



CITY OF HENDERSONVILLE WATER SEWER ADVISORY COUNCIL

Operations Center - Assembly Room | 305 Williams St. | Hendersonville NC 28792
Monday, April 24, 2023 – 6:00 PM

AGENDA

1. CALL TO ORDER

2. APPROVAL OF AGENDA

3. APPROVAL OF MINUTES

A. Approval of Minutes – *Jerry Smith, Chairman*

4. OLD BUSINESS

5. NEW BUSINESS

A. Stantec Presentation on 2023 W&S Rate Study – *Adam Murr, Budget Manager*

B. New Fats, Oils, and Grease (FOG), Management Policy -*Lee Smith, Utilities Director, Kasey Lyons, Environmental Compliance Technician*

The purpose of this new Fats, Oils, and Grease (FOG) Management Policy is to ensure no food service establishment (FSE) is discharging FOG into the City's sanitary sewer system. The specific requirements that FSEs must follow are detailed in this policy, including the frequency for cleaning of grease removal devices.

The new proposed maintenance requirements outline specific steps FSEs must take to properly clean and maintain their grease removal device. This policy also covers the requirement that FSEs document the cleanings and retain the records for review during inspections. Inspections will be annual, or more often if needed.

The Best Management Practices (BMPs) section provides detailed instructions for employees working in a kitchen on ways to avoid FOG from going down the drain. This section also provides more details of the construction and plumbing requirements related to grease removal devices. This includes a more specific requirement to have automatic dishwashers bypass any grease removal devices, as this has been leading to more frequent sanitary sewer overflows. Additionally, this section establishes requirements for mobile food units, which have previously gone unaddressed.

The requirements for new FOG sources outlines the information the city needs from any new FSE as related to their grease removal device including information the FSE needs to ensure their grease removal device meets the City's requirements. This section also removes the ability of any FSE to be "grandfathered in" and ensures all FSE compliance.

C. Tap Water Branding – *Adam Steurer, Utilities Engineer*

6. OTHER BUSINESS

7. ADJOURNMENT

The City of Hendersonville is committed to providing accessible facilities, programs and services for all people in compliance with the Americans with Disabilities Act (ADA). Should you need assistance or an accommodation for this meeting please contact the City Clerk no later than 24 hours prior to the meeting at 697-3005.



CITY OF HENDERSONVILLE AGENDA ITEM SUMMARY

SUBMITTER: John Connet, City Manager **MEETING DATE:** 4/24/2023
AGENDA SECTION: APPROVAL OF MINUTES **DEPARTMENT:** Administration
TITLE OF ITEM: Approval of Minutes – *Jerry Smith, Chairman*

SUGGESTED MOTION(S):

I move that the Water and Sewer Advisory Council approve the minutes for the January 23, 2023 meeting.

SUMMARY:

The minutes from the January 23, 2023 meeting of the Water and Sewer Advisory Council are submitted for your approval.

BUDGET IMPACT: \$ NA

Is this expenditure approved in the current fiscal year budget? NA

If no, describe how it will be funded. NA

ATTACHMENTS:

Draft Minutes



CITY OF HENDERSONVILLE WATER SEWER ADVISORY COUNCIL

Operations Center - Assembly Room | 305 Williams St. | Hendersonville NC 28792
Monday, January 23, 2023 – 6:00 PM

MINUTES

- Present: City of Hendersonville Council Member & Chair Jerry Smith, County Commissioner & Vice Chairman Daniel Andreotta, City of Hendersonville Water/Sewer Customer Representative Chuck McGrady, Henderson County Water/Sewer Customer Representative Andrew Riddle, Village of Flat Rock Council Member David Dethero, Town of Fletcher Council Member Sheila Franklin, City of Saluda Council Member Stan Walker, Town of Mills River Mayor Pro-Tem Randy Austin, and Partnership for Economic Development Representative Carsten Erkel
- Staff Present: City Manager John Connet, Assistant City Manager Brian Pahle, Budget Manager Adam Murr, City Engineer Brent Detwiler, Utilities Director Lee Smith and Utilities Engineer Adam Steurer and others.
- Others Present: Mills River Town Manager Daniel Cobb, Henderson County Engineer Marcus Jones, Stantec Senior Principal David Hyder

1. CALL TO ORDER

A. Organizational Meeting – *Jerry Smith, Chairman*

In accordance with the Water and Sewer Advisory Committee Rules of Procedure, the City of Hendersonville's representative will serve as the Committee Chairman for the next two years. Henderson County's representative will serve as Vice Chairman.

Chairman Jerry Smith called the meeting to order at 6:00 p.m. and welcomed those in attendance.

2. APPROVAL OF AGENDA

County Commissioner & Vice Chairman, Daniel Andreotta moved to approve the agenda as presented. A unanimous vote of the Council Members present followed. Motion carried.

3. APPROVAL OF MINUTES

A. Approval of the October 24, 2022 Minutes.

Council Member Sheila Franklin moved to approve the minutes of October 24, 2022 as presented. A unanimous vote of the Council Members present followed. Motion carried.

4. OLD BUSINESS

There was no Old Business.

5. NEW BUSINESS

A. Approval of Annual Meeting Schedule - *John Connet, City Manager*

Each advisory board is required to approve their annual meeting schedule in accordance with the open meetings laws.

Town of Mills River Mayor Pro Tem Randy Austin moved that the Water and Sewer Advisory Committee approve the 2023 meeting schedule as presented. A unanimous vote of the Council Members present followed. Motion carried.

NOTICE

City of Hendersonville Water/Sewer Advisory Council | 160 Sixth Avenue East Hendersonville, NC 28792

CITY OF HENDERSONVILLE

Water & Sewer Advisory Council

ANNUAL SCHEDULE OF REGULAR MEETINGS 2023

The following Regular Meetings of the City of Hendersonville Water & Sewer Advisory Council are held **Quarterly on the fourth Monday of July, October, January, and April at 6:00 p.m.** in the Assembly Room of the City Operations Building located at 305 Williams St. Hendersonville NC unless otherwise noticed. The regular meetings will be conducted in person.

The following Water & Sewer Advisory Council meetings have been scheduled for 2022-23.

January 23, 2023
April 24, 2023
July 24, 2023
October 23, 2023

Meetings are open to the public.

City Clerk

The Water and Sewer Advisory Council is a requirement of the 2002 Mud Creek Sewer District Purchase and Interlocal Cooperation and Settlement Agreement with Henderson County.

The City of Hendersonville is committed to providing accessible facilities, programs, and services for all people in compliance with the Americans with Disabilities Act (ADA). Should you need assistance or a particular accommodation for this meeting please contact the City Clerk no later than 24 hours prior to the meeting at 697-3005.

Adopted: 08/15/2022 Posted 08/16/2022
<https://www.hendersonvillenc.gov>

B. Winter Storm Update – *Lee Smith, Utilities Director*

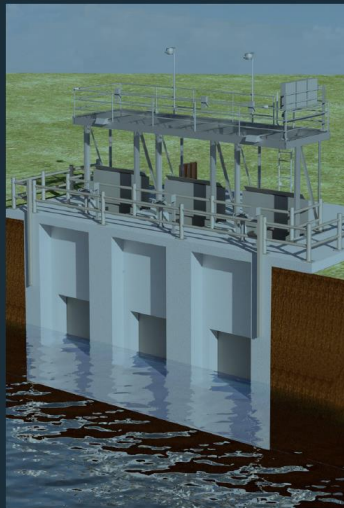
Utilities Director Lee Smith gave a winter storm update and said that his team did all the things they would normally do like testing generators, topping off tanks etc. They had a few breaks but nothing was due to the storm. He added that his biggest takeaway from the storm is that he would like to come up with a more robust communication plan.

C. Capital Projects Update – *Various Staff*

City staff provided updates on current and future water and sewer capital projects.

Utilities Engineer Adam Steurer showed a brief PowerPoint presentation regarding water and sewer project updates.

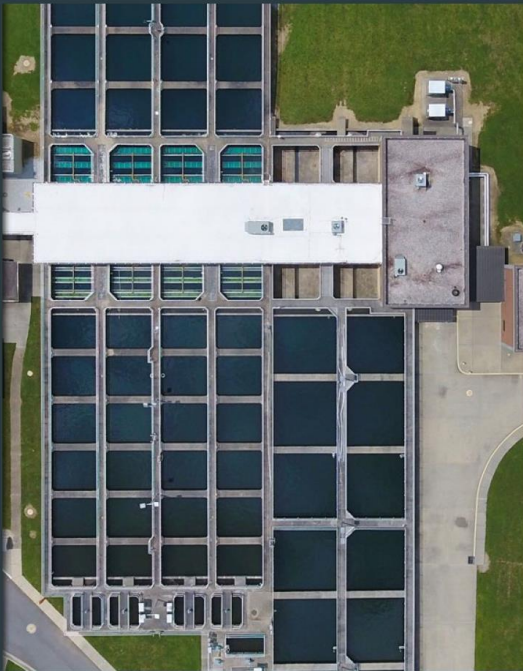
French Broad River Intake and Pumping Station



- ▶ Construction began Spring 2022
- ▶ Construction completion: mid-2024
- ▶ \$23.5M - State Revolving Fund (SRF) low-interest loan



French Broad River Intake and Pumping Station



Water Treatment Facility - Master Plan

- ▶ Inventory of Assets/Equipment
- ▶ Condition Assessment
- ▶ Treatment process and major equipment evaluation
 - ▶ Capacity
 - ▶ Redundancy
 - ▶ Expansion
- ▶ Capital Improvement Plan to 2050
- ▶ Funded through a \$400,000 grant

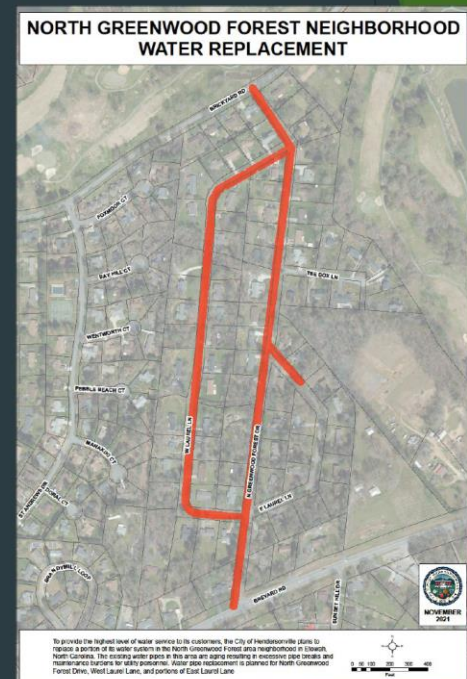
WWTF - Replacements/Repairs



- ▶ Ultraviolet (UV) Improvements -
 - ▶ Project Bid: 12/8/2022
 - ▶ Turner Murphy Company, Inc.
 - ▶ Cost \$3.5M
- ▶ Aeration Basin No.2 Repair and Rehabilitation
 - ▶ Structural evaluations and design
 - ▶ Approximate cost \$1.8M
- ▶ Both projects funded through ARP \$5.0M grant allocation

North Greenwood Neighborhood Water Replacement - Etowah

- ▶ Replacement of ~5,300 feet of existing water main
 - ▶ Excessive pipe breaks/maintenance burdens
- ▶ In-house construction crew
- ▶ ~60% complete to date
- ▶ Expected Completion Spring 2023



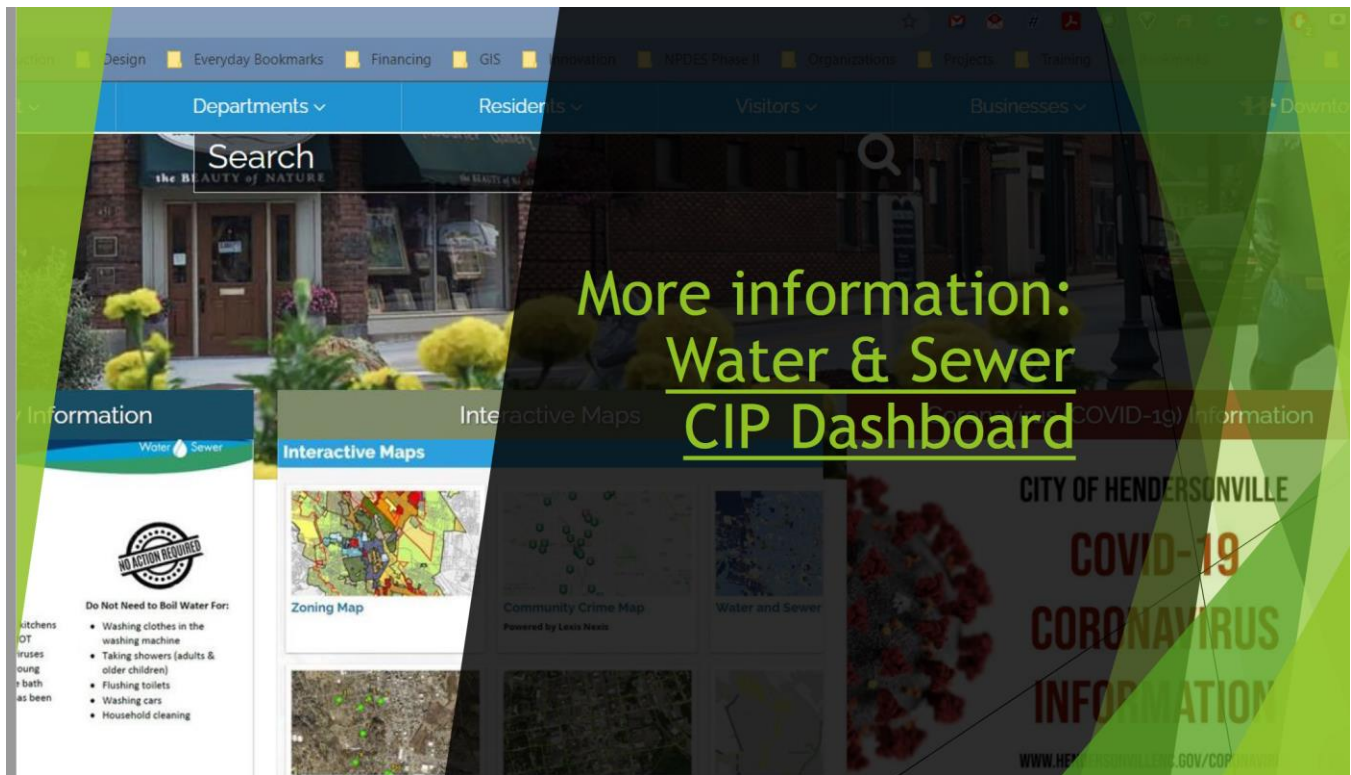


North Greenwood Neighborhood Water Replacement - Etowah



North Fork Reservoir Dredging

- ▶ Bid: November 2022
- ▶ Baker Grading & Landscaping
- ▶ Construction: \$942,000
- ▶ Schedule
 - ▶ Begin Spring 2023
 - ▶ Finish Late Summer 2023



City Engineer Brent Detwiler explained that we now have handheld scanners that they can use to take snapshot of anything, as well as, a drone. He added that we are in the stages now of hiring an engineering firm and said that the options for funding capital improvement projects are:

- Pay cash
- State of Federal Revolving Loans
- Revenue Bonds

5. OTHER BUSINESS

There was no other business.

6. ADJOURNMENT

There being no further business, the meeting was adjourned at 6:47 p.m.

ATTEST:

Jill Murray, City Clerk

Jerry A. Smith Jr., J.D., City Council Member & Chairman



CITY OF HENDERSONVILLE AGENDA ITEM SUMMARY

SUBMITTER: Adam Murr **MEETING DATE:** 04/24/2023
AGENDA SECTION: New Business **DEPARTMENT:** Administration
TITLE OF ITEM: Stantec Presentation on 2023 W&S Rate Study – *Adam Murr, Budget Manager*

SUGGESTED MOTION(S):

N/A – Presentation only.

SUMMARY:

The City of Hendersonville has partnered with Stantec’s Financial Services Team to complete a water and sewer rate study and system development fee analysis. Stantec’s Financial Services Team specializes in utility financial management and has provided their services to over 30 communities in the State of North Carolina alone. Stantec also maintains a robust national and international consulting presence. The City and Stantec have worked together in recent months to collect relevant data and metrics to support the rate study. At this time, Stantec will provide an overview presentation on the rate study process, opportunities for guidance, and desired outcomes.

Nearing the end of the study, Stantec will provide an update on findings and recommendations to be considered by City Council upon budget adoption at the 06/01/2023 regular meeting of the City Council.

BUDGET IMPACT: N/A

Is this expenditure approved in the current fiscal year budget? N/A

If no, describe how it will be funded. N/A

ATTACHMENTS:

1. Stantec Water & Sewer Rate Study Presentation



City of Hendersonville Rate Study Results and Recommendations

April 24, 2023



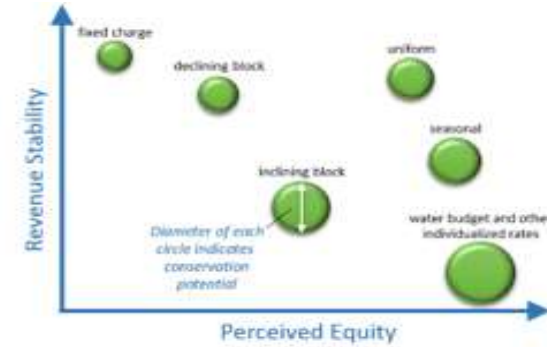
Agenda

Item A.

2

- 1) Overview of Rate Study Process
- 2) Financial Plan
- 3) Cost of Service Results
- 4) Rate Structure Analysis
- 5) Bill Impacts
- 6) System Development Fees
- 7) Recommendations





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

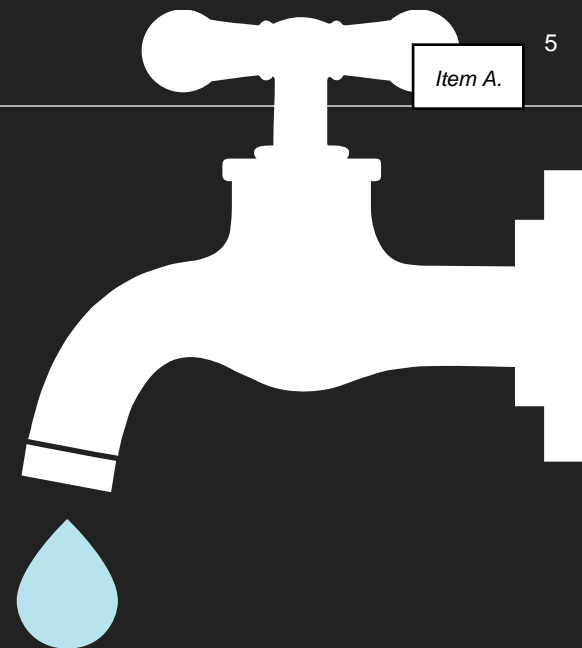
- Forecast of system operating expenditures
- Forecast of capital investments including existing debt obligations

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



Capital Costs

Debt Service

Operating Costs



Operating Expenditures

- FY 24 budget used as a starting point for modeling
- Annual inflation by expenditure type to develop a 10-year forecast

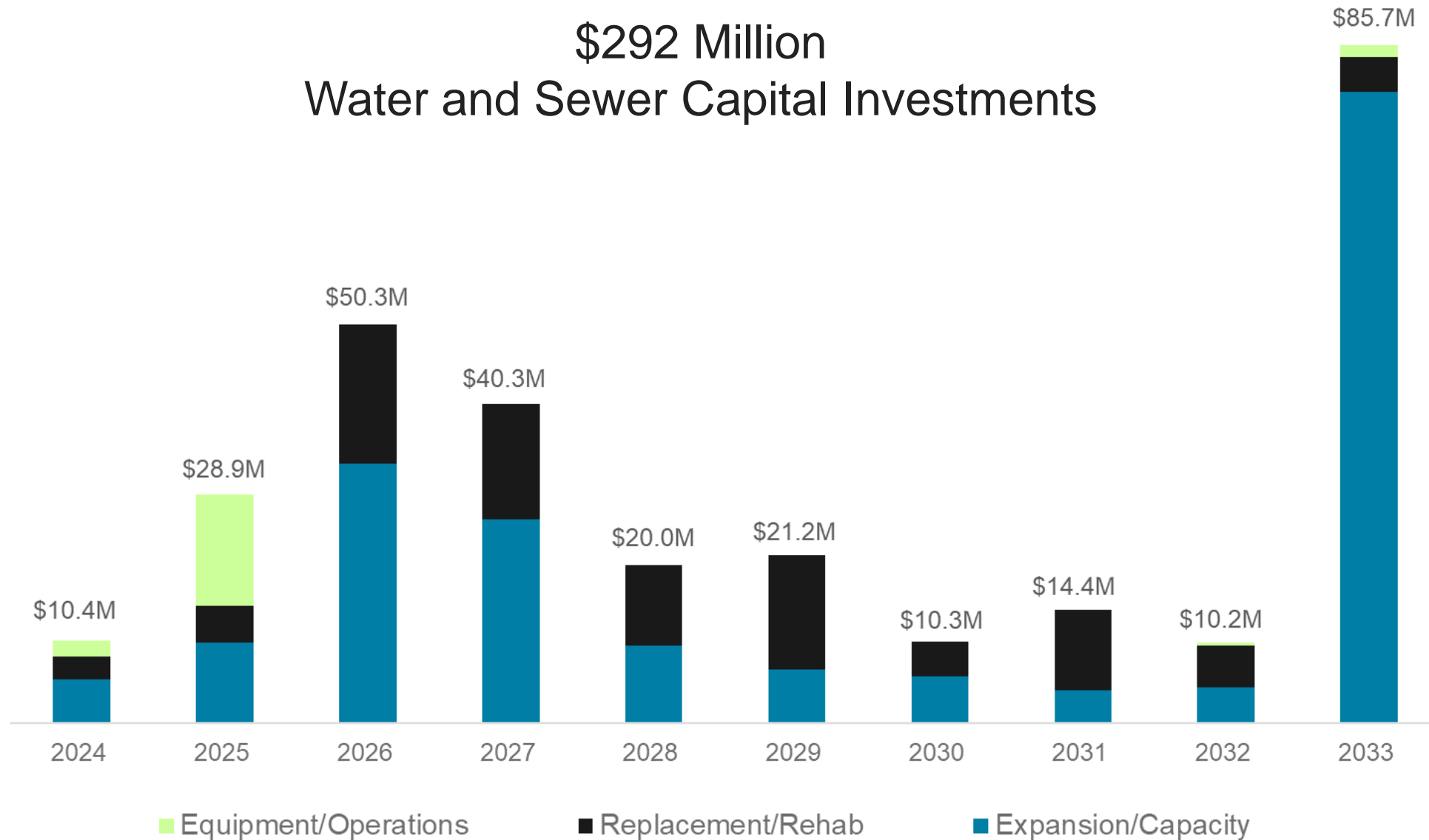
Capital Expenditures

- Annual payment of existing debt service (FY 24 payment of \$3.9M)
- Ten-year capital plan
 - Funded with a blend of future borrowing and cash

Revenues

- FY 24 budget used for non-rate revenue (assumed to remain flat over forecast period)
- Growth in customers at 0.5% inside City and 1.0% outside annually
- User rates adjusted as part of financial plan

\$292 Million
Water and Sewer Capital Investments





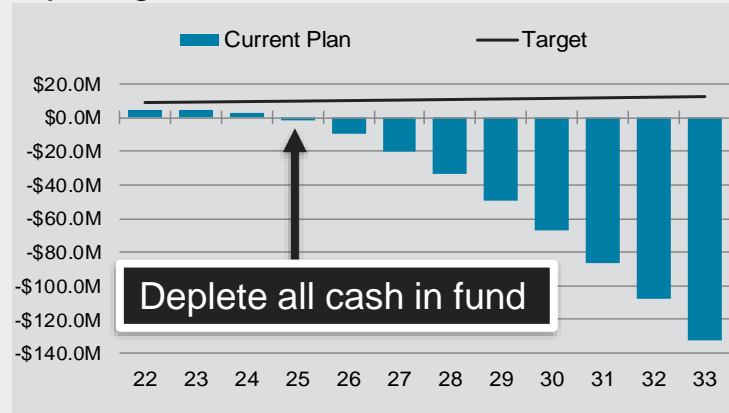
No Rate Adjustments

Fail Debt Coverage Tests

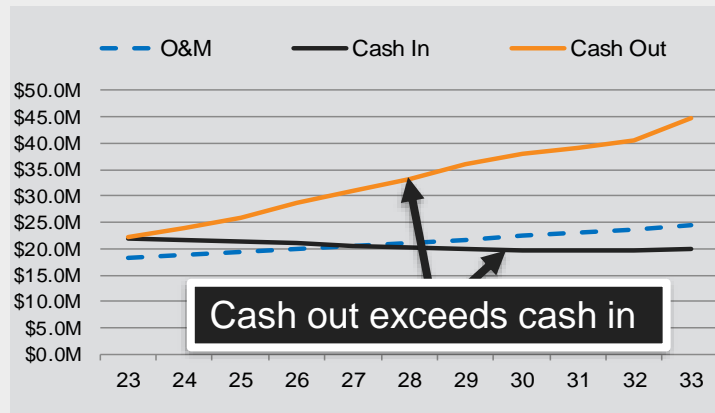
Item A.

	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030	FY 2031	FY 2032	FY 2033	FY 2027	FY 2033
Water Rate Plan	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.0%	0.0%
Wastewater Rate Plan	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.0%	0.0%
Debt Service Coverage Test A	1.44	0.81	0.40	0.08	(0.16)	(0.37)	(0.53)	(0.74)	(0.94)	(1.13)	(1.12)		
Debt Service Coverage Test B	1.21	0.65	0.34	0.14	0.01	(0.06)	(0.12)	(0.17)	(0.20)	(0.22)	(0.21)		
Total Single Family Bill	\$62.33	\$62.33	\$62.33	\$62.33	\$62.33	\$62.33	\$62.33	\$62.33	\$62.33	\$62.33	\$62.33		

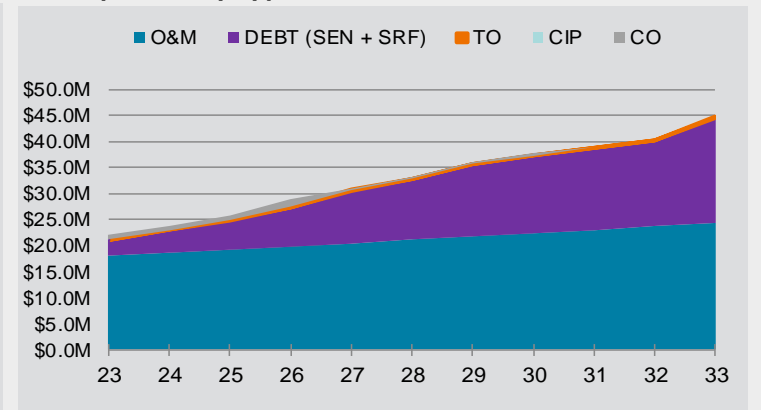
Operating Fund - 60



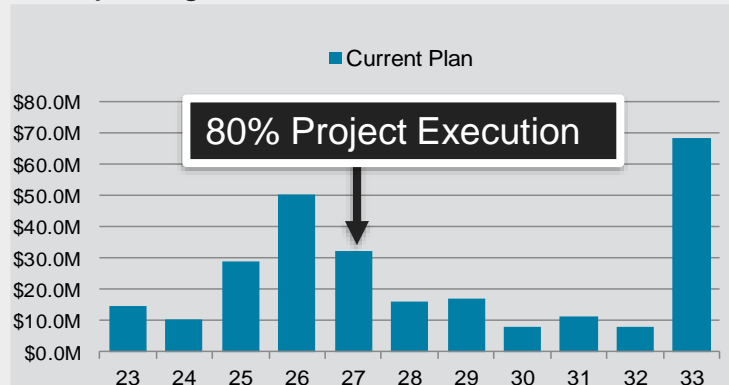
60: Revenues vs. Expenses



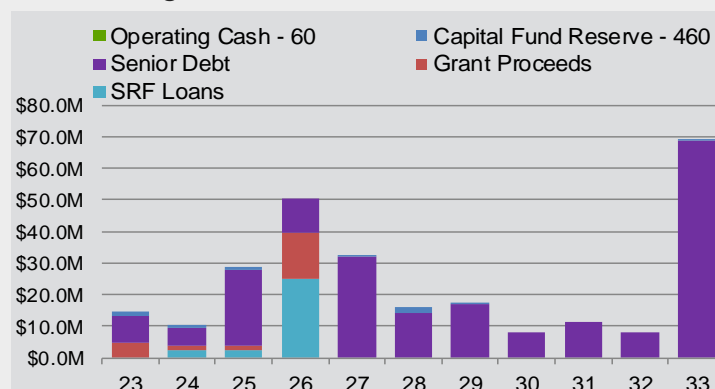
60: Expenses by Type



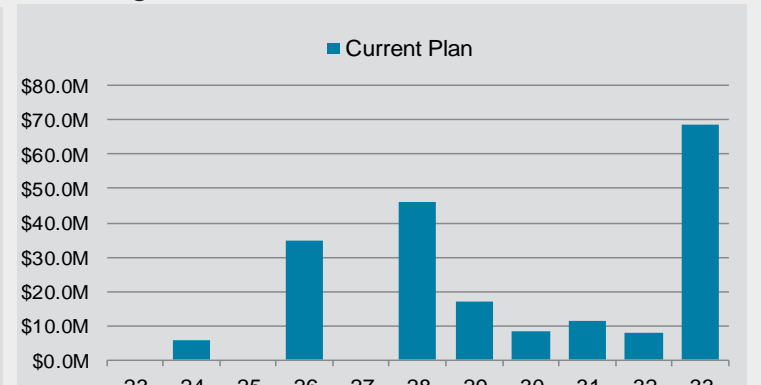
CIP Spending



CIP Funding



Borrowing - Senior Debt





Prior Rate Plan

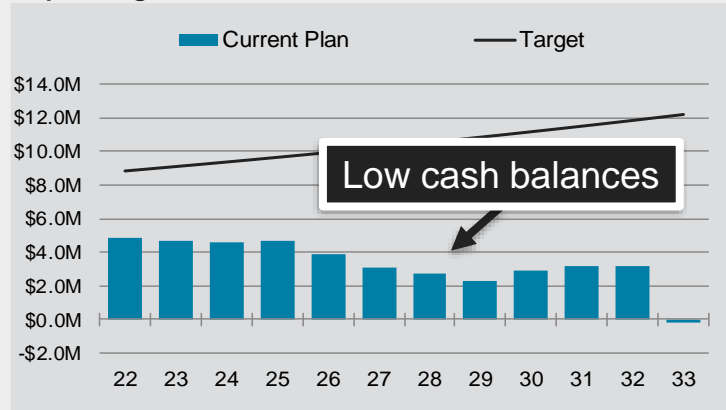
Fail Debt Coverage Tests

Item A.

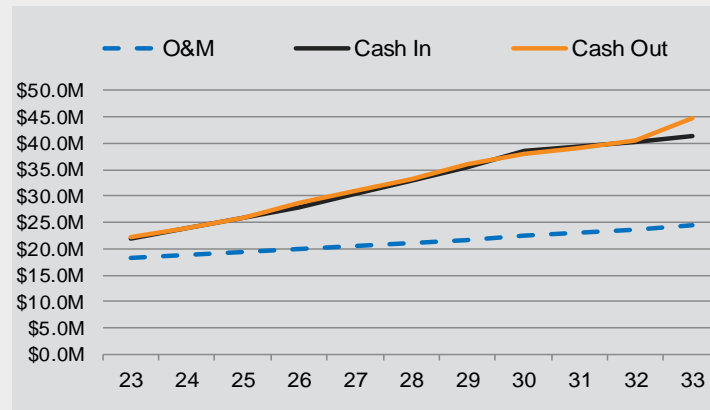
Projected revenue increases

	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030	FY 2031	FY 2032	FY 2033	FY 2027	FY 2033
Water Rate Plan	0.00%	12.00%	12.00%	12.00%	12.00%	12.00%	12.00%	12.00%	2.00%	2.00%	2.00%	57.3%	130.0%
Wastewater Rate Plan	0.00%	7.00%	7.00%	7.00%	7.00%	7.00%	7.00%	7.00%	2.00%	2.00%	2.00%	30.9%	67.0%
Debt Service Coverage Test A	1.44	1.27	1.21	1.08	0.94	0.94	0.91	0.98	0.94	0.92	0.75		
Debt Service Coverage Test B	1.21	1.14	1.11	1.03	0.92	0.95	0.93	1.01	0.97	0.95	0.78		
Total Single Family Bill	\$62.33	\$67.77	\$73.71	\$80.23	\$87.34	\$95.15	\$103.74	\$113.13	\$115.39	\$117.71	\$119.39		

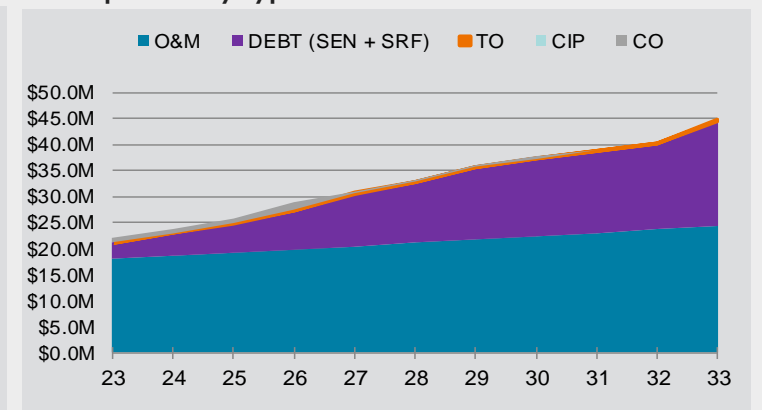
Operating Fund - 60



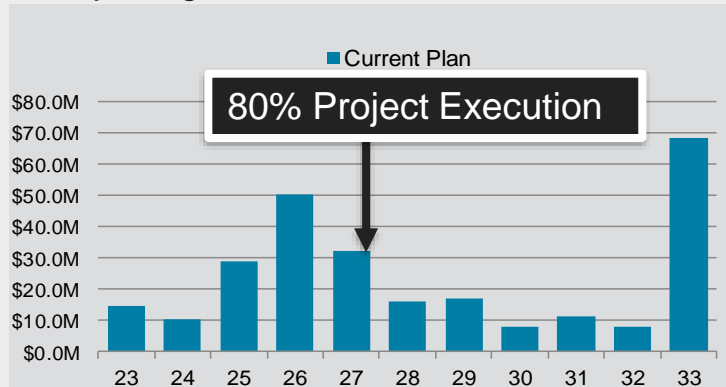
60: Revenues vs. Expenses



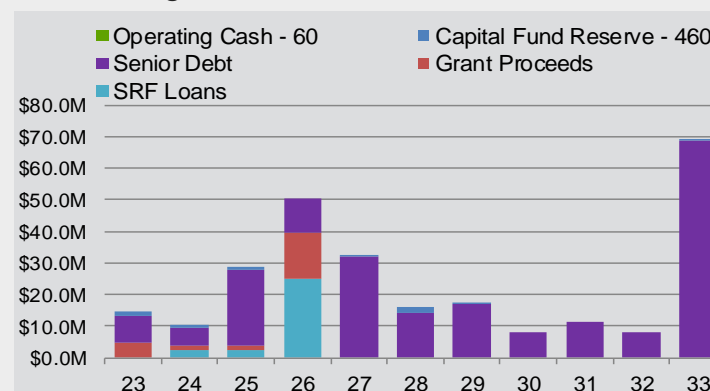
60: Expenses by Type



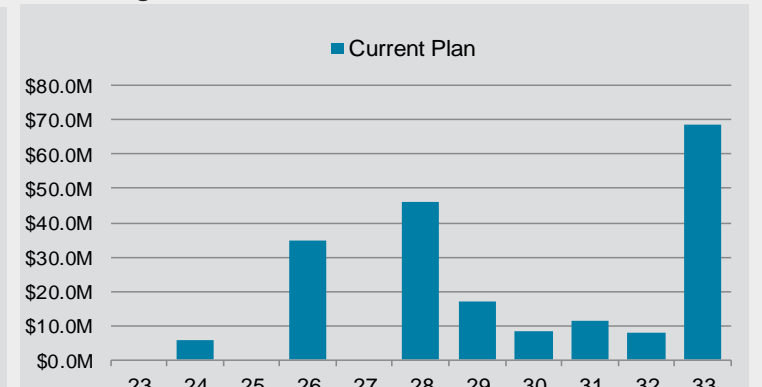
CIP Spending



CIP Funding



Borrowing - Senior Debt





Financial Management Plan

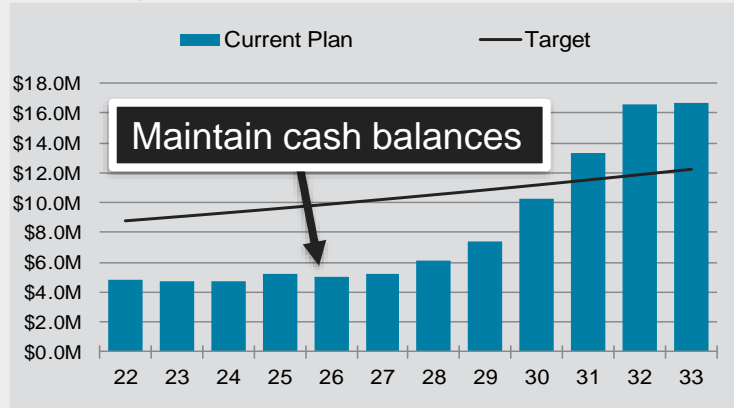
Meet debt coverage tests

Item A.

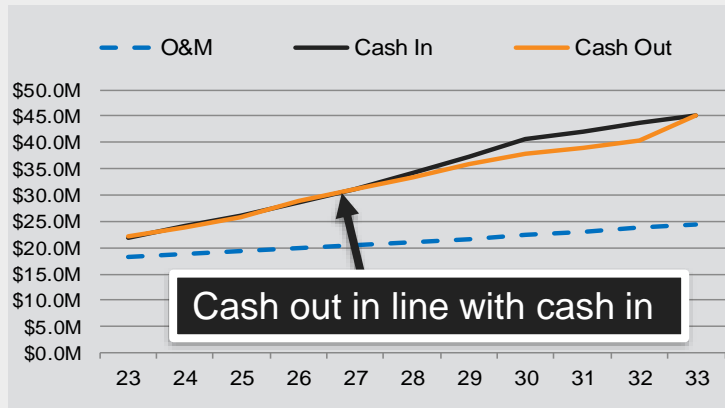
Projected revenue increases

	2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030	FY 2031	FY 2032	FY 2033	FY 2027	FY 2033
Water Rate Plan	0.00%	11.00%	11.00%	11.00%	11.00%	11.00%	11.00%	11.00%	3.00%	3.00%	3.00%	51.9%	120.3%
Wastewater Rate Plan	0.00%	12.00%	12.00%	12.00%	12.00%	12.00%	12.00%	12.00%	3.00%	3.00%	3.00%	57.3%	134.4%
Debt Service Coverage Test A	1.44	1.31	1.28	1.17	1.05	1.07	1.06	1.17	1.18	1.20	1.03		
Debt Service Coverage Test B	1.21	1.18	1.18	1.10	1.01	1.05	1.04	1.15	1.14	1.13	0.96		
Total Single Family Bill	\$62.33	\$69.59	\$77.71	\$86.76	\$96.87	\$108.19	\$120.81	\$134.89	\$138.94	\$143.10	\$146.25		

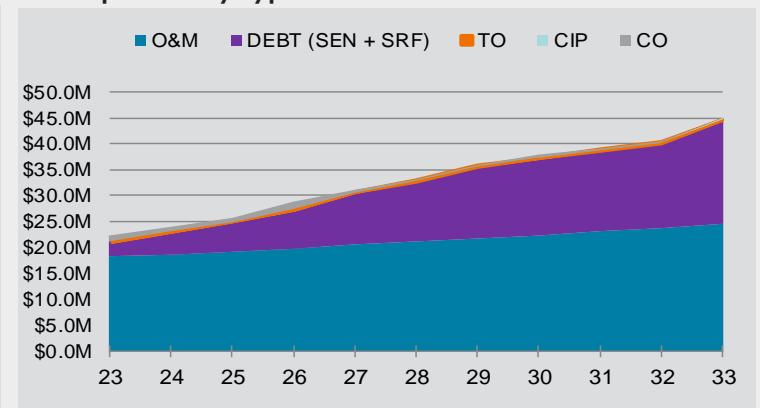
Operating Fund - 60



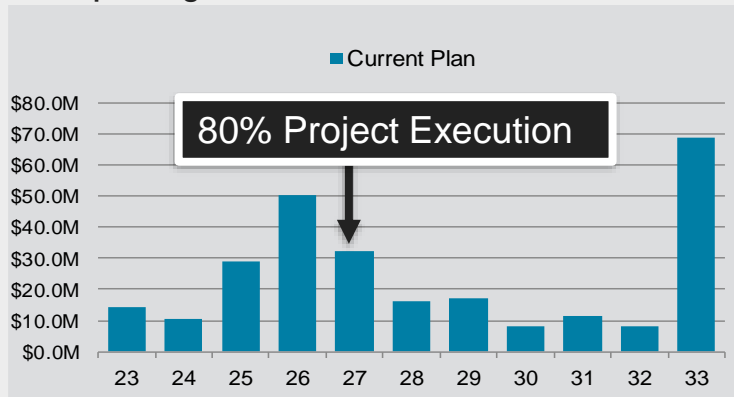
60: Revenues vs. Expenses



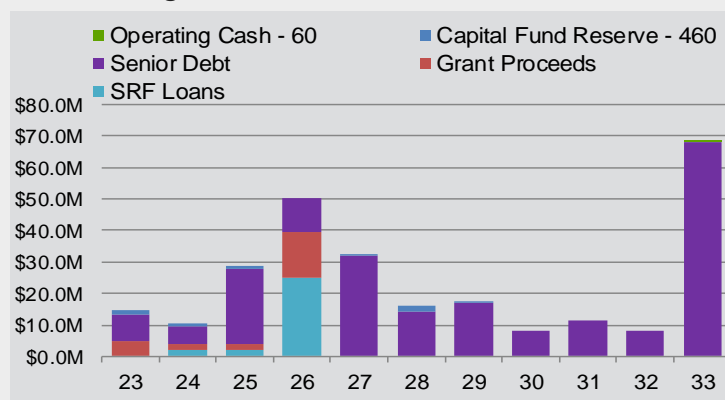
60: Expenses by Type



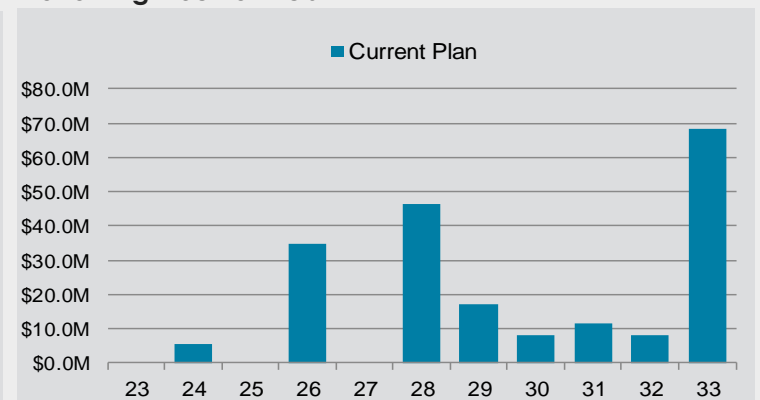
CIP Spending



CIP Funding



Borrowing - Senior Debt

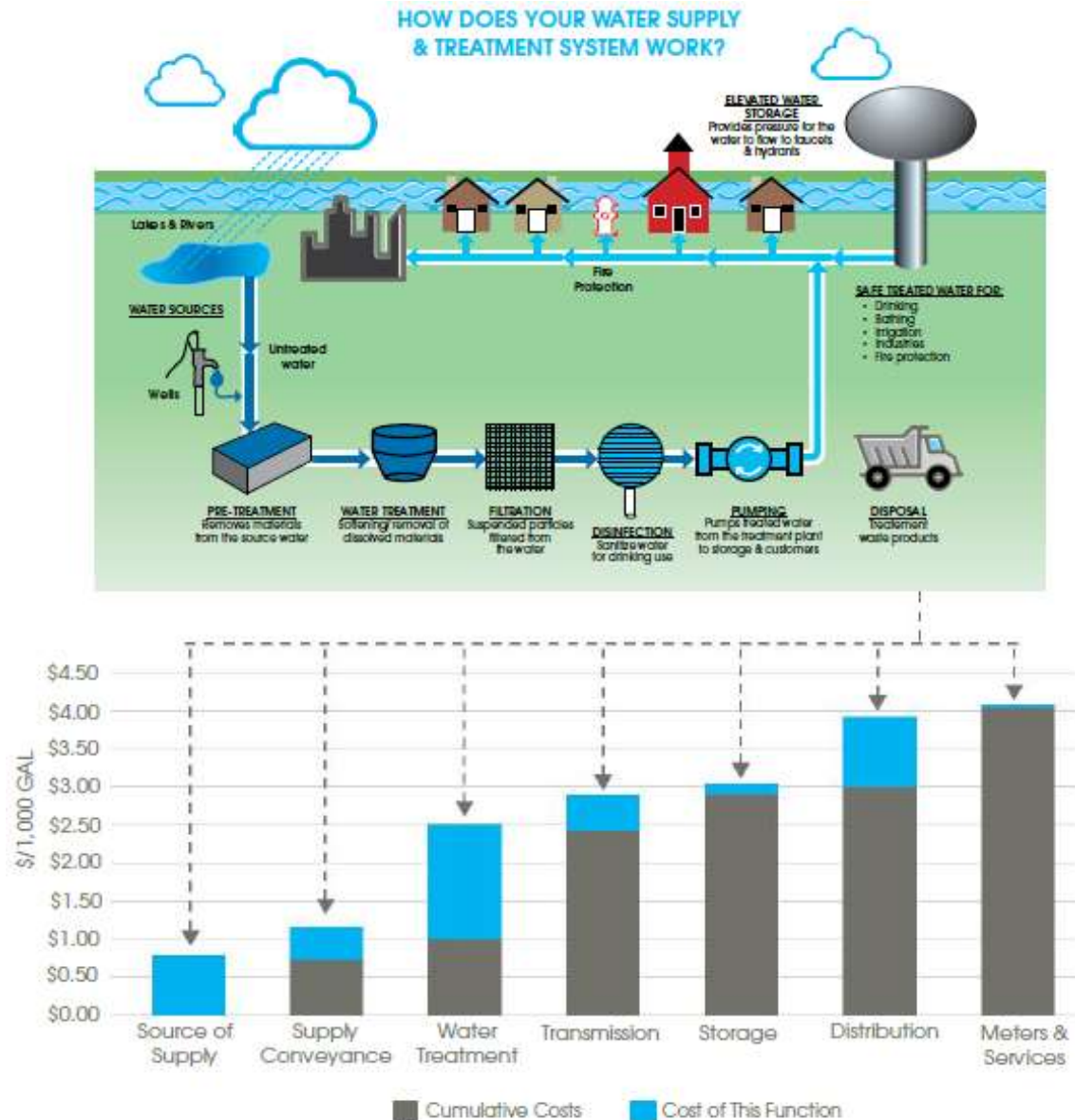




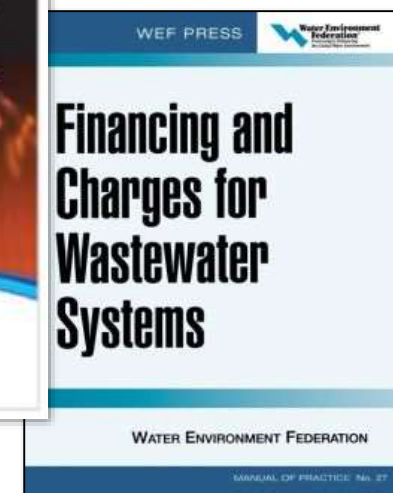
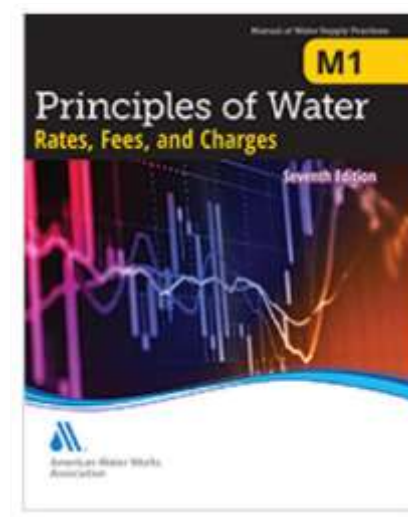
- Revenue increases from rates are required in FY 24 to meet debt coverage and cash balances
- Recommended adjustments
 - Water revenue increase: 11.00%
 - Sewer revenue increase: 12.00%
- Customer bill impacts will vary based on rate structure recommendations
- Future revenue increases will be required at similar levels
- Financial plan should be evaluated annually based on capital spending, growth, & other factors



Cost of Service Results



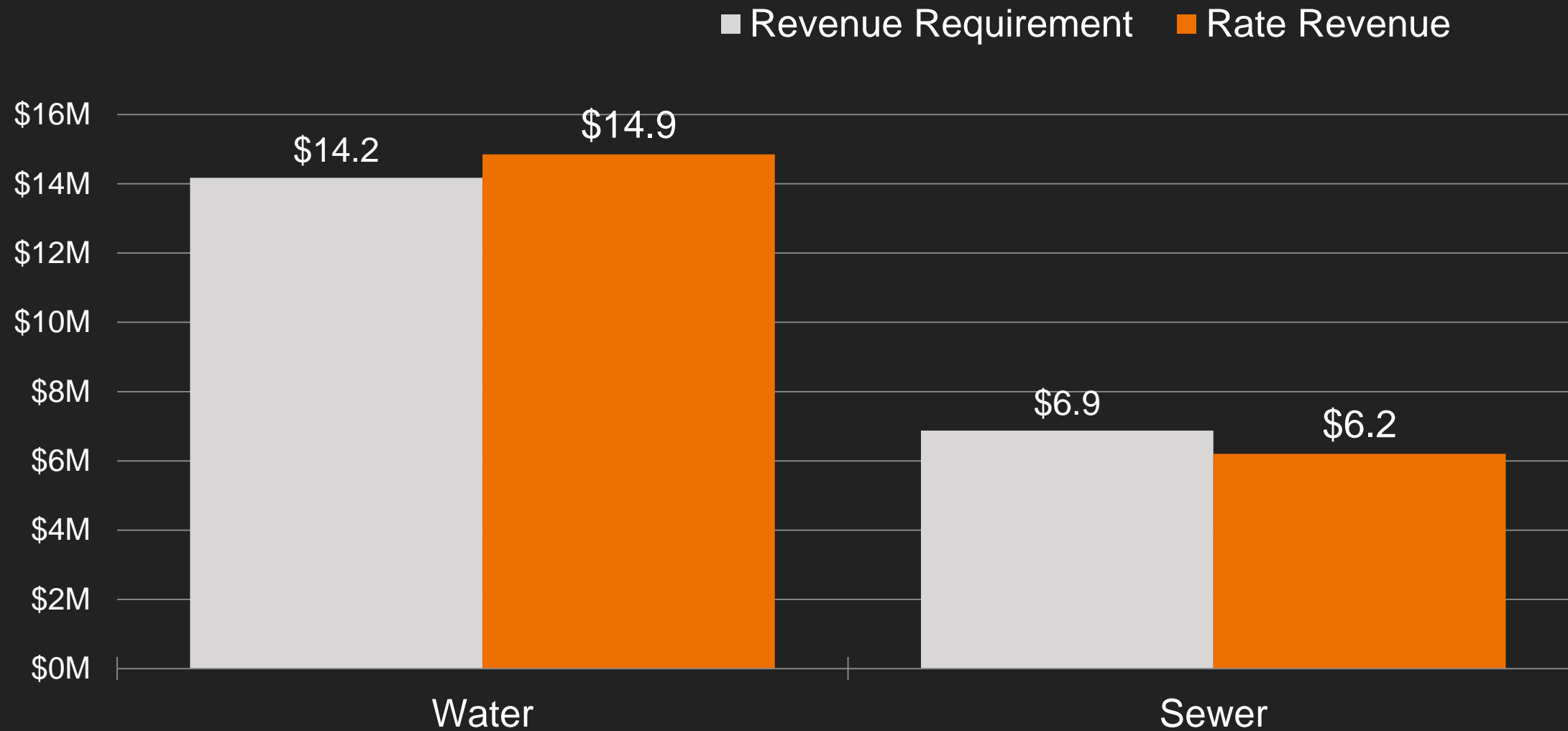
Goal: Determine the equitable distribution of revenue to be recovered by customer class based on the **cost to serve** each class



Use of Industry Standard Approaches

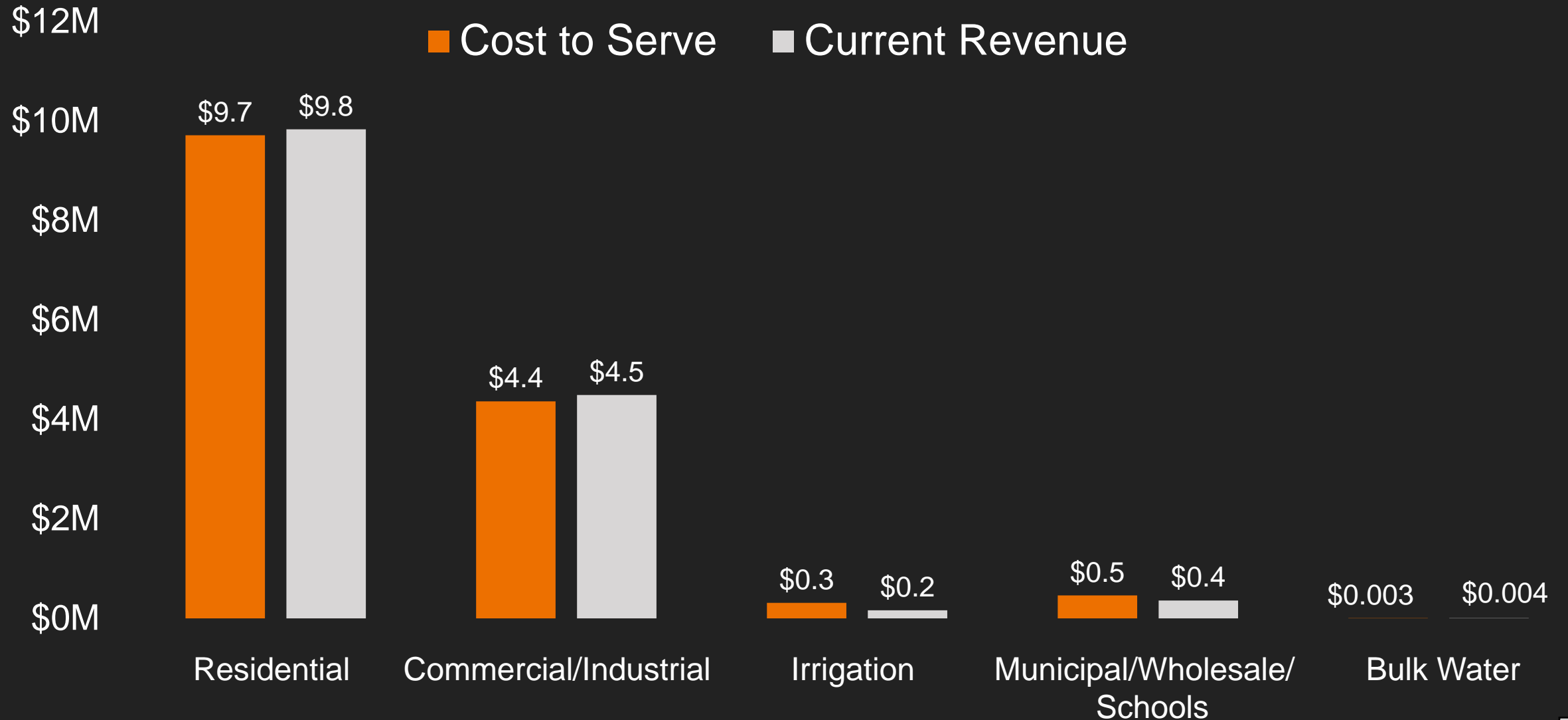


Net Revenue Requirements by Service





FY23 Water Cost to Serve vs. Current Revenue by Class (\$M)





- Modest misalignment between water and sewer costs and revenue generated (~ 3% of revenues)
 - Recommend balancing of water and sewer cost of service and revenues over time
 - Financial plan reflects this balancing
- Customer class cost of service is **closely** aligned with recovery by class
 - Rate structure modifications designed to fully align with the cost of service



Rate Structure Alternatives



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 Rates

Item A.

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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

Public Schools	
Base Charge Per Acct	\$8.32
All Usage	\$4.48

Water Volumetric 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	

30



City's Current Sewer Rates

Item A.

20

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 Volumetric Rates (per 1,000 gallon)	Inside City	Outside City
Residential / Commercial		
All Usage	\$6.33	\$9.50

Public Schools	
Base Charge Per Acct	\$8.92
All Usage	\$6.33

Municipal	
Base Charge Per Acct	\$8.92
All Usage	\$9.50



Water and Sewer Base Charge

- Increase the portion of revenues collected from base charge
- Scale fixed charges consistent with industry standards

Residential / Irrigation Water Rates

- Modify the tier quantities and differences in pricing between tiers
 - Creation of a “life-line” tier – increased customer bill control / affordability
 - Enhance conservation incentive – aligns with cost of service

Commercial / Industrial Water Rates

- Move to a uniform rate in FY 2024

Recommended FY 24 Water Base Charges

Meter Size	Inside City Account Charge	Inside City RTS Charge	Inside City Total Base Charge
3/4"	\$6.73	\$3.23	\$9.96
1"	\$6.73	\$5.39	\$12.12
1.5"	\$6.73	\$10.77	\$17.50
2"	\$6.73	\$17.24	\$23.97
3"	\$6.73	\$37.71	\$44.44
4"	\$6.73	\$64.65	\$71.38
6"	\$6.73	\$145.46	\$152.19
8"	\$6.73	\$172.39	\$179.12

FY 23 Base Charges

Outside City Total Base Charge	Inside City	Outside City
\$12.95	\$8.32	\$11.23
\$15.75	\$9.71	\$13.11
\$22.76	\$13.15	\$17.75
\$31.16	\$17.55	\$23.69
\$57.77	\$27.88	\$37.64
\$92.79	\$42.60	\$57.51
\$197.84	\$79.40	\$107.19
\$232.86	\$123.56	\$166.81

Recommended base charges along with recommend volumetric rates would generate a 11% increase in water revenues



Addition of an initial quantity of water for basic indoor water needs at a lower rate



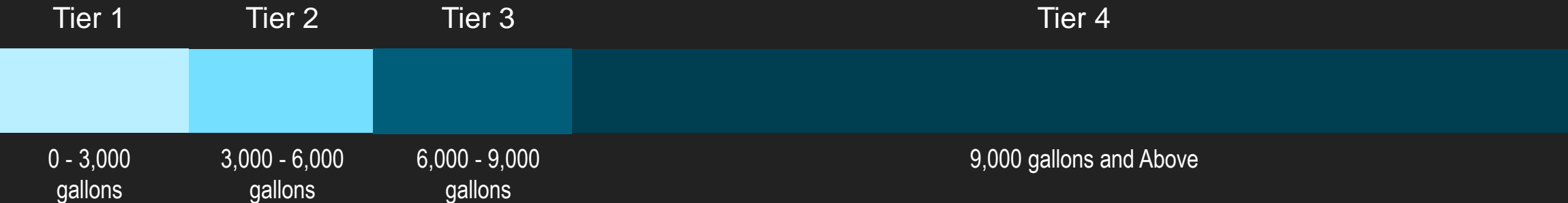
Life-line Tier = 3,000 gallons



Current Monthly Water Tiers



Recommended Monthly Water Tiers





Water Volumetric Rates

Recommended FY 24 Water Volumetric Rates

Water Volumetric Rates (per 1,000 gallon)	Rate Differential	Inside City	Outside City	
Residential				
0 to 3,000 gal.	0.75	\$3.76	\$4.89	Addition of Life-line Tier / Enhanced Conservation
3,001 to 6,000 gal.	1.00	\$5.01	\$6.51	
6,001 to 9,000 gal.	1.25	\$6.26	\$8.14	
9,001 gal. and over	1.50	\$7.52	\$9.77	
Commercial/Industrial				
0 to 50,000 gal.	1.00	\$5.01	\$6.51	Transition to Uniform Rates
50,001 to 100,000 gal.	1.00	\$5.01	\$6.51	
100,001 gal. and over	1.00	\$5.01	\$6.51	
Irrigation				
0 to 40,000 gal.	2.00	\$10.02	\$13.03	Enhanced Conservation
40,001 gal. and over	2.10	\$10.52	\$13.68	
Municipal/Wholesale/Public Schools		\$5.01		
Bulk Water		\$9.77		

Recommended FY 24 Sewer Base Charges

Meter Size	Inside Account Charge	Inside RTS Charge	Inside City Total Base Charge	Outside City Total Base Charge
3/4"	\$7.60	\$3.56	\$11.16	\$16.74
1"	\$7.60	\$5.93	\$13.53	\$20.30
1.5"	\$7.60	\$11.87	\$19.47	\$29.20
2"	\$7.60	\$18.99	\$26.59	\$39.88
3"	\$7.60	\$41.54	\$49.14	\$73.71
4"	\$7.60	\$71.21	\$78.81	\$118.22
6"	\$7.60	\$160.23	\$167.83	\$251.74
8"	\$7.60	\$189.90	\$197.50	\$296.25

FY 23 Base Charges

Inside City	Outside City
\$8.92	\$13.38
\$11.25	\$16.88
\$17.05	\$25.58
\$24.03	\$36.05
\$40.44	\$60.66
\$63.89	\$95.84
\$122.45	\$183.68
\$192.75	\$289.13

Recommended base charges along with recommend volumetric rates would generate a 12% increase in sewer revenues

Recommended FY 24 Sewer Rates

Sewer Volumetric Rates (per 1,000 gallon)	Inside City	Outside City
Residential / Commercial		
All Usage	\$6.88	\$10.32
Wholesale / Municipal		
All Usage	\$10.32	

Public Schools	
Base Charge Per Acct	\$11.16
All Usage	\$6.88

Municipal	
Base Charge Per Acct	\$11.16
All Usage	\$10.32

FY 23 Sewer Rates

Sewer Volumetric Rates (per 1,000 gallon)	Inside City	Outside City
Residential / Commercial		
All Usage	\$6.33	\$9.50
Wholesale / Municipal		
All Usage	\$9.50	

Public Schools	
Base Charge Per Acct	\$8.92
All Usage	\$6.33

Municipal	
Base Charge Per Acct	\$8.92
All Usage	\$9.50



Bill Comparisons



Average Monthly Household Spending

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\$150
on electricity



\$105
on cell phone
service



Water: **\$22**
Sewer: **\$28**
Total: \$50
Hendersonville
(Inside City Current)



Water: **\$21**
Sewer: **\$32**
Total: \$53
Hendersonville
(Inside City Proposed FY24)



Water: **\$27**
Sewer: **\$33**
Total: \$60
NC Average

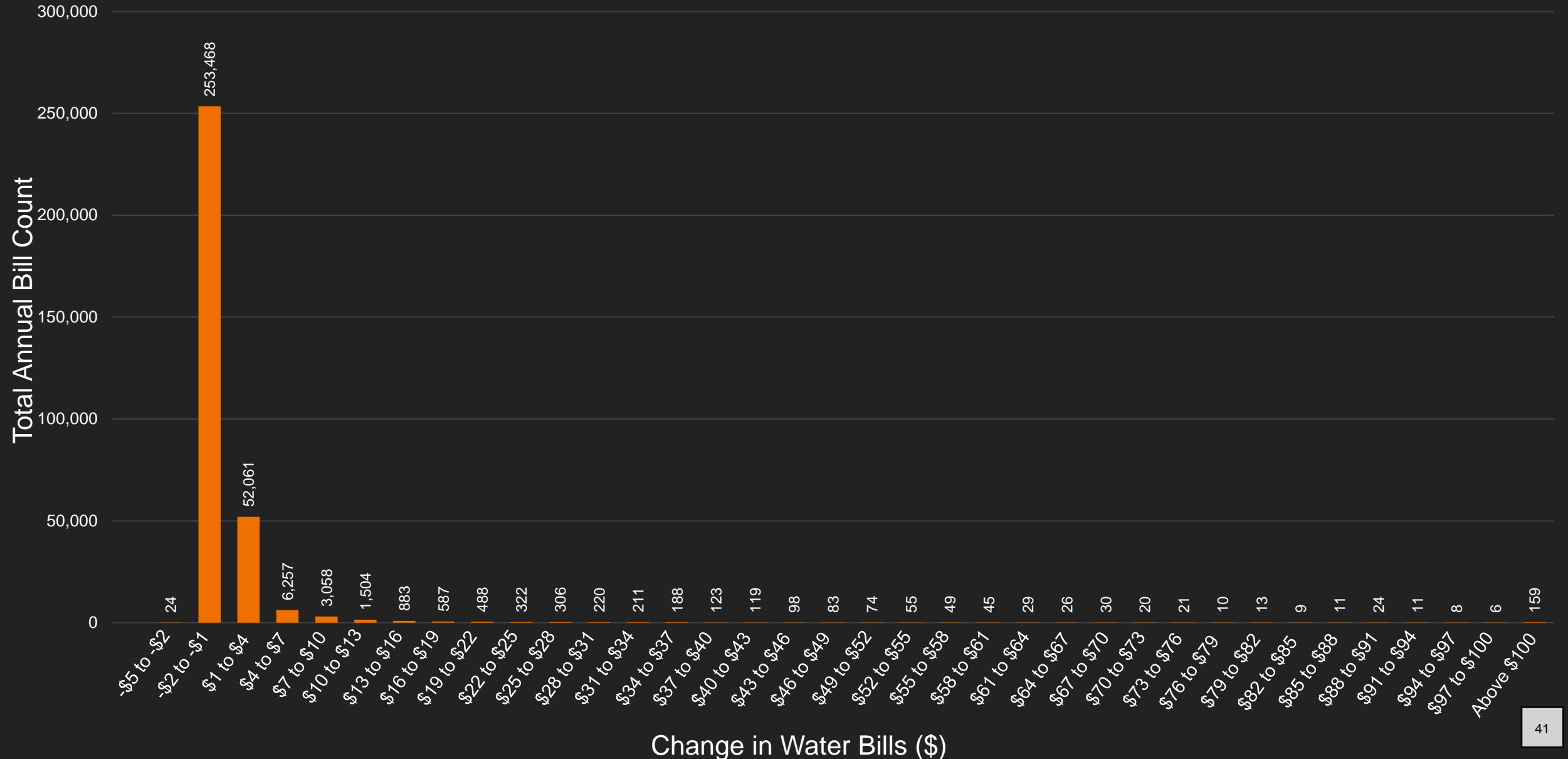
- US Energy Information Administration, 2022 Electricity Reports
- US Bureau of Labor Statistics, Consumer Expenditure Survey, August 2022
- Current inside city residential rates for 3,000 gallons per month
- Outside City current and proposed residential bills for 3,000 gallons per month at \$71 and \$75, respectively



Change in Monthly Residential Water Bills (\$)

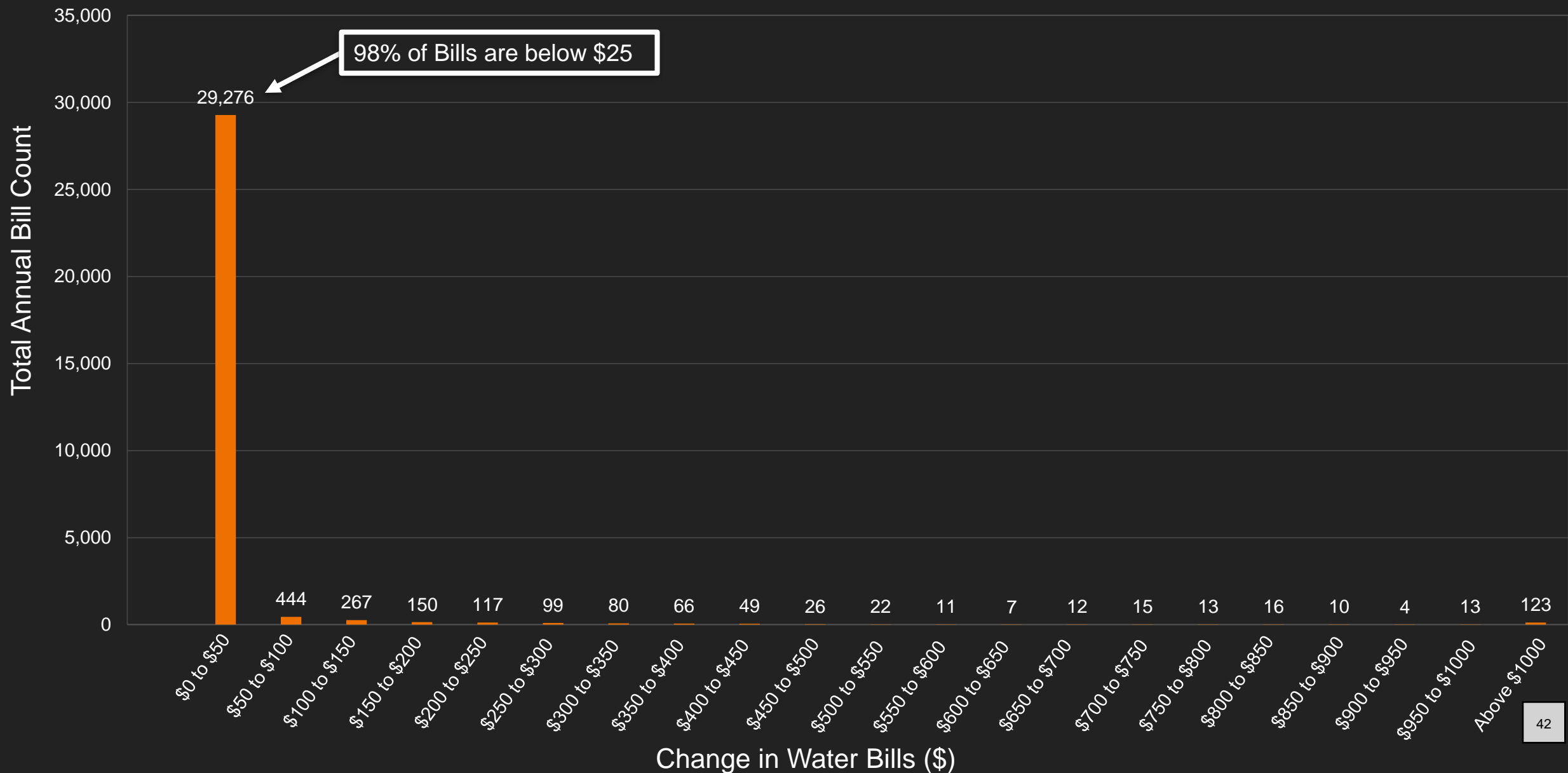
Item A.

30





Change in Monthly Commercial Water Bills (\$)

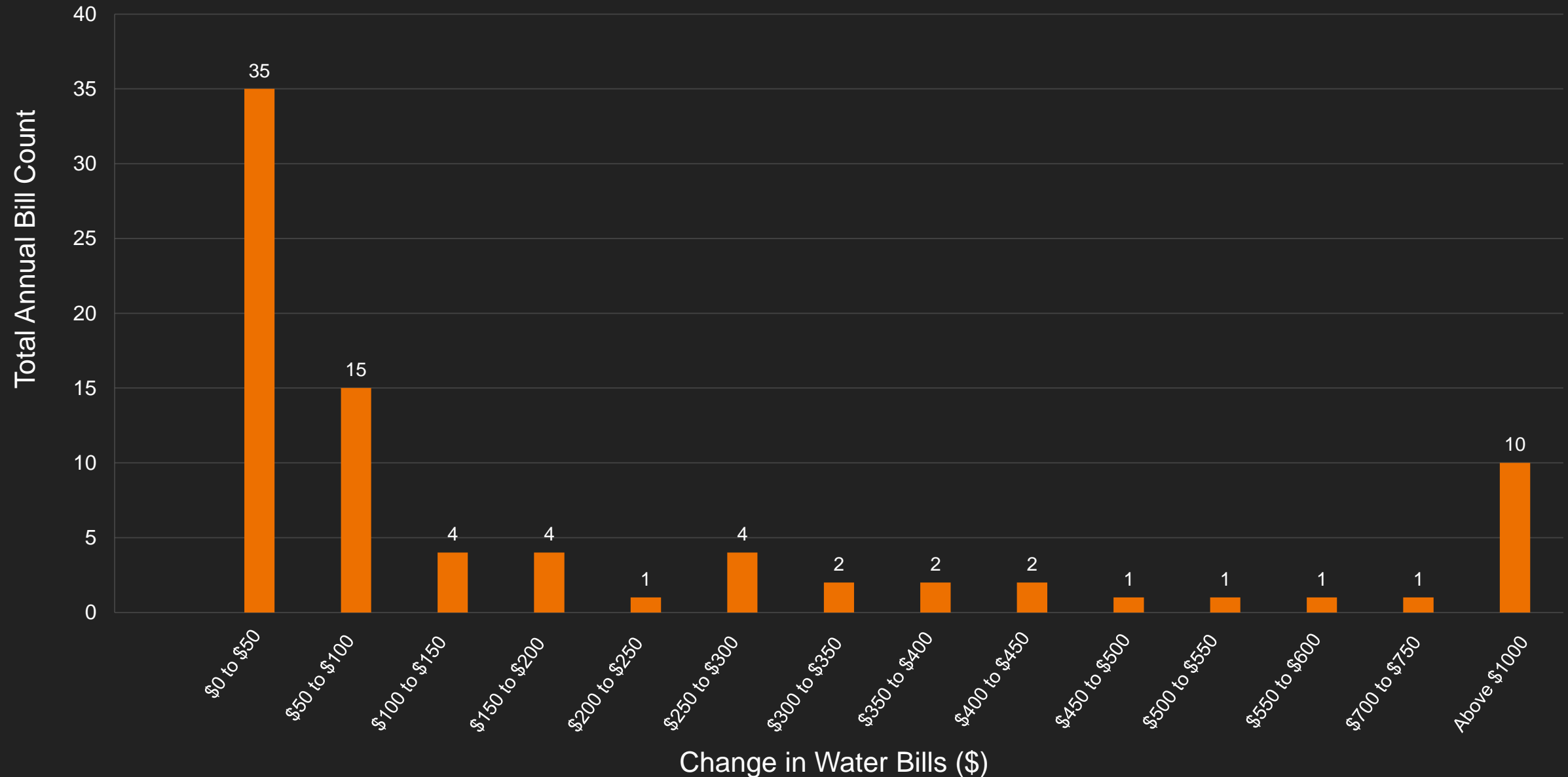




Change in Monthly Industrial Water Bills (\$)

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Sample Residential Monthly Bills (3/4") - Inside

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Item A.

Meter Size	Usage (gal)	Water Bill (Inside)				Sewer Bill (Inside)				Total Bill (Inside)			
		Current Bill	Proposed Bill	\$ Change	% Change	Current Bill	Proposed Bill	\$ Change	% Change	Current Bill	Proposed Bill	\$ Change	% Change
3/4	1,000	\$ 12.80	\$ 13.72	\$ 0.92	7.2%	\$ 15.25	\$ 18.04	\$ 2.79	18.3%	\$ 28.05	\$ 31.76	\$ 3.71	13.2%
3/4	2,000	\$ 17.28	\$ 17.48	\$ 0.20	1.2%	\$ 21.58	\$ 24.92	\$ 3.34	15.5%	\$ 38.86	\$ 42.40	\$ 3.54	9.1%
3/4	3,000	\$ 21.76	\$ 21.24	\$ (0.52)	-2.4%	\$ 27.91	\$ 31.80	\$ 3.89	13.9%	\$ 49.67	\$ 53.04	\$ 3.37	6.8%
3/4	4,000	\$ 26.24	\$ 26.25	\$ 0.01	0.0%	\$ 34.24	\$ 38.68	\$ 4.44	13.0%	\$ 60.48	\$ 64.93	\$ 4.45	7.4%
3/4	5,000	\$ 30.72	\$ 31.26	\$ 0.54	1.8%	\$ 40.57	\$ 45.56	\$ 4.99	12.3%	\$ 71.29	\$ 76.82	\$ 5.53	7.8%
3/4	6,000	\$ 35.20	\$ 36.27	\$ 1.07	3.0%	\$ 46.90	\$ 52.44	\$ 5.54	11.8%	\$ 82.10	\$ 88.71	\$ 6.61	8.1%
3/4	7,000	\$ 40.13	\$ 42.53	\$ 2.40	6.0%	\$ 53.23	\$ 59.32	\$ 6.09	11.4%	\$ 93.36	\$ 101.86	\$ 8.50	9.1%
3/4	8,000	\$ 45.06	\$ 48.80	\$ 3.74	8.3%	\$ 59.56	\$ 66.20	\$ 6.64	11.2%	\$ 104.62	\$ 115.00	\$ 10.38	9.9%
3/4	9,000	\$ 49.99	\$ 55.06	\$ 5.07	10.1%	\$ 65.89	\$ 73.09	\$ 7.20	10.9%	\$ 115.88	\$ 128.15	\$ 12.27	10.6%
3/4	10,000	\$ 54.92	\$ 62.58	\$ 7.66	13.9%	\$ 72.22	\$ 79.97	\$ 7.75	10.7%	\$ 127.14	\$ 142.54	\$ 15.40	12.1%
3/4	11,000	\$ 59.85	\$ 70.09	\$ 10.24	17.1%	\$ 78.55	\$ 86.85	\$ 8.30	10.6%	\$ 138.40	\$ 156.94	\$ 18.54	13.4%
3/4	12,000	\$ 64.78	\$ 77.61	\$ 12.83	19.8%	\$ 84.88	\$ 93.73	\$ 8.85	10.4%	\$ 149.66	\$ 171.34	\$ 21.68	14.5%
3/4	13,000	\$ 69.71	\$ 85.13	\$ 15.42	22.1%	\$ 91.21	\$ 100.61	\$ 9.40	10.3%	\$ 160.92	\$ 185.73	\$ 24.81	15.4%
3/4	14,000	\$ 74.64	\$ 92.64	\$ 18.00	24.1%	\$ 97.54	\$ 107.49	\$ 9.95	10.2%	\$ 172.18	\$ 200.13	\$ 27.95	16.2%
3/4	15,000	\$ 80.24	\$ 100.16	\$ 19.92	24.8%	\$ 103.87	\$ 114.37	\$ 10.50	10.1%	\$ 184.11	\$ 214.53	\$ 30.42	16.5%
3/4	16,000	\$ 85.84	\$ 107.67	\$ 21.83	25.4%	\$ 110.20	\$ 121.25	\$ 11.05	10.0%	\$ 196.04	\$ 228.92	\$ 32.88	16.8%
3/4	17,000	\$ 91.44	\$ 115.19	\$ 23.75	26.0%	\$ 116.53	\$ 128.13	\$ 11.60	10.0%	\$ 207.97	\$ 243.32	\$ 35.35	17.0%
3/4	18,000	\$ 97.04	\$ 122.71	\$ 25.67	26.5%	\$ 122.86	\$ 135.01	\$ 12.15	9.9%	\$ 219.90	\$ 257.72	\$ 37.82	17.2%
3/4	19,000	\$ 102.64	\$ 130.22	\$ 27.58	26.9%	\$ 129.19	\$ 141.89	\$ 12.70	9.8%	\$ 231.83	\$ 272.12	\$ 40.29	17.4%
3/4	20,000	\$ 108.24	\$ 137.74	\$ 29.50	27.3%	\$ 135.52	\$ 148.77	\$ 13.25	9.8%	\$ 243.76	\$ 286.51	\$ 42.75	17.5%

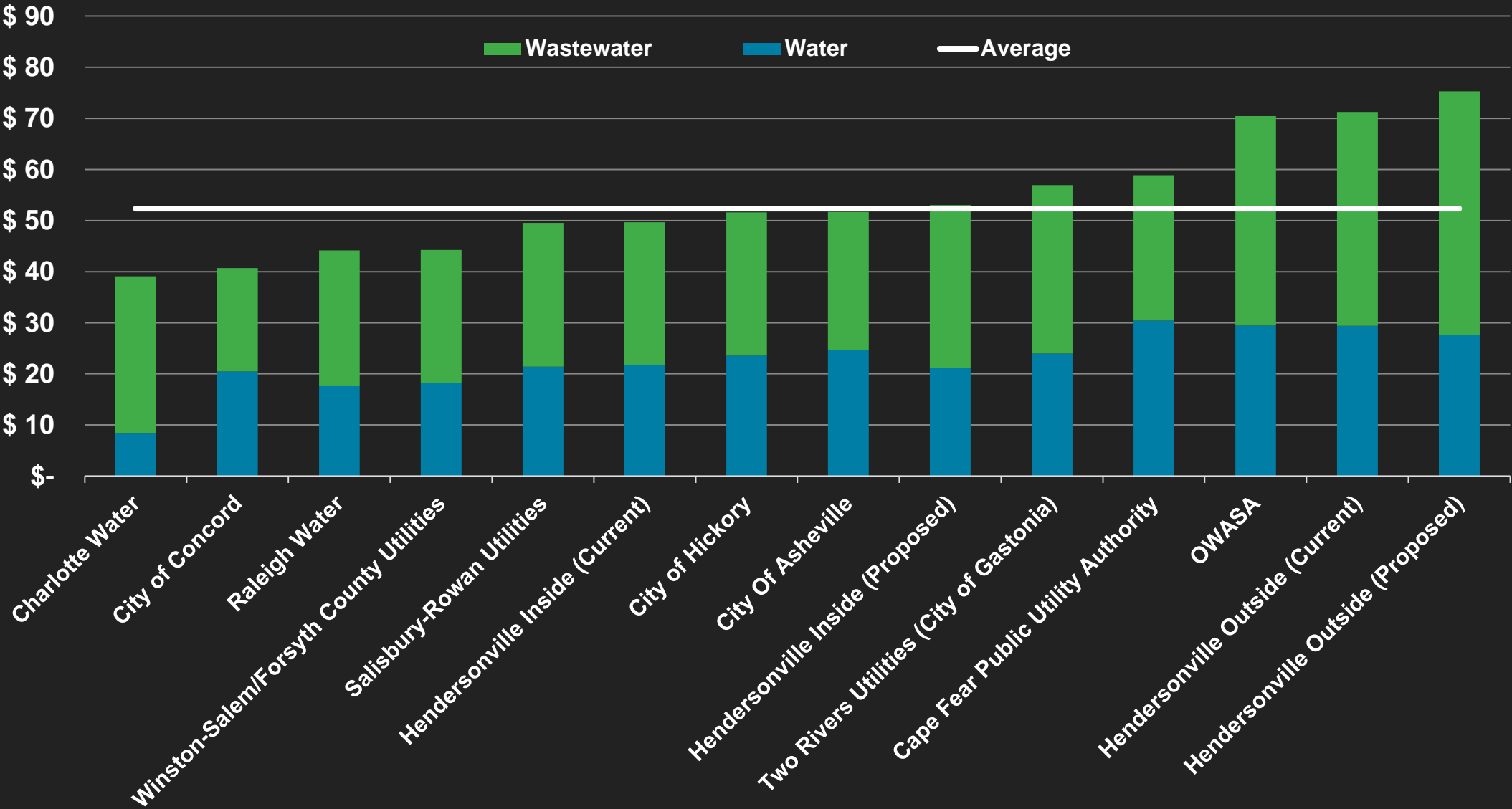


Sample Residential Monthly Bills (3/4") – Outside

		Water Bill (Outside)				Sewer Bill (Outside)				Total Bill (Outside)			
Meter Size	Usage (gal)	Current Bill	Proposed Bill	\$ Change	% Change	Current Bill	Proposed Bill	\$ Change	% Change	Current Bill	Proposed Bill	\$ Change	% Change
3/4	1,000	\$ 17.28	\$ 17.84	\$ 0.56	3.2%	\$ 22.88	\$ 27.06	\$ 4.18	18.3%	\$ 40.16	\$ 44.90	\$ 4.74	11.8%
3/4	2,000	\$ 23.33	\$ 22.72	\$ (0.61)	-2.6%	\$ 32.37	\$ 37.38	\$ 5.01	15.5%	\$ 55.70	\$ 60.10	\$ 4.40	7.9%
3/4	3,000	\$ 29.38	\$ 27.61	\$ (1.77)	-6.0%	\$ 41.87	\$ 47.70	\$ 5.84	13.9%	\$ 71.24	\$ 75.31	\$ 4.07	5.7%
3/4	4,000	\$ 35.42	\$ 34.12	\$ (1.30)	-3.7%	\$ 51.36	\$ 58.02	\$ 6.66	13.0%	\$ 86.78	\$ 92.14	\$ 5.36	6.2%
3/4	5,000	\$ 41.47	\$ 40.64	\$ (0.84)	-2.0%	\$ 60.86	\$ 68.34	\$ 7.49	12.3%	\$ 102.33	\$ 108.98	\$ 6.65	6.5%
3/4	6,000	\$ 47.52	\$ 47.15	\$ (0.37)	-0.8%	\$ 70.35	\$ 78.66	\$ 8.31	11.8%	\$ 117.87	\$ 125.82	\$ 7.95	6.7%
3/4	7,000	\$ 54.18	\$ 55.29	\$ 1.12	2.1%	\$ 79.85	\$ 88.99	\$ 9.14	11.4%	\$ 134.02	\$ 144.28	\$ 10.26	7.7%
3/4	8,000	\$ 60.83	\$ 63.44	\$ 2.60	4.3%	\$ 89.34	\$ 99.31	\$ 9.97	11.2%	\$ 150.17	\$ 162.74	\$ 12.57	8.4%
3/4	9,000	\$ 67.49	\$ 71.58	\$ 4.09	6.1%	\$ 98.84	\$ 109.63	\$ 10.79	10.9%	\$ 166.32	\$ 181.21	\$ 14.88	8.9%
3/4	10,000	\$ 74.14	\$ 81.35	\$ 7.21	9.7%	\$ 108.33	\$ 119.95	\$ 11.62	10.7%	\$ 182.47	\$ 201.30	\$ 18.83	10.3%
3/4	11,000	\$ 80.80	\$ 91.12	\$ 10.32	12.8%	\$ 117.83	\$ 130.27	\$ 12.44	10.6%	\$ 198.62	\$ 221.39	\$ 22.77	11.5%
3/4	12,000	\$ 87.45	\$ 100.89	\$ 13.44	15.4%	\$ 127.32	\$ 140.59	\$ 13.27	10.4%	\$ 214.77	\$ 241.48	\$ 26.71	12.4%
3/4	13,000	\$ 94.11	\$ 110.66	\$ 16.56	17.6%	\$ 136.82	\$ 150.91	\$ 14.10	10.3%	\$ 230.92	\$ 261.58	\$ 30.65	13.3%
3/4	14,000	\$ 100.76	\$ 120.43	\$ 19.67	19.5%	\$ 146.31	\$ 161.23	\$ 14.92	10.2%	\$ 247.07	\$ 281.67	\$ 34.59	14.0%
3/4	15,000	\$ 108.32	\$ 130.21	\$ 21.88	20.2%	\$ 155.81	\$ 171.55	\$ 15.75	10.1%	\$ 264.13	\$ 301.76	\$ 37.63	14.2%
3/4	16,000	\$ 115.88	\$ 139.98	\$ 24.09	20.8%	\$ 165.30	\$ 181.88	\$ 16.58	10.0%	\$ 281.18	\$ 321.85	\$ 40.67	14.5%
3/4	17,000	\$ 123.44	\$ 149.75	\$ 26.30	21.3%	\$ 174.80	\$ 192.20	\$ 17.40	10.0%	\$ 298.24	\$ 341.94	\$ 43.71	14.7%
3/4	18,000	\$ 131.00	\$ 159.52	\$ 28.52	21.8%	\$ 184.29	\$ 202.52	\$ 18.23	9.9%	\$ 315.29	\$ 362.04	\$ 46.74	14.8%
3/4	19,000	\$ 138.56	\$ 169.29	\$ 30.73	22.2%	\$ 193.79	\$ 212.84	\$ 19.05	9.8%	\$ 332.35	\$ 382.13	\$ 49.78	15.0%
3/4	20,000	\$ 146.12	\$ 179.06	\$ 32.94	22.5%	\$ 203.28	\$ 223.16	\$ 19.88	9.8%	\$ 349.40	\$ 402.22	\$ 52.82	15.1%



Residential Bill Comparisons (3/4" Meter, 3 kgal)

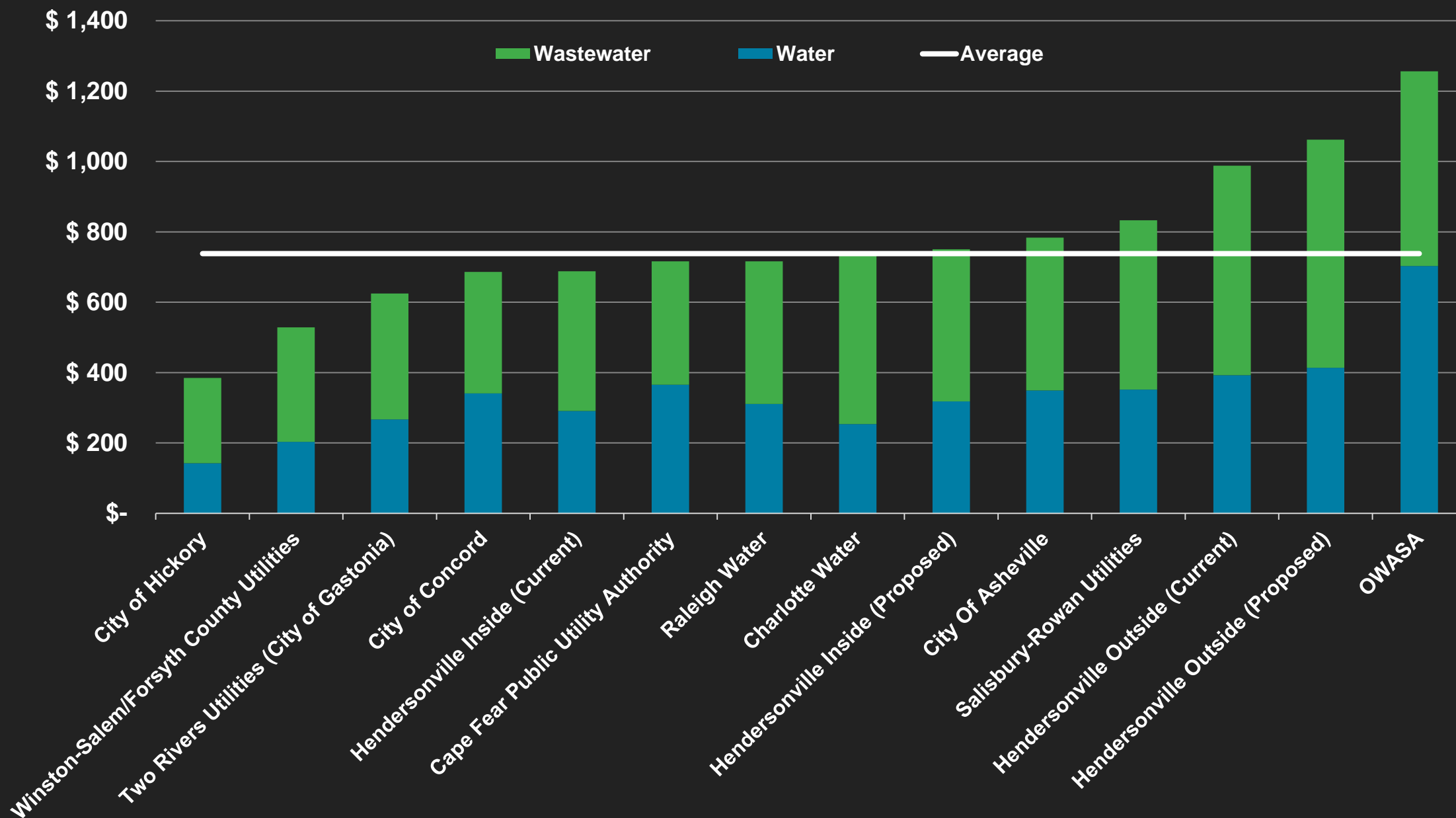




Commercial/Industrial Bill Comparisons (1.5" Meter, 60 kgall)

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System Development Fees

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



- 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 but are very common in North Carolina
- Requirements and limitations on the use of SDFs given legislation
 - Separate tracking of revenues from SDFs
 - Limitations on use of proceeds depending on approach

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

Recommend the use of the combined-in method for water and sewer SDFs for City



$$\text{System Development Fee} = \frac{\text{Value of System} - \text{Credit}}{\text{System Capacity}}$$

1) Value of Utility System

- Depreciated value of current assets in place, escalated to current replacement cost
- Plus: The value of future planned capital projects that will **add** capacity to the system (*10-Year Capital Plan*)

2) Credits

- Outstanding principal on existing utility debt
- NPV of principal on future debt over planning period (must equal at least 25% of expansion capital projects, if not additional credit required)
- Donated/contributed and non-core system assets

3) System Capacity

- Total capacity in the utility system measured in units of service (Equivalent Residential Units or ERUs) with the existing system and expansion of the system



Water SDF Calculation

	Source / Treatment	Transmission / Distribution	Total
Replacement Value of Existing Depreciated Assets	\$34,607,998	\$51,705,500	\$86,313,497
Expansion Capital Projects	63,485,535	45,005,000	108,490,535
Total Value	\$98,093,533	\$96,710,500	\$194,804,032
<i>Less Credits</i>			
Outstanding Debt Principal	(\$7,240,635)	(\$10,817,749)	(\$18,058,384)
Donated and Non-Core Assets	(1,219,302)	(8,960,275)	(10,179,577)
Revenue Credit (NPV of future debt principal over period)	(26,613,455)	(18,866,322)	(45,479,777)
Net System Value	\$63,020,141	\$58,066,154	\$121,086,295
System Capacity - Million Gallons per Day*	18.0	18.0	
Level of Service per ERU (gallons per day)	277	277	
Equivalent Residential Units (ERU)	64,935	64,935	
Water System Development Fee Per ERU	\$971	\$894	\$1,865

**Includes 6 MGD WTP plant expansion*



Sewer SDF Calculation

	Treatment	Conveyance / Collection	Total
Replacement Value of Existing Depreciated Assets	\$28,145,176	\$35,802,595	\$63,947,771
Expansion Capital Projects	57,750,769	16,212,000	73,962,769
Total Value	\$85,895,945	\$52,014,595	\$137,910,540
<i>Less Credits</i>			
Outstanding Debt Principal	(\$6,446,996)	(\$8,201,021)	(\$14,648,017)
Donated and Non-Core Assets	(63,282)	(2,629,945)	(2,693,227)
Revenue Credit (NPV of future debt principal over period)	(24,209,412)	(6,796,152)	(31,005,564)
Net System Value	\$55,176,255	\$34,387,477	\$89,563,732
System Capacity - Million Gallons per Day*	7.8	7.8	
Level of Service per ERU (gallons per day)	277	277	
Equivalent Residential Units (ERU)	28,139	28,139	
Wastewater System Development Fee Per ERU	\$1,961	\$1,222	\$3,183

*Includes 3 MGD WWTP plant expansion



Assessment of System Development Fees

Item A.

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- 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
- Recommend the use of American Water Works Association (AWWA) meter equivalents

Meter size	Equivalent Residential Units (ERU)
3/4"	1.00
1"	1.67
1 1/2"	3.33
2"	5.33
3"	11.67
4"	21.00
6"	43.33
8"	93.33



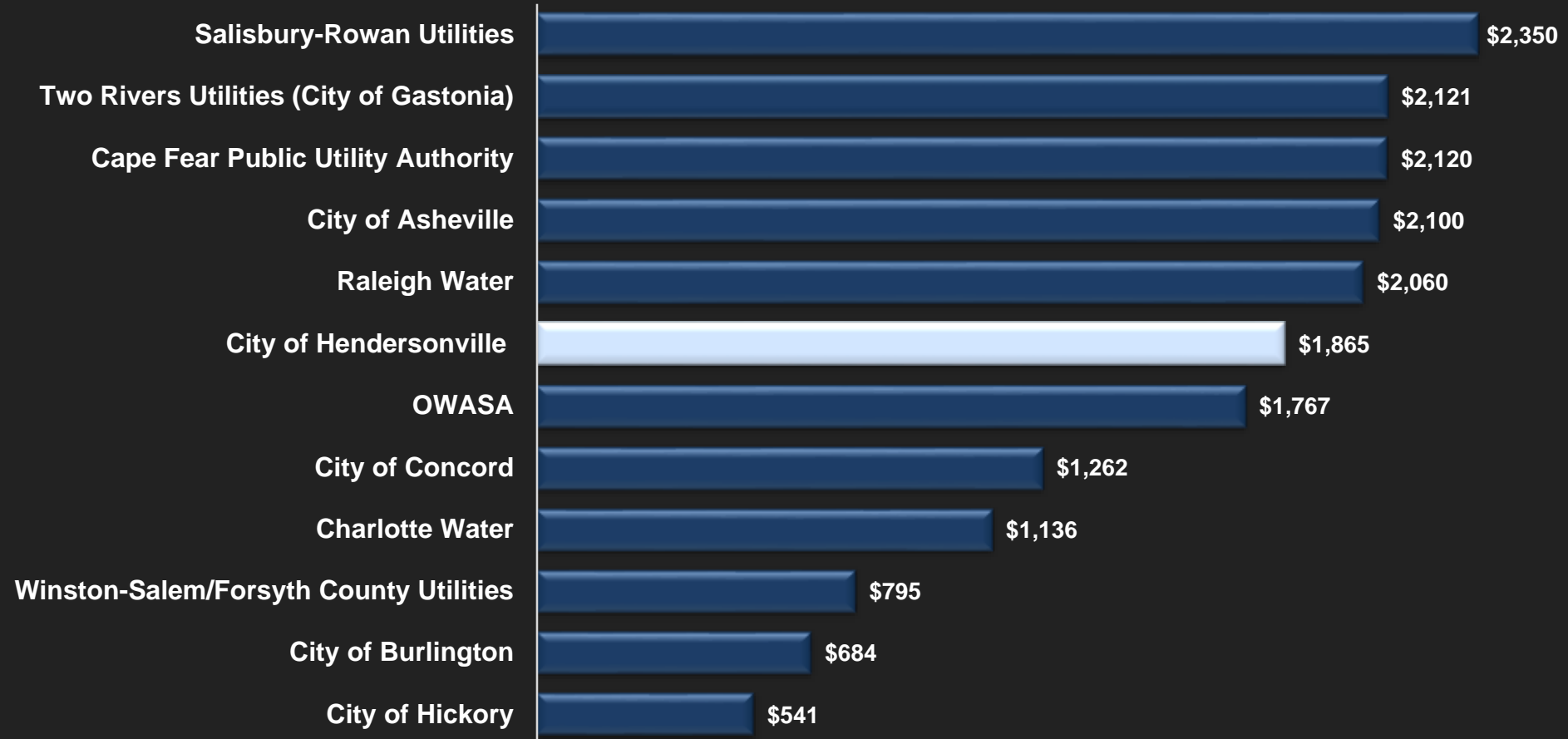
Calculated System Development Fees

Item A.

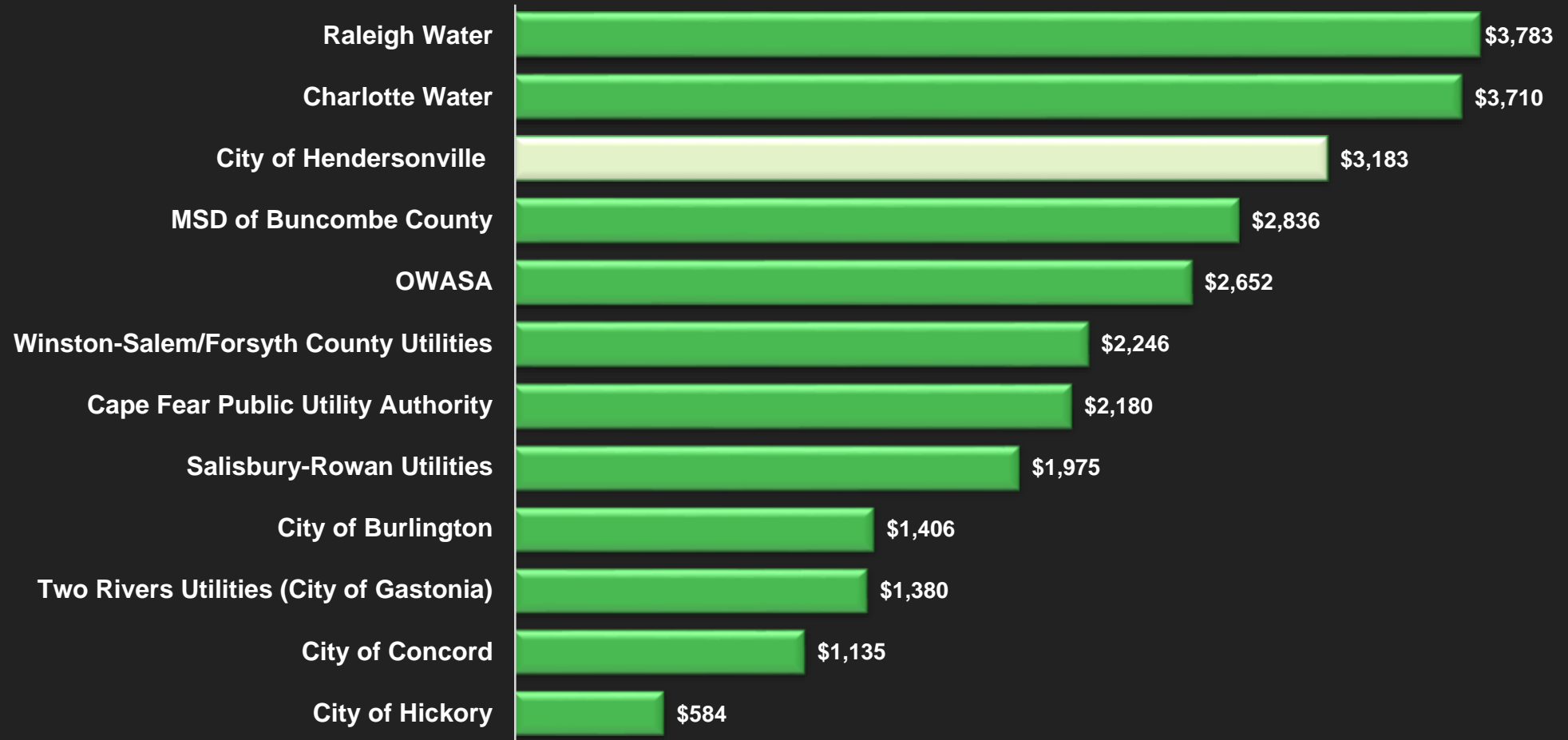
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Meter size	Calculated Water SDF	Current No. of Water Meters	Calculated Wastewater SDF	Current No. of Wastewater Customers	Combined SDF
3/4"	\$1,865	29,564	\$3,183	9,767	\$5,048
1"	\$3,108	622	\$5,305	297	\$8,413
1 1/2"	\$6,217	317	\$10,610	177	\$16,827
2"	\$9,947	142	\$16,976	79	\$26,923
3"	\$21,758	24	\$37,135	12	\$58,893
4"	\$39,165	11	\$66,843	4	\$106,008
6"	\$80,817	11	\$137,930	2	\$218,747
8"	\$174,067	0	\$297,080	0	\$471,147

Water System Development Fees (3/4" Meter - Residential)



Sewer System Development Fees (3/4" Meter - Residential)



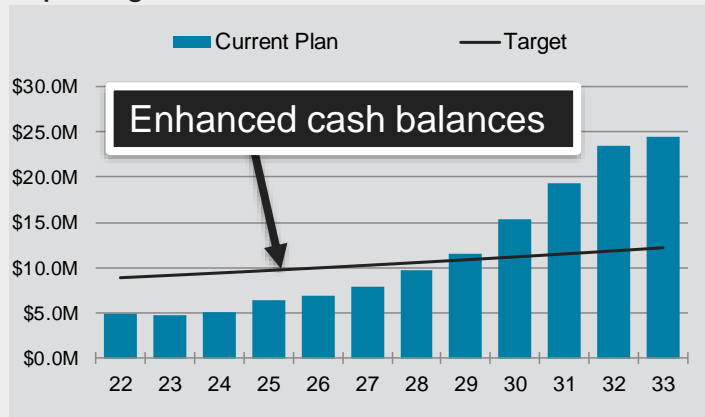


Financial Management Plan - Addition of SDFs

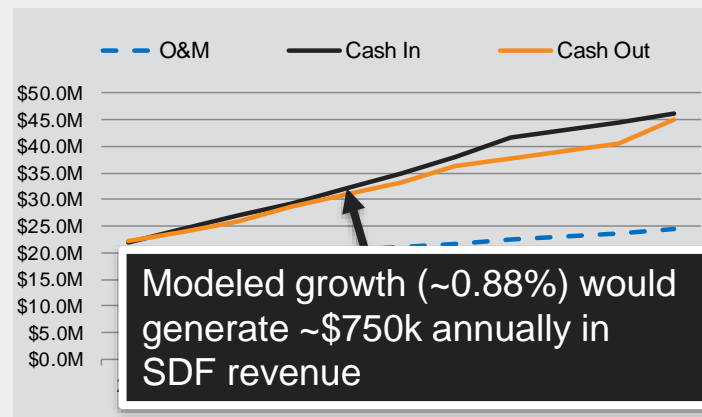
Item A.

	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030	FY 2031	FY 2032	FY 2033	FY 2027	FY 2033
Water Rate Plan	0.00%	11.00%	11.00%	11.00%	11.00%	11.00%	11.00%	11.00%	3.00%	3.00%	3.00%	51.9%	120.3%
Wastewater Rate Plan	0.00%	12.00%	12.00%	12.00%	12.00%	12.00%	12.00%	12.00%	3.00%	3.00%	3.00%	57.3%	134.4%
Debt Service Coverage Test A	1.44	1.31	1.29	1.20	1.08	1.12	1.11	1.22	1.24	1.27	1.10		
Debt Service Coverage Test B	1.21	1.18	1.18	1.11	1.01	1.06	1.05	1.16	1.14	1.14	0.96		
Total Single Family Bill	\$62.33	\$69.59	\$77.71	\$86.76	\$96.87	\$108.19	\$120.81	\$134.89	\$138.94	\$143.10	\$146.25		

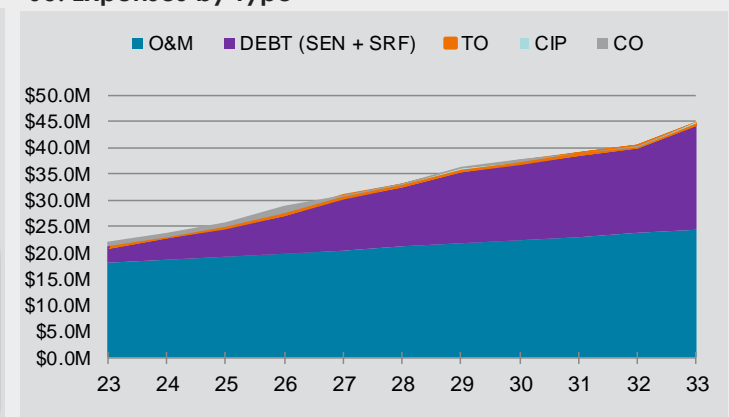
Operating Fund - 60



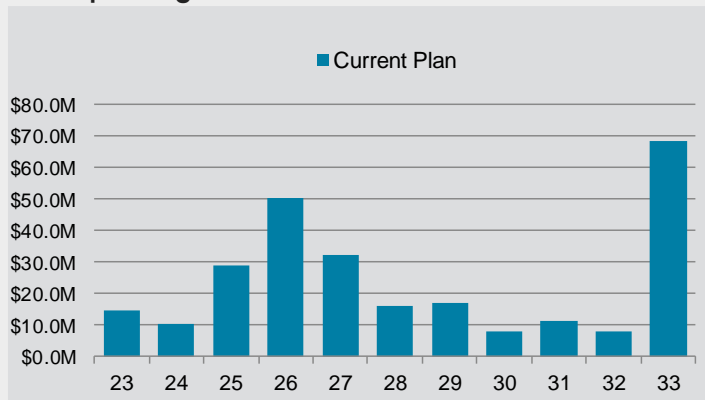
60: Revenues vs. Expenses



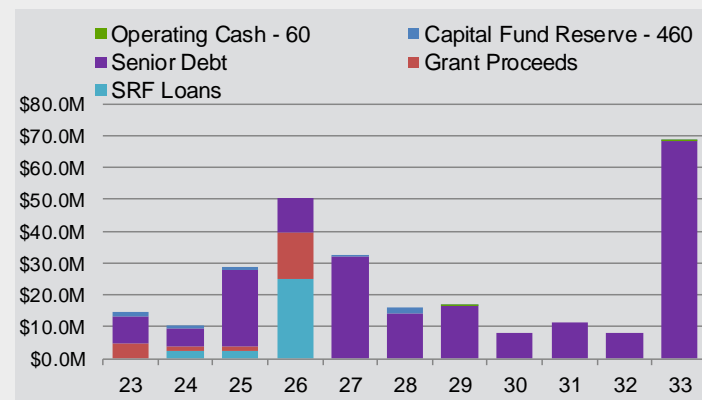
60: Expenses by Type



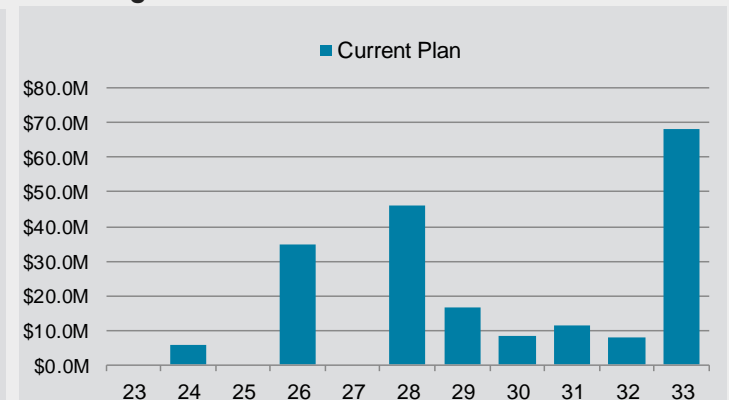
CIP Spending



CIP Funding



Borrowing - Senior Debt





Recommendations



1. Revenue increases from rates are required in FY 24 to meet debt coverage and cash balances
 - Recommended adjustments: Water 11%, Sewer 12%
2. Recommended water and sewer rate structure changes
 - Increase base charges and align scaling with industry standards
 - Modify residential water volumetric rates to include life-line tier and enhanced conservation
 - Adopt uniform commercial/industrial water volumetric rates
 - Enhanced conservation for irrigation rates
3. Consider the adoption of system development fees



Additional Questions/Discussion



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Principal

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The purpose of this new Fats, Oils, and Grease (FOG) Management Policy is to ensure no food service establishment (FSE) is discharging FOG into the City's sanitary sewer system. The specific requirements that FSEs must follow are detailed in this policy, including the frequency for cleaning of grease removal devices.

The new proposed maintenance requirements outline specific steps FSEs must take to properly clean and maintain their grease removal device. This policy also covers the requirement that FSEs document the cleanings and retain the records for review during inspections. Inspections will be annual, or more often if needed.

The Best Management Practices (BMPs) section provides detailed instructions for employees working in a kitchen on ways to avoid FOG from going down the drain. This section also provides more details of the construction and plumbing requirements related to grease removal devices. This includes a more specific requirement to have automatic dishwashers bypass any grease removal devices, as this has been leading to more frequent sanitary sewer overflows. Additionally, this section establishes requirements for mobile food units, which have previously gone unaddressed.

The requirements for new FOG sources outlines the information the city needs from any new FSE as related to their grease removal device including information the FSE needs to ensure their grease removal device meets the City's requirements. This section also removes the ability of any FSE to be "grandfathered in" and ensures all FSE compliance.

LEE SMITH, UTILITIES DIRECTOR

Hendersonville's Proposed FOG Management Policy

Kasey Lyons and Grace Erwin
April 2023



Fats, Oils and Grease... Who cares?

TOPICS TO DISCUSS

What is FOG?

Why do we need to manage it?

What are FSEs and MFUs?

Why do we need a policy?

Who does it apply to?

Specific Highlights

Contact Information



What is FOG?

FATS, OILS AND GREASE THAT HAVE POTENTIAL TO BE DISCHARGED INTO THE SANITARY SEWER.

Without proper management, FOG will negatively interfere with the components of the sewer collection system, impairs wastewater treatment and contributes to sanitary sewer overflows (SSOs).



Why do we need a policy?

It has become evident that FOG management inside of Hendersonville's sewer collection system needs some standardization and well-defined requirements.





To whom does the policy apply to?

FOOD SERVICE ESTABLISHMENTS (FSE)

Any food service facility discharging kitchen or food preparation wastewater – examples include restaurants, hotels, schools, grocery stores, nursing homes.

MOBILE FOOD UNITS (MFU)

Any self-contained mobile kitchen that is equipped to prepare and/or sell consumable food or drink items; a food establishment designed to be readily moved and vend food.

What does the new policy include?



SPECIFIC AND
CLEAR
DEFINITIONS –

Examples include FSE,
MFU, grease interceptors,
grease traps.

REQUIREMENTS
REGARDING
GREASE
REMOVAL
DEVICES –

Frequency of cleaning,
records/documentation.

DETAILS ABOUT
CITY
INSPECTIONS –

What to expect from City
inspections, frequency,
and requirements.



Specific Highlights

BEST MANAGEMENT PRACTICES -

A detailed BMP section has been included to assist FSE and MFU in FOG management.

CONSTRUCTION AND PLUMBING REQUIREMENTS -

Clear requirements have been outlined for new and existing construction.

GRANDFATHER CLAUSE REMOVED

The policy includes no "grandfathering out" and requires that all FSE and MFU be subject to the policy.



QUESTIONS,
COMMENTS,
OR CONCERNS?

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FEEL FREE TO REACH US ANYTIME



CITY OF HENDERSONVILLE AGENDA ITEM SUMMARY

SUBMITTER: Adam Steurer **MEETING DATE:** 04/24/2023

AGENDA SECTION: Presentations **DEPARTMENT:** Utilities

TITLE OF ITEM: Tap Water Branding – *Adam Steurer, Utilities Engineer*

SUGGESTED MOTION(S):

N/A – Presentation only.

SUMMARY:

The City of Hendersonville must instill the value of water and improve consumer confidence in its product: high-quality tap water. Recent high-profile water system failures across the nation (Ex. Jackson, Mississippi and Flint, Michigan) have negative impacts on confidence in tap water and local governments everywhere. Consumers who have lost confidence in their tap water through these system failures and/or have perceived health risks from drinking tap water are forced to seek an alternative – bottled water, which on a per unit basis is orders of magnitude more expensive compared to tap water and not environmentally friendly.

Hendersonville tap water is of the highest quality but does not have a “brand”. Building a “brand” for its tap water and providing additional educational outreach through the “brand” will allow the Utility to improve consumer confidence, build trust in local government, instill the value of water, reduce the use of wasteful plastic bottled water, and improve affordability.

A focus group comprised of multidisciplinary Utility staff have selected a brand name and associated imagery for City of Hendersonville tap water.

BUDGET IMPACT: N/A

Is this expenditure approved in the current fiscal year budget? N/A

If no, describe how it will be funded. N/A

ATTACHMENTS:

1. Tap Water Branding Presentation