



Mount Vernon

Wastewater Rate Study

March 27, 2019



Purpose of The Study

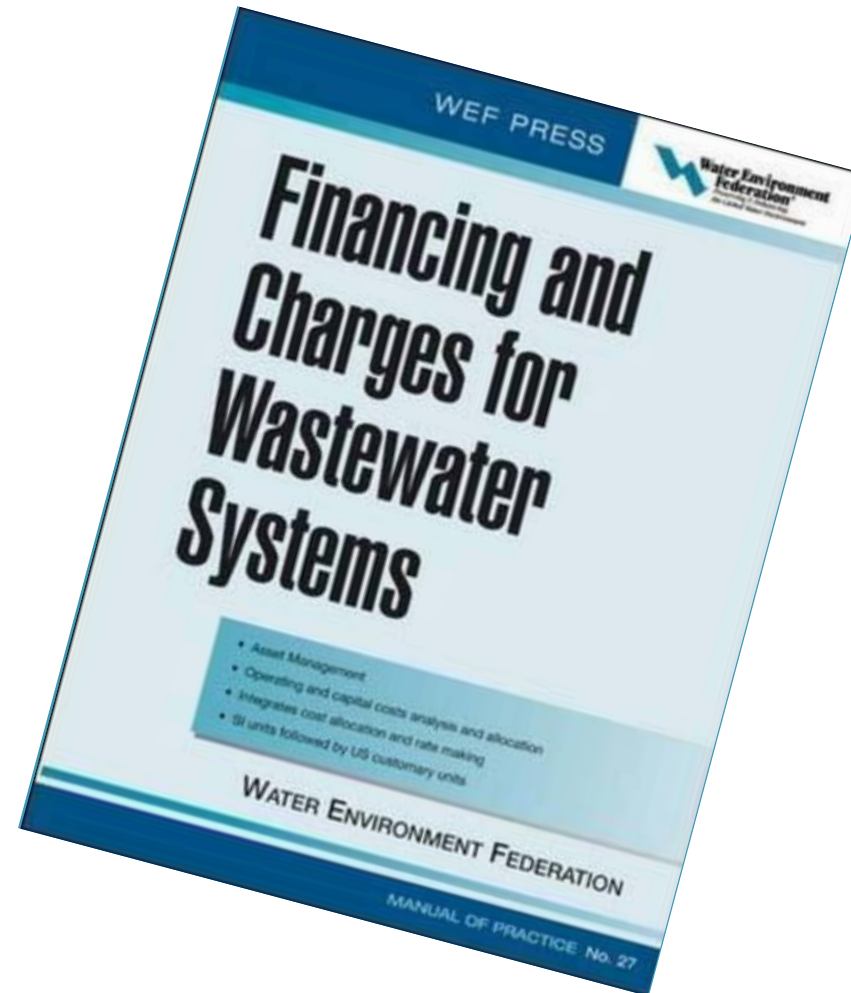
- Update rates to provide sufficient revenue to operate and maintain the City's wastewater system
- Develop equitable and cost-based rates
- Reflect prudent financial planning criteria
 - Maintain target debt service coverage (DSC) ratio
 - Prudent rate funding of capital
 - Meet target reserve balances
- Develop the study using generally accepted methodologies tailored to the City's Utilities and customer characteristics.



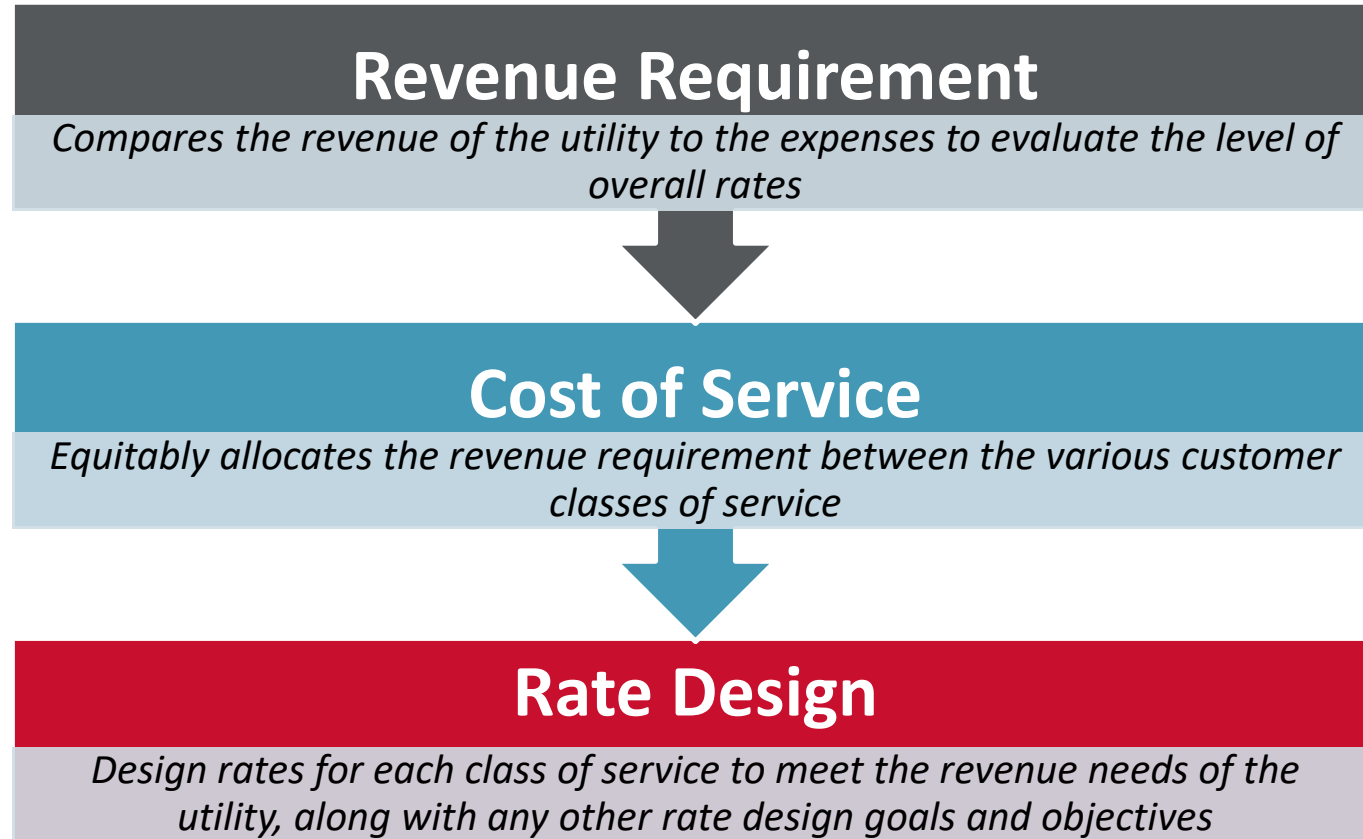
Recap

- March 13th the results of the Rate and Connection Fee study were presented
- Since that meeting, Staff has recommended revising the proposed Rate adjustment to inflationary level adjustments of 2.5% per year
 - This scenario assumes that Fund 401 reserves will be used to keep the rates down to 2.5%, while also reducing the fund balance to the recommended 90 days of O&M expense.
- The Connection Fee study determines the maximum allowable Connection Fee
 - The Fee was calculated to be higher than the current Connection Fee
 - Staff Recommends leaving the Connection Fee at the current level with an annual adjustment for inflation

“What is Generally Accepted”?



Developing Cost-Based Rates



Revenue Requirement



Summary of the Revenue Requirement

Developed based on overall utility financial objectives

Should be developed and based on “prudent” financial planning criteria

Revenue requirement analysis determines adequate funding for the utility to operate on a financially stable basis

District currently develops a long-term plan to meet these needs

Revenue Requirement Results for 3.8%

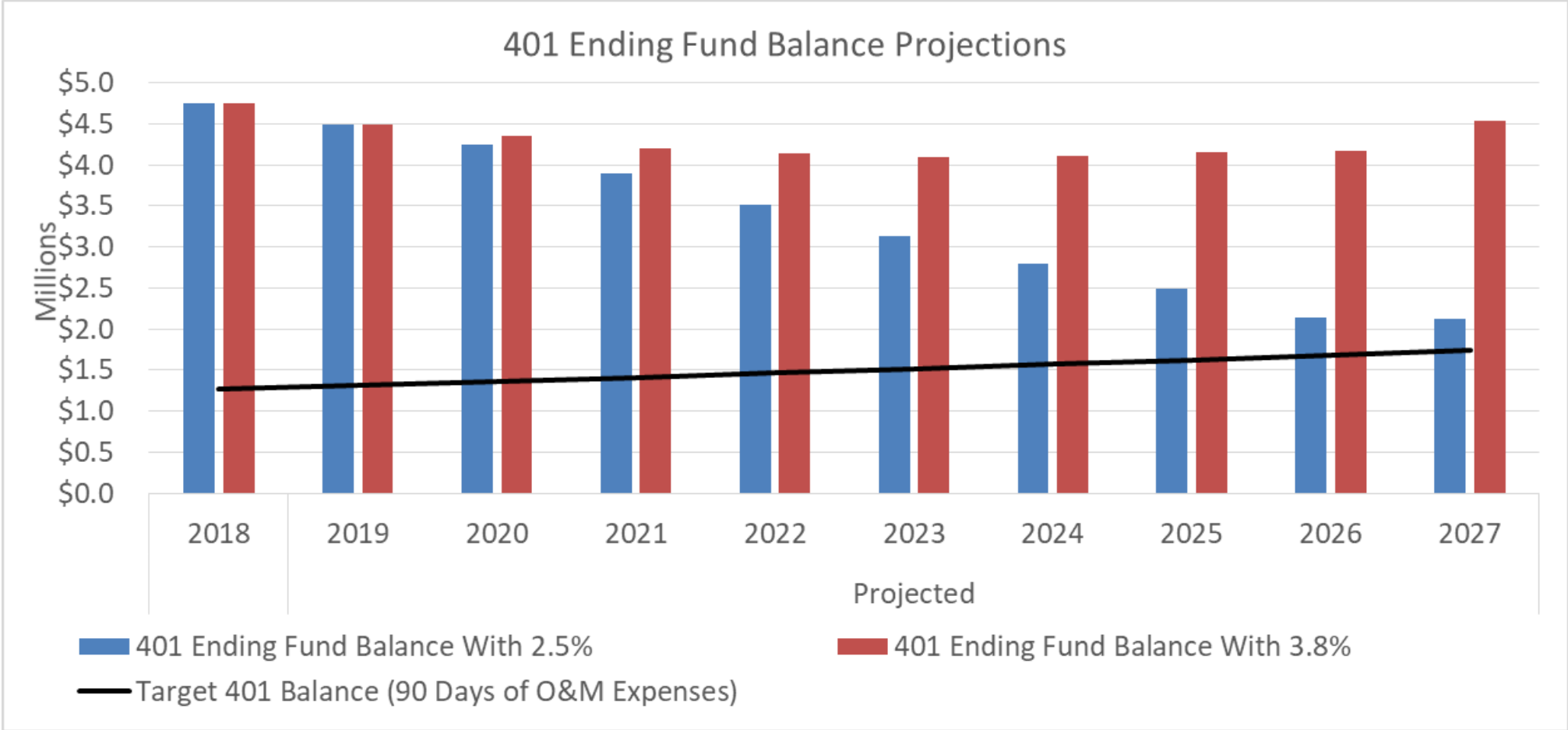
	Budget		Projected							
	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
Sources of Funds										
Rates	\$7,884	\$7,961	\$8,029	\$8,099	\$8,169	\$8,241	\$8,313	\$8,386	\$8,460	\$8,534
Other Revenues	<u>145</u>	<u>148</u>	<u>151</u>	<u>154</u>	<u>157</u>	<u>160</u>	<u>163</u>	<u>167</u>	<u>170</u>	<u>174</u>
Total Sources of Funds	\$8,029	\$8,108	\$8,180	\$8,253	\$8,326	\$8,401	\$8,476	\$8,553	\$8,630	\$8,708
Applications of Funds										
Operations & Maintenance Expense										
Sewer Collection	\$1,128	\$1,165	\$1,204	\$1,244	\$1,286	\$1,329	\$1,374	\$1,421	\$1,469	\$1,519
Sewer Treatment	3,896	4,039	4,187	4,342	4,502	4,668	4,840	5,019	5,206	5,399
Sewer - Pumpstations	135	139	143	148	152	156	161	166	171	176
Rate Funded Capital	1,068	1,000	1,000	1,080	1,170	1,260	1,360	1,470	1,590	1,720
Debt Service	2,053	1,847	1,899	2,015	2,010	2,005	1,944	1,886	1,882	1,507
Taxes	182	177	185	193	201	208	215	222	230	238
Transfers to (from) Reserves	<u>(432)</u>	<u>(258)</u>	<u>(134)</u>	<u>(153)</u>	<u>(52)</u>	<u>(45)</u>	<u>6</u>	<u>45</u>	<u>23</u>	<u>365</u>
Total Applications of Funds	\$8,029	\$8,108	\$8,485	\$8,868	\$9,269	\$9,582	\$9,901	\$10,230	\$10,570	\$10,923
Balance/(Deficit) Funds	\$0	\$0	(\$305)	(\$616)	(\$943)	(\$1,182)	(\$1,424)	(\$1,677)	(\$1,940)	(\$2,215)
Balance/(Deficit) of Funds as % of Rate Revenues	0.0%	0.0%	3.8%	7.6%	11.5%	14.3%	17.1%	20.0%	22.9%	25.9%
Proposed Adjustment	0.0%	0.0%	3.8%	3.8%	3.8%	2.5%	2.5%	2.5%	2.5%	2.5%
Fund 401 ending fund balance	\$4,742	\$4,485	\$4,351	\$4,198	\$4,146	\$4,101	\$4,106	\$4,151	\$4,175	\$4,539

Revenue Requirement Results for 2.5%

	Budget	Projected								
	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
Sources of Funds										
Rates	\$7,884	\$7,961	\$8,029	\$8,099	\$8,169	\$8,241	\$8,313	\$8,386	\$8,460	\$8,534
Other Revenues	<u>145</u>	<u>148</u>	<u>151</u>	<u>154</u>	<u>157</u>	<u>160</u>	<u>163</u>	<u>167</u>	<u>170</u>	<u>174</u>
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Taxes	182	177	183	189	195	201	208	215	222	230
Transfers to (from) Reserves	<u>(432)</u>	<u>(258)</u>	<u>(236)</u>	<u>(360)</u>	<u>(371)</u>	<u>(380)</u>	<u>(341)</u>	<u>(313)</u>	<u>(347)</u>	<u>(18)</u>
Total Applications of Funds	\$8,029	\$8,108	\$8,381	\$8,658	\$8,944	\$9,240	\$9,547	\$9,864	\$10,192	\$10,532
Balance/(Deficit) Funds	\$0	\$0	(\$201)	(\$405)	(\$618)	(\$840)	(\$1,071)	(\$1,312)	(\$1,562)	(\$1,824)
Balance/(Deficit) of Funds as % of Rate Revenues	0.0%	0.0%	2.5%	5.0%	7.6%	10.2%	12.9%	15.6%	18.5%	21.4%
Proposed Adjustment	0.0%	0.0%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%
Fund 401 ending fund balance	\$4,742	\$4,485	\$4,249	\$3,889	\$3,518	\$3,138	\$2,797	\$2,484	\$2,137	\$2,118

Inflationary Adjustments

Comparison of Scenarios – Operating Fund



Cost of Service



Overview of the Cost of Service

What is cost of service?

- Analysis to equitably allocate the revenue requirement to the customer classes of service

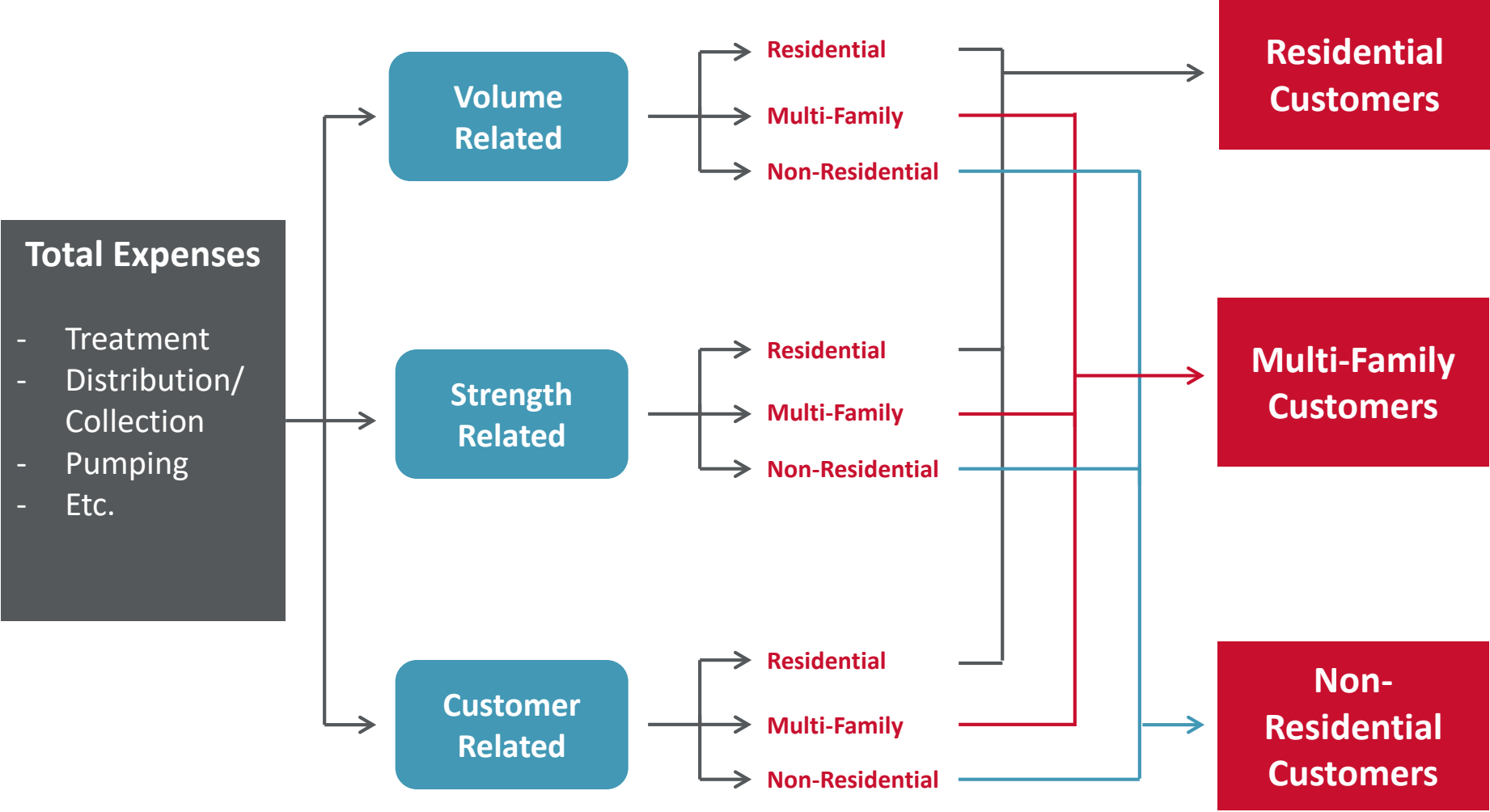
Why cost of service

- Generally accepted as “fair and equitable”
- Avoids subsidies
- Revenues reflect costs

Objectives of Cost of Service

- Determine if subsidies exist
- Develop average unit costs

Sewer Cost of Service Methodology



Summary of the Cost of Service

Reflects usage and facility requirements of each customer class

Results in fair and equitable rates for each customer class of service

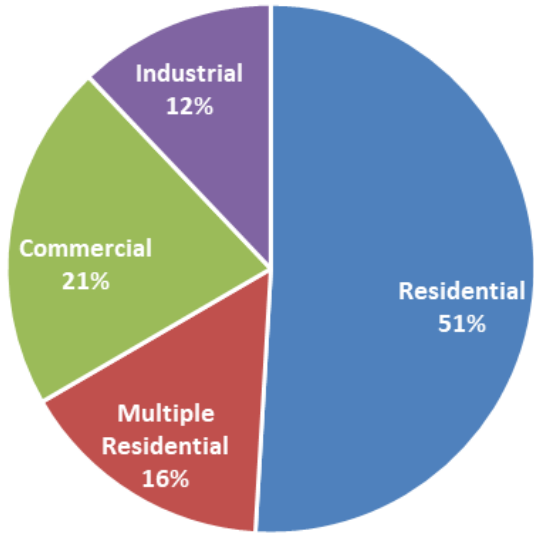
Provides the City with information for rate structure policy decisions

Should be reviewed periodically to reflect changes in customer and system characteristics

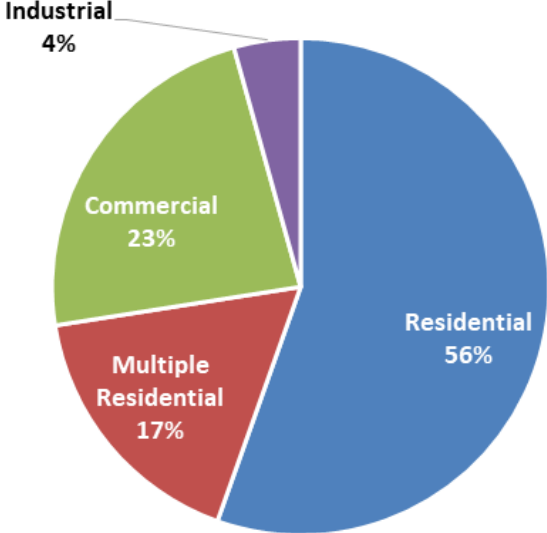
While the Cost of Service is informative and helps in rate setting, in Washington there are no requirements to follow the Results

Cost Allocation Factors

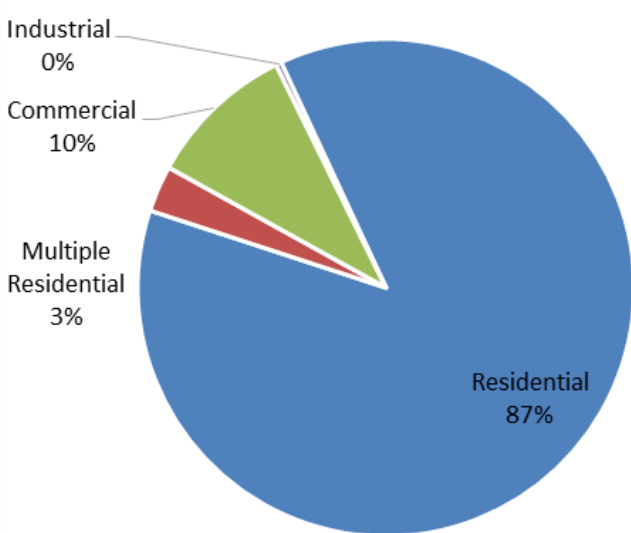
Wastewater Volume



Wastewater Strength



Customer Related

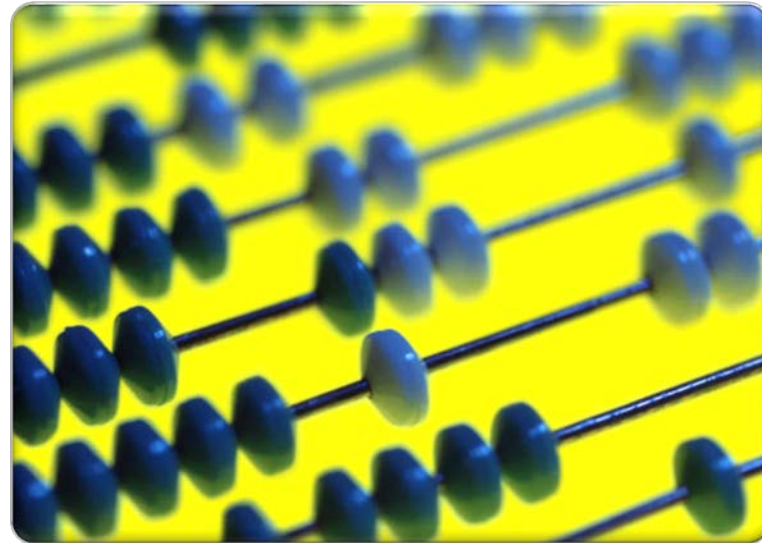


Cost of Service Results

	Present Rates	Allocated Revenue	Balance / (Deficiency) of Funds	% Change to Cost of Service
Customer Class				
Residential	\$5,288	\$5,402	(\$114)	2.2%
Multiple Residential	909	900	10	-1.1%
Commercial	1,325	1,401	(75)	5.7%
Industrial	507	528	(21)	4.1%
Total	\$8,029	\$8,230	(\$201)	2.5%

- Cost of Service Analysis is not an exact calculation since it is based on historical data which may not be indicative of future usage characteristics.
- Due to the uncertain nature of the assumptions, a customer is considered to be within an acceptable range to be considered meeting their cost of service if it is within 5% of the overall adjustment.

Rate Design

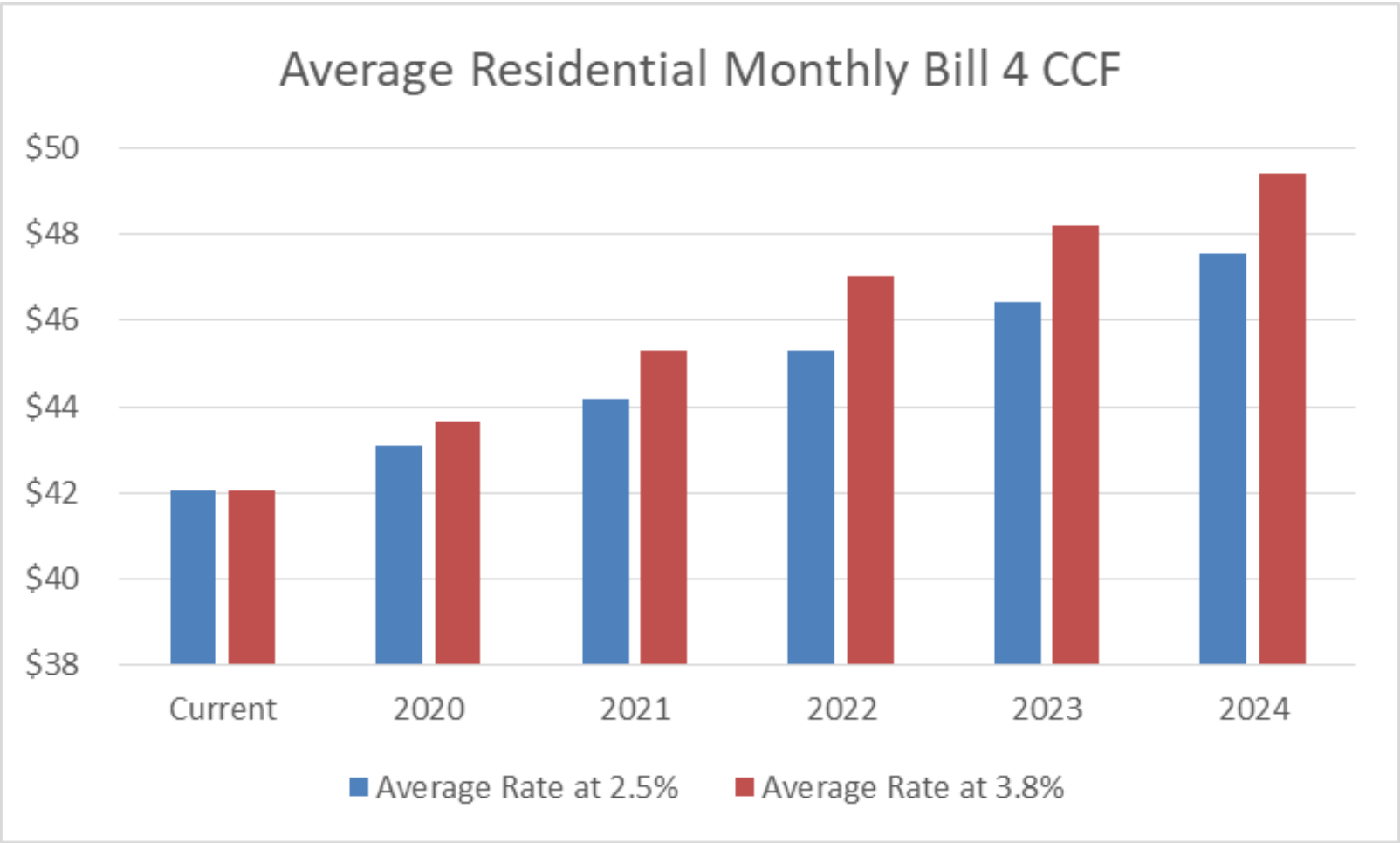


Typical Rate Setting Goals and Objectives

Rate design Objectives may have competing interests and the utility should consider what is most important to accomplish.

- Revenue Sufficiency and Stability
- Easy to Understand (customer)
- Easy to Administer (City)
- Affordability
- Efficient Use of the Resource
- Equitable and non-discriminating (cost-based)
- Legally Defendable

Comparison of Scenarios Based on Average Monthly Bill



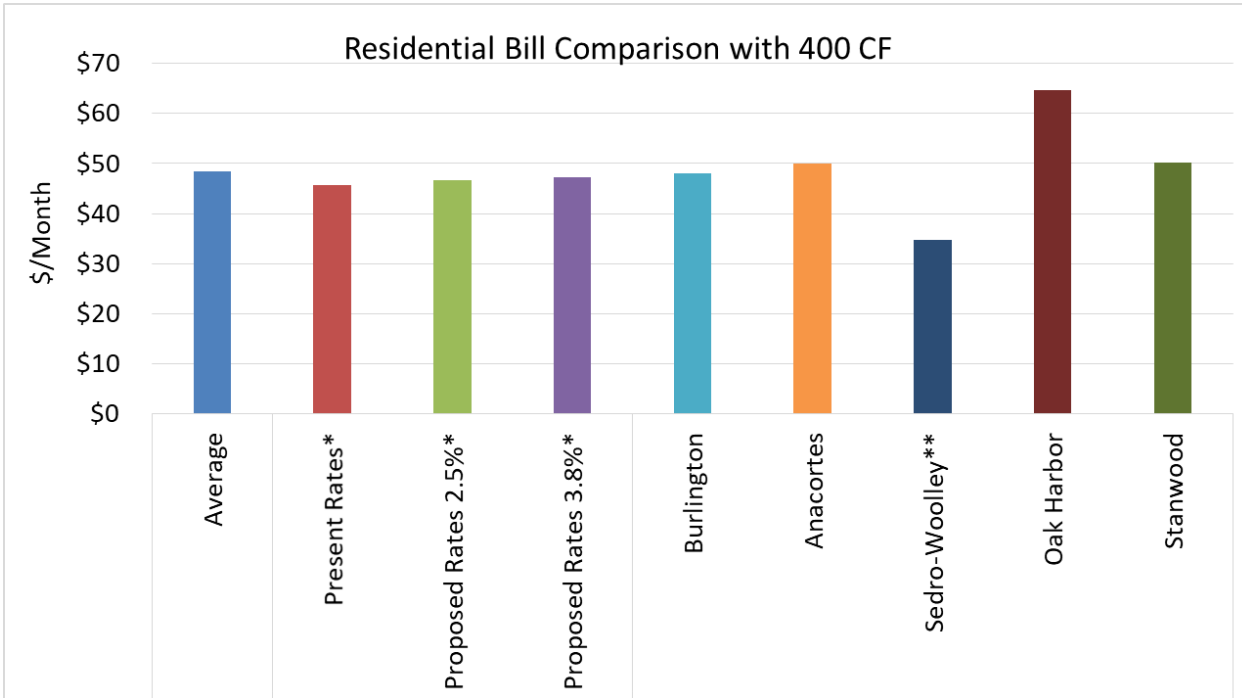
Residential Rates at 2.5%

	Current	2020	2021	2022	2023	2024
Overall Adjustment		2.5%	2.5%	2.5%	2.5%	2.5%
Residential						
\$/Month						
Single Family Units	\$30.65	\$31.42	\$32.20	\$33.01	\$33.83	\$34.68
Duplex Units	30.65	31.42	32.20	33.01	33.83	34.68
Low Income Elderly Units	22.99	23.56	24.15	24.76	25.38	26.01
Mobile Home Park Senior Units	22.99	23.56	24.15	24.76	25.38	26.01
Outside Single Family Units	45.98	47.12	48.30	49.51	50.75	52.02
Commodity Charge (\$/CCF)						
Single Family Vol	2.85	2.92	2.99	3.07	3.15	3.22
Duplex Vol	2.85	2.92	2.99	3.07	3.15	3.22
Low Income Elderly Vol	2.14	2.19	2.25	2.30	2.36	2.42
Mobile Home Park Senior Vol	2.14	2.19	2.25	2.30	2.36	2.42
Outside Single Family Vol	4.28	4.38	4.49	4.60	4.72	4.84
Multifamily						
\$/Month						
Housing Authority of Skagit Co. Units	\$16.05	\$16.45	\$16.86	\$17.28	\$17.72	\$18.16
Multifamily Units	16.05	16.45	\$16.86	\$17.28	\$17.72	\$18.16
Commodity Charge (\$/CCF)	\$4.38	\$4.49	\$4.60	\$4.72	\$4.83	\$4.96

Non-Residential Rates at 2.5%

	Current	2020	2021	2022	2023	2024
Overall Adjustment		2.5%	2.5%	2.5%	2.5%	2.5%
Commercial						
\$/Month						
Commercial Units	\$47.50	\$48.69	\$49.90	\$51.15	\$52.43	\$53.74
Commodity Charge (\$/CCF)	\$4.38	\$4.49	\$4.60	\$4.72	\$4.83	\$4.96
Industrial						
Admin Charge (\$/Month)	\$1,603.76	\$1,643.85	\$1,684.95	\$1,727.07	\$1,770.25	\$1,814.51
Capacity Charge						
Flow (\$/1,000 Gal)	\$5,248.01	\$5,379.21	\$5,513.69	\$5,651.53	\$5,792.82	\$5,937.64
BOD (\$/lbs)	\$4.55	\$4.66	\$4.78	\$4.90	\$5.02	\$5.15
TSS (\$/lbs)	\$1.77	\$1.81	\$1.86	\$1.91	\$1.95	\$2.00
Usage Charge						
Flow Charge (\$/1,000 Gal)	\$1.00	\$1.03	\$1.05	\$1.08	\$1.10	\$1.13
BOD (\$/lbs)	\$0.87	\$0.89	\$0.91	\$0.94	\$0.96	\$0.98
TSS (\$/lbs)	\$0.59	\$0.60	\$0.62	\$0.64	\$0.65	\$0.67

Comparison to Other Utilities



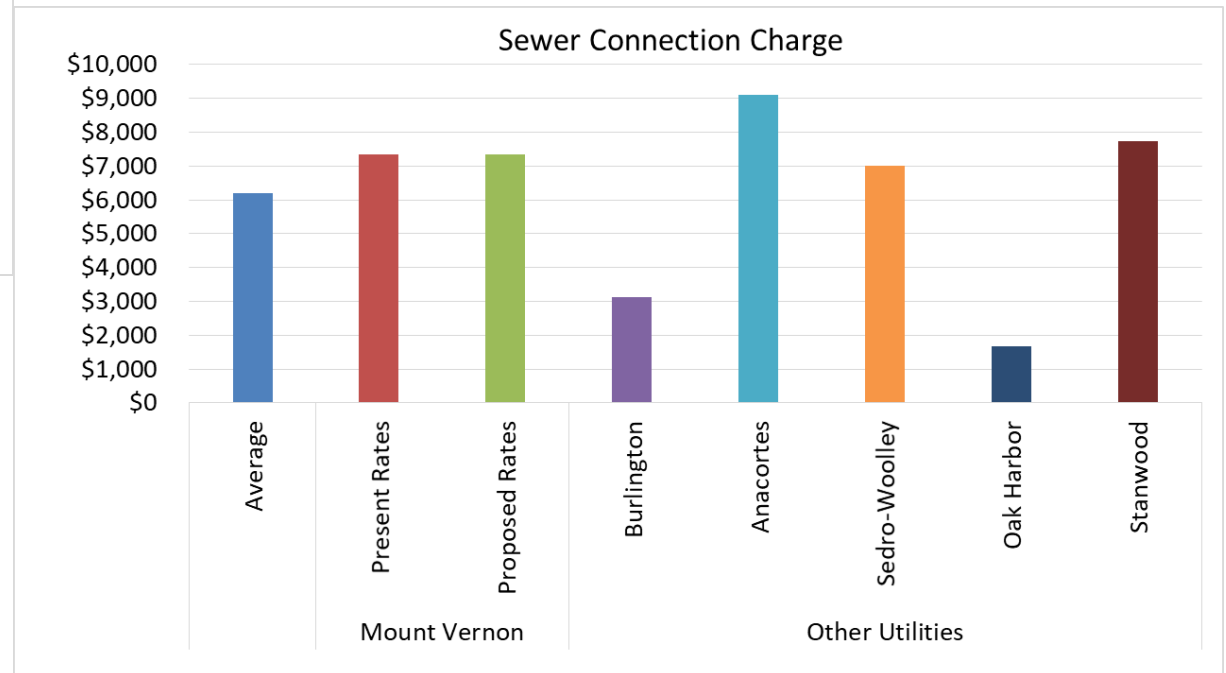
* Includes 8.5% tax to have a accurate comparison

** Includes 9.5% tax to have a accurate comparison

For the Average Residential Bill

2.5% increase equals approximately. \$13 increase per year

3.8% increase equals approximately. \$19 Increase per year



Rate Study Findings

- The Sewer Utility has been managed in a responsible manner and needs relatively small adjustments to bring the rates up to a level to meet the Utility funding needs. Last rate adjustment was in 2013.
- The proposed rate adjustments will provide necessary funds to meet the utilities operational needs as well as future capital projects planned in the next 10 years.
- City should consider implementing inflationary rate adjustments to keep up with costs and prevent erosion of service levels. This could be tied to an index such as the Consumer Price Index for Seattle-Tacoma MSA.
- The Cost of Service results indicate that customer class rates are roughly proportionate to the cost to serve them.
- Since Rates were roughly proportionate rates were adjusted across the board for simplicity.

Connection Charges

What are Connection Charges?

One time charges to new customers to pay for their share of the sewer system that has already been built as well as new sewer infrastructure to meet the additional capacity necessary to service them. "Growth pays for growth"

How are they calculated?

There are two components:

Buy In= Value of the existing system divided by the number of customers that can be served.

Future Improvements = Value of new system components divided by estimated new customer connections.

Connection Charge = Buy In + Future Improvement

Results of Connection Charge Study

Customer Type	Per ERU	Current Charge	Maximum Allowable Charge	\$ Change
Single Family	1.0	\$7,347.00	\$8,149.00	\$802.00
Duplex (Per Unit)	0.75	5,509.00	6,112.00	603.00
Multi-Family (Per Unit)	0.50	3,673.00	4,075.00	402.00
	<u>or</u> Per fixture unit	209.00	233.00	24.00
Commercial/Industrial	Per fixture unit	348.00	388.00	40.00

The Calculated Charge is the Maximum Allowable, and the City can choose to set the rate at any level deemed necessary.

The City can leave the Connection Charge at the current level and continue to adjust it annually for inflation or adopt the higher charge.

Questions

