City of Hendersonville
Water and Sewer Rate Study Overview

October 26, 2022

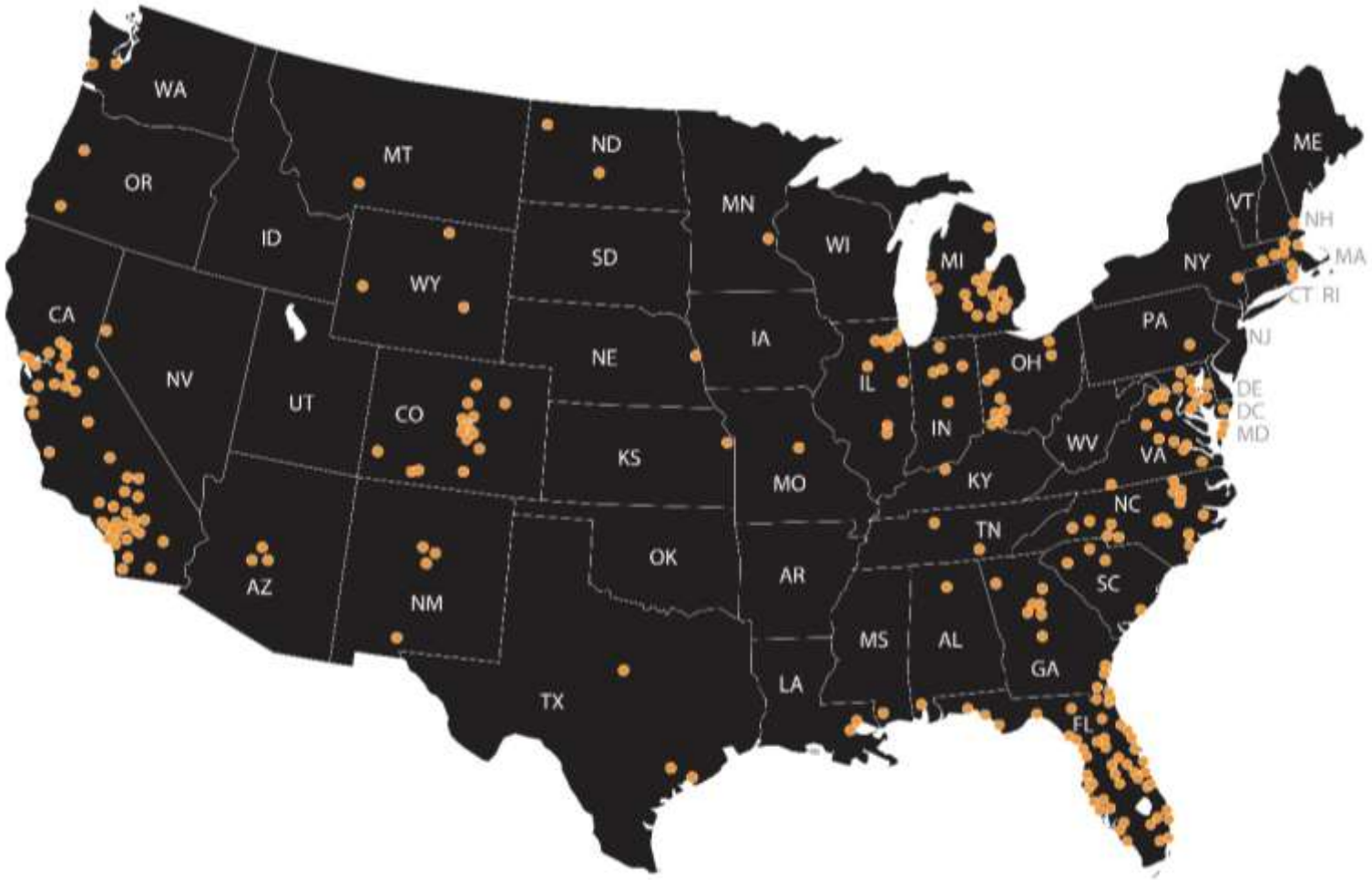
Agenda

1) Overview of Rate Study Process
2) Key Challenges
3) Review of Current Rate Structures
4) System Development Fees
5) Project Schedule

Introduction: Stantec's Financial Services Team

30+

Communities served by Stantec Financial Services in North Carolina



>360

Communities served, accounting for 25+% of the US population

400+
Combined years of experience

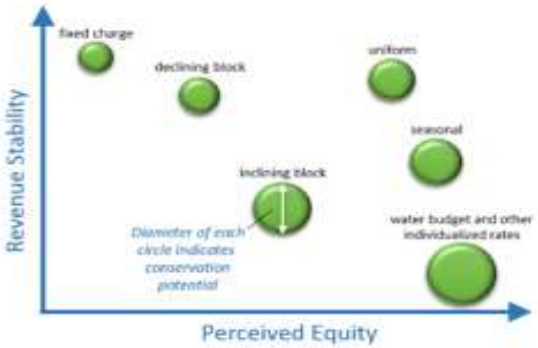
1.5K+
Studies in the last 10 years

35+
Specialists in utility financial management

>550
Utilities in our benchmarking database

$4B+
Debt supported in past five years

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 classes

Rate Design

How to Collect?

Structure of how revenues are recovered by class

Financial Plan

Revenue Requirements

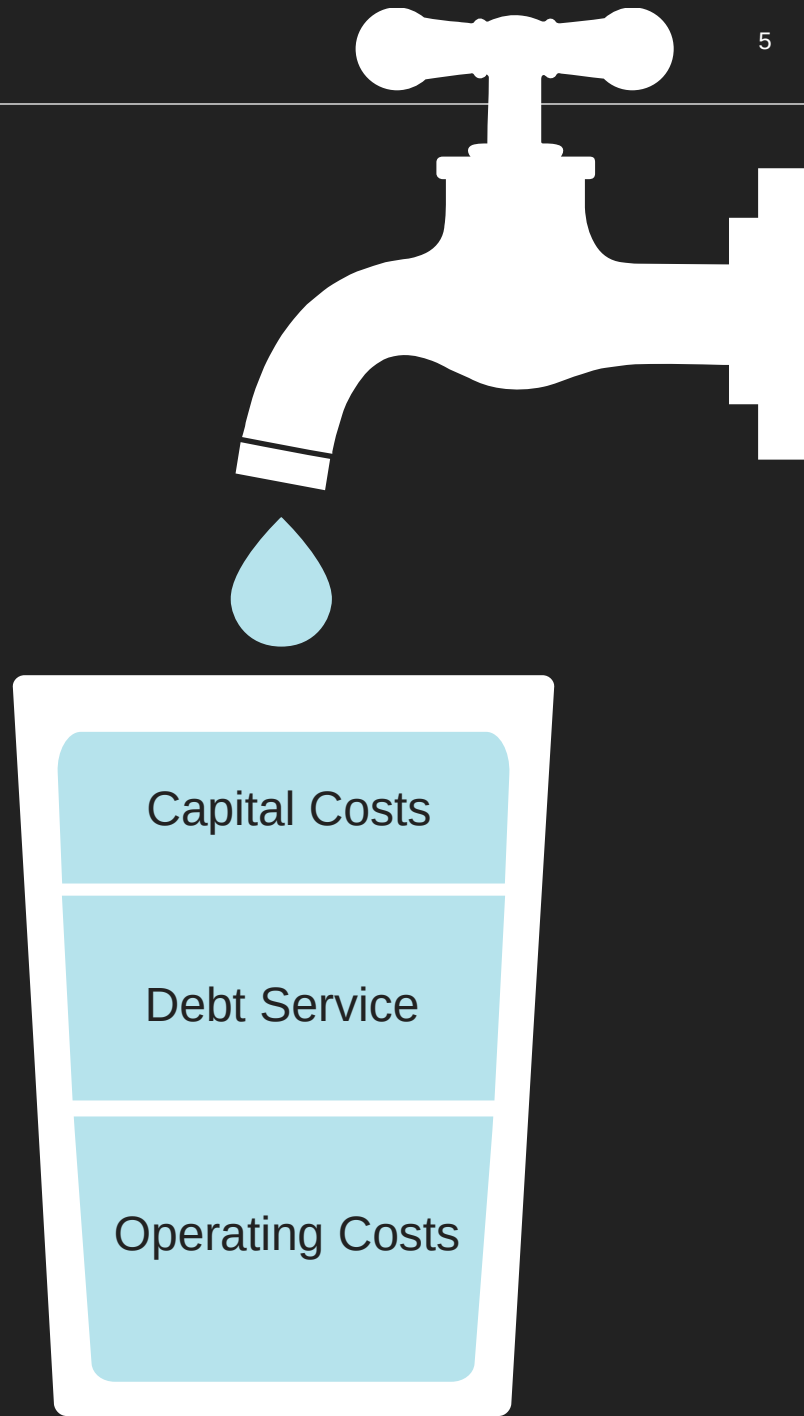
- Forecast of system operating expenditures
- Forecast of capital investments including existing debt obligations

Revenue Forecast

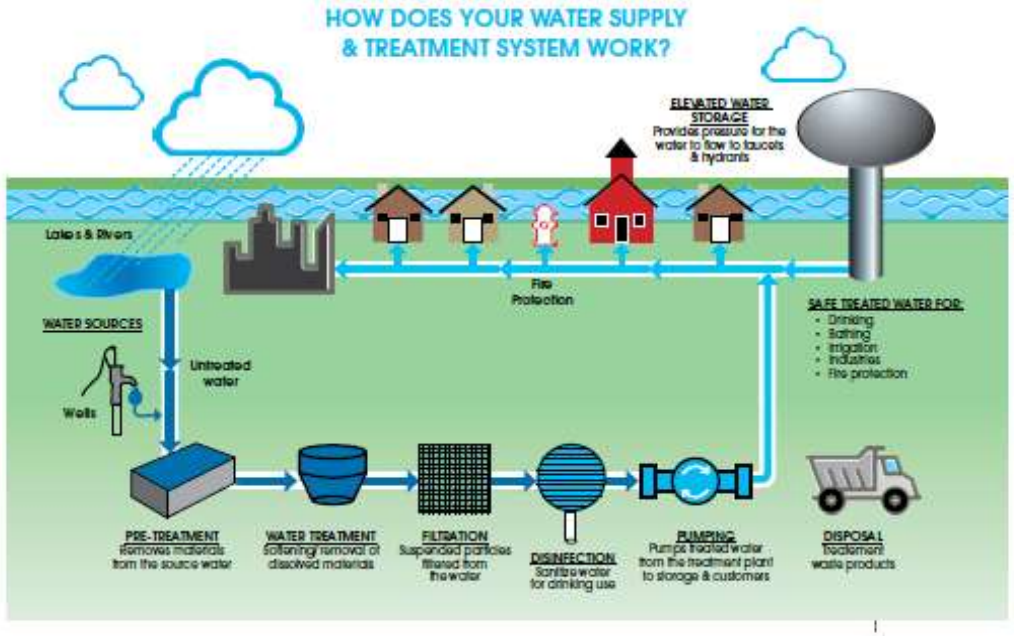
- Forecast of system demands and customer counts
- Development of revenue forecast with existing rates and fees

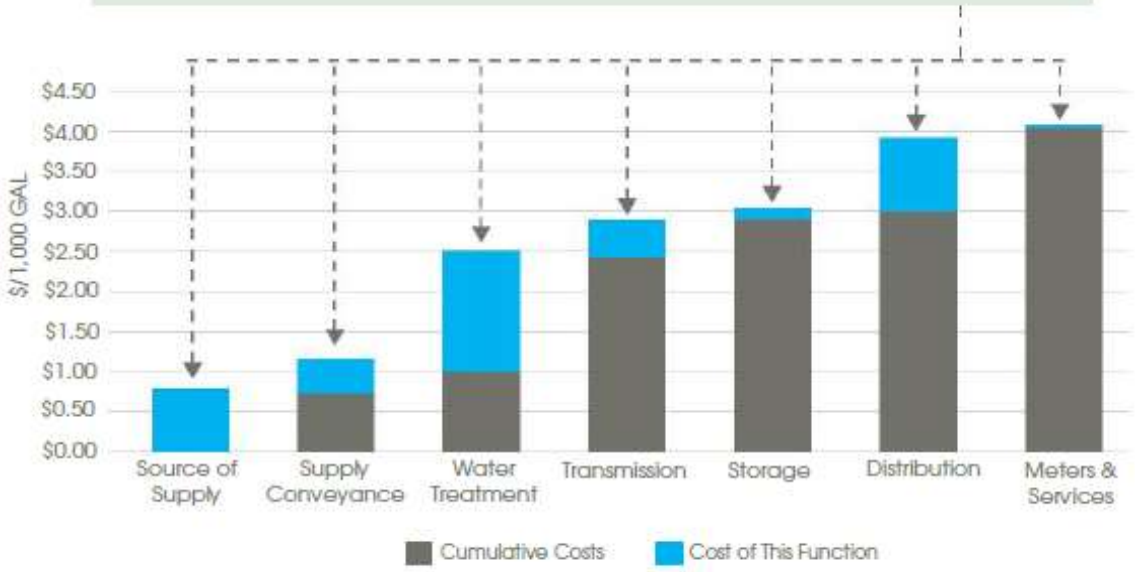
Evaluate Key Metrics

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

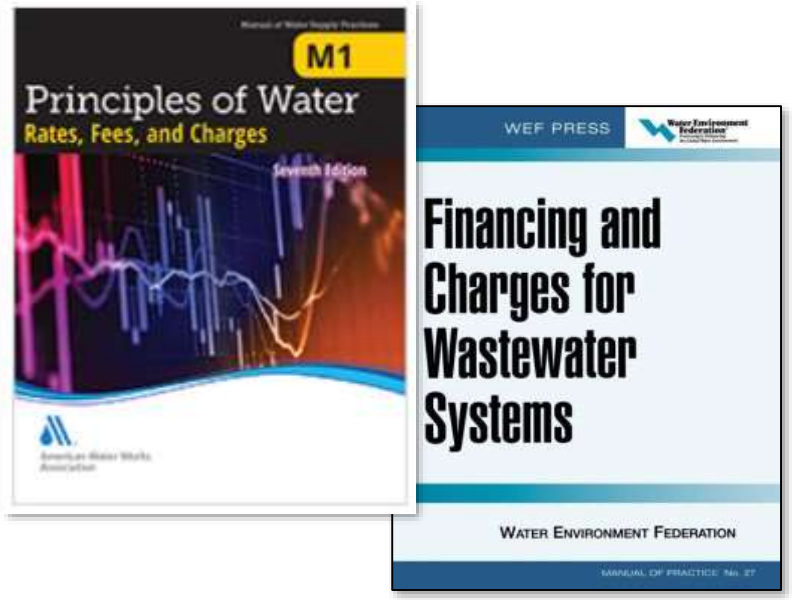


Cost of Service





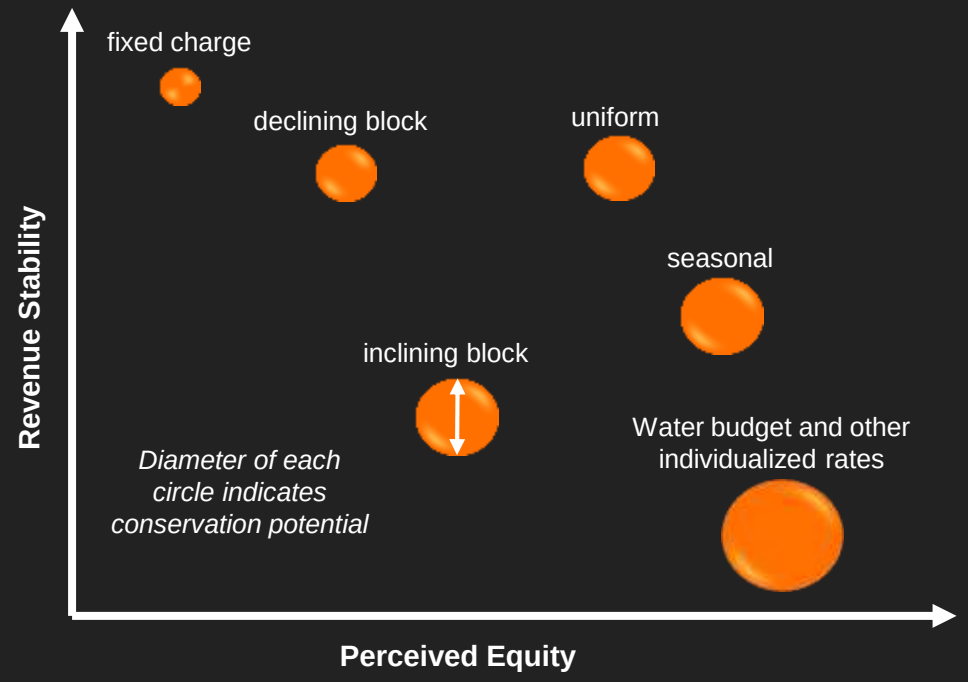
Goal: Determine the equitable distribution of revenue to be recovered by customer class based on the **cost to serve** each class



Use of Industry Standard Approaches

Rate Design

Rate Design ⟶ How costs are specifically recovered from customers



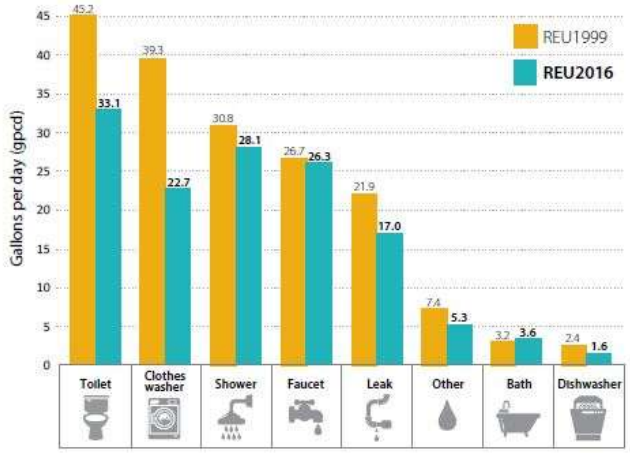
Requires Consideration of Pricing Goals and Objectives

Revenue Stability	vs	Conservation Signal
Revenue Stability	vs	Low Income Impacts
Alignment with Cost of Service	vs	Administrative Burden
Affordability	vs	Equity

Key Challenges

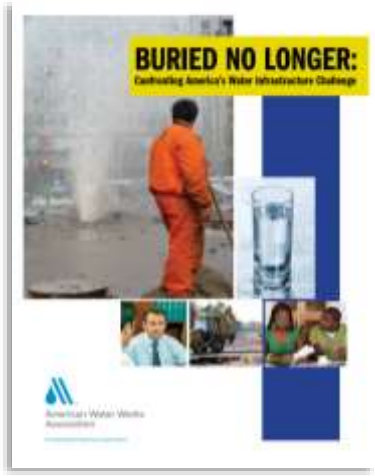
Current Industry Challenges

Reductions in Use / Revenue Impacts



22%
DECREASE
PER HOUSEHOLD
DAILY WATER USE
1999 TO 2016

Aging Infrastructure



Regulatory and Resilience

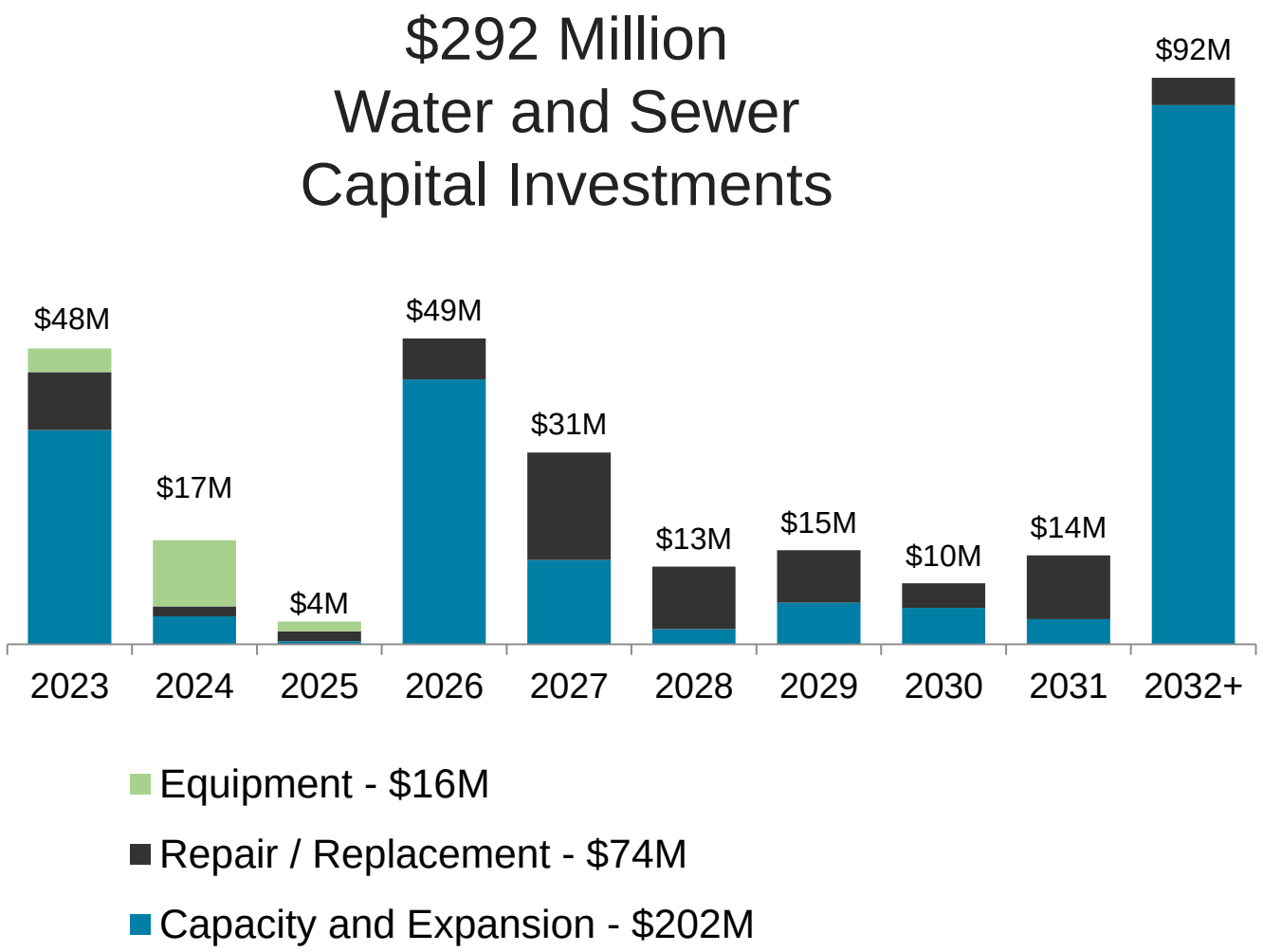
EPA United States Environmental Protection Agency

Aging Workforce

Customer Affordability

Operational Costs Increases

Primary Challenge Facing City's Utilities



Impacts on Water and Sewer Rates and Affordability of Service

Water and Sewer Structures

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

City's Current Water Rate Structure

Water Base Charges	Inside City	Outside City
3/4"	$8.32	$11.23
1"	$9.71	$13.11
1.5"	$13.15	$17.75
2"	$17.55	$23.69
3"	$27.88	$37.64
4"	$42.60	$57.51
6"	$79.40	$107.19
8"	$123.56	$166.81

Water Usage Rates (per 1,000 gallon)	Inside City	Outside City
Residential		
0 to 6,000 gal.	$4.48	$6.05
6,001 to 14,000 gal.	$4.93	$6.65
14,001 gal. and over	$5.60	$7.56
Commercial/Industrial		
0 to 40,000 gal.	$4.48	$6.05
40,001 to 200,000 gal.	$4.28	$5.78
200,001 gal. and over	$3.80	$5.13
Irrigation		
0 to 40,000 gal.	$5.60	$7.56
40,001 gal. and over	$6.10	$8.06
Municipal/Wholesale	$4.48	
Bulk Water	$7.56	

Water Rate Structure Observations

Base charge provides revenue stability and fixed cost recovery

- Potential to increase the portion of revenues collected from base charge
- Potential to consider alternative scaling between meters

Residential/Irrigation inclining water block rates promote conservation

- Potential modifications to tier quantities and differences in pricing between tiers
  - Creation of a “life-line” tier
  - Enhance conservation incentive

Commercial/Industrial declining water block rates are less common

- City plans to move to a uniform rate by FY 2024

City provides water service to a significant number of water accounts outside the City acting as a regional service provider

- City plans to move to eliminate differential by 2030

Example Pricing Considerations

Example Rate Structure Changes	Consideration of Pricing Goals and Objectives		
Increase Revenue Collected in Base Charges	Increase Revenue Stability	vs	Decrease Conservation Signal
Add a “Life-Line” Tier	Enhance Affordability	vs	Increase Administrative Burden
Increase Water Tier Pricing Differentials	Enhance Conservation Signal	vs	Decrease Revenue Stability
Elimination of Commercial Declining Block	Enhance Alignment with Cost of Service	vs	Impact on Large Commercial Users

City's Current Sewer Rate Structure

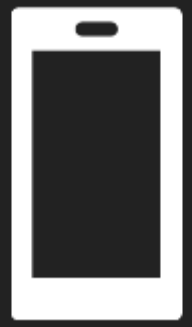
Sewer Base Charges	Inside City	Outside City
3/4"	$8.92	$13.38
1"	$11.25	$16.88
1.5"	$17.05	$25.58
2"	$24.03	$36.05
3"	$40.44	$60.66
4"	$63.89	$95.84
6"	$122.45	$183.68
8"	$192.75	$289.13

Sewer Usage Rates (per 1,000 gallon)	Inside City	Outside City
Residential / Commercial		
All Usage	$6.33	$9.50
Public Schools		
All Usage	$6.33	
Wholesale / Municipal / Henderson County / Internal		
All Usage	$9.50	

Average Monthly Household Spending

$150

on electricity



$105

on cell phone service

Water: **$22**

Sewer: **$28**

Total: $50

Hendersonville

Water: **$27**

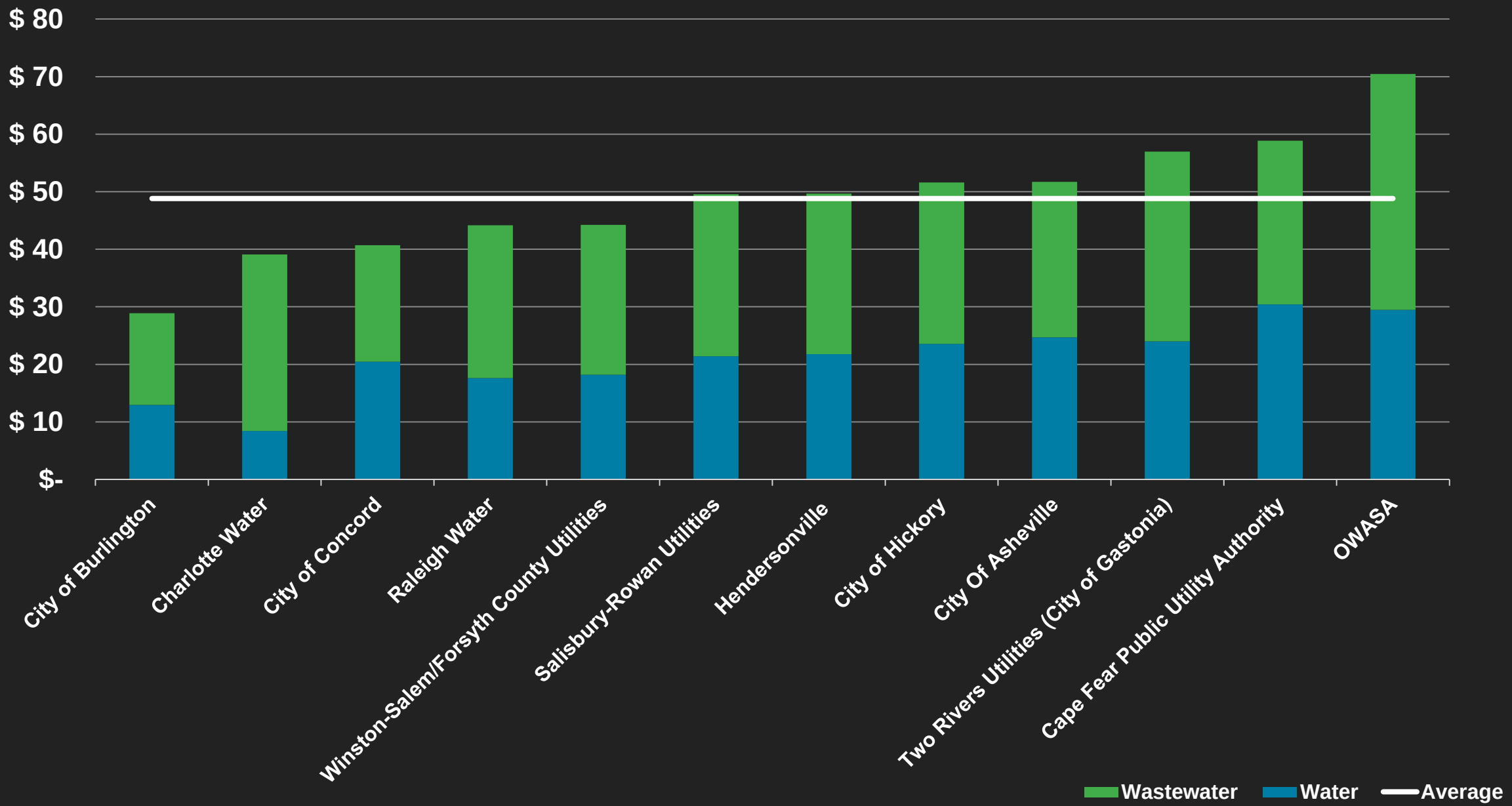
Sewer: **$33**

Total: $60

NC Average

- US Energy Information Administration, 2022 Electricity Reports
- US Bureau of Labor Statistics, Consumer Expenditure Survey, August 2022
- Current inside city residential rates for 3,000 gallons per month

Residential Bill Comparisons (3,000 gallon per month)



System Development Fees

System Development Fees

- Fees charged for new connections joining the water and sewer system
- Intended to recover cost of constructing water and sewer capacity, “growth pays for growth”
- Fees are applied based on units of service (representing potential demand on utility system)
- Fees are legislated in North Carolina
  - Public Water and Sewer System Development Fee Act (NC General Statutes - Chapter 162A Article 8) approved July 2017

Approach / Methodologies

Methodology	Description	Appropriate For
Buy-In Method	Fees are based on cost of constructing existing utility system	System with ample existing capacity to sell
Incremental Cost Method	Fees are based on planned growth-related capital improvements	System with limited or no existing capacity to sell
Combined Method	Fees are based on cost of existing system and planned capital improvements	System with existing capacity to sell and with planning growth-related capital projects

Assessment of System Development Fees

- SDFs must be applied based on units of service (represents potential demand)
- SDFs are often scaled by meter size based on hydraulic capacity of meter
- Common to use number of bedrooms for scaling single family residential

Meter size	Equivalent Residential Units (ERU)
3/4"	1.00
1"	1.67
1 ½”	3.33
2"	5.33
3”	11.67
4"	21.00
6"	43.33

System Development Fee Considerations

- SDFs allow community to recover at least a portion of cost of constructing system infrastructure
- Lack of SDFs places full cost of infrastructure on user rates
- SDFs have potential impact on development
- Requirements and limitations on the use of SDFs given legislation
  - Separate tracking of revenues from SDFs
  - Limitations on use of proceeds depending on approach

Project Schedule

Financial Plan

Draft Complete

Cost of Service and System Development Fees

November

Rate Design

Early December

Agreed Upon Procedures Letter for Bond Issuance

Late December

Provide Initial Recommendations

February

Additional Questions/Discussion

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