



**AGENDA**  
**PURCELLVILLE TOWN COUNCIL SPECIAL MEETING**  
**WEDNESDAY, MARCH 18, 2020, 7:00 PM**  
**TOWN HALL COUNCIL CHAMBERS**

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- 1. CALL TO ORDER OF BUDGET WORK SESSION**
- 2. PLEDGE OF ALLEGIANCE**
- 3. INVOCATION**
- 4. PRESENTATION OF FY 2021 BUDGET (D. Mekarski)**
  - a. Town Manager's Proposed Budget FY2021
- 5. CITIZEN/BUSINESS COMMENTS**
- 6. DISCUSSION /INFORMATIONAL ITEMS**
  - a. Review of Upcoming Budget Work Schedule
  - b. Review of Budget Process (oral discussion)
- 7. REVIEW OF UPCOMING BUDGET SCHEDULE (Town Council & Staff)**
- 8. ACTION ITEM(S)**
  - a. Adoption of New Utility Rate Design Methodology
- 9. ADJOURNMENT**



**STAFF REPORT**  
**INFORMATION/DISCUSSION ITEM**

Item # 4.a.

**SUBJECT:** Town Manager's Proposed Budget FY2021

**DATE OF MEETING:** March 18, 2020

**STAFF CONTACT(S):** David A. Mekarski, AICP Town Manager

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**STAFF REPORT**  
**ITEM**

Item # 5.a.

**SUBJECT:** Review of Upcoming Budget Work Schedule

**DATE OF MEETING:** March 18, 2020

**STAFF CONTACT(S):** David A. Mekarski, AICP Town Manager

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**ATTACHMENTS:**

**Schedule of Budget Work Sessions**

# UPCOMING MEETINGS

<u>Date (7 PM)</u>	<u>Meeting/Work Session</u>	<u>Topics for Discussion/Action</u>
Wed 3/18	Special Meeting/Budget Work Session	<ul style="list-style-type: none"> <li>Town Manager presents proposed Budget</li> </ul>
Tue 3/24	Regular Town Council Work Session	<ul style="list-style-type: none"> <li>Public Hearing for 2020 Property Tax rates (effective 1/1/20)</li> <li>Long-term Fiscal &amp; Debt Planning – GF2030-Davenport &amp; Stantec</li> </ul>
Thu 3/26	Special Meeting/Budget Work Session	<ul style="list-style-type: none"> <li>General Fund – Police Department and Police Facility</li> </ul>
Wed 4/1	Special Meeting/Budget Work Session	<ul style="list-style-type: none"> <li>General Fund – Administration, Finance, Information Technology, Community Development</li> <li>Parks &amp; Recreation Fund</li> </ul>
M-F 4/6-4/10	None	<ul style="list-style-type: none"> <li>Spring Break</li> </ul>
Tue 4/14	Regular Town Council Meeting	<ul style="list-style-type: none"> <li>Public Hearing for FY 2021 Budget and Master Tax &amp; Fee Summary</li> <li>Town Council to Adopt Real Estate Tax Rate, Fireman’s Field Tax District, Personal Property Tax Rate and PPTRA</li> </ul>
Wed 4/22	Special Meeting/Budget Work Session	<ul style="list-style-type: none"> <li>Capital Improvement Projects (CIP) – All Funds</li> <li>General Fund – Public Works – Capital Projects and Engineering</li> </ul>
Tue 4/28	Regular Town Council Meeting	<ul style="list-style-type: none"> <li>General Fund – Public Works – Admin and Maintenance</li> <li>Utility Fund – Public Works – Water and Wastewater</li> </ul>
Wed 5/6	Special Meeting/Budget Work Session	<ul style="list-style-type: none"> <li>Fall Back date – Topic is to be determined</li> </ul>
Tue 5/26	Regular Town Council Meeting	<ul style="list-style-type: none"> <li>Public Hearing for Year End Budget Amendment (if needed)</li> <li>Town Council to Adopt FY 2021 Operating Budget, Adoption/Appropriation Resolution, Master Tax &amp; Fee Summary and Utility Rates</li> </ul>
Tue 6/9	Regular Town Council Meeting	<ul style="list-style-type: none"> <li>Fall Back date to Adopt FY 2021 Budget and Master Tax &amp; Fee Summary</li> </ul>



**STAFF REPORT**  
**INFORMATION/DISCUSSION ITEM**

Item # 5.b.

**SUBJECT:** Review of Budget Process (oral discussion)

**DATE OF MEETING:** March 18, 2020

**STAFF CONTACT(S):** David A. Mekarski, AICP, Town Manager  
Liz Krens, Director of Finance

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## **STAFF REPORT** **ACTION ITEM**

Item # 6.a.

**SUBJECT:** Adoption of New Utility Rate Design Methodology

**DATE OF MEETING:** March 18, 2020

**STAFF CONTACT(S):** David A. Mekarski, AICP, Town Manager

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### **SUMMARY and RECOMMENDATIONS:**

At the November 20, 2019 Town Council Work Session on the water and sewer rate study, Stantec proposed three different alternatives as their recommendations to change our current seventeen-tier water rate structure to a new structure that would provide long-term sustainability by addressing four key objectives, including rate equity, stability, conservation and simplicity. While we did not have full Council representation at the work session, the general consensus was toward adopting Alternative C.

Alternative C simplifies our water rate system into two classifications; single family and non-single family, which includes all other users. The structure provides a water fixed charge, which is scaled based on meter size (based on average use) and has a water volume metric charge which provides for single family residential four inclining tiers (based on data analysis) and for non-single family with four inclining tiers (tiered by meter size). For our sewer customers, the new system includes a sewer fixed charge, which is scaled based on meter size (based on average use) and a sewer volumetric charge, which is based on a uniform rate. Alternative C provides a transition toward ensuring that our water and sewer rates are consistent with the cost of service for water production, distribution, and sewage treatment. Please see slides numbered 19 through 25 and slides 27, 28 and 30 of 66 (from Nov. 20 presentation).

### **BACKGROUND:**

The administration procured the services of Stantec during last year's budget cycle and began a series of work sessions last fall which were designed to walk the Council through a four step study approach of financial planning, cost of service analysis, rate design and ultimately, public communication. At this juncture, Stantec is walking the Council through rate design. Following selection of this alternative and the new methodology structuring water and sewer rates, the Town Council will be requested to adopt a water and sewer revenue sufficiency analysis and make a decision on adjusting water and sewer rates over the next decade.

**ISSUES:**

While the Council is being asked to select a rate methodology, the administration will not implement this methodology until a final decision is made regarding the revenue sufficiency analysis and how rates would be incrementally increased over the next decade to provide for structural balance within the utilities. Other timing factors include public hearing requirements, bi-monthly usage and bill cycles, and MUNIS utility go-live schedule.

**CORRELATION TO STRATEGIC INITIATIVES:**

This item is consistent with two Strategic Initiative Tier 1 items: Promote Community and Economic Well-Being (-Prepare a resource management plan that will address current and future Purcellville water and wastewater needs, including a plan on how to build a bridge to the future) and Fund the Future (Design & implement a strategy that will permit Purcellville’s utilities program to function as a self-supporting enterprise account).

**CORRELATION TO ORGANIZATIONAL ASSESSMENT RECOMMENDATIONS:**

This item aligns with recommendation 47, Conduct a utility rate study and move toward a simplified rate structure.

**BUDGET IMPACT:**

The selection of a methodology does not provide any impact to the budget, only when the Council delineates a specific revenue sufficiency analysis and rate charge will budgetary impacts be evident.

**MOTION(S):**

I move that Purcellville Town Council accept Stantec’s recommendation for a new water and sewer rate structure simplifying our seventeen-tier water rate structure to a two group system (single family, non-single family) with a water fixed charge scaled based on meter size (based on average use) and a water volumetric charge based on Alternative C, which provides for single family residential users four inclining tiers (based on data analysis) and for non-single family users, four inclining tiers (tiered by meter size).

Be it further provided that the sewer fixed charge for all customers would be scaled based on meter size (based on average use) with a sewer volumetric charge (based on a uniform rate).

Under this alternative methodology to be implemented with future fiscal year rate changes both our water and sewer customers would be transitioning toward a cost of service methodology ensuring future equity and structural balance to implement a strategy that will permit Purcellville’s utilities program to function as a self-supporting enterprise account.

**ATTACHMENTS:**

**Town Manager and Stantec Presentation from November 20, 2019**

Preface  
Comments from Town Manager

# The Challenge of Structural Balance in Perspective

The Town annually requires a total of \$3,500,000 to achieve structural balance for both Water and Sewer Enterprise Accounts

2023 Annual Sewer Debt Payment = \$2,300,000

Water CIP Requirements Annualized for the next 10 years = \$1,200,000

“Even if the Town had zero financial requirements in the Water CIP and Sewer Debt, the Town will still need an annual water/sewer rate increase of 4% in each fund to account for growth in O&M cost increases due to inflation.”

- David Hyder, Stantec

## Alternate General Fund Revenue Scenarios in Lieu of Water and Sewer Rates to Finance \$3,500,000 Annually

- A. Property Tax – 24 cents additional per household (totaling 44 cents)
- B. Property Tax (19 cents) + 2% meals tax (\$860,000)
- C. Property Tax (15 cents) + 2% meals tax (\$860,000) + residents pay for trash and recycling services (\$500,000)

It is clear that we cannot approach this challenge of structural balance at the margins as any other source of General Fund monies would create excessive burden on either tax payers and/or adversely diminish the delivery of services.

The following scenario from Stantec represents three rate alternatives to achieve equity over time and structural balance for the next decade.

- \*A) one large increase in a single year (FY21),
  - \*B) a large increase broken down over two years (FY21 and FY22) followed by a 4% fixed rate for the remainder of the decade,
  - C) a fixed and smooth rate each year for a ten year period.
- \* Following the one or two year large rate increase, subsequent years are followed by a 4% increase to keep pace with O&M and inflation.

After considerable deliberation by the entire management team, we are strongly recommending that the Council take a serious look at the one-time large increment in FY21, which represents little more than a \$1 dollar a day for that single year. For the remainder of the decade, only a 4% increase would be necessary which approximates to less than 25 cents a day to maintain structural balance.

Not only does this rate model achieve structural balance immediately, it provides a path towards rate equity, it also preserves the General Fund for many of the challenges that lie ahead, including the construction of a new police headquarters, the commitment to our employees on compensation and classification, as well as, the completion of the Council's strategic initiatives and the recommendations of the Novak Administrative Assessment.



Town of Purcellville, VA

Water and Sewer Rate Study

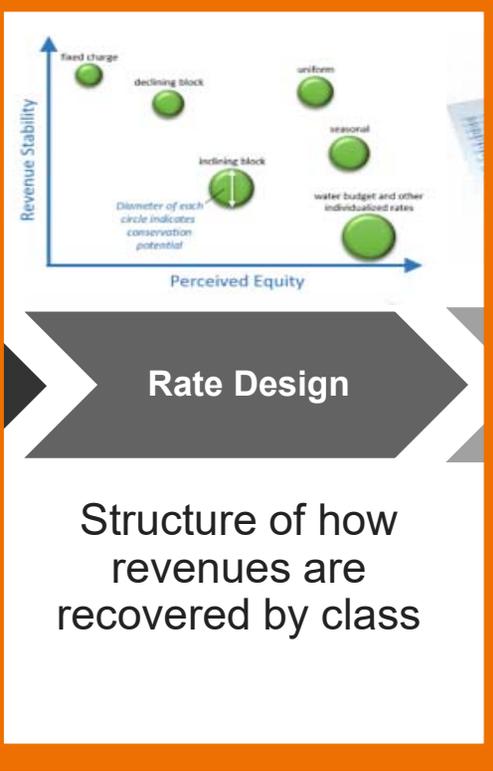
Rate Study Work Session

November 20, 2019



# Study Approach

Overview



Defines how much total revenue is needed each year



Defines proportional revenue recovery between customer classes

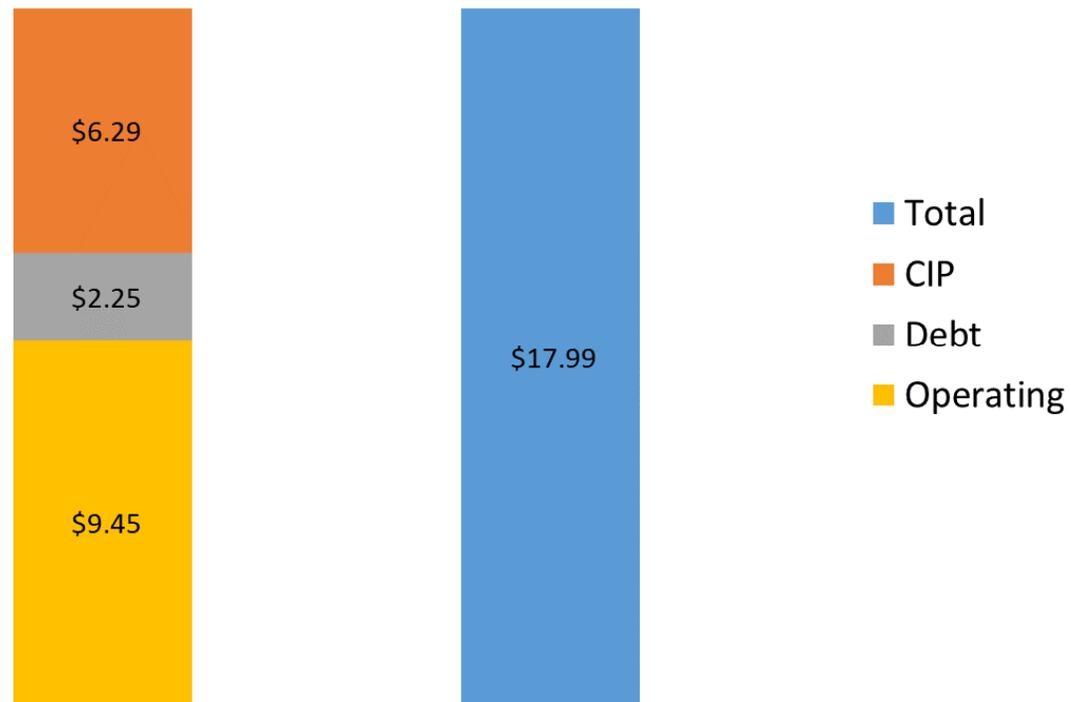


Structure of how revenues are recovered by class



Explains why

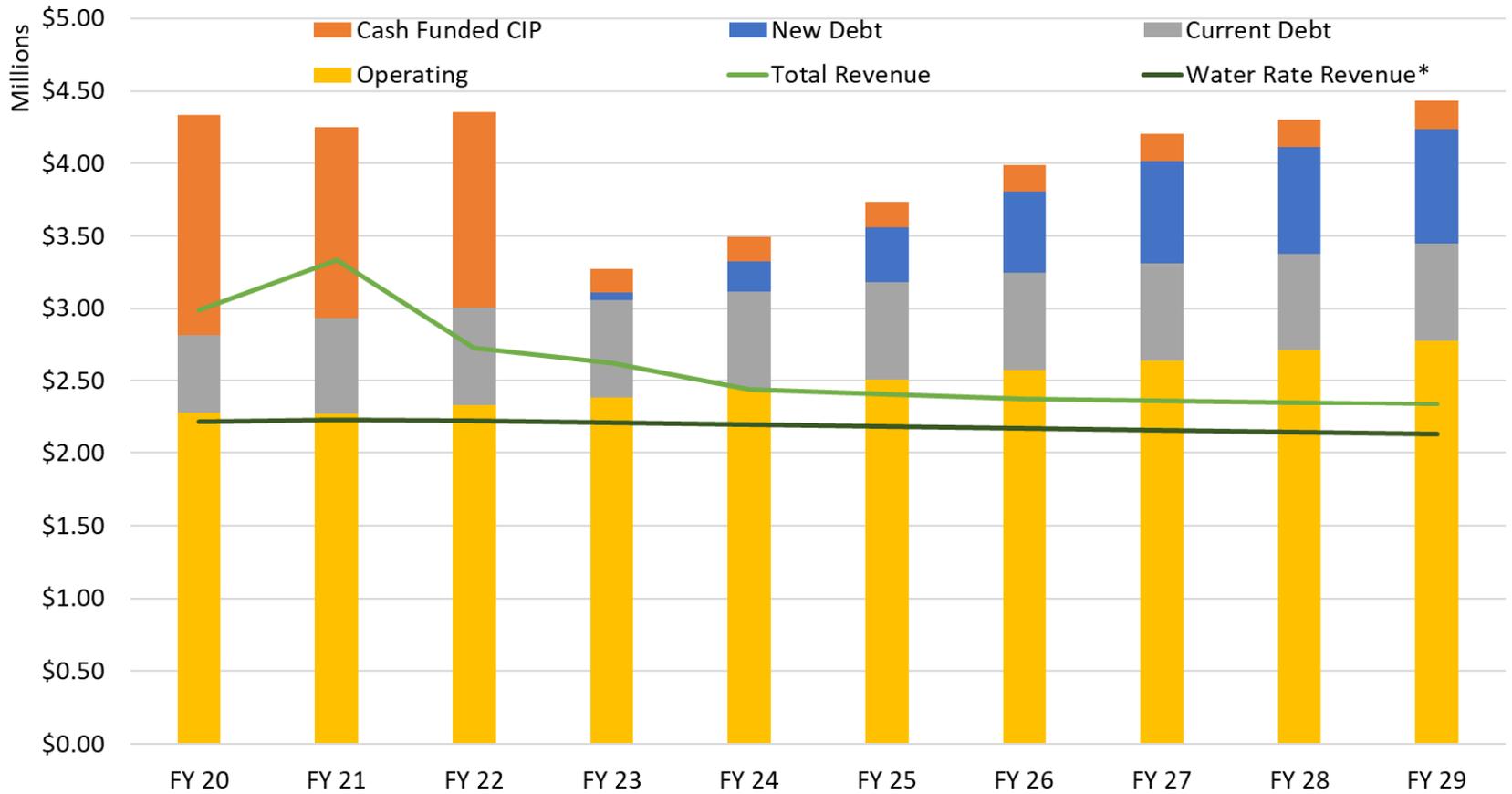
## FY 2020 Water Unit Cost Comparison per 1,000 gallons



## FY 2020 Sewer Unit Cost Comparison per 1,000 gallons

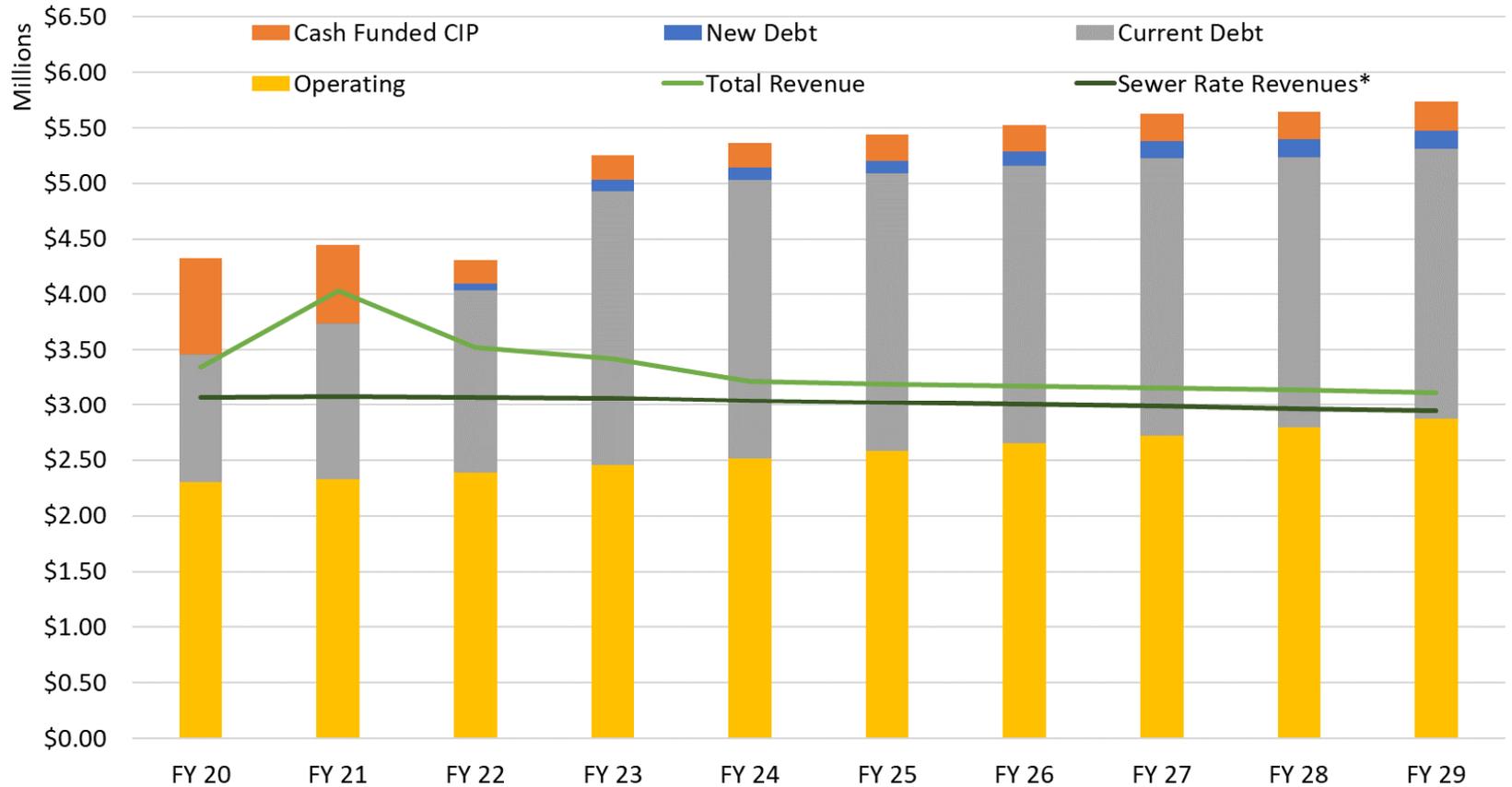


# Water Revenue Requirement by Type of Expense



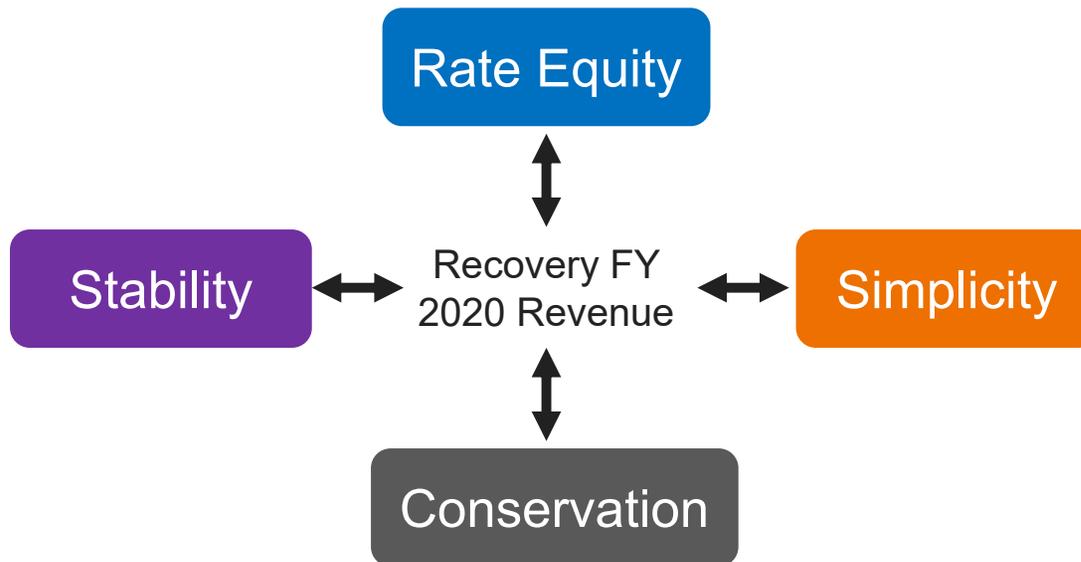
\*Water user rate revenues at current rates (recurring revenues)

## Sewer Revenue Requirement by Type of Expense



\* Sewer user rate revenues at current rates (recurring revenues)

# Objectives of Rate Design



Key Objective: **A sustainable rate structure**

**Goal:** Design rates that fairly recover revenue across and within customer classes, increase fixed cost recovery, and promote conservation.

# Current and Alternative Rate Structures

Single Family Residential  
Non-Single Family

## Water Fixed Charge

Current	Alternative A, B, & C
Scaled based on meter size	Scaled based on meter size (based on average use)

## Water Volumetric Charge

Current	Alternative A*	Alternative B & C**
17 inclining tiers	4 inclining tiers (based on data analysis)	4 inclining tiers (based on data analysis)
	Uniform rate	4 inclining tiers (tiered by meter size)

## Sewer Fixed Charge

Current	Alternative
Scaled based on meter size	Scaled based on meter size (based on average use)

## Sewer Volumetric Charge

Current	Alternative
Uniform rate	Uniform rate

All Customers

\*Full cost of service based rates  
\*\*Transition towards cost of service

# Fixed Charges

Level of Fixed Revenue		
	Water	Sewer
Bi-Monthly Fixed Fees	13.5%	11.0%
First 1,000 Gallons	5.2%	9.0%
<b>Total</b>	<b>18.7%</b>	<b>20.0%</b>

Recommendation: 20%

Meter Size	Current		Calculated	
	Scaling	Fixed Fee	Average Use*	Scaling
5/8"	1.0	\$15.00	8,000	1.0
3/4"	1.0	\$15.00	25,000	3.2
1"	2.5	\$37.50	32,000	4.0
1.5"	5.0	\$75.00	52,000	6.7
2"	8.0	\$119.99	95,000	12.0
3"	16.0	\$239.48	206,000	26.3
4"	25.0	\$374.97	356,000	43.3

\*Average bi-monthly use

## Bi-Monthly Fixed Charge Summary

Meter Size	Number of Water Meters*	Meter Equivalencies**	Current Water Fixed Charge	Alternative A&B Water Fixed Charge	Alternative C Water Fixed Charge	Current Sewer Fixed Charge	Proposed Sewer Fixed Charge
5/8"	2,777	1.0	\$15.00	\$13.33	\$14.75	\$15.00	\$15.23
3/4"	20	3.2	15.00	42.66	44.81	15.00	48.73
1"	44	4.0	37.50	53.62	59.80	37.50	61.25
1.5"	28	6.7	75.00	89.75	99.27	75.00	102.52
2"	26	12.0	119.99	160.62	177.66	119.99	183.47
3"	5	26.3	239.48	350.47	387.63	239.48	400.32
4"	2	45.3	374.97	604.26	668.33	374.97	690.20

\*Approximately same number of sewer meters by meter size.

\*\*Meter equivalencies calculated based on average billed usage.

## Alternative A, B & C Volumetric Rates

### Alt. A Water Rates Single Family

Usage Tier (kgal)	Water Rate (per kgal)
0 – 7	\$9.20
8 – 14	\$13.81
15 – 20	\$18.41
Over 20	\$23.01

### Alt. A Water Rates Non-Single Family

Usage Tier (kgal)	Water Rate (per kgal)
All Usage	\$9.47

Meter Size	Count	Tier 1 (kgal)	Tier 2 (kgal)	Tier 3 (kgal)	Tier 4 (kgal)
Single Family	2,585	0 – 7	8 – 14	15 – 20	Over 20
Non-Single Family					
5/8"	195	0 – 7	8 – 14	15 – 20	Over 20
3/4"	19	0 – 21	22 – 43	44 – 61	Over 61
1"	41	0 – 28	29 – 57	58 – 81	Over 81
1.5"	28	0 – 47	48 – 94	95 – 135	Over 135
2"	26	0 – 84	85 – 169	170 – 241	Over 241
3"	5	0 – 184	185 – 368	369 – 526	Over 526
4"	2	0 – 317	318 – 635	636 – 906	Over 906
6"	0	0 – 713	714 – 1,429	1,430 – 2,039	Over 2,039
Alternative B Rate (per kgal)		\$8.32	\$12.47	\$16.63	\$20.79
Alternative C Rate (per kgal)		\$7.65	\$13.39	\$17.22	\$21.04

# Current and Alternative Volumetric Rates

## Current Sewer Rates All Customers

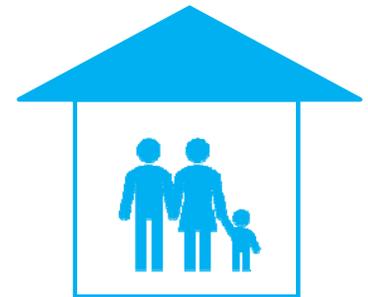
Usage Tier (kgal)	Sewer Rate (per kgal)
All Usage	\$15.95

## Calculated Sewer Rates All Customers

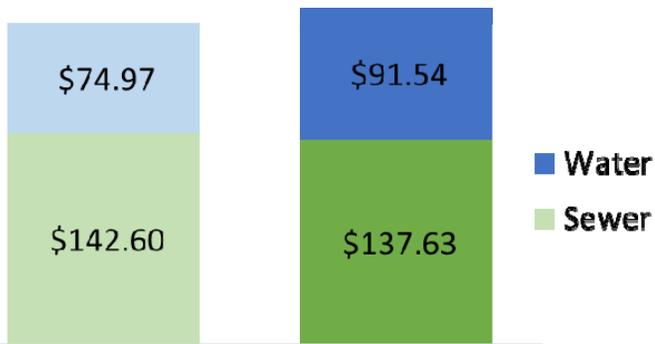
Usage Tier (kgal)	Sewer Rate (per kgal)
All Usage	\$15.30

# Bill Impacts: Single Family Customers

Customer with water and sewer service  
 Three-person (**average user**) household with some outdoor use  
 8,000 gallons bi-monthly (56<sup>th</sup> percentile)

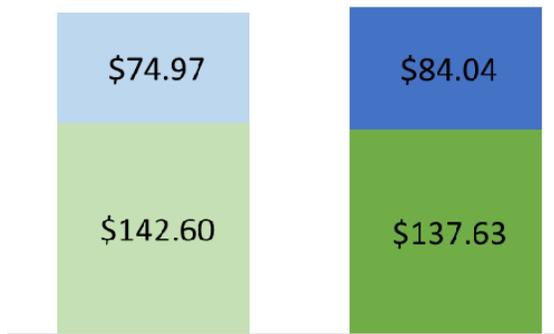


Alternative A



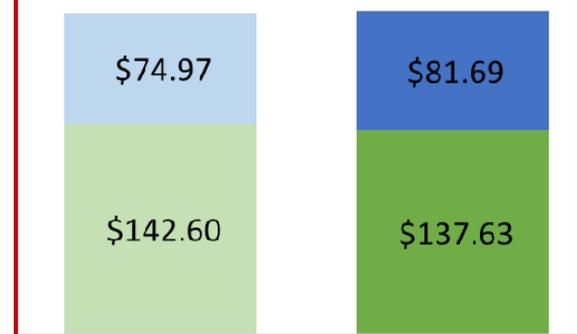
**Current**      **Calculated**  
 \$ Change: \$11.60  
 % Change: 5.33%

Alternative B



**Current**      **Calculated**  
 \$ Change: \$4.10  
 % Change: 1.88%

Alternative C

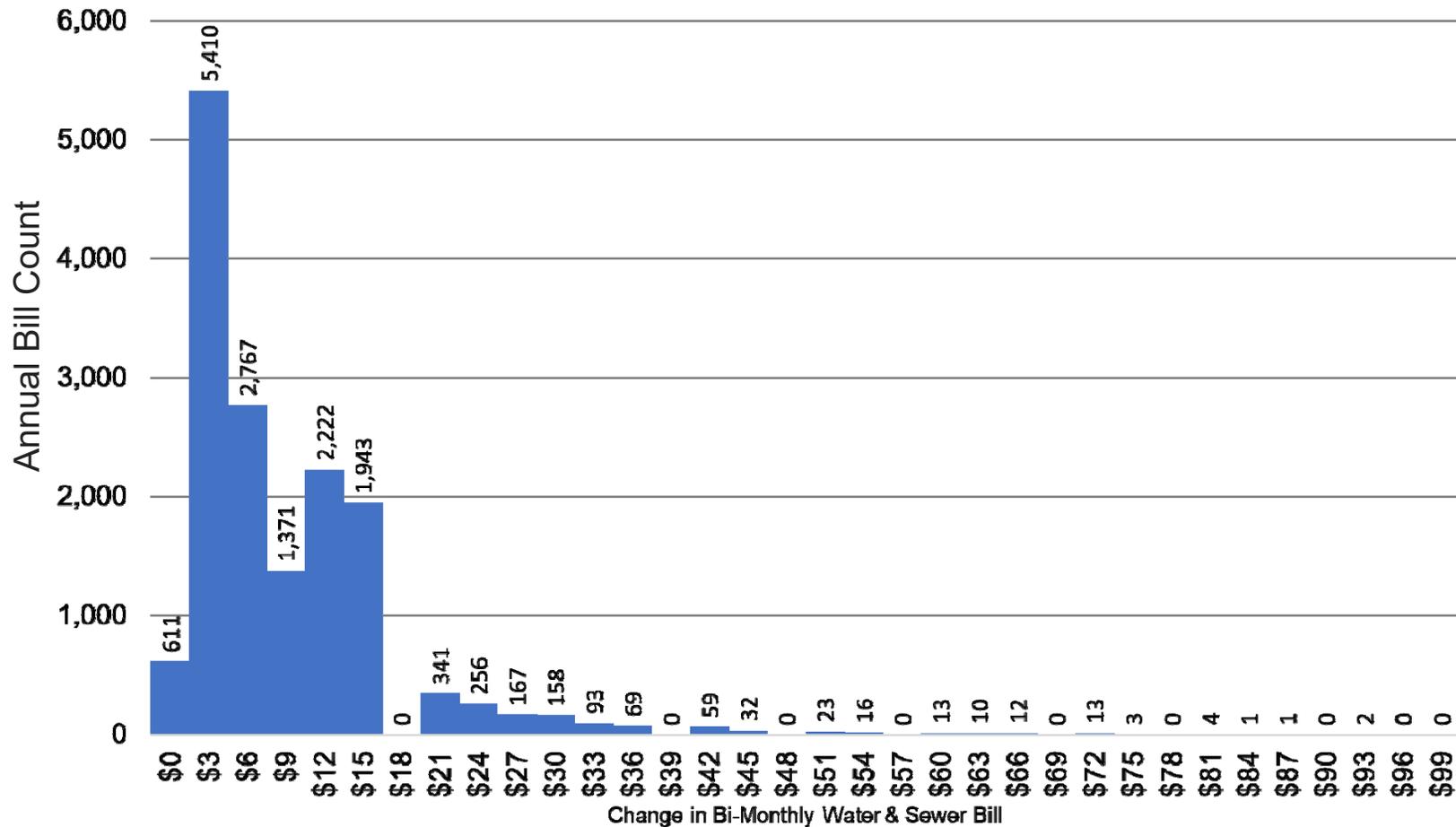


**Current**      **Calculated**  
 \$ Change: \$1.75  
 % Change: 0.80%

# Summary Single Family Customers Bill Impacts

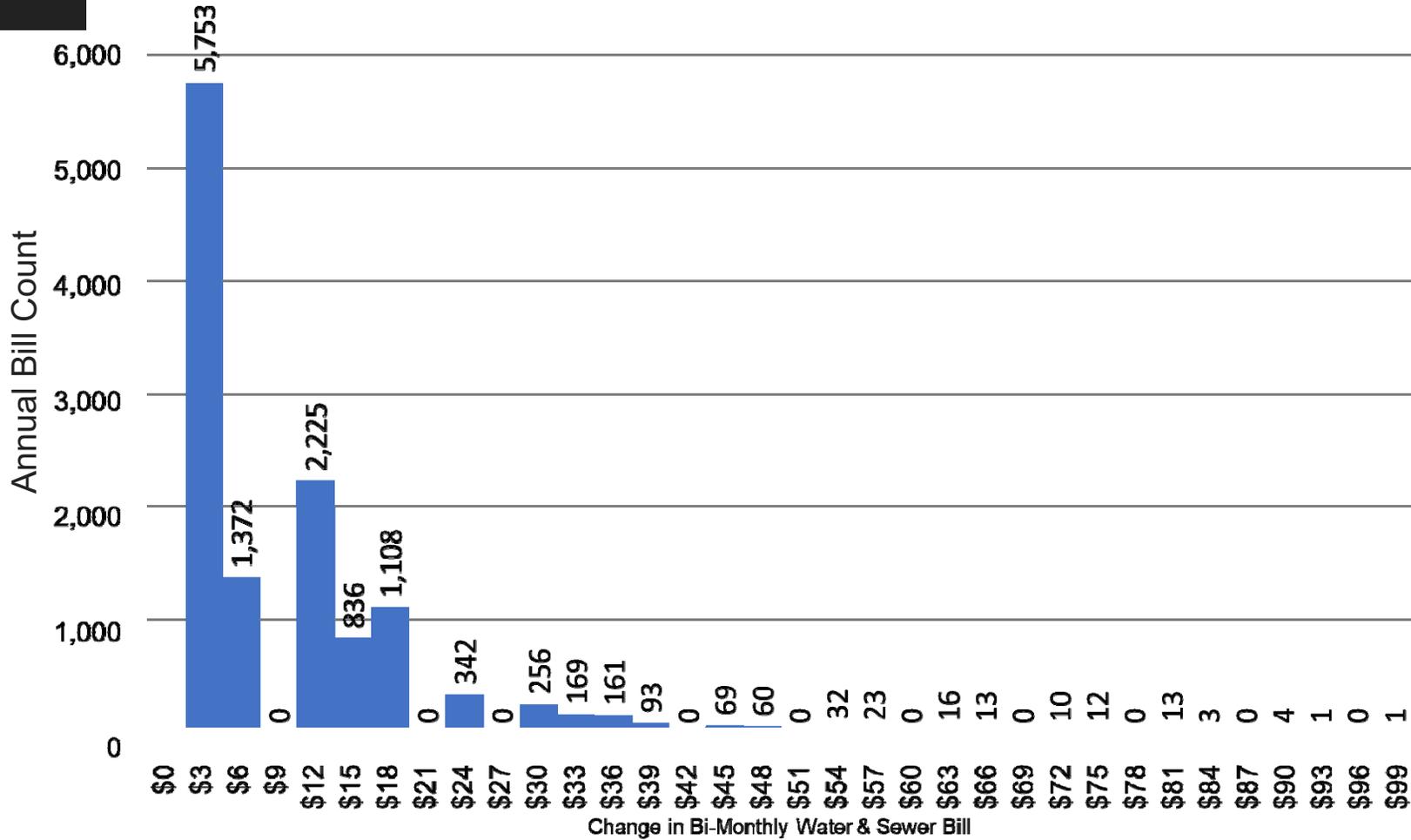
Alternative	Meter Size	Average Bi-Monthly Usage (1,000 gallons)	Current Bi-Monthly Bill	Alternative Bi-Monthly Bill	\$ Change in Bi-Monthly Bill	% Change in Bi-Monthly Bill	Count of Bills
A	5/8"	4	\$120.44	\$126.56	\$6.12	5.08%	1,076
	<b>5/8"</b>	<b>8</b>	<b>\$217.57</b>	<b>\$229.17</b>	<b>\$11.60</b>	<b>5.33%</b>	<b>1,527</b>
	5/8"	14	\$373.89	\$403.83	\$29.94	8.01%	463
	5/8"	20	\$544.05	\$606.09	\$62.04	11.40%	69
B	5/8"	4	\$120.44	\$123.04	\$2.60	2.16%	1,076
	<b>5/8"</b>	<b>8</b>	<b>\$217.57</b>	<b>\$221.67</b>	<b>\$4.10</b>	<b>1.88%</b>	<b>1,527</b>
	5/8"	14	\$373.89	\$388.29	\$14.40	3.85%	463
	5/8"	20	\$544.05	\$579.87	\$35.82	6.58%	69
C	5/8"	4	\$120.44	\$121.78	\$1.34	1.11%	1,076
	<b>5/8"</b>	<b>8</b>	<b>\$217.57</b>	<b>\$219.32</b>	<b>\$1.75</b>	<b>0.80%</b>	<b>1,527</b>
	5/8"	14	\$373.89	\$391.46	\$17.57	4.70%	463
	5/8"	20	\$544.05	\$586.67	\$42.62	7.83%	69

## Distribution of Bill Change: Single-Family Customers Alternative B



# Distribution of Bill Change: Single-Family Customers Alternative C

Bill Impacts

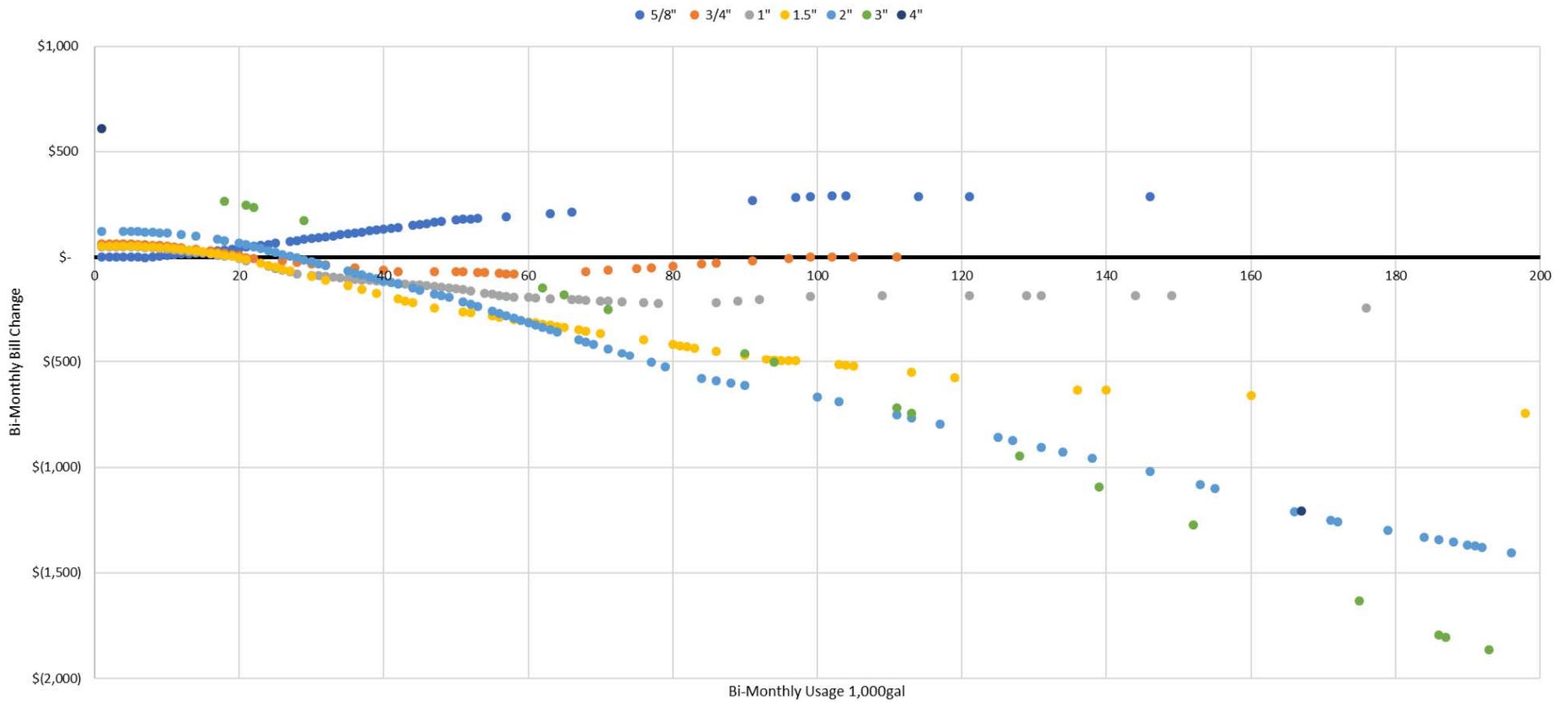


## Representative Non-Single Family Customers

Alternative	Meter Size	Average Bi-Monthly Usage (kgal)	Current Bi-Monthly Bill	Alternative Bi-Monthly Bill	\$ Change in Bi-Monthly Bill	% Change in Bi-Monthly Bill
A	5/8"	11	\$294	\$301	\$7	2.4%
	1.5"	91	\$3,019	\$2,446	(\$616)	-21.3%
	2"	587	\$27,146	\$14,884	(\$12,367)	-45.9%
	3"	531	\$23,707	\$13,904	(\$10,076)	-43.3%
	4"	277	\$10,951	\$8,155	(\$2,796)	-25.5%
B	5/8"	11	\$294	\$305	\$11	3.8%
	1.5"	91	\$3,019	\$2,524	(\$495)	-16.4%
	2"	587	\$27,146	\$19,125	(\$8,021)	-29.5%
	3"	531	\$23,707	\$15,411	(\$8,296)	-35.0%
	4"	277	\$10,951	\$7,837	(\$3,114)	-28.4%
C	5/8"	11	\$294	\$305	\$12	3.9%
	1.5"	91	\$3,019	\$2,543	(\$475)	-15.7%
	2"	587	\$27,146	\$19,647	(\$7,498)	-27.6%
	3"	531	\$23,707	\$15,613	(\$8,094)	-34.1%
	4"	277	\$10,951	\$7,718	(\$3,233)	-29.5%

# Distribution of Bill Change: Non-Single Family Customers Alternative C

Bill Impacts

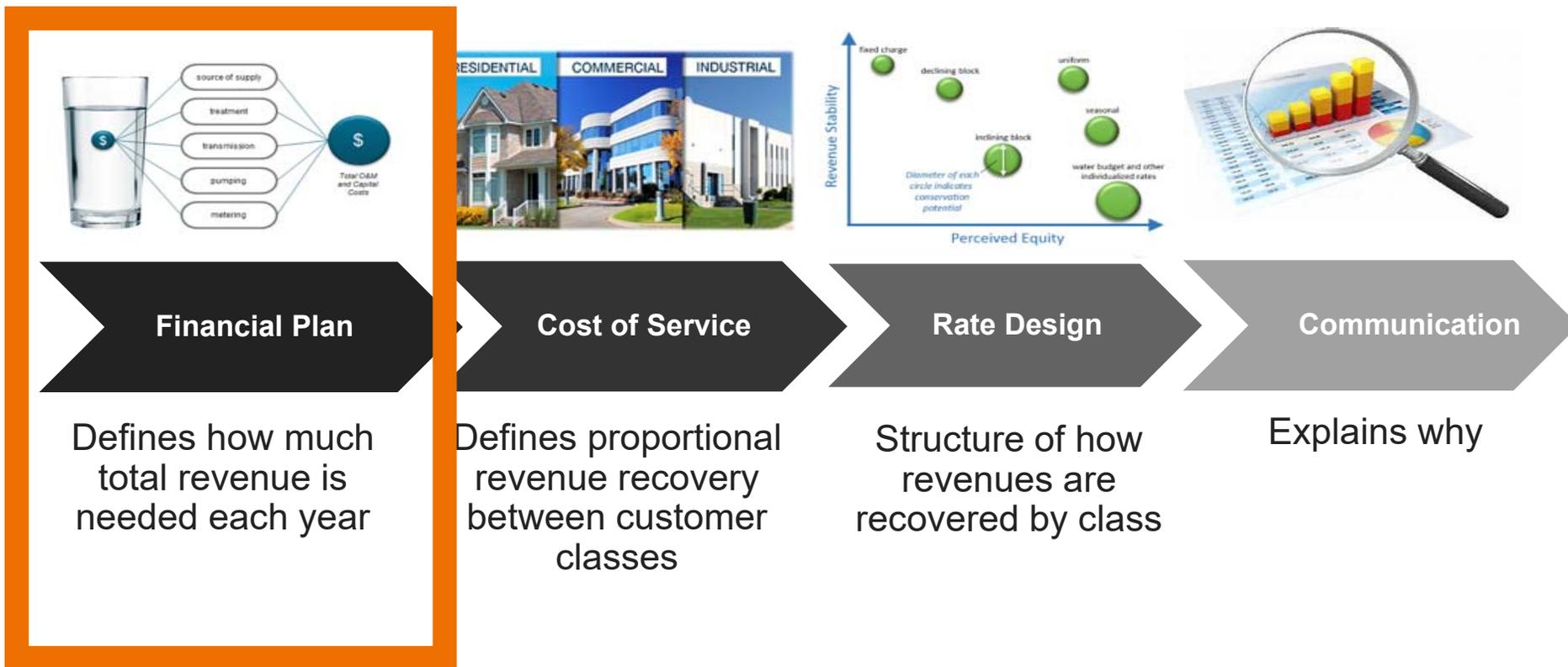


## Key Recommendations

- Consider the adoption of Alternative C rate option, which:
  - Corrects an unsustainable rate structure
  - Balances customer impacts with cost of service findings and rate equity
  - Enhances the transparency and understandability of rates
  - Promotes conservation for all customers

# Study Approach

Overview



## Financial Modeling Assumptions

Current Chargeback per Fund: \$493k

Rate Adjustments:

- 1% Increase in Water Rates = \$21,000 of additional revenue
- 1% Increase in Sewer Rates = \$32,000 of additional revenue

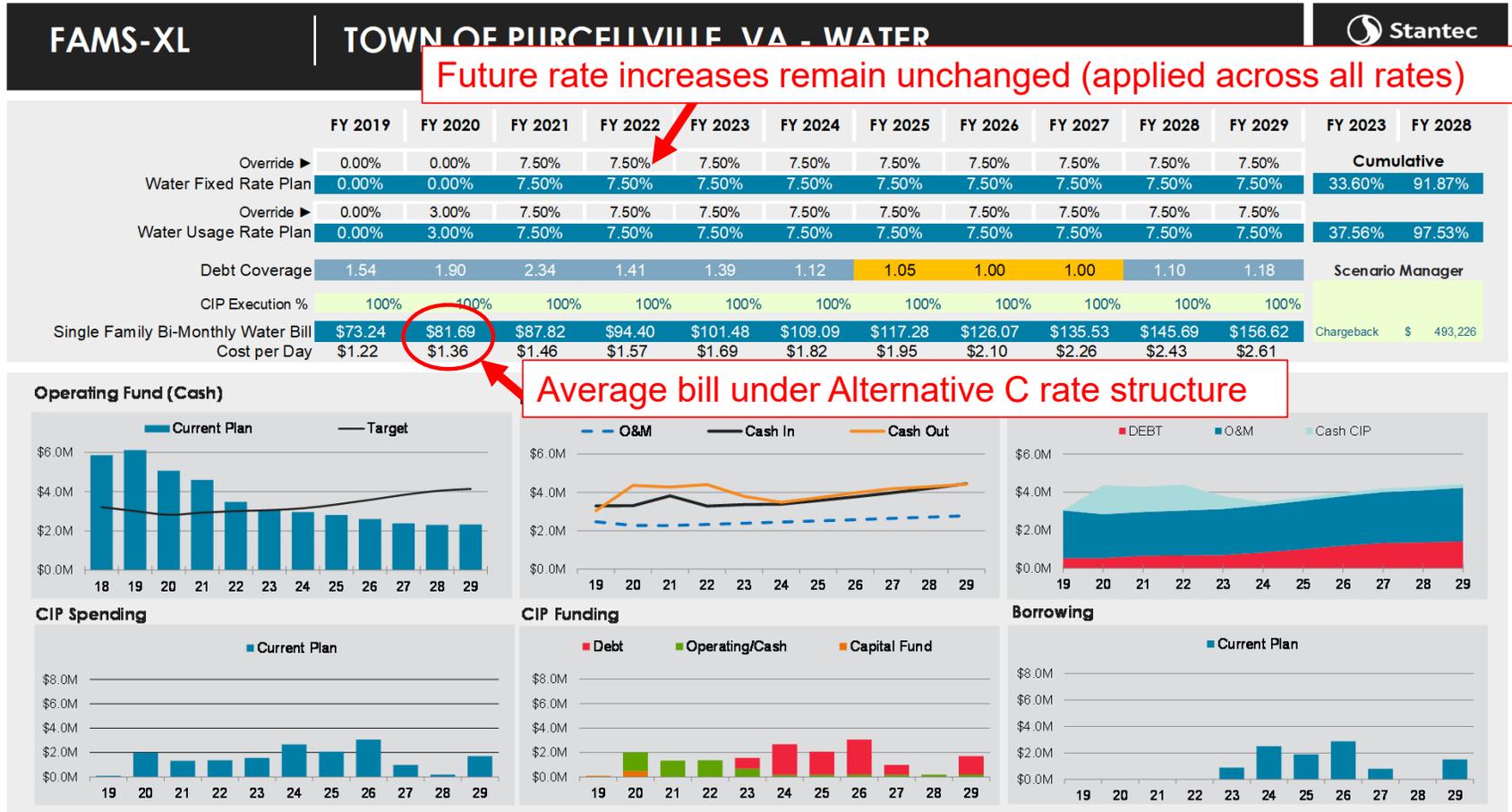
If Any Support from General Fund:

- 1% Increase in Meals Tax = \$430k
- 1 Cent Increase in Property Tax = \$141k

Water CIP was reduced per risk analysis presented by Public Works on 10/9/19

# Bringing it all Together – Water Revenue Sufficiency Analysis

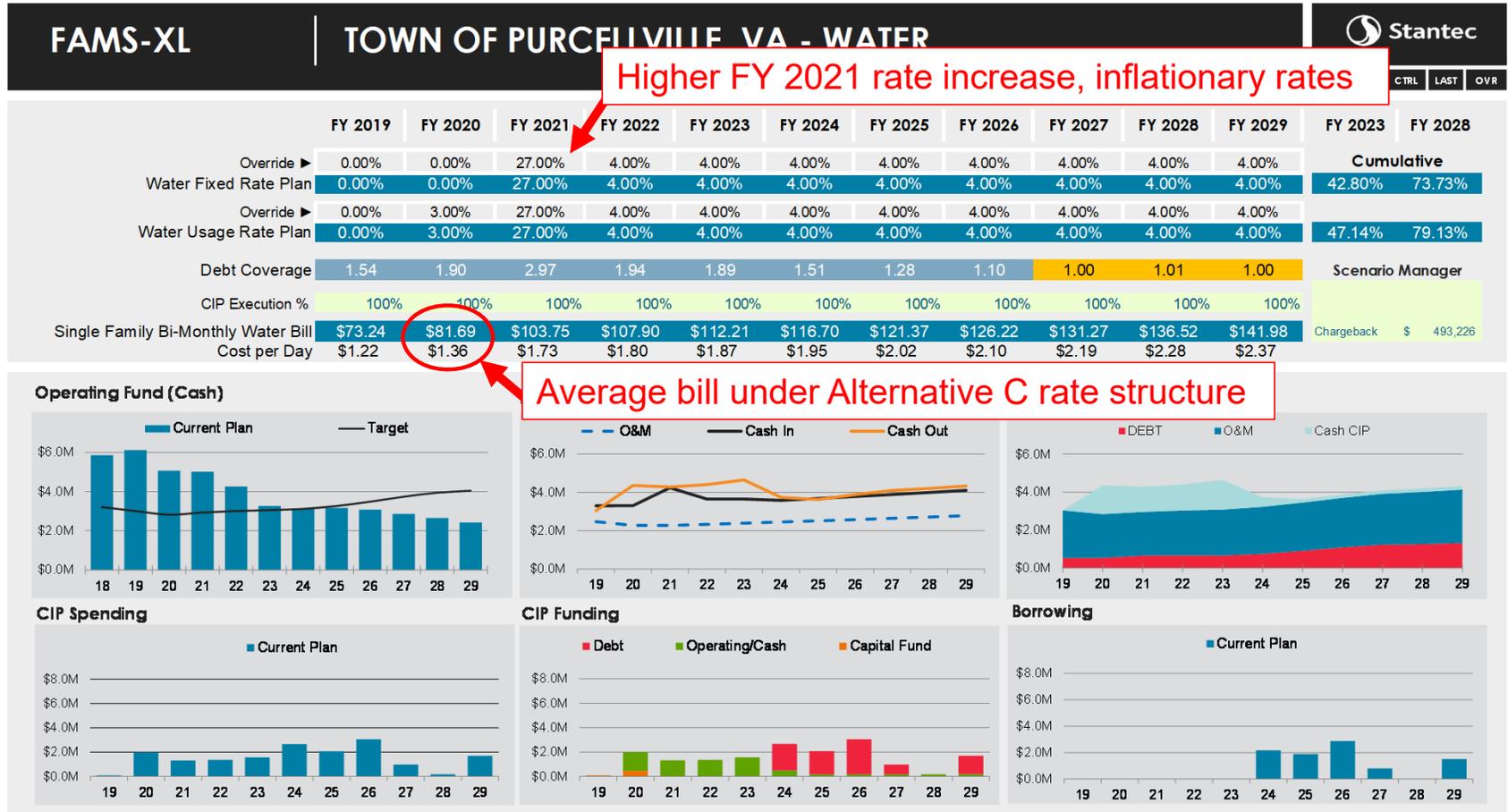
Summary



**Assumptions:**  
 Alternative C rate structure, Level Fixed and Usage increases beginning in FY21

# Bringing it all Together – Water Revenue Sufficiency Analysis

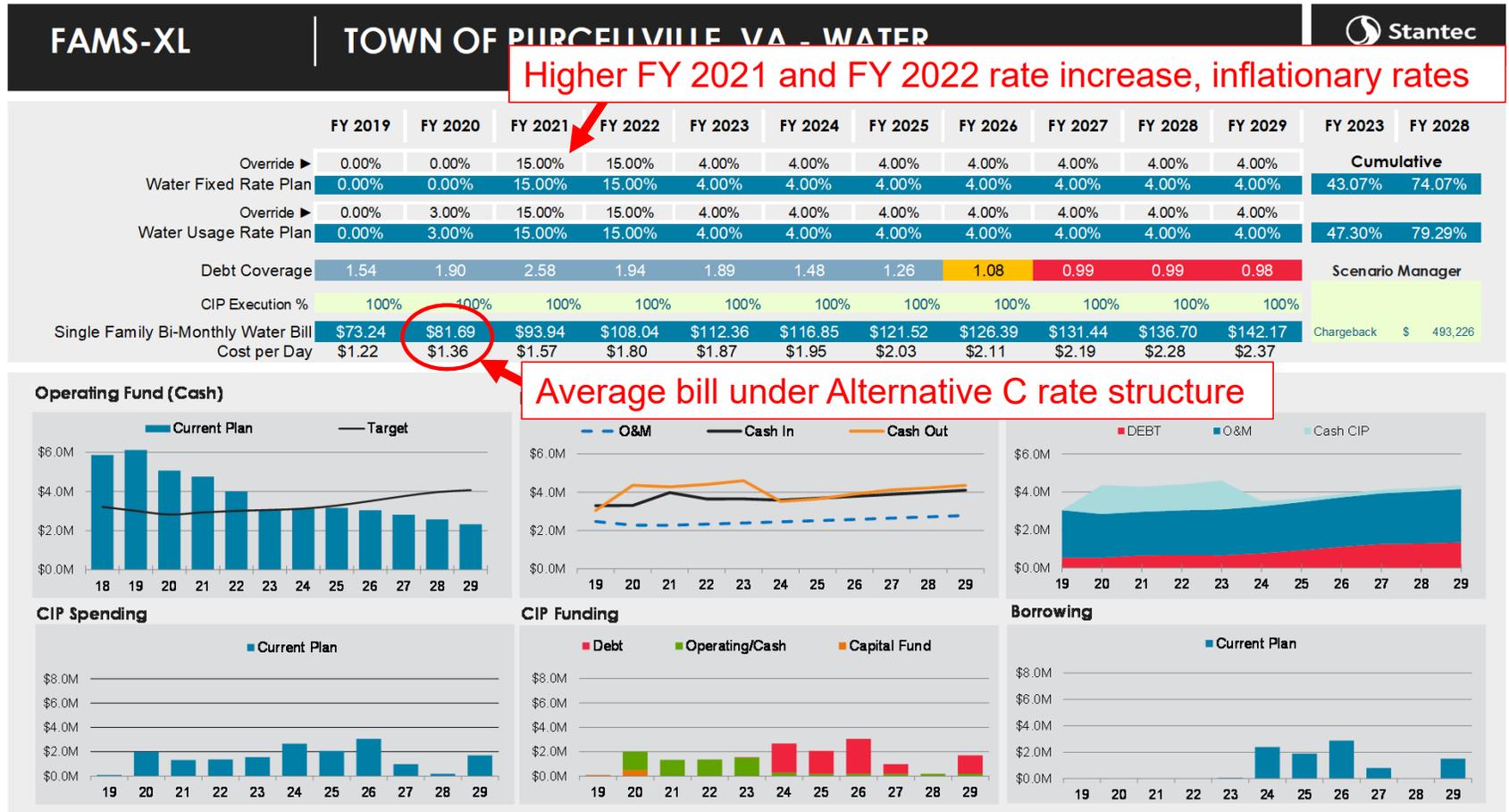
Summary



**Assumptions:**  
 Alternative C rate structure, Higher FY 2021 rate increase, Level inflationary Fixed and Usage increases beginning in FY22

# Bringing it all Together – Water Revenue Sufficiency Analysis

Summary

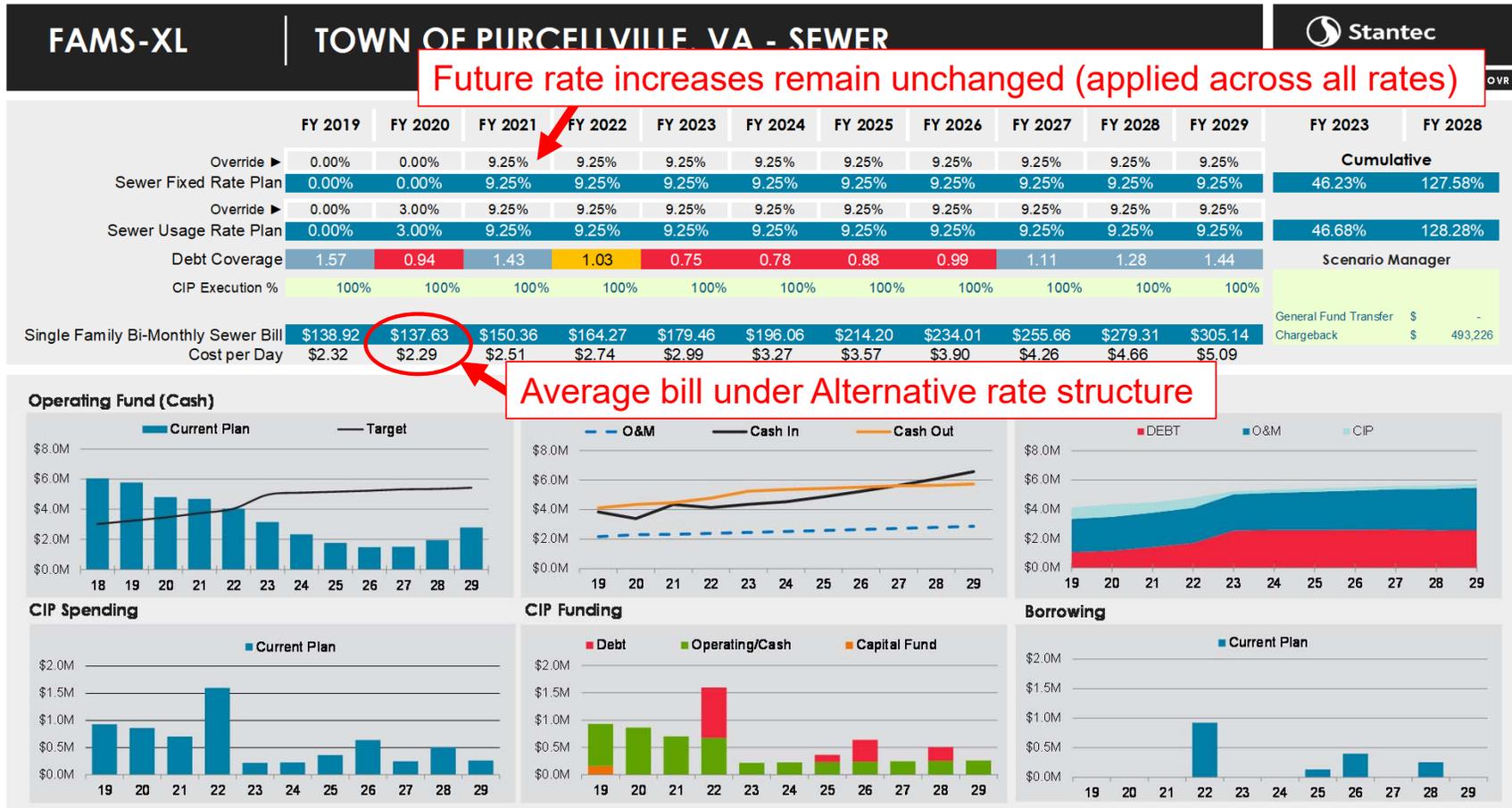


**Assumptions:**  
 Alternative C rate structure, Higher FY 2021 and 2022 rate increase, Level inflationary Fixed and Usage increases beginning in FY23

# Bringing it all Together – Sewer Revenue Sufficiency Analysis

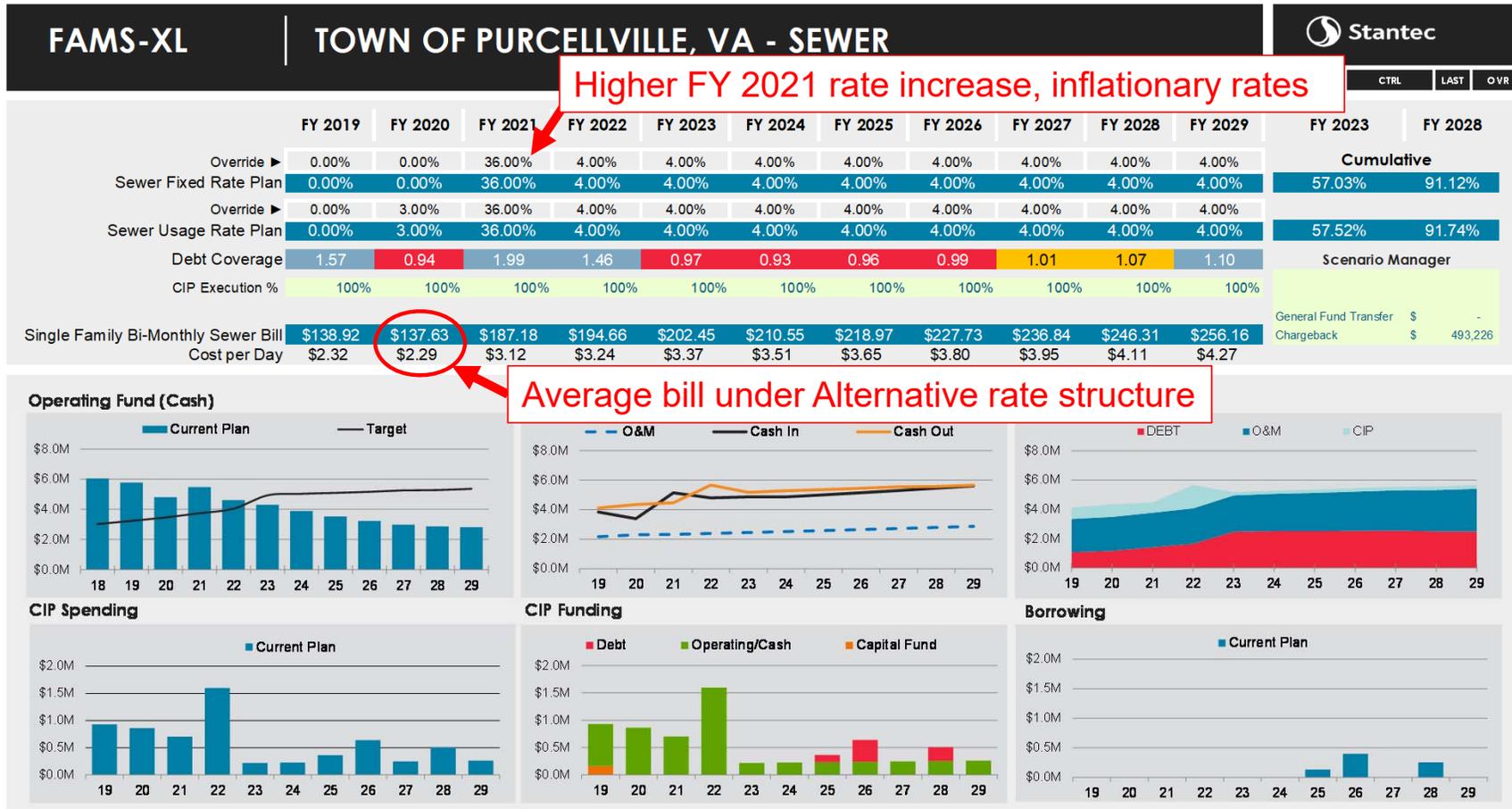
Summary

Assumptions: Alternative rate structure, Level Fixed and Usage Increases beginning in FY21



# Bringing it all Together – Sewer Revenue Sufficiency Analysis

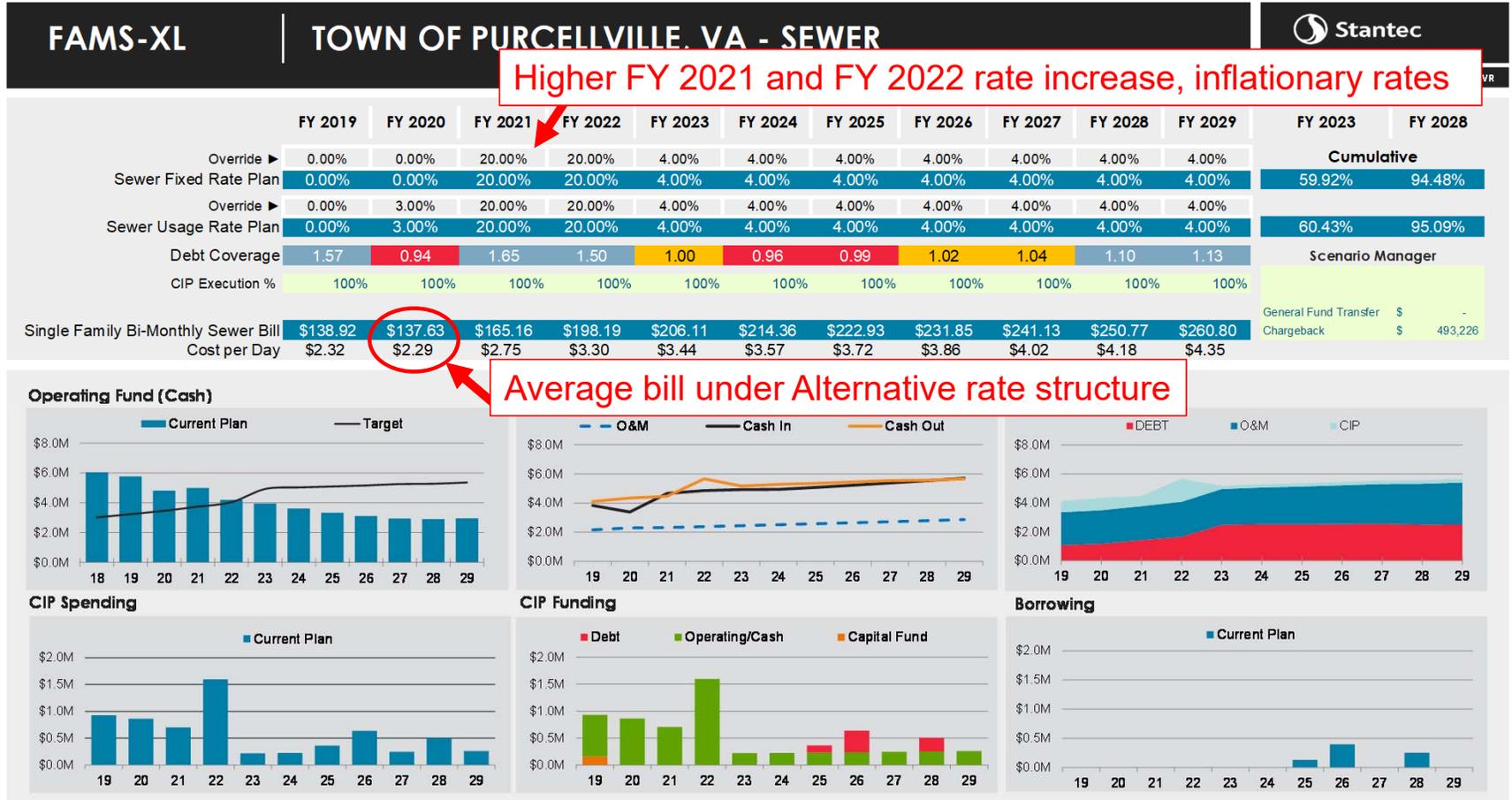
Summary



**Assumptions:**  
 Alternative rate structure, Higher FY 2021 rate increase, Level inflationary Fixed and Usage increases beginning in FY22

# Bringing it all Together – Sewer Revenue Sufficiency Analysis

Summary



**Assumptions:**  
 Alternative rate structure, Higher FY 2021 and 2022 rate increase, Level inflationary Fixed and Usage increases beginning in FY23

## Average Customer Bill Impact (8,000 gallons / bi-monthly period) Alternative C – Smooth Rate Plan

Summary

	<b>FY 20</b>	<b>FY 20</b>	<b>FY 21</b>	<b>FY 22</b>	<b>FY 23</b>	<b>FY 24</b>	<b>FY 25</b>
<b>Water</b>	\$74.97	\$81.69	\$87.82	\$94.40	\$101.48	\$109.09	\$117.28
<b>Sewer</b>	\$142.60	\$137.63	\$150.36	\$164.27	\$179.46	\$196.06	\$214.20
Bi-Monthly Bill	\$217.57	\$219.32	\$238.18	\$258.67	\$280.95	\$305.16	\$331.48
Change / Day		\$0.03	\$0.31	\$0.34	\$0.37	\$0.40	\$0.44
Change / Month		\$0.88	\$9.43	\$10.25	\$11.14	\$12.11	\$13.16
Change %		0.80%	8.60%	8.60%	8.61%	8.62%	8.62%

Change due to Rate Structure Change



## Average Customer Bill Impact (8,000 gallons / bi-monthly period) Alternative C – One-Year Rate Impact

Summary

	<b>FY 20</b>	<b>FY 20</b>	<b>FY 21</b>	<b>FY 22</b>	<b>FY 23</b>	<b>FY 24</b>	<b>FY 25</b>
<b>Water</b>	\$74.97	\$81.69	\$103.75	\$107.90	\$112.21	\$116.70	\$121.37
<b>Sewer</b>	\$142.60	\$137.63	\$187.18	\$194.66	\$202.45	\$210.55	\$218.97
<b>Total</b>	\$217.57	\$219.32	\$290.92	\$302.56	\$314.66	\$327.25	\$340.34
Change / Day		\$0.03	\$1.19	\$0.19	\$0.20	\$0.21	\$0.22
Change / Month		\$0.88	\$35.80	\$5.82	\$6.05	\$6.29	\$6.54
Change %		0.80%	32.65%	4.00%	4.00%	4.00%	4.00%

Change due to Rate Structure Change



## Average Customer Bill Impact (8,000 gallons / bi-monthly period) Alternative C – Two-Year Rate Impact

Summary

	<b>FY 20</b>	<b>FY 20</b>	<b>FY 21</b>	<b>FY 22</b>	<b>FY 23</b>	<b>FY 24</b>	<b>FY 25</b>
<b>Water</b>	\$74.97	\$81.69	\$93.94	\$108.04	\$112.36	\$116.85	\$121.52
<b>Sewer</b>	\$142.60	\$137.63	\$165.16	\$198.19	\$206.11	\$214.36	\$222.93
<b>Total</b>	\$217.57	\$219.32	\$259.10	\$306.22	\$318.47	\$331.21	\$344.46
Change / Day		\$0.03	\$0.66	\$0.79	\$0.20	\$0.21	\$0.22
Change / Month		\$0.88	\$19.89	\$23.56	\$6.13	\$6.37	\$6.63
Change %		0.80%	18.14%	18.19%	4.00%	4.00%	4.00%

Change due to Rate Structure Change

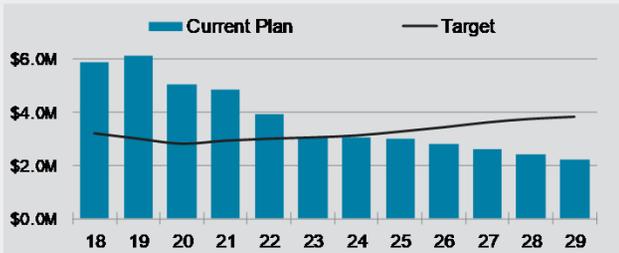


# USDA Funding

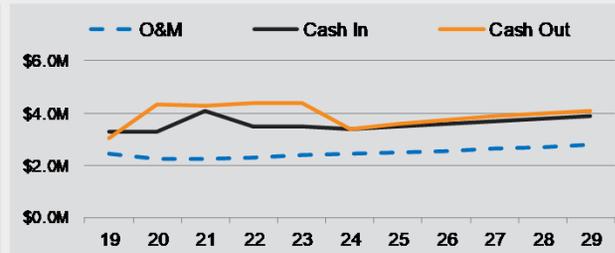
7% Lower rate increase due to use of USDA 40-year debt

	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	FY 2023	FY 2028
Override ▶	0.00%	0.00%	20.00%	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%	<b>Cumulative</b>	
Water Fixed Rate Plan	0.00%	0.00%	20.00%	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%	35.00%	64.27%
Override ▶	0.00%	3.00%	20.00%	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%		
Water Usage Rate Plan	0.00%	3.00%	20.00%	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%	38.95%	68.93%
Debt Coverage	1.54	1.90	2.75	1.71	1.63	1.27	1.16	1.05	1.01	1.03	1.02	<b>Scenario Manager</b>	
CIP Execution %	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%		
Single Family Bi-Monthly Water Bill	\$73.24	\$81.69	\$98.03	\$101.95	\$106.03	\$110.27	\$114.68	\$119.27	\$124.04	\$129.00	\$134.16	Chargeback	\$ 493,226
Cost per Day	\$1.22	\$1.36	\$1.63	\$1.70	\$1.77	\$1.84	\$1.91	\$1.99	\$2.07	\$2.15	\$2.24		

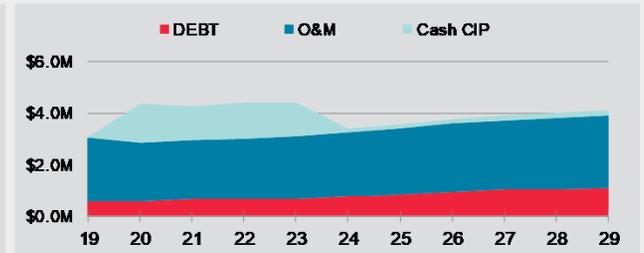
Operating Fund (Cash)



Revenues vs. Expenses



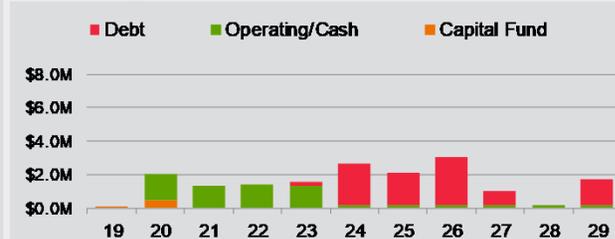
Expenses by Type



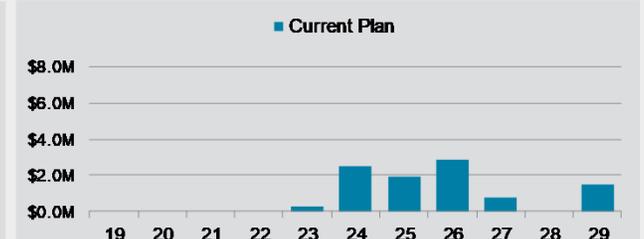
CIP Spending



CIP Funding



Borrowing



3% Lower rate increase due to use of USDA 40-year debt

	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	FY 2023	FY 2028
Override ▶	0.00%	0.00%	33.00%	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%	<b>Cumulative</b>	
Sewer Fixed Rate Plan	0.00%	0.00%	33.00%	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%	53.56%	86.77%
Override ▶	0.00%	3.00%	33.00%	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%	<b>Scenario Manager</b>	
Sewer Usage Rate Plan	0.00%	3.00%	33.00%	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%	54.03%	87.35%
Debt Coverage	1.56	0.93	1.90	1.36	0.92	0.88	0.90	0.93	0.95	1.00	1.03		
CIP Execution %	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%		
Single Family Bi-Monthly Sewer Bill	\$138.92	\$137.63	\$183.05	\$190.37	\$197.98	\$205.90	\$214.14	\$222.71	\$231.61	\$240.88	\$250.51	General Fund Transfer	\$ -
Cost per Day	\$2.32	\$2.29	\$3.05	\$3.17	\$3.30	\$3.43	\$3.57	\$3.71	\$3.86	\$4.01	\$4.18	Chargeback	\$ 493,226

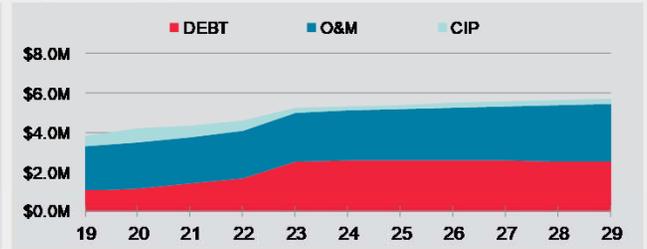
Operating Fund (Cash)



Revenues vs. Expenses



Expenses by Type



CIP Spending



CIP Funding



Borrowing



Average Customer Bill Impact (8,000 gallons / bi-monthly period)  
 Alternative C – One-Year Rate Impact – with 40 Year Water Debt

Summary

	<b>FY 20</b>	<b>FY 20</b>	<b>FY 21</b>	<b>FY 22</b>	<b>FY 23</b>	<b>FY 24</b>	<b>FY 25</b>
Water	\$74.97	\$81.69	\$98.03	\$101.95	\$106.03	\$110.27	\$114.68
Sewer	\$142.60	\$137.63	\$183.05	\$190.37	\$197.98	\$205.90	\$214.14
Total	\$217.57	\$219.32	281.08	288.40	296.01	303.93	312.17
Change / Day		\$0.03	\$1.03	\$0.19	\$0.19	\$0.20	\$0.21
Change / Month		\$0.88	\$30.88	\$5.62	\$5.85	\$6.08	\$6.32
Change %		0.80%	28.20%	4.00%	4.00%	4.00%	4.00%

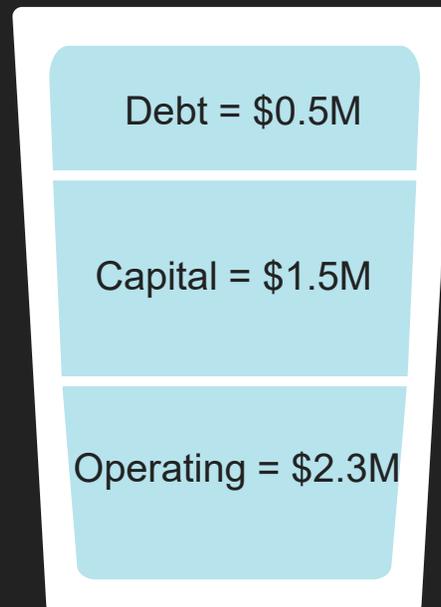
Change due to Rate Structure Change

# Public Engagement Examples

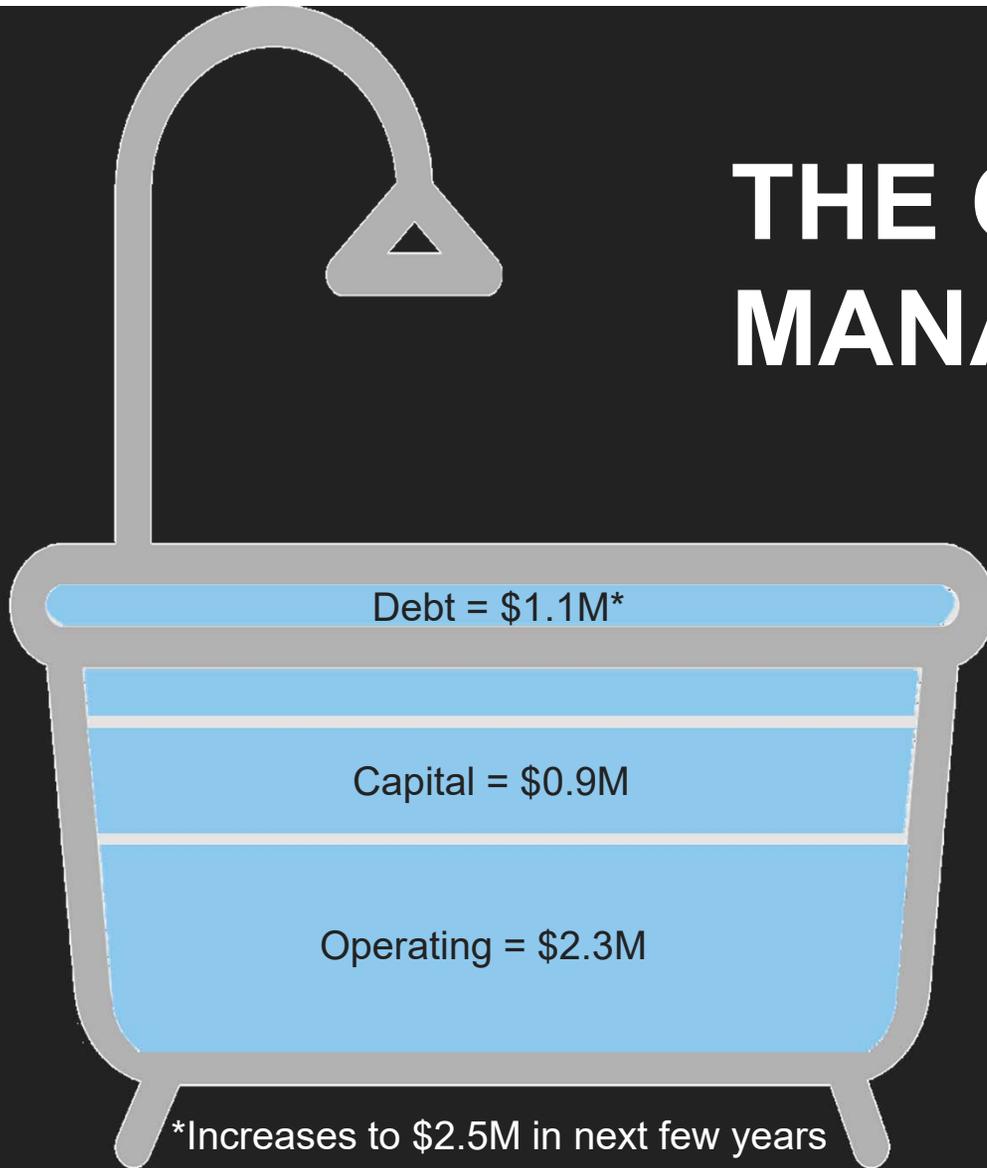
# THE COST TO PROVIDE WATER



*Total Water Costs* = \$4.3M  
*Current Water Revenue* = \$2.2M  
***Current Funding Gap* = \$1.9M**



# THE COST TO MANAGE SEWER



<i>Total Sewer Costs</i>	<b>= \$4.3M</b>
<i>Current Sewer Revenue</i>	<b>= \$3.0M</b>
<b>Current Funding Gap</b>	<b>= \$1.3M</b>

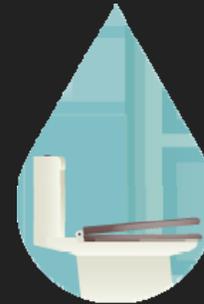
# \$8.00 for 1,000 gallons or.....



58 showers



40 minutes of  
watering with a  
hose



285 toilet flushes



33 loads of laundry



16,000 cups of water

# Appendix

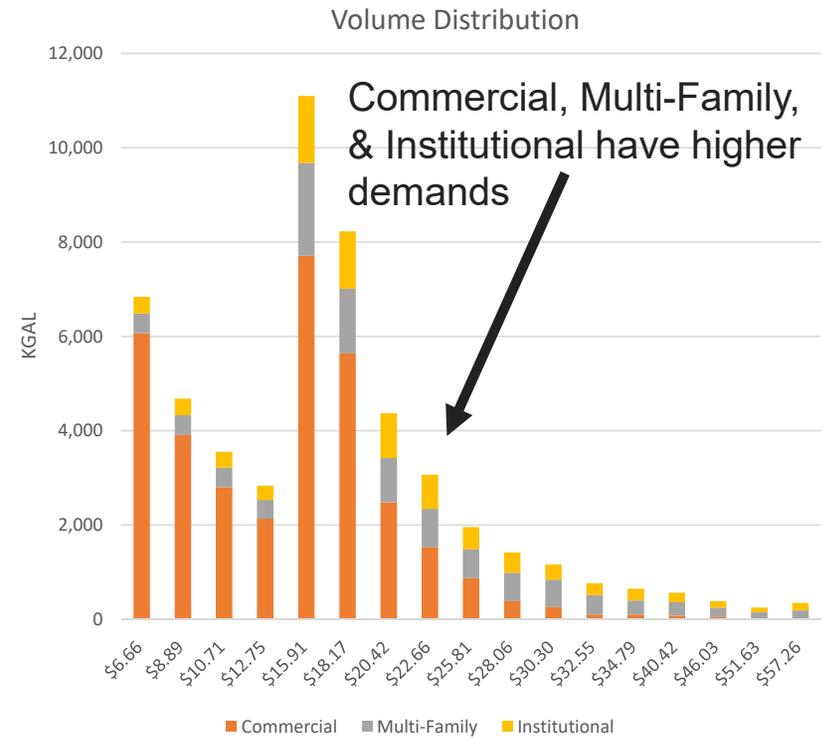
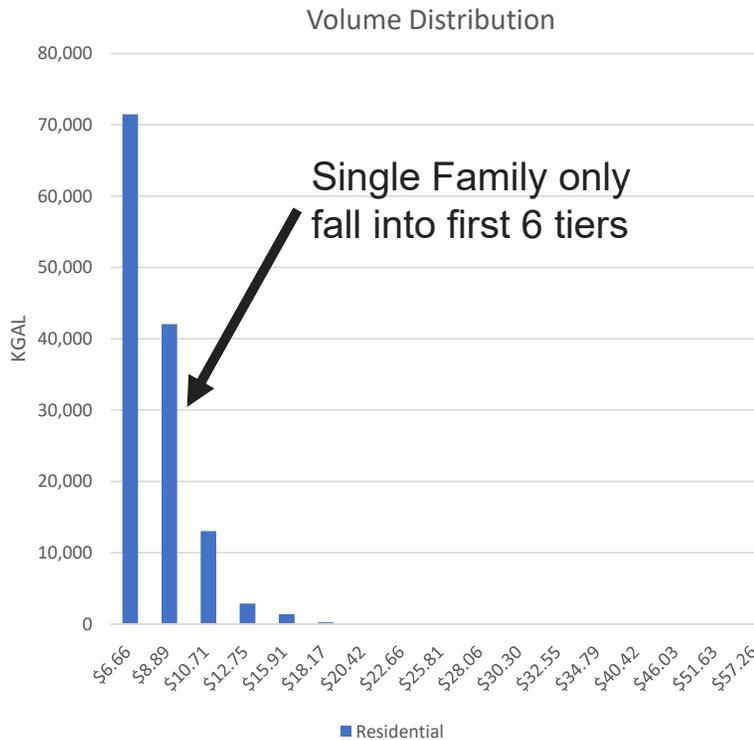
# Objectives of Cost of Service Analysis

- The total cost of service is the annual revenue requirement of the utility, which is recovered from the utility's customers.
- The utility system is made up of different functions, which drive costs.
- Different customer types use the system functions differently and, as a result, the cost to serve these customer types vary.

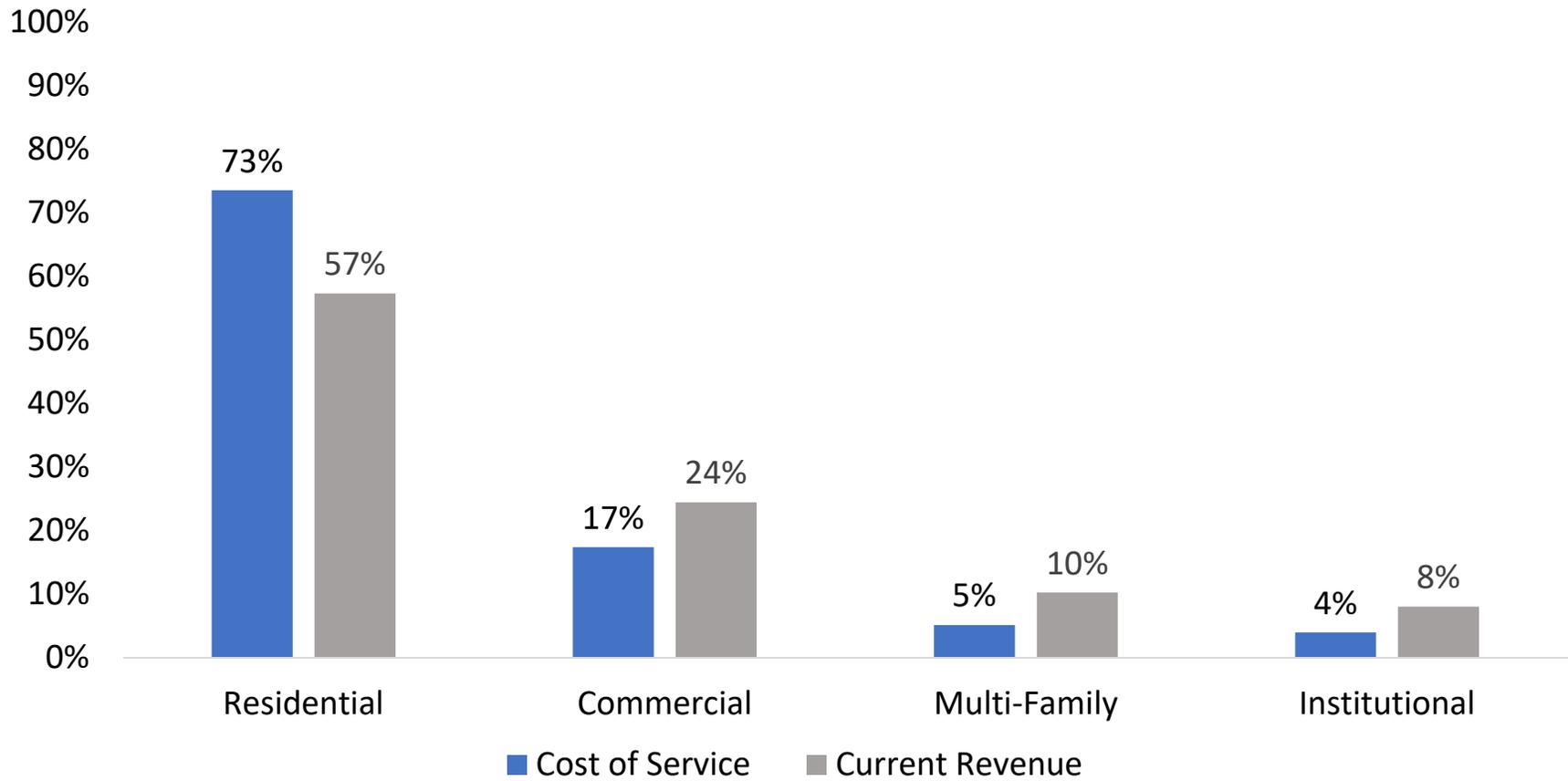
**Goal:** Use customer and system data to determine the **cost to serve** each class and collect revenue from each class according to the resulting cost allocation.

# Current Water Rate Structure Impacts

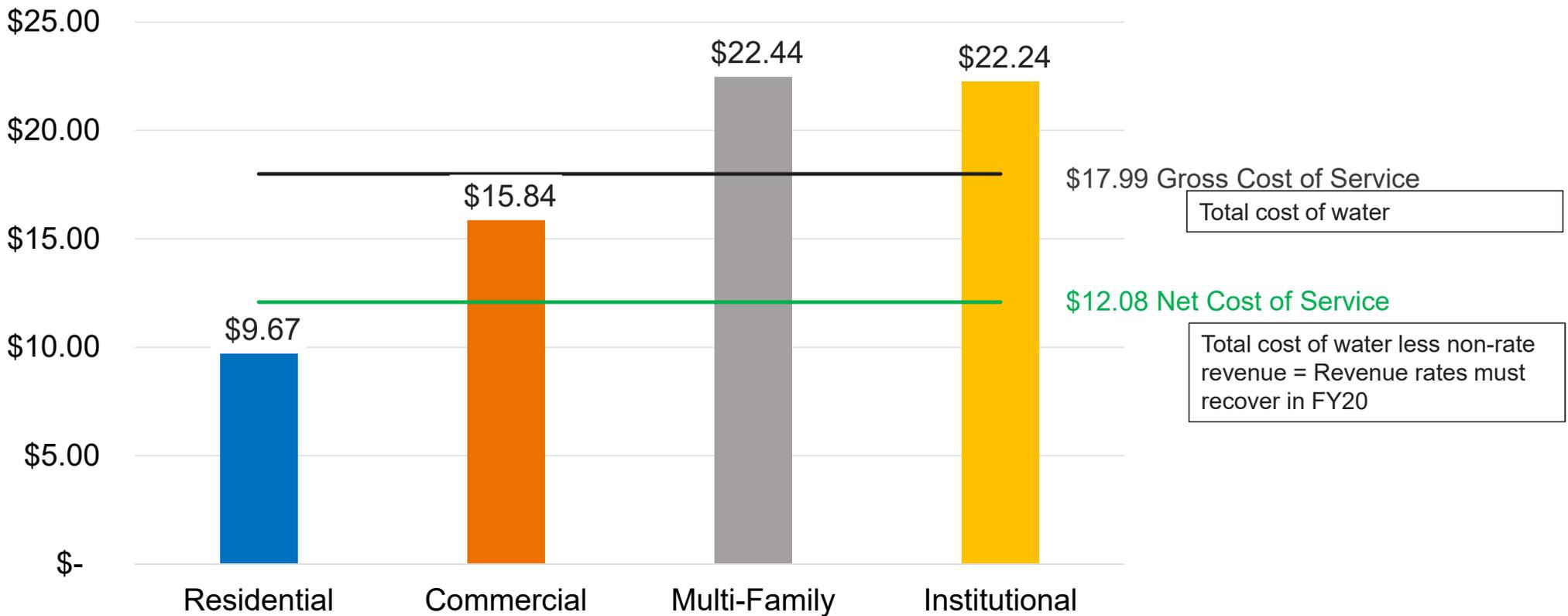
Usage Tier (kgal)	Water Rate (per kgal)
0 to 5	\$6.66
5 – 10	\$8.89
10 – 15	\$10.71
15 – 20	\$12.75
20 – 50	\$15.91
50 – 100	\$18.17
100 – 150	\$20.42
150 – 200	\$22.66
200 – 250	\$25.81
250 – 300	\$28.06
300 – 350	\$30.30
350 – 400	\$32.55
400 – 450	\$34.79
450 – 500	\$40.42
500 – 550	\$46.03
550 – 600	\$51.63
Over 600	\$57.26



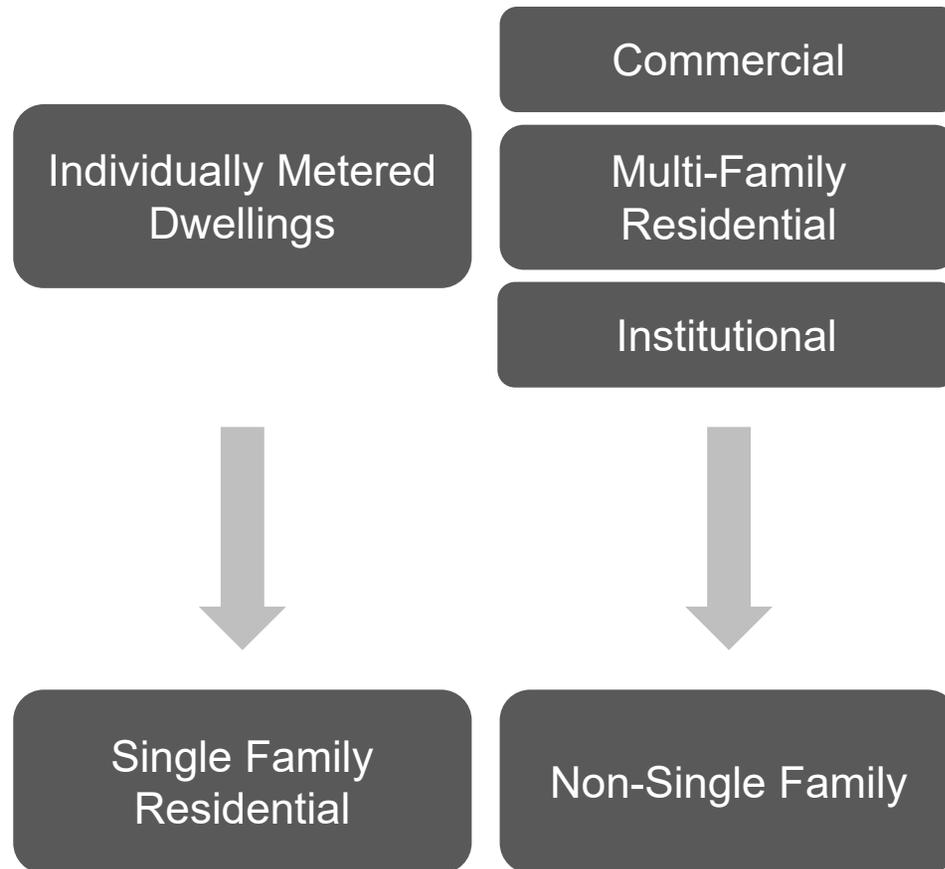
## Cost of Service To Current Revenue



# Water Unit Cost Comparison per 1,000 gallons



## Recommended Customer Classes



## Bi-Monthly Single Family Tier Sizing: Tier 1



Tier 1 = 7,000 gallons

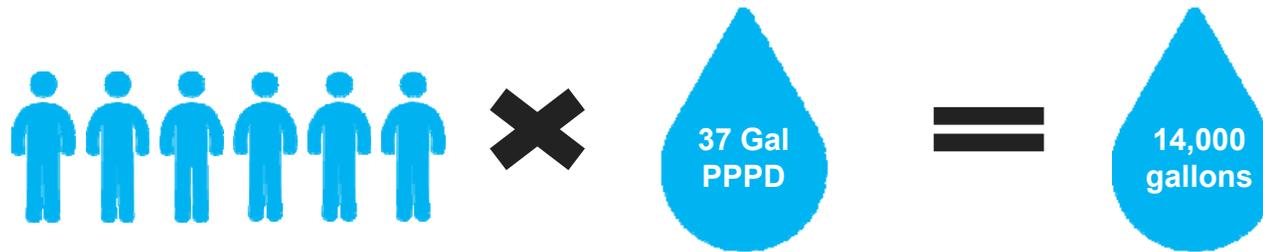
### Bi-Monthly Tiers

Tier 1



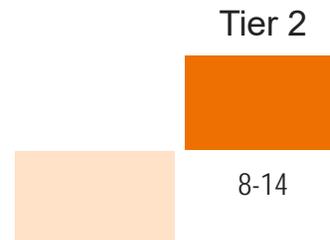
0-7

## Bi-Monthly Single Family Tier Sizing: Tier 2

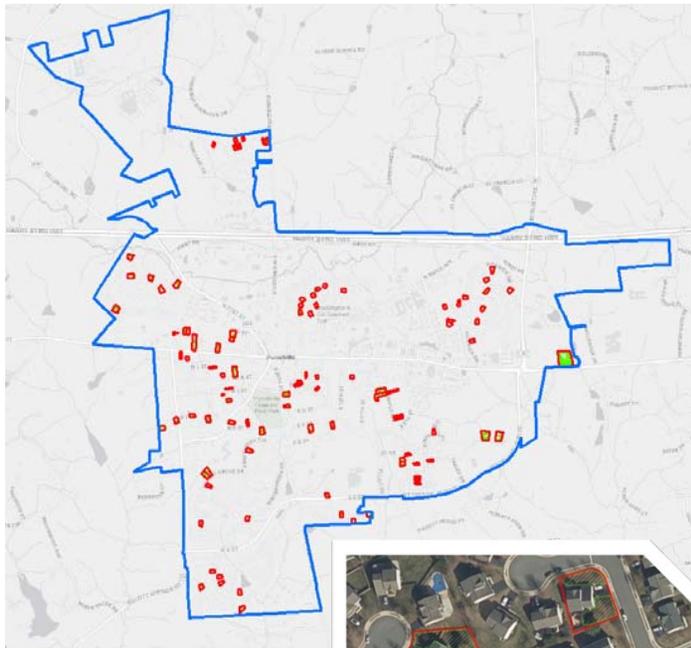


Tier 2 = Additional 7,000 gallons

### Bi-Monthly Tiers



# Distribution of Single Family Lot Sizes



101 Properties Sampled

Average Size:  
13,988 Sq. Ft.

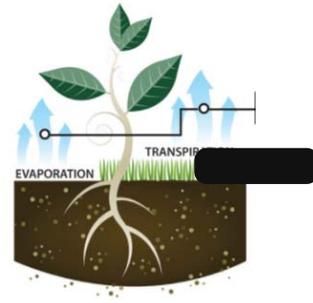
Average Irrigation:  
6,495 Sq. Ft.

Parcel Irrigated: 46%

# Outdoor Use: Calculating Irrigation Requirements for the Average Parcel



Parcel Size: 14,000  
Landscape Area: 6,500



Evapotranspiration:  
23.4 Inches



Beneficial Rainfall:  
14 Inches



Irrigation System  
Efficiency: 70%

Irrigation Requirement = 6,000 gallons

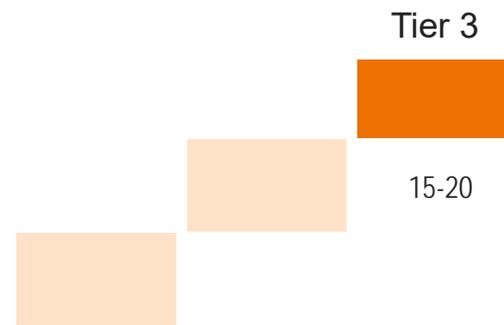
## Bi-Monthly Single Family Tier Sizing: Tier 3



Parcel Size: 14,000  
Landscape Area: 6,500

=

### Bi-Monthly Tiers



**Tier 3 = Additional 6,000 gallons**

# Current and Alternative A Volumetric Rates

## Current Water Rates All Customers

Usage Tier (kgal)	Water Rate (per kgal)
0 – 5	\$6.66
5 – 10	\$8.89
10 – 15	\$10.71
15 – 20	\$12.75
20 – 50	\$15.91
50 – 100	\$18.17
100 – 150	\$20.42
150 – 200	\$22.66
200 – 250	\$25.81
250 – 300	\$28.06
300 – 350	\$30.30
350 – 400	\$32.55
400 – 450	\$34.79
450 – 500	\$40.42
500 – 550	\$46.03
550 – 600	\$51.63
Over 600	\$57.26

## Alt. A Water Rates Single Family

Usage Tier (kgal)	Water Rate (per kgal)
0 – 7	\$9.20
8 – 14	\$13.81
15 – 20	\$18.41
Over 20	\$23.01

## Alt. A Water Rates Non-Single Family

Usage Tier (kgal)	Water Rate (per kgal)
All Usage	\$9.47

## Current Sewer Rates All Customers

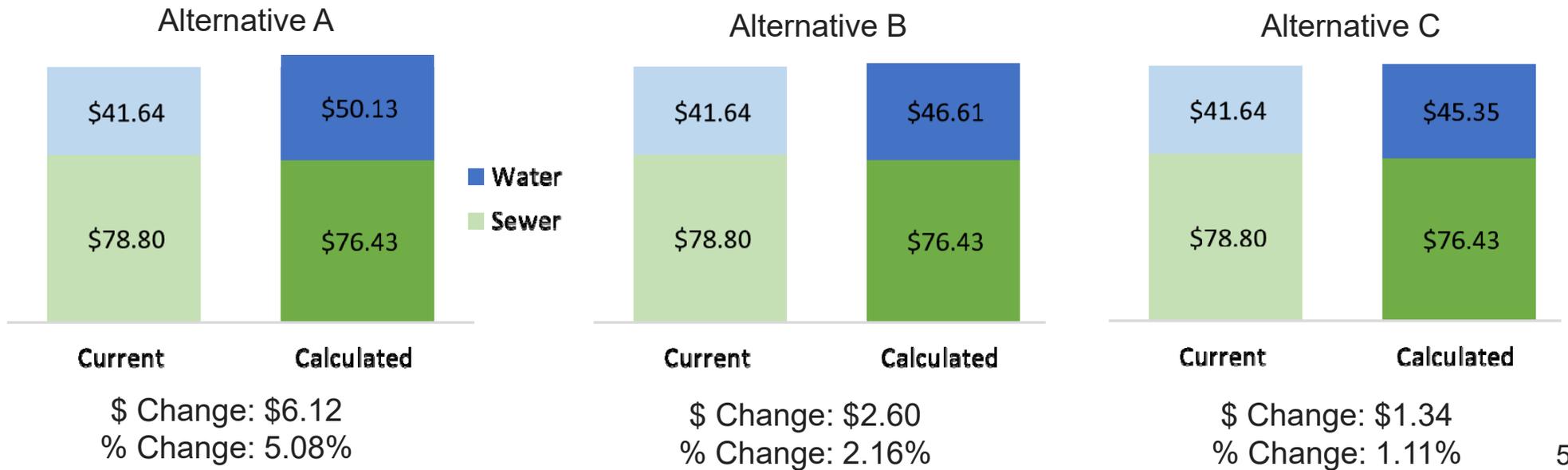
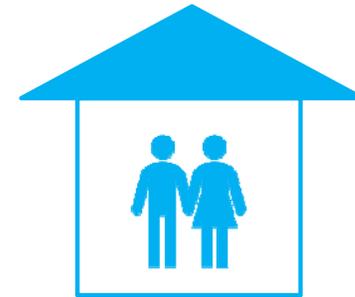
Usage Tier (kgal)	Sewer Rate (per kgal)
All Usage	\$15.95

## Calculated Sewer Rates All Customers

Usage Tier (kgal)	Sewer Rate (per kgal)
All Usage	\$15.30

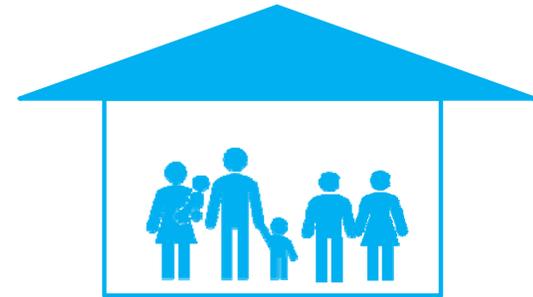
# Bill Impacts: Single Family Customers

Customer with water and sewer service  
 Two-person household (**Small User**)  
 4,000 gallon bi-monthly (19<sup>th</sup> percentile)

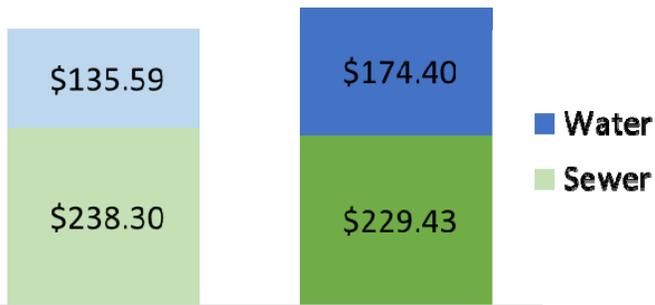


# Bill Impacts: Single Family Customers

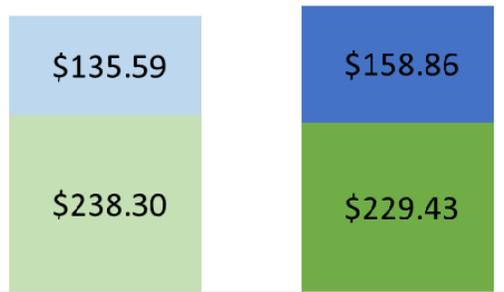
Customer with water and sewer service  
**Large household** with indoor only use  
 14,000 gallon bi-monthly (92<sup>nd</sup> percentile)



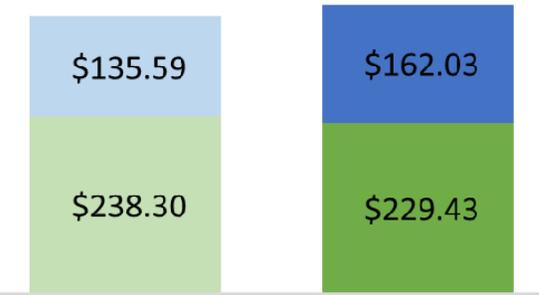
Alternative A



Alternative B



Alternative C



**Current**      **Calculated**

\$ Change: \$29.94  
 % Change: 8.01%

**Current**      **Calculated**

\$ Change: \$14.40  
 % Change: 3.85%

**Current**      **Calculated**

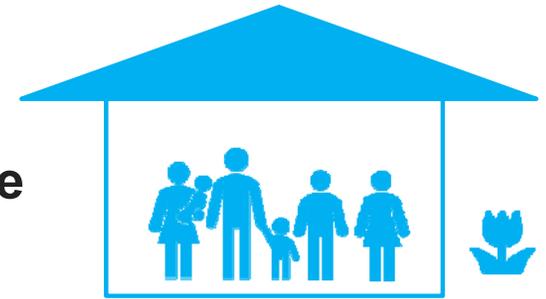
\$ Change: \$17.57  
 % Change: 4.70%

# Bill Impacts: Single Family Customers

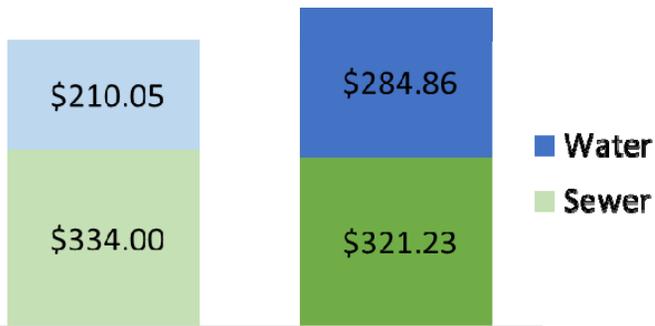
Customer with water and sewer service

**Large household with indoor and outdoor water use**

20,000 gallon bi-monthly (99<sup>th</sup> percentile)



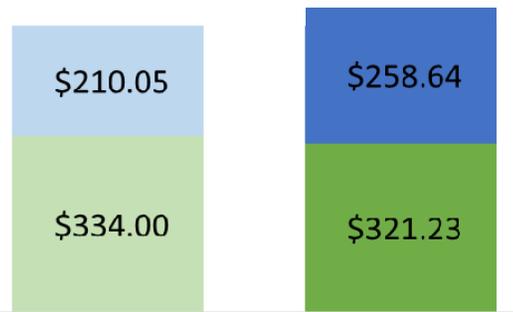
Alternative A



Current      Calculated

\$ Change: \$62.04  
% Change: 11.4%

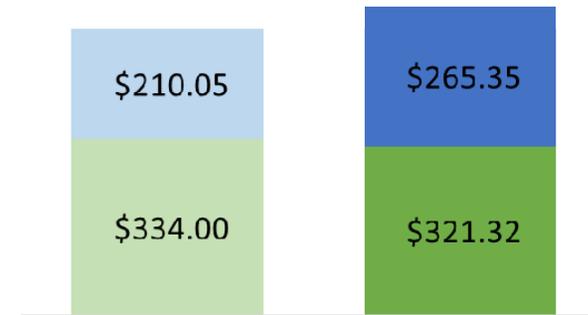
Alternative B



Current      Calculated

\$ Change: \$35.82  
% Change: 6.58%

Alternative C

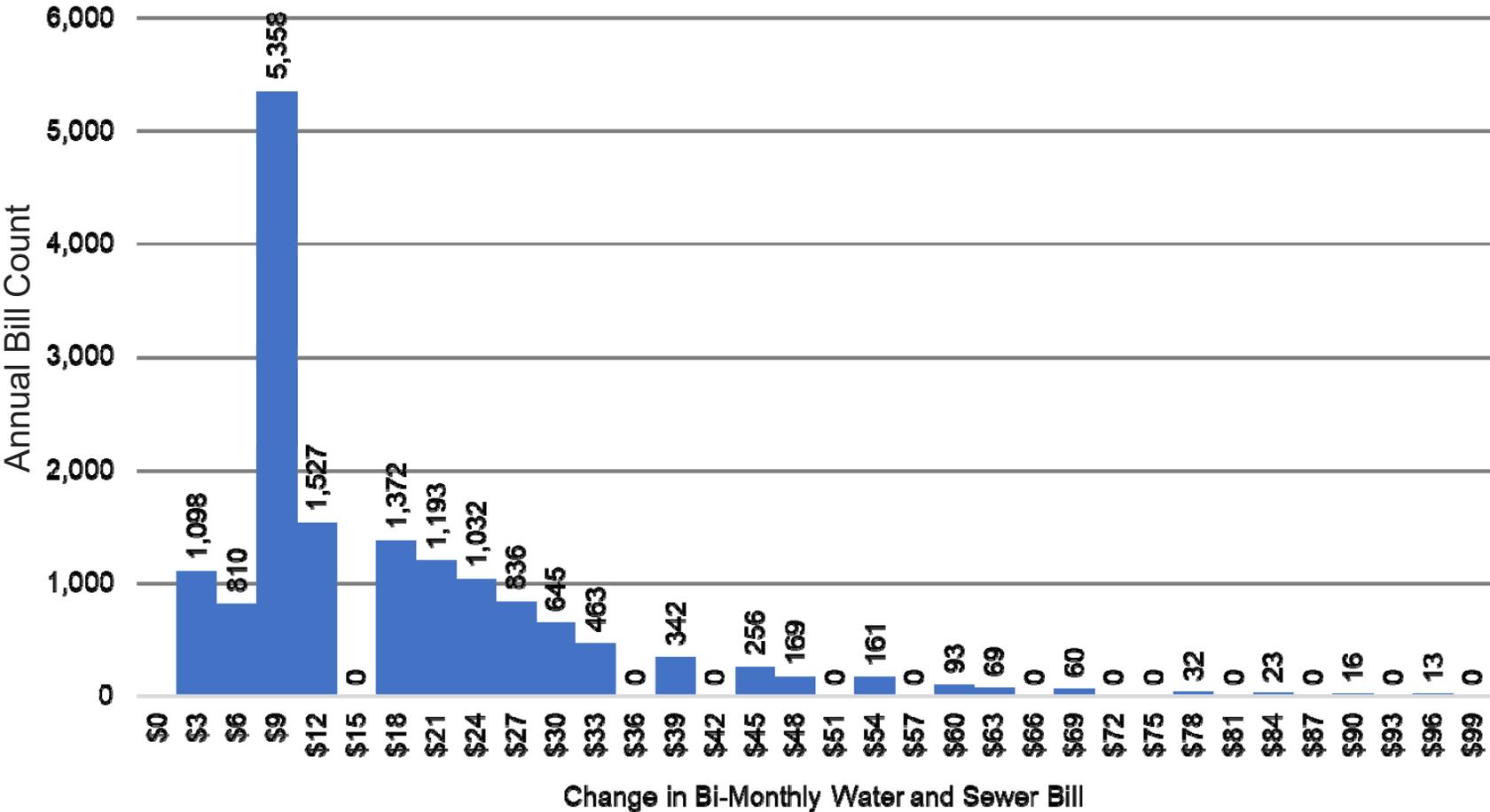


Current      Calculated

\$ Change: \$42.62  
% Change: 7.83%

# Distribution of Bill Change: Single-Family Customers Alternative A

Bill Impacts



## Distribution of Bill Change: Non-Single Family Customers Alternative A

