



Washougal Rate Study



CAC Meeting #5: Rate Design

August 8, 2023



Welcome & Introductions

- **Welcome!**
- **Team Introductions**
- **CAC Introductions**



Agenda

- **Welcome & Introductions**
- **CAC Role & Schedule**
- **Rate Design**
 - » Sewer
 - » Stormwater
 - » Water
- **Wrap-up & Next Steps**



CAC Role & Schedule

- **Role in public process**
- **Meet 5-6 times: January – September 2023**
- **Represent the Community**
- **Provide input, feedback, and recommendations**
- **Discussion/Questions**



Operating Principles

- 1. I will come to each meeting with an open mind**
- 2. I will focus on solutions**
- 3. I will listen to what others have to say and do my best to understand**
- 4. I will let others participate**
- 5. I will treat others with respect**
- 6. I will think before speaking**
- 7. It's ok to disagree, but I will do my best to find common ground**
- 8. I will stay on topic**
- 9. I will explore interests, not positions**
- 10. I will tackle the topic, not the person**
- 11. I will work to reach consensus on all decisions**

MONTHLY PAYMENT
NEEDED TO PAY BACK A LOAN

3 YEARS	4 YEARS	5 YEARS
1.63	1.28	2.56
	5.12	

Rate Design



Discussion Overview

- **Background**
- **Overview of the rate setting process**
- **Rate design**
 - » Sewer
 - » Stormwater
 - » Water
- **Input / questions / discussion**
- **Next steps**



Background

- **Rate study update commenced in 2022**
- **Public outreach workshop** **11/5/2022**
- **CAC Meeting #1: Rate Setting Fundamentals** **1/25/2023**
- **CAC Meeting #2: Revenue Requirement** **5/3/2023**
- **CAC Meeting #3: Revenue Requirement Follow Up** **5/23/2023**
- **CAC Meeting #4: Cost of Service** **6/20/2023**
 - » Reviewed cost of service results for water and sewer utilities for both revenue requirement options
 - Committee preferred reduced revenue requirement option targeting 15% cumulative increase for an average residential customer
 - » Committee generally agreed with the proposed cost of service phase-in recommendations for the water and wastewater utilities
 - » Committee generally did not prefer the monthly billing alternative if it would increase overall rates



CAC4 Background: Revenue Requirement

Utility	2024	2025	2026	2027	2028	Cumulative
Water	3.80%	3.80%	3.80%	3.80%	3.80%	20.50%
Sewer	2.00%	2.00%	2.00%	2.00%	2.00%	10.41%
Stormwater	3.80%	3.80%	3.80%	3.80%	3.80%	20.50%
Avg. Res. Bill	2.81%	2.82%	2.83%	2.84%	2.84%	14.98%

Utility	RRF Funding				
	2024	2025	2026	2027	2028
Water	77.00%	77.00%	77.00%	77.00%	77.00%
Sewer	19.00%	19.00%	19.00%	46.00%	54.00%
Stormwater	100.00%	100.00%	100.00%	100.00%	100.00%

Notes:

1. Avg. Res. Bill assumes 15ccf water consumption and 11ccf winter average use for sewer billing.

- » Assumes the City will receive low interest financing for the WWTP Project
- » Reduces RRF funding for the water utility
- » Increases debt requirements outside the 5-year rate setting period
- » All debt assumes a 30-year term, 1.50 coverage minimum target (revenue bonds)
- » Targets average Residential customer for the 15% cumulative target
 - Cumulative impacts may vary slightly based on usage level and class of service



CAC4 Background: Cost of Service

Class	2024 COSA	Water Proposed Phase-In				
		2024	2025	2026	2027	2028
Single-family	3.53%	3.79%	3.78%	3.78%	3.77%	3.77%
Multi-family	-13.60%	2.50%	2.50%	2.50%	2.50%	2.50%
Commercial	14.46%	4.75%	4.75%	4.75%	4.75%	4.75%
Lg. Commercial	30.26%	5.00%	5.00%	5.00%	5.00%	5.00%
Total	3.80%	3.80%	3.80%	3.80%	3.80%	3.80%

- **Water**

- » All classes, except Single-family, outside the range of reasonableness
- » Proposed to gradually phase-in towards COSA

Class	2024 COSA	Sewer Proposed Phase-In				
		2024	2025	2026	2027	2028
Single-family	1.60%	2.00%	2.00%	2.00%	2.00%	2.00%
Multi-family	5.87%	2.00%	2.00%	2.00%	2.00%	2.00%
Commercial	-0.08%	2.00%	2.00%	2.00%	2.00%	2.00%
Total	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%

- **Sewer**

- » All classes within range of reasonableness, apply increases on an across-the-board basis (equally to all classes)



Overview of Rate Setting Process

Fiscal Policies – Set the Management Foundation

Step 1:
Revenue Requirement
(defining overall needs)

Revenue

Debt

Reserves

O&M

Capital

Step 2:
Cost of Service
(equity evaluation)

Define Customer Classes

Allocate Costs

Today's
Focus

Step 3:
Design Rates
(collect target revenue)

Fixed Charge

Variable Charge



Overview of Rate Design

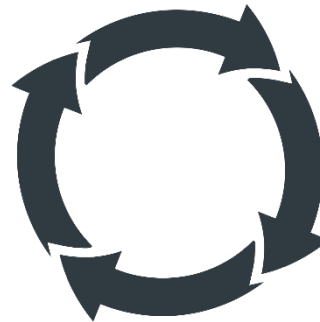
- **Development of fixed and variable charges assessed to customers**



Aligns fixed and variable costs with fixed and variable revenue sources



Generates sufficient revenue to meet utility requirements



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



Evaluate monthly rate impact for different levels of use

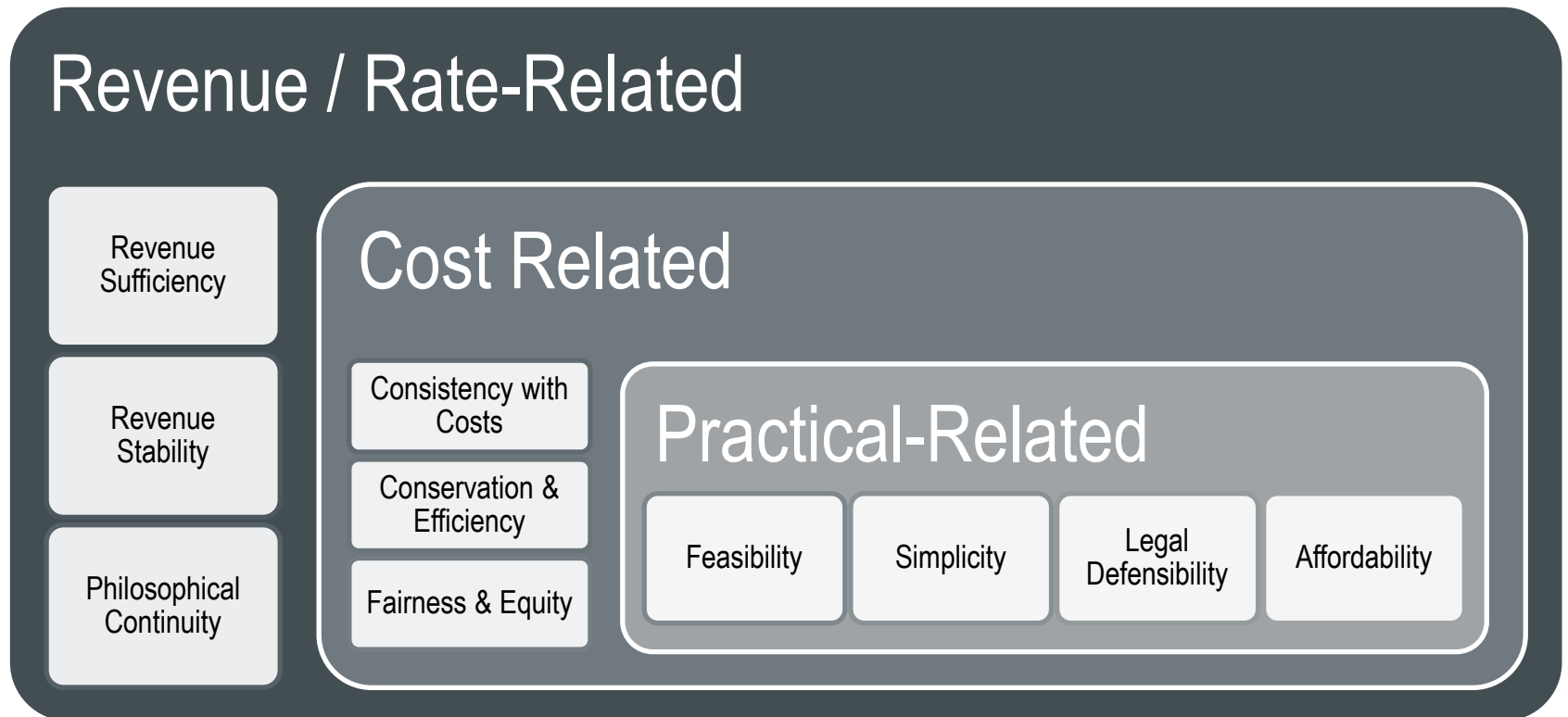


Overview of Rate Design (continued)

- **Utility rates generally consist of two components**
 - » Fixed Charges:
 - Imposed on each meter, account, or ERU
 - Do not vary with the amount of use
 - Provides a predictable source of revenue
 - » Variable Charges:
 - Imposed on each unit (ccf = 748 gallons) of use/flow
 - Recover a greater share of revenue from customers who place the greatest demand on the system
 - Encourage conservation and efficiency in use
 - Introduces additional revenue volatility and seasonality

Rate Design Goals

- No structure can completely achieve all the objectives – it's a balancing act



Source: *Principles of Public Utility Rates*, Bonbright, Danielson and Kamerschen

A close-up, high-angle photograph of a circular metal sewer manhole cover. The cover has a raised, diamond-shaped pattern. A dark, semi-transparent arrow points from the left towards the right, partially obscuring the cover. The word "Sewer" is written in white, bold, sans-serif font on the arrow.

Sewer



Rate Design Considerations

- Increases applied on an across-the-board basis

Class	Existing 2023		Proposed Rates									
			2024		2025		2026		2027		2028	
Bi-Monthly Fixed												
Single-family	\$	86.84	\$	88.58	\$	90.35	\$	92.16	\$	94.00	\$	95.88
Multifamily												
First unit	\$	144.73	\$	147.62	\$	150.57	\$	153.58	\$	156.65	\$	159.78
Each additional unit		121.40		123.83		126.31		128.84		131.42		134.05
Commercial	\$	160.61	\$	163.82	\$	167.10	\$	170.44	\$	173.85	\$	177.33
Volume Rate (per 100 cf or 1 ccf)												
Single-family (winter avg.)	\$	6.35	\$	6.48	\$	6.61	\$	6.74	\$	6.87	\$	7.01
Commercial (actual usage)												
0-14 ccf allowance	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-
15+ ccf		11.92		12.16		12.40		12.65		12.90		13.16

Notes:

Low income ELIL and VLIL rate available.

Industrial rates available.

Outside City rates are 1.5 times the inside City rates.

- Definitions**

- » VLIL: Very low-income level on the Housing and Urban Development federal site
- » ELIL: Extremely low-income level on the Housing and Urban Development federal site
- » ccf: 100 cubic feet or 748 gallons



Rate Design Impacts: Single-Family

Single-family	Existing 2023		Proposed Bi-Monthly Bills				
			2024	2025	2026	2027	2028
25% Percentile (6ccf)	\$	124.94	\$ 127.46	\$ 130.01	\$ 132.60	\$ 135.22	\$ 137.94
50% Percentile (10ccf)		150.34	153.38	156.45	159.56	162.70	165.98
Average (11ccf)		156.69	159.86	163.06	166.30	169.57	172.99
75% Percentile (13ccf)		169.39	172.82	176.28	179.78	183.31	187.01
Max Use (78ccf)		582.14	594.02	605.93	617.88	629.86	642.66
\$ Bi-Monthly Difference							
25% Percentile (6ccf)	\$		2.52	\$ 2.55	\$ 2.59	\$ 2.62	\$ 2.72
50% Percentile (10ccf)			3.04	3.07	3.11	3.14	3.28
Average (11ccf)			3.17	3.20	3.24	3.27	3.42
75% Percentile (13ccf)			3.43	3.46	3.50	3.53	3.70
Max Use (78ccf)			11.88	11.91	11.95	11.98	12.80
% Difference							
25% Percentile (6ccf)			2.02%	2.00%	1.99%	1.98%	2.01%
50% Percentile (10ccf)			2.02%	2.00%	1.99%	1.97%	2.02%
Average (11ccf)			2.02%	2.00%	1.99%	1.97%	2.02%
75% Percentile (13ccf)			2.02%	2.00%	1.99%	1.96%	2.02%
Max Use (78ccf)			2.04%	2.00%	1.97%	1.94%	2.03%

Note: ccf = 100 cubic feet or 748 gallons.



Rate Design Impacts: Multi-Family

Multi-family	Existing 2023		Proposed Bi-Monthly Bills				
		2024	2025	2026	2027	2028	
2 Units (Mode)	\$ 266.13	\$ 271.45	\$ 276.88	\$ 282.42	\$ 288.07	\$ 293.83	
3 Units (Median)	387.53	395.28	403.19	411.26	419.49	427.88	
6 Units (Average)	751.73	766.77	782.12	797.78	813.75	830.03	
116 Units (Maximum)	14,105.73	14,388.07	14,676.22	14,970.18	15,269.95	15,575.53	
\$ Bi-Monthly Difference							
2 Units (Mode)	\$ 5.32	\$ 5.43	\$ 5.54	\$ 5.65	\$ 5.76		
3 Units (Median)	7.75	7.91	8.07	8.23	8.39		
6 Units (Average)	15.04	15.35	15.66	15.97	16.28		
116 Units (Maximum)	282.34	288.15	293.96	299.77	305.58		
\$ Bi-Monthly Difference per Unit							
2 Units (Mode)	\$ 2.66	\$ 2.72	\$ 2.77	\$ 2.82	\$ 2.88		
3 Units (Median)	2.58	2.64	2.69	2.74	2.80		
6 Units (Average)	2.51	2.56	2.61	2.66	2.71		
116 Units (Maximum)	2.43	2.48	2.53	2.58	2.63		
% Difference							
2 Units (Mode)	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	
3 Units (Median)	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	
6 Units (Average)	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	
116 Units (Maximum)	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	

Notes:

1. Median: value in the middle of a data set; 50% of data points are above or below the value.
2. Mode: value that appears most often.



Rate Design Impacts: Commercial

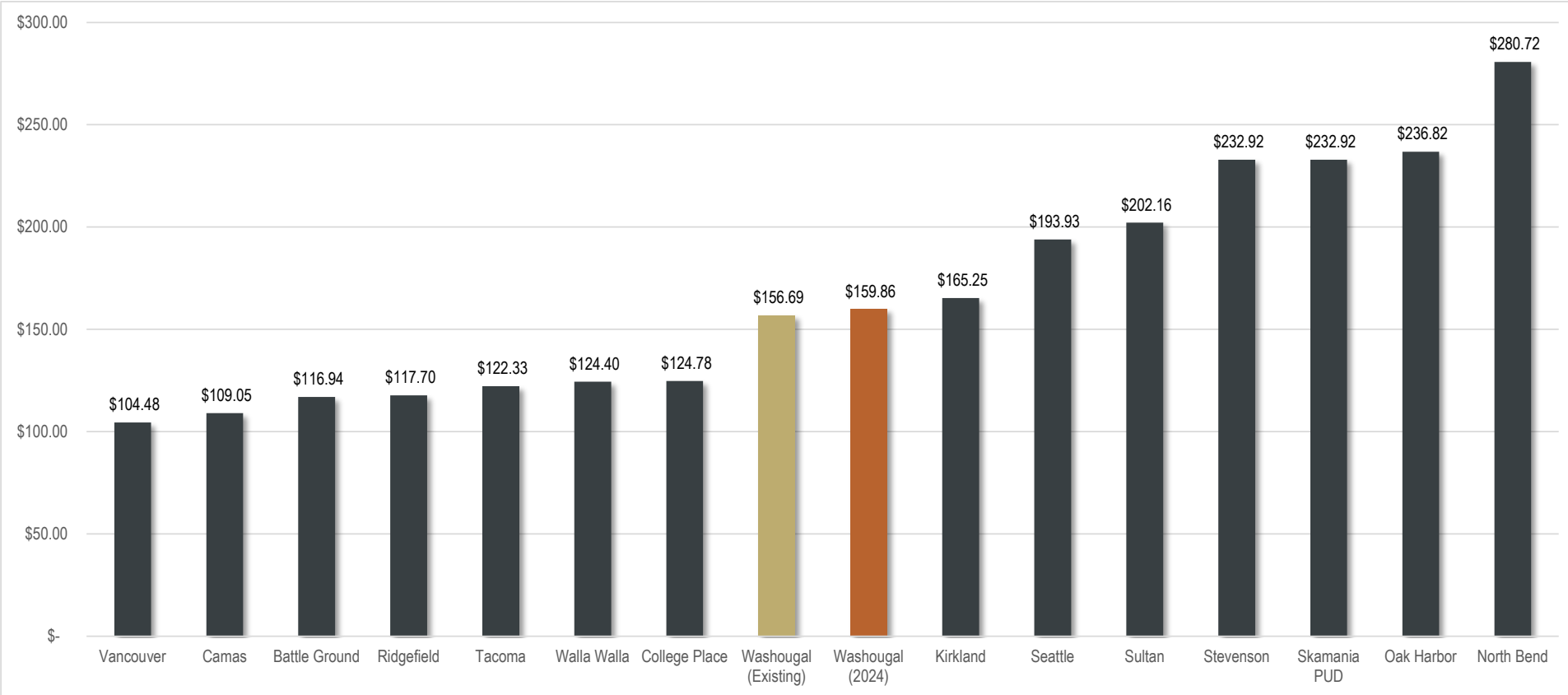
Commercial	Existing 2023		Proposed Bi-Monthly Bills				
		2024	2025	2026	2027	2028	
25% Percentile (2ccf)	\$ 160.61	\$ 163.82	\$ 167.10	\$ 170.44	\$ 173.85	\$ 177.33	
50% Percentile (10ccf)	160.61	163.82	167.10	170.44	173.85	177.33	
75% Percentile (25ccf)	339.41	346.22	353.10	360.19	367.35	374.73	
Average (44ccf)	565.89	577.26	588.70	600.54	612.45	624.77	
Max Use (917ccf)	10,972.05	11,192.94	11,413.90	11,643.99	11,874.15	12,113.45	
\$ Bi-Monthly Difference							
25% Percentile (2ccf)	\$	3.21	\$ 3.28	\$ 3.34	\$ 3.41	\$ 3.48	
50% Percentile (10ccf)		3.21	3.28	3.34	3.41	3.48	
75% Percentile (25ccf)		6.81	6.88	7.09	7.16	7.38	
Average (44ccf)		11.37	11.44	11.84	11.91	12.32	
Max Use (917ccf)		220.89	220.96	230.09	230.16	239.30	
% Difference							
25% Percentile (2ccf)		2.00%	2.00%	2.00%	2.00%	2.00%	
50% Percentile (10ccf)		2.00%	2.00%	2.00%	2.00%	2.00%	
75% Percentile (25ccf)		2.01%	1.99%	2.01%	1.99%	2.01%	
Average (44ccf)		2.01%	1.98%	2.01%	1.98%	2.01%	
Max Use (917ccf)		2.01%	1.97%	2.02%	1.98%	2.02%	

Notes:

1. ccf: 100 cubic feet or 748 gallons.



Sewer Residential Rate Survey



Notes:

- Sample bi-monthly Residential bill assumes 11ccf consumption.
- Ridgefield rates are based off CRWWD Ridgefield Service Area charges and include system integration charge and City operation fees.
- Skamania PUD rates are based off City of Stevenson charges.
- City of Kirkland includes King County Treatment and City of Kirkland Distribution fees.
- Bills include utility taxes where applicable.



Stormwater



Rate Design Considerations

- **Increases applied on an across-the-board basis**

Description	Existing 2023		2024		2025		Proposed Rates 2026		2027		2028	
	Bi-Monthly Fixed											
Single-family	\$	35.17	\$	36.51	\$	37.90	\$	39.34	\$	40.83	\$	42.38
Commercial (per ERU)												
Standard	\$	35.17	\$	36.51	\$	37.90	\$	39.34	\$	40.83	\$	42.38
w. Credit		17.59		18.26		18.95		19.67		20.42		21.20

Notes:

Low income ELIL and VLIL rate available.

ERU = 3,900 square feet of impervious surface area.

- **Definitions**
 - » VLIL: Very low-income level on the Housing and Urban Development federal site
 - » ELIL: Extremely low-income level on the Housing and Urban Development federal site



Rate Design Impacts: Single-Family

Single-family	Proposed Rates					
	Existing 2023	2024	2025	2026	2027	2028
Bi-Monthly Bill	\$ 35.17	\$ 36.51	\$ 37.90	\$ 39.34	\$ 40.83	\$ 42.38
\$ Bi-Monthly Difference		\$ 1.34	1.39	1.44	1.49	1.55
% Difference		3.81%	3.81%	3.80%	3.79%	3.80%

Note: ERU: Equivalent Residential Unit = 3,900 square feet of impervious surface area.



Rate Design Impacts: Multi-Family

Multi-family	Existing 2023		Proposed Bi-Monthly Bills				
		2024	2025	2026	2027	2028	
1 ERU (Mode)	\$ 35.17	\$ 36.51	\$ 37.90	\$ 39.34	\$ 40.83	\$ 42.38	
3 ERUs (Median)	105.51	109.53	113.70	118.02	122.49	127.14	
11 ERUs (Average)	386.87	401.61	416.90	432.74	449.13	466.18	
143 ERUs (Maximum)	5,029.31	5,220.93	5,419.70	5,625.62	5,838.69	6,060.34	
\$ Bi-Monthly Difference							
1 ERU (Mode)	\$ 1.34	\$ 1.39	\$ 1.44	\$ 1.49	\$ 1.55		
3 ERUs (Median)	4.02	4.17	4.32	4.47	4.65		
11 ERUs (Average)	14.74	15.29	15.84	16.39	17.05		
143 ERUs (Maximum)	191.62	198.77	205.92	213.07	221.65		
% Difference							
1 ERU (Mode)	3.81%	3.81%	3.80%	3.79%	3.80%		
3 ERUs (Median)	3.81%	3.81%	3.80%	3.79%	3.80%		
11 ERUs (Average)	3.81%	3.81%	3.80%	3.79%	3.80%		
143 ERUs (Maximum)	3.81%	3.81%	3.80%	3.79%	3.80%		

Notes:

1. ERU: Equivalent Residential Unit = 3,900 square feet of impervious surface area.
2. Median: value in the middle of a data set; 50% of data points are above or below the value.
3. Mode: value that appears most often.



Rate Design Impacts: Commercial

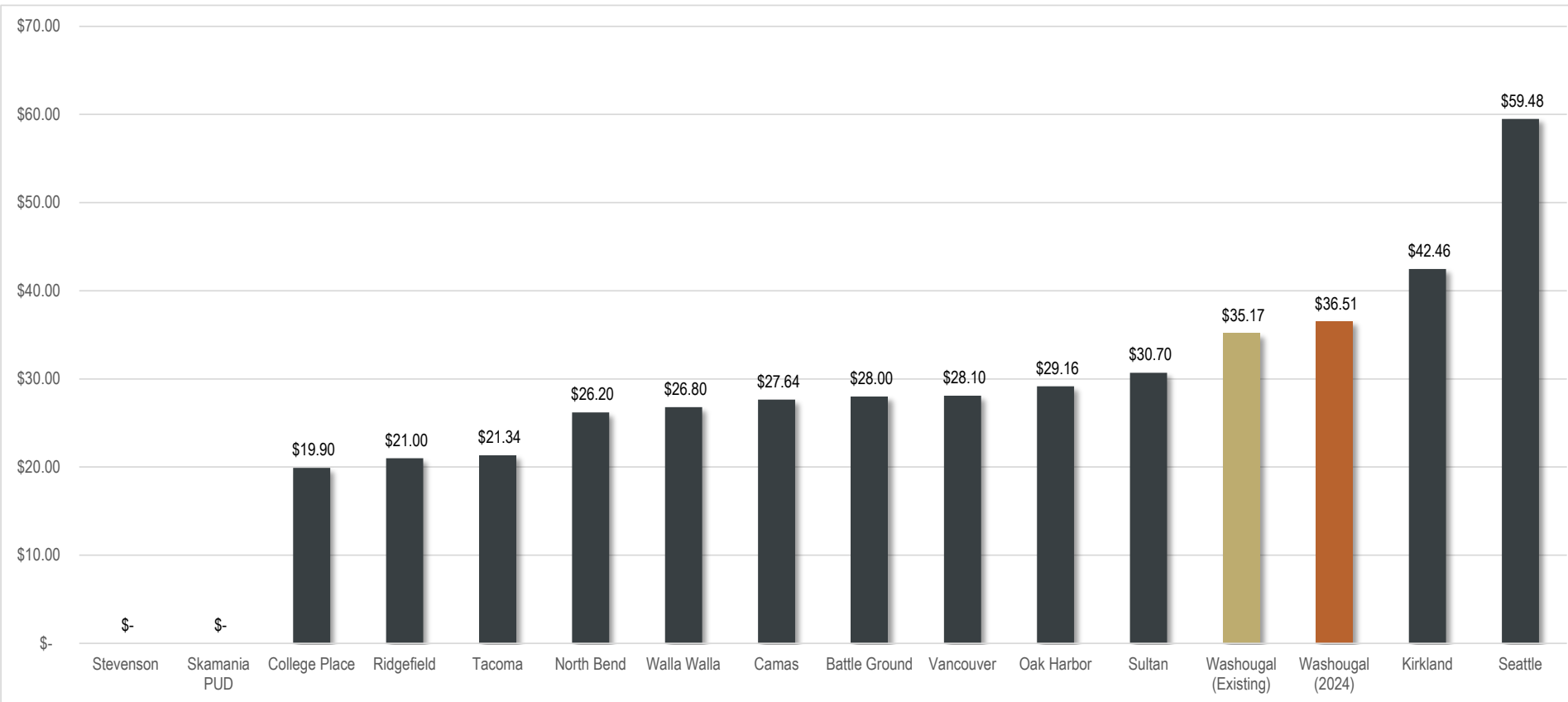
Commercial	Existing 2023		Proposed Bi-Monthly Bills					
		2024	2025	2026	2027	2028		
1 ERU (Mode)	\$ 35.17	\$ 36.51	\$ 37.90	\$ 39.34	\$ 40.83	\$ 42.38		
2 ERUs (Median)	70.34	73.02	75.80	78.68	81.66	84.76		
4 ERUs (Average)	140.68	146.04	151.60	157.36	163.32	169.52		
142 ERUs (Maximum)	4,994.14	5,184.42	5,381.80	5,586.28	5,797.86	6,017.96		
\$ Bi-Monthly Difference								
1 ERU (Mode)	\$	1.34	\$ 1.39	\$ 1.44	\$ 1.49	\$ 1.55		
2 ERUs (Median)		2.68	2.78	2.88	2.98	3.10		
4 ERUs (Average)		5.36	5.56	5.76	5.96	6.20		
142 ERUs (Maximum)		190.28	197.38	204.48	211.58	220.10		
% Difference								
1 ERU (Mode)		3.81%	3.81%	3.80%	3.79%	3.80%		
2 ERUs (Median)		3.81%	3.81%	3.80%	3.79%	3.80%		
4 ERUs (Average)		3.81%	3.81%	3.80%	3.79%	3.80%		
142 ERUs (Maximum)		3.81%	3.81%	3.80%	3.79%	3.80%		

Notes:

1. ERU: Equivalent Residential Unit = 3,900 square feet of impervious surface area.
2. Median: value in the middle of a data set; 50% of data points are above or below the value.
3. Mode: value that appears most often.



Stormwater Residential Rate Survey



Notes:

- City of North Bend includes flood management charge.
- Bills include utility taxes where applicable.



Water



Rate Design Considerations

- **Incorporate the class-based cost-of-service increases based on phase-in**

Class	Water Proposed Phase-In				
	2024	2025	2026	2027	2028
Single-family	3.79%	3.78%	3.78%	3.77%	3.77%
Multi-family	2.50%	2.50%	2.50%	2.50%	2.50%
Commercial	4.75%	4.75%	4.75%	4.75%	4.75%
Lg. Commercial	5.00%	5.00%	5.00%	5.00%	5.00%
Total	3.80%	3.80%	3.80%	3.80%	3.80%

- **Increase bi-monthly fixed charges based on the overall average increase**
 - » Volumetric charges make up the difference to reach cost-of-service phase-in targets
- **Single-family volumetric alternative**
 - » Changes to tiers – *interactive worksheet*



Existing & Proposed Rates: Water

Meter	Existing 2023		Proposed Rates					
			2024	2025	2026	2027	2028	
Bi-Monthly Fixed								
3/4"	\$	44.54	\$ 46.23	\$ 47.99	\$ 49.81	\$ 51.71	\$ 53.67	
1"		50.87	52.80	54.81	56.89	59.05	61.30	
1.5"		84.66	87.88	91.22	94.68	98.28	102.02	
2"		124.15	128.87	133.76	138.85	144.12	149.60	
3"		260.25	270.14	280.40	291.06	302.12	313.60	
4"		392.84	407.77	423.26	439.35	456.04	473.37	
6"		658.77	683.80	709.79	736.76	764.76	793.82	
8"		1,099.07	1,140.83	1,184.19	1,229.19	1,275.89	1,324.38	
Volume (per 100 cf or 1 ccf)								
Single-family								
Block 1 (0-12 ccf)	\$	2.47	\$ 2.56	\$ 2.66	\$ 2.76	\$ 2.86	\$ 2.97	
Block 2 (13-30 ccf)		6.70	6.95	7.21	7.49	7.77	8.06	
Block 3 (31+ ccf)		8.39	8.71	9.03	9.37	9.73	10.09	
Multifamily	\$	4.64	\$ 4.75	\$ 4.85	\$ 4.96	\$ 5.08	\$ 5.19	
Commercial	\$	4.60	\$ 4.83	\$ 5.07	\$ 5.33	\$ 5.60	\$ 5.88	
Large Commercial	\$	2.91	\$ 3.06	\$ 3.21	\$ 3.37	\$ 3.54	\$ 3.72	

Notes:

Outside City rates are 1.6 times the inside City rates.

Low income ELIL and VLIL rate available.

Definitions

- » VLIL: Very low-income level on the Housing and Urban Development federal site
- » ELIL: Extremely low-income level on the Housing and Urban Development federal site



Rate Design Impacts: Single-Family

2021	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
Bi-Mo. Average	10.15	11.21	11.02	10.27	13.43	15.87	19.12	25.37	23.72	16.43	11.18	9.83	14.80
<i>Mo. Average</i>	<i>5.07</i>	<i>5.61</i>	<i>5.51</i>	<i>5.13</i>	<i>6.71</i>	<i>7.94</i>	<i>9.56</i>	<i>12.68</i>	<i>11.86</i>	<i>8.21</i>	<i>5.59</i>	<i>4.91</i>	<i>7.40</i>
Bi-Monthly ccf by Percentile													
10.00%	3	2	4	3	4	4	5	5	6	4	3	3	4
25.00%	6	5	6	5	7	7	9	10	11	8	6	5	7
50.00%	9	9	10	9	12	12	16	19	18	13	9	8	12
75.00%	13	15	14	13	17	20	25	34	31	22	14	12	19
90.00%	18	21	19	18	24	31	36	52	47	32	20	18	28
Max Bill	78	110	150	143	107	391	291	383	328	181	148	97	201
Number of Bills	2,784	2,365	2,776	2,367	2,809	2,392	2,820	2,400	2,823	2,409	2,839	2,419	
Accounts		5,149		5,143		5,201		5,220		5,232		5,258	
Bills by Percentile													
10.00%	294	259	353	313	350	313	351	302	338	308	314	351	
25.00%	518	381	371	316	386	342	388	320	466	390	504	308	
50.00%	679	545	815	701	781	556	752	613	626	507	620	557	
75.00%	653	656	602	497	598	592	628	579	720	640	742	599	
90.00%	395	292	369	303	414	365	434	359	399	329	404	393	

Note: ccf = 100 cubic feet or 748 gallons.



Rate Design Impacts: Single-Family

Single-Family	Existing 2023		Proposed Bi-Monthly Bills					
			2024	2025	2026	2027	2028	
25% Percentile (7ccf)	\$	61.83	\$ 64.18	\$ 66.61	\$ 69.13	\$ 71.75	\$ 74.47	
50% Percentile (12ccf)		74.18	76.99	79.91	82.93	86.07	89.32	
Average (15ccf)		94.28	97.85	101.55	105.39	109.37	113.50	
75% Percentile (19ccf)		121.08	125.66	130.41	135.34	140.44	145.73	
Max Use (200ccf)		1,621.08	1,682.28	1,745.69	1,811.37	1,879.41	1,949.89	
\$ <i>Bi-Monthly Difference</i>								
25% Percentile (7ccf)		\$	2.35	\$ 2.43	\$ 2.52	\$ 2.62	\$ 2.72	
50% Percentile (12ccf)			2.81	2.92	3.02	3.14	3.25	
Average (15ccf)			3.57	3.70	3.84	3.98	4.13	
75% Percentile (19ccf)			4.58	4.75	4.92	5.10	5.29	
Max Use (200ccf)			61.20	63.41	65.68	68.04	70.47	
% <i>Difference</i>								
25% Percentile (7ccf)			3.79%	3.79%	3.79%	3.79%	3.79%	
50% Percentile (12ccf)			3.79%	3.79%	3.78%	3.78%	3.78%	
Average (15ccf)			3.79%	3.78%	3.78%	3.78%	3.77%	
75% Percentile (19ccf)			3.78%	3.78%	3.78%	3.77%	3.77%	
Max Use (200ccf)			3.78%	3.77%	3.76%	3.76%	3.75%	

Note: ccf = 100 cubic feet or 748 gallons.



Rate Design Impacts: Multi-Family

Multi-Family	Existing 2023		Proposed Bi-Monthly Bills					Units / Account
			2024	2025	2026	2027	2028	
3/4" - 42 ccf	\$	239.42	\$ 245.54	\$ 251.82	\$ 258.27	\$ 264.88	\$ 271.66	3
1" - 42 ccf		245.75	252.11	258.64	265.35	272.23	279.29	3
1.5" - 112 ccf		604.34	619.37	634.78	650.56	666.74	683.32	8
2" - 154 ccf		838.71	859.67	881.16	903.18	925.76	948.90	11
3" - 1,162 ccf		5,651.93	5,784.40	5,919.84	6,058.33	6,199.91	6,344.66	83
\$ Bi-Monthly Difference								
3/4" - 42 ccf		\$ 6.12	\$ 6.28	\$ 6.44	\$ 6.61	\$ 6.78		
1" - 42 ccf		6.36	6.53	6.70	6.88	7.06		
1.5" - 112 ccf		15.03	15.40	15.79	16.18	16.58		
2" - 154 ccf		20.96	21.49	22.02	22.57	23.14		
3" - 1,162 ccf		132.47	135.45	138.48	141.58	144.75		
% Difference								
3/4" - 42 ccf		2.56%	2.56%	2.56%	2.56%	2.56%		
1" - 42 ccf		2.59%	2.59%	2.59%	2.59%	2.59%		
1.5" - 112 ccf		2.49%	2.49%	2.49%	2.49%	2.49%		
2" - 154 ccf		2.50%	2.50%	2.50%	2.50%	2.50%		
3" - 1,162 ccf		2.34%	2.34%	2.34%	2.34%	2.33%		

Note:

1. ccf = 100 cubic feet or 748 gallons.
2. Assumes 14ccf per unit.



Rate Design Impacts: Commercial

Commercial	Proposed Bi-Monthly Bills					
	Existing 2023	2024	2025	2026	2027	2028
3/4" 14 ccf Avg.	\$ 108.94	\$ 113.87	\$ 119.03	\$ 124.42	\$ 130.06	\$ 135.96
1" 54 ccf Avg.	299.27	313.70	328.82	344.67	361.29	378.70
1.5" 42 ccf Avg.	277.86	290.80	304.34	318.51	333.35	348.88
2" 130 ccf Avg.	722.15	756.95	793.43	831.66	871.72	913.71
3" 252 ccf Avg.	1,419.45	1,487.66	1,559.14	1,634.05	1,712.54	1,794.80
4" 440 ccf Avg.	2,416.84	2,533.60	2,655.97	2,784.24	2,918.68	3,059.59
6" 94 ccf Avg.	1,091.17	1,137.96	1,186.78	1,237.71	1,290.87	1,346.33
\$ Bi-Monthly Difference						
3/4" 14 ccf Avg.	\$	4.93	\$ 5.16	\$ 5.39	\$ 5.64	\$ 5.90
1" 54 ccf Avg.		14.43	15.12	15.85	16.61	17.41
1.5" 42 ccf Avg.		12.94	13.54	14.17	14.84	15.53
2" 130 ccf Avg.		34.80	36.48	38.23	40.06	41.99
3" 252 ccf Avg.		68.21	71.48	74.91	78.50	82.26
4" 440 ccf Avg.		116.76	122.38	128.27	134.44	140.91
6" 94 ccf Avg.		46.79	48.82	50.94	53.15	55.46
% Difference						
3/4" 14 ccf Avg.		4.53%	4.53%	4.53%	4.53%	4.53%
1" 54 ccf Avg.		4.82%	4.82%	4.82%	4.82%	4.82%
1.5" 42 ccf Avg.		4.66%	4.66%	4.66%	4.66%	4.66%
2" 130 ccf Avg.		4.82%	4.82%	4.82%	4.82%	4.82%
3" 252 ccf Avg.		4.81%	4.80%	4.80%	4.80%	4.80%
4" 440 ccf Avg.		4.83%	4.83%	4.83%	4.83%	4.83%
6" 94 ccf Avg.		4.29%	4.29%	4.29%	4.29%	4.30%

Note: ccf = 100 cubic feet or 748 gallons.



Rate Design Impacts: Large Commercial

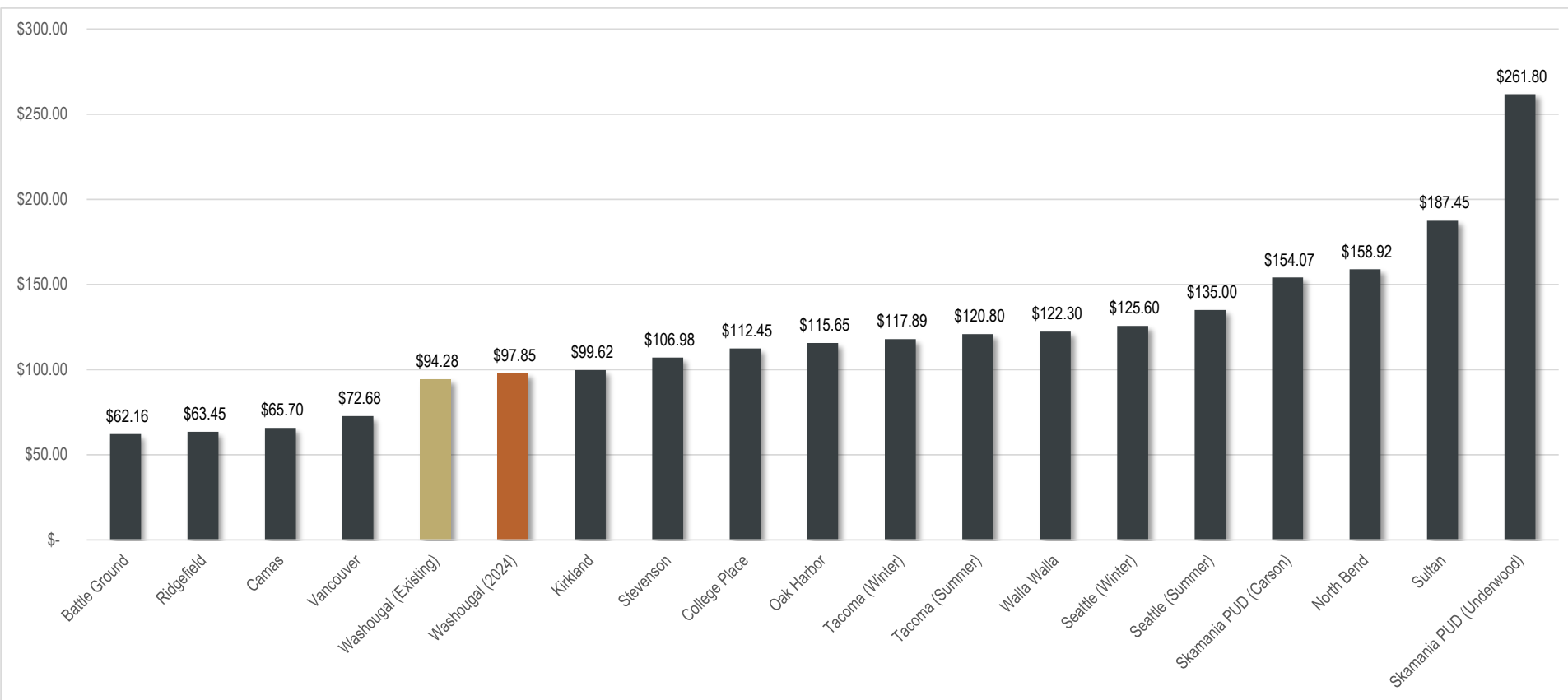
Large Commercial	Proposed Bi-Monthly Bills					
	Existing 2023	2024	2025	2026	2027	2028
Average (8" 7,500 ccf)	\$ 22,924	\$ 24,070	\$ 25,272	\$ 26,535	\$ 27,861	\$ 29,254
\$ Bi-Monthly Difference	\$ 1,146	\$ 1,203	\$ 1,263	\$ 1,326	\$ 1,392	
% Difference	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%

Note:

1. Class contains 1 account with consistent bi-monthly usage.
2. ccf = 100 cubic feet or 748 gallons.



Water Residential Rate Survey



Notes:

- Sample bi-monthly Residential bill assumes a ¾" meter and 15ccf consumption.
- Bills include utility taxes where applicable.



Rate Design: Single-Family Alternatives

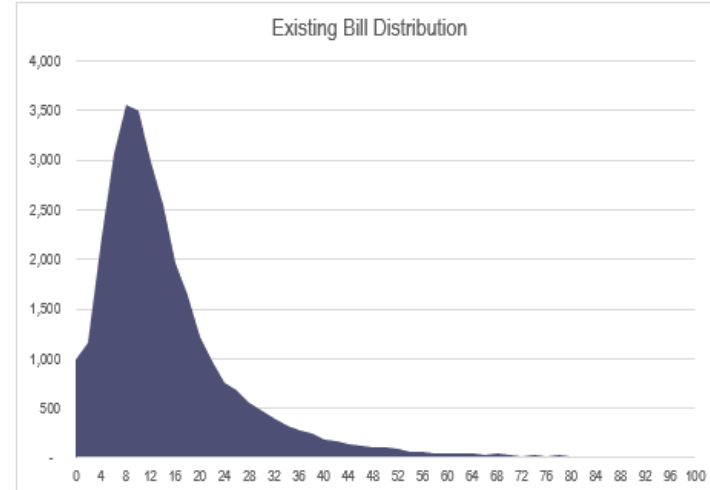
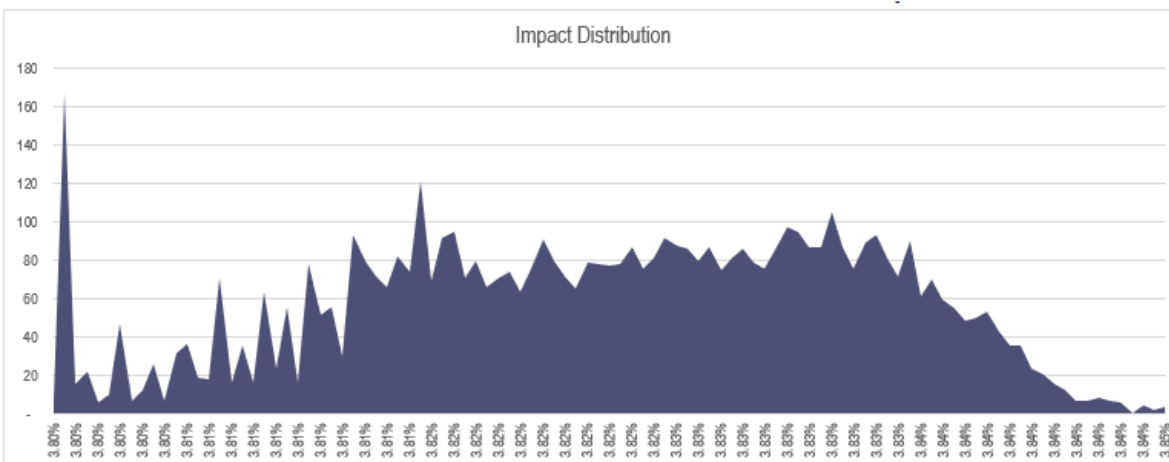
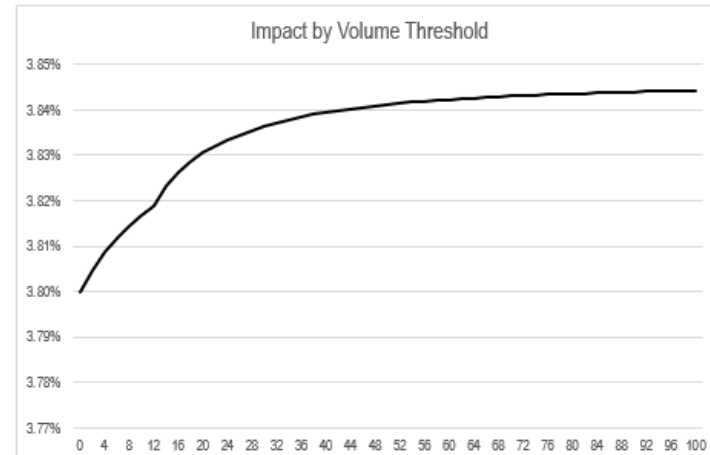
External Model

Rate Design

COSA		Phase-In 2024
Phase In Increase		3.79%
Revenue Target		\$ 3,413,354
Fixed Increase		3.80%
Volume Increase		3.77%
Overall Increase		3.79%
Check		-

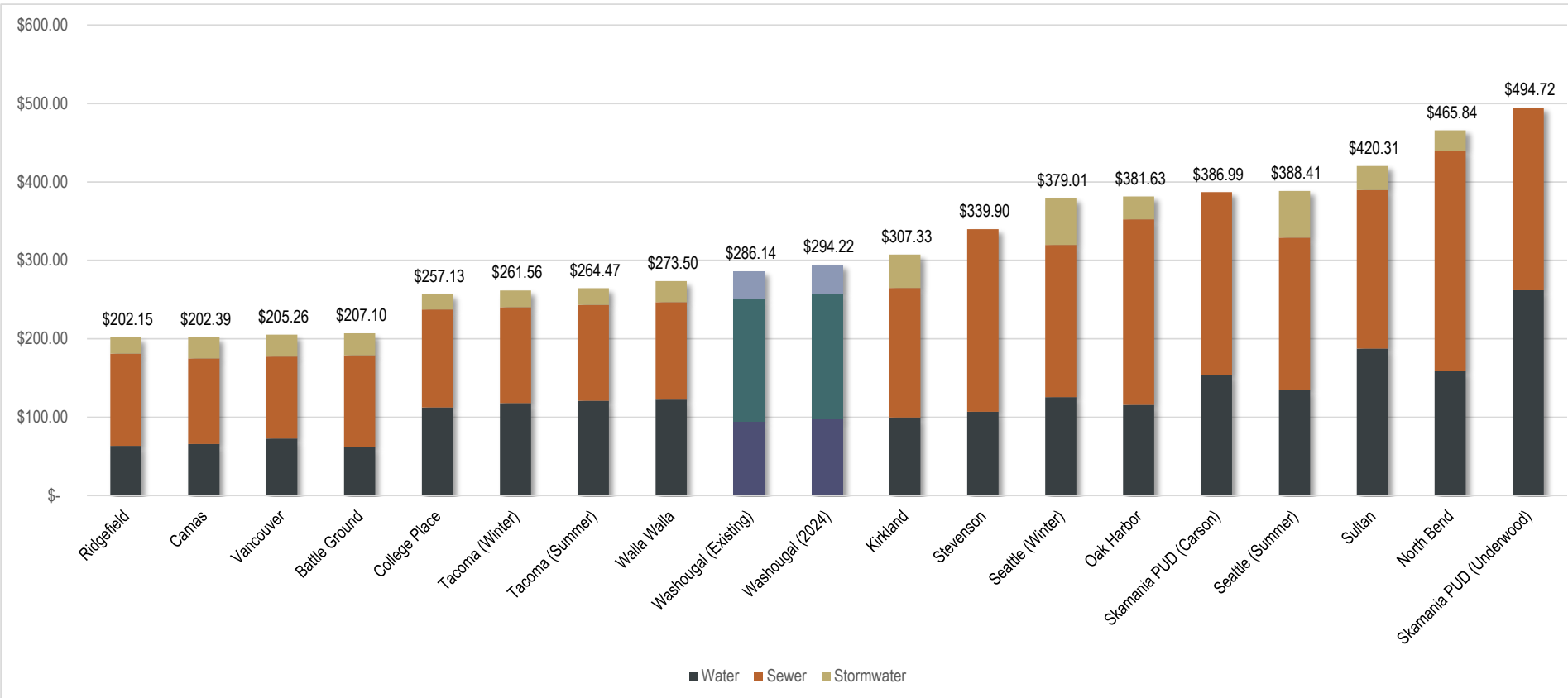
Single-Family	Data 2024	Meter Size Differential Existing	Proposed	Tier Size Existing	Proposed	Revenue After Increase
Accounts	5,079					\$ 1,412,731
3/4"	4,985	1.00	1.00			1,382,896
1"	94	1.14	1.14			29,834
ccl	450,363					\$ 2,000,623
Tier 1 (0-12)	277,924	1.00	1.00	12	12	713,416
Tier 2 (13-30)	121,527	2.71	2.71	30	30	845,985
Tier 3 (31+)	50,911	3.40	3.40	31+	31+	441,222
						\$ 3,413,354

	Existing Rates	Proposed 2024
\$	44.54	\$ 46.23
	50.87	52.80
\$	2.47	\$ 2.57
	6.70	6.96
	8.39	8.71





Combined Residential Rate Survey



Notes:

- Sample bi-monthly Residential bill assumes 15ccf of water and 11ccf of sewer consumption. Water bills assume a ¾" meter.
- Ridgefield sewer rates are based off CRWWD Ridgefield Service Area charges and include system integration charge and City operation fees.
- Skamania PUD rates are based off City of Stevenson charges.
- City of Kirkland includes King County Treatment and City of Kirkland Distribution fees.
- Bills include utility taxes where applicable.
- City of North Bend stormwater bill includes flood management charge.

Summary / Direction

- **Revenue requirement**

- » Cumulative impact of 15% over 5-years (average Single-Family)
- » Average annual bi-monthly single-family bill increase of \$8.55 for all utilities
 - Average annual monthly equivalent: \$4.27



- **Cost of service**

- » Gradually phase in water towards cost of service



Class	2024 COSA	Water Proposed Phase-In				
		2024	2025	2026	2027	2028
Single-family	3.53%	3.79%	3.78%	3.78%	3.77%	3.77%
Multi-family	-13.60%	2.50%	2.50%	2.50%	2.50%	2.50%
Commercial	14.46%	4.75%	4.75%	4.75%	4.75%	4.75%
Lg. Commercial	30.26%	5.00%	5.00%	5.00%	5.00%	5.00%
Total	3.80%	3.80%	3.80%	3.80%	3.80%	3.80%

- » Apply sewer on an across-the-board basis (results within cost of service)



Summary / Direction (continued)

- **Rate design**

- » No structural changes
- » Apply water cost of service phase-in by class of service

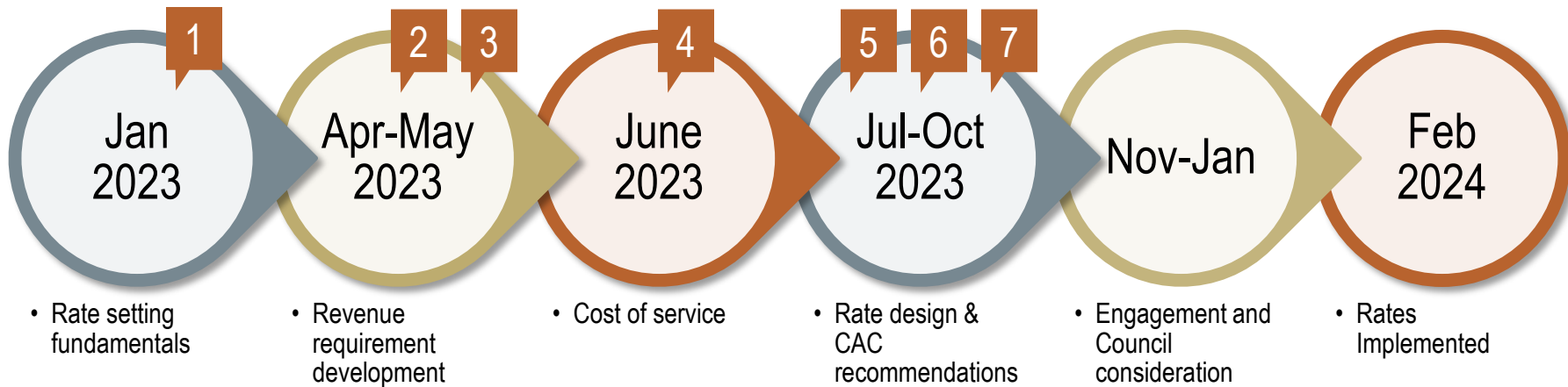


Class of Service	Class Based Combined Annual Increase (Water, Sewer & Stormwater)					Cumulative
	2024	2025	2026	2027	2028	
Single-family	2.90%	2.91%	2.91%	2.92%	2.92%	15.43%
Multi-family	2.31%	2.31%	2.31%	2.32%	2.32%	12.12%
Commercial	3.26%	3.28%	3.29%	3.30%	3.32%	17.57%
Large Commercial	3.24%	3.26%	3.28%	3.31%	3.33%	17.54%
System Wide Average	2.89%	2.90%	2.90%	2.91%	2.92%	15.39%

- **Monthly billing: survey the customers & revisit after AMI implementation**



Wrap-up & Next Steps



Review Meetings with CAC, Staff and Council



Thank you!

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