study Process



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How Much?

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# Current Rate Structure

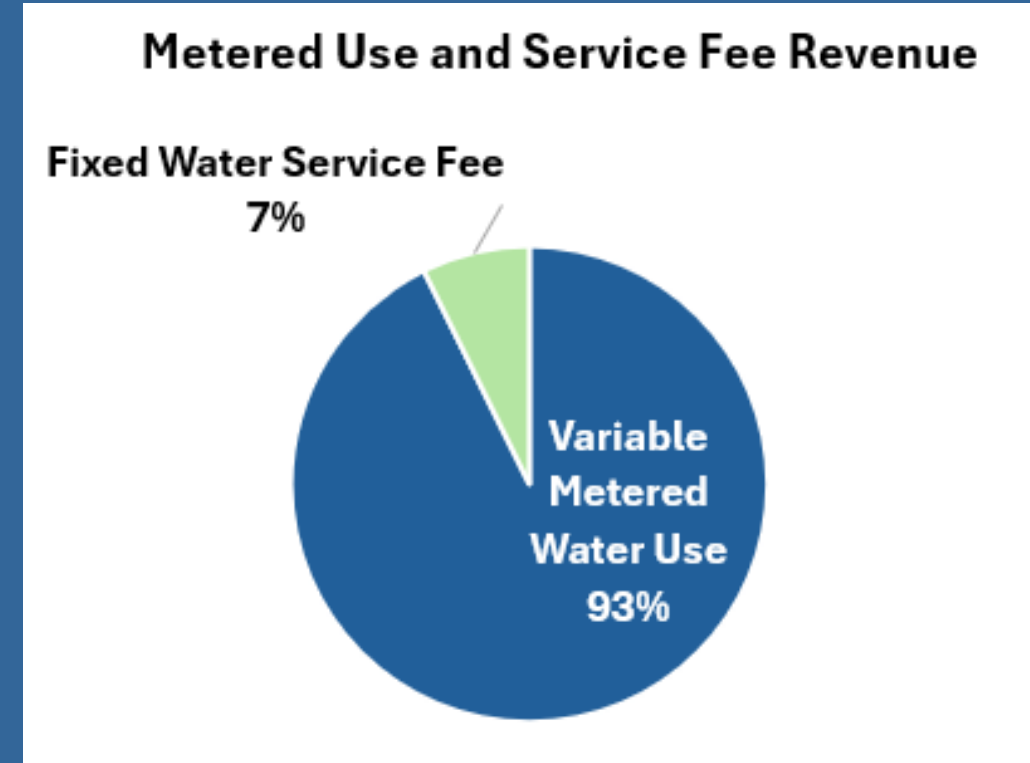
- Water Monthly Fixed Charge
  - Fixed charge scales by meter size
- Water and Sewer Usage Charge
  - Monthly per metered unit (1 Unit = 748 gallons)
  - Two Tiered Rates:
    - Tier 1 up to 10 Units per month
    - Tier 2 more than 10 Units per month
  - Three Tiered Irrigation Rates:
    - Tier 1 up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

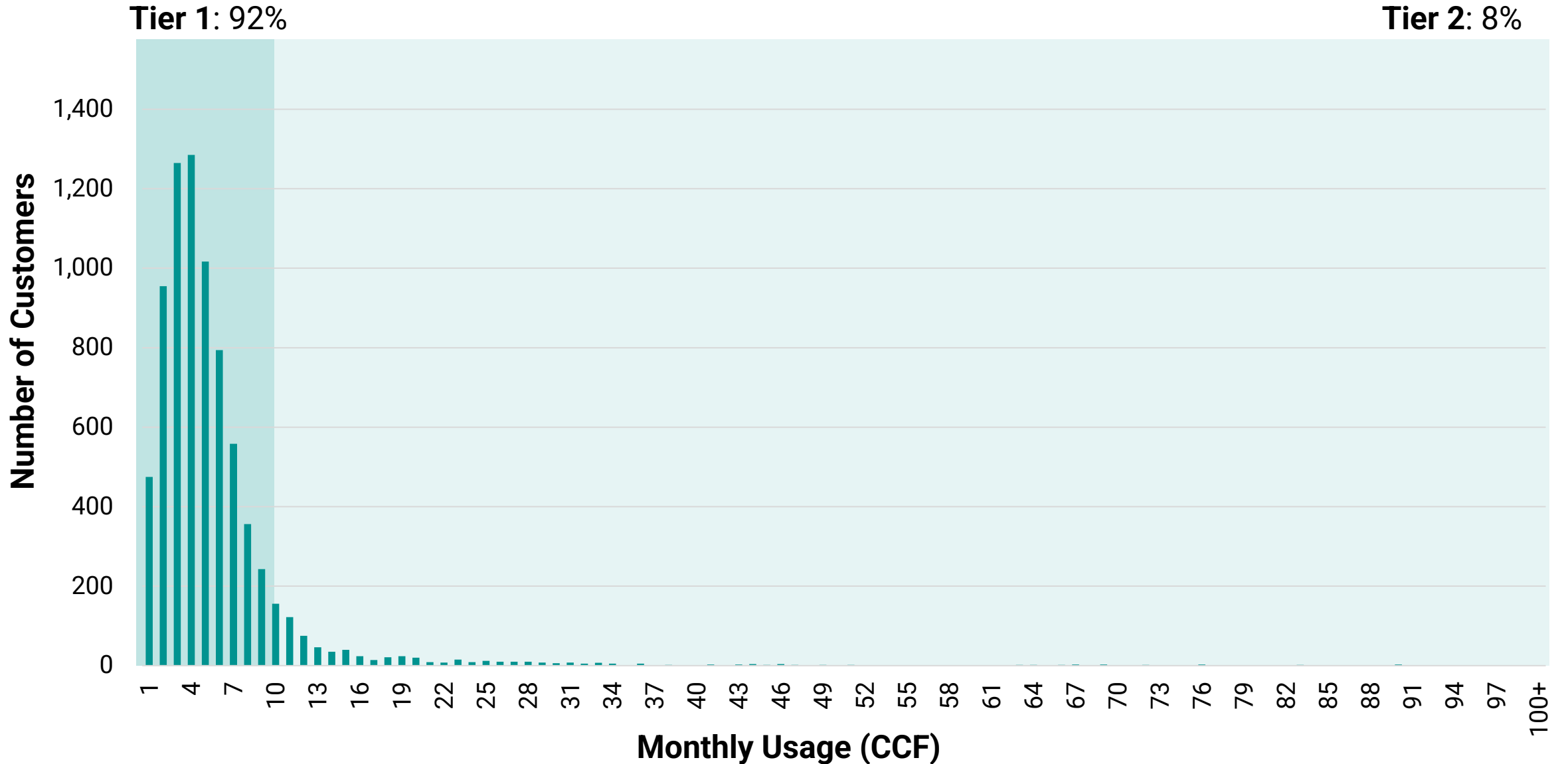
Item	Water		Sewer
Fixed Charge (Meter Size)	<i>Retail</i>	<i>Irrigation</i>	<i>All Customers</i>
5/8" & 3/4"	\$4.95	\$4.95	N/A
1"	\$8.27	\$8.27	N/A
1.5"	\$14.25	\$14.25	N/A
2"	\$22.91	\$22.91	N/A
3"	\$36.26	\$36.26	N/A
4"	\$68.74	\$68.74	N/A
6"	\$120.27	\$120.27	N/A
8"	\$168.01	\$168.01	N/A
10"	\$252.02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

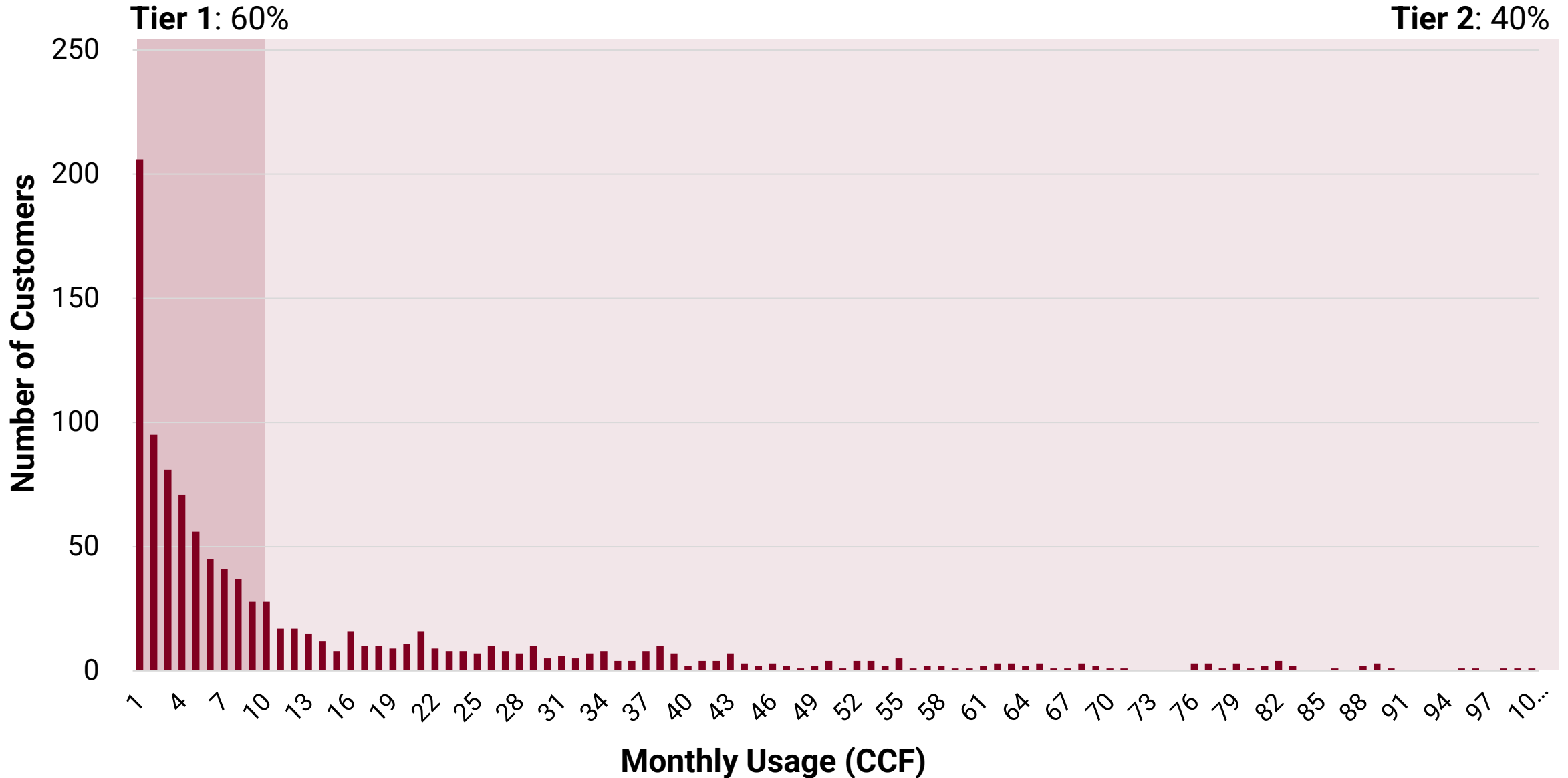
- Large portion of City's costs of providing Water and Sewer service are incurred regardless of customer use.
- Fixed charge only collected on Water service and has remained at same level for 24 years.
- Industry standard to collect 15 % to 30% of service revenues from fixed charges to provide revenue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



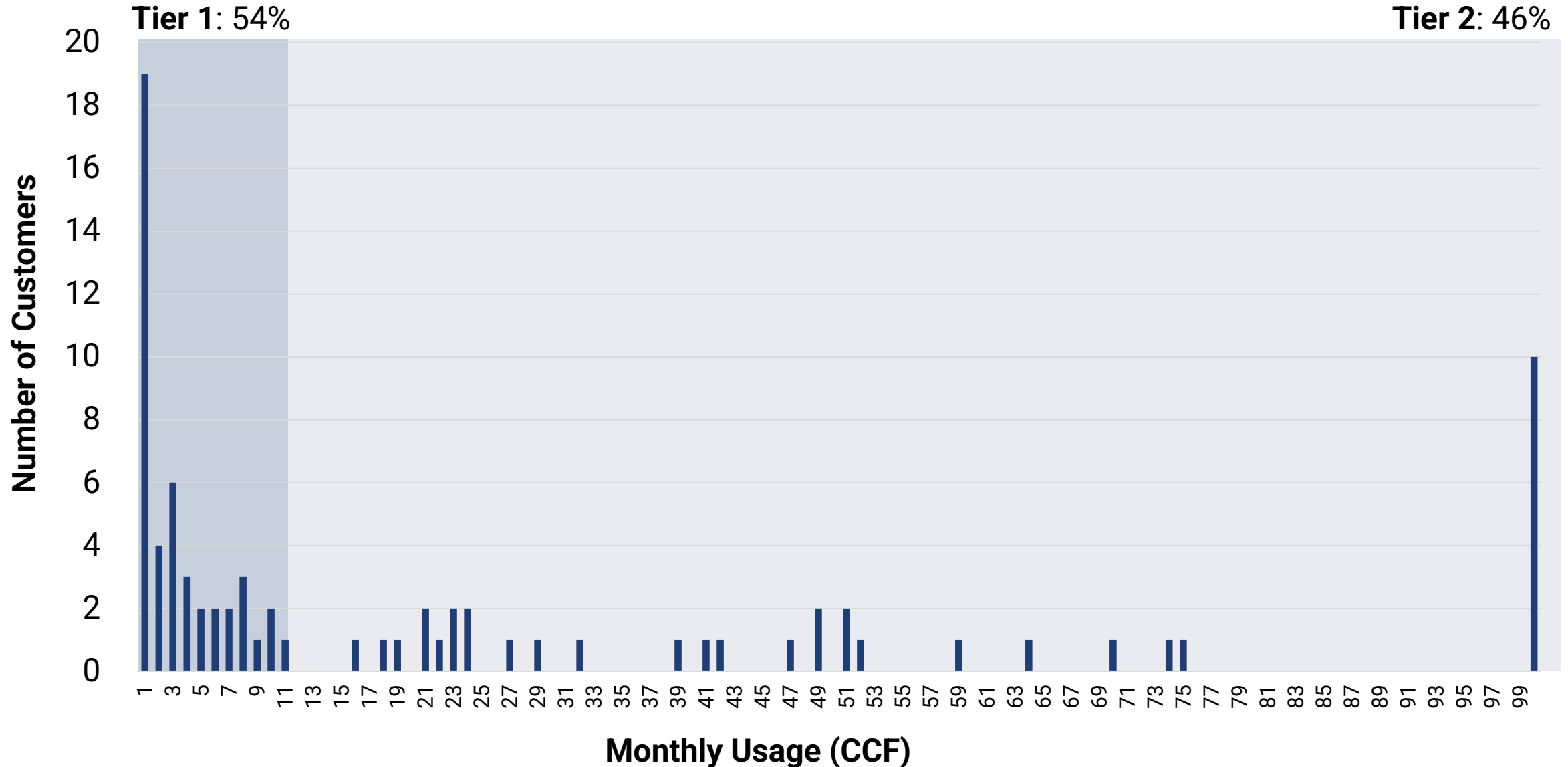
# Current Usage Distribution – Residential Water



# Current Usage Distribution – Commercial Water

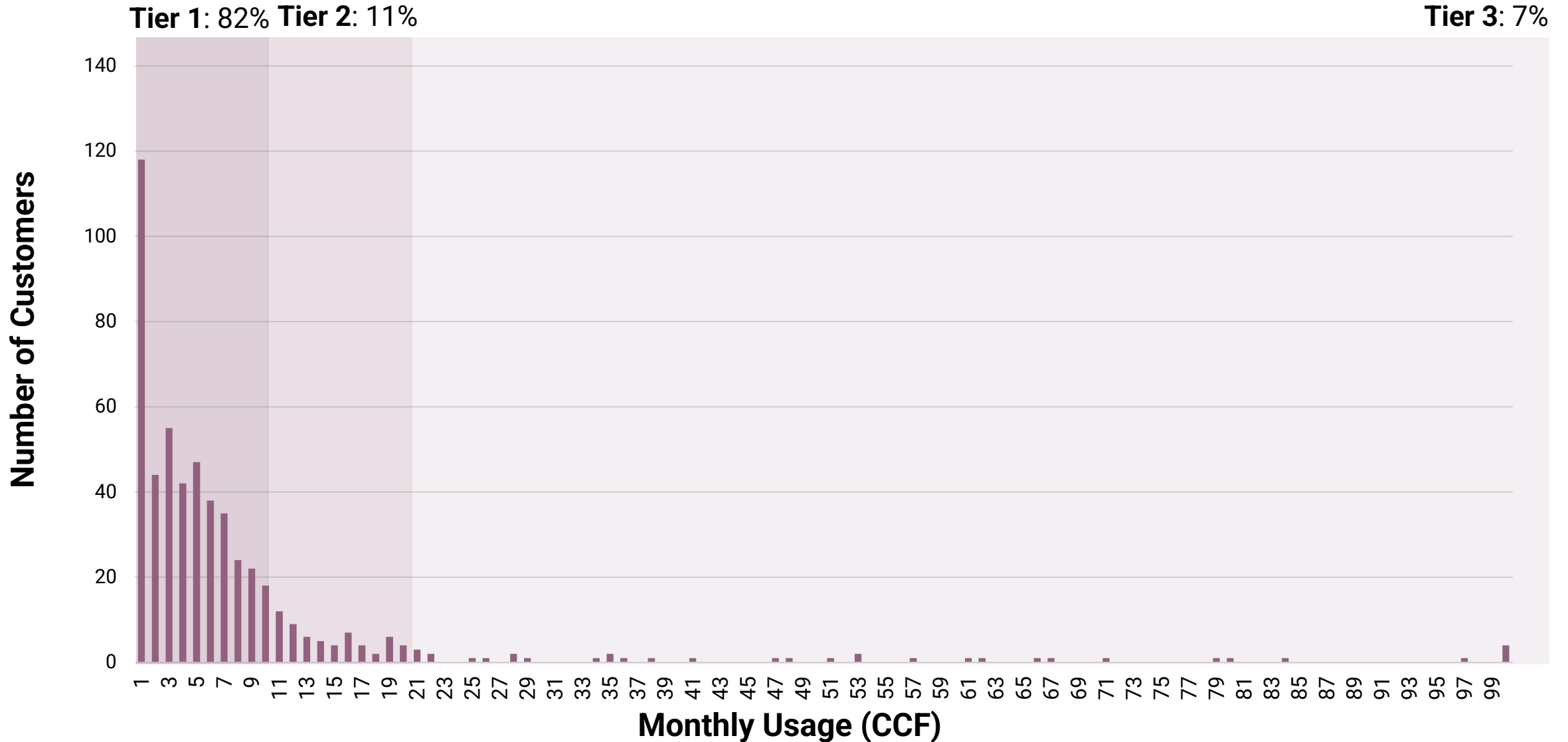


# Current Usage Distribution – Industrial Water





# Current Usage Distribution – Irrigation\* Water



# 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.

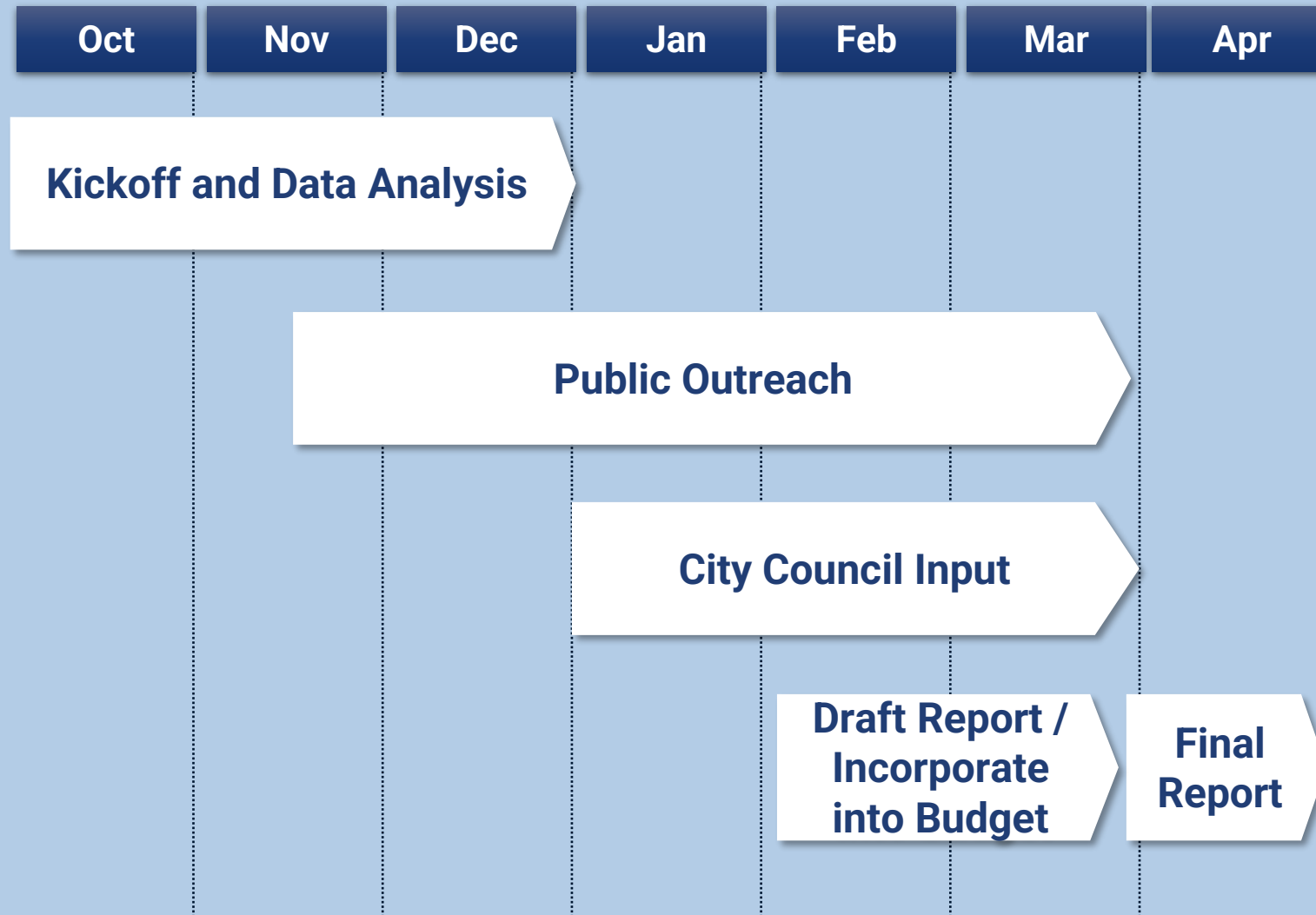
# Summary of Initial Findings

- Current Water and Sewer revenues are not sufficient to meet current or projected expenditures within each fund.
- 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