CITY OF Salem
AT YOUR SERVICE

Cost of Service Rate Study

Technical Update

July 2022

GALARDI
ROTHSTEIN
GROUP

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Commonly Used Abbreviations and Acronyms

BOD	Biochemical Oxygen Demand
CCF	Hundred Cubic Feet
COSA	Cost of Service Analysis
DU	Dwelling Unit
EDU	Equivalent Dwelling Unit
FY	Fiscal Year
I/I	Infiltration/Inflow
LBS	Pounds
MG	Million Gallons
SQ FT	Square Feet
TSS	Total Suspended Solids

Background

Rate-Setting Process

The City of Salem (City) uses a cost-of-service analysis (COSA) framework to establish user rates for the water, wastewater, and stormwater systems – collectively referred to as the Utility. A COSA provides the opportunity to evaluate the financial needs of the Utility, and to develop rates that balance various local policy objectives. The City's rate-setting process includes two primary elements:

1. **Determination of Revenue Slope** – Long-term financial planning is integral to the Utility's success and stability as it allows for regular balancing of funding levels for operations and maintenance, capital investment, and financial reserves with the desire for smaller and more predictable rate increases. The series of projected annual revenue increases designed to meet desired funding levels overall for the Utility is referred to as the "revenue slope". While the Utility reviews costs, revenues, and financial planning assumptions on an annual basis, formal revenue slope proposals are prepared every two years and are effective each January.
2. **COSA Rate Updates** – The COSA provides a framework to evaluate how Utility system costs are incurred in relationship to the specific services provided, so that costs may be recovered equitably from different types of customers. Council Policy C-14 requires COSA rate updates every four years. Changes in rates and customer bills each January reflect the adopted revenue slope and any changes to customer class-specific rates resulting from the COSA.

Rate proposals are reviewed by the Utility's Water Wastewater Task Force (Task Force) and recommendations are then made to the City Council for rates effective January 1, 2023, and January 1, 2024. The rate proposal includes recommendations to the revenue slope, as well as a COSA rate technical update. This report summarizes the key findings of the COSA and presents the Task Force-recommended rates.

Policy Objectives

Within standard industry practices, utilities have flexibility in selecting approaches to rate setting that align with local policy objectives. The following policy priorities have guided the Utility rate-setting process for over two decades:

- Equitable - Rate structures reflect costs of providing service to different groups based on area, function, customer class, and service characteristics.
- Adequate Revenue - Rates are sufficient to generate revenues required to support operations and maintenance, develop capital infrastructure, and preserve or enhance the financial integrity of the Utility.

- Beneficial to Economy - Rate structures are supportive of business retention or expansion and industrial development.
- Rate Stability - Rate design and financial planning promote small steady increases over time rather than substantial fluctuations which may be unpredictable for customers. Changes in rate structure may be transitioned to mitigate impacts.
- Revenue Stability - Rate structures provide predictable revenues that are less sensitive to changes in demand or weather patterns.
- Understandable - Rates and fees are transparent and easy to for the general public to understand and calculate based on information provided.
- Defensible – Rates follow standard industry practice and a COSA framework.

Overview of COSA Process

The general process for developing cost-of-service rates is illustrated in Figure 1 (following page). This process begins with the development of Utility revenue requirements (i.e., the annual costs to be recovered from rates as determined by the revenue slope). The annual revenue requirements are distributed to customer classes based on a multi-step cost allocation process. Because rates are established at the individual system level, the first step is to allocate Utility-wide costs to the water, sanitary sewer (or wastewater), and stormwater systems. Individual system costs are further distributed to system-specific functions and service characteristics as described below.

System Functions and Service Characteristics

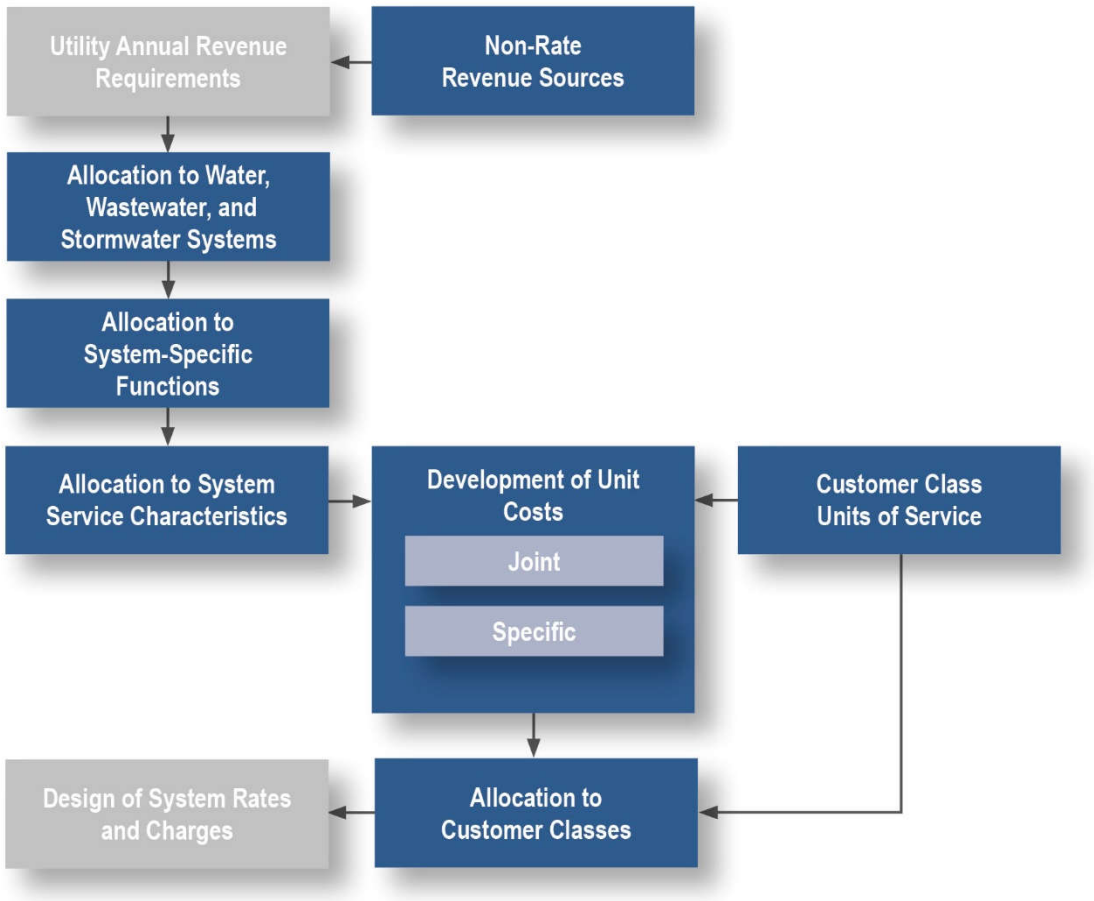
Functional categories are based on specific budgeted program areas and capital facilities. Water system functions include supply (Geren Island), transmission (upper and lower), storage, pumping, customer service, meter, and fire protection. Wastewater functions include individual treatment unit processes (e.g. primary treatment, secondary treatment, solids handling), collection and conveyance, pumping, and customer service. Stormwater functions include water quality, water quantity, and customer service.

Following functionalization, costs are allocated to system service characteristics. Some costs incurred by the utility are a function of the quantity of water consumed or volume of wastewater or stormwater discharged by customers. Other costs are associated with serving customers regardless of the quantity that flows through the system. The American Water Works Association recommends classification of water system costs based on average and peak water demands, and services provided to customers. Water Environment Federation and U.S. Environmental Protection Agency methods classify wastewater system costs according to flow (average and peak wet weather), biochemical oxygen demand[1]

[1] BOD is the quantity of oxygen used in the biochemical oxidation of organic matter in a specified time and at a specified temperature.

(BOD) and total suspended solids[2] (TSS) loadings, and services provided to customer classes. Stormwater costs are classified as account or volume based. Costs are classified among service characteristics, so that they may then be allocated to customer classes in proportion to system demands.

Figure 1 COSA Process



Allocations to Customer Classes

Revenue requirements by service characteristic are divided by the sum of estimated annual billable service units to determine unit costs by service characteristic. For example, unit costs for BOD handling are determined by dividing the total costs allocated to BOD through the functionalization and classification steps by the pounds of BOD billed across all customer classes. Cost allocations to service characteristics are based on various information sources, including facility design, operations data, and maintenance records.

[2] TSS are solids that float on the surface of, or are in suspension in wastewater or other liquids, and are largely removable by laboratory filtering.

Annual service units for each customer class are generally estimated based on billing records that contain information on customer accounts, water use (annual and winter average for wastewater bases) and stormwater impervious area. Cost responsibility for each customer class is determined by multiplying the unit costs for each service characteristic by each class's projected annual units of service and aggregating the results for each service characteristic.

In determining unit costs, it is necessary to differentiate "joint" costs from costs that are related to services provided exclusively to selected customer groups ("specific" costs). For example, the current COSA framework identifies specific wastewater costs for industrial and institutional customers related to management of the industrial pretreatment program. In addition, the capital facilities involved in providing water service to each wholesale customer are a subset of those needed to serve retail water customers, given their varying locations, and required levels of service. The development of specific unit costs allows for certain costs to be allocated directly to benefiting customers or subgroups of customers, while joint costs are distributed across all customers of the system.

Rate Design

The last step in the rate development process is the design of the rate structure and the development of rates. There are a variety of rate structure options available to meet a wide range of policy objectives. Rates generally are comprised of a fixed charge per customer per billing period, and a volume charge that varies based on water usage or estimated wastewater flow or stormwater runoff. The selection of a particular rate structure is influenced by local policy objectives.

Once a rate structure is selected, rates are calculated based on the costs and units of service specific to each system and customer class. In some cases, a rate transition plan may be developed to enable a phase-in of cost-based rates over multiple years.

The result of the COSA rate development process is distribution of revenue requirements to system users based on cost causation.

Cost of Service Rates

The COSA provides the framework for determining how the revenue slope increase will be distributed to different types of customers. System cost structures (i.e., alignment of costs with system functions and service characteristics) change over time due to varying investments in system operation and maintenance, and capital facilities which may be driven by regulatory requirements, system expansion, new technologies, asset management plans, and other factors.

This section highlights the key factors influencing the updated COSA rates for the 2023 and 2024 rate setting period and presents the updated rates for each system and customer Utility bills. Rates and bills include the Task Force-recommended revenue slope of five (5) percent.

Foundational Practices

The COSA rates continue to reflect several foundational practices established in prior rate updates. Table 1 provides a summary of foundational COSA practices, which were reviewed at a high level, and continue to align with the Utility's policy objectives.

Table 1 Summary of COSA Foundational Practices

Issue	Practice
Distance and Elevation Surcharges	No rate differentials based on customer location or elevation.
Water discounts for Industrial Customers	Exempt industrial customers from storage above "G-0" (the lowest pressure zone), as well as pumping, and some distribution costs.
Outside-City Customer Surcharge	7.5 percent surcharge for all outside-city customers except City of Keizer and City of Turner which were phased-out in 2015.
Infiltration and Inflow (I/I) Cost Allocation	In considering the costs associated with building and maintaining extra capacity in the wastewater system associated with I/I, 75 percent of costs will be allocated to customers classes based on the number of dwelling unit equivalents (residential) or accounts (nonresidential), and 25 percent will be based on wastewater volume. The residential unit equivalent for multifamily customers is 10 percent per dwelling unit.
Public Fire Protection Cost Allocation	In considering the costs associated with building and maintaining extra capacity in the water system for public fire protection, 100 percent of costs will be allocated to customers through the fixed meter charge, standardized based on a one-inch meter.
Water Volume Rates	Recover water system volume rates based on a uniform volume rate structure for each customer class and service area.
Wastewater Volume Rates	For the purpose of assessing wastewater volume rates for all non-monitored customers, compute each customer's winter average water use, in order to exclude non-sewered water uses like irrigation that generally occur during the summer.

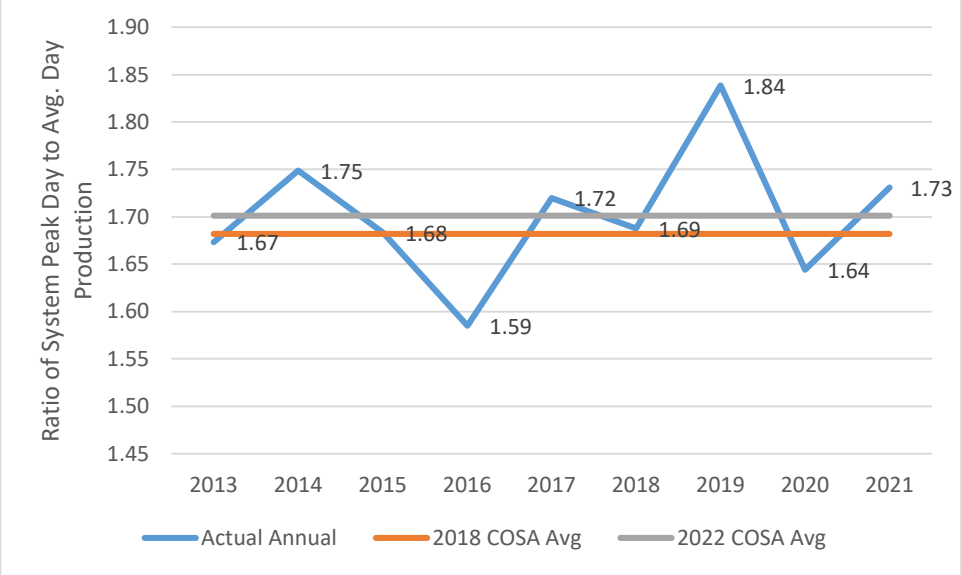
Water System COSA

The updated water COSA results in some shifts in costs among system functions and service characteristics, due to recent facility investment and review of staff work orders and operations data. Key factors influencing the updated COSA rates include the following:

Water Production Costs Increases – At the time of the last COSA update in 2018, the Utility had just begun planning for the additional capital investments needed to address the presence of cyanotoxins in finished water produced at the Geren Island Water Treatment Facility. In March 2020, a $60 million revenue bond was issued to fund an ozone treatment facility, resulting in an increased debt service requirement of $4.3 million annually. The new facility became operational in 2022, and the FY 2022-23 budget includes additional costs associated with facility operation and maintenance. As a result, water production costs have increased as a percentage of water system costs, compared to the prior (2018) COSA.

Increase in System Peak Demands – Utility facilities are designed with sufficient capacity to meet peak (summer) season production and delivery needs; therefore, a portion of water system costs are allocated to customer classes in proportion to their estimated peak demands. The portion of costs attributable to peak demand requirements reflects the historical ratio of the system maximum day to average day water production (i.e., "peaking factors"). Figure 2 shows historical annual system peaking factors, and averages used for allocating costs in 2018 and the updated COSA. The updated peaking factor is 1.70 (2013-2021 average), up from 1.68 used in the 2018 COSA. An increase in the system peaking factor results in relatively more water system costs allocated to customers on a peak demand basis.

Figure 2 Historical Water System Peaking Factors



Changes in Non-Rate Revenue Sources – Between 2018 and 2022, the Utility received about $2.8 million per year in revenue from the sale of Willamette River water rights to the

City of Hillsboro. Based on a prior policy decision endorsed by the Task Force, the revenue from the sale of the City of Salem asset (which concluded in 2022) was used to offset the annual revenue requirements of inside-city customers only. For the current rate-setting period, all non-rate revenues were applied to system-wide revenue requirements, benefitting all customers. Some of these revenues included Federal Emergency Management Agency reimbursements from the 2021 ice storm and one-time American Rescue Plan Act revenue replacement funds. The result of the change in the composition of non-rate revenue sources is an increase in the net revenue requirements for inside-city customers.

Deferred Wholesale Rate Increases – The 2018 COSA resulted in significant rate increases for wholesale water customers. Based on recommendations of the Task Force, the rate increases were to be phased in over a four-year period (2018-2022). However, in 2020, the City Council deferred the final two years of the phase-in plan, due to concern about rate increase impacts during the COVID-19 pandemic. The updated COSA rates include relatively higher rate increases for wholesale customers for 2023 and 2024, consistent with what would have been implemented in the final two years of the prior COSA phase-in plan.

Water System Rates

Existing (January 1, 2022) and updated COSA (2023 and 2024) water rates are shown in Table 2 (following page). As with existing rates, the revised rate schedule includes a fixed monthly service charge that varies by meter size, and a volume rate per hundred cubic feet (ccf) for each customer class. Volume rates vary based on the peak demands of each customer class.

The revised fixed monthly service charges are estimated to recover about 25 percent of rate revenue, consistent with current rates. Volume rate changes by customer class reflect the impacts of the water COSA factors highlighted previously. Specifically, larger rate increases (i.e., percentage increases above the five percent revenue slope) are reflected in the rates of:

- Most inside-city customers, reflecting the changes in non-rate revenue sources.
- Irrigation customers who use water most intensively during the peak production period.
- Wholesale customers, reflecting completion of the rate transitioning begun in 2018.

As with current rates, revised rates for customers in unincorporated areas outside the City include a 7.5 percent surcharge per long-standing Utility policy.

Table 2 Comparison of Current and Revised Water Rates

	Inside-City			*Outside-City*		
	Existing	**Revised[1]**	**Revised[1]**	**Existing**	**Revised[1]**	**Revised[1]**
Effective January 1:	2022	2023	2024	2022	2023	2024
Volume Rates ($/ccf)[2]						
Residential	$2.70	$2.87	$3.02	$3.20	$3.11	$3.28
Multifamily	$2.27	$2.37	$2.49	$2.68	$2.57	$2.71
Irrigation	$3.65	$4.02	$4.23	$4.45	$4.37	$4.60
Commercial	$2.38	$2.49	$2.62	$2.80	$2.70	$2.84
Industrial	$1.63	$1.72	$1.81	--	--	--
Institutional	$2.20	$2.28	$2.40	--	--	--
Public Building	$2.58	$2.73	$2.87	$3.06	$2.96	$3.12
Wholesale Rates ($/ccf)[2]						
Suburban East Salem Water District	--	--	--	$1.31	$1.41	$1.53
City of Turner	--	--	--	$1.11	$1.21	$1.32
Orchard Heights Water Association	--	--	--	$3.23	$3.55	$3.91
Monthly Service Charges Meter Size ($/Meter)[3]						
5/8" or 3/4""	$12.07	$12.44	$12.90	$13.00	$13.28	$13.88
1"	$16.35	$17.94	$18.65	$17.59	$19.19	$20.07
1.5"	$28.31	$30.65	$31.93	$30.46	$32.85	$34.34
2"	$42.68	$45.90	$47.85	$45.90	$49.24	$51.46
3"	$80.97	$86.56	$90.33	$87.06	$92.96	$97.12
4"	$124.05	$132.32	$138.11	$133.36	$142.14	$148.49
6"	$243.71	$259.40	$270.85	$262.00	$278.76	$291.18
8"	$842.00	$894.84	$934.53	$905.17	$961.86	$1,004.64
10"	$1,320.66	$1,403.19	$1,465.47	$1,419.72	$1,508.33	$1,575.40

[1] Revised rates include the 5 percent revenue slope and updated COSA.
[2] ccf = hundred cubic feet (748 gallons)
[3] Outside-city meter charges vary by service area for wholesale customers; rates shown in this table are for Orchard Heights Water Association and retail customers.

Wastewater System COSA

As with the water system, the updated wastewater COSA analysis results in some shifts in costs among system functions and service characteristics. Key factors influencing the updated COSA wastewater rates include the following:

Solids Handling Cost Increases – Solids are a byproduct of wastewater treatment and are produced during the primary treatment and secondary treatment processes. The capital and operations and maintenance costs associated with solids management have increased since the prior COSA, such that these costs now represent a larger portion of annual

wastewater system costs[3]. Operating cost increases reflect additional staff labor hours attributable to solids handling, tracked through the Utility's work order system. In addition, the Utility is in the process of completing construction of a new solids handling facility, resulting in an increase in capital costs.

Increase in Total Suspended Solids (TSS) Allocation –Solids facilities are sized to handle BOD and TSS removed during the treatment process. Primary treatment removes about 60 percent of TSS and 30 percent of BOD, while secondary treatment removes relatively more BOD than TSS. Sludge production data from the primary and secondary treatment processes were reviewed for the 2018-2022 period to determine the portion of solids attributable to BOD and TSS. As a result of this analysis, solids handling costs are allocated 50 percent to BOD and 50 percent to TSS in the updated COSA, compared to 75 percent BOD and 25 percent TSS in the prior COSA.

Increase in Industrial Pretreatment Program Costs –The industrial pretreatment program is a subcomponent of the Utility's environmental compliance group. Services performed include monitoring of industrial wastewater and general compliance activities. Cost increases for this program reflect staff time and materials attributed to these activities.

Increase in Wet Weather Flow Investment – Capital investments for collection and pumping increased as a percent of total wastewater system asset value, compared to the 2018 COSA. Collection and pumping facilities provide significant capacity for transporting wet weather flows (i.e., rainfall and groundwater that enter the system in the form of infiltration and inflow.) Therefore, wet weather flow costs increased as a percent of total costs.

Wastewater System Rates

Existing (January 1, 2022) and updated COSA (2023 and 2024) wastewater rates are shown in Table 3 (following page). As with existing rates, the revised rate schedule includes monthly fixed charges and volume charges. Volume rates vary based on the estimated wastewater strengths of each customer class.

Wastewater service to customers outside the City limits in unincorporated areas (other than Turner and Keizer) reflect inclusion of a 7.5 percent surcharge.

[3] Operating costs attributable to solids handling are about 17 percent of total costs (up from about 14 percent in 2018), and capital costs increased from about 3.5 percent to 5 percent.

Table 3 Comparison of Existing and Revised Wastewater Rates

Effective January 1:	Existing 2022	Revised[1] 2023	Revised[1] 2024
Volume Rates ($/ccf)[2]			
Inside-City			
Residential	$3.82	$3.93	$4.09
Multifamily	$3.82	$3.93	$4.09
Commercial	$5.24	$5.54	$5.78
Outside-City			
Keizer[3]			
Residential	$3.86	$3.98	$4.14
Multifamily	$3.86	$3.98	$4.14
Commercial	$5.30	$5.60	$5.85
Labish/Chatnicka	$4.16	$4.28	$4.45
East Salem Service District/Jan Ree			
Residential	$4.16	$4.28	$4.45
Multifamily	$4.16	$4.28	$4.45
Commercial	$5.71	$6.03	$6.29
Wholesale Rate ($/ccf)			
Turner	$3.83	$3.93	$4.09
Fixed Charge ($/Bill)			
Inside-City			
Residential	$15.92	$17.21	$18.38
Multifamily			
Duplexes	$17.28	$18.69	$19.97
Triplexes	$18.64	$20.18	$21.56
Fourplexes	$20.00	$21.67	$23.16
Five and above	$21.34	$23.16	$24.75
DUs over 5	$1.36	$1.49	$1.59
Commercial	$23.81	$25.75	$27.57
Outside-City			
Keizer[3]			
Residential	$13.85	$15.19	$16.26
Multifamily			
Duplexes	$15.24	$16.71	$17.89
Triplexes	$16.62	$18.23	$19.51
Fourplexes	$18.01	$19.75	$21.14
Five and above	$19.41	$21.27	$22.76
DUs over 5	$1.39	$1.52	$1.63
Commercial	$21.98	$23.97	$25.71
Labish	$17.32	$18.72	$19.99
East Salem Service District/Jan Ree/Eola-Chatnicka			
Residential	$17.32	$18.72	$19.99
Multifamily (3 units +)			
Duplexes	$18.80	$20.34	$21.73
Triplexes	$20.27	$21.96	$23.46
Fourplexes	$21.76	$23.58	$25.20
Five and above	$23.24	$25.20	$26.93
DUs over 5	$1.47	$1.62	$1.74
Commercial	$25.91	$28.03	$30.02

[1] Revised rates include the 5 percent revenue slope and updated COSA.
[2] ccf = hundred cubic feet (748 gallons)
[3]Volume rates include directly assigned administrative costs; fixed charges exclude billing costs.

Rate changes by customer class and rate component reflect the impacts of the wastewater COSA factors highlighted previously. Specifically, larger rate increases (i.e., percentage increases above the 5 percent revenue slope) are reflected in:

- Commercial volume rates, reflecting increased wastewater treatment and solids handling costs. The volume rates for commercial customers are higher than residential customers due to the higher estimated wastewater strengths of these customers.
- Fixed charges (all customers), reflecting the increase in wet weather flow costs. Consistent with a foundational rate practice, 75 percent of wet weather flow costs are recovered through fixed charges, and the remaining 25 percent of costs are recovered through volume charges.
- Monitored industrial and institutional customer TSS and fixed charge unit costs, as shown in Table 4. Monitored Industrial and institutional customers are charged for each service element individually because their BOD and TSS loadings are measured. The increases in TSS and industrial pretreatment unit costs reflect cost factors discussed previously. The industrial pretreatment unit cost increase also reflects the loss of two industrial customers (so the fixed program costs are spread over fewer customers). Industrial pretreatment charges are lower for institutional customers due to the less frequent monitoring/sampling performed for these customers.

Table 4 Comparison of Current and Revised Monitored Wastewater Rates

Component (Effective January 1:)	Existing 2022	Revised 2023	Revised 2024
Flow ($/MG)	$3,607.40	$3,506.28	$3,629.92
BOD ($/1,000 lbs)	$377.57	$391.03	$409.84
TSS ($/1,000 lbs)	$268.42	$350.91	$369.58
Industrial Pretreatment ($/bill) – Industrial	$2,135.07	$2,728.80	$2,943.48
Industrial Pretreatment ($/bill) – Institutional	$1,196.68	$1,365.56	$1,472.97

Stormwater System COSA

The City Council adopted the stormwater rate structure methodology in 2010. Based on that policy direction, a portion of the stormwater costs are recovered through an account-based charge per customer, and the remaining costs are recovered through the equivalent dwelling unit (EDU) charge, where an EDU is defined as 3,000 square feet of impervious area for nonresidential customers.

The primary finding of the updated COSA for stormwater is that capital investment and operating costs associated with managing stormwater water quality and quantity costs, increased relative to customer service, dispatch, and street sweeping costs, which are recovered through the account-based charge.

Stormwater System Rates

Existing (January 1, 2022) and updated COSA (2023 and 2024) stormwater rates are shown in Table 5. Residential customers are charged based on a three-tiered EDU structure, where the rate increases for homes with larger impervious area. Account charges apply to both

residential and nonresidential customers, in addition to the class-specific EDU rates. EDU rates increase relatively more than the account charge, reflecting the updated COSA.

Table 5 Current and Revised COSA Stormwater Rates

Rate Component — Effective January 1:	Existing 2022	Revised[1] 2023	Revised[1] 2024
Residential EDU Rate ($/Month)			
Tier 1 (less than or equal to 1,330 SQ FT)	$5.87	$6.21	$6.55
Tier 2 (greater than 1,330 but less than 2,900 SQ FT)	$6.70	$7.10	$7.49
Tier 3 (greater than or equal to 2,900 SQ FT)	$7.54	$7.99	$8.42
Account Charge – All Customers ($/Month)	$12.22	$12.66	$13.22
Nonresidential Rate ($/EDU/Month)[2]	$6.70	$7.10	$7.49

[1] Revised rates include the 5 percent revenue slope and updated COSA.
[2] EDU = 3,000 square feet of impervious area

Sample Utility Bills

A combined Utility bill for a typical residential customer inside the City is shown in Table 6 (following page). A typical single family customer falls in the Tier 2 subclass for stormwater, has a 3/4" water meter, and has average monthly water use and wastewater base of 8.0 ccf and 5.5 ccf, respectively. As shown in Table 6, the monthly bill increases for a typical residential customer are $4.69 (5.0 percent) for 2023, and $4.88 (4.9 percent) for 2024.

The Utility bills for all customers include a 5 percent franchise fee, and the proposed bills include the 5 percent revenue slope.

Table 6 Sample Bill for Typical Inside-City Residential Customer

Bill Component	Month Use (ccf)	Specific Info[1]	Current 1/1/2022	Proposed 1/1/2023	Proposed 1/1/2024
Water	8.0	0.75	$33.67	$35.40	$37.06
Wastewater	5.5		36.93	38.83	40.88
Stormwater		Tier 2	18.92	19.76	20.70
Franchise Fee			4.48	4.70	4.93
Total Bill			**$94.00**	**$98.68**	**$103.57**
Percent Change				5.0%	4.9%
Dollar Change				$4.69	$4.88

[1] Water meter size (inches) and residential rate tier for stormwater

Bills impacts for inside-city multifamily customers are shown in Table 7 and are generally at or below the revenue slope, even with higher stormwater charges (which are the smallest portion of the bill). Customers with low volumes per unit have percentage increases slightly higher than revenue slope for wastewater (due to the increases in wet weather charges).

Table 7 Sample Bills for Multifamily Customers

	Month Use (ccf)	Other Info[1]	Current 1/1/2022	Proposed 1/1/2023	Proposed 1/1/2024
Fourplex					
Water	10.0	1.0	$39.05	$41.64	$43.55
Wastewater	7.0	4	46.74	49.18	51.79
Stormwater	--	1.2	20.26	21.18	22.21
Franchise Fee			5.30	5.60	5.88
Total Bill			**$111.35**	**$117.60**	**$123.43**
Percent Change				5.6%	5.0%
Dollar Change				$6.25	$5.83
Large					
Water	300.0	2.0	$723.68	$756.90	$794.85
Wastewater	300.0	116	1,318.30	1,367.55	1,428.24
Stormwater	--	56.2	388.76	411.68	434.16
Franchise Fee			121.54	126.81	132.86
Total Bill			**$2,552.28**	**$2,662.94**	**$2,790.11**
Percent Change				4.3%	4.8%
Dollar Change				$110.66	$127.17

Table 7 (Continued) Sample Bills for Multifamily Customers

	Month Use (ccf)	Other Info[1]	Current 1/1/2022	Proposed 1/1/2023	Proposed 1/1/2024
Mobile Home					
Water	1,000	2.0	$2,312.68	$2,415.90	$2,537.85
Wastewater	992	213	4,093.66	4,231.64	4,412.75
Stormwater	--	350.8	2,362.58	2,503.34	2,640.71
Franchise Fee			438.45	457.54	479.57
Total Bill			**$9,207.37**	**$9,608.42**	**$10,070.88**
Percent Change				4.4%	4.8%
Dollar Change				$401.06	$462.45

[1] Water meter size (inches), multifamily dwelling units, EDUs for stormwater

Bills impacts for inside-city nonresidential customers are shown in Table 8 (following page), and are summarized as follows:

- **Commercial and Public**: Bills for commercial and public customers are slightly higher than the revenue slope primarily due to the wastewater and stormwater charges. Wastewater charges reflect higher sewage strengths and stormwater charges reflect larger EDUs.

- **Irrigation**: Bill impacts for the irrigation class are the highest of all the customer types driven by the increase in water volume rates reflecting increased peak demand costs and the change in the composition of non-rate revenue sources (which impact all inside-city customers). Some customers may experience increases of 10 percent in 2023 with increases in 2024 closer to the revenue slope of 5 percent.

- **Industrial & Institutional** – Bill impacts will vary (some above and others below the revenue slope) because of the diversity of customers and because they are billed based on their actual wastewater flows and loads. While the unit prices for TSS and Industrial Pretreatment Program costs increase significantly, they are offset by reductions in the wastewater flow unit rate. Most customers are large EDU customers for the purposes of stormwater, so that portion of the bill goes up initially 5-6 percent.

Table 8 Sample Bills for Nonresidential Customers

	Month Use (ccf)	Other Info[1]	Current 1/1/2022	Proposed 1/1/2023	Proposed 1/1/2024
Commercial - Large EDU					
Water	315	2.0	$792.38	$830.25	$873.15
Wastewater	300	--	1,595.81	1,687.75	1,761.57
Stormwater	--	177.4	1,200.80	1,272.20	1,341.95
Franchise Fee			179.45	189.51	198.83
Total Bill			**$3,768.44**	**$3,979.71**	**$4,175.50**
Percent Change				5.6%	4.9%
Dollar Change				$211.27	$195.79
Commercial - Small EDU					
Water	80.0	1.5	$218.71	$229.85	$241.53
Wastewater	68.0	--	380.13	402.47	420.61
Stormwater	--	4.1	39.69	41.77	43.93
Franchise Fee			31.93	33.70	35.30
Total Bill			**$670.46**	**$707.79**	**$741.37**
Percent Change				5.6%	4.7%
Dollar Change				$37.34	$33.58
Public					
Water	30.0	3.0	$158.37	$168.46	$176.43
Wastewater	11.5	--	84.07	89.46	94.04
Stormwater		13.5	102.67	108.51	114.34
Franchise Fee			17.26	18.32	19.24
Total Bill			**$362.37**	**$384.75**	**$404.05**
Percent Change				6.2%	5.0%
Dollar Change				$22.39	$19.29
Irrigation					
Water	483	2.0	$1,805.63	$1,987.56	$2,090.94
Backflow Prevention			1.50	2.25	2.25
Franchise Fee			90.28	99.38	104.55
Total Bill			**$1,897.41**	**$2,089.19**	**$2,197.74**
Percent Change				10.1%	5.2%
Dollar Change				$191.78	$108.55
Industrial					
Water	2,842	6.0	$4,876.17	$5,147.64	$5,414.87
Wastewater		--			
Flow (mg)	1.7		6,276.88	6,100.93	6,316.06
BOD (1,000 lbs)	9.7		3,651.10	3,781.26	3,963.15
TSS (1,000 lbs)	5.1		1,371.63	1,793.15	1,888.55
Fixed			2,135.07	2,728.80	2,943.48
Stormwater		113.1	769.99	815.67	860.34
Franchise Fee			954.04	1,018.37	1,069.32
Total Bill			**$20,034.88**	**$21,385.82**	**$22,455.78**
Percent Change				6.7%	5.0%
Dollar Change				$1,350.94	$1,069.96

[1] Public = ccf, Industrial units vary

[2] Water meter size (inches) and EDUs for stormwater

Table 8 (Continued) Sample Bills for Nonresidential Customers

	Month Use (ccf)	Other Info[1]	Current 1/1/2022	Proposed 1/1/2023	Proposed 1/1/2024
Institutional					
Water	2,000	2.0	$4,442.68	$4,605.90	$4,847.85
Wastewater		--			
Flow (mg)	1.8		6,565.47	6,381.43	6,606.45
BOD (1,000 lbs)	7.0		2,646.77	2,741.12	2,872.98
TSS (1,000 lbs)	8.6		2,305.73	3,014.32	3,174.69
Fixed			1,196.68	1,365.56	1,472.97
Stormwater		560.0	3,764.22	3,988.66	4,207.62
Franchise Fee			$1,046.08	$1,104.85	$1,159.13
Total Bill			**$21,967.62**	**$23,201.84**	**$24,341.69**
Percent Change				5.6%	4.9%
Dollar Change				$1,234.22	$1,139.86

[1] Water meter size (inches)

Bills impacts for outside-city customers are shown in Table 9. Bills for outside-city retail water services are significantly lower than the revenue slope due to the change in composition of non-rate revenue sources. Wastewater bill increases are similar to those of inside-city customers, with residential bills consistent with the revenue slope, and larger increases for commercial customers.

Table 9 Sample Bills for Outside-City Customers

	Month Use (ccf)	Other Info[1]	Current 1/1/2022	Proposed 1/1/2023	Proposed 1/1/2024
Jan Ree/Eola-Chatnicka					
Single Family Residential					
Water	10.0	0.75	$45.00	$44.38	$46.68
Wastewater	6.0	--	42.28	44.40	46.69
Total Bill			**$87.28**	**$88.78**	**$93.37**
Percent Change				1.7%	5.2%
Dollar Change				$1.50	$4.59
Commercial					
Water	12.0	1.0	$51.19	$51.59	$54.15
Wastewater	4.0	--	48.75	52.15	55.18
Total Bill			**$99.94**	**$103.74**	**$109.33**
Percent Change				3.8%	5.4%
Dollar Change				$3.80	$5.59
Sewer Only					
Single Family Residential					
Wastewater	5.0	--	$38.12	$40.12	$42.24
Percent Change				5.2%	5.3%
Dollar Change				$2.00	$2.12

Table 9 (Continued) Sample Bills for Outside-City Customers

	Month Use (ccf)	Other Info[1]	Current 1/1/2022	Proposed 1/1/2023	Proposed 1/1/2024
City of Keizer					
Single Family Residential					
Wastewater	5.0	--	$33.15	$35.09	$36.96
Percent Change				5.9%	5.3%
Dollar Change				$1.94	$1.87
Fourplex					
Wastewater	10.0	4	$56.61	$59.55	$62.54
Percent Change				5.2%	5.0%
Dollar Change				$2.94	$2.99
Commercial					
Wastewater	4.0	--	$43.18	$46.37	$49.11
Percent Change				7.4%	5.9%
Dollar Change				$3.19	$2.74

[1] Water meter size (inches), multifamily dwelling units for wastewater.

Bills impacts for wholesale customers are shown in Table 10. Water bill increases are higher than the revenue slope because of the deferred increases from January 2021 and 2022. The percentage increases are similar to what had been projected in the 2018 COSA, even though the revenue slope recommended by the Task Force is higher than in the prior COSA.[4]

Table 10 Sample Bills for Wholesale Customers

	Month Use (ccf)	Current 1/1/2022	Proposed 1/1/2023	Proposed 1/1/2024
Suburban East Salem Water District				
Water – one 8" and two 6" meters	57,660	$75,926.31	$81,958.22	$89,143.31
Percent Change			7.9%	8.8%
Dollar Change			$6,031.91	$7,185.09
Orchard Heights Water Association Wholesale				
Water - two 3" meters	1,267	$4,266.53	$4,683.77	$5,148.21
Percent Change			9.8%	9.9%
Dollar Change			$417.24	$464.44
City of Turner				
Water – one 2" and two 6" meters	11,181	$12,567.22	$13,780.79	$15,106.14
Sewer	7,536	28,866.84	29,620.43	30,826.37
Total Bill		$41,434.06	$43,401.22	$45,932.51
Percent Change			4.7%	5.8%
Dollar Change			$1,967.16	$2,531.30

[4] The revenue slope for 2021 and 2022 was 3 percent.

The City of Turner's sewer rates are lower than the revenue slope because the city (as a wholesale customer) has a different rate structure that does not include individual wet weather charges for customers (which increased relatively more than the volume charges)[5]. Turner also has primarily domestic strength wastewater, so rate increases are slightly below the revenue slope (as is the case for - residential customers inside the City of Salem).

[5] The City of Turner's wastewater flow is metered, so any I/I in the system is included in metered wastewater flows subject to the wholesale volume charges.