City of Washougal
Washington

Water, Sewer, and Stormwater Rate Study: Phase II.b

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FCS GROUP
Solutions-Oriented Consulting

Study Segments

Study Phase I May 29	Study Phase II.a August 13	Study Phase II.b October 22
Capital Funding Analysis	Stormwater Credit Analysis	Water Rate Design
Policy Evaluation	Sewer Utility Tax Evaluation	System Development Charges Update
Operations Forecast	Water Revenue Reconciliation	Utility Benchmarking
Scenario Analysis		Review: Stormwater Credit Analysis
Rate Plan Alternatives		

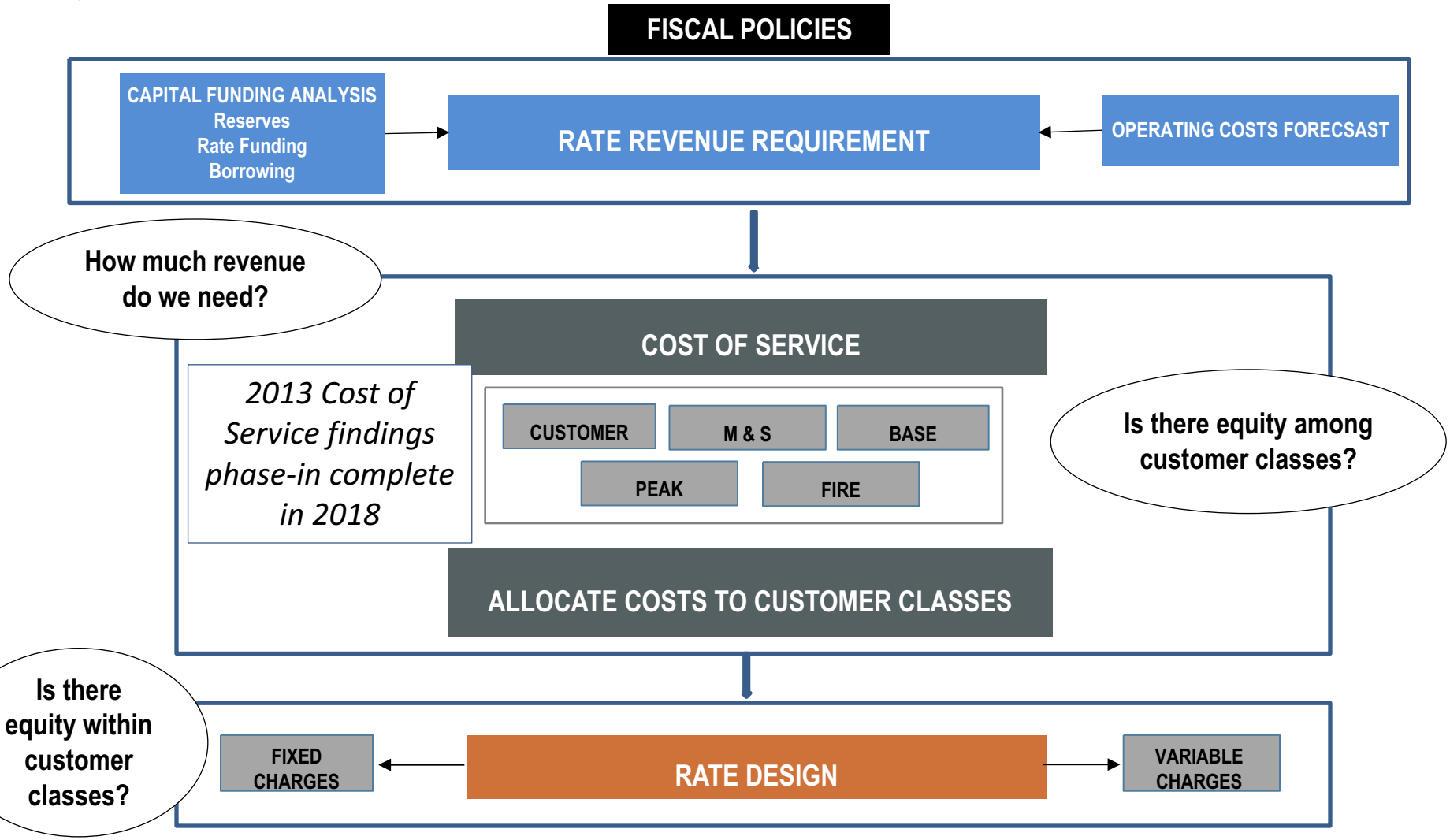
Phase II.a Review

- **Rate Plan**
  - Water: Phased CIP, conservative revenue basis
  - Sewer: Programmed CIP, decrease utility tax
  - Stormwater: Delay programmed staffing, adjust for cost-based credit

Utility	2019	2020	2021	2022	2023
Water (Previous)	4%	4%	4%	4%	4%
Water (Updated)	3%	3%	3%	3%	3%
Sewer (Previous)	10%	10%	10%	4.25%	4.25%
Sewer (Updated)	9.5%	9.5%	9.5%	4.75%	4.75%
Stormwater	4.5%	4.5%	4.5%	3%	3%

- **Stormwater Rate Credit**
  - 2019 Implementation
  - Phase-in Alternative

Overview of Rate Setting Process



Utility Rates Progression

2010 Comprehensive Rate Study

Water Sewer Storm RR, COSA, RD, SDCs

Implementation:

- W/S/St RR
- Financial policies
- Water Lane decision compliance
- COSA & RD delayed

2013 Rate Study Update

Water Sewer Update RR, COSA, RD

Implementation:

- W/S RR
- Water COSA, 3-tier SFR volume rate
- Allowance reduction from 10 ccf to 5 ccf
- Phase-in 2014-2018

2015 Rate Study Update

Water Sewer Update RR, COSA, RD

Implementation:

- Sewer COSA
- Sewer rate design – volume based commercial rates
- Phase-in 2016-2018

2018 Comprehensive Rate Study

Water Sewer Storm RR, COSA, RD, SDCs

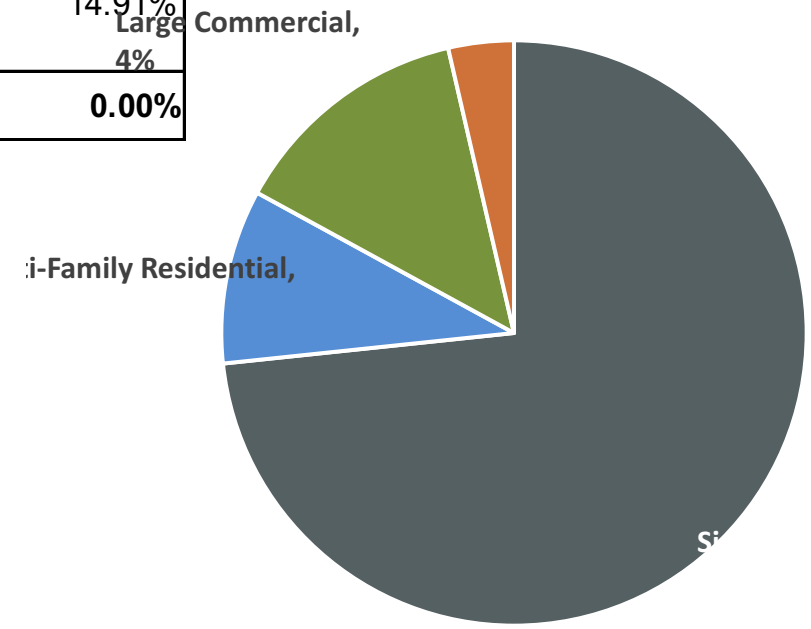
Implementation:

- W/S/St RR
- Stormwater Credit Analysis
- Water Rate Design
- Updated SDCs
- Utility Benchmarking

COSA 2013 Water Rate Study

Customer Classes	2014 Revenue with Across-the-Board Increase	2014 Cost of Service	Indicated Increase / (Decrease)
Single Family Residential	$ 2,397,926	$ 2,430,050	1.34%
Multi-Family Residential	418,282	268,505	-35.81%
Commercial	381,161	480,995	26.19%
Large Commercial	119,526	137,345	14.91%
TOTAL	**$ 3,316,895**	**$ 3,316,895**	**0.00%**

- Subsidies phased out between classes from 2014 to 2018
- Final cost shares used for 2018 rate design



Water Rate Design

Rate Design

- **Determines the structure by which revenue will be collected from individual customers within a class**
  - Based on utility goals and objectives

Continued Rate Study Objectives from 2013 Study	
Equity	Reduce usage allowance from 10 ccf to 5 ccf by 2018
Affordability	Reduce fixed charge share of revenue recovery
Conservation	Set block thresholds and prices to reflect peak usage cost differential
Industry Best-Practice	Rate structures that are easy to understand and administer

2018 Rate Design Focus
Continue phase-out of Single Family Residential usage allowance from 5 ccf to 0 ccf by 2023
Ensure rate structure aligns with updated customer demand patterns

2018 Rate Structure

2018 Bimonthly Rate Schedule		
Meter Size	Base Meter Charge	Meter Allowance
3/4"	$ 39.77	5
1"	45.42	7
1.5"	75.59	14
2"	110.85	24
3"	232.37	53
4"	350.75	85
6"	588.18	150
8"	981.30	250
MFR Add'l Unit	$ 33.70	5

Customer Class	All Usage	0 - 14 ccf	14 - 40 ccf	Over 40 ccf
SFR		$ 4.86	$ 5.12	$ 6.13
MFR	$ 2.64			
Commercial	$ 4.64			
Large Commercial	$ 2.57			

- **Fixed Charge**
  - Meter size based fee
  - Additional unit charge for MFR
  - Usage allowance that increases with meter size
  - Additional MFR allowance based on units
  - 46% of total revenue
- **Volume**
  - SFR – 3 tier increasing block rate
  - All other classes single volume rate

MFR Sample Allowances

- Varies by meter size (allowance #1)
- 5 ccf per additional unit (allowance #2)
- Each customer has an individual allowance

Meter Size	Units	Allowance #1	Allowance #2	Total Allowance
3/4"	3	5	10	15
3/4"	8	5	35	40
1"	5	7	20	27
1"	7	7	30	37
1.5"	12	14	55	69
1.5"	14	14	65	79
2"	6	24	25	49
2"	31	24	150	174
3"	25	53	120	173
3"	62	53	305	358

Comprehensive Rate Structure Update

Revise SFR block sizes
Block 1 threshold reduced from 14 ccf to 12 ccf winter average, lower revenue recovery
Block 3 threshold reduced from 40 ccf to 30 ccf to include customers using greater than 2 x the annual average bimonthly use, higher revenue recovery

Phase out SFR allowance by 1 ccf annually
Currently 5 ccf bimonthly in 2018
Phase-out accomplished in 2023

Simplify MFR and Commercial Rate Structures (phase-out complexities)
Eliminate all usage allowances
Eliminate MFR per unit charge
Single volume rate for all usage

Reduce fixed revenue recovery – target 35% versus current 46%
Minimizes bill impact to low water users to offset reducing the allowance
Recognizes cost of the allowance included in the fixed charge

Revised 2019 Water Rate Schedule

2019 Bimonthly Rate Schedule		
Meter Size	Base Meter Charge	SFR Allowance
3/4"	$ 39.57	4
1"	45.20	4
1.5"	75.22	
2"	110.30	
3"	231.23	
4"	349.03	
6"	585.30	
8"	976.51	
MFR Add'l Unit	n/a	n/a

Customer Class	All Usage	0 - 12 ccf	12 - 30 ccf	Over 30 ccf
SFR		$ 3.70	$ 5.95	$ 7.45
MFR	$ 4.12			
Commercial	$ 4.08			
Large Commercial	$ 2.53			

- **Fixed Charge**
  - Set for target revenue recovery (35%)
  - 1 ccf phase-out of SFR usage allowance
  - Eliminate usage allowances and unit charges for MFR & COM
- **Volume**
  - Revise block sizes to reflect updated usage statistics
  - Rebalance usage block pricing
  - Single volume rate for MFR and COM

Revised 2023 Water Rate Schedule

2023 Bimonthly Rate Schedule

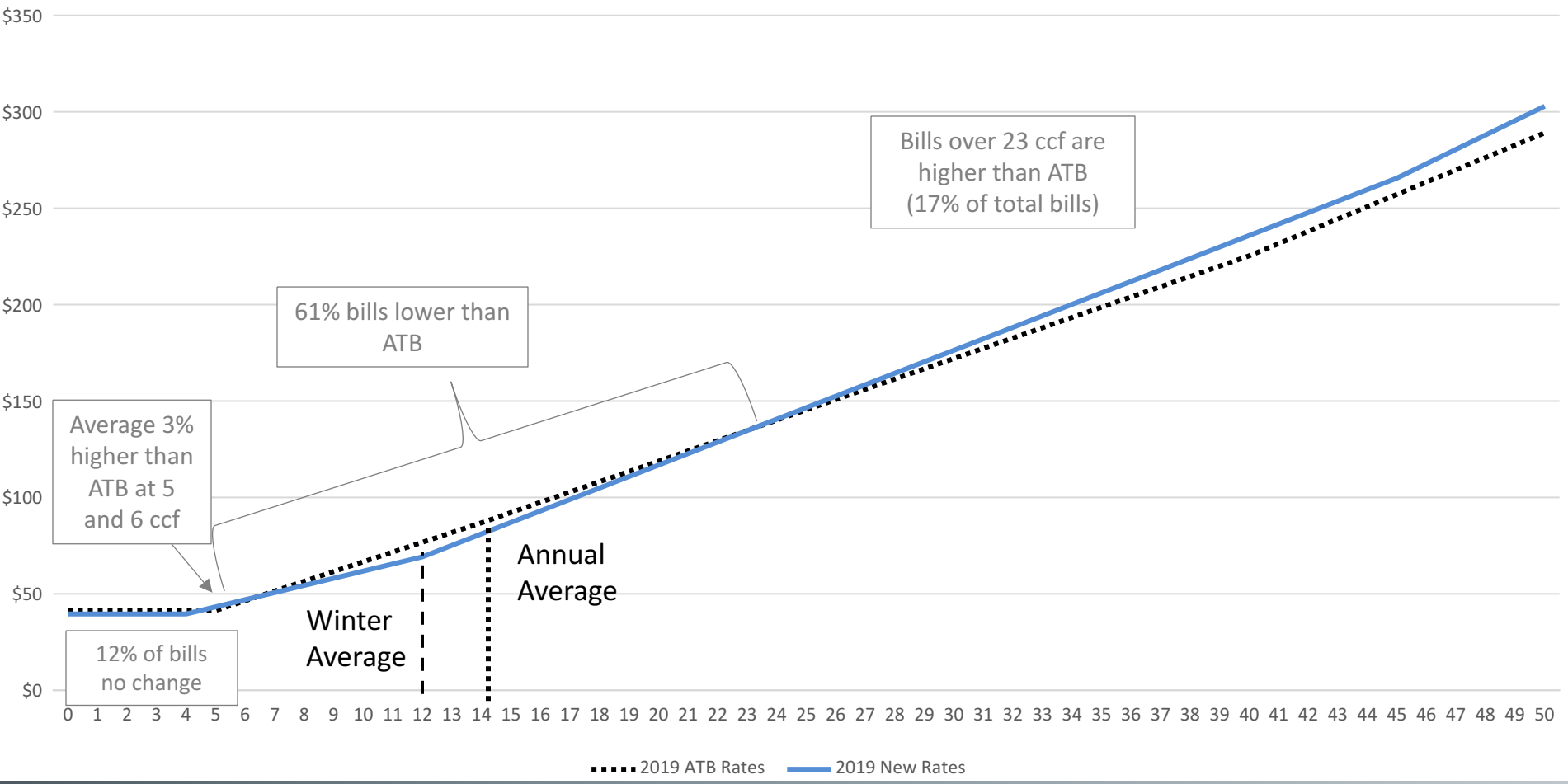
Meter Size	Base Meter Charge	SFR Allowance
3/4"	$ 44.54	0
1"	50.87	0
1.5"	84.66	
2"	124.15	
3"	260.25	
4"	392.84	
6"	658.77	
8"	1,099.07	
MFR Add'l Unit	n/a	n/a

Customer Class	All Usage	0 - 12 ccf	12 - 30 ccf	Over 30 ccf
SFR		$ 2.47	$ 6.70	$ 8.39
MFR	$ 4.64			
Commercial	$ 4.60			
Large Commercial	$ 2.91			

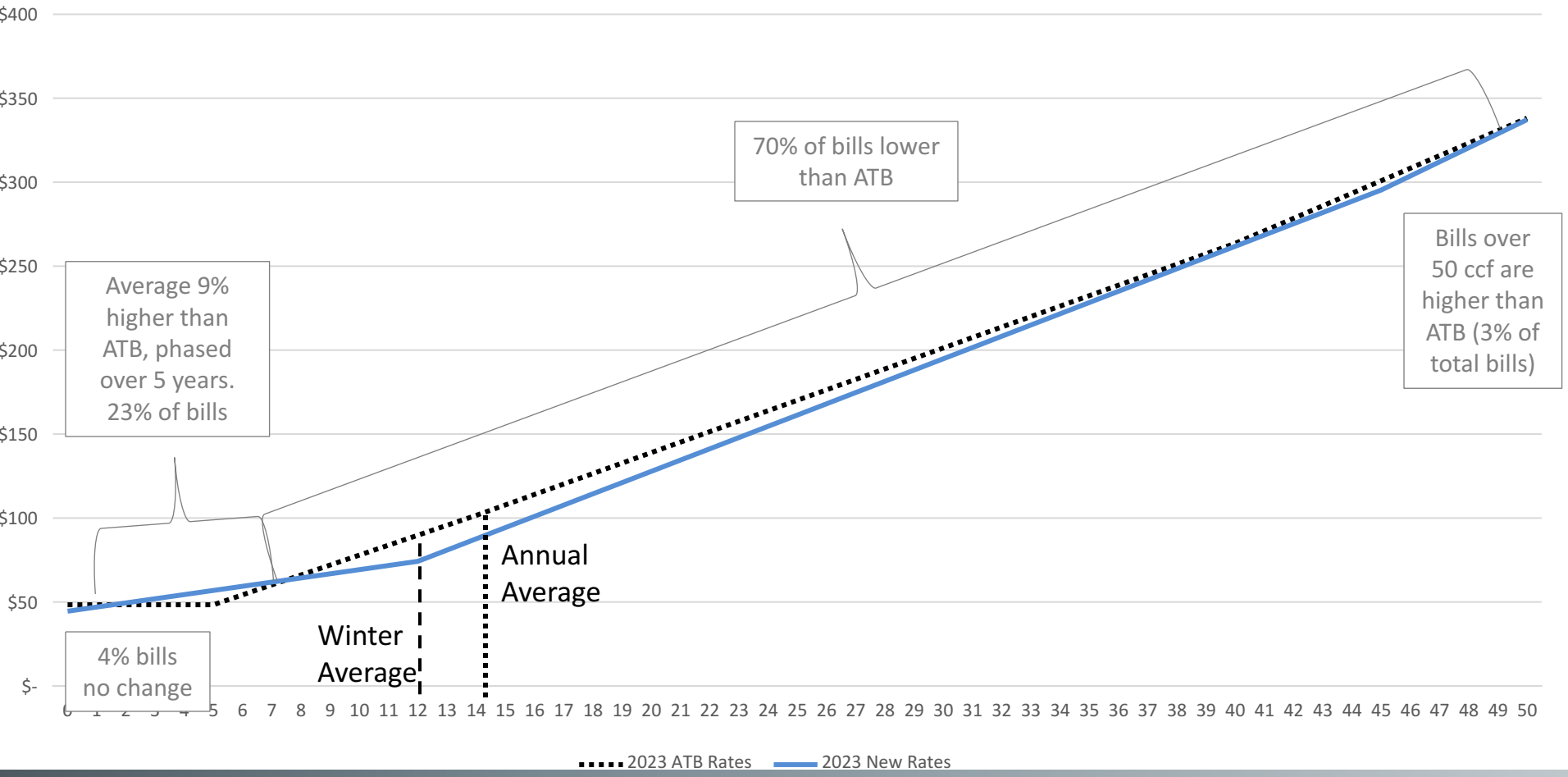
- **Fixed Charge**
  - Completion of SFR usage allowance phase-out
  - ATB increases to MFR and COM
  - 35% of total revenue
- **Volume**
  - Block 1 rate goes down with additional usage from allowance phase-out

Single Family Residential Impacts

2019 SFR Bimonthly Bill Impacts (4 ccf allowance)



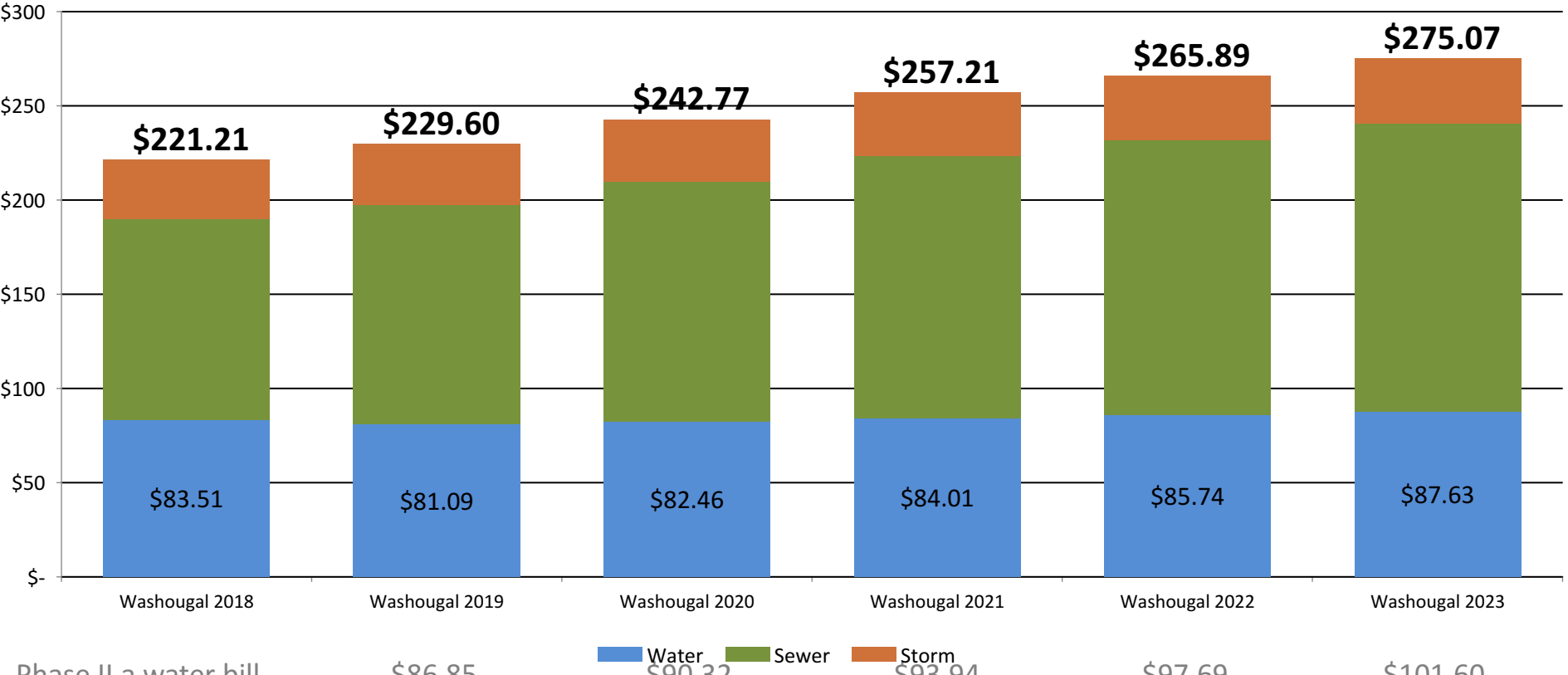
2023 SFR Bimonthly Bill Impacts (no allowance)



Rate Design Combined Bill Impacts

Ph I $279.55
Ph II $289.68

Bimonthly $ Increase	$8.39	$13.17	$14.44	$8.68	$9.18
Annual % Increase	3.79%	5.74%	5.95%	3.37%	3.45%
				Cumulative Rate Increase	24.3%

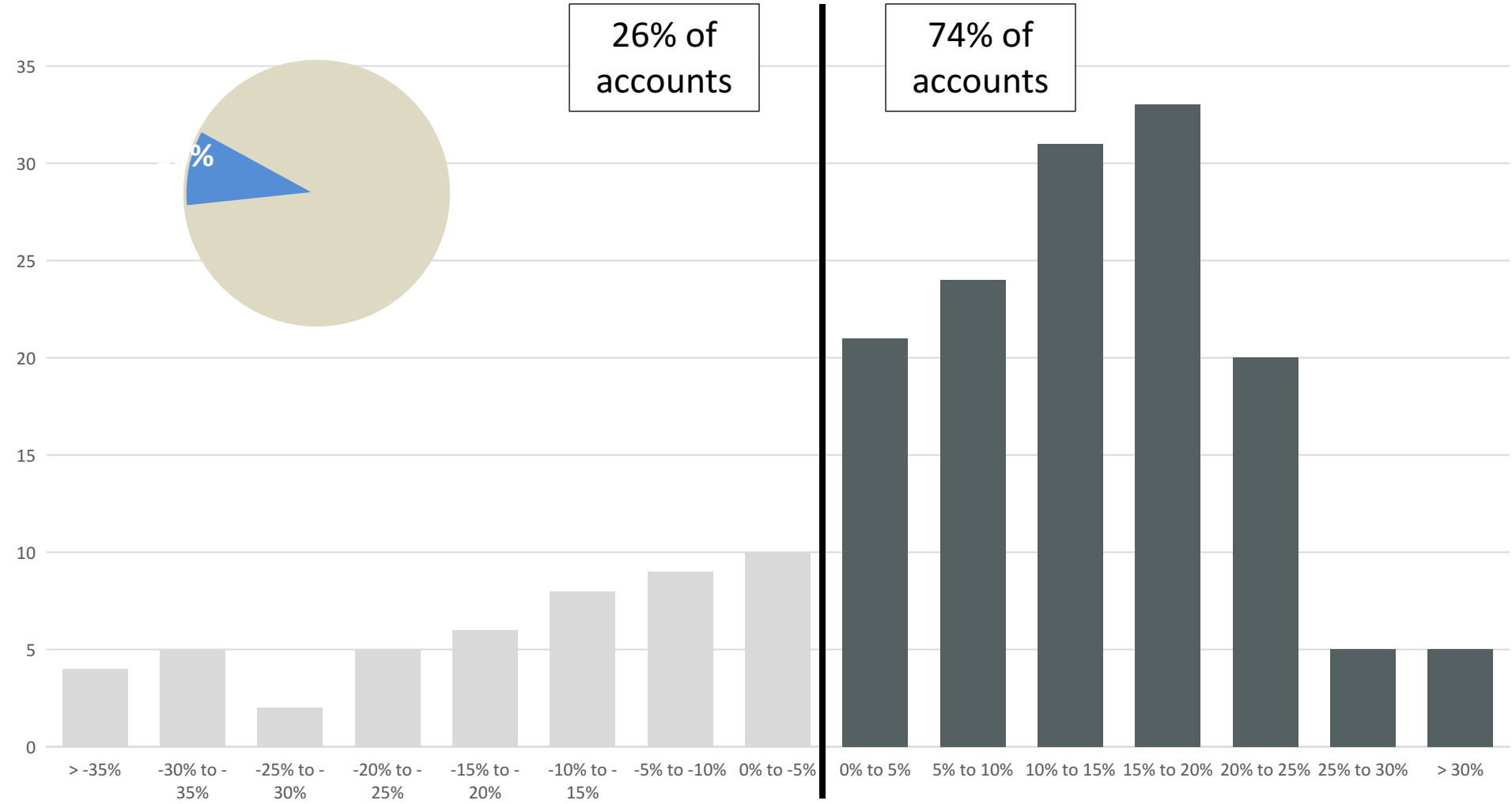


Phase II.a water bill	$86.85	$90.32	$93.94	$97.69	$101.60

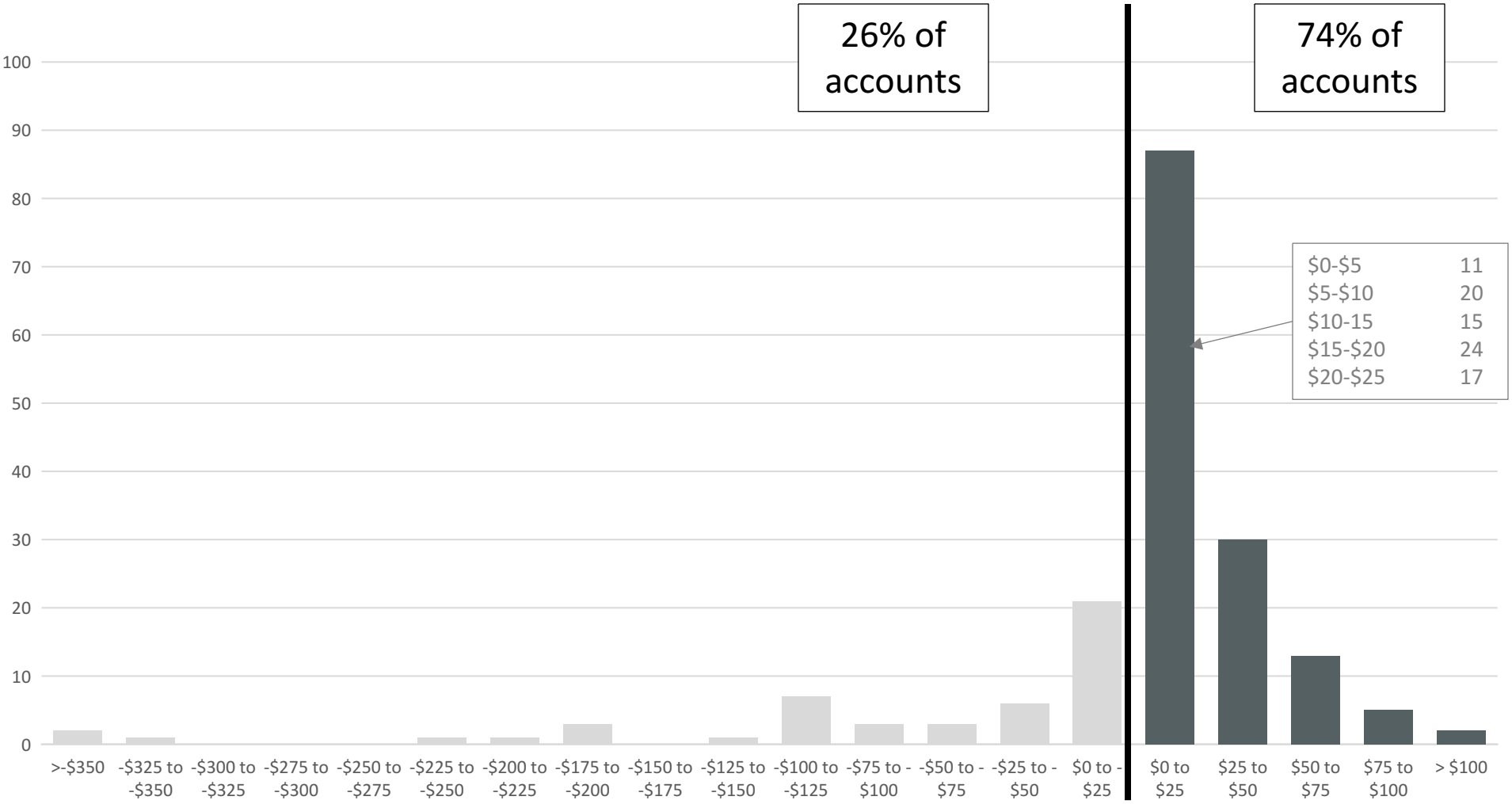
Assumes ¾" Meter, 14 ccf bimonthly, Stormwater 5-year phase-in

Multi-Family Residential Impacts

MFR Percentage Change Distribution



MFR Dollar Change Distribution



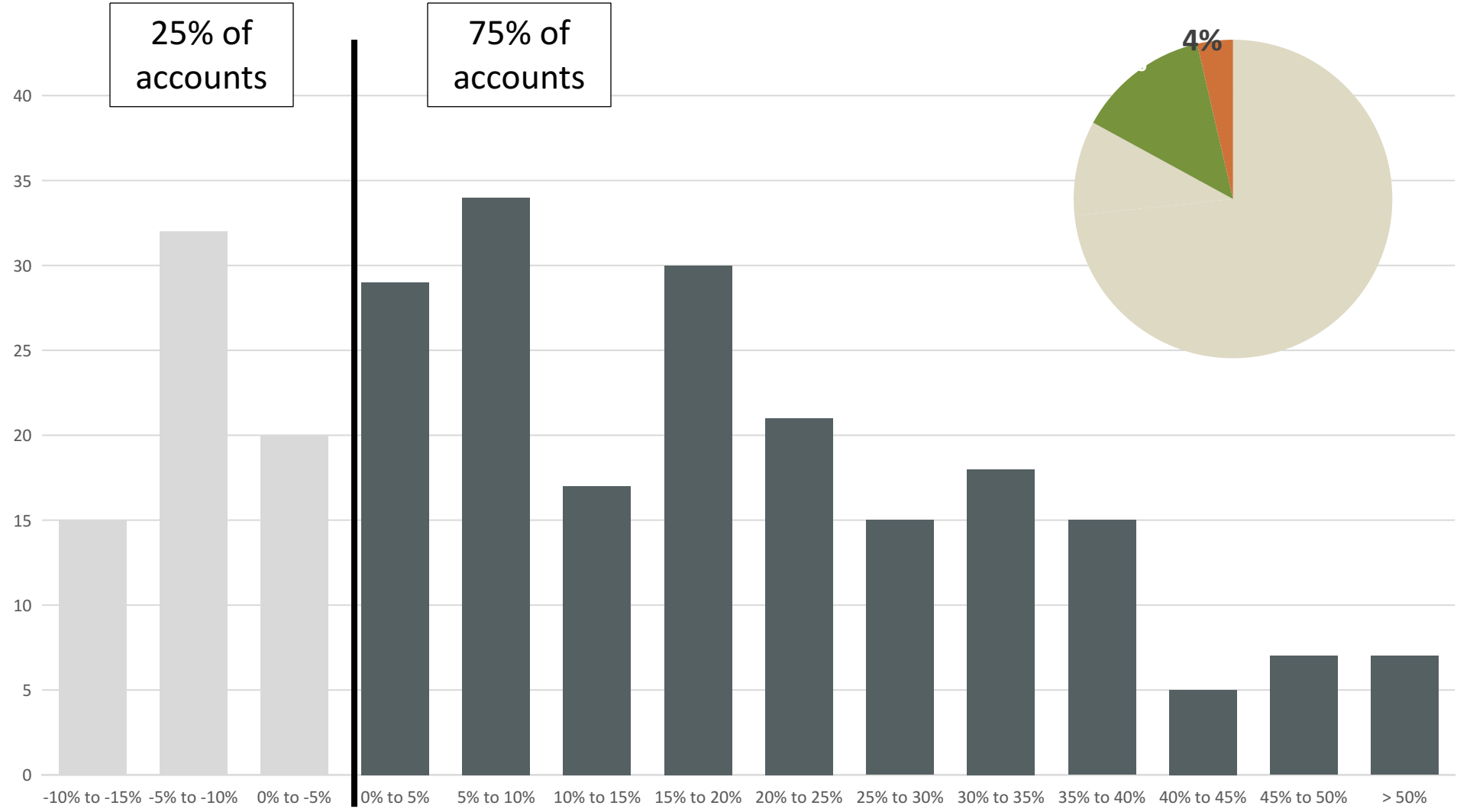
2019 MFR Sample Bimonthly Bills

Meter Size	Units	ATB	Rate Design	$ Change	% Change
3/4"	4	$ 205.05	$ 205.73	$ 0.68	0.3%
3/4"	2	$ 79.52	$ 83.79	$ 4.27	5.4%
1"	4	$ 264.57	$ 299.13	$ 34.56	13.1%
1"	2	$ 87.67	$ 89.15	$ 1.48	1.7%
1.5"	18	$ 896.30	$ 803.51	$ (92.79)	-10.4%
1.5"	13	$ 547.79	$ 444.39	$ (103.40)	-18.9%
2"	6	$ 365.05	$ 418.50	$ 53.45	14.6%
2"	4	$ 232.29	$ 281.82	$ 49.53	21.3%

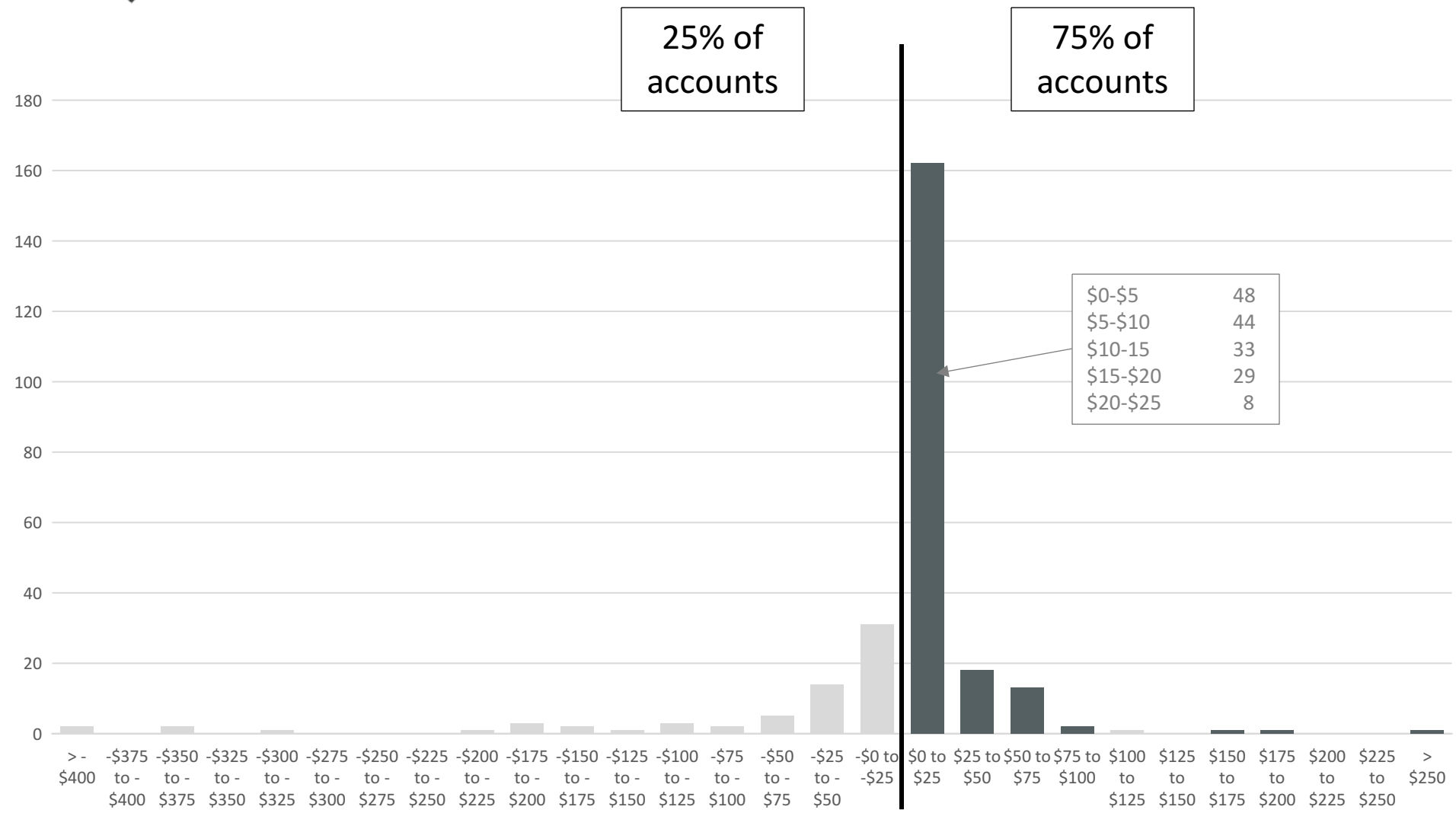
- Subsidies due to complex rate structure features are corrected
- Updated rate design reflects capacity commitment and actual usage demand

Commercial Impacts

Commercial Percentage Change Distribution



Commercial Dollar Change Distribution



2019 Commercial Sample Bills

Meter Size	ATB	Rate Design	$ Change	% Change
1"	$ 45.91	$ 62.43	$ 16.52	36.0%
1.5"	$ 545.43	$ 486.17	$ (59.26)	-10.9%
2"	$ 102.55	$ 152.83	$ 50.28	49.0%
3"	$ 73.65	$ 93.08	$ 19.44	26.4%
4"	$ 5,107.85	$ 4,747.98	$ (359.87)	-7.0%

- Subsidies due to usage allowances are corrected
- Updated rate design reflects capacity commitment and actual usage demand

Rate Design Alternatives

1. Full implementation of comprehensive rate structure design changes (including phased elements)
2. Partial rate design implementation:
   a) Do not phase-out the SFR usage allowance – remains at 5 ccf
   b) Revise SFR block sizes for usage statistics
   c) Simplify MFR and COM rate structures – no usage allowances or unit charges
3. Do not change rate structure – apply rate increases uniformly Across-the-Board (ATB)

*Administrative Recommendation

System Development Charge (SDC)

SDC Concepts and Authority

- Authorized by RCW 35.92.025 to charge properties seeking to connect to the system **"in order that such property owners shall bear their equitable share of the cost of such system."**
    - A one-time charge to a new customer
    - Not based on target revenue generation
    - Based on an equitable share of the cost of the system
- Utility infrastructure cannot feasibly be constructed incrementally for growth
    - Systems are oversized to serve future connections
    - Existing customers must carry the cost of available capacity
- **In general, the purpose of a connection charge is to mitigate the impact of growth on the utility systems, or to compensate for investments already made to provide available capacity to serve future growth.**

Existing SDCs

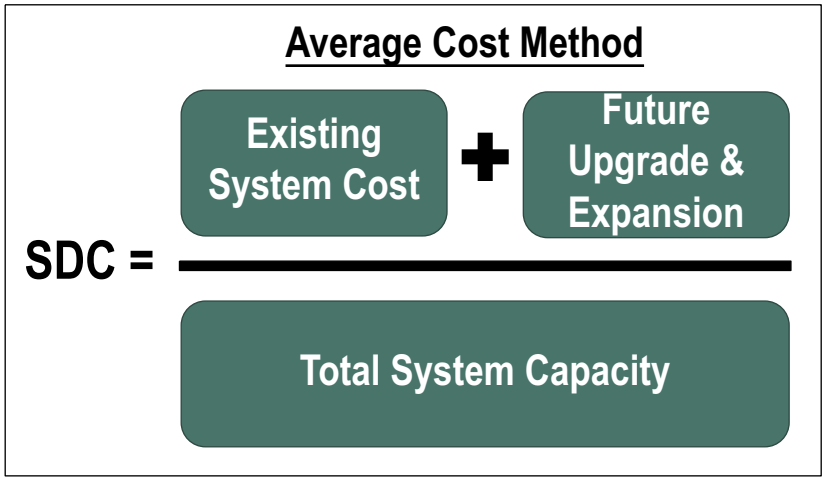
Customer Group	Water SDCs		Sewer SDCs		Storm SDCs
	City	County	City	County	City
Residential:					
Zone 1 Low Level	$ 2,930	$ 4,395	$ 5,620	$ 8,430	$ 450
Zone 2 Intermediate	3,370	5,055	5,620	8,430	450
Multiple Dwellings:					
2 units	$ 4,395	$ 6,595	$ 8,430	$ 12,645	$ 450
3 units	6,595	9,895	12,645	18,970	per 3,900
4 units	8,790	13,185	16,860	25,290	impervious
More than 4 (per unit)	2,038	3,060	3,785	5,680	sq ft
Commercial:					
Service Stations	$ 6,350	$ 9,525	$ 12,105	$ 18,160	
Public Buildings/Offices, Churches	6,350	9,525	12,105	18,160	$ 450
Small business/Offices	4,760	7,140	12,105	18,160	per 3,900
Restaurants and Taverns, Laundromats	9,525	14,285	133,800	200,700	impervious
Industrial	12,700	19,050	17,840	26,760	sq ft
Hotel/Motel			.085 ERU/unit	.085 ERU/unit	

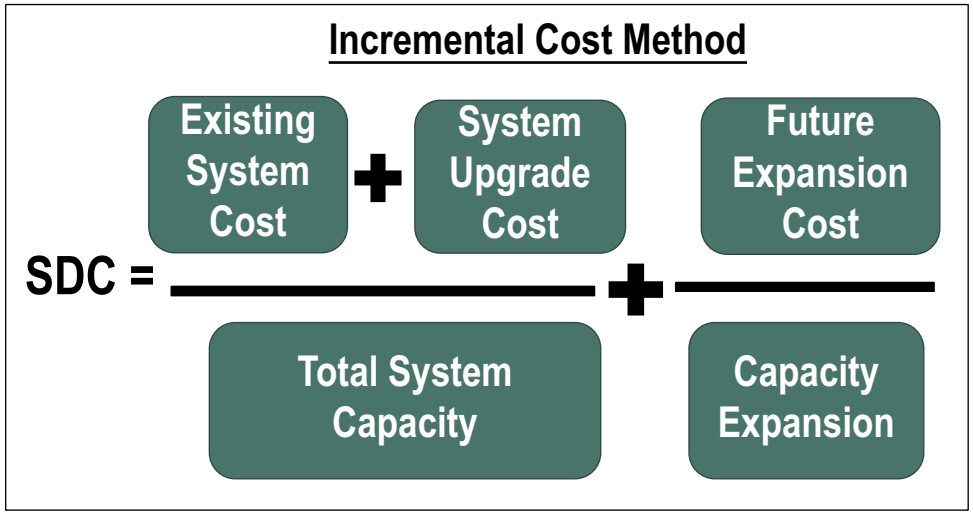
- **Current methodology - complex structure**
  - Recommendation: single fee for simplification and available cost basis
    - Water: Meter Capacity Equivalent (MCE) basis
    - Sewer: flow-based Equivalent Residential Unit (ERU)
    - Stormwater ESU basis maintained

SDC Policy Considerations and Methodology

Based on the City's policy direction on how growth supports growth-related costs:

1. The Average Cost Method (ACM) seeks to arrive at the average cost of one unit of capacity.
2. The Incremental Cost Method (ICM) separates the cost of capacity expansion, and recovers the cost from future customers served by that capacity.





Water System Development Charge

Average Cost Method SDC	
Existing System Costs	$ 35,231,756
Future System Costs	10,371,500
Total Allocable Costs	**$ 45,603,256**
Total MCE Capacity	11,881
TOTAL SDC PER MCE	**$ 3,838**
Existing SDC	*2,930*

Incremental Cost Method SDC	
Existing System	$ 35,231,756
System Upgrade Cost	5,792,000
Total	$ 41,023,756
Total System Capacity	11,881
System Buy-In	**$ 3,453**
Future Expansion Costs	$ 4,579,500
Increased Capacity (MCEs)	5,817
Future System Buy-In	**$ 787**
TOTAL SDC PER MCE	**$ 4,240**
Existing SDC	$ 2,930

Existing System Cost Basis

- **New connections will support outstanding debt repayment through rates once connected**
  - Outstanding principal is deducted from the cost basis
- **Alternatively SDC revenue can be dedicated to debt repayment**
  - No deduction is made for outstanding principal
  - Updated financial policy

Existing System	
Water Capital Assets through 2017	$ 34,146,605
plus: Interest Accrued on Utility Funde	11,281,267
less: Contributed Assets	(8,078,655)
less: Net Debt Principal	(2,117,461)
TOTAL	**$ 35,231,756**
Total with Updated Policy	$ 37,349,217

Water SDC Alternatives

Approach	SDC per MCE
Existing SDC (Low Level)	$2,930
Existing SDC (Intermediate)	$3,370
Average Cost Method	$3,838
ACM - SDC-funded Debt Service	$4,017
Incremental Cost Method	$4,240
ICM - SDC-funded Debt Service	$4,418

Sewer System Development Charge

Average Cost Method SDC	
Existing System Costs	$ 40,677,022
Future System Costs	34,564,483
Total Allocable Costs	**$ 75,241,505**
Total ERU Capacity	15,604
TOTAL SDC PER ERU	**$ 4,822**
Existing SDC	$ 5,620

Incremental Cost Method SDC	
Existing System	$ 40,677,022
System Upgrade Cost	10,174,317
Total	$ 50,851,339
Total System Capacity	15,604
System Buy-In	**$ 3,259**
Future Expansion Costs	$ 24,390,167
Increased Capacity (ERUs)	8,860
Future System Buy-In	**$ 2,753**
TOTAL SDC PER ERU	**$ 6,011**
Existing SDC	$ 5,620

Sewer SDC Alternatives

Approach	SDC per ERU
Existing SDC	$5,620
Average Cost Method	$4,822
ACM - SDC-funded Debt Service	$5,956
Incremental Cost Method	$6,011
ICM - SDC-funded Debt Service	$7,145

Stormwater System Development Charge

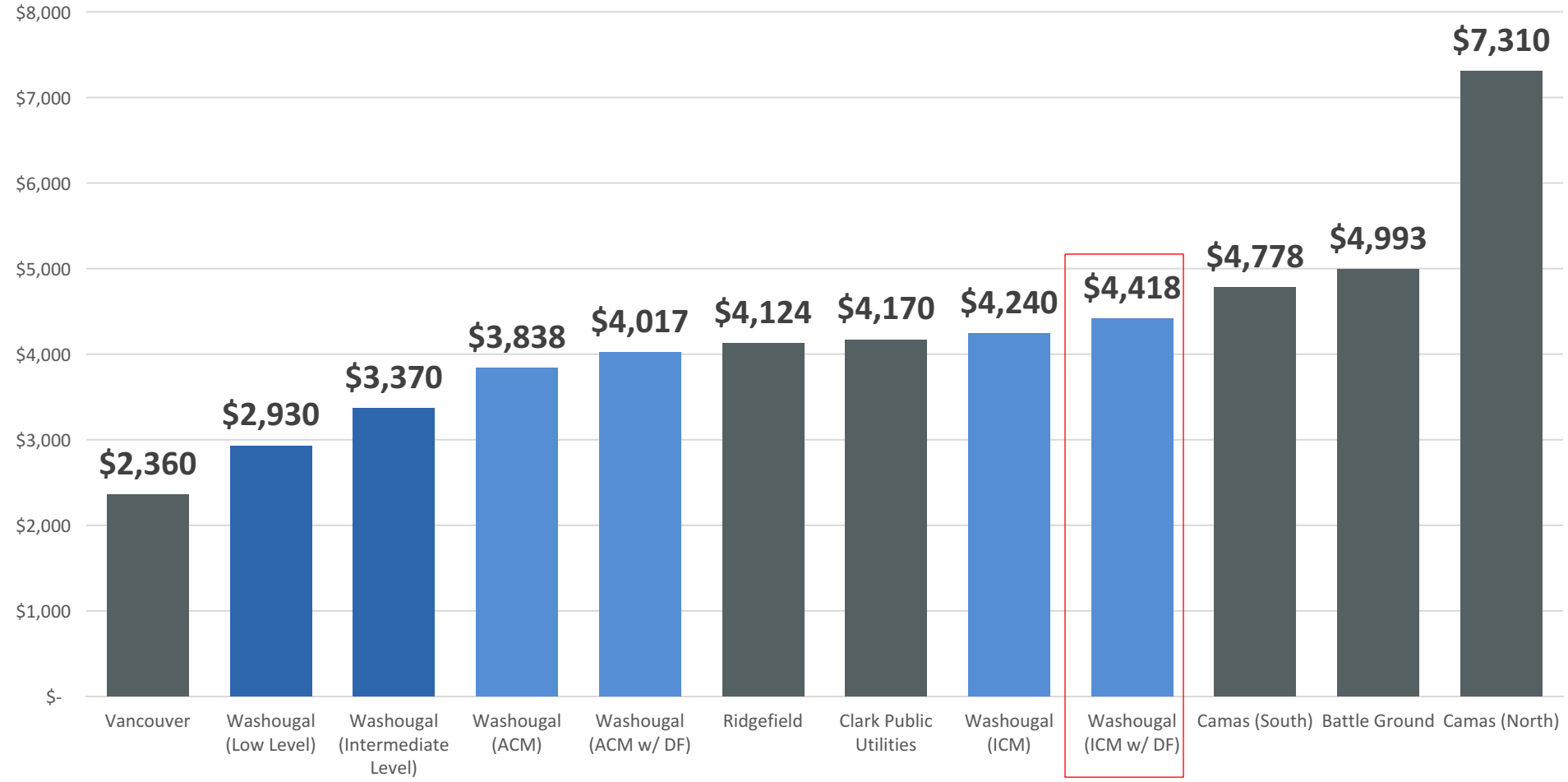
Average Cost Method SDC		
Existing System Costs	$	7,513,209
Future System Costs		597,856
Total Allocable Costs	**$**	**8,111,065**
Total ESU Capacity		17,310
TOTAL SDC PER ESU	**$**	**469**
Existing SDC	$	450

Incremental Cost Method SDC		
Existing System	$	7,513,209
System Upgrade Cost		424,523
Total	$	7,937,732
Total System Capacity		17,310
System Buy-In	**$**	**459**
Future Expansion Costs	$	173,333
Increased Capacity (ESUs)		9,037
Future System Buy-In	**$**	**19**
TOTAL SDC PER ESU	**$**	**478**
Existing SDC	$	450

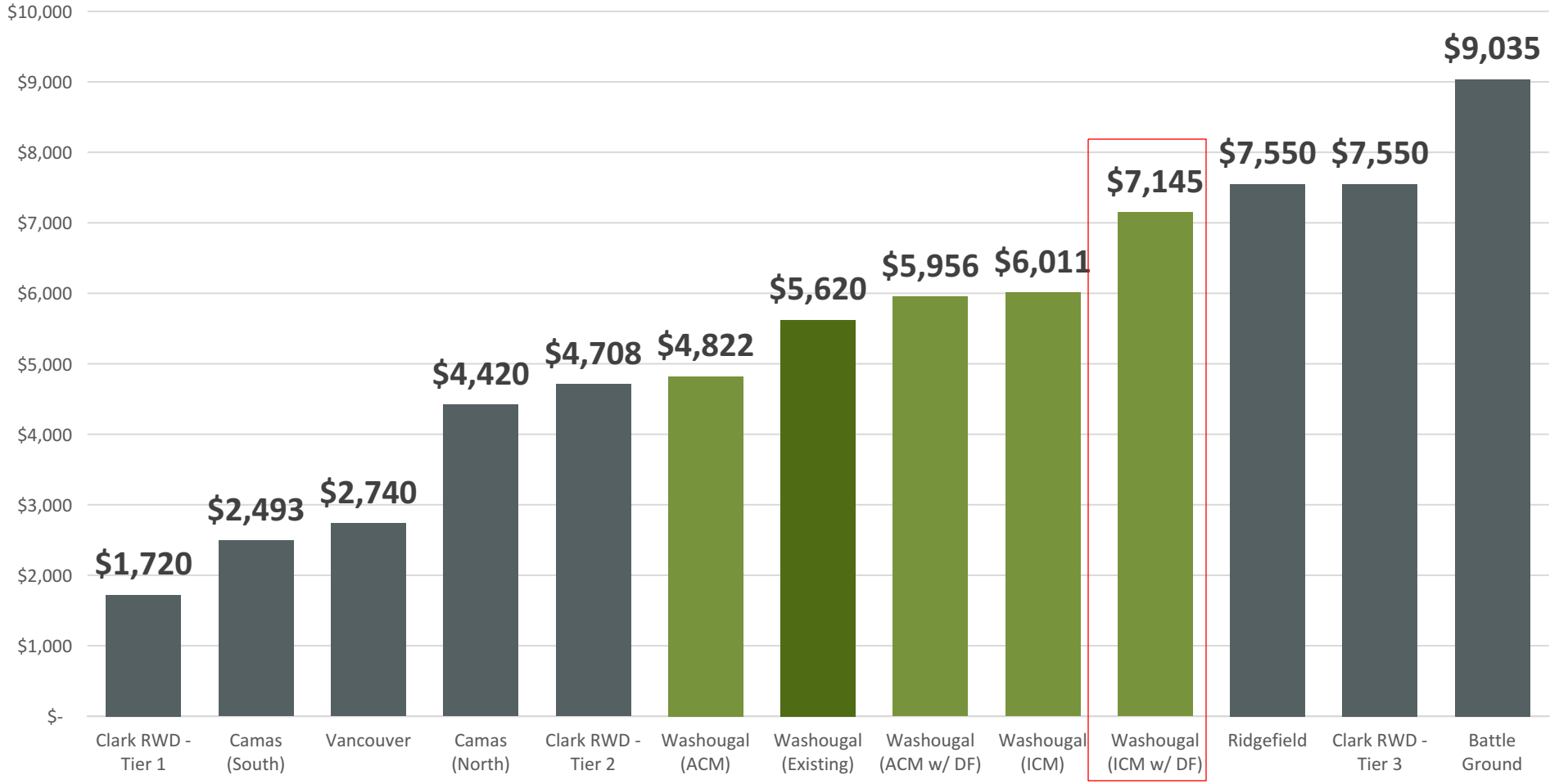
Stormwater SDC Alternatives

Approach	SDC per ESU
Existing SDC	$450
Average Cost Method	$469
Incremental Cost Method	$478

Water SDC Survey



Sewer SDC Survey

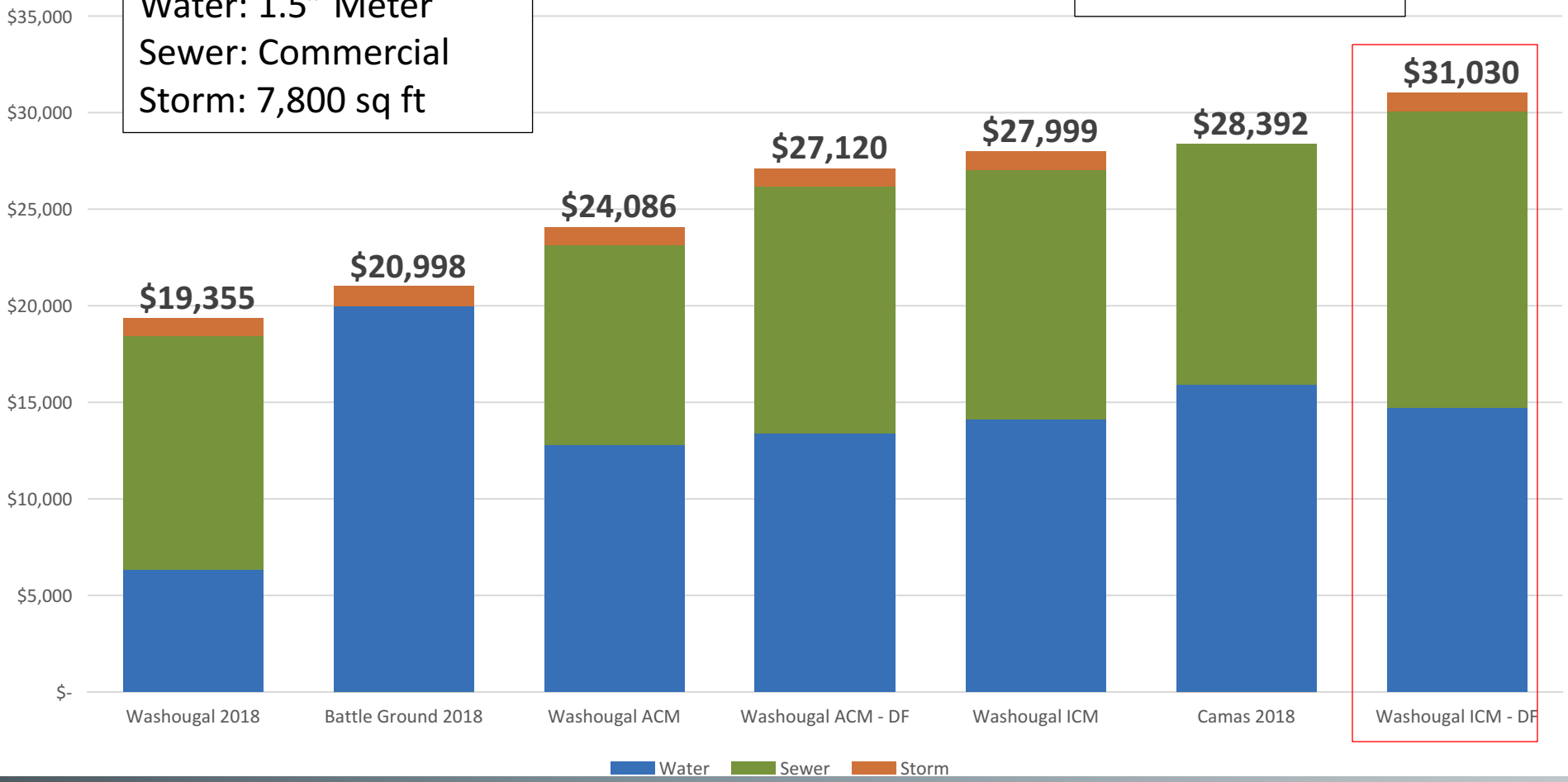


Stormwater SDC Survey

Small Commercial SDC Comparison

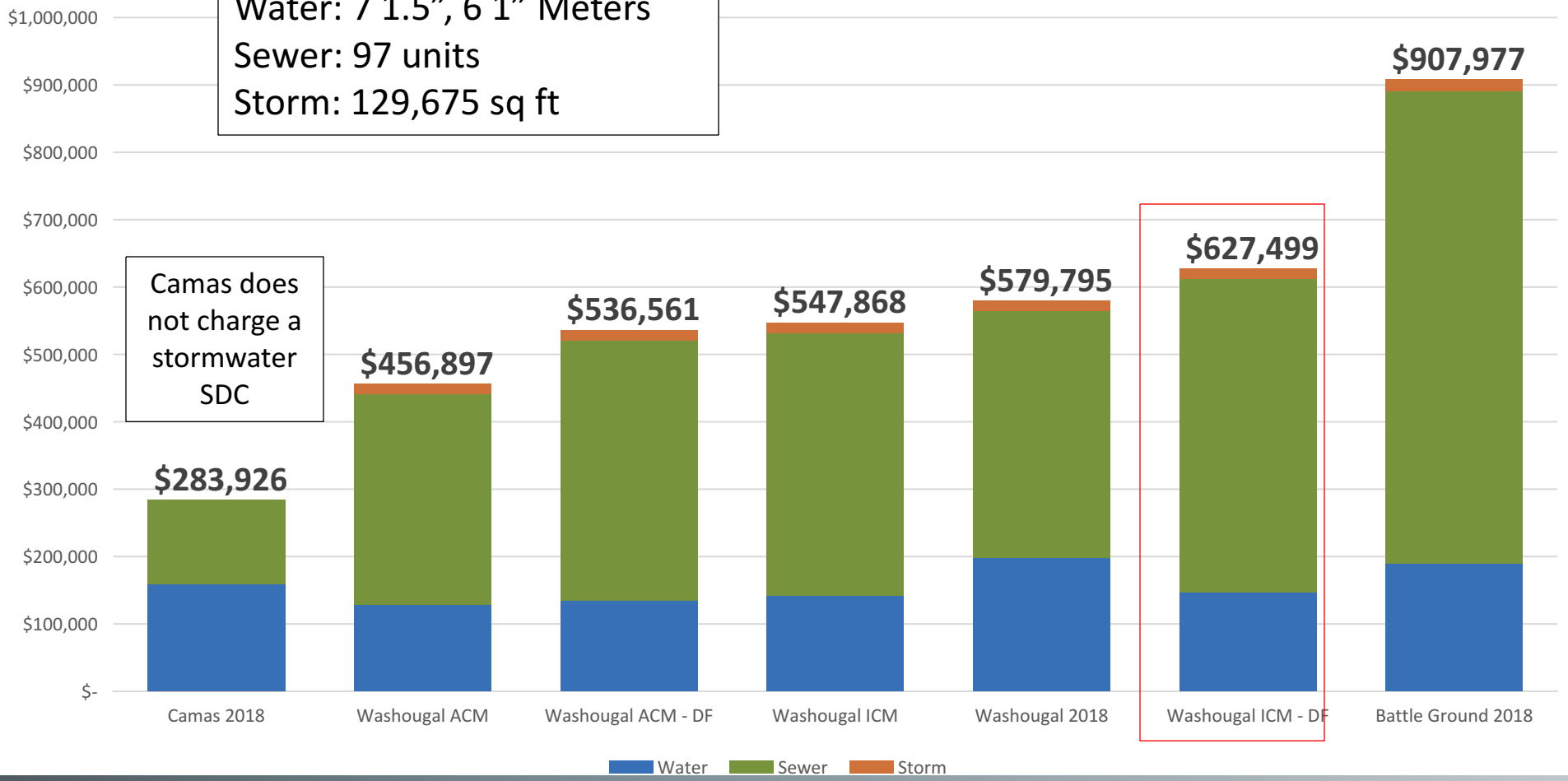
Small Commercial
Water: 1.5” Meter
Sewer: Commercial
Storm: 7,800 sq ft

Camas does not charge a stormwater SDC

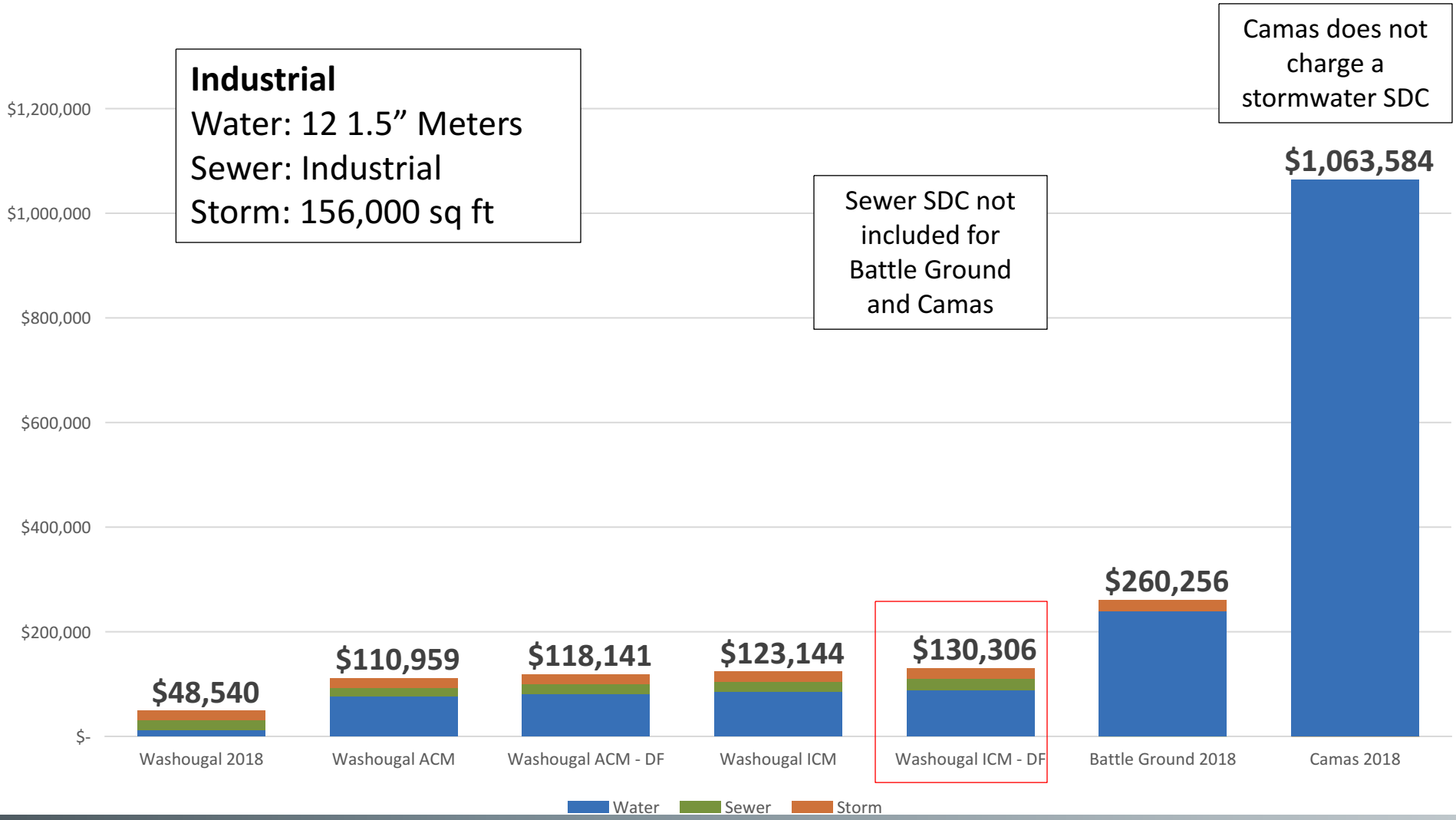


Apartment SDC Comparison

Apartment
Water: 7 1.5”, 6 1” Meters
Sewer: 97 units
Storm: 129,675 sq ft



Industrial SDC Comparison

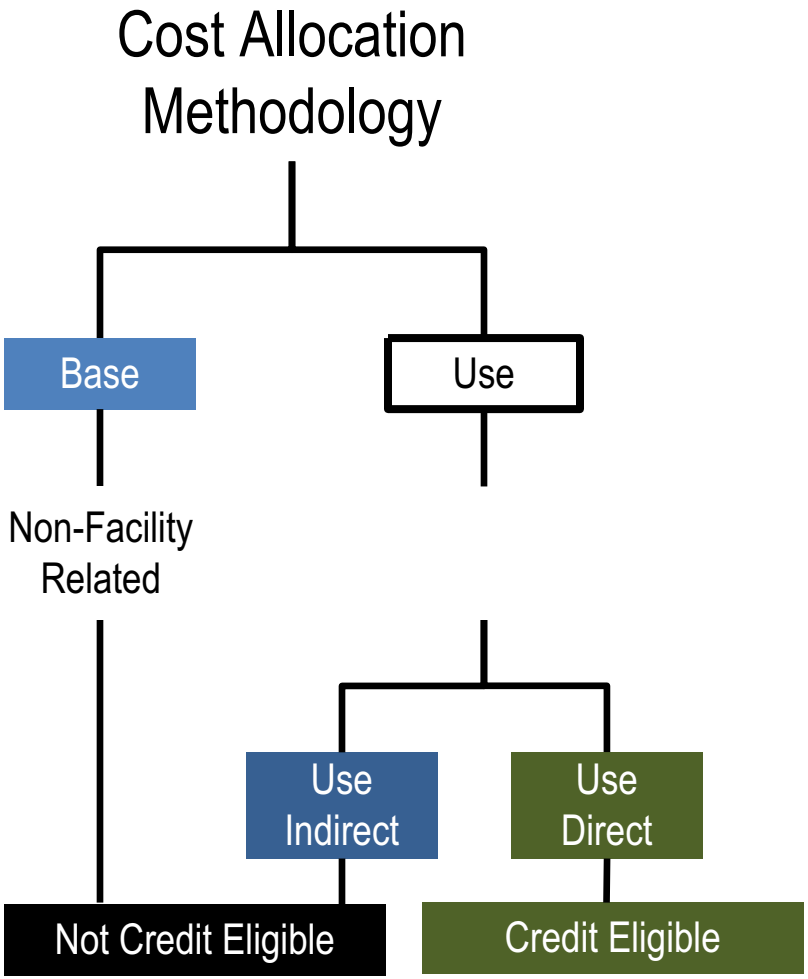


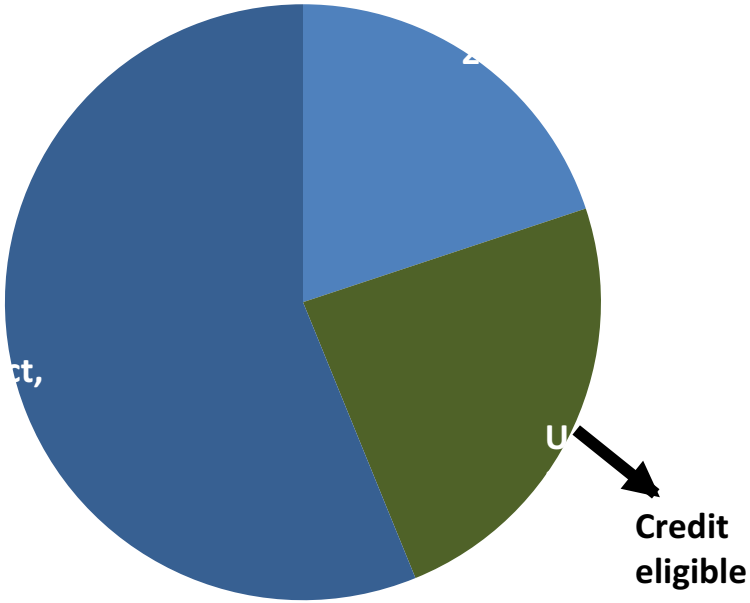
Stormwater Credit Review (II.a)

Stormwater Rate Credit Policy

- **Washougal's existing available rate credit value of 75% is provided to the following customer groups**
  - Any property with qualifying onsite mitigation facilities
  - Individual NPDES permit-holders
- **Rate equity / rate credits are emerging as a concern as program costs and resulting rates go up to meet regulatory pressures**
- **Key features of a sustainable rate credit policy**
  - Should be cost-based and acknowledge that most stormwater program costs are fixed and unaffected by those who mitigate their impacts *(cost)*
  - Should acknowledge that even those who fully mitigate their own impacts are served / protected by the public system *(benefit)*
- **The "cost of service" analysis evaluates savings to the utility from on-site mitigation to determine the cost-based maximum credit level**

Functional Cost Allocation





Non-Credit Eligible Cost Categories

Base
Billing
Public Outreach
Administrative Overhead

Use Indirect
Regulatory Compliance (City-wide NPDES Permit)
Engineering, Data collection and monitoring, Code and policy development
Grant Administration
Street Sweeping
240.5 acres of city-owned roadway, 112 cubic yards of debris removed in 2017

Credit Eligible Cost Categories

Use Direct (portion allocable to onsite mitigation)
Vegetation Maintenance
14.7 acres of city-owned facilities
Cleaning and Maintenance of Catch Basins
1,365 total with 859 cleaned in 2019, 187.5 cubic yards of debris removed in 2017
Maintenance of Other System Components
Cleaning and Maintenance of Dry-wells

Stormwater Credit Comparisons

Community	Credit Policy
Battle Ground	0% rate credit
Camas	O&M credit minus street sweeping with NPDES may be granted with Public Works Director consent
Duvall	25% credit for onsite mitigation. Additional discount for onsite discharge system up to 50%
Mount Vernon	30% rate credit
Sumner	25% private outfall, 50% NPDES permit, 40% Storm Maintenance Agreement, 50% LID

Updated Phased Credit Alternative: 50% 2023

- **Updated 5 Year Phase-in**
  - Half of credit reduction by 2023 (50%)
- **Includes 2019-2021 4.5% rate increases, 3% in 2022-2023**

Bimonthly Rate	2018	2019	2020	2021	2022	2023
Residential						
Single Family Residential	$ 31.48	$ 32.56	$ 33.66	$ 34.82	$ 35.50	$ 36.20
Senior ELIL30	15.74	16.28	16.83	17.41	17.75	18.10
Senior ELIL50	23.61	24.42	25.25	26.11	26.62	27.15
Commercial						
Commercial	$ 31.48	$ 32.56	$ 33.66	$ 34.82	$ 35.50	$ 36.20
Credit Recipients	7.88	9.77	11.78	13.93	15.97	18.10
Credit Percent	75%	70%	65%	60%	55%	50%

Rate Impacts Based on Credit Alternative

	2018 Existing	2019 ATB	2019 Updated Credit	2019 Phased Credit Alternative	2023 Phased Credit Alternative
ESU Rate	$ 31.48	$ 32.90	$ 29.62	$ 32.56	$ 36.20
Credit %	75%	75%	25%	70%	50%
Credit Recipient Rate per ESU	$ 7.88	$ 8.22	$ 22.22	$ 9.77	$ 18.10

Utility Benchmarking

Benchmarking

Source: 2017 AWWA Utility Benchmarking
1. All respondents (nationwide)
2. West Region
3. Communities <50k population (Washougal 16k)

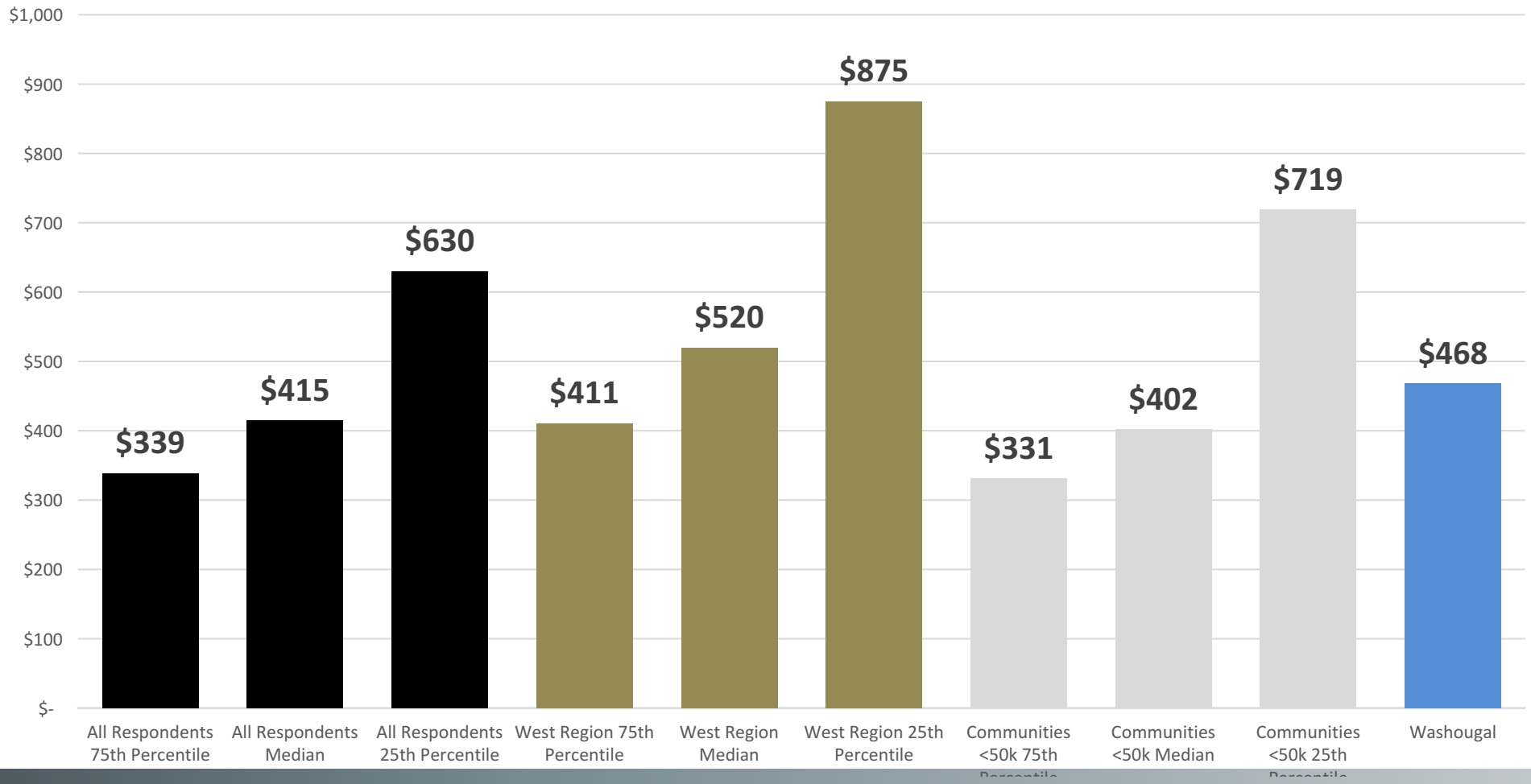
- **Definitions**
  - O&M per Account
    - Operations and Maintenance Expense / Accounts Served

    "How does operating efficiency compare?"
  - Debt Ratio
    - Total Liabilities / Total Assets

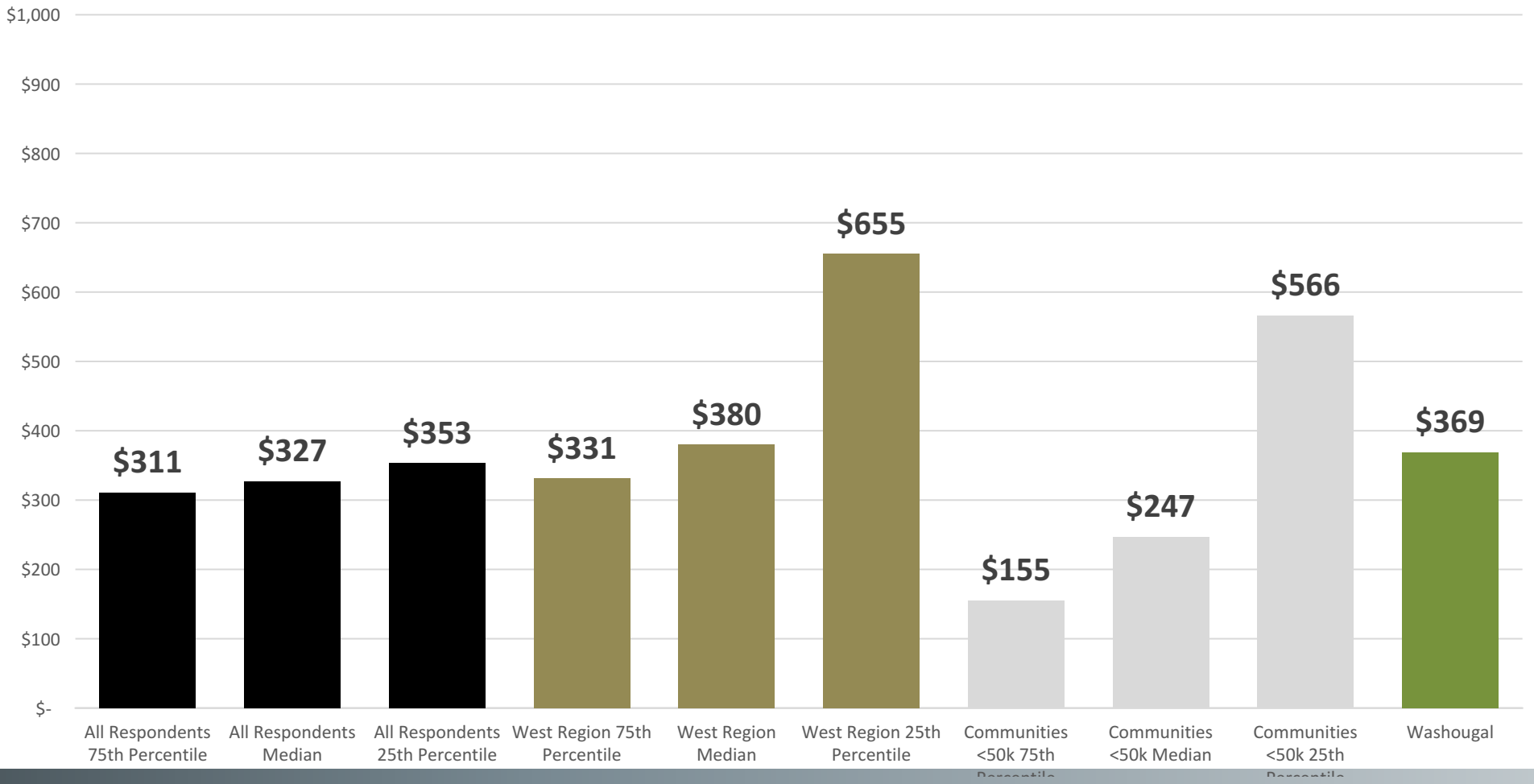
    "How leveraged are we?"
  - Return on Assets
    - Net Income / Total Assets

    "Is utility income sufficient related to investment in infrastructure assets?"

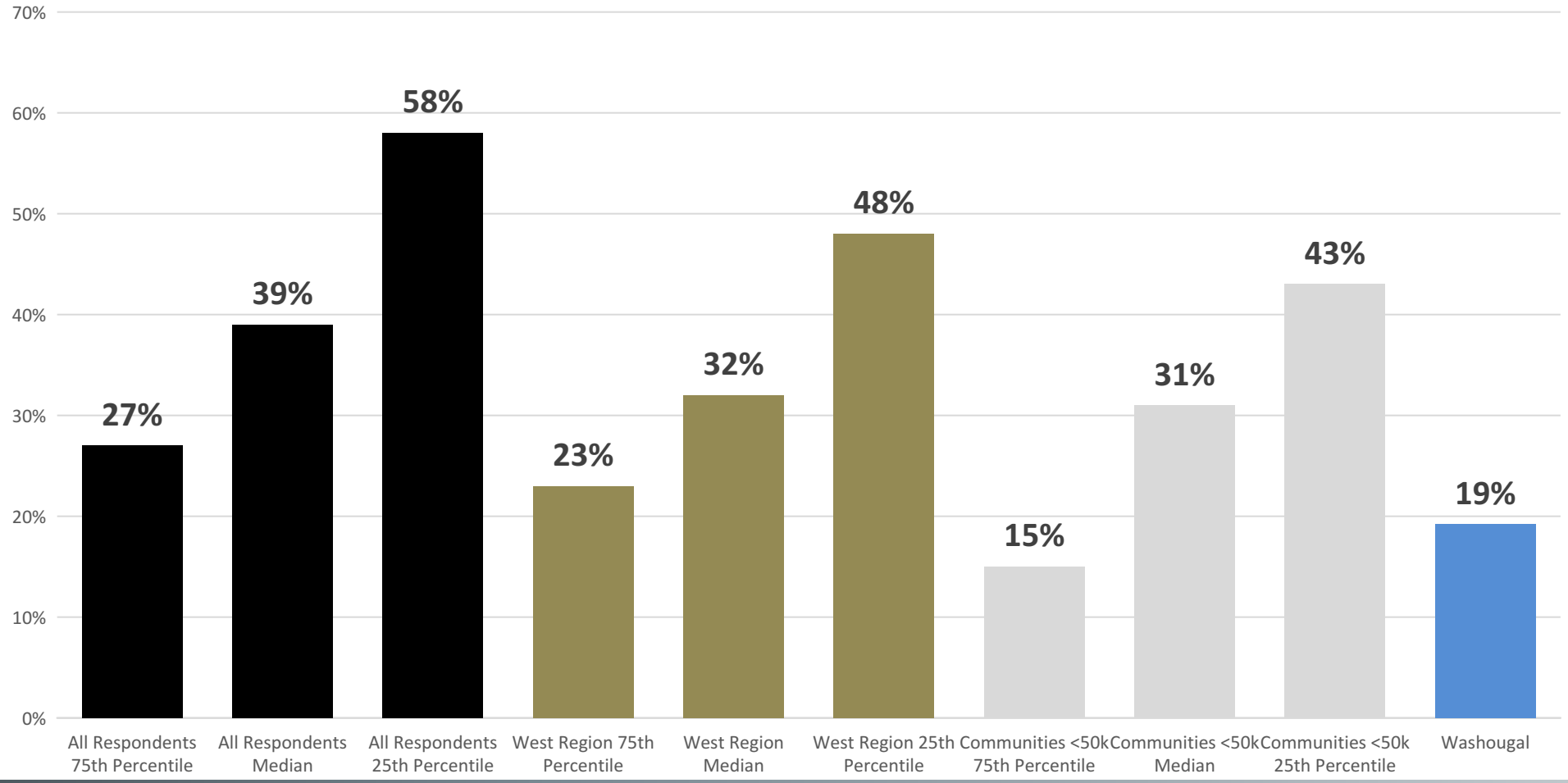
Water $ O&M per Account



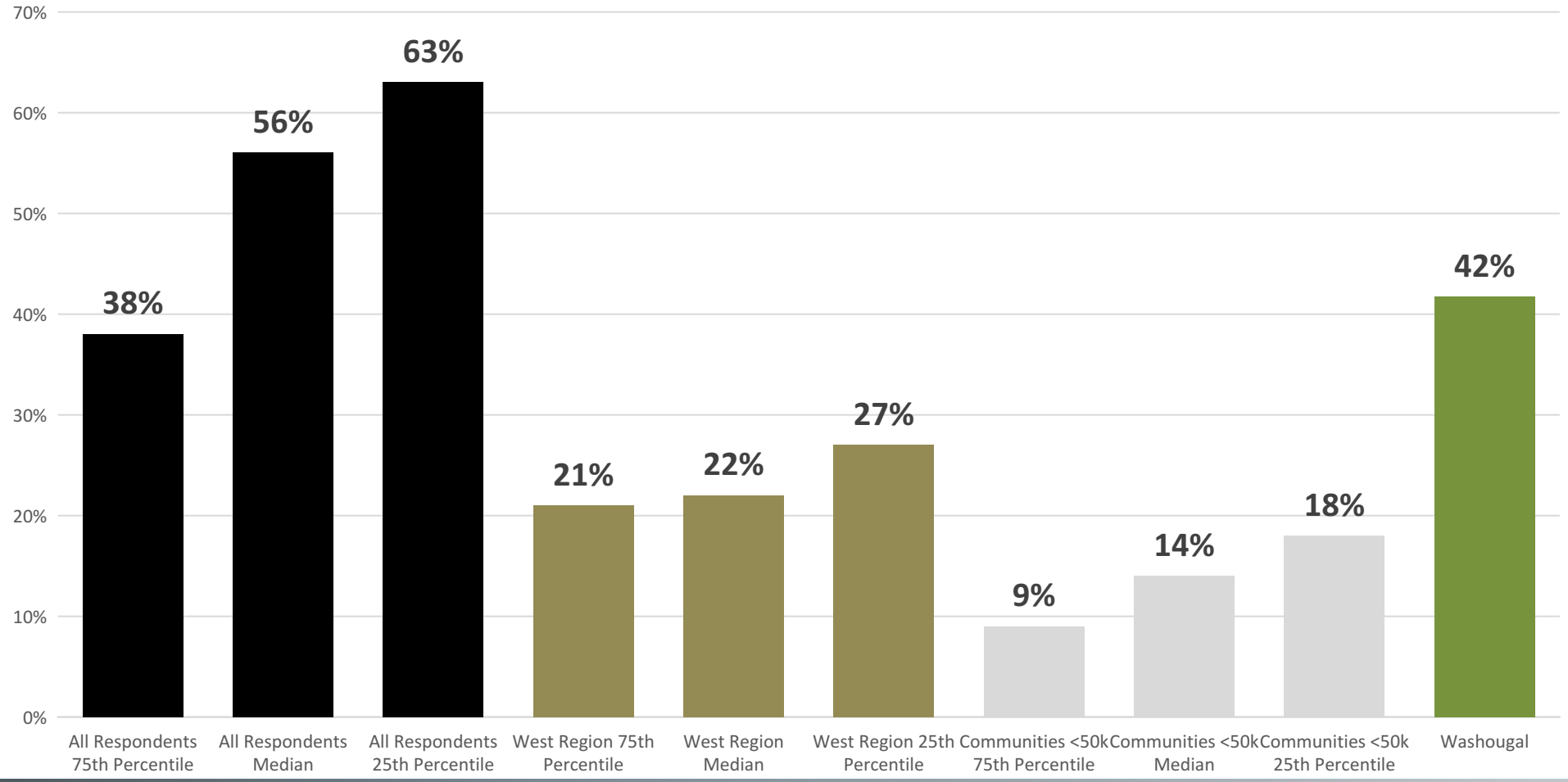
Sewer $ O&M per Account



Water Debt Ratio

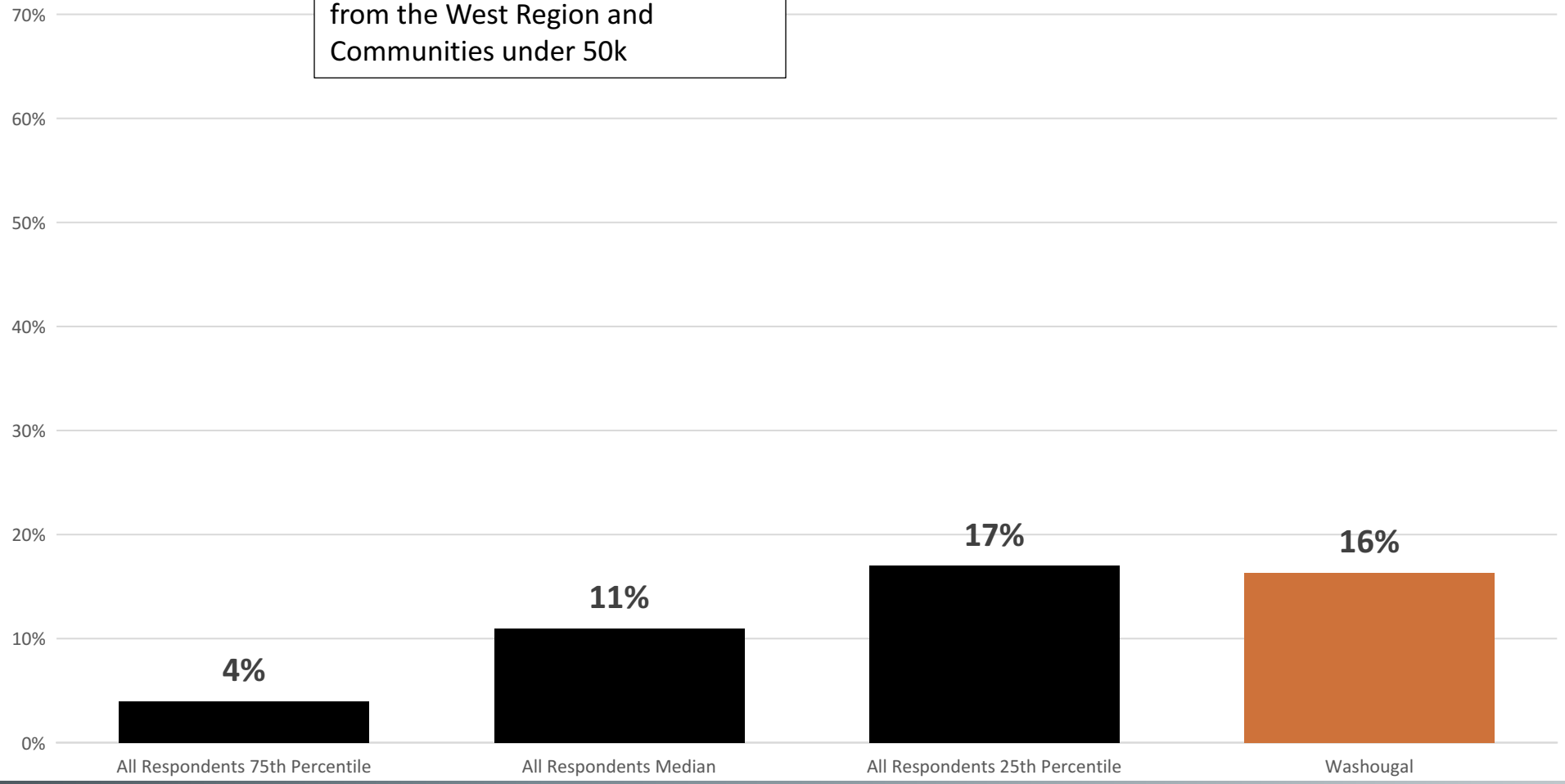


Sewer Debt Ratio



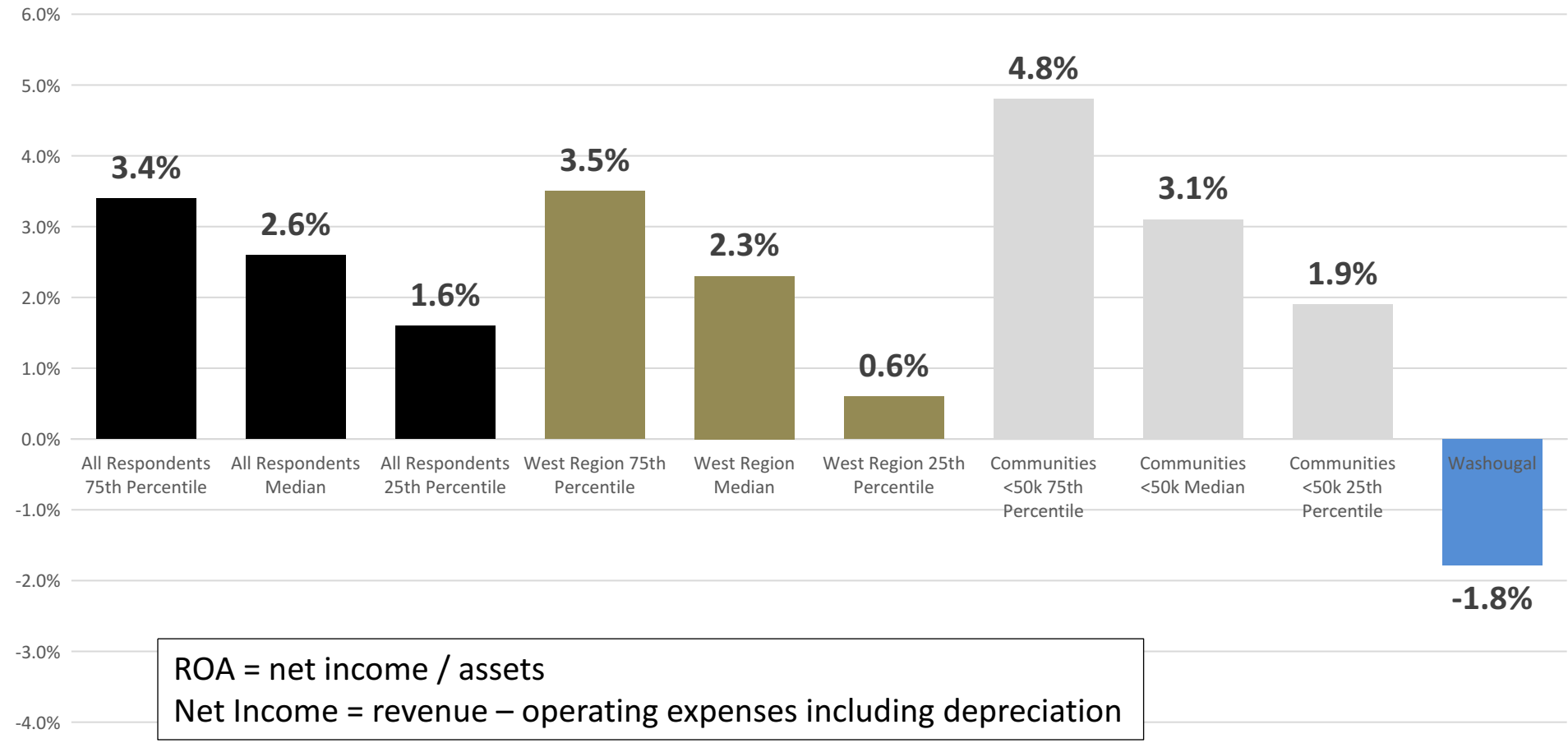
Stormwater Debt Ratio

Insufficient qualifying respondents from the West Region and Communities under 50k



Water Return on Assets

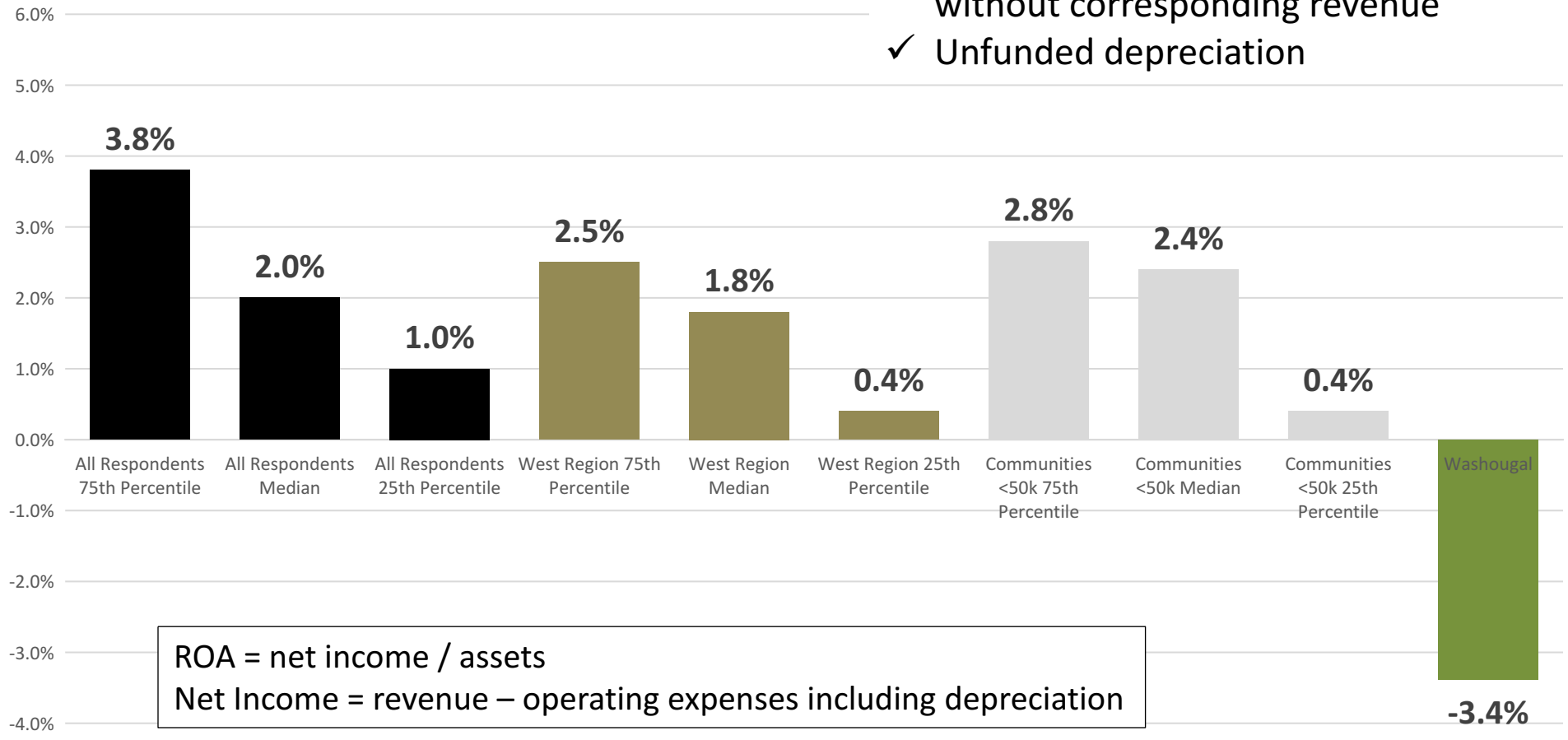
✓ Unfunded depreciation



ROA = net income / assets
Net Income = revenue – operating expenses including depreciation

Sewer Return on Assets

- ✓ Recent plant expansion- asset capacity without corresponding revenue
- ✓ Unfunded depreciation

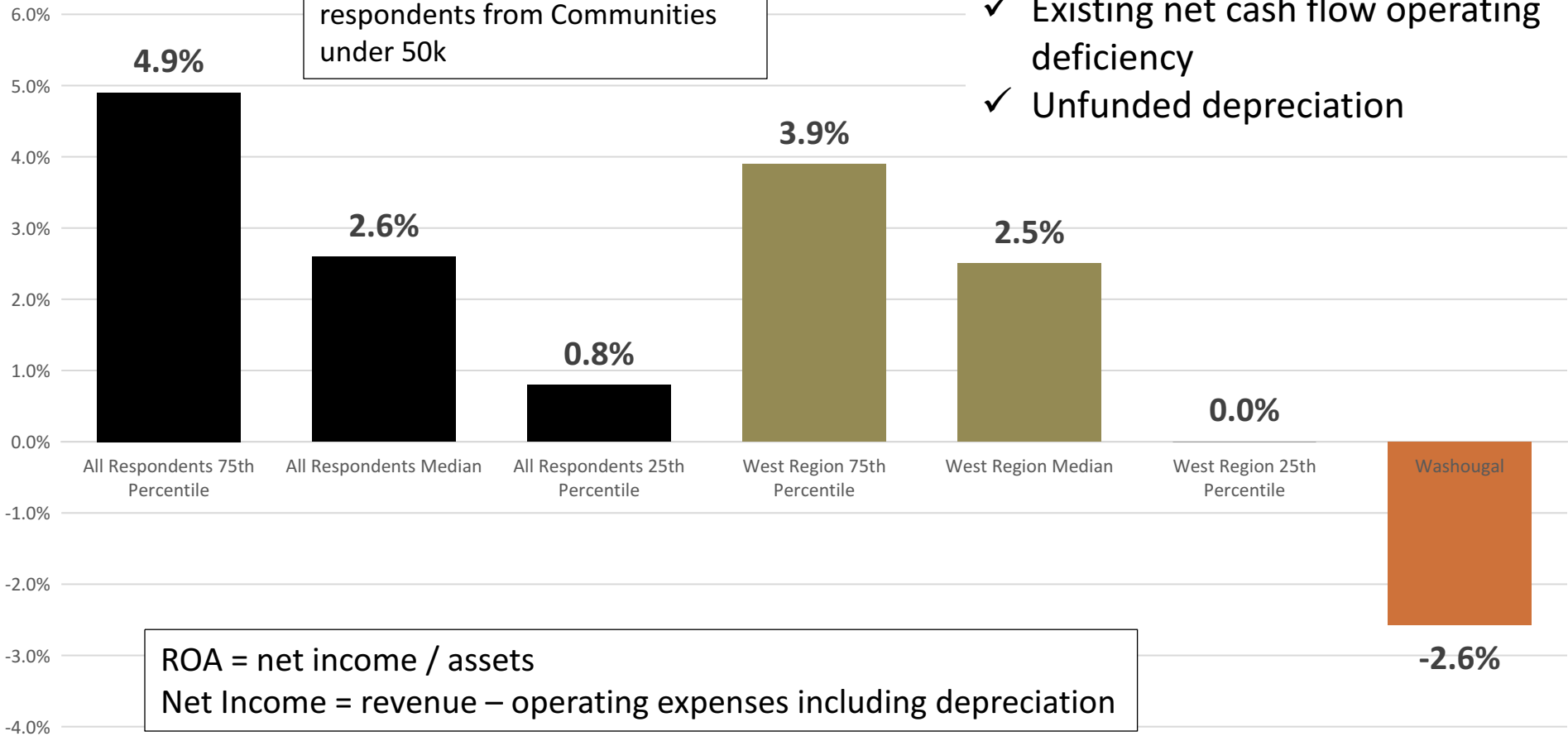


ROA = net income / assets
Net Income = revenue – operating expenses including depreciation

Stormwater Return on Assets

Insufficient qualifying respondents from Communities under 50k

- ✓ Existing net cash flow operating deficiency
- ✓ Unfunded depreciation



ROA = net income / assets
Net Income = revenue – operating expenses including depreciation

Next Steps

Next Steps

- **Direction**
  - Rate Design
    1. Comprehensive rate structure revisions
    2. Partial rate design implementation (SFR usage allowance no change)
    3. Across the board rate increases
  - SDCs
    4. Average vs Incremental Approach
    5. SDC debt-funding policy
  - Stormwater Rate Credit
- **Nov. 5th Worksession:** Review draft implementing ordinances
- **Nov. 19th Council meeting:** Potential Council action on implementing ordinances

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SDC Definitions

- **Existing Cost Basis:** Original cost of utility plant-in-service (based on City asset records), excluding developer donations and grant-funded facilities
- **Future Cost Basis:** CIP costs in current dollars, excluding costs to repair or replace an existing system asset
- **System Capacity:** The number of customers that can be served by the system
- **MCE:** Meter Capacity Equivalent – the unit basis for measuring water capacity commitment
- **ERU:** Equivalent Residential Unit – the unit basis for measuring sewer capacity commitment. Equal to one residential user
- **ESU:** Equivalent Service Unit – the unit basis for measuring stormwater capacity commitment. Equal to 3,900 square feet impervious area