



Wastewater Treatment Division

Executive summary

RWSP Update – Group #5, Policy Memo #8: Finance/Affordability

This executive summary provides a synopsis of the policy questions, problem statement, challenges and the options to address the two Finance/Affordability questions listed below.

Policy questions

1. How will the Wastewater Treatment Division (WTD) measure customer affordability for contract agencies and ratepayers?
2. What other rate relief approaches should WTD implement to improve affordability for those who may struggle to pay their sewer bill?

Problem statement

Measuring Affordability

When describing how to measure sewer service affordability, it is important to distinguish between “System Affordability” and “Household Affordability”. System Affordability (or Financial Capability) reflects a community’s ability to fund future investments and is used for Clean Water Act schedule negotiations and/or NPDES permitting. Household Affordability reflects an individual customer’s ability to pay their sewer bills while also covering other essential living expenses.

Households and communities in WTD’s service area span a wide range of economic conditions, from high-wealth neighborhoods to those with a high incidence of poverty. As a result, no single metric aggregated or averaged across the entire service area can fairly define when rates exceed ratepayers’ ability to pay. Furthermore, there is no industry consensus on a single metric to measure affordability of utility bills, and neither King County Code nor WTD’s contracts with local sewer agencies (LSAs) include policies explicitly directing WTD’s measurement of rate affordability.

A combination of quantitative and qualitative data and measurements is needed to fully understand and communicate the financial burden of wastewater bills. The challenge is to present a set of measures that supports a clear, objective narrative about the prevalence, magnitude, and distribution of affordability issues at both the “System” and “Household” levels.

Rate Relief Approaches

Wastewater conveyance and treatment is a critical service that households rely on, and high wastewater rates can place a significant burden on lower income households. Because WTD is a regional wholesale provider, WTD rate increases impact all households, but WTD does not have a direct billing relationship to offer customer assistance programs (CAPs) or other forms of direct relief. Additionally, current contracts with LSAs require a uniform rate structure and stipulate the allowed uses of wastewater rate revenue. This language currently prevents WTD from offering rate relief approaches without contractual changes. Lastly, state and federal law require utilities to charge uniform, nondiscriminatory rates for customers within the same class, with limited exceptions—one exception being low-income households.

Policy issues, challenges, and opportunities

In the absence of large federal grants or a permanent nationwide water assistance program (such as the low income household water assistance program (LIHWAP) during Covid), the burden falls onto individual utilities to figure out how to ensure everybody can pay their sewer bills. As regulated monopolies, utilities' ongoing expenses and future investments are not optional—they are driven by the need to meet regulations, maintain levels of service to all customers, and plan for future growth. Rates represent the cost of providing the service to each customer. This means that there is an inherent trade-off between maintaining a “utility’s sustainability” and “household affordability”. In this “policy trilemma” (Doyle 2020), utilities are in a constant balancing act between infrastructure investment, rate affordability, and fiscal sustainability (borrowing levels).¹

Affordability Metrics Options

The range of possible metrics to measure affordability includes:

1. Residential Indicator (RI) – sewer bill as percentage of median household income (MHI)
2. Financial Capability Indicator (FCI) – utility and community’s collective ability to manage financial burden of compliance
3. Poverty Indicator – measures prevalence of poverty in the service area
4. Lowest Quintile Residential Income (LQRI) – sewer bill as percentage of lowest quintile income

¹ Doyle, M.W., Patterson, L., Smull, E., & Warren, S. (2020). Growing Options for Shrinking Cities. *Journal American Water Works Association*, 112(12), 56-66. <https://doi.org/10.1002/awwa.1634>

5. AR₂₀ – calculates cost of water and sewer service as percentage of household disposable income for the lowest quintile
6. Hours Worked at Minimum Wage – number of hours worked at the local minimum wage to pay for water and sewer service

During the “Step 2” analysis for this topic, WTD will identify a suite of recommended metrics that will be used to measure affordability.

Rate Relief Policy Approaches

The range of rate relief policy approaches include:

1. Status Quo – uniform rate structure and ongoing cost containment efforts.
 - a. **Outcome:** Rate affordability is assessed to negotiate regulatory compliance, contextualize capital spending scenarios, and provide awareness to decision makers.
2. Apply Affordability Metrics – benchmarking with recommended mitigation actions.
 - a. **Outcome:** An affordability framework with common goals and language between WTD and partners; actions/mitigation may be more focused on partnership, predictability, and leverage of existing LSA CAPs than limits to annual rate increases.
3. Local Service Agency (LSA) Partnerships – data sharing, working regionally towards better/standardized Customer Assistance Program (CAP) eligibility and enrollment.
 - a. **Outcome:** Barriers to eligibility and enrollment in LSA CAPs may be lowered or removed. Without a requirement, progress in improving assistance to the most vulnerable populations may be slow and uneven.
4. Customer Assistance Program (CAP) Requirement – all LSAs required to have a CAP for sewer rate low-income customers.
 - a. **Outcome:** CAP enrollment and eligibility are standardized and universally accessible across the WTD service area; improvement in enrollment in the populations that could most use the assistance.
5. Low-Income Rate Class – institute new rate class at the wholesale level and eligibility requirements for those most in need of assistance.
 - a. **Outcome:** Rates subsidized regionally rather than the administration of assistance at the local level; would de facto raise the sewer rate for everyone who is not part of the low-income rate class, as well as those low-income households that do not enroll.
6. Tax-Funding Alternatives – investigate property tax options in place of, or as a supplement to, the fee for service structure.
 - a. **Outcome:** Progressive distribution of costs helping to alleviate burden on those most affected by increases to the wastewater service revenue

requirement. This approach has legal and local tax structure feasibility challenges.

7. Regulate multifamily landlords to prevent inflated pass-through increases/charges and strengthen renter/tenant protections against sewer rate overbilling.
 - a. **Outcome:** Increases associated with the sewer rate cannot be inappropriately inflated for tenants who are historically some of the most vulnerable communities.

Relationship to other RWSP topics

Costs for the various policy options across the RWSP topics will serve as the foundation for the three conceptual approaches (i.e. Stay the Course, Strategic Enhancement, Transformative) in the Draft RWSP Update. Costs for these conceptual approaches will need to consider affordability and rate relief options.

Alternative rate structures (such as flow-based charges, infiltration/inflow surcharges, combined sewer overflow surcharges, etc.) will be examined in more detail later this year and may influence both affordability and rate relief options.

RWSP Update - Finance/Affordability

Group #5, Policy Memo #8

A. Policy Questions

This memo is focused on the policy questions related to the Affordability topic of the Regional Wastewater Services Plan (RWSP) Update. The two policy questions explored in this memo are:

1. How will WTD measure customer affordability for contract agencies and ratepayers?
2. What other rate relief approaches should WTD implement to improve affordability for those who may struggle to pay their sewer bill?

B. Problem Statement

Measuring Affordability: Assessing the affordability of a wastewater bill is inherently subjective, complex, and context dependent. When describing how to measure sewer service affordability, it is important to distinguish between “System Affordability” and “Household Affordability”. System Affordability (or Financial Capability) reflects a community’s ability to fund future investments and is used for Clean Water Act schedule negotiations and NPDES permitting. Household Affordability, in contrast, reflects an individual customer’s ability to pay their sewer bills while also covering other essential living expenses.

Affordability researchers generally agree that the financial burden of wastewater rates cannot be captured by a single metric because it depends on interrelated factors such as employment, income, cost of living, and access to financial assistance. Furthermore, communities in WTD’s service area span a wide range of economic conditions, from high-wealth neighborhoods to those with a high incidence of poverty. As a result, no single metric aggregated or averaged across the entire service area can fairly define when rates exceed ratepayers’ ability to pay. Instead, a mix of quantitative and qualitative data is needed to fully understand and communicate the financial burden of wastewater bills. The challenge is to present a set of measures that supports a clear, objective narrative about the prevalence, magnitude, and distribution of affordability issues.

Rate Relief and Customer Assistance Approaches: Wastewater conveyance and treatment is a critical service that households rely on, and high wastewater rates can place a significant burden on lower income households. Because WTD is a regional wholesale provider, WTD rate increases impact all households, but WTD does not have a direct billing

relationship to offer customer assistance programs or some other forms of direct relief. Additionally, current contracts with local sewer agencies require a uniform rate structure and stipulate the allowed uses of wastewater rate revenue. This language prevents WTD from offering rate relief approaches without contractual changes. Lastly, state and federal law require utilities to charge uniform, nondiscriminatory rates for customers within the same class, with limited exceptions—one exception being low-income persons.

C. Contextual and Baseline Information

i. What is known about the topic and current conditions

This section of the policy memo is divided into two parts; part 1 is focused on affordability metrics background information and part 2 is focused on rate relief background information.

Measuring Affordability

WTD is mindful of the impact of rates on local households and businesses and strives to keep rates as low as possible while remaining financially prudent and meeting its regulatory obligations. For specific metrics, WTD needs to assess the affordability of its rates to inform regulatory processes with the U.S. Environmental Protection Agency (EPA) and the Washington State Department of Ecology (Ecology). The Clean Water Act allows regulators to consider a community's ability to fund compliance measures when negotiating details such as implementation schedules. The metrics described in this section have been used in the past as part of discussions related to CSO control and are anticipated to be used as part of negotiations with Ecology related to new nutrient regulations. Both EPA and Ecology use the same basic framework, described in this section.

Financial Capability Assessment: The backbone of the required regulatory methodology is EPA's financial capability assessment (FCA). This framework has evolved in recent years, even while WTD has been working to apply it. For example, the County entered CSO Consent Decree negotiations in 2019, and WTD's preparation of the related FCA submission fell under four different versions: 2020 Proposed, 2021 "pre-published" (later retracted), 2022 Proposed, and 2023 Final Guidance.

EPA has stated that the FCA "is not a methodology for defining water affordability" but rather is intended to standardize what EPA will consider when determining a community's financial capability to meet Clean Water Act requirements and to assist states in assessing the degree of economic and social impact of potential water quality standards decisions. The FCA calculates a set of metrics, assigns them various weights, and combines metrics

into a final determination of low, medium, or high impact. A finding of medium or high impact can open the door to some regulatory relief, such as adjusted compliance schedules, though this does not dismiss regulated entities from their obligations.

Residential Indicator: Within EPA’s FCA framework, the only measure that focuses on the cost of regulatory compliance and its effect on ratepayers is the Residential Indicator (RI). The RI expresses average annual wastewater costs per customer as a percentage of median household income (MHI). It answers the question, *for the average home in our service area, how much of the household income goes toward wastewater bills?* The impact of these household costs is considered low when the RI is less than 1.0%, mid-range when it is between 1.0% and 2.0%, and high when it is greater than 2.0%.

In both EPA’s and Ecology’s methods, the RI is the sole metric that focuses on the cost impact on ratepayers at the household level. Yet it accounts for only one-quarter of the overall assessment of a community’s ability to fund Clean Water Act compliance. The remaining three-fourths come from the Financial Capability Indicator, which is explained below. As a result, even RI values exceeding 100% could still yield a “low impact” determination.

Financial Capability Indicator: Whereas the RI assesses household affordability—the main topic of this policy memo—it is worth discussing the Financial Capability Indicator (FCI) as the FCA framework weighs it heavily. This metric investigates the utility and community’s collective ability to manage the financial burden of compliance. The FCI includes six parameters representing different aspects of the community’s underlying financial strength. Two parameters address existing WTD debt obligations, two consider socio-economic conditions in the region, and two relate to property tax data. Ecology released its own FCA guidance that made small adjustments to EPA’s approach, including using Washington’s statewide MHI rather than the national figure when calculating the FCI.²

Poverty Indicator: The FCA also includes a benchmarking analysis related to the prevalence of poverty in the service area. The Poverty Indicator, or PI, combines six measurements of poverty prevalence in the service area into a single metric. The calculations that go into the PI are upper limit of lowest quintile household income, percentage of population with income under 200% of the federal poverty level, percentage of population receiving food stamp/SNAP benefits, percentage of housing units that are vacant, trend in household growth, and unemployment rate. These calculations are compared to national benchmarks and rated as indicating low, mid-range, or high impact.

² [Final Treatment Plant Financial Capability Assessment Guidance Puget Sound Nutrient General Permit](#)

Ecology's 2024 guidance includes a similar adjustment for the PI as it does for the FCI, it replaces national comparisons with state comparisons.

In the final step of the FCA process, depending on the PI score, the final FCA score may be adjusted up or down, resulting in EPA's overall assessment of the impact on the service area community.

Lowest Quintile Residential Indicator (WA Department of Ecology): Ecology's 2024 FCA guidance includes a new metric: the Lowest Quintile Residential Indicator, or LQRI. The LQRI measures costs per household as a percentage of household income at the lowest quintile (bottom 20th percentile) income. This complements the calculation of RI (which is based on MHI) by acknowledging the reality that increasing costs will have a larger impact on low-income customers than on customers at the MHI level.

Ecology has indicated that the LQRI score will not be assigned a weight and incorporated into the overall FCA score but will instead be considered independently. The reason is that there is a lack of data, science, and consensus around what LQRI thresholds would result in low, average, or high impacts for communities.

Supplemental Analysis: The FCA also allows permittees to present their case using evidence produced by their own internal financial planning tools and service area research.

Rate Relief Approaches

Rate relief approaches could be broadly separated into two categories: universal or targeted. A universal approach means trying to lower the average sewer rate for everyone—in other words, lowering the total revenue requirement of the utility. This can be achieved by lowering costs or increasing non-rate revenue. WTD is always trying to optimize its costs, apply for grants and loans, and keep its other fees up to date. Those efforts do not require new policy direction and are not the focus of the rate relief policy question. The only potential new area of analysis is tax-funding alternatives that are separate from the sewer rate. Other than that, this policy question mostly focuses on targeted rate relief approaches—how to lower the rate that is paid by households or businesses struggling to afford their sewer bills.

Customer Assistance Programs

WTD has done extensive research to better understand the options for rate-relief and to evaluate the effectiveness of the customer assistance programs (CAPs) currently in use. At best, these programs can offer relief to a segment of the intended households; at worst they can be a costly way to redistribute burdens between low-income households. These

are some of the common limitations that WTD has identified among CAPs within its service area, offered by our local sewer agency (LSA) partners:

- Most LSAs have a CAP, but the amount of assistance and criteria to qualify vary.
 - A majority of them are only available to seniors and individuals with disabilities.
 - Almost all specifically exclude WTD’s wastewater treatment charge from their discount.
- With few exceptions, agencies are unable to offer assistance to multifamily residential households since they have billing relationships with landlords but not with the low-income households.
- CAPs tend to have low subscription rates (beneficiaries as a share of eligible households) and high administrative costs.
 - If there is no external funding, these are funded by higher rates for all, including low-income households that do not participate in the program.
- As independent cities and special purpose districts, the LSAs do not share resources. Smaller, less well-funded agencies must fund CAPs from rates paid by their own constituents. In other words, there are no cross-subsidies between agencies.

There are also significant barriers related to “hard-to-reach” customers, i.e., renters and households living in multifamily buildings. Multifamily buildings do not meter water use at the unit level. Rather, utility accounts are held by landlords who pass the cost through either rent or a separate allocated billing to residents. Lower income households are more likely to rent than own a home. Programs that do not reach multifamily renters are excluding a large portion of the lowest-income households. Figure 1 below shows that in King County almost 45% of households live in multi-family units and Figure 2 shows that most households in the lowest quintile of income are renters.

Types of structure (Table B25024) [View table](#)

Column	King County			
Single unit	53.6%	±0.9%	554,024	±9,495.6
Multi-unit	44.9%	±1.3%	463,945	±13,424
Mobile home	1.4% [†]	±0.2%	14,180	±1,998
Boat, RV, van, etc.	0.1% [†]	±0.1%	1,373	±904

Figure 1. 2024 Housing Type Distribution in King County

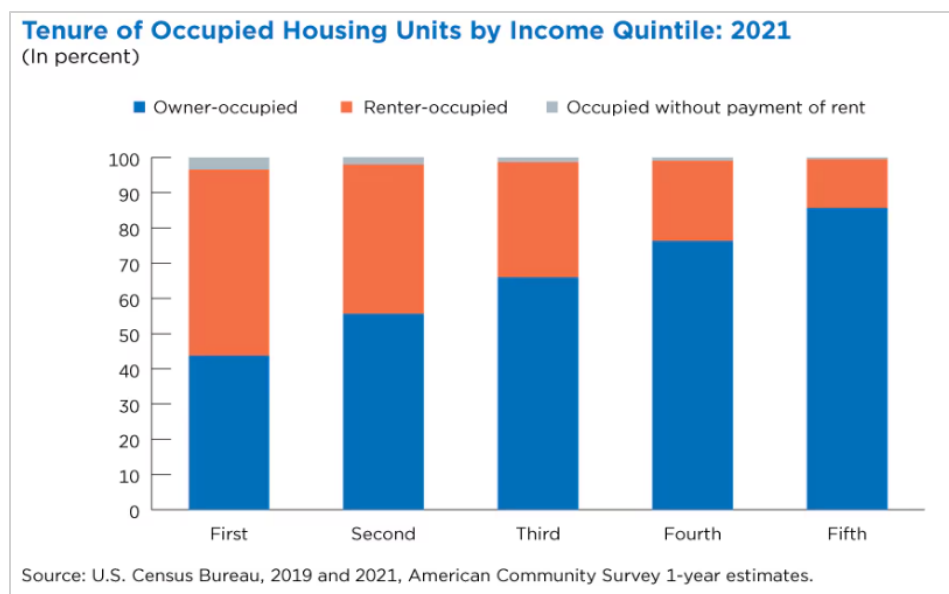


Figure 2. 2021 Housing Ownership by Income (National)

The FCA also includes a requirement (“Financial Alternatives Analysis”) to submit information on the utility’s rate structure and customer assistance programs, with the intent to assess whether utilities are making the most of these tools to lessen the impact on their most vulnerable customers.

ii. Current policies in policies in code, contract, or in practice

Measuring Affordability: Neither King County Code nor WTD’s contracts with LSAs include policies explicitly directing WTD’s measurement of rate affordability.

Rate Relief Approaches

Relevant Policies	Description
RCW 36.94.140	State law (and federal case law) includes restrictions on utilities that ensure a uniform rate for the same class of customers, and customer classification needs to follow cost-of-service principles except for low-income assistance.
LSA Contracts (Sewage Disposal Agreements)	The LSA contracts (section 5) dictate a uniform rate structure and the allowed uses of wastewater rate revenue. This language prevents WTD from offering rate relief approaches without contractual changes.

Customer Assistance Programs

The primary policy driver for WTD’s work on rate affordability and customer assistance programs in the past was the 2016 – 2022 Equity and Social Justice Strategic Plan. This plan led to a capacity charge rate structure study and a capacity charge low-income customer affordability study.

Unlike the wholesale sewer rate, the capacity charge is billed directly to customers by WTD. As the program administrator and billing agency, WTD has tried to maximize the affordability tools it can offer. These tools allow for some temporary relief but are not equivalent to a permanent CAP:

- Flexible payment plans, up to a full year to pay the balance due through monthly payments
- Payment deferral for low-income seniors and disabled individuals until they sell their property

Based on the findings from the consultant-led Low-Income Customer Affordability Study, in 2019 WTD implemented some marginal improvements to its existing affordability tools: extended payment plans, no interest or late fees on property liens, and expanded affordable housing eligibility.

As a result of the Capacity Charge Rate Study, in 2021 WTD implemented a discounted capacity charge for eligible low-income housing. This promotes affordable housing construction but does not translate into direct assistance to individual households.

WTD’s capacity charge needs to be consistent with state law, which means it needs to be uniform for the same customer class and reflect a property owner’s equitable share of the cost of the system (RCW 36.94.140 and RCW 35.58.570). Unlike the sewer rate, there is no explicit exemption for low-income persons.

iii. The system “must-dos”

WTD is not currently required by law or regulation to measure the affordability of its rates or to provide rate relief for those in need. However, certain Clean Water Act regulatory processes may trigger the need for a Financial Capability Assessment (FCA), as occurred during WTD’s CSO Consent Decree negotiations.

Ecology’s 2021 Puget Sound Nutrient General Permit (PSNGP) required several dischargers, including WTD, to complete an FCA as part of a nutrient reduction evaluation—a conceptual planning effort to assess potential nitrogen treatment alternatives. Ecology released FCA guidance for this work in 2024, but the PSNGP was subsequently invalidated. Ecology has indicated it intends to move forward with many PSNGP elements, including nutrient reduction evaluations and FCA requirements, through its NPDES permitting process. Ecology has indicated the FCA results will be considered in future nutrient permitting to develop feasible compliance schedules and cannot be used to lessen regulatory standards. The scope of and timeline for implementing these regulations remains highly uncertain.

iv. Current and Budgeted Expenditures

WTD is limited in terms of current dedicated budget in service of affordability metrics or rate relief measures. As a wholesaler, it does not have the direct customer relationship to offer assistance on the sewer rate at the present time, though the policy options section of this memo will explore some potential changes to that model. The primary budgeted expenditures related to affordability are WTD finance staff resources. A portion of our utility rates and capital finance team’s time is dedicated to affordability issues, and a portion of our customer assistance, accounts receivable, and capacity charge teams’ time is dedicated to connecting folks to advice and assistance for payment options on the capacity charge. Based on staff labor, benefits, and overhead costs, this could equate to about \$300K annually in terms of budgeted expenditures associated with affordability efforts.

v. Summary of Data

The National Coalition for Legislation on Water Affordability defined water affordability as:

The cost of provision that does not impede people from meeting other basic needs or human rights. There is, however, currently no one generally accepted definition of

water affordability. It varies depending on the purpose of the water affordability assessment. Affordability researchers generally agree that no one single metric can or should be used in measuring water affordability, rather, a variety of quantitative and qualitative data should be considered.³ (Schneemann, 2019)

Additionally, in December 2024, the United States Environmental Protection Agency (EPA) wrote in its *Water Affordability Needs Assessment Report to Congress* that:

One widely used qualitative definition of water affordability is the ability of a household to pay for basic water services necessary for drinking, cooking, cleaning, and sanitation without experiencing undue hardship (Patterson & Doyle, 2021; Raucher et al., 2019). The United Nations definition of water affordability further characterizes “undue hardship” by describing water affordability as **“essential water and sanitation services available at a price that does not prevent access, nor interfere with other essential expenditures such as food, healthcare, housing, clothing, and education”** (United Nations Human Rights Council, 2015). Legal definitions of “undue hardship” refer to the imposition of “significant difficulty or expense” as a result of a lack of adequate accommodation (Cornell Law School, 2024). These definitions also note that while people may successfully pay water bills, they may still be facing undue hardship related to other categories of necessary spending. Therefore, simply examining the rates of customer nonpayment may provide an incomplete view of undue hardship.⁴

³ Schneemann, M. (2019). *Defining & measuring water affordability: A literature review*. Illinois-Indiana Sea Grant. <https://iiseagrant.org/publications/water-affordability-method-literature-review/>

⁴ US EPA. [Water Affordability Needs Assessment Report to Congress](#) (2024). 14.

Figure 3 below ranks (from highest to lowest) the combined monthly sewer bill for WTD's 34 local service agencies; WTD's portion of the sewer bill is shown in dark green next to the local service agencies' portion of the bill.⁵

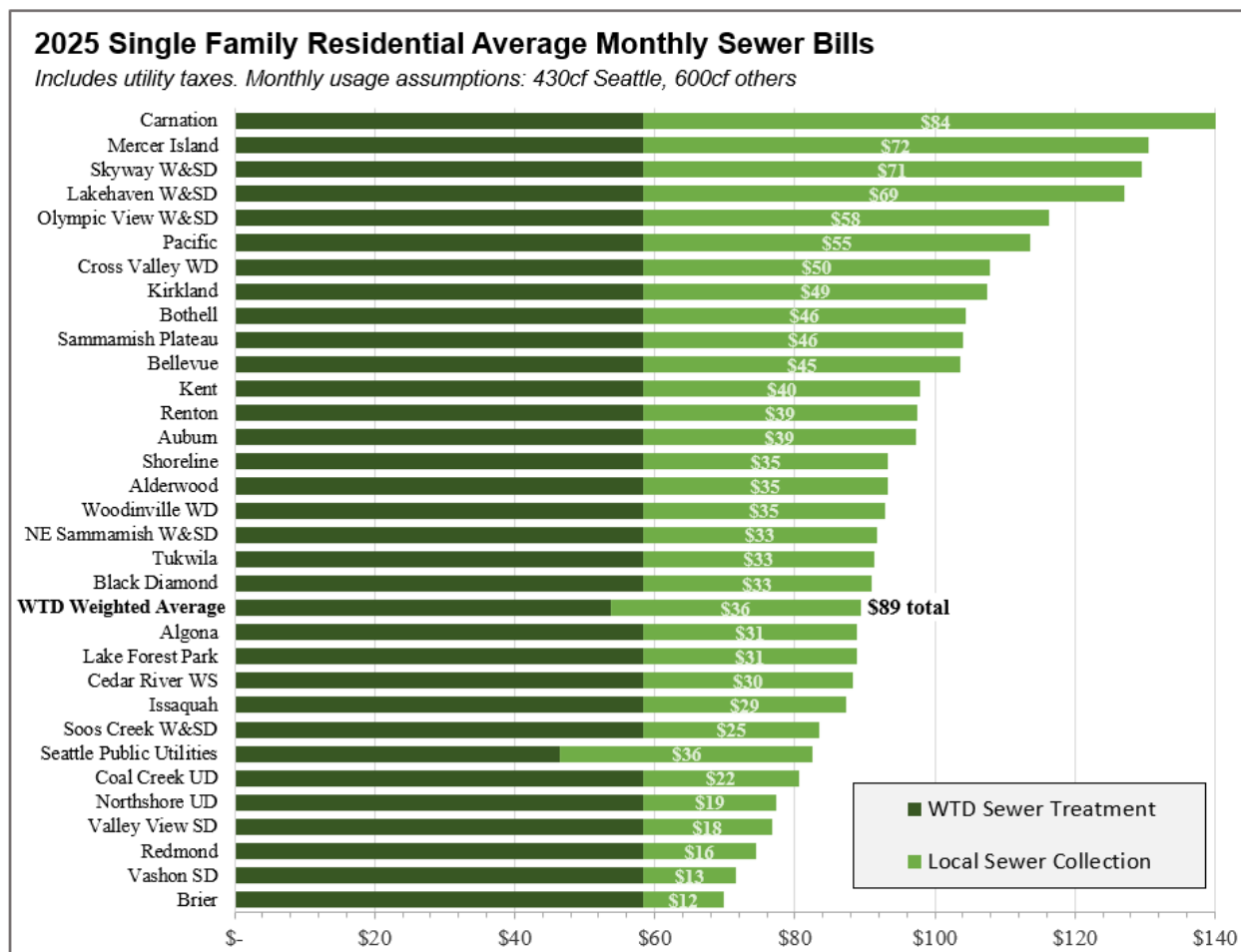


Figure 3. 2025 Single Family Residential Average Monthly Sewer Bills

⁵ Seattle Public Utilities charges single-family homes on a volumetric basis, instead of using a direct pass-through of WTD's fixed treatment rate per single-family home. This blended charge per 100 cubic feet effectively lowers the treatment rate portion paid by the average Seattle single-family home, as shown in the chart

The image contains two maps of King County, Washington, illustrating wastewater treatment service areas and household income data.

Left Map: 2025 Median Household Income by Census Tract

This map displays the projected 2025 median household income for various census tracts within King County. The income levels are categorized into five ranges, represented by different colors:

- Below \$100,000 (Dark Red)
- \$100,000 - \$133,000 (Orange)
- \$133,000 - \$166,000 (Yellow)
- \$166,000 - \$200,000 (Light Green)
- \$200,000 & Above (Dark Green)

The map also shows the boundaries of surrounding counties (Snohomish, Kitsap, Pierce) and major water bodies (Puget Sound, Lake Washington).

Right Map: WTD Component Agency

This map displays the wastewater treatment district (WTD) component agency service areas within King County. The service areas are categorized into five income ranges, represented by different colors:

- Below \$100,000 (Dark Red)
- \$100,000 - \$133,000 (Orange)
- \$133,000 - \$166,000 (Yellow)
- \$166,000 - \$200,000 (Light Green)
- \$200,000 & Above (Dark Green)

The map also shows the boundaries of surrounding counties (Snohomish, Kitsap, Pierce) and major water bodies (Puget Sound, Lake Washington).

King County Wastewater Treatment

2025 Median Household Income By Census Tract

King County Wastewater Treatment

2025 Median Household Income By Local Sewer Agency

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Figure 5 below shows the Lowest Quintile Residential Indicator (LQRI) individually calculated for each service area, using the average bill from Figure 1 and the local incomes. As described above, the LQRI metric is equal to the annual sewer bill (inclusive of collection, treatment, taxes, and stormwater) divided by the lowest 20% of household income.

Service Area	# of Customers	2025				
		Sewer & Stormwater Monthly Bills (w taxes)	Median Household Income	MHI RI	Lowest Quintile Income	LQRI
Alderwood Water & Wastewater District	54,502	\$105	\$129,445	1.0%	\$67,519	1.9%
City of Algona	1,659	\$105	\$91,876	1.4%	\$60,344	2.1%
City of Auburn	31,430	\$117	\$94,427	1.5%	\$52,231	2.7%
City of Bellevue	66,330	\$114	\$161,300	0.9%	\$69,115	2.0%
City of Black Diamond	2,465	\$114	\$147,069	0.9%	\$89,808	1.5%
City of Bothell	8,707	\$125	\$130,654	1.2%	\$58,172	2.6%
City of Brier	1,806	\$89	\$144,995	0.7%	\$78,249	1.4%
City of Carnation	942	\$154	\$171,369	1.1%	\$75,125	2.5%
Cedar River Water & Sewer District	5,511	\$118	\$115,870	1.2%	\$66,363	2.1%
Coal Creek Utility District	4,942	\$114	\$174,098	0.8%	\$71,089	1.9%
Cross Valley Water District	418	\$120	\$162,425	0.9%	\$72,789	2.0%
Highlands Sewer District	N/A	N/A	N/A	N/A	N/A	N/A
City of Issaquah	13,371	\$109	\$145,356	0.9%	\$70,259	1.9%
City of Kent	37,334	\$117	\$86,230	1.6%	\$45,294	3.1%
City of Kirkland	16,265	\$131	\$172,537	0.9%	\$71,630	2.2%
City of Lake Forest Park	4,066	\$117	\$142,418	1.0%	\$73,898	1.9%
Lakehaven Utility District	1,152	\$145	\$126,324	1.4%	\$66,308	2.6%
City of Mercer Island	8,655	\$157	\$192,862	1.0%	\$91,442	2.1%
Muckleshoot Indian Tribe	N/A	N/A	N/A	N/A	N/A	N/A
NE Sammamish Sewer & Water District	4,845	\$131	\$232,071	0.7%	\$125,694	1.3%
Northshore Utility District	31,452	\$99	\$137,364	0.9%	\$65,547	1.8%
Olympic View Water & Sewer District	215	\$110	\$149,519	0.9%	\$73,429	1.8%
City of Pacific	2,533	\$143	\$92,116	1.9%	\$46,963	3.6%
City of Redmond	34,833	\$91	\$166,710	0.7%	\$71,323	1.5%
City of Renton	32,229	\$116	\$103,037	1.4%	\$50,453	2.8%
City of Shoreline Wastewater Utility	20,408	\$122	\$119,777	1.2%	\$51,262	2.9%
Sammamish Plateau Water	16,626	\$144	\$204,927	0.8%	\$100,056	1.7%
Seattle Public Utilities	303,784	\$139	\$121,984	1.4%	\$47,852	3.5%
Skyway Water & Sewer District	5,247	\$148	\$95,286	1.9%	\$40,056	4.4%
Soos Creek Water & Sewer District	39,537	\$114	\$121,299	1.1%	\$62,378	2.2%
City of Tukwila	7,629	\$111	\$85,950	1.5%	\$55,919	2.4%
Valley View Sewer District	16,921	\$96	\$81,765	1.4%	\$42,963	2.7%
Vashon Island Sewer District	653	\$102	\$106,204	1.1%	\$31,811	3.8%
Woodinville Water District	5,988	\$110	\$151,611	0.9%	\$77,549	1.7%
WTD Weighted Average		\$123	\$129,557	1.1%	\$53,814	2.8%

Figure 5. Lowest Quintile Residential Indicator (LQRI) Table Format

Figure 6 maps the LQRI information geographically, by local sewer agency.

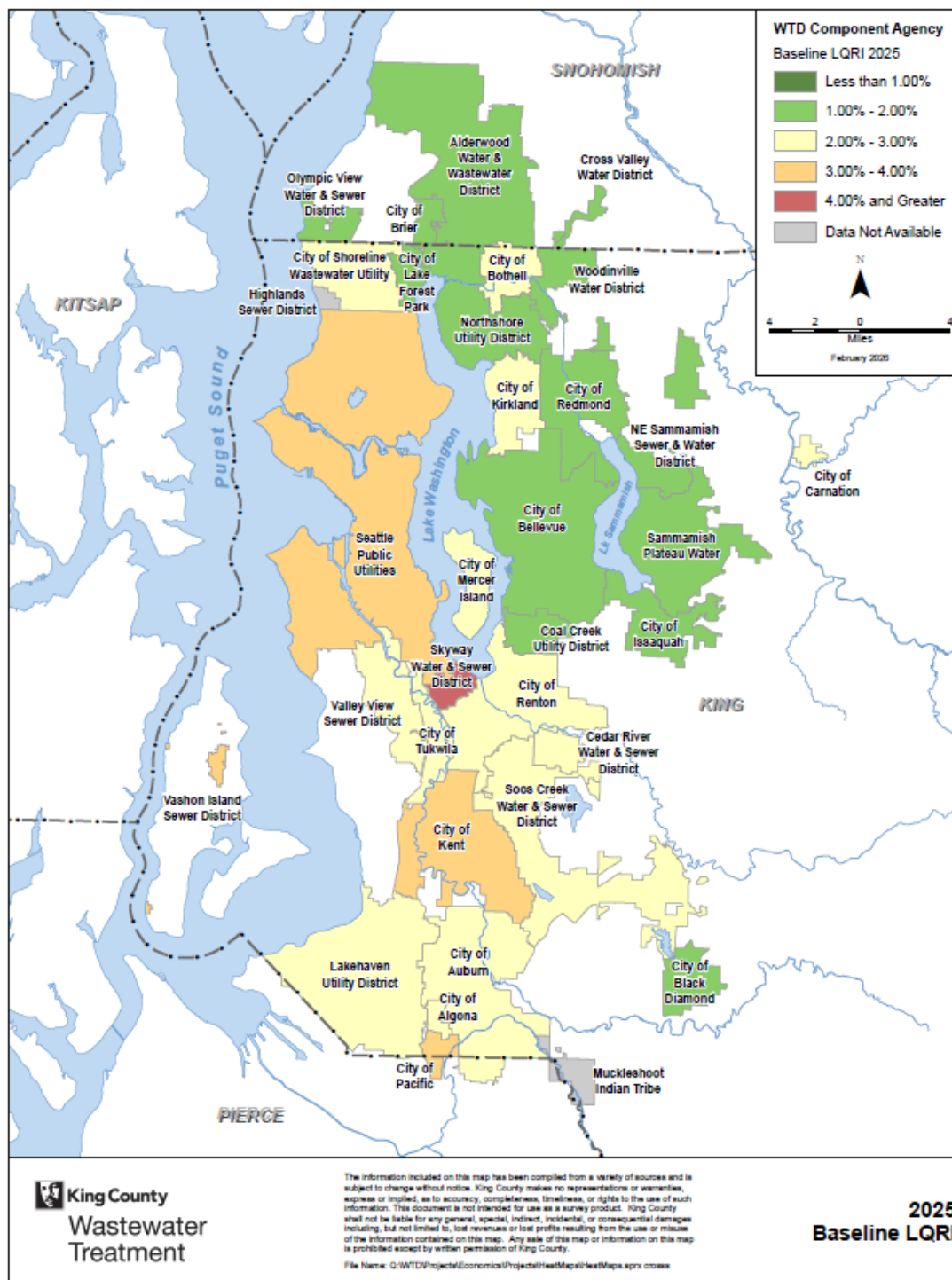


Figure 6. Lowest Quintile Residential Indicator (LQRI) Map Format

Figure 7 below shows a 20-year forecast for both WTD’s sewer bill as a percentage of median household income (MHI) and the LQRI. EPA set 2% as the threshold of “high impact” for the MHI Residential Indicator. Higher impact can justify extended schedules, not reduced regulatory obligations.

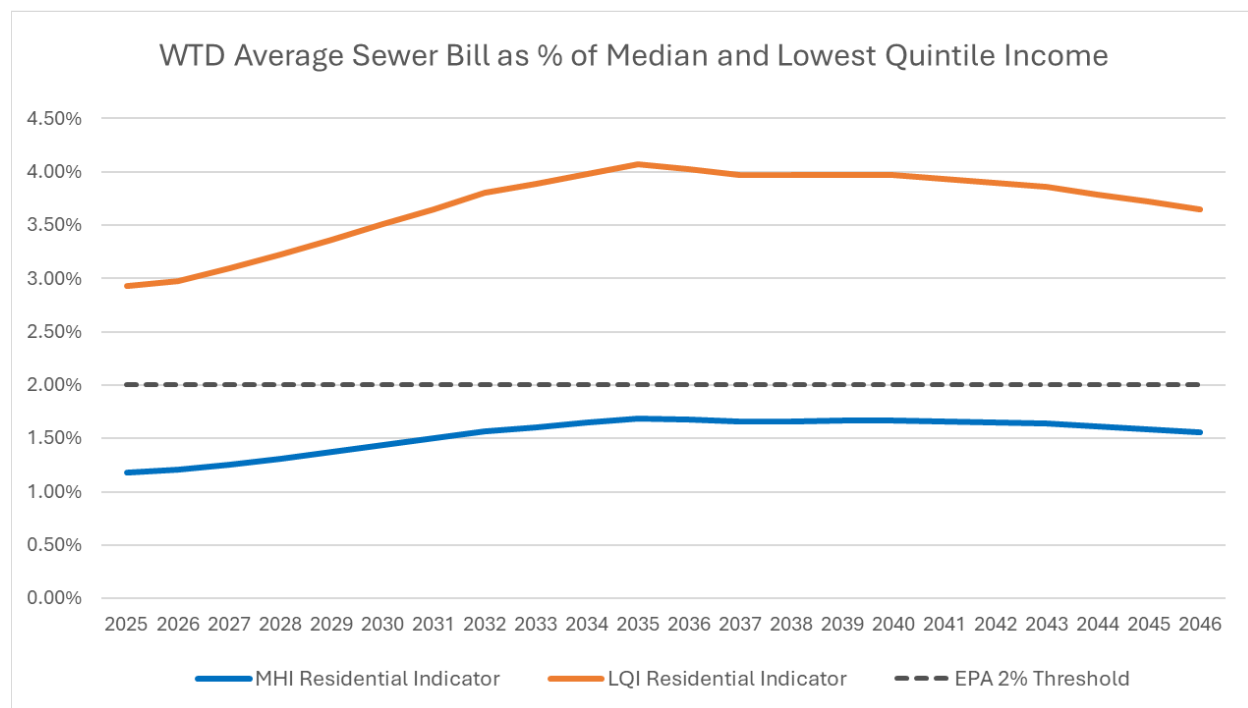


Figure 7. WTD Average Sewer Bill as % of Median and Lowest Quintile Income

In light of shared awareness and growing concern about affordability issues in the water and wastewater sectors as well as limitations in the FCA framework, additional metrics that better reflect the affordability of wastewater bills at the household level are gaining recognition. Professor Manuel P. Teodoro, a professor of public affairs at University of Wisconsin-Madison highly regarded for his contributions to wastewater utility management and finance, has introduced two approaches.

Affordability Ratio: The first of these is an affordability metric that incorporates local cost of living (see discussion below). The Affordability Ratio (AR) calculates the costs of water and sewer service as a percentage of household disposable income. For the baseline AR, household disposable income is calculated by subtracting local costs such as taxes, housing, health care, food, and home energy from the census bureau’s household income for the same area. Dr. Teodoro’s rule of thumb is that paying for water and sewer services should not require more than 10% of disposable household income.

When this metric is calculated using disposable income at the lowest quintile, the ratio is called the AR at the 20th percentile (abbreviated as AR₂₀). Calculating AR₂₀ is especially useful for measuring utility affordability for vulnerable populations.

Hours Worked at Minimum Wage: Another innovative affordability metric is the Hours Worked metric, which estimates the number of hours that must be worked at a given wage to pay for monthly water and sewer service. Dr. Teodoro's rule of thumb is that paying for water and sewer services should not require more than eight hours of work per month. Customizing this calculation to examine Hours Worked at Minimum Wage is valuable because it highlights the burden on minimum wage workers, a group highly susceptible to economic hardship and instability. In this way, eight hours worked at minimum wage may represent a ceiling on the maximum monthly water and wastewater bill that is affordable for the region's most vulnerable working families.

Figure 8 shows data for AR₂₀ and hours worked at minimum wage by agency.

AR ₂₀ and Hours Worked (2025 Rates)			
Service Area	# of Customers	AR ₂₀	Hours Worked
Alderwood Water & Wastewater District	54,502	13%	8.9
City of Algona	1,659	29%	9.4
City of Auburn	31,430	100%	10.4
City of Bellevue	66,330	15%	11.7
City of Black Diamond	2,465	6%	10.5
City of Bothell	8,707	52%	11.3
City of Brier	1,806	6%	7.9
City of Carnation	942	13%	13.9
Cedar River Water & Sewer District	5,511	16%	10.2
Coal Creek Utility District	4,942	11%	9.9
Cross Valley Water District	418	12%	11.3
City of Issaquah	13,371	13%	10.8
City of Kent	37,334	100%	11.4
City of Kirkland	16,265	13%	11.8
City of Lake Forest Park	4,066	10%	9.9
Lakehaven Utility District	1,152	18%	11.0
City of Mercer Island	8,655	8%	14.6
NE Sammamish Sewer & Water District	4,845	3%	11.3
Northshore Utility District	31,452	15%	8.9
Olympic View Water & Sewer District	215	10%	9.9
City of Pacific	2,533	100%	13.1
City of Redmond	34,833	9%	8.0
City of Renton	32,229	100%	7.7
City of Shoreline Wastewater Utility	20,408	100%	11.7
Sammamish Plateau Water	16,626	5%	12.1
Seattle Public Utilities	303,784	100%	9.2
Skyway Water & Sewer District	5,247	100%	13.9
Soos Creek Water & Sewer District	39,537	23%	9.9
City of Tukwila	7,629	82%	6.9
Valley View Sewer District	16,921	100%	9.1
Vashon Island Sewer District	653	100%	8.7
Woodinville Water District	5,988	10%	11.6
WTD Weighted Average		100%	9.8

Figure 8. AR₂₀ and Hours Worked

D. Example Practices from Other Jurisdictions/Industry

Lessons can be drawn from peer agencies on best practices for rate relief approaches. The following section attempts to summarize them.

Seattle Public Utilities provides a unique solution to assistance to multifamily renters by partnership with Seattle City Light. Also, its rate structure is mostly volume based, which allows customers to lower their sewer bills by reducing water consumption (although not all households are able to reduce their essential water use).

Utility Discount Program

If your household income is at or below 70% of the state median income, enroll in the Utility Discount Program to receive an ongoing 50% bill discount on your water, sewer, and solid waste services from Seattle Public Utilities plus a 60% discount on Seattle City Light electricity bills. Learn more about the [Utility Discount Program](#).

In December of 2023, the City of Kirkland updated its code to establish a “universal low-income relief program” that no longer includes age or disability requirements. It also incorporates utility discounts in the form of rebates for those who rent multifamily residential units.

The City of Kirkland offers reduced water, sewer and garbage rates for qualifying low income residential customers. To qualify, applicants must live within Kirkland City Limits and have an annual income at or below [80% AMI for King County](#).

Sewer:

Reduced sewer rates are 75% of the sewer base charge. Normal rates apply to usage above the basic rate.

In 2017, the City of Philadelphia launched a new Tiered Assistance Program (TAP) for residential customers who meet low-income or “special hardship” criteria. In short, the program is a type of CAP that provides variable discounts to households’ water and sewer bills depending on their poverty level (based on income and household size)

Assistance Programs Eligibility Guidelines



Below is an overview of the Water Revenue Bureau's (WRB) income-based assistance and benefits. When you provide a completed application, along with all required documentation, WRB uses the application to determine and enroll you in the program that is most beneficial to you.

Tiered Assistance Program (TAP)

If your household income is equal to or less than 150% of the **Federal Poverty Level (FPL)**, your monthly water bill payment could be fixed at between 2% and 3% of household income.

Is your household income greater than 150% of FPL?

Special Hardship Claims:
If your household has special circumstances (such as the loss of a job or death of a primary wage earner), your monthly water bill payment could be fixed at 4% of household income. For more information, see **Attachment C**.

If your income is between 150–250% of FPL you may still be eligible for monthly payments of about 4% of household income.

Senior Citizen Discount

Seniors 65 or older may be eligible for monthly bills discounted by 25% if household income is less than \$38,800 per year.

Household Income to Federal Poverty Level Percentage	Bill as percentage of Household Income
Below 50%	2%
Above 50% and at or below 100%	2.5%
Above 100% and at or below 150%	3%
Above 150% (Special Hardship)	4%

In addition to those mentioned above, Atlanta has a 1% sales and use tax that supports water and sewer upgrades and reduces rates, and Chicago's program covers most of its rates with property tax.

E. Policy Issues, Challenges, and Opportunities

Measuring Affordability

1. Use of median income

Median income can be a useful benchmark for identifying "typical" income in a given area. However, affordability metrics centered on a typical household inherently obscure the hardships faced by more economically vulnerable residents. WTD's service area—including LSAs, census tracts, zip codes, and neighborhoods—contains households across a wide income spectrum. For example, in King County, the upper bound of the lowest quintile income in 2024 was \$51,349, and the median household income was \$124,700. Understanding rate affordability requires disaggregating income data and examining impacts on households with incomes below the median. Ecology has signaled support for regulated entities assessing impacts on more vulnerable households, through both the introduction of the LQRI and allowance of supplemental analysis in its most recent FCA guidance.

2. Cost of living

Using national baselines can overstate communities' economic resilience when the analysis ignores localized cost-of-living pressures. Ecology's FCA guidance improves on EPA's by using a statewide, rather than national, benchmark for FCI and LQPI. But these comparisons can still mask significant disparities. For example, King County's cost of living is dramatically higher than that of Yakima County, despite identical poverty thresholds. Some federal agencies already adjust incomes for regional price differences, recognizing that buying power varies widely across states and metro areas. Other metrics readily available at the census tract level can serve as meaningful proxies for cost of living. For example, median rent can be a meaningful benchmark that correlates with other essential expenses, making it a practical basis for adjusting income and poverty measures for apples-to-apples comparison. WTD would need to develop methods for making those adjustments in a consistent and defensible manner.

3. Combined impacts of regional and local costs

Because WTD is a wholesale wastewater treatment provider, its regional treatment costs do not capture the full cost of clean water services borne by local sewer agency customers, who must also fund local collection systems and stormwater management. As a result, affordability metrics generally need to include these local costs. WTD can draw on current and historical LSA residential rate data, but its insight into future rate increases is limited and inconsistent.

4. Data availability

WTD's goal of developing a complete and nuanced understanding of local affordability challenges is constrained by practical data limitations. No single dataset provides fully detailed, accurate, and sufficiently disaggregated information for WTD's affordability analyses. Even so, WTD has access to several high-quality, relevant data sources through public datasets and established partnerships, including census-tract-level American Community Survey data and billing information reported by LSAs.

Rate Relief – Policy Issues, Challenges and Opportunities

1. WTD is a wholesaler; it does not have a direct relationship with residents outside of the capacity charge and is therefore limited in its ability to provide customer assistance programs (CAPs). Policy options in the following section will explore possibilities to leverage local agency partner CAPs or modify existing legal conditions to allow support to be directed to those who most need it.

2. State and federal law require utilities to charge uniform, nondiscriminatory rates for the same class of customer with limited exceptions.
 - a. Utilities may establish different customer classes based on reasonable distinctions, such as differences in cost (i.e., customer classes that cost the utility more to serve) or differences in kind (i.e., high-strength industrial dischargers)
 - b. An additional exception exists for a low-income customer class, “Any county, city ...public utility district or other municipal corporation providing utility services may provide such services at reduced rates for low-income senior citizens or other low-income citizens” RCW 74.38.070.
3. Utility rates are a fee for service (not a tax), and utilities cannot force some customer classes to subsidize other classes outside of low-income assistance.
4. Current terms of local sewer agency contracts. Establishing new customer classes, different fee structures, or some other rate relief efforts would require changes to existing contracts, and uniform adoption across all contracts.

F. Affordability Metrics and Rate Relief Policy Approaches

- Policy question: *How will WTD measure customer affordability for contract agencies and ratepayers?*

The range of possible metrics to measure affordability, as described in more detail in Section C.v. of this memo, is shown below. During the “Step 2” analysis for this topic, WTD will use these to identify a suite of recommended metrics to measure affordability, rather than a range of policy options.

1. Residential Indicator (RI) – sewer bill as percentage of median household income (MHI)
2. Financial Capability Indicator (FCI) – utility and community’s collective ability to manage financial burden of compliance
3. Poverty Indicator – measures prevalence of poverty in the service area
4. Lowest Quintile Residential Income (LQRI) – sewer bill as percentage of lowest quintile income
5. AR₂₀ – calculates cost of water and sewer service as percentage of household disposable income for the lowest quintile
6. Hours Worked at Minimum Wage – number of hours worked at any given wage to pay for water and sewer service

- Policy question: *What other rate relief approaches should WTD implement to improve affordability for those who may struggle to pay their sewer bill?*

The range of rate relief approaches that WTD could implement to answer this question:

1. **Status Quo** – uniform rate structure and ongoing cost containment efforts.
2. **Apply Affordability Metrics** – benchmarking with recommended mitigation actions.
3. **LSA Partnership** – data sharing, working regionally towards better CAP enrollment.
4. **CAP Requirement** – all LSAs required to have a CAP for sewer rate customers.
5. **Low-Income Rate Class** – institute new rate class and eligibility requirements for those most in need of assistance.
6. **Tax-Funding Alternatives** – investigate property tax options in place of the fee for service structure.
7. **Regulate multifamily landlords to prevent inflated pass-through increases/charges and strengthen renters'/tenant protections against sewer rate over billing.**

Summary of Rate Relief Approaches

	Description	Goals/outcomes	Tradeoffs
#1	Status Quo: Maintain prudent financial stewardship of rate payer funds through cost containment, project prioritization, and best-available financing.	Maintain current practices to assess rate affordability, limit annual rate increases, and strengthen protections for vulnerable customers.	This approach would continue WTD's current practice of proactively using rate smoothing, project deferral, seeking lower interest financing, etc. to manage rate shocks, but with no special affordability metrics for the general sewer rate. It would continue WTD's capacity charge relief efforts including the payment plan program.
#2	Apply Affordability Metrics: Measure current rate path against benchmarks of affordability to inform key decision-making, mitigation efforts, and future planning.	An affordability framework with common goals and language between WTD and partners is established. Initial mitigation efforts and triggers can be discussed and paired with other rate relief efforts.	Setting fixed thresholds/triggers/goals is challenging as no one metric perfectly encapsulates the experiences of those struggling to pay their bills in the region. If/when WTD's rate exceeds thresholds, which would be largely driven by regulatory requirements without immediate off ramps, there may be dissatisfaction from interested parties that the subsequent actions/mitigation work might be more focused on partnership, predictability, and leverage of existing LSA CAPs than actual rate reduction.

	Description	Goals/outcomes	Tradeoffs
#3	LSA Partnership: Partner with local sewer agencies to share customer affordability data and increase use of their customer assistance programs (CAPs).	Barriers to enrollment in LSA CAPS regionally are lowered/removed. WTD and LSA partners can engage in decision making with confidence in shared data.	This approach would focus on increasing collaboration with LSAs to share best practices on CAPs, minimize administrative costs, and help in expanding enrollment in the programs. It would not require CAPs as part of the LSA contracts. Without a requirement, it may be challenging to realize meaningful improvement in enrollment in the populations that could most use the assistance.
#4	CAP Requirement: Require all LSAs to offer CAPs via contracts.	CAP enrollment and eligibility are standardized and universally accessible across the WTD service area.	This approach builds on approach #3 by requiring all LSAs to have a CAP in their service contract, as well as standardizing the eligibility requirements of those programs. Renegotiating contracts is a significant lift and not all LSA partners may agree.
#5	Low-Income Rate Class: Add low-income as a customer class at a lower rate than other RCEs.	Rates are subsidized regionally rather than the administration of assistance sitting at the local level.	Would require council adoption, then standardization of low-income requirements across all LSA contracts, as well as local covenants to ensure that low-income rates pass through to actual residents, as opposed to individual agencies or landlords. Would de facto raise the sewer rate for everyone who is not

	Description	Goals/outcomes	Tradeoffs
			part of the low-income rate class. Low-income households that do not sign up would end up paying the higher rate.
#6	Tax-Funding Alternatives: Fund all or part of the sewer rate through property taxes, which are more progressive than the current structure.	A more progressive distribution of costs is achieved, helping to alleviate burden on those most affected by increases to the revenue requirement.	Although this approach would be more progressive, there are significant legal and practical feasibility challenges. It would require significant changes to both LSA contracts and local tax structure. Thus, it is not recommended as practical.
#7	Regulate Multifamily landlords to prevent inflated pass through increases/charges: This approach would limit the pass-through increases to tenants to no more than the LSA sewer bill increases from year to year.	Tenant protections are improved – historically some of the most vulnerable communities. Bill increases associated with the sewer rate cannot be inappropriately inflated.	These type of tenant improvement laws are outside of WTD’s current purview and would require significant legal counsel and work with the State Legislature and Governor’s Office to implement. More data is required to understand the prevalence and nature of this phenomenon.

G. Interested and affected parties WTD will engage to gather input

MWPAAC and the component agencies that WTD provides sewerage services to are one of the audiences that need to be engaged on affordability metrics and rate relief approaches. Additional engagement with tribes, community-based organizations (CBOs), and environmental non-governmental organizations (NGOs), businesses, industries, and the general public may be conducted during implementation planning.

H. Rate structure considerations

Several of the rate relief approaches described above would have impacts on the rate structure. Establishing rate-setting policies that rates cannot exceed a benchmark (approach #2) would have obvious limitations on rate growth.

Policy approach #5, Low Income Rate Class, would have a major impact on WTD's rate structure. LSAs with a higher percentage of low-income households would pay less, and LSAs with a lower percentage of low-income households would pay more. The exact implications of policy approach #6, Tax Funding Alternatives, would depend on further definition of the tax-funding structure, but a full replacement of the sewer rate would shift the burden from low-income households to households living in higher valued properties.

Similarly, changes to WTD's rate structure could have indirect impacts on affordability, such as updating the RCE equivalency factor, implementing I/I surcharges, or moving to a fully volumetric rate design.

I. Relationship to contracts

Many of the rate relief approaches discussed would require changes to the sewer rate contracts, such as the requirement and standardization of CAPs, or the addition of a low-income customer class. Adoption of these measures would require universal adoption across LSA contracts. The sewer contracts also state that the contracts may be modified from time to time through changes to King County Code.

J. Equity and Social Justice (ESJ) impacts

To be identified and analyzed as policy approaches are finalized. Different rate relief approaches have varying impact on the progressiveness of cost structure and equitability of rate burdens on the service area.

K. Planning-level cost estimates

This section will be added into the policy memo as the "Step 2" analysis later.

L. Evaluation of outcomes: identify impacts and outcomes of each option

This section will be added into the policy memo as the "Step 2" analysis later.