



# Utility Rate Study

Presented by  
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January 18, 2024



# Agenda

- **Background / Scope**
- **Overview of the rate setting process**
- **Key assumptions**
- **Fiscal policy targets**
- **Summary of findings**
- **Next steps**



# Background / Scope

- **FCS Group initially contracted with the City in late 2022**

- **Scope of Services**

- » Collect and validate relevant utility financial data
- » Develop rate plans to achieve policies and objectives
- » Evaluate equity between sewer customer classes
- » Provide rate design alternatives to achieve City objectives
- » Update System Development Charge (SDC) calculation

## **Status**

Completed

Presented today

Presented today

Presented today

Presented today



# **Rate Setting Process**



# Overview of Rate Setting Process

## Financial Policies – Set the Management Foundation

**Step 1:**  
**Revenue Requirement**  
(defining overall needs)

Revenue

O&M

Economic  
Factors

Capital

Reserves

**Step 2:**  
**Cost of Service**  
(equity evaluation)

**Sewer Only**

Define Customer Classes

Allocate Costs

**Step 3:**  
**Design Rates**  
(collect target revenue)

Fixed Charges

Variable Charges



# Step 1: Revenue Requirement Overview

- **Determine the amount of annual revenue necessary**
  - » Operating and maintenance expenses
  - » Debt service (principal & interest)
  - » Capital costs
- **Meet financial parameters and targets**
  - » Debt service coverage ratios
  - » Maintain reserve balances
- **Evaluate revenue sufficiency over multi-year period**
- **Develop rate plan to balance financial needs and minimize customer impacts**



## Step 2: Cost of Service Overview

- **An equitable distribution of cost shares that considers utility specific data:**
  - » Measures of usage and demand
  - » Planning, engineering and design criteria
  - » Facility requirements
- **Total cost by class (equity)**
- **Fundamental question: Do cost differences exist to serve different customer classes?**



## Step 3: Rate Design Overview

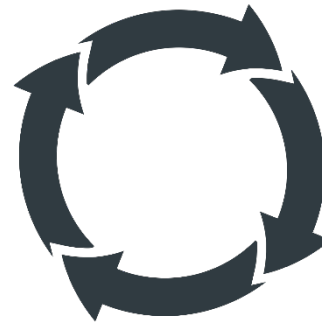
- **Development of fixed and variable charges assessed to customers**



Aligns fixed and variable costs with fixed and variable revenue sources



Generates sufficient revenue to meet utility requirements



Meet goals and objectives of the utility (e.g., conservation)



Evaluate monthly rate impact for different levels of use





# **Key Assumptions and Policies**



# Key Assumptions

- **Rate setting period 2024-2028**
  - » Financial model will evaluate twenty-year timeframe
- **Rate revenues forecasted based on 2020-2022 customer data plus the adopted 2023 rate increase**
- **Customer growth**
  - » ~1% system-wide; different growth rates applied to different classes
- **Expenses based on 2023 budget and staff input**
  - » Costs escalated by various inflationary factors (~3.1% average increase)
- **In process loan draws and recently awarded low-interest loans forecasted**



# Fiscal Policy Targets

- **Help guide the financial management of the City**

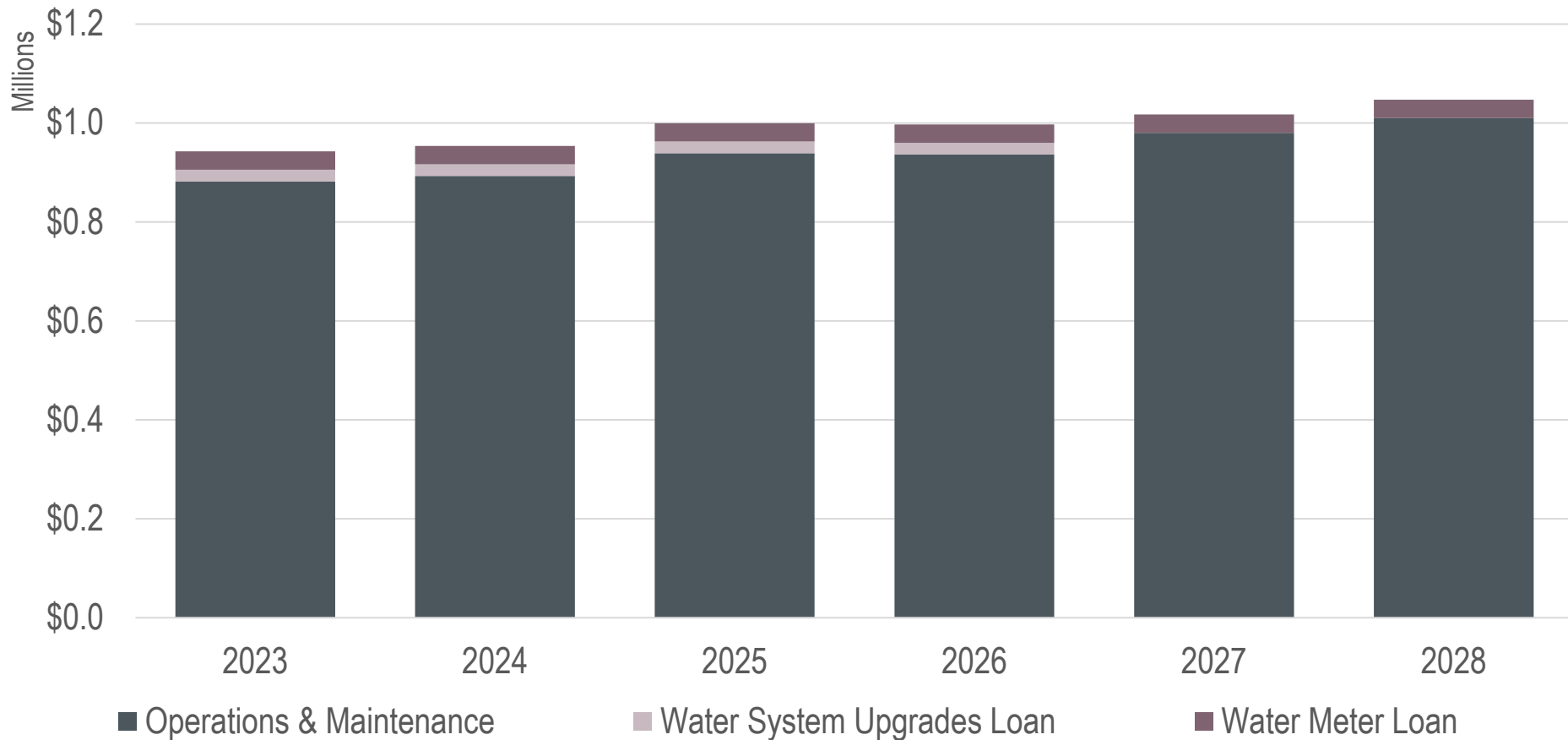
<b>Policy</b>	<b>Purpose</b>	<b>Target</b>
Operating Reserve	To provide sufficient cash flow to meet daily operating expenses (short-term, annual revenue cycles)	Water: 60-90 days of O&M Sewer: 45-60 days of O&M
Capital Reserve	To provide a source of funding for emergency repairs, unanticipated capital, and project cost overruns.	Minimum Target: greater of \$100,000 or 1% of assets in service
Debt Service Coverage	To ensure compliance with existing loan/debt covenants and maintain credit worthiness for future debt issuance.	Minimum Bond Covenant Requirement 1.25



# **Water Findings**



# Water Operating Forecast – Current Obligations



- **O&M Expenses**

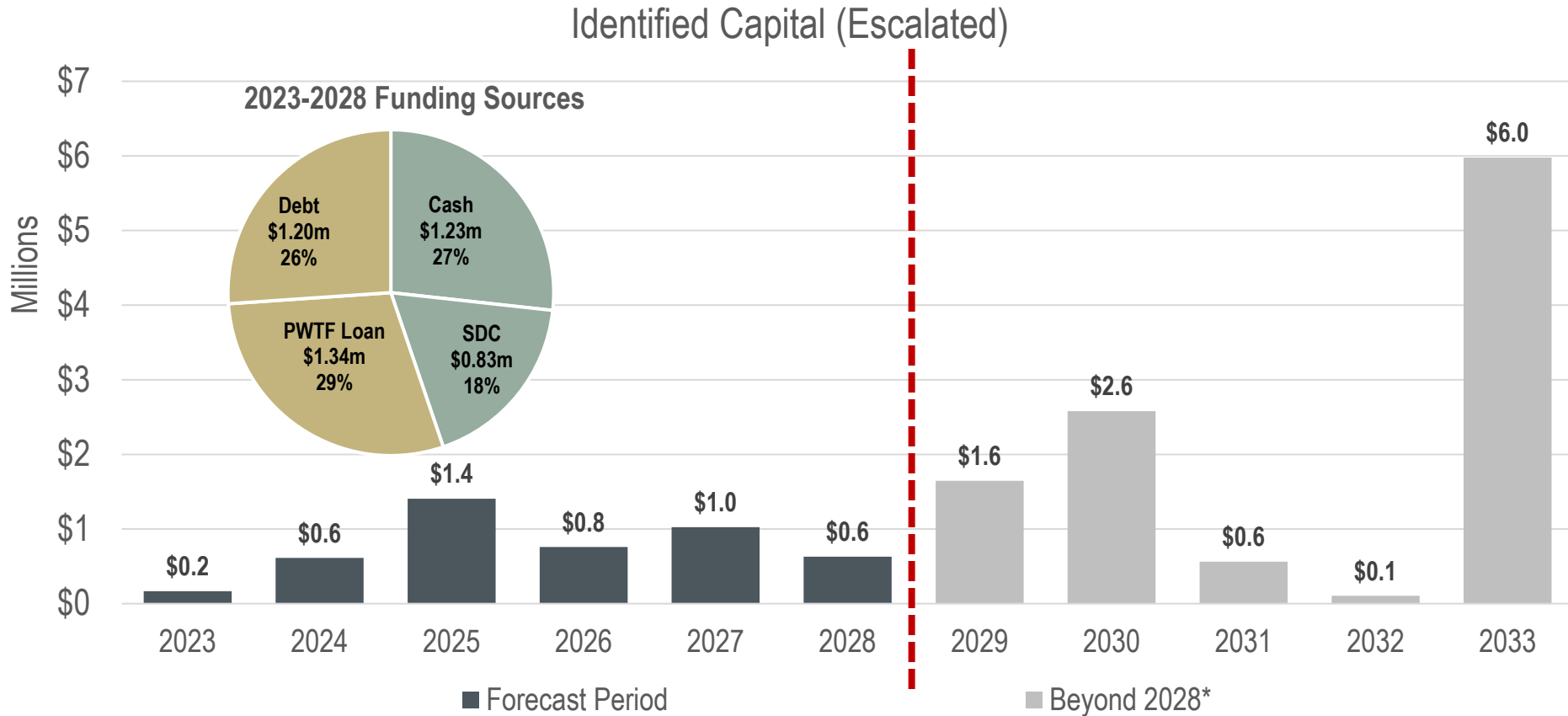
- » \$880,000 in 2023
- » \$1.0 million by 2028

- **Existing Debt Service**

- » \$61,000 annually from 2023-2026
- » \$37,000 annually in 2027 & 2028



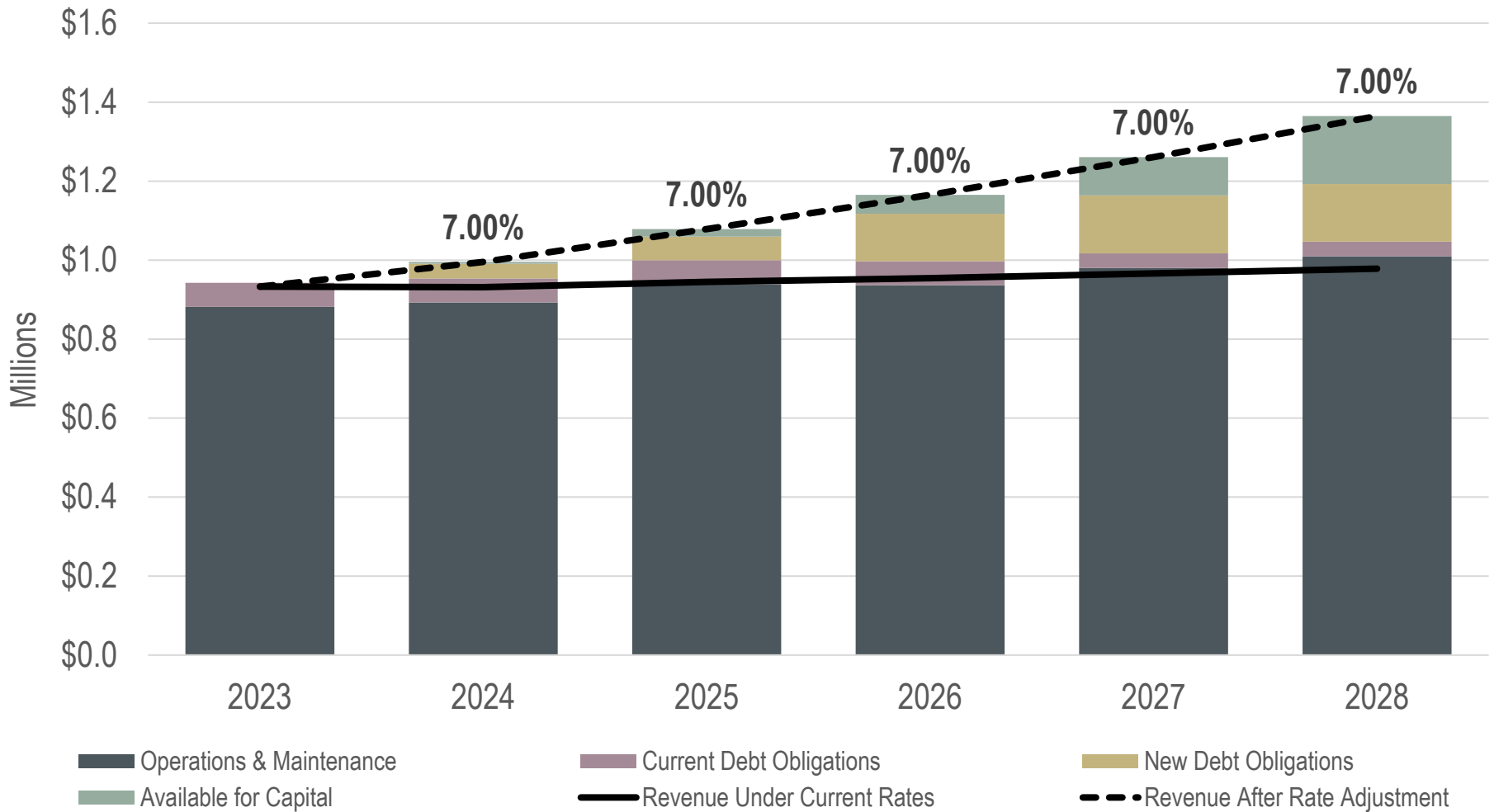
# Water Capital Funding Strategy



- **\$14.5 million in capital projects identified from 2023-2033**
  - » 30% (\$4.6m) projected during the rate setting period
    - Rates set in preparation for capital beyond 2028



# Water Revenue Requirement Summary



- **Annual 7% increases required to fund the capital program**



# Current Water Rates

Charge	2023 Rate
<b>Fixed Charge</b>	
3/4"	\$37.04
1"	\$60.79
1 1/2"	\$146.72
2"	\$282.98
3"	\$508.52
4"	\$610.12
6"	\$1,625.27
per Unit*	\$37.04
<b>Variable Charge (after 400* cf Allowance)</b>	
per cf	\$0.047

\*half for transient lodging

- **Fixed Charge**

- » Base fee is charged to all customers
- » Charge scales based on capacity available to the customer

- **Variable Charge**

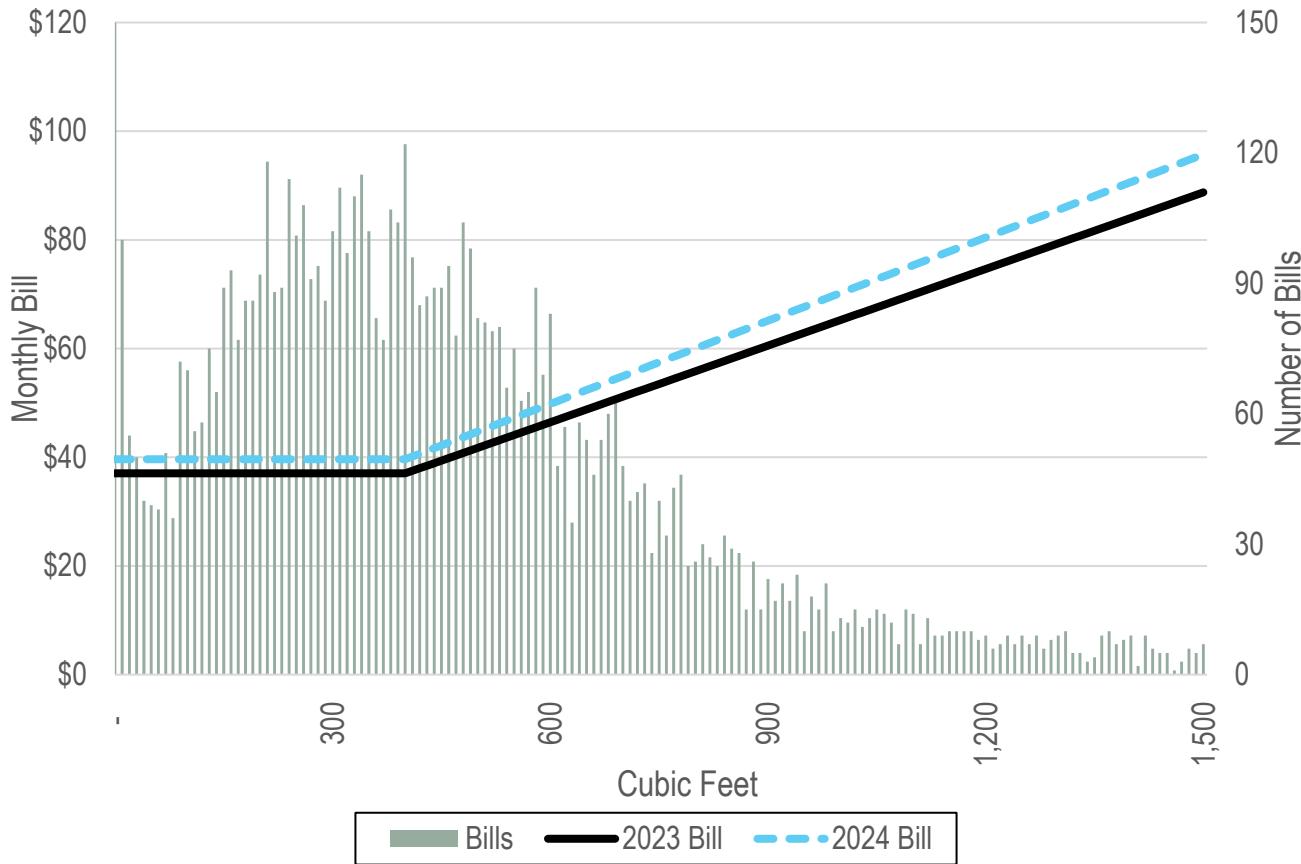
- » No charge for first 400 cf ( $\approx$  3,000 gallons) of usage
- » Uniform charge per cf for all usage above allowance





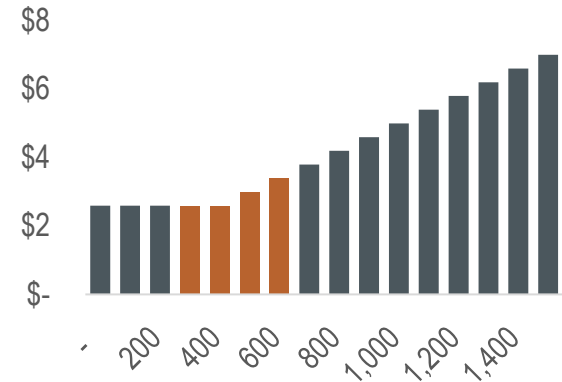
# Across The Board (ATB) Bill Comparisons

## Single Family Bill Comparison



Charge	2023	ATB
Base	\$37.04	\$39.63
per cf after allowance	\$0.047	\$0.051

### Change in Monthly Bill Black Line - Blue Line





# Water Rate Design Options

## Scenario 1

- **Fully Remove Allowance**
  - » Customers billed for all usage
- **Advantages:**
  - » Users have more control over bills
- **Things to Consider:**
  - » Utility revenue relies more on usage rates
  - » Lower users charged for usage not previously billed

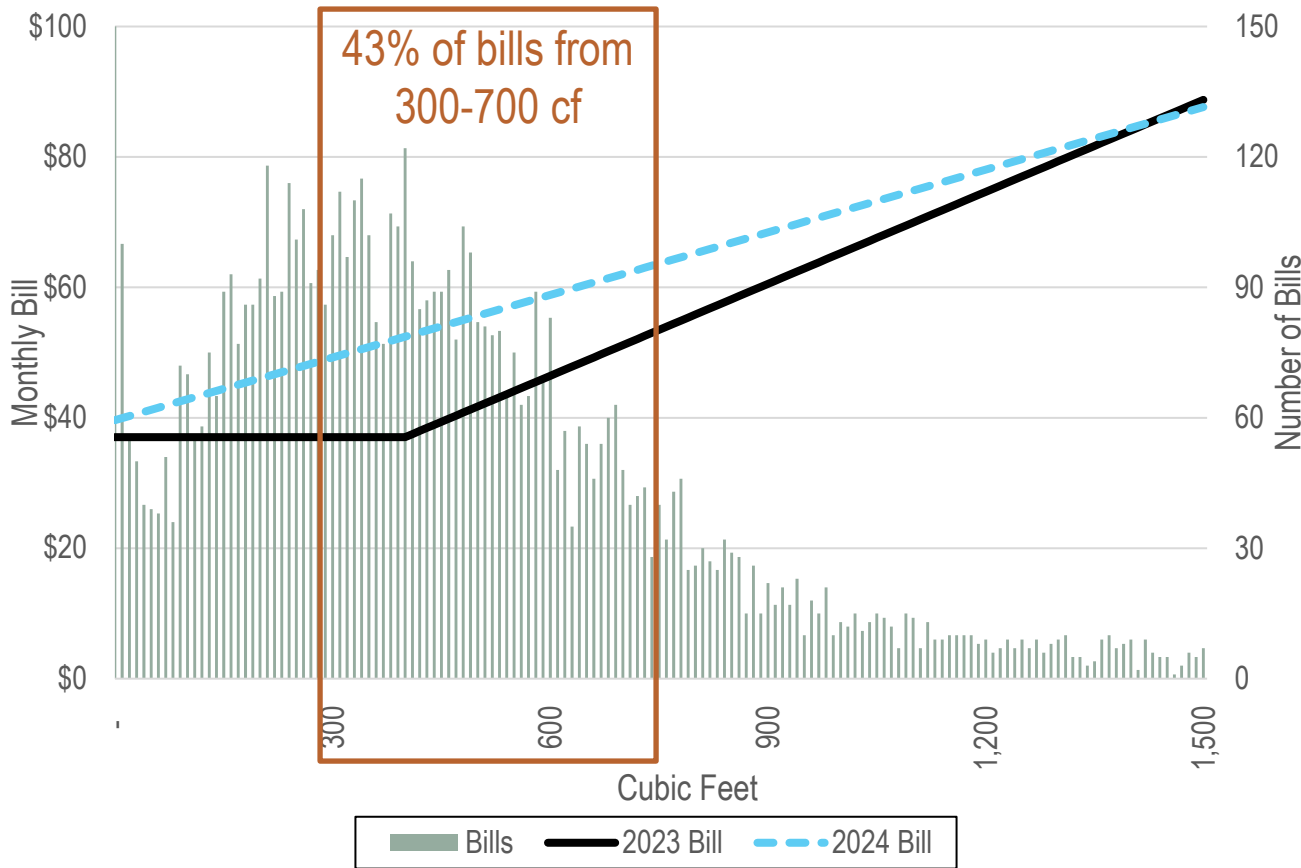
## Scenario 2

- **Cut the allowance in half**
  - » Monthly allowance now 200 cf\*
- **Advantages:**
  - » Finds a balance between current rate design and Scenario 1
- **Things to Consider:**
  - » Customers near original allowance now paying for half their usage



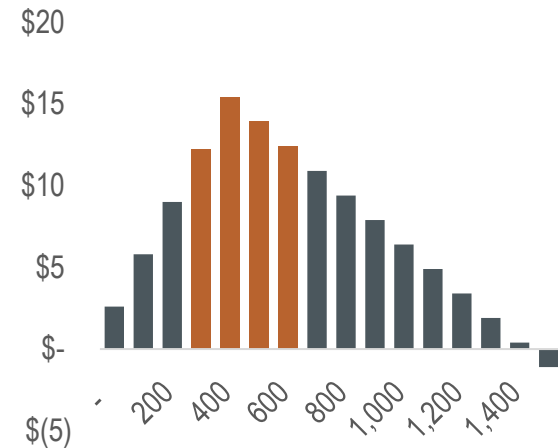
# Scenario 1: Fully Removed Allowance

## Single Family Bill Comparison



Charge	2023	Scenario 1
Base	\$37.04	\$39.63
per cf for all usage	\$0.047	\$0.032

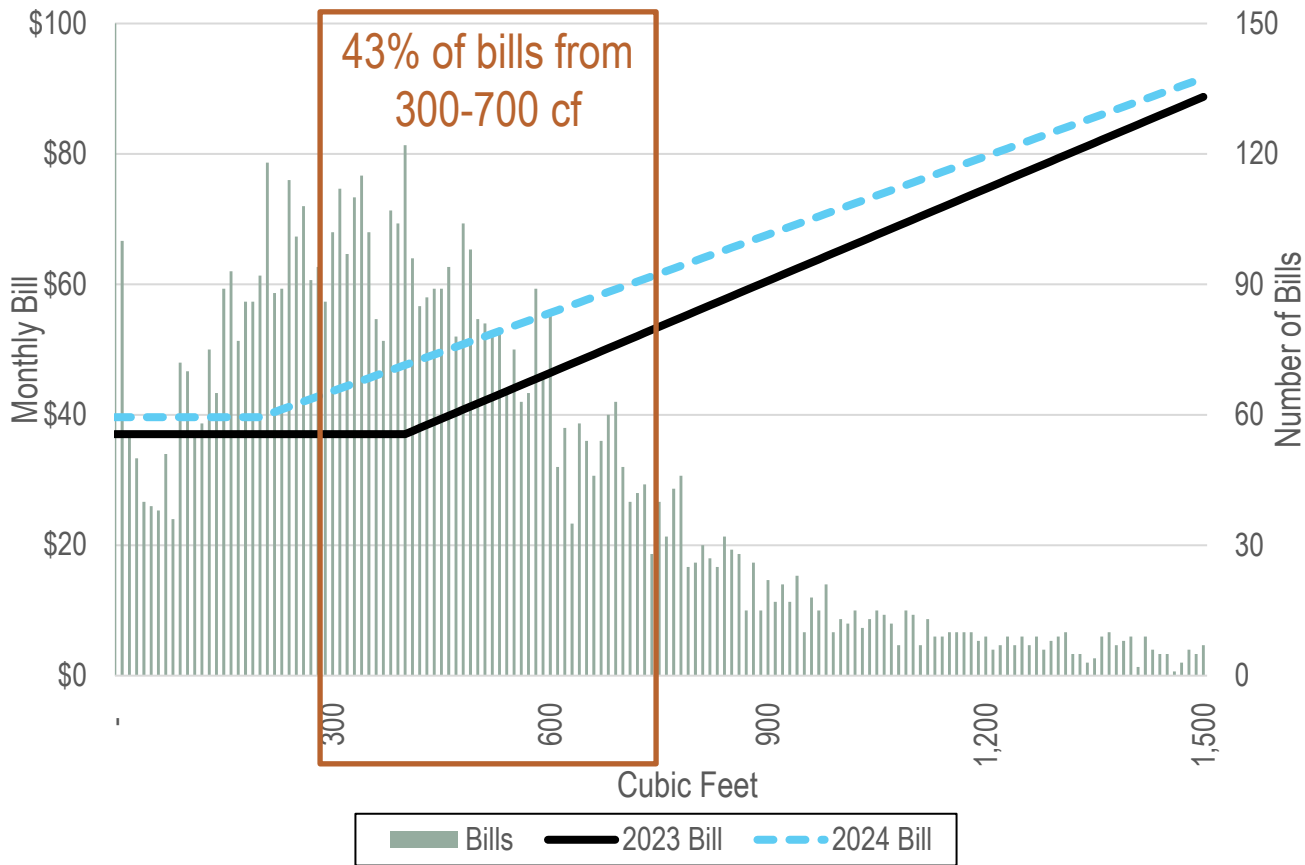
## Change in Monthly Bill





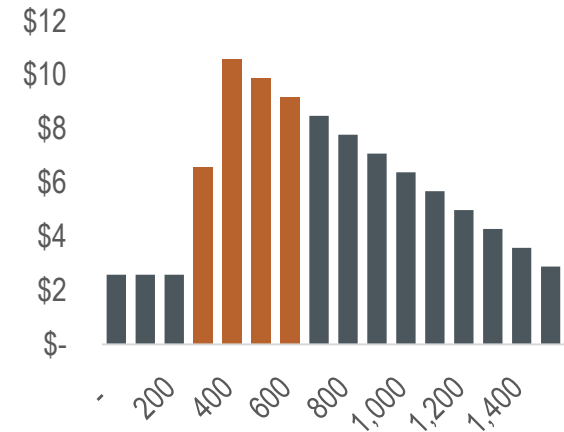
# Scenario 2: Remove Half of Allowance

Single Family Bill Comparison



Charge	2023	Scenario 2
Base	\$37.04	\$39.63
per cf after allowance	\$0.047	\$0.040

Change in Monthly Bill





# Single Family Bills by Usage

Usage (cf)	2023	ATB	\$ Change	Scenario 1	\$ Change	Scenario 2	\$ Change
0	\$37.04	\$39.63	<b>\$2.59</b>	\$39.63	<b>\$2.59</b>	\$39.63	<b>\$2.59</b>
300	\$37.04	\$39.63	<b>\$2.59</b>	\$49.23	<b>\$12.19</b>	\$43.63	<b>\$6.59</b>
600	\$46.44	\$49.83	<b>\$3.39</b>	\$58.83	<b>\$12.39</b>	\$55.63	<b>\$9.19</b>
750	\$53.49	\$57.48	<b>\$3.99</b>	\$63.63	<b>\$10.14</b>	\$61.63	<b>\$8.14</b>
900	\$60.54	\$65.13	<b>\$4.59</b>	\$68.43	<b>\$7.89</b>	\$67.63	<b>\$7.09</b>
1200	\$74.64	\$80.43	<b>\$5.79</b>	\$78.03	<b>\$3.39</b>	\$79.63	<b>\$4.99</b>
1500	\$88.74	\$95.73	<b>\$6.99</b>	\$87.63	<b>(\$1.11)</b>	\$91.63	<b>\$2.89</b>

- **Average Usage Statistics:**

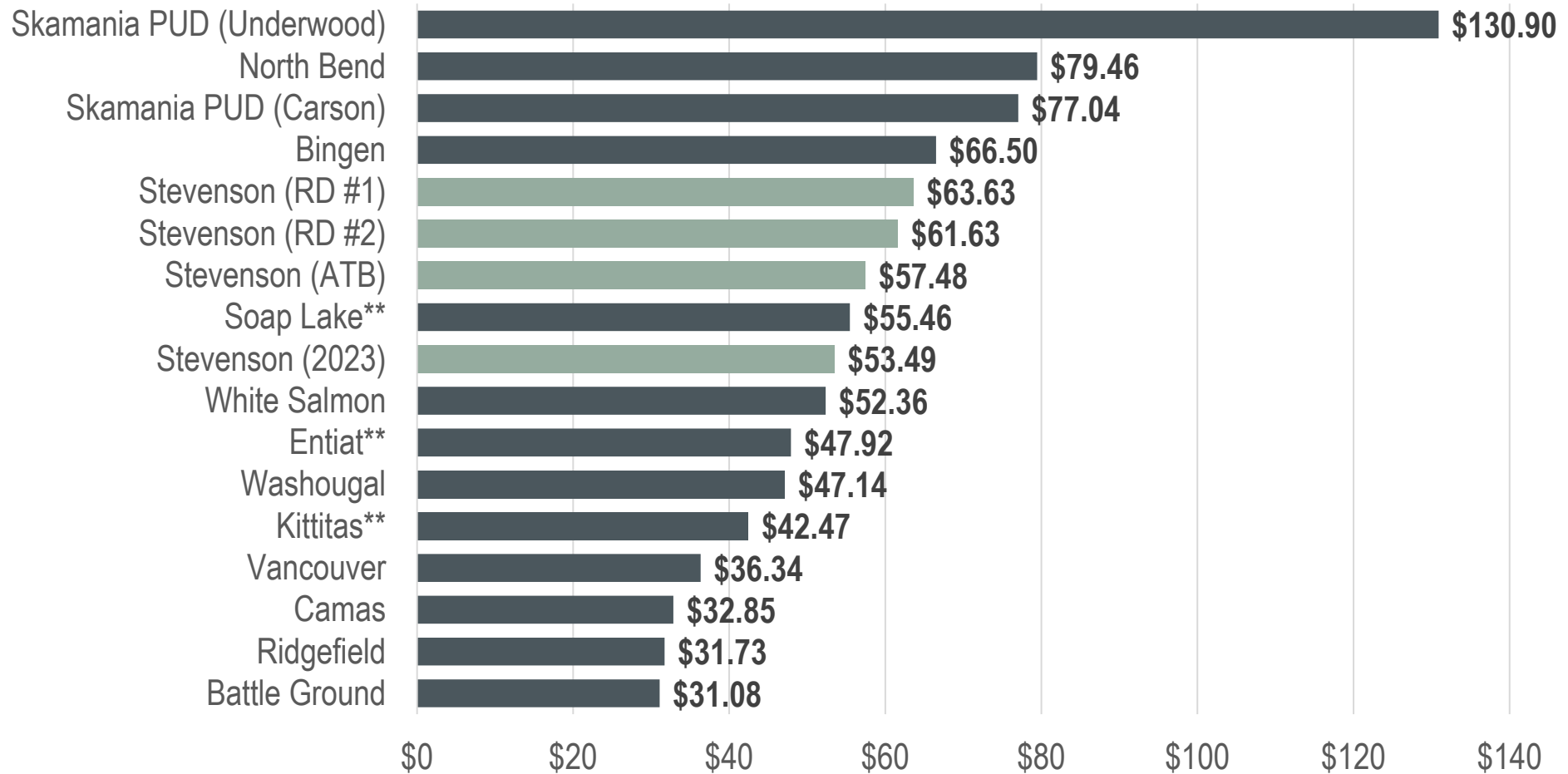
- » Winter: 470 cf
- » Summer: 960 cf

- **Median Usage Statistics:**

- » Winter: 380 cf
- » Summer: 580 cf



# Residential Water Monthly Rate Comparison\*



\*Assumes 750 cf monthly usage

\*\*Similar sized population



# Water Summary

- **Water Rate Increases:**
  - » 7% annual revenue increases for 2024-2028
- **Rate Design Options:**
  - » Across the Board rate increases
  - » Scenario 1: Fully eliminate the usage allowance
  - » Scenario 2: Reduce the usage allowance
  - » Other options to be explored?

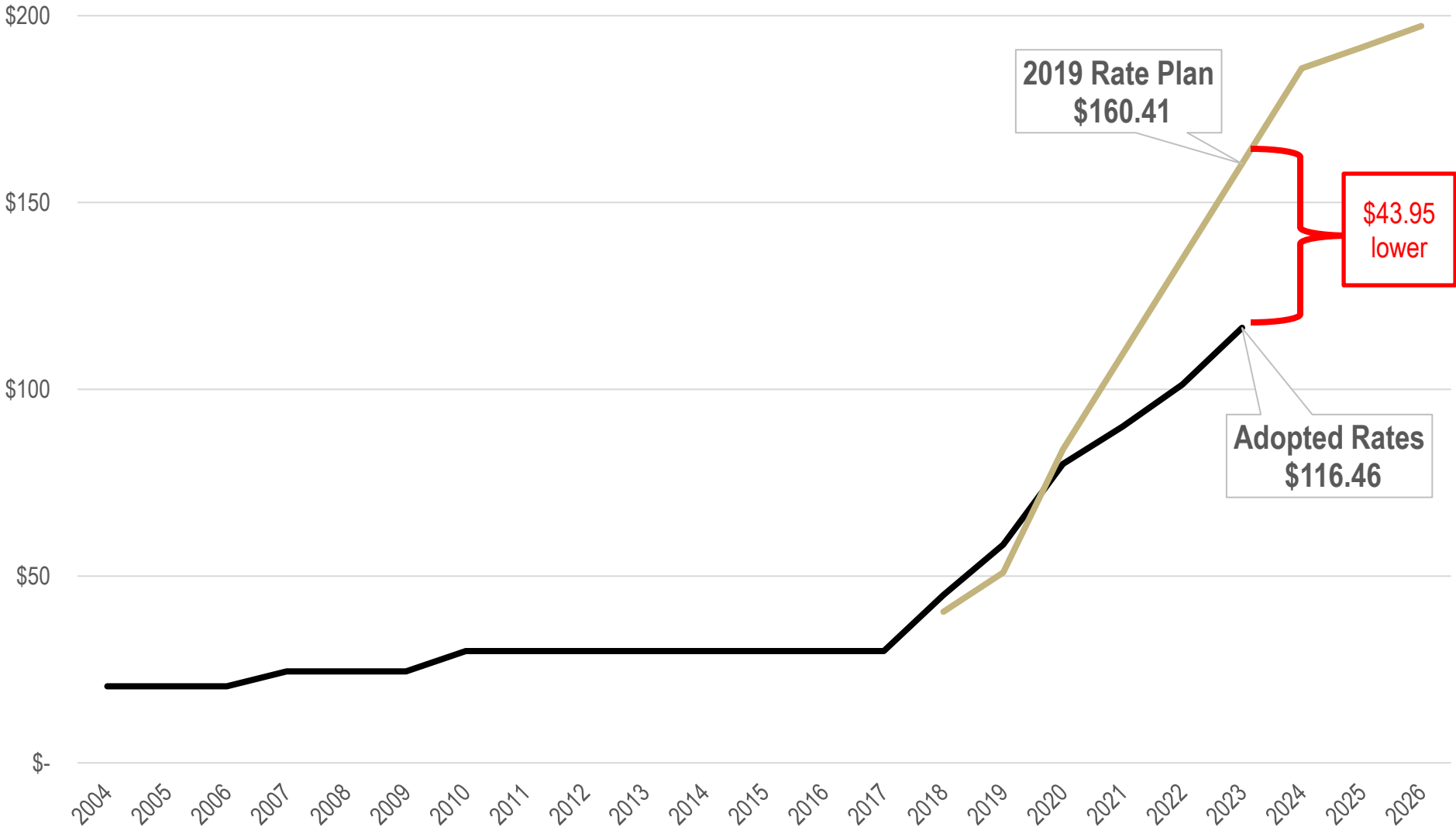


# Sewer Findings



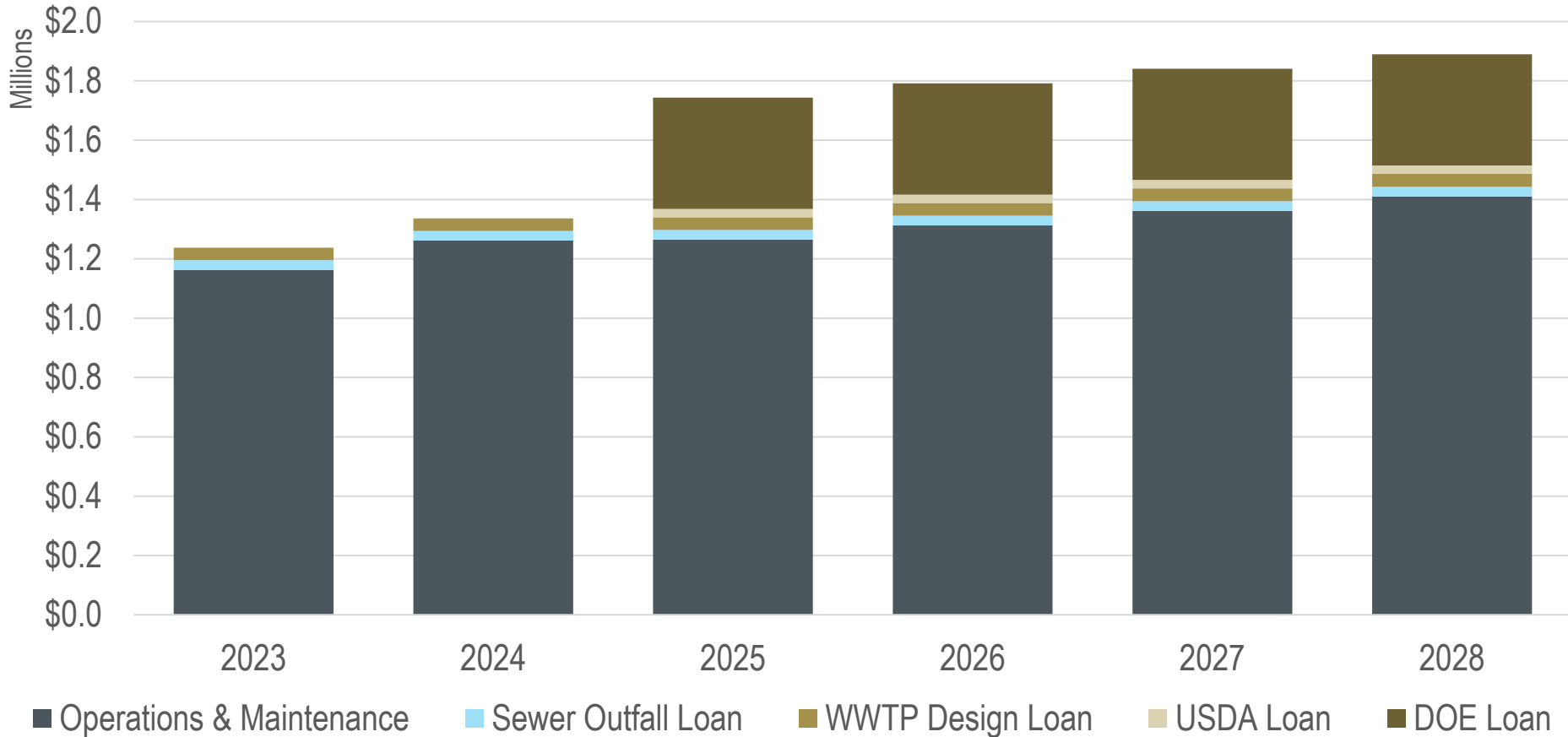


# Historical vs Forecasted Residential Rates





# Sewer Operating Forecast – Current Obligations



- **O&M Expenses**

- » \$1.2 million in 2023
- » \$1.4 million by 2028

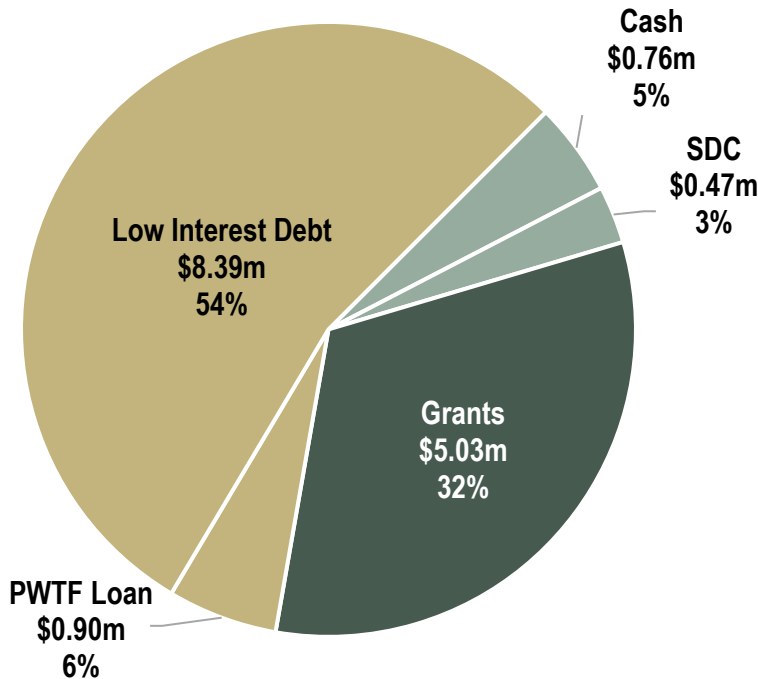
- **Existing Debt Service**

- » \$75,000 annually from 2023 and 2024
- » \$475,000 annually in 2025-2028

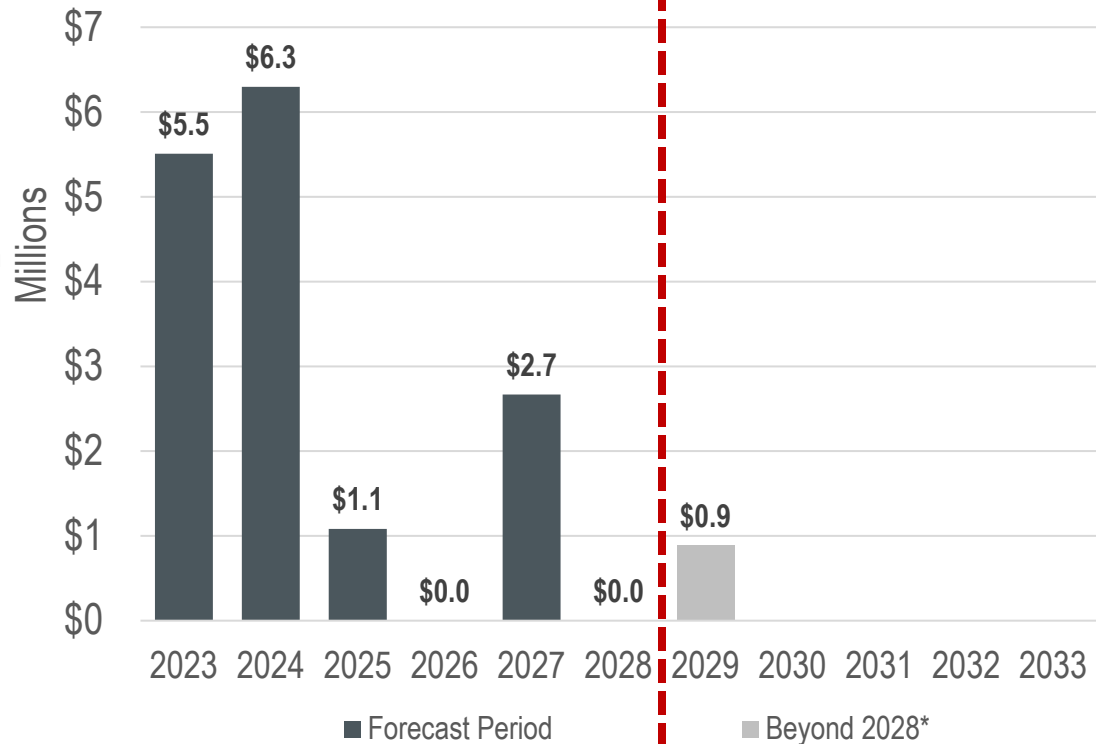


# Sewer Capital Funding Strategy

2023-2028 Funding Sources



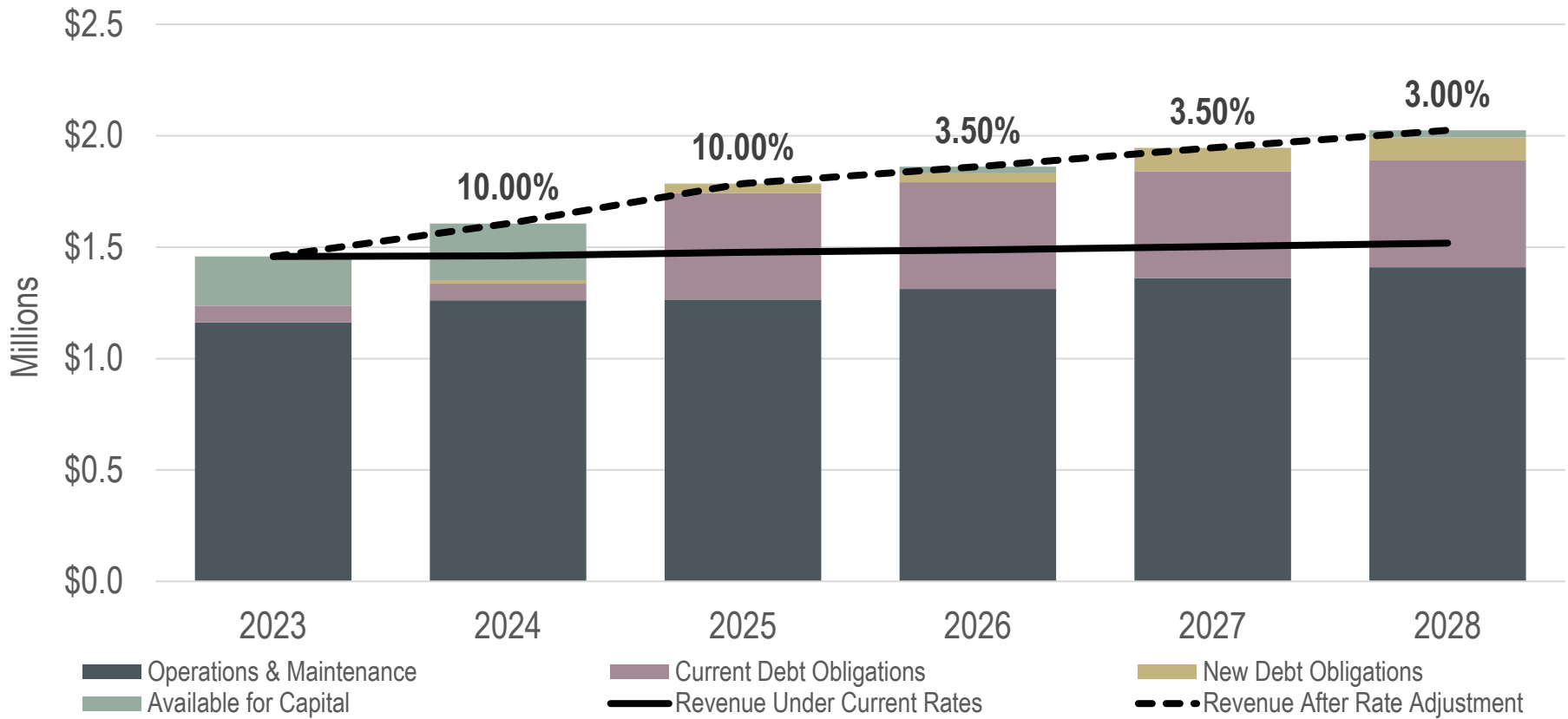
Identified Capital (Escalated)



- **\$16.4 million in capital projects identified from 2023-2029**
  - » 95% (\$15.5m) projected during the rate setting period
    - 32% of remaining capital needs funded through grants
    - 60% of remaining capital through 2028 funded through low interest loans



# Sewer Revenue Requirement Summary



Sample Bill	Existing	2024	2025	2026	2027	2028
<b>Proposed Increases</b>		<b>10.00%</b>	<b>10.00%</b>	<b>3.50%</b>	<b>3.50%</b>	<b>3.00%</b>
Sample Residential Bill*	\$ 116.46	\$ 128.11	\$ 140.92	\$ 145.85	\$ 150.95	\$ 155.48
\$ Difference		\$ 11.65	\$ 12.81	\$ 4.93	\$ 5.10	\$ 4.53

2019 Rate Update = **\$197.23**  
**\$51.28 lower**



# Alternative Rate Scenarios

- **Extend sewer collections lines to areas currently not served by the City**
  
- **Project costs:**
  - A. Scenario 1: City rate-payers fund the extensions
  - B. Scenario 2: Developers fund the extensions
  
- **Major Assumptions:**
  - » All identified customers connect when sewer service is available
  - » No SDC revenues charged to septic conversion customers



# Rate Scenarios

» Additional Customers:

	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037
Additional Customers	20	-	27	-	20	-	26	-	17	-	10

» Additional Cost (escalated):

	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037
Millions	\$0.8	\$ -	\$2.8	\$ -	\$3.1	\$ -	\$4.6	\$ -	\$2.1	\$ -	\$4.4

» Result

Scenario	2024	2025	2026	2027	2028
Status Quo Rate Plan	10.0%	10.0%	3.5%	3.5%	3.0%
City Rate-Payer Funded	10.0%	10.0%	4.5%	4.5%	4.5%
Developer Funded	10.0%	10.0%	3.0%	3.0%	3.0%

- **City rate-payer funded extensions would require 1.5% higher annual increases from 2026-2037**

» This analysis is independent of any capital beyond 2029



# Cost of Service Process

- **Step 1: Allocate total utility costs to cost pools**

Sewer Utility Functions*
<ul style="list-style-type: none"><li>• Customer</li><li>• Collection</li><li>• Treatment (Flow)</li><li>• Treatment (BOD)</li></ul>

- **Step 2: Develop allocation factors using class specific information**
- **Step 3: Allocate costs to customer classes**

\* Industry Standard Methodologies; Water Environment Federation Financing and Charges for Wastewater Systems Manual 27



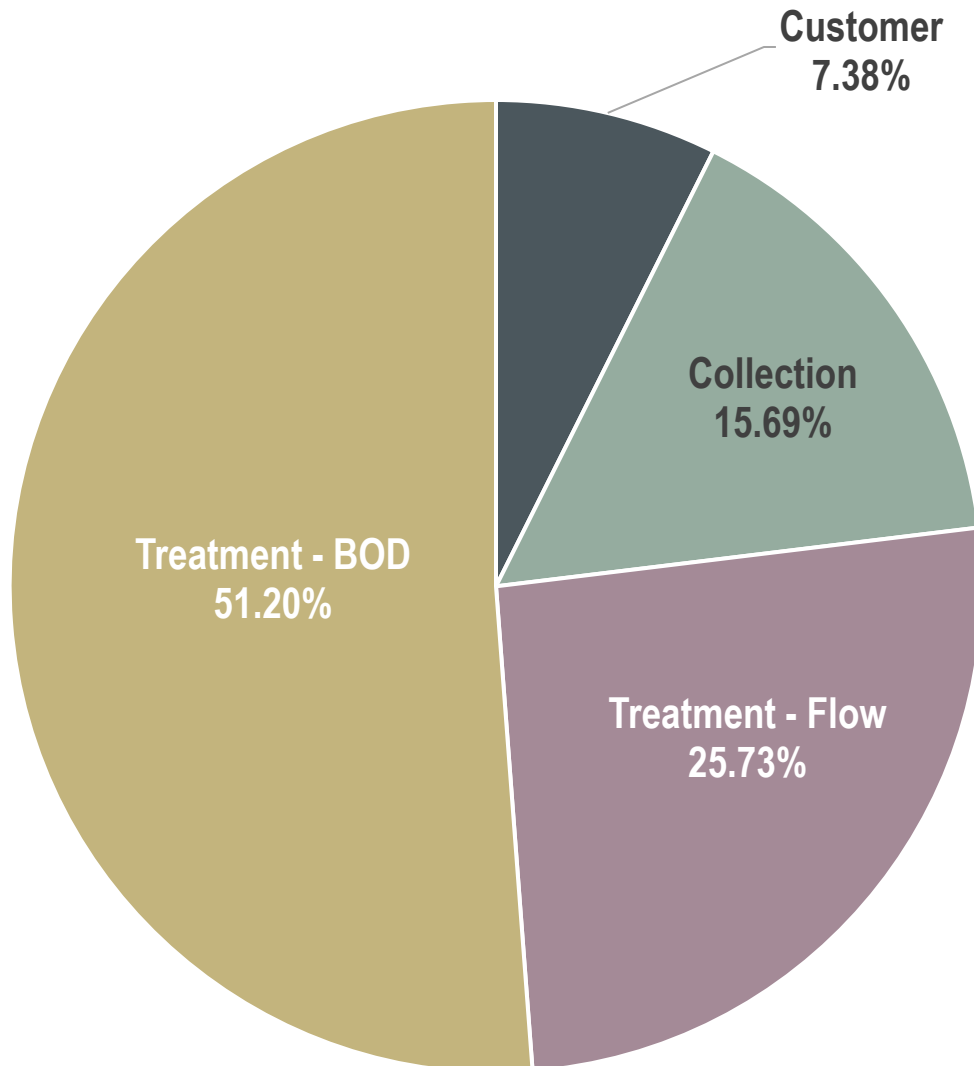
# Customer Class Designations

- **Single Family**
  - » Single Family Residential
  - » Seniors
- **Multi-Family**
  - » Multi-Family Residential
  - » Multi-Family Transient
- **Commercial – Low**
  - » Public Facilities
  - » General Retail
  - » Offices
- **Commercial – Medium**
  - » Schools
  - » Laundromat
- **Commercial – High**
  - » Coffee Shop
  - » Bakery
  - » Restaurant
- **Commercial – Very High**
  - » Brewery
  - » Dairy
  - » Industrial w/ Process Discharge





# Step 1: Allocate Sewer Costs to Cost Pools



**Customer:**  
Administrative, billing  
and customer service costs

**Collection:**  
Maintenance of collection lines  
and pumping to transport  
sewage to treatment plant

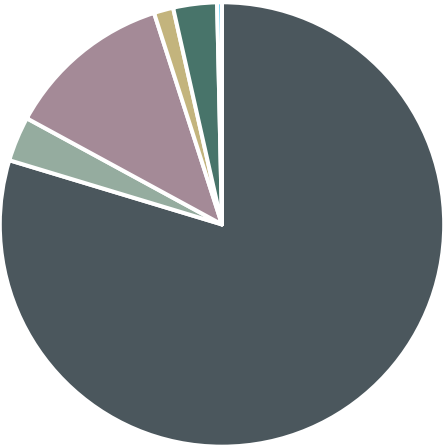
**Treatment - Flow:**  
Cost related to treating the  
flow component at the  
treatment plant

**Treatment - BOD:**  
Cost related to treating the  
BOD component at the  
treatment plant

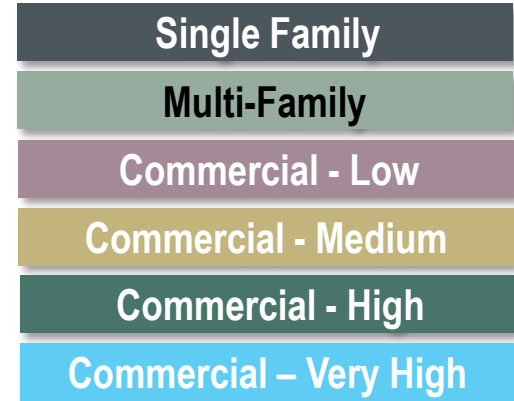
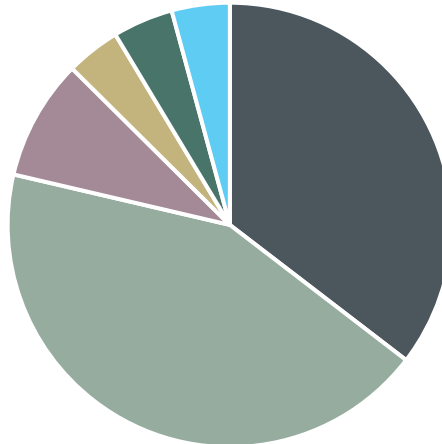


# Step 2: Develop Allocation Factors

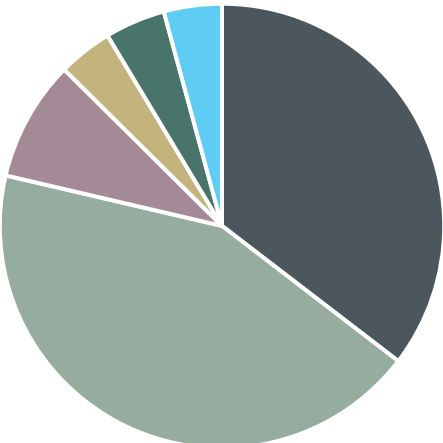
Customer - Accounts



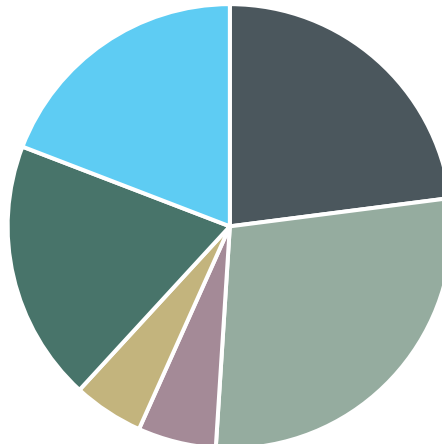
Collection – Sewer Flow



Treatment Flow – Sewer Flow



Treatment BOD – BOD Contribution



- **Single Family has 80% of accounts but only 35% of sewer flow**
- **Multi-Family is only 3% of the accounts but contributes over 40% of the sewer flow**
- **Commercial High and Very High has less than 4% of accounts and only 9% of sewer flow but contributes 38% of the BOD to the treatment plant**



## Step 3: Allocate Costs to Customer Classes

Class	2025 Rates at ATB	2025 Cost of Service	\$ Difference	% Difference
Single Family	\$ 752,844	\$ 573,113	\$ (179,731)	-23.9%
Multi-Family	622,185	576,776	(45,409)	-7.3%
Comm - Low	223,317	132,122	(91,195)	-40.8%
Comm - Medium	74,976	77,460	2,484	3.3%
Comm - High	69,528	209,140	139,612	200.8%
Comm - Very High	31,277	205,516	174,239	557.1%
<b>Total</b>	<b>\$ 1,774,128</b>	<b>\$ 1,774,128</b>	<b>\$ -</b>	<b>0.0%</b>

**Note:  $\pm 5\%$  of average is within cost of service**

### Paying More

- » Single Family
- » Multi-Family
- » Commercial - Low

### Within Cost of Service

- » Commercial - Medium

### Paying Less

- » Commercial - High
- » Commercial – Very High



# 5 Year Phase-In Scenario

Class	Annual Class Specific Rate Increase				
	2024	2025	2026	2027	2028
System-Wide Increase	10.00%	10.00%	3.50%	3.50%	3.00%
Constraint Maximum	20.00%	20.00%	7.00%	7.00%	6.00%
Single Family	9.90%	9.90%	3.50%	3.50%	3.00%
Multi-Family	9.90%	9.90%	3.50%	3.50%	3.00%
Comm - Low	5.00%	5.00%	1.50%	1.50%	1.00%
Comm - Medium	12.50%	12.50%	3.50%	3.50%	3.00%
Comm - High	20.00%	20.00%	7.00%	7.00%	6.00%
Comm - Very High	20.00%	20.00%	7.00%	7.00%	6.00%

- **Scenario constraints:**

- » Maximum increase twice ATB increase
- » Single Family and Multi-Family balance the revenue requirement

- **Results:**

- » Begins increasing equity between classes
- » Focuses on increasing costs for higher BOD customer classes



# Current Sewer Rates

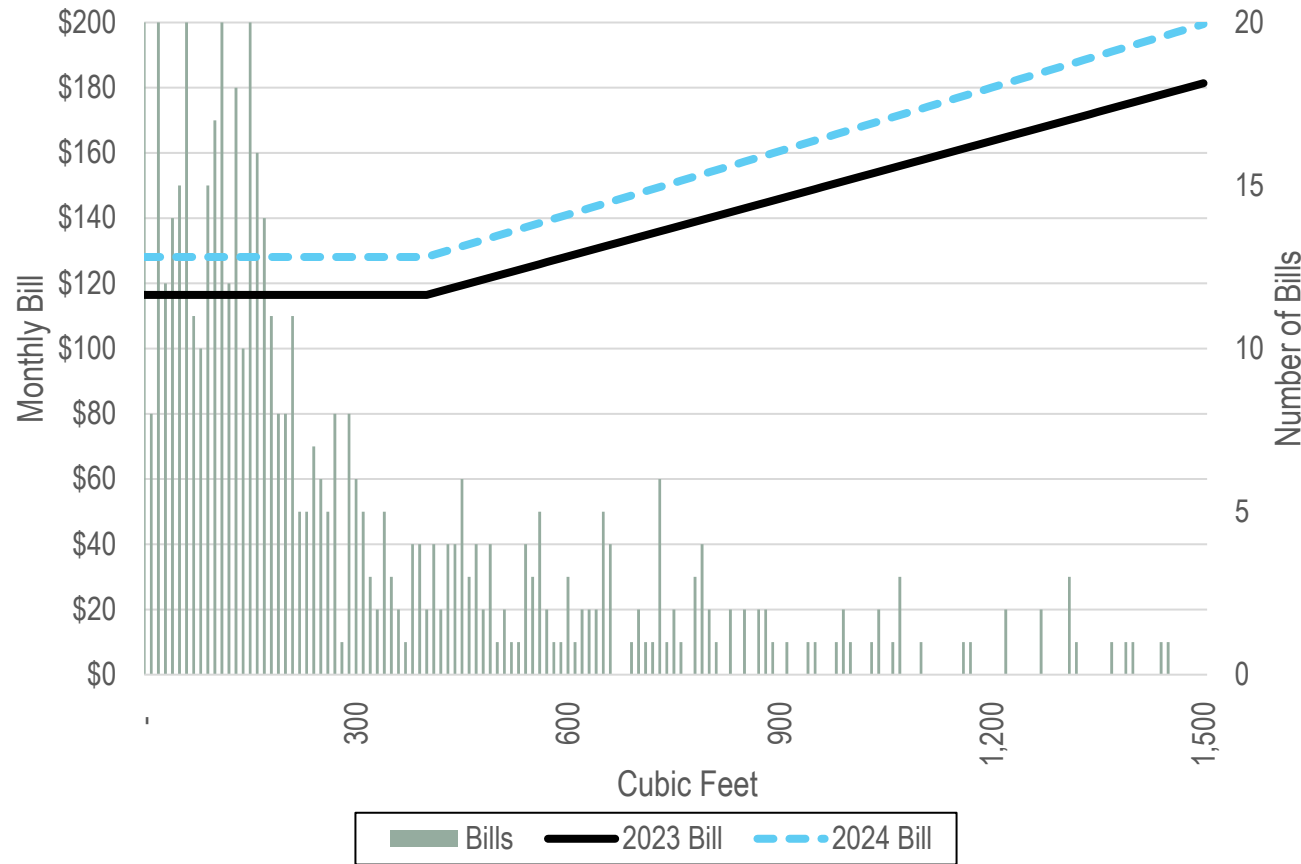
Charge	2023 Rate
<b>Fixed Charge</b>	
Single Family	\$116.46
Multi-Family (per unit)*	\$116.46
<b>Non-Residential</b>	
3/4"	\$116.46
1"	\$242.05
1 1/2"	\$360.65
2"	\$545.54
3"	\$782.72
4"	\$1,019.90
6"	\$1,684.03
<b>Variable Charge (after 400* cf Allowance)</b>	
Flow per cf	\$0.059
<b>BOD Concentration (charge per cf)</b>	
Medium	\$0.023
High	\$0.047
Very High	\$0.092

- **Fixed Charge**
  - » Base fee is charged to all customers
  - » Charge scales based on capacity available to the customer using water meter size
- **Variable Charge**
  - » Only applies to non-residential
- **BOD Charge**
  - » Based on commercial use category



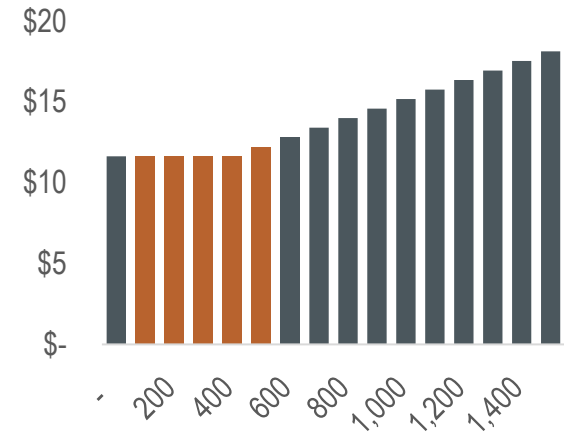
# Across the Board Rate Increases

## 3/4" Commercial – Low\* Bill Comparison



Charge	2023	ATB
Base	\$116.46	\$128.11
per cf after allowance	\$0.059	\$0.065

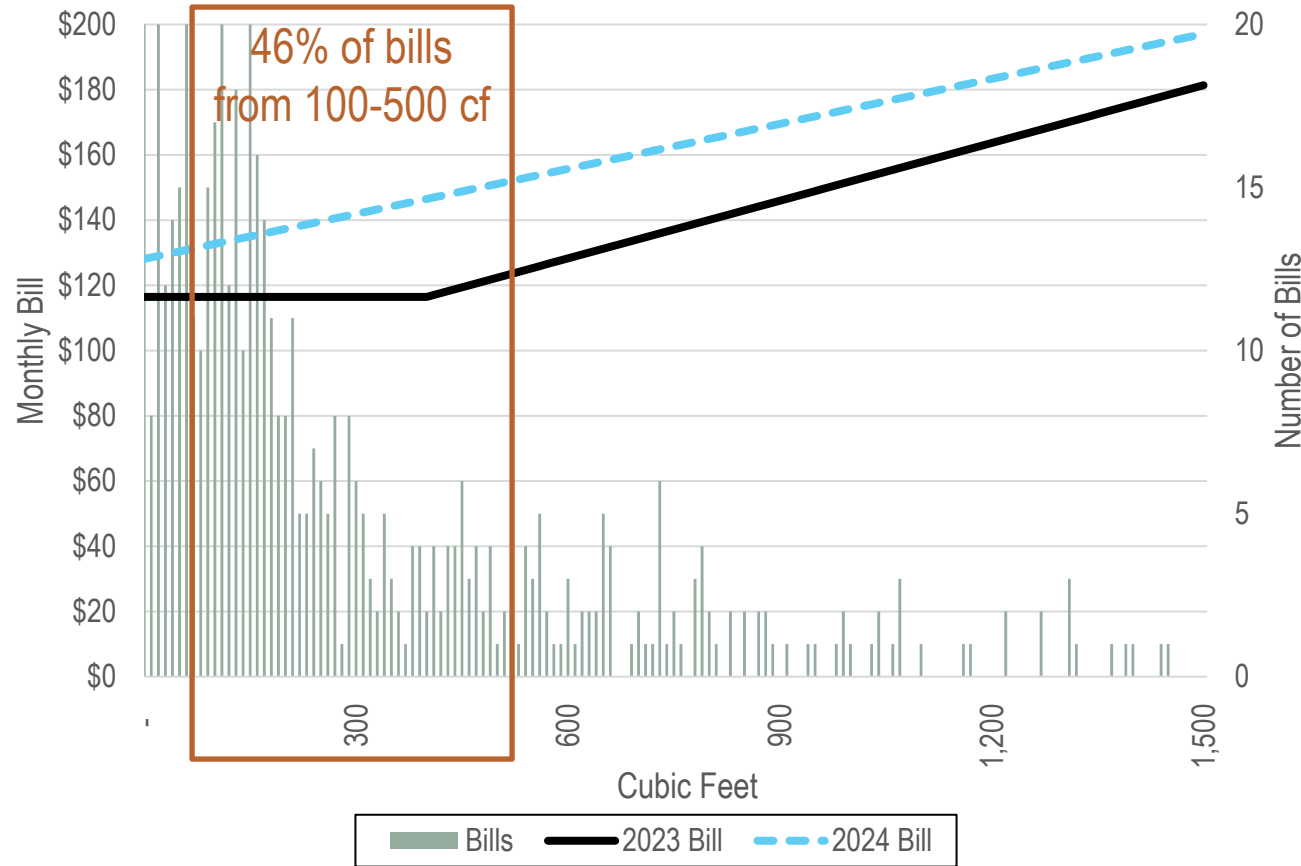
### Change in Monthly Bill





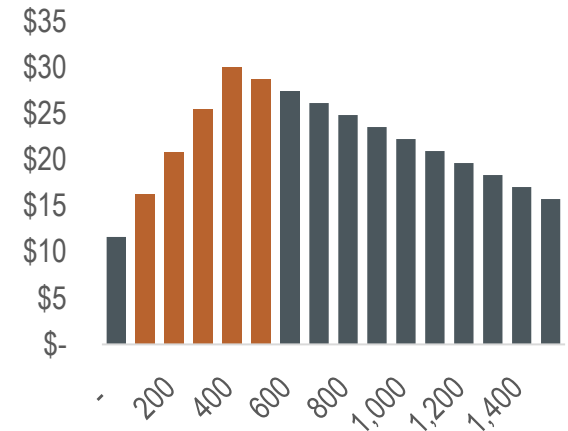
# Scenario 1: Fully Remove Allowance

3/4" Commercial – Low\* Bill Comparison



Charge	2023	Scenario 1
Base	\$116.46	\$128.11
per cf for all usage	\$0.059	\$0.046

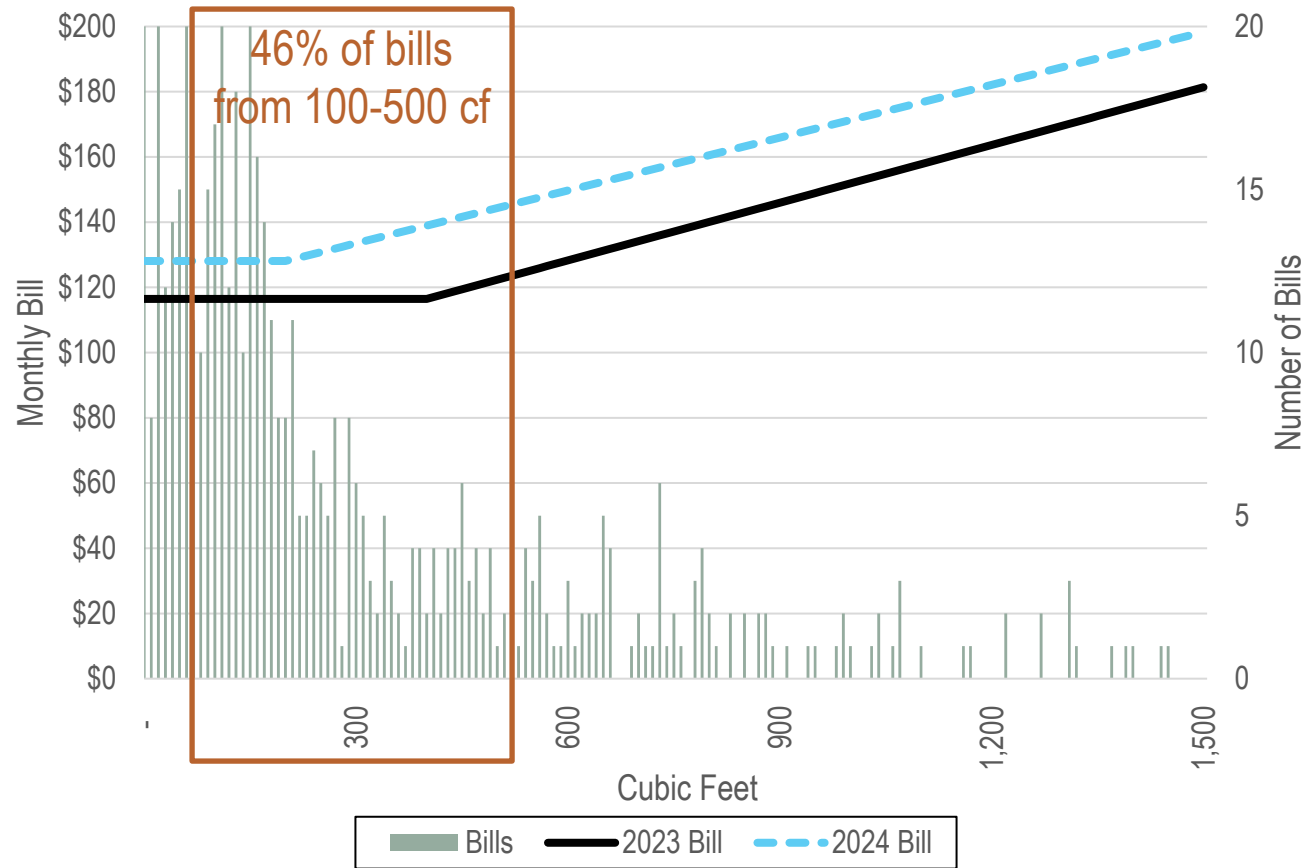
## Change in Monthly Bill





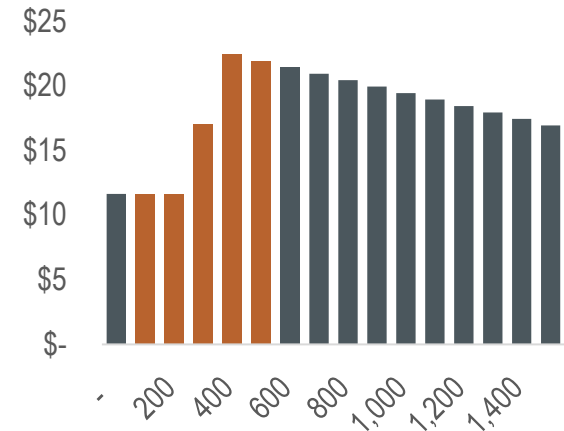
# Scenario 2: Half Removal of Allowance

3/4" Commercial – Low\* Bill Comparison



Charge	2023	Scenario 2
Base	\$116.46	\$128.11
per cf after allowance	\$0.059	\$0.054

Change in Monthly Bill







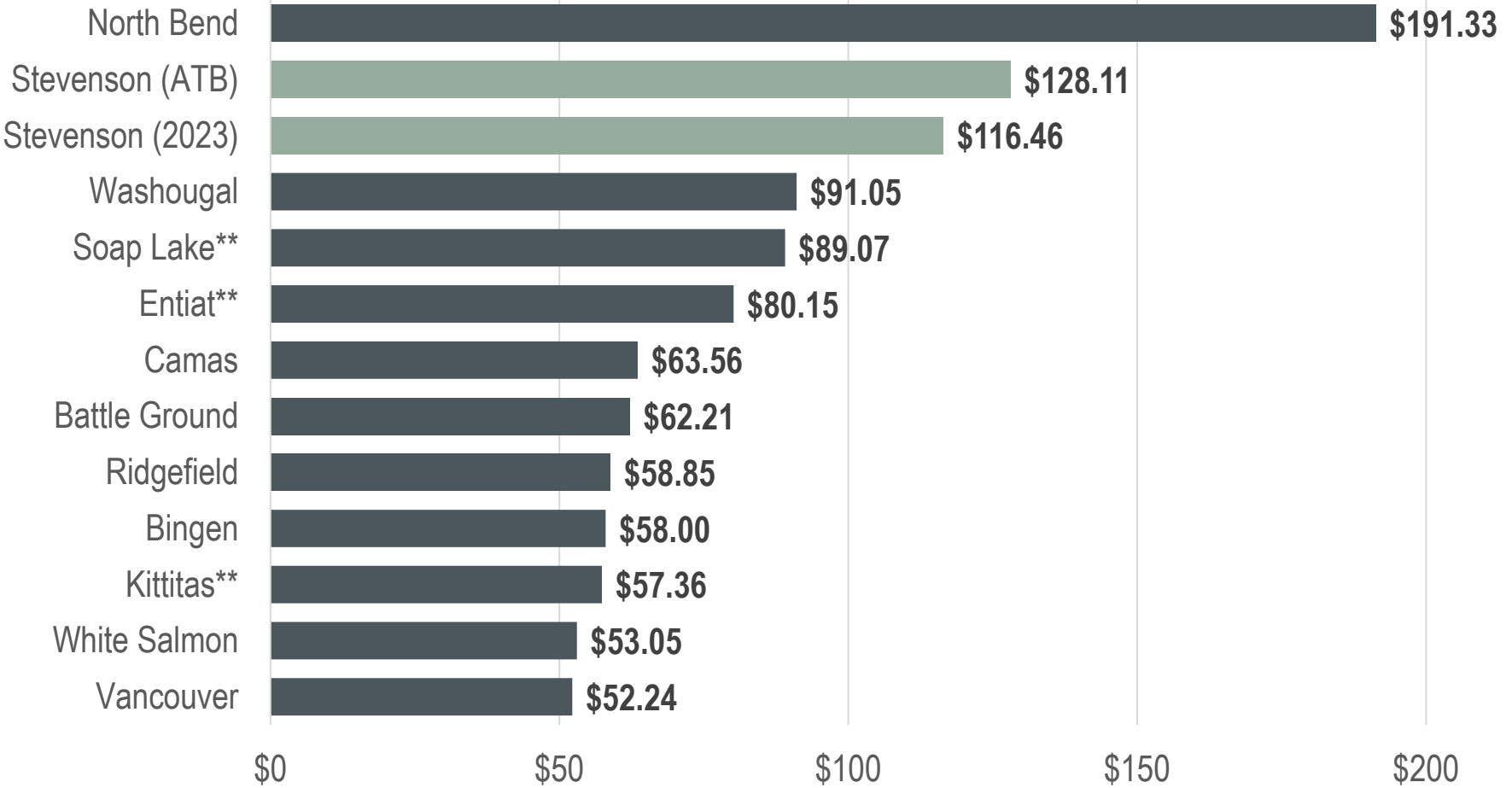
## 3/4" Commercial – Low Bills by Usage

Usage	2023	ATB	\$ Change	Scenario 1	\$ Change	Scenario 2	\$ Change
0	\$116.46	\$128.11	<b>\$11.65</b>	\$128.11	<b>\$11.65</b>	\$128.11	<b>\$11.65</b>
300	\$116.46	\$128.11	<b>\$11.65</b>	\$141.91	<b>\$25.45</b>	\$133.51	<b>\$17.05</b>
600	\$128.26	\$141.11	<b>\$12.85</b>	\$155.71	<b>\$27.45</b>	\$149.71	<b>\$21.45</b>
750	\$137.11	\$150.86	<b>\$13.75</b>	\$162.61	<b>\$25.50</b>	\$157.81	<b>\$20.70</b>
900	\$145.96	\$160.61	<b>\$14.65</b>	\$169.51	<b>\$23.55</b>	\$165.91	<b>\$19.95</b>
1200	\$163.66	\$180.11	<b>\$16.45</b>	\$183.31	<b>\$19.65</b>	\$182.11	<b>\$18.45</b>
1500	\$181.36	\$199.61	<b>\$18.25</b>	\$197.11	<b>\$15.75</b>	\$198.31	<b>\$16.95</b>

- **City Hall Statistics:**
  - » Winter: 235 cf
  - » Summer: 440 cf



# Single Family Sewer Monthly Rate Comparison\*





# Sewer Summary

- **Water Rate Increases:**
  - » 10% annual rate increase for 2024-2025
  - » Re-evaluate rates for 2026 depending on developer extension decision
- **Cost of Service Options:**
  - » Explore options to improve equity between class
    - Define duration and constrains of phasing in results
  - » Apply rates on a system-wide basis
- **Rate Design Options:**
  - » Across the Board rate increases
  - » Scenario 1: Fully eliminate the usage allowance
  - » Scenario 2: Reduce the usage allowance
  - » Other options to be explored?



# **System Development Charges**



# Overview

- **Revised Code of Washington (RCW) 35.92.025 grants Cities the authority to fix rates and charges for connecting to water & wastewater systems**
- **One time charge imposed on new development or expanded connection to system**
- **Represents a prorated share of the cost of providing system capacity**
- **Based on cost of system infrastructure investment**
  - » Allows for both existing and future costs
- **May not be used to fund operation and maintenance costs**



# General Methodology

$$\text{SDC} = \frac{\text{Existing Cost Basis} + \text{Future Cost Basis}}{\text{Total System Capacity}}$$

## Existing Costs

- Existing assets (original cost)
- Less: Contributions (developer/grants)
- Less: Net debt principal
- Plus: Interest (maximum 10 years)

## Future Costs

- Future capital
- Less: Repair and replacement projects



# Water SDC Calculation

$$\begin{array}{c}
 \$12,334 \\
 \text{per MCE}
 \end{array}
 =
 \frac{
 \begin{array}{c}
 \text{Existing Cost Basis:} \\
 \$9.5 \text{ million}
 \end{array}
 +
 \begin{array}{c}
 \text{Future Cost Basis:} \\
 \$11.4 \text{ million}
 \end{array}
 }{
 \begin{array}{c}
 \text{Total System Capacity:} \\
 1,695 \text{ MCEs}
 \end{array}
 }$$

- **Maximum \$12,334 per Meter Capacity Equivalent (MCE\*)**

Fixture Units	Residential Charge
5/8" : < 25 Fixture Units	\$8,223
3/4" : < 55 Fixture Units	\$12,334
1" : < 130 Fixture Units	\$20,556

Meter Size	Charge
3/4"	\$12,334
1"	\$20,556
1 1/2"	\$41,113
2"	\$65,781
3"	\$123,339
4"	\$205,565
6"	\$411,130



# Sewer SDC Calculation by Component

<b>Flow SDC:</b> <b>\$5,966</b> <b>per ERU*</b>	=	<b>Existing Cost Basis:</b> <b>\$4.0 million</b>	+	<b>Future Cost Basis:</b> <b>\$6.1 million</b>
		<b>Total System Capacity:</b> <b>1,681 ERUs</b>		

<b>BOD SDC:</b> <b>\$2,944</b> <b>per ERU*</b>	=	<b>Existing Cost Basis:</b> <b>\$5.0 million</b>	+	<b>Future Cost Basis:</b> <b>\$5.0 million</b>
		<b>Total System Capacity:</b> <b>3,403 ERUs</b>		

House Size	Residential Charge
< 1,500 SqFt	\$6,683
1,500 – 2,599 SqFt	\$8,910
>2,600 SqFt	\$11,607

Component	Non-Res Unit Charge
Flow (gallon)	\$14.88
BOD (pound)	\$5,666





# Non-Residential Examples

- **Medium – Laundry Mat – 4,100 cf per month**
  - » 1,000 gallons and 3.76 pounds of BOD per day
  - » \$36,184 (\$14,880 flow, \$21,304 for BOD)
- **High – Restaurant – 2,000 cf per month**
  - » 500 gallons and 5.42 pounds of BOD per day
  - » \$38,150 (\$7,440 flow, \$30,710 for BOD)
- **Very High – Brewery – 10,150 cf per month into the sewer system**
  - » 2,500 gallons and 52.16 pounds of BOD per day
  - » \$332,739 (\$37,200 flow, \$295,539 for BOD)



# SDC Summary

- **Water**
  - » Maximum \$12,334 per MCE
  - » Lower charge?
  
- **Sewer**
  - » Maximum \$8,910 per ERU
    - \$5,966 per flow ERU
    - \$2,944 per BOD ERU
  - » Lower charge?
  
- **Establish scalable residential options?**



**Input**

**Discussion**

**Next Steps**

# Thank you!

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