Tacoma Water Budget and Rate Recommendations



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Tacoma Water Rate Recommendations

Agenda

- 1 Introduction
- **2** Revenue Requirement and Budget
- 3 Cost of Service
- 4 Rate Design
- 5 Appendix

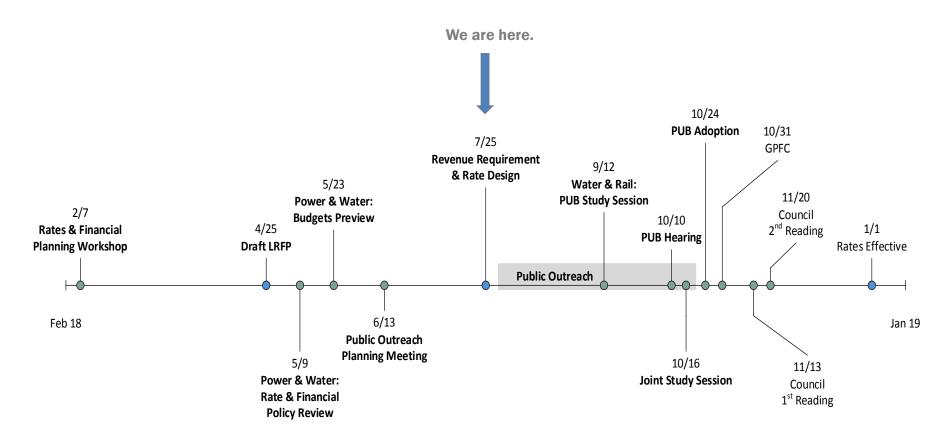


Introduction



Introduction

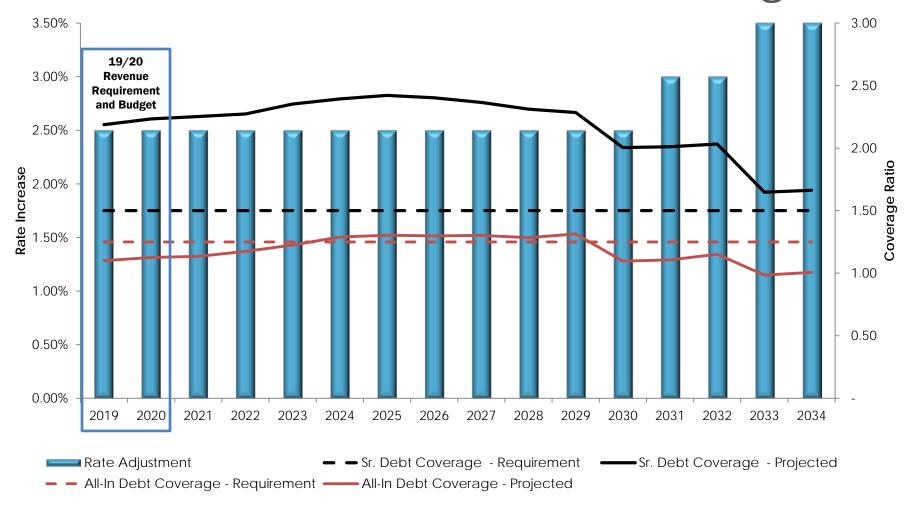
Budget and Rate Timeline





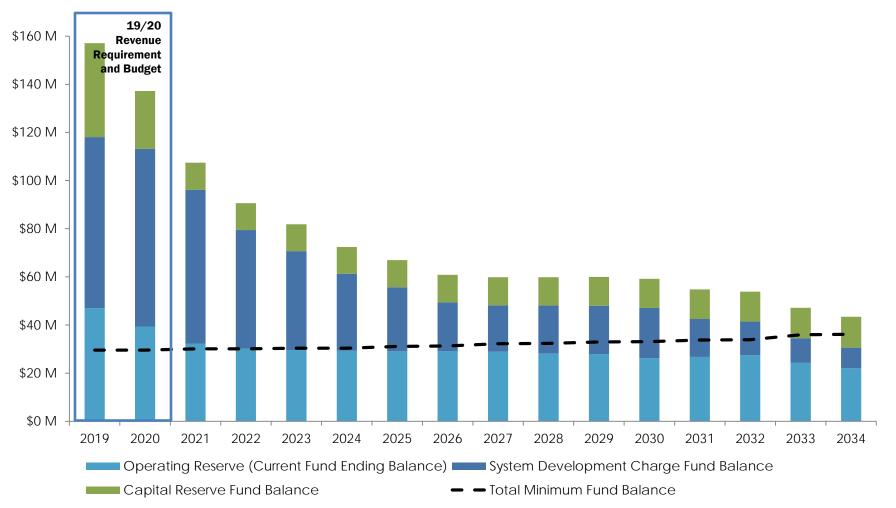


Rate Increases and Debt Service Coverage





Total Fund Balance





Revenue Requirement Analysis





- Apply budget development decision making tools
- Conduct historical cost review
- Include inflation factors
- Consider strategic initiatives and additional needs or enhancements
- Plan for increasing costs
- Incorporate forecasted assessments and labor assumptions



Capital Expense Forecast

- Capital Budget and 10-year CIP developed with business case evaluations
- Funding assumptions apply existing bond fund sources first, then reasonable spend down of capital and operating reserves, then anticipated additional debt funding in 2023/24



Non-Rate Revenue Forecast

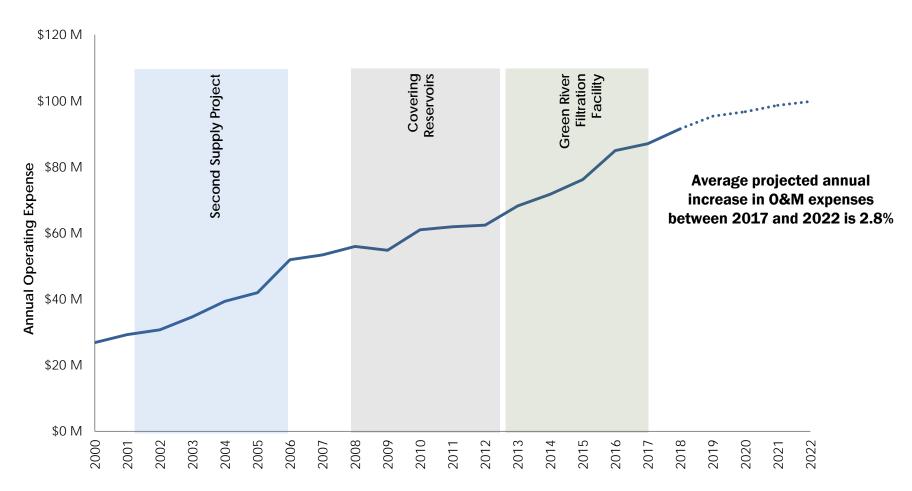
- Miscellaneous fee and charge revenues projected based on recent historical trends and known future changes
- Used to reduce rate revenue requirement

Rate Revenue Requirement Forecast

- Projection of revenue under existing rates using 10-year demand forecast
- Any revenue requirement deficiencies must be addressed by rate adjustments



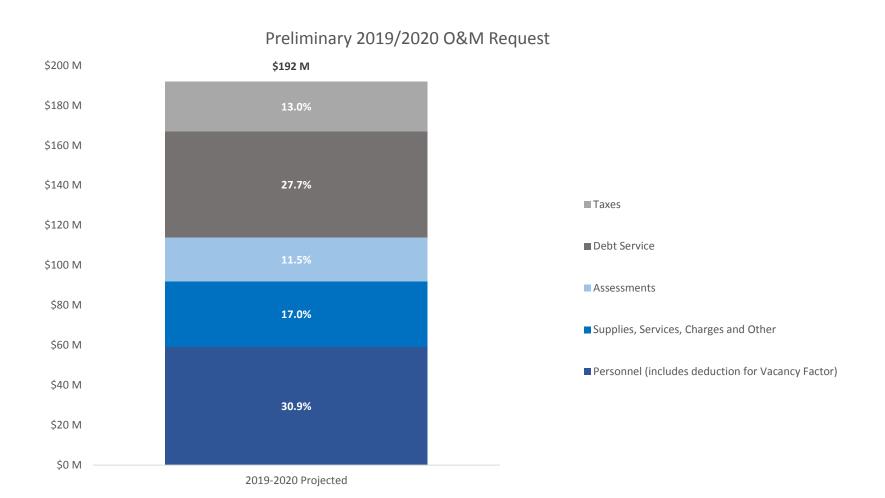
O&M Budget Overview



In response to 5/23 Board Study Session question from Board Member Larkin (ACTION ITEM 21).

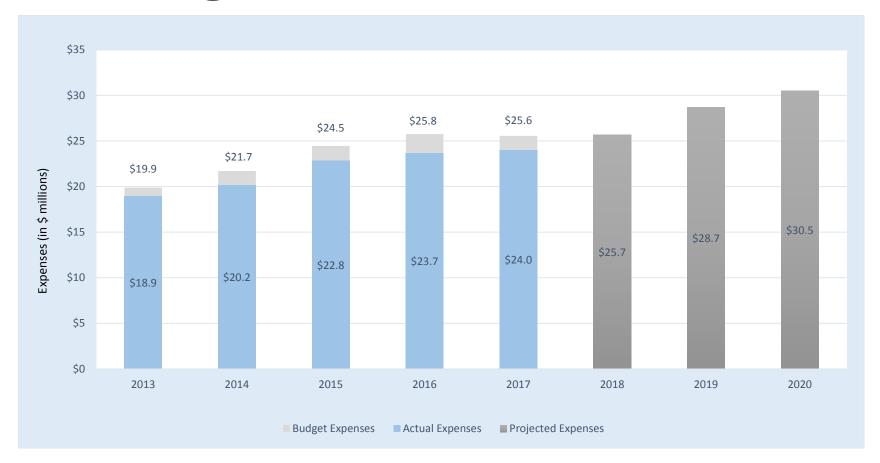


2019/20 Preliminary 0&M Budget





O&M Budget Overview: Personnel

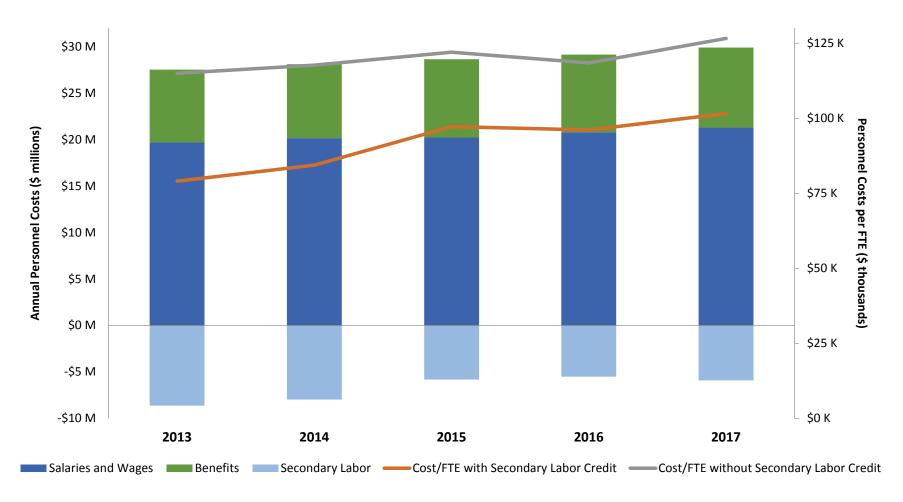


Average annual increase in total personnel expense between 2016-2020 is 6.0%. Includes Vacancy Factor deduction for 2017-2020.

In response to 4/25 Board Study Session question from Board Member Larkin (ACTION ITEM 16).



O&M Budget Overview: Personnel



Average annual increase in salaries and benefits per FTE is 2.5%



O&M Budget Overview: Personnel

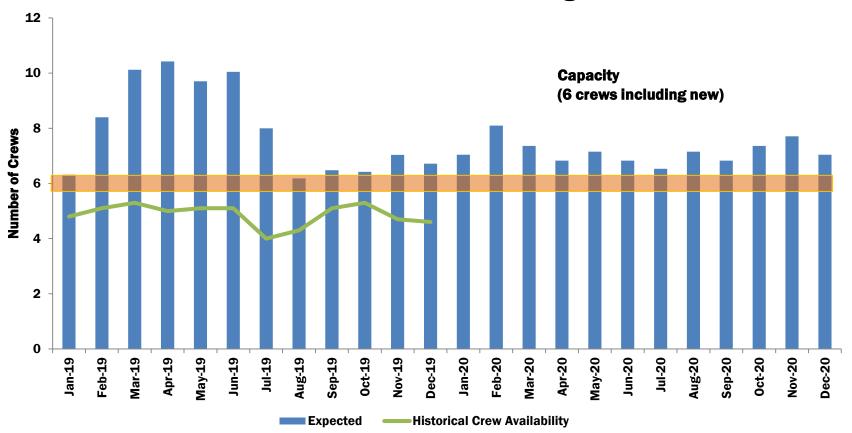
Permanent Capabilities	FTE	Project Positions	FTE
Operational Support		Operational Innovation	
Water Utility Workers*	2	Advanced Metering Infrastructure (AMI)	
Heavy Equipment Operator	1	Water Service Worker	2
Senior Warehouse Technician	1	Water Utility Worker	2
Regulatory Compliance (Lead Locator)	1	Water Meter Repair Worker	1
Managing Assets (Planner)	1		
Employee Engagement (Workforce Development)	1		
Operational Optimization			
Knowledge Manager	1		
Safety Manager	1		
Project Manager	1		
Total Permanent	10	Total Project	5
Total Permanent Strategic FTEs	5		
Total Permanent Operational FTEs	5		
Total Project FTEs	5	Vacancy Factor (4% + *2 Water Utility Workers)	(13)
Total New FTEs	15	Total New FTE's Less Vacancy Factor	2

The overall Personnel Expense increase is \$4.8M or 8.6% over the 2017/18 budget and includes a deduction of \$3.4M for the vacancy factor.



O&M Budget Overview: Personnel

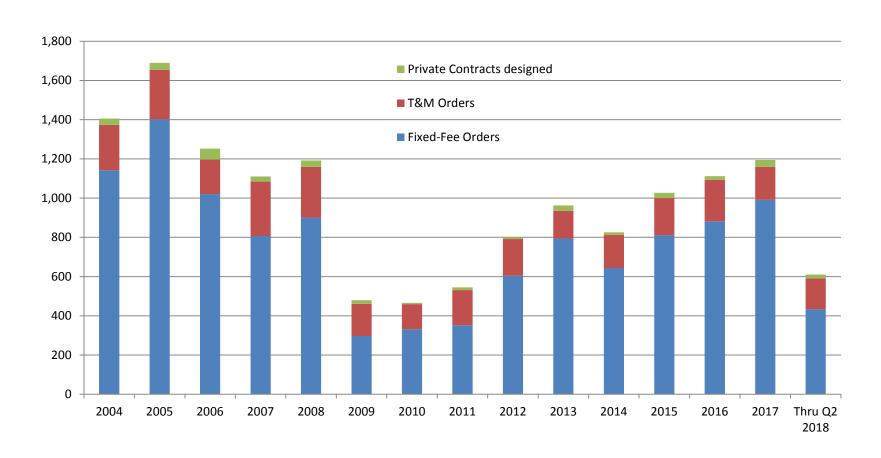
Service Crews Resource Histogram





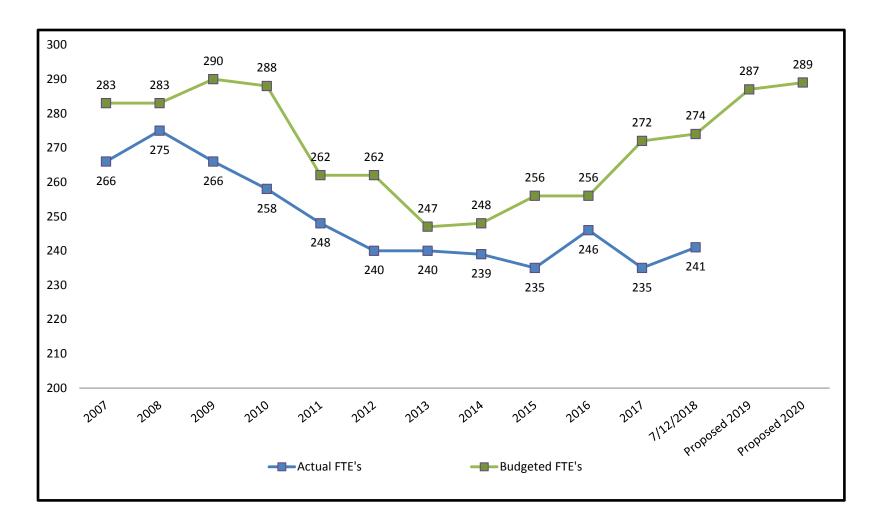
O&M Budget Overview: Personnel

Developer Funded Work, including T&M's and Private Contracts



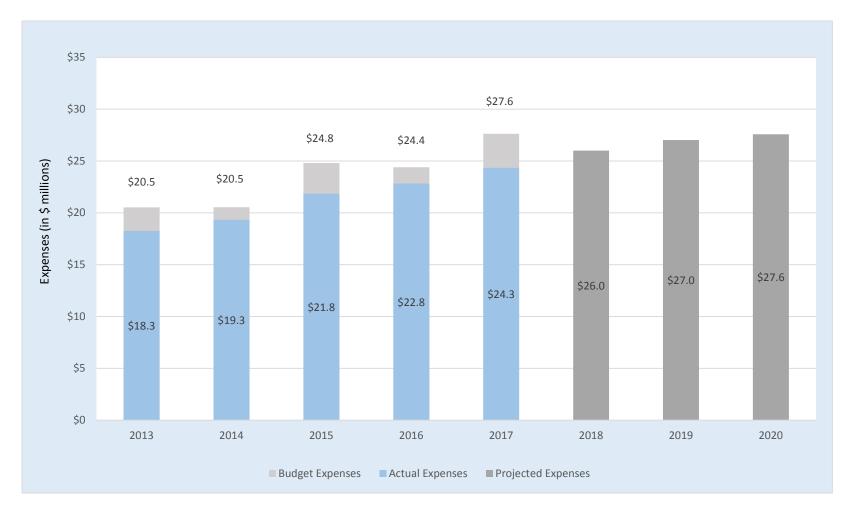


O&M Budget Overview: Personnel





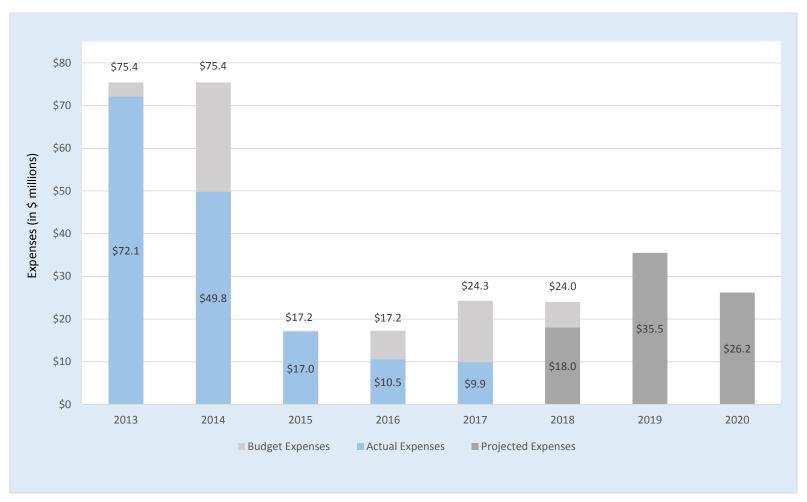
O&M Budget Overview: Supplies, Services and Charges



Average annual increase in Supplies, Services and Other Charges between 2016-2020 is 4.8%.



Capital Budget Overview

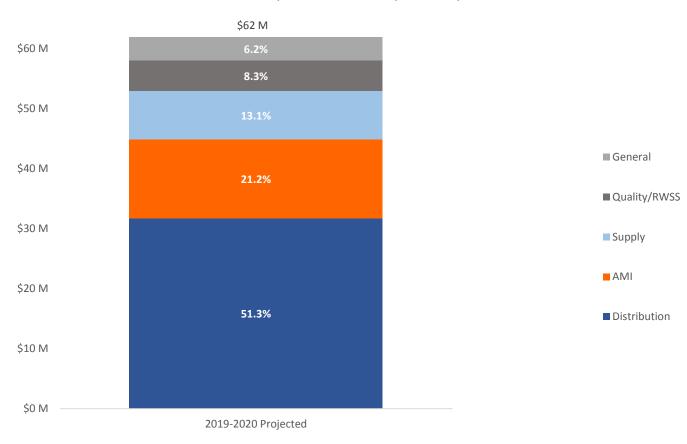


Average annual increase in budgeted Capital between 2016-2020 is 13%.



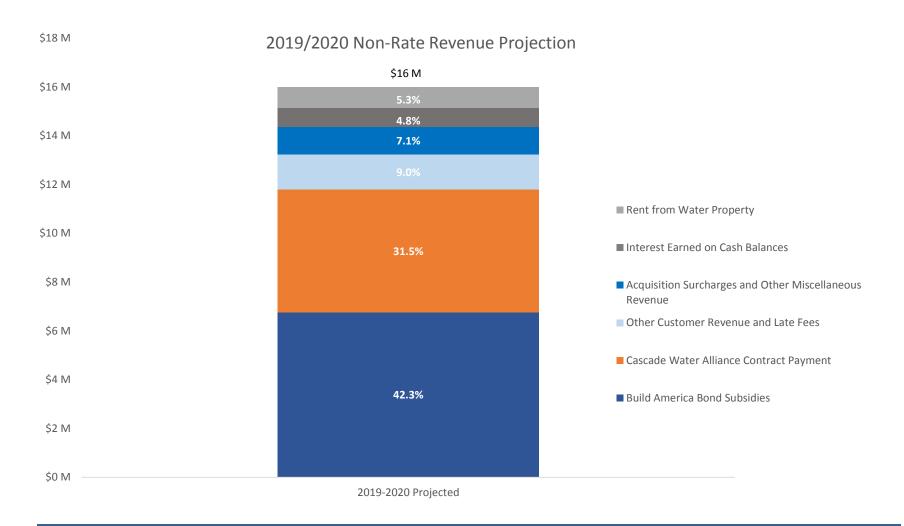
2019/20 Preliminary Capital Budget

Preliminary 2019/2020 Capital Request



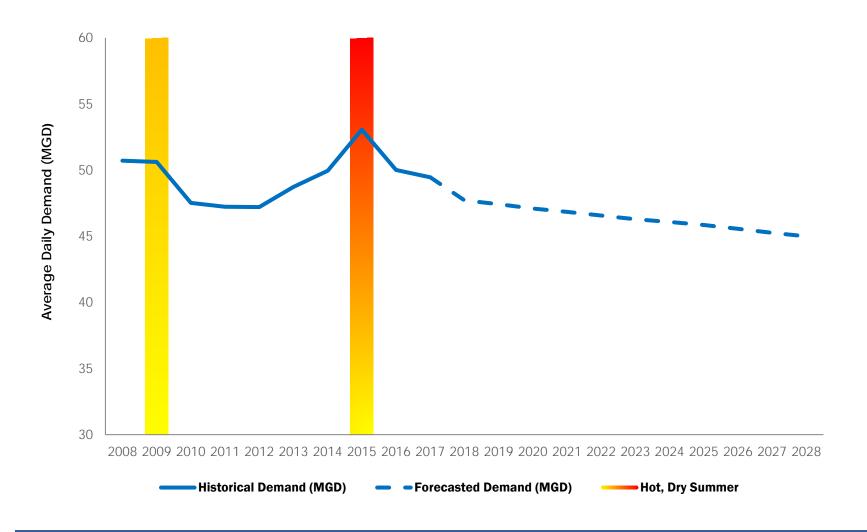


Revenue Overview: Non-Rate Revenue





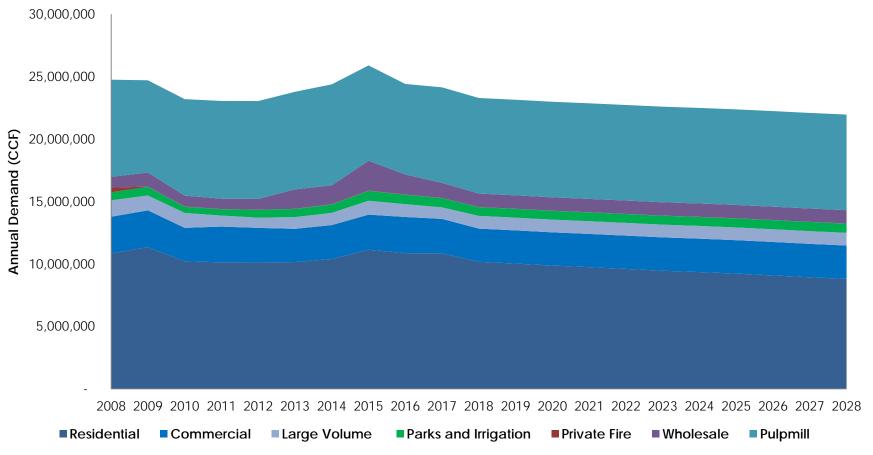
Rate Revenue Forecast





Rate Revenue Forecast: Demand

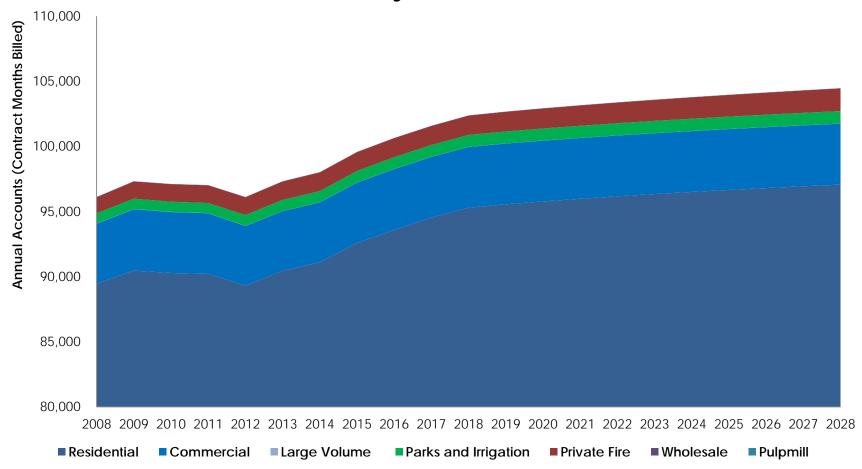






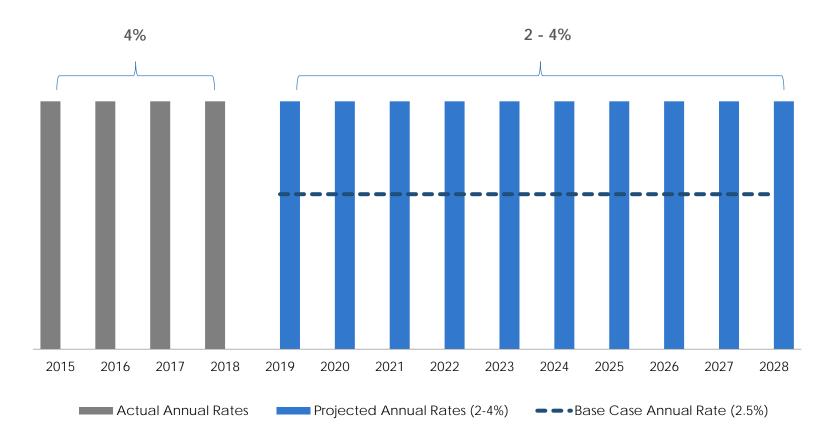
Rate Revenue Forecast: Accounts

Accounts by Customer Class





Forecast of Projected Rate Increases



This forecast is subject to change, and is dependent upon actual financial performance in future years.





Cost of Service Analysis

Tacoma Public Utilities is a Cost-of-Service Organization

- Rates set based on cost to serve customers.
- Customer Classes are groups of customers with similar usage characteristics that influence cost, such as infrastructure requirements and consumption patterns
- A cost-of-service analysis (COSA) determines the cost of serving each Customer Class:
 - Standard utility practice
 - Conducted every budget cycle
 - Reviewed by third-party consultant

The COSA calculates the total revenue that should be collected from each rate class.



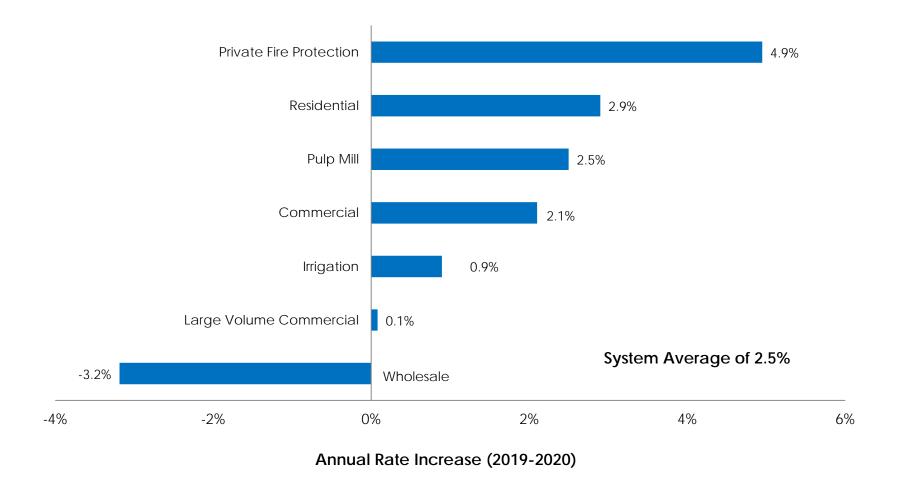
Customer Class Overall Revenue Requirement

Customer Class		2019-2020 Revenues @				Additional	
Customer Crass		Current Rates	F	Proposed Rates	Re	evenue Required	
Residential	\$	111,273,911	\$	116,141,841	\$	4,867,930	
Irrigation		6,449,180		6,536,106		86,926	
Commercial		21,772,140		22,470,052		697,912	
Large Volume Commercial		4,278,790		4,284,057		5,267	
Wholesale		5,674,463		5,406,285		(268,177)	
Private Fire Protection		5,617,189		6,042,306		425,117	
Pulp Mill		13,305,109		13,808,208		503,099	
System	\$	168,370,781	\$	174,688,855	\$	6,318,075	





Proposed Rate Increases by Customer Class





Principles of Rate Design



Legal

- Fair
- Just
- Reasonable
- Non-Discriminatory



Industry-Standard

- Revenue Stability
- Cost Causation
- Economic Efficiency
- Equity
- Bill Stability



TPU Principles

- Affordability
- Environment
- Public Involvement



Rate Recommendation (Scenario 1)

Scenario 1 applies a 0% increase to the fixed rate for each class (except for Irrigation and the Pulp Mill), while incorporating fire protection fees.

Customer Class	Overall	Ready to Serve Charge (Fixed)	Rate per CCF (Variable)
Residential	2.9%	0.2%	6.3%
Irrigation	0.9%	-25.0%	7.1%
Commercial	2.1%	0.1%	3.8%
Large Volume Commercial	0.1%	0.0%	0.1%
Wholesale	-3.2%	0.0%	-3.5%
Private Fire Protection	4.9%	4.8%	0.0%
Pulp Mill	2.5%	2.5%	2.5%



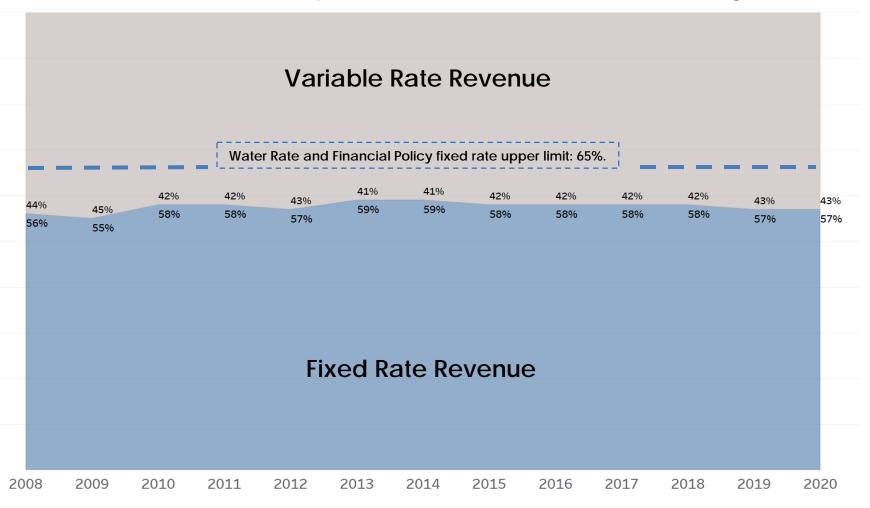
Rate Recommendation (Scenario 2)

Scenario 2 applies a 2.5% increase to the fixed rate for each class (except for Irrigation), while incorporating fire protection fees.

Customer Class	Overall	Ready to Serve Charge (Fixed)	Rate per CCF (Variable)
Residential	2.9%	2.9%	2.8%
Irrigation	0.9%	-25.0%	7.1%
Commercial	2.1%	2.5%	1.7%
Large Volume Commercial	0.1%	2.5%	0.0%
Wholesale	-3.2%	2.5%	-3.7%
Private Fire Protection	4.9%	4.8%	0.0%
Pulp Mill	2.5%	2.5%	2.5%



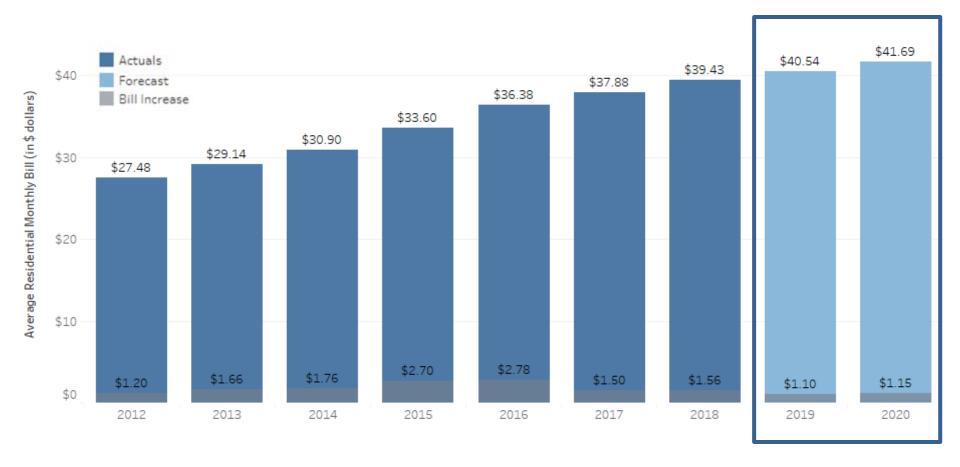
Residential Fixed/Variable Rate Recovery



The projected 2019-2020 recovery ratio is for Scenario 1. Scenario 2's projected recovery ratio would be 42% variable and 58% fixed.



Sample Monthly Bill Increase (Scenario 1)



The monthly average residential bill assumes water consumption of 7 CCF per month on a 5/8 meter.



Sample Monthly Bill Increase (Scenario 2)

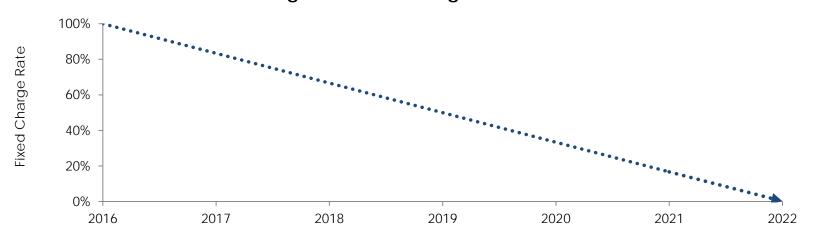


The monthly average residential bill assumes water consumption of 7 CCF per month on a 5/8 meter.



Irrigation Timeline

Irrigation Fixed Charge Schedule



Fixed charge to gradually phase out over 6 years, transitioning to a purely variable rate structure by 2022

Objectives

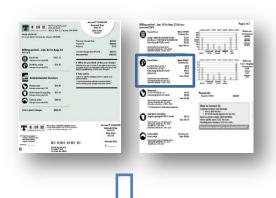
- Improve operational efficiency by reducing truck rolls
- Strengthen seasonal conservation signal
- Will position the utility well to explore AMI-supported rate design alternatives



Public Fire Protection: Inside City

 Recover public fire protection costs from the fixed component of the rate, and remove "Hydrant Service Fee" as a separate line item on the bill

Sample 2018 Residential Bi-Monthly Bill





2019 Sample Bill (itemized))	
11.340 @ \$2.014/ccf	\$	22.84
Fixed Charge @ \$22.05/month	\$	44.10
Hydrant Service Fee @ 2.71/month	\$	5.42
Total	\$	72.36



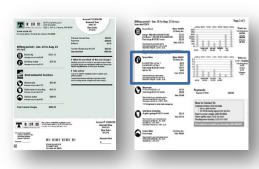
2019 Sample Bill (combined)		
11.340 @ \$2.014/ccf	\$	22.84
Fixed Charge @ \$24.76/month	\$	49.52
Total	\$	72.36



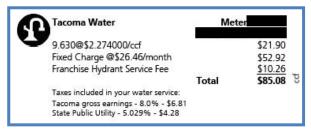
Public Fire Protection: Outside City

- Recover public fire protection costs from the fixed component of the rate, and remove "Hydrant Service Fee" as a separate line item on the bill
- Retire "Historical Service Component" for outside city customers

Sample 2018 Residential Bi-Monthly Bill







2019 Sample Bill (itemized)	
9.630 @ \$2.417/ccf	\$ 23.28
Fixed Charge @ \$26.46/month	\$ 52.92
Hydrant Service Fee (Historical) @ \$0.00/month	\$ -
Hydrant Service Fee (Ongoing) @ \$3.47/month	\$ 6.94
Total	\$83.14

2019 Sample Bill (combined)	
9.630 @ \$2.417/ccf	\$ 23.28
Fixed Charge @ \$29.93/month	\$ 59.86
Total	\$83.14



Appendix



Residential Service

Reside	Residential, Commercial & Large Volume - Ready to Serve Charge					
Matau Sina	Inside City		Outside City	y of Tacoma		
Meter Size (Inches)		Rate Effec	ctive Dates			
(menes)	1/1/19	1/1/20	1/1/19	1/1/20		
5/8	\$24.76	\$24.94	\$29.93	\$30.20		
3/4	\$35.79	\$35.97	\$43.17	\$43.44		
1	\$57.84	\$58.02	\$69.63	\$69.90		
1.5	\$112.96	\$113.14	\$135.77	\$136.04		
2	\$179.11	\$179.29	\$215.15	\$215.42		
3	\$333.46	\$333.64	\$400.37	\$400.64		
4	\$553.96	\$554.14	\$664.97	\$665.24		
6	\$1,105.21	\$1,105.39	\$1,326.47	\$1,326.74		
8	\$1,766.71	\$1,766.89	\$2,120.27	\$2,120.54		
10	\$2,538.46	\$2,538.64	\$3,046.37	\$3,046.64		
12	\$3,723.65	\$3,723.83	\$4,468.60	\$4,468.87		

Residential Service				
	Inside City	of Tacoma	Outside City of Tacoma	
Range in CCF (100 cubic feet)		Rate Effec	tive Dates	
	1/1/19	1/1/20	1/1/19	1/1/20
For each CCF of water consumption during the winter months of October through and including May	\$2.014	\$2.138	\$2.417	\$2.566
For the first five CCF of water consumption per month during the summer months of June through and including September	\$2.014	\$2.138	\$2.417	\$2.566
For each CCF of water consumption over five CCF during the summer months of June through and including September	\$2.518	\$2.673	\$3.021	\$3.208



Commercial and Industrial Service

Residential, Commercial & Large Volume - Ready to Serve Charge					
Meter Size	Inside City	of Tacoma	Outside Cit	y of Tacoma	
(Inches)		Rate Effec	ctive Dates		
(Hiches)	1/1/19	1/1/20	1/1/19	1/1/20	
5/8	\$24.76	\$24.94	\$29.93	\$30.20	
3/4	\$35.79	\$35.97	\$43.17	\$43.44	
1	\$57.84	\$58.02	\$69.63	\$69.90	
1.5	\$112.96	\$113.14	\$135.77	\$136.04	
2	\$179.11	\$179.29	\$215.15	\$215.42	
3	\$333.46	\$333.64	\$400.37	\$400.64	
4	\$553.96	\$554.14	\$664.97	\$665.24	
6	\$1,105.21	\$1,105.39	\$1,326.47	\$1,326.74	
8	\$1,766.71	\$1,766.89	\$2,120.27	\$2,120.54	
10	\$2,538.46	\$2,538.64	\$3,046.37	\$3,046.64	
12	\$3,723.65	\$3,723.83	\$4,468.60	\$4,468.87	

Commercial and Industrial - General Service					
	Inside City	of Tacoma	Outside City	y of Tacoma	
Range in CCF (100 cubic feet)		Rate Effective Dates			
	1/1/19	1/1/20	1/1/19	1/1/20	
For each CCF of water consumption	\$2.204	\$2.286	\$2.645	\$2.743	

Commercial and Industrial - Large Volume Service*					
	Inside City	Inside City of Tacoma		Outside City of Tacoma	
Range in CCF (100 cubic feet)		Rate Effective Dates			
	1/1/19	1/1/20	1/1/19	1/1/20	
For each CCF of water consumption	\$1.783	\$1.785	\$2.140	\$2.142	
* Customers may qualify for this rate based on an established consumption history greater than 65,000 CCF annually.					



Parks and Irrigation Service

Parks & Irrigation - Ready to Serve Charge				
M . G:	Inside City	of Tacoma	Outside City	y of Tacoma
Meter Size (Inches)		Rate Effec	ctive Dates	
(Inches)	1/1/19	1/1/20	1/1/19	1/1/20
5/8	\$11.03	\$7.35	\$13.23	\$8.82
3/4	\$16.54	\$11.03	\$19.85	\$13.23
1	\$27.57	\$18.38	\$33.08	\$22.05
1.5	\$55.13	\$36.75	\$66.15	\$44.10
2	\$88.20	\$58.80	\$105.84	\$70.56
3	\$165.38	\$110.25	\$198.45	\$132.30
4	\$275.63	\$183.75	\$330.75	\$220.50
6	\$551.25	\$367.50	\$661.50	\$441.00
8	\$882.00	\$588.00	\$1,058.40	\$705.60
10	\$1,267.88	\$845.25	\$1,521.45	\$1,014.30
12	\$1,860.47	\$1,240.31	\$2,232.57	\$1,488.38

Parks and Irrigation Service					
	Inside City	Inside City of Tacoma		Outside City of Tacoma	
Range in CCF (100 cubic feet)		Rate Effective Dates			
	1/1/19	1/1/20	1/1/19	1/1/20	
For each CCF of water consumption	\$3.732	\$3.985	\$4.478	\$4.782	



Wholesale Service

Wholesale - Ready to Serve Charge					
Meter Size	Rate Effective Dates				
(Inches)	1/1/19	1/1/20			
5/8	\$26.46	\$26.46			
3/4	\$39.70	\$39.70			
1	\$66.16	\$66.16			
1.5	\$132.30	\$132.30			
2	\$211.68	\$211.68			
3	\$396.90	\$396.90			
4	\$661.50	\$661.50			
6	\$1,323.00	\$1,323.00			
8	\$2,116.80	\$2,116.80			
10	\$3,042.90	\$3,042.90			
12	\$4,465.13	\$4,465.13			

Wholesale Constant Use Customer				
Pance in CCE (100 askis fact)	Rate Effec	tive Dates		
Range in CCF (100 cubic feet)	1/1/19	1/1/20		
Per CCF for winter months (October - May)	\$2.038	\$1.967		
Per CCF for summer months (June - September)	\$2.548	\$2.459		

Wholesale Summer Season, Peaking				
Pance in CCE (100 oxidis fact)	Rate Effec	ctive Dates		
Range in CCF (100 cubic feet)	1/1/19	1/1/20		
For each CCF of water consumption \$3.821 \$3.688				



Fire Protection Service

	Fire Protection Service - Ready to Serve Charge						
	Inside City of Tacoma Outside City of Tacoma			Maximum			
Meter Size		Rate Effec	tive Dates		Allowable Monthly Water Usage for		
(Inches)	1/1/19	1/1/20	1/1/19	1/1/20	Testing and Leakage, CCF		
2	\$27.33	\$28.70	\$32.80	\$34.44	2.99		
3	\$39.79	\$41.79	\$47.75	\$50.15	2.99		
4	\$66.48	\$69.82	\$79.78	\$83.78	2.99		
6	\$149.13	\$156.60	\$178.96	\$187.92	2.99		
8	\$265.48	\$278.79	\$318.58	\$334.55	2.99		
10	\$415.25	\$436.07	\$498.30	\$523.28	2.99		
12	\$664.19	\$697.48	\$797.03	\$836.98	2.99		

Fire Protection Service					
Inside City of Tacoma Outside City of Tacom				y of Tacoma	
Range in CCF (100 cubic feet)	Rate Effective Dates				
	1/1/19 1/1/20 1/1/19 1/1				
For each CCF of water consumption	\$3.960 \$3.960 \$4.752 \$4.752				



Pulp Mill

Billing Components	1/1/19	1/1/20
Distribution Charge per Month	\$82,296.95	\$84,354.37
Supply Charge/CCF	\$0.7620256	\$0.7810762
Daily or Monthly Excess Water Usage Charge (Commercial and Industrial - Large Volume Rate) per CCF	\$1.783	\$1.785



Residential Service

Resido	Residential, Commercial & Large Volume - Ready to Serve Charge					
Matan Sina	Inside City of Tac		Outside City	y of Tacoma		
Meter Size (Inches)		Rate Effec	ctive Dates			
(fliches)	1/1/19	1/1/20	1/1/19	1/1/20		
5/8	\$25.31	\$26.06	\$30.59	\$31.54		
3/4	\$36.61	\$37.65	\$44.15	\$45.45		
1	\$59.21	\$60.82	\$71.27	\$73.26		
1.5	\$115.71	\$118.74	\$139.07	\$142.76		
2	\$183.51	\$188.25	\$220.43	\$226.17		
3	\$341.71	\$350.44	\$410.27	\$420.80		
4	\$567.71	\$582.14	\$681.47	\$698.84		
6	\$1,132.71	\$1,161.39	\$1,359.47	\$1,393.94		
8	\$1,810.71	\$1,856.49	\$2,173.07	\$2,228.06		
10	\$2,601.71	\$2,667.44	\$3,122.27	\$3,201.20		
12	\$3,816.46	\$3,912.83	\$4,579.97	\$4,695.67		

Residential Service					
	Inside City of Tacoma Outside City of Ta				
Range in CCF (100 cubic feet)		Rate Effec	tive Dates		
	1/1/19	1/1/20	1/1/19	1/1/20	
For each CCF of water consumption during the winter months of October through and including May	\$1.948	\$2.003	\$2.338	\$2.404	
For the first five CCF of water consumption per month during the summer months of June through and including September	\$1.948	\$2.003	\$2.338	\$2.404	
For each CCF of water consumption over five CCF during the summer months of June through and including September	\$2.435	\$2.504	\$2.923	\$3.005	



Commercial and Industrial Service

Reside	Residential, Commercial & Large Volume - Ready to Serve Charge					
Inside		of Tacoma	Outside City of Tacoma			
Meter Size (Inches)		Rate Effec	ctive Dates			
(filches)	1/1/19	1/1/20	1/1/19	1/1/20		
5/8	\$25.31	\$26.06	\$30.59	\$31.54		
3/4	\$36.61	\$37.65	\$44.15	\$45.45		
1	\$59.21	\$60.82	\$71.27	\$73.26		
1.5	\$115.71	\$118.74	\$139.07	\$142.76		
2	\$183.51	\$188.25	\$220.43	\$226.17		
3	\$341.71	\$350.44	\$410.27	\$420.80		
4	\$567.71	\$582.14	\$681.47	\$698.84		
6	\$1,132.71	\$1,161.39	\$1,359.47	\$1,393.94		
8	\$1,810.71	\$1,856.49	\$2,173.07	\$2,228.06		
10	\$2,601.71	\$2,667.44	\$3,122.27	\$3,201.20		
12	\$3,816.46	\$3,912.83	\$4,579.97	\$4,695.67		

Commercial and Industrial - General Service					
	Inside City of Tacoma Outside City of Tacor			y of Tacoma	
Range in CCF (100 cubic feet)	Rate Effective Dates 1/1/19 1/1/20 1/1/19 1/1/2				
For each CCF of water consumption \$2.159 \$2.195 \$2.591 \$2.634					

Commercial and Industrial - Large Volume Service*					
Inside City of Tacoma Outside City of Taco				y of Tacoma	
Range in CCF (100 cubic feet)	Rate Effective Dates				
	1/1/19	1/1/20	1/1/19	1/1/20	
For each CCF of water consumption \$1.782 \$1.782 \$2.138 \$2.13					
* Customers may qualify for this rate based on an esta	blished consumpti	on history greater	than 65.000 CCF	annually.	



Parks and Irrigation Service

Parks & Irrigation - Ready to Serve Charge					
M · C'	Inside City of Tacoma		Γacoma Outside City		
Meter Size (Inches)		Rate Effec	ctive Dates		
(Hiches)	1/1/19	1/1/20	1/1/19	1/1/20	
5/8	\$11.03	\$7.35	\$13.23	\$8.82	
3/4	\$16.54	\$11.03	\$19.85	\$13.23	
1	\$27.57	\$18.38	\$33.08	\$22.05	
1.5	\$55.13	\$36.75	\$66.15	\$44.10	
2	\$88.20	\$58.80	\$105.84	\$70.56	
3	\$165.38	\$110.25	\$198.45	\$132.30	
4	\$275.63	\$183.75	\$330.75	\$220.50	
6	\$551.25	\$367.50	\$661.50	\$441.00	
8	\$882.00	\$588.00	\$1,058.40	\$705.60	
10	\$1,267.88	\$845.25	\$1,521.45	\$1,014.30	
12	\$1,860.47	\$1,240.31	\$2,232.57	\$1,488.38	

Parks and Irrigation Service				
	Inside City	Inside City of Tacoma Outside City of Tac		
Range in CCF (100 cubic feet)		Rate Effective Dates		
	1/1/19 1/1/20 1/1/19			
For each CCF of water consumption	\$3.732	\$3.985	\$4.478	\$4.782



Wholesale Service

Wholesale - Ready to Serve Charge				
Meter Size	Rate Effective Dates			
(Inches)	1/1/19	1/1/20		
5/8	\$27.12	\$27.80		
3/4	\$40.68	\$41.71		
1	\$67.80	\$69.52		
1.5	\$135.60	\$139.02		
2	\$216.96	\$222.43		
3	\$406.80	\$417.06		
4	\$678.00	\$695.10		
6	\$1,356.00	\$1,390.20		
8	\$2,169.60	\$2,224.32		
10	\$3,118.80	\$3,197.46		
12	\$4,576.50	\$4,691.93		

Wholesale Constant Use Customer				
Dangs in CCE (100 sukis fast)	Rate Effective Dates			
Range in CCF (100 cubic feet)	1/1/19	1/1/20		
Per CCF for winter months (October - May)	\$2.033	\$1.956		
Per CCF for summer months (June - September)	\$2.541	\$2.445		

Wholesale Summer Season, Peaking			
D ' COE (100 1.' . f)	Rate Effec	ctive Dates	
Range in CCF (100 cubic feet)	1/1/19	1/1/20	
For each CCF of water consumption	\$3.812	\$3.668	



Fire Protection Service

Fire Protection Service - Ready to Serve Charge					
	Inside City of Tacoma Outside City of Taco		y of Tacoma	Maximum	
Meter Size	Rate Effective Dates			Allowable Monthly Water Usage for	
(Inches)	1/1/19	1/1/20	1/1/19	1/1/20	Testing and Leakage, CCF
2	\$27.33	\$28.70	\$32.80	\$34.44	2.99
3	\$39.79	\$41.79	\$47.75	\$50.15	2.99
4	\$66.48	\$69.82	\$79.78	\$83.78	2.99
6	\$149.13	\$156.60	\$178.96	\$187.92	2.99
8	\$265.48	\$278.79	\$318.58	\$334.55	2.99
10	\$415.25	\$436.07	\$498.30	\$523.28	2.99
12	\$664.19	\$697.48	\$797.03	\$836.98	2.99

Fire Protection Service				
	Inside City of Tacoma		Outside City of Tacoma	
Range in CCF (100 cubic feet)	Rate Effective Dates			
	1/1/19	1/1/20	1/1/19	1/1/20
For each CCF of water consumption	\$3.960	\$3.960	\$4.752	\$4.752



Pulp Mill

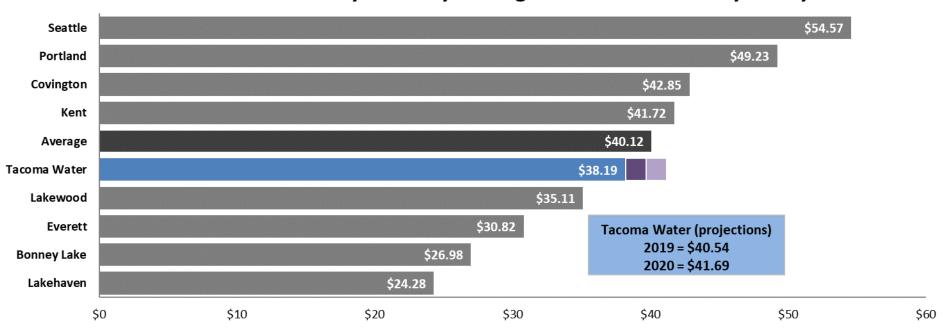
Billing Components	1/1/19	1/1/20
Distribution Charge per Month	\$82,296.95	\$84,354.37
Supply Charge/CCF	\$0.7620256	\$0.7810762
Daily or Monthly Excess Water Usage Charge (Commercial and Industrial - Large Volume Rate) per CCF	\$1.782	\$1.782



Bill Comparison

Residential Inside City of Tacoma

Residential Inside City Monthly Average Bill at 2018 Rates by Utility



ASSUMPTIONS: 5/8" Meter with 6 CCF per month demand in winter for 8 months and 9 CCF per month demand in summer for 4 months.

