

Kitsap County Solid Waste Division

SOLID WASTE COST OF SERVICE AND RATE STUDY FINAL REPORT

December 2021

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FCS GROUP
Solutions-Oriented Consulting

December 22, 2021

Chris Piercy, Senior Program Manager
Kitsap County Public Works - Solid Waste Division
614 Division Street, MS-27
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Subject: Final Report for Solid Waste Cost of Service and Rate Study

Dear Chris,

FCS GROUP is pleased to submit the final report of the Solid Waste Cost of Service and Rate Study. The report summarizes the methodology, findings, and recommendations for each of the core elements of the study.

It has been a pleasure working with Kitsap County Solid Waste Division staff on this effort. Please let me know if you have any questions or need additional information on this report. I can be reached at (425) 336-4157.

Sincerely,



Angie Sanchez-Virnoche
Principal and Vice President



Matt Hobson
Project Manager



Melanie Hobart
Project Consultant

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Section I. EXECUTIVE SUMMARY

I.A. BACKGROUND

The Kitsap County Solid Waste Division (Division or County) oversees and manages solid waste transfer and disposal services throughout Kitsap County. The Division owns four transfer stations: Olympic View Transfer Station (OVTS) and three smaller recycling and garbage facilities (RAGFs). The facilities provide waste disposal and recycling drop-off services to residents, businesses, and commercial waste haulers within the County and surrounding areas. All municipal solid waste (MSW) that is collected at the RAGFs is hauled to OVTS before disposal.

The County contracts with Waste Management (WM) for operation of OVTS, long-haul transportation, and eventual landfilling of solid waste at the Columbia Ridge Landfill in Arlington, Oregon.

I.B. COST PRESSURES AND RATE IMPACTS

The Division is anticipating several operating and capital cost pressures over the next several years that, if left unaddressed, will impact the County's goals for providing efficient and reliable solid waste services that also protect and preserve human health, environmental quality, and natural resources.

- A new 20-year service contract for the operation of OVTS begins in 2022. The contract includes new compensation rates and services to address the County's requirements at the facility.
- The County has identified approximately \$46 million in capital project improvements at its solid waste facilities between 2021 and 2028.
- The Division's existing rate structure – charging customers a tipping fee based on the weight of MSW – is a common structure for transfer stations; however, it can create funding challenges for the utility. Some of the services provided by the Division are unrelated to disposed solid waste (e.g., recycling and hazardous materials processing), but are exclusively supported by a rate structure dependent on disposed solid waste.
- Disposal tonnage historically fluctuates from year to year in response to economic conditions and effects of resource recovery programs, creating a funding challenge for disposal services that are generally fixed relative to changes in disposed tons.
- All MSW collected at the RAGFs must be transported to OVTS before disposal. This creates two separate “touch points” to manage waste collected at the RAGFs, making the full cost of MSW collected at the RAGFs higher than the cost of MSW dropped directly at OVTS.
- Operationally, there is a higher cost per transaction for self-haulers when compared to commercial haulers. This is due to the amount of time it takes at the entry point of the RAGFs and OVTS, compared to an automated system for commercial haulers. With this in mind, the County is looking to incentivize residential self-haulers to switch to curbside collection services that would reduce customers' costs and decrease traffic volumes at the County facilities.

I.C. STUDY PROCESS

The methods used to conduct the rate study are based on principles that are generally accepted and widely followed throughout the industry. These principles are designed to produce rates that equitably recover the costs of the utility by setting the appropriate level of revenue to be collected from ratepayers.

The three key analyses completed as part of the study process are listed below:

- **Revenue Requirement.** This analysis identifies the total revenue requirement to fully fund the Division on a standalone basis, considering operating and maintenance expenditures, capital funding needs, and fiscal policy objectives.
- **Cost of Service.** This analysis equitably distributes costs to customer classes based on their proportional demands on and use of the system.
- **Rate Design.** Rate design is the third technical step in utility rate setting. The principal objective of rate design is to implement a rate structure that collects the appropriate level of revenue and is both cost-based and aligns with the utility's pricing goals and objectives.

I.D. RESULTS

The Division's multi-year financial plan includes a proposed 16.5 percent increase to rate revenues effective June 1, 2022. An additional 16.5 percent increase would occur January 2023. Inflationary-level revenue adjustments of 3.0 percent annually are forecasted from 2024 to 2028. With these revenue adjustments, the Division is projected to generate approximately \$24.6 million and \$31.4 million in 2022 and 2023 respectively. Adjustments to specific rates over the rate-setting period are designed to transition existing rates towards the cost to provide services to the utility's different customer groups.

I.E. SUMMARY RECOMMENDATIONS

There are several rate changes recommended as a result of this study.

- **MSW Tipping Fee Increase** – The existing MSW tipping fee is scheduled to increase from \$90.00 to \$104.00 in 2022, \$118.00 in 2023, and \$121.00 in 2024.
- **Minimum Fee Increase** – The existing minimum fee of \$22.00 is charged to all OVTS self-haul loads up to 460 pounds. The fee is proposed to increase to \$36.00 in 2022, \$41.00 in 2023, and \$42.00 in 2024. The new fees will cover up to 700 pounds of waste. The increased fees will also support a greater share of the cost of recycling services provided at the transfer stations which are primarily used by self-haulers.
- **RAGF Can Fees** – The first 32-gallon can per load will increase from \$11.00 to \$13.00 in 2022. Each additional 32-gallon can per load will increase from \$3.00 to \$5.00. The proposed increases would support a greater share of the recycling services provided at the transfer stations which are primarily used by self-haulers. The increase to additional 32-gallon cans is designed to recover the costs incurred by the Division to consolidate, transfer, and dispose of waste received at the RAGFs.
- **Special Waste Fees** – Tipping fees for contaminated soils, asbestos, creosote treated lumber, and other special wastes are proposed to increase based on the increased costs incurred by the Division from the new operating contract for OVTS. The tipping fee for asbestos is proposed to increase from \$183.35 per ton to \$247.52 per ton in 2022.

Exhibit 1.1 details the scheduled increases to the County’s solid waste rates at OVTS and the RAGFs from 2022 to 2024.

**Exhibit 1.1
 Proposed Rate Schedule**

OVTS Fee Schedule

WASTE TYPE	DISPOSAL FEES			
	Existing	6/1/22	1/1/23	1/1/24
Municipal Solid Waste (MSW) -- per ton	\$90.00	\$104.00	\$118.00	\$121.00
Minimum Fee	\$21.24	\$34.49	\$39.32	\$40.20
Minimum Fee, <i>including 3.6% State Refuse Tax</i>	\$22.00	\$36.00	\$41.00	\$42.00
Contaminated Soils -- per ton	\$48.48	\$65.45	\$88.35	\$94.54
Bulky Waste -- per ton	\$120.82	\$163.11	\$220.19	\$235.61
Asbestos -- per ton	\$183.35	\$247.52	\$334.16	\$357.55
Coal Ash -- per ton	\$57.81	\$78.04	\$105.36	\$112.73
Creosote Treated Lumber -- per ton	\$57.81	\$78.04	\$105.36	\$112.73
Dredge Spoils -- per ton	\$48.48	\$65.45	\$88.35	\$94.54
Biosolids (<i>delivered loose</i>) -- per ton	\$78.35	\$91.28	\$106.34	\$109.53
Biosolids (<i>delivered in intermodal containers</i>) -- per ton	\$69.63	\$81.12	\$94.50	\$97.34
Yard Waste - per ton	\$77.67	\$100.19	\$129.25	\$136.75
Processed Wood Waste - per ton	\$48.08	\$62.02	\$80.01	\$84.65
Appliances - per appliance	\$20.00	\$24.00	\$28.00	\$28.00
Passenger Vehicle Tires - per tire	\$9.00	\$11.00	\$13.00	\$13.00
Commercial Vehicle Tire - per tire	\$11.00	\$13.00	\$15.00	\$16.00

RAGF Fee Schedule

	DISPOSAL FEES			
	Existing	6/1/22	1/1/23	1/1/24
One-can (32-gallon)	\$10.62	\$12.55	\$13.51	\$13.51
w/ 3.6% State Refuse Tax	\$11.00	\$13.00	\$14.00	\$14.00
Each additional can	\$2.90	\$4.83	\$7.72	\$8.69
w/ 3.6% State Refuse Tax	\$3.00	\$5.00	\$8.00	\$9.00
Volume-based fees (per cubic yard)	\$24.94	\$34.92	\$48.88	\$52.79
Special Wastes				
Mattress, box spring, or recliner (each)	\$12.00	\$14.00	\$16.00	\$16.00
Sofa (each)	\$15.00	\$29.00	\$54.00	\$63.00
Sofa with bed (each)	\$30.00	\$45.00	\$66.00	\$73.00
Roofing (per cubic yard)	\$45.00	\$68.00	\$100.00	\$110.00
Drywall (per cubic yard)	\$45.00	\$68.00	\$100.00	\$110.00
Appliance (each)	\$20.00	\$24.00	\$28.00	\$28.00

Section II. INTRODUCTION

II.A. SCOPE OF WORK

In May 2021, the Kitsap County Solid Waste Division contracted with FCS GROUP to perform a solid waste cost-of-service and rate study. The results of this study establish a blueprint for achieving strong financial performance in the future while delivering efficient and effective services to the Division's customers.

II.B. REPORT ORGANIZATION

This report is organized into eight sections.

- **Section I** presents a high-level executive summary, detailing the cost-of-service study and rate recommendations.
- **Section II** provides background information about the Division and a general outlook of factors affecting the future financial performance of the solid waste utility.
- **Section III** describes the general purpose of a utility rate study, as well as the industry standard methodology and framework for the analysis.
- **Section IV** explains the step-by-step process and results of the revenue requirement analysis, which details the overall needs of the system (operating expenses, existing debt, capital programs, etc.), and the revenue (rate increases) required to cover those needs.
- **Section V** details the cost-of-service analysis, which addresses cost proportionality between the Division's customer classes. This analysis explores the extent to which different customer classes are paying their proportional share of the revenue requirement.
- **Section VI** outlines the third and final technical step in utility rate setting (rate design). The principal objective of rate design is to implement rate structures that collect the appropriate level of revenue and are reasonably aligned with cost of service.
- **Section VII** summarizes the study results and recommendations from FCS GROUP.

II.C. KITSAP COUNTY SOLID WASTE DIVISION

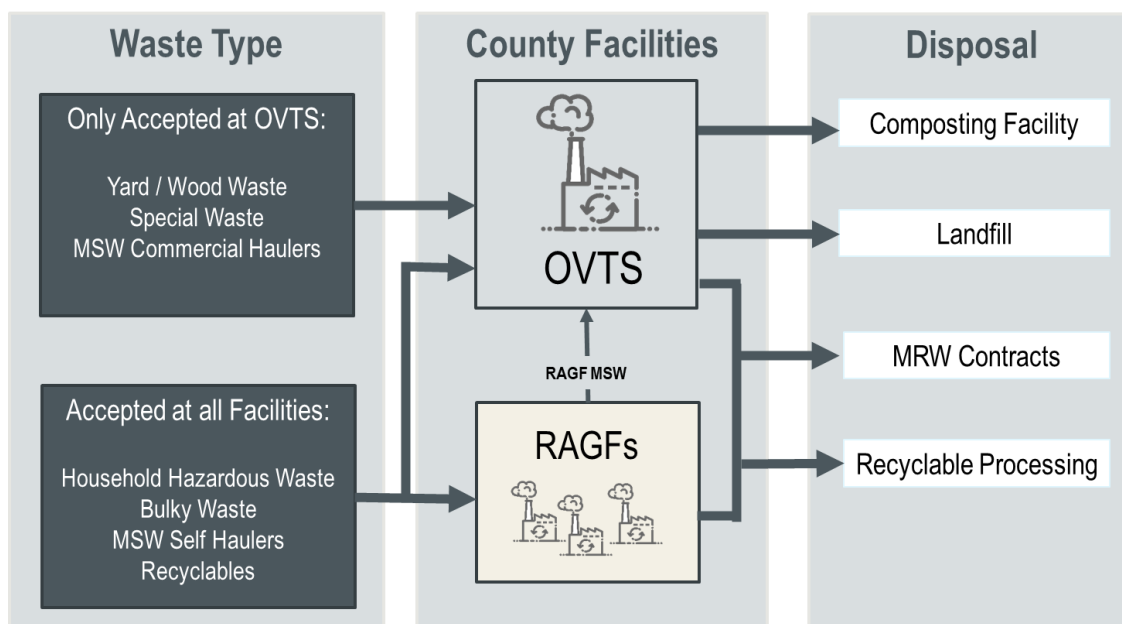
The Kitsap County Solid Waste Division owns and manages the transfer and disposal of solid waste generated in the county, including the cities of Bainbridge Island, Bremerton, Poulsbo, and Port Orchard, areas governed by the Suquamish Tribe, the Port Gamble S'Klallam Tribe, and U.S. Naval Base Kitsap. The Division also serves as the lead agency for solid waste management planning within the county service area. The Division owns and manages four solid waste transfer stations:

- » Olympic View Transfer Station (OVTS) is the largest and main transfer station in the County system. OVTS accepts MSW from commercial and self-haulers, as well as recyclables, household hazardous waste, yard / wood waste, and special wastes. The Division contracts with Waste Management, Inc (WMI) for operation of OVTS.
- » Olalla, Silverdale and Hansville recycling and garbage facilities (RAGFs) are satellite facilities that receive waste from self-haulers throughout the County. These facilities accept MSW including roofing and sheetrock, limited household hazardous waste, appliances and

other bulky waste, and recyclables. Recycling and limited household hazardous waste drop-off is provided free of charge. All other waste received at the RAGFs are charged on a per item / per can basis, or by volume. Recyclable material received at the RAGFs is hauled and processed by private-sector partners through service contracts maintained by the Division. Solid waste is transferred by Waste Management, Inc (WMI) to OVTS to be consolidated with other solid waste before eventual transport and disposal at the Columbia Ridge Landfill in Arlington, Oregon.

The exhibit below outlines the flow of materials through the Division’s waste facilities.

Exhibit 2.1
Waste Flow Map for Division Facilities



II.D. COST PRESSURES AND RATE IMPACTS

The Division is anticipating several operating and capital cost pressures over the next several years that, if left unaddressed, will impact the County’s goals for providing efficient and reliable solid waste services that also protect and preserve human health, environmental quality, and natural resources.

II.D.1. Updated Waste Management Contract

The Division maintains a service contract with Waste Management, Inc (WMI) for the operation of OVTS and long-haul transportation and disposal of solid waste. The contract, initially signed in October 2000 expires on June 3, 2022. The County and WMI have agreed to terms for a new 20-year service contract with new terms that reflect the existing/future costs of operating the transfer station and waste disposal. As part of this rate study, FCS GROUP has outlined the projected costs of the new contract and incorporated them into the Division’s financial forecast and rate adjustments.

II.D.2. Capital Improvement Plan

The County has identified approximately \$46 million in capital project improvements at its solid waste facilities between 2021 and 2028. These costs include substantial investments at OVTS and the RAGFs, as well as ongoing capital improvements at closed landfills maintained by the County. The rate study includes a capital funding plan that leverages cash, reserves, and revenue bonds to fully fund the County's solid waste capital program.

II.D.3. Cost of Self-Haul Transactions

County residents can choose to self-haul solid waste to the County's transfer stations. This is an essential service for residents who either do not have access to or choose not to use curbside collection programs. The rate study evaluates the cost to the County of providing self-haul solid waste services at the transfer stations and develops a rate structure that incentivizes residents to take advantage of more efficient curbside collection options when available.

II.D.4. Cost Recovery of Recycling and Other Services

The Division provides recycling and limited household hazardous waste drop-off free of charge for County residents. These are important services for residents, but the cost of providing them is not free. The cost-of-service analysis estimates the cost to provide these services as well as funding mechanisms to recover these costs.

Section III. RATE SETTING PRINCIPLES AND METHODOLOGY

III.A. OVERVIEW

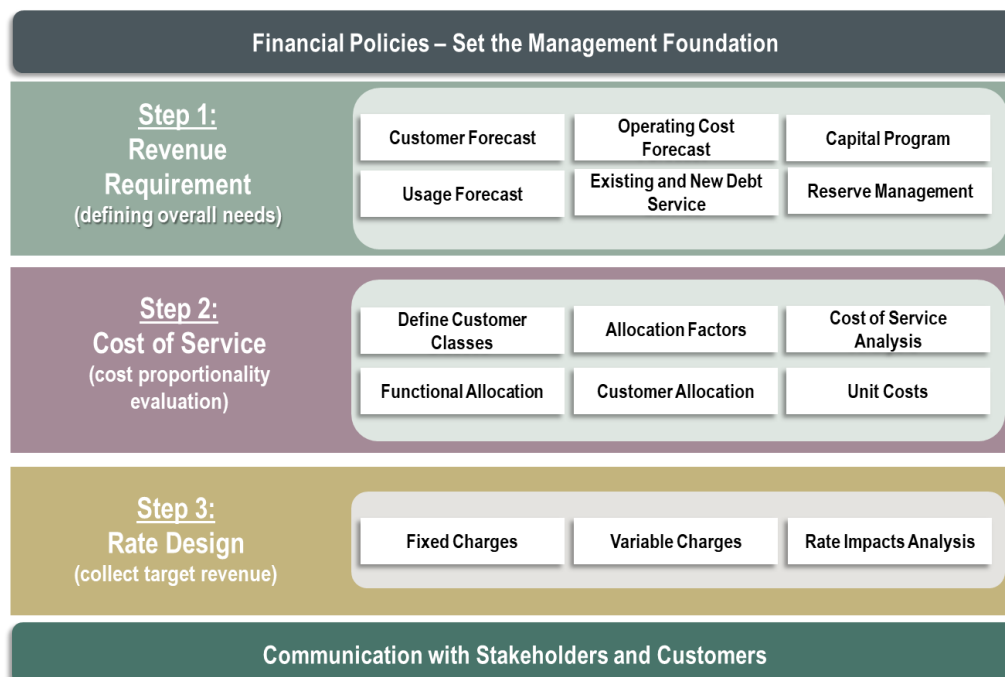
The methods used to establish rates are based on principles that are generally accepted and widely followed throughout the industry. These principles are designed to produce rates that equitably recover the costs of the utility by setting the appropriate level of revenue to be collected from ratepayers and utilizing the established rate structure to collect those revenues.

The three key analyses completed as part of the rate study process are listed below:

- **Revenue Requirement.** This analysis identifies the total revenue requirement to fully fund the Division on a standalone basis, considering operating and maintenance expenditures, capital funding needs, and fiscal policy objectives.
- **Cost of Service.** This analysis proportionally distributes costs to customer classes based on their unique demands on and use of the system.
- **Rate Design.** This analysis includes the development of a rate structure that generates sufficient revenue to meet each system’s revenue requirement forecast, and to address the County’s pricing objectives (e.g., revenue stability, conservation, cost-based pricing).

Exhibit 3.1 illustrates the entire rate study process.

Exhibit 3.1
Overview of Rate Study Process



III.B. FINANCIAL POLICIES

The basic framework for evaluating utility revenue needs is founded on a set of fiscal policies. These policies, which can address a variety of topics including cash management, capital funding strategy, financial performance, and rate proportionality, are intended to promote long-term financial viability for the County. The fiscal policy assumptions in the rate model were provided by the County.

III.B.1. Utility Reserves

Reserves are a key component of any utility financial strategy, as they provide the flexibility to manage variations in costs and revenues that could otherwise have an adverse impact on ratepayers. The rate study included the following financial reserves:

- **Operating Reserve**– Operating reserves are designed to provide a liquidity cushion to ensure that adequate cash will be maintained to deal with significant cash balance fluctuations such as seasonal fluctuations in billings and receipts, unanticipated cash expenses, or lower than expected revenue collections. Industry practice is to maintain a minimum balance in the operating reserve equal to 30 to 90 days of operations and maintenance (O&M) expenses for a solid waste utility. These, of course, are guidelines and actual levels should be established based upon each jurisdiction’s unique needs and risk tolerance. The current operating reserve target for the County’s Solid Waste Division is 90 days of O&M expenses. It is assumed that any operating funds above the operating reserve minimum target are assigned to the capital reserve.
- **Rate Stabilization Reserve** – This reserve is a percentage of annual revenues set aside for years with lower than expected revenue collections. The reserve provides a financial tool to mitigate the effects of significant shifts in expenses or revenue on tipping fees. The minimum target for this reserve is 15 percent of annual revenue – equivalent to approximately \$3.5 million in 2022. The 2021 beginning balance for the existing rate stabilization reserve is approximately \$0.5 million (the reserve balance is anticipated to be \$1.0 million in 2022). The County is aiming to increase funding to the rate stabilization reserve over the next 10 years to meet the minimum target.
- **Capital Reserve** – The Division maintains a capital reserve used to fund annual capital needs. Common industry practices are to maintain a minimum balance equal to 1% to 2% of the utility’s net assets or an amount sufficient to cover an unexpected system failure. The minimum target for this reserve is \$1.0 million.
- **Clean Kitsap Reserve** – The County maintains a separate fund to account for the Clean Kitsap program that funds litter and illegal dumping prevention and response. The fund has a minimum reserve target of \$1.0 million.
- **Landfill Closure Reserves** – The County maintains three Landfill Closure Reserves: Olalla Landfill, Hansville Landfill and General Landfill. These reserves are funded through the life of the landfill, and are used for maintenance and regulatory requirements after the landfill is closed. While there is no formal minimum balance target, the three funds combined have over \$12 million at the beginning of the forecast and are sufficient to cover projected needs through the forecast. Landfill reserve funding is used to offset the cost of landfill-related capital projects within the financial planning period; however, it is not used as a funding source for other capital projects or for operating expenses.

Reserves should fluctuate above and below targets, and such experience does not reflect on the quality of budgeting or management. In fact, if a reserve remains static for extended periods of time without use, this may indicate that it is not set appropriately, or is unnecessary. Utility reserves are

intended to absorb fluctuation in revenues or expenditures without abrupt rate impacts. As reserve levels vary, a policy structure can define the mechanisms for regulating those levels and returning them to intended targets.

III.B.2. Debt Management

Debt issuance is a valuable tool for the Division to finance certain costs, as it allows the Division to spread a relatively large capital project cost over several years. Debt repayment structures can be flexible (e.g. deferred principal repayment), allowing the Division to “shape” its cost structure and facilitate a stable progression of moderate rate adjustments. When developing its capital funding strategy, the Division must weigh the pros and cons of issuing debt to pay for a project. Too much debt issuance may limit the ability to manage rates. However, excessive aversion to issuing debt can also create problems, shifting the burden of funding capital investment to existing customers. It is prudent to consider policies related to debt management as part of a broader utility financial policy structure. Common debt management policies may include the level of acceptable outstanding debt, debt repayment terms, bond coverage and total debt coverage targets.

- » **Debt Service Coverage.** Debt service coverage is a requirement associated with revenue bonds and some State loans. It is a financial measure that assesses the ability to repay debt. A typical minimum coverage requirement for utility revenue bonds is 1.25. If the Division issues debt, the Division is required to collect enough revenue to meet operating expenses and not only pay debt service but collect an additional 25 percent above the bonded debt service. The extra revenue is a cushion that assures bondholders that the Division has the financial resources to meet its debt service obligations. Based on discussions with Division staff, the minimum debt service coverage for future revenue bond debt is assumed at 1.50. Achieving a bonded debt service coverage level greater than the minimum required level is a positive signal to bond rating agencies and can result in more favorable terms when the Division enters the market for revenue bonds.

III.C. REVENUE REQUIREMENT

A revenue requirement analysis forms the basis for a long-range financial plan and multi-year rate management strategy for the solid waste utility. A revenue requirement enables the Division to set utility rate increases which fully recover the total cost of operating the utility: capital improvement and replacement, operations, maintenance, administration, fiscal policy attainment, cash reserve management, and debt repayment. Linking rate levels to a financial plan such as this helps to enable not only sound financial performance for the Division, but also establishes a clear and defensible relationship between the rates imposed on utility customers and the costs incurred to provide the service.

A revenue requirement analysis establishes the total annual financial obligations of the utility by bringing together the following core elements:

- **Fiscal Policy Analysis.** Identifies formal and informal fiscal policies of the Division to ensure that current policies are maintained, including reserve levels and debt service coverage.
- **Capital Funding Plan.** Defines a strategy for funding the capital improvement program, including an analysis of available resources from rate revenues, debt financing, and any special resources that may be readily available (e.g., grants, outside contributions, etc.).

- **Operating Forecast.** Identifies future annual non-capital costs associated with the operation, maintenance, and administration of the system.
- **Sufficiency Testing.** Evaluates the sufficiency of revenues in meeting all financial obligations, including any coverage requirements associated with long-term debt.
- **Strategy Development.** Designs a forward-looking strategy for adjusting rates to fully fund all financial obligations on a periodic or annual basis over the planning period.

III.D. COST OF SERVICE

The purpose of a cost-of-service analysis is to provide a rational basis for distributing the full costs of each utility service to each class of customers in proportion to the demands they place on the system. Detailed cost allocations, along with appropriate customer class designations, help to sharpen the degree of equity that can be achieved in the resulting rate structure design. The key analytical steps of the cost-of-service analysis are as follows:

- **Functional Cost Allocation.** Apportions the annual revenue requirement (e.g., operating expenses, annual debt service, use/funding of financial reserves) to the major functions of the solid waste service:
 - » Scalehouse, Olympic View Transfer Station (OVTS) Waste Transfer, OVTS Diverted Materials Transfer, OVTS Yard / Wood Transfer, Moderate Risk Waste, Clean Kitsap, Recycling and Garbage Facilities (RAGF) Diverted Materials Transfer, RAGF Waste Transfer, Special Waste Transfer, Environmental Compliance, Municipal Solid Waste (MSW) Transport, and MSW Disposal.
- **Cost Classification.** Establishes a rational relationship between functions (activities) and costs. For example, the cost of disposing waste at a landfill is determined by the tonnage sent to the landfill. An allocation of these disposal costs to a particular customer class would be based on the tons generated by that customer class. Tonnage and transaction statistics are developed to allocate the cost of service to customers classes.
- **Customer Class Designation.** Identifies the customer classes that will be evaluated as part of the study. Existing as well as new or revised customer classes or class definitions may be considered. It is appropriate to group customers that exhibit similar usage characteristics and service requirements. The classes in this study are Transfer Station (commercial), Transfer Stations (self-haul), Transfer Stations (self-haul minimum), Regional Direct, Special Waste, Yard Waste and Appliances.
- **Cost Allocation.** Allocates the costs from the functional cost allocation to different customer classes based on their unique demands for each service as defined through the cost classification process. The results identify shifts in cost recovery by customer class from that experienced under the existing rate structure.

III.E. RATE DESIGN

Rate design is the third and final technical step in utility rate setting. The first two technical steps (identifying the total rate revenue needs and determining the proportional distribution of those revenue needs to the utility's customer classes of service) provide the revenue targets for rate design. The principal objective of rate design is to implement rate structures that collect the appropriate level of revenue and that are reasonably aligned with cost of service.

No one rate structure will work well for every utility nor will one rate structure work equally well for all customer classes within a single utility. Solid waste utilities recover charges through a variety of rate structures from tipping fees, fixed fees, fees based on container size and container compaction rating, as well as service frequency. Given the range and complexity of potential rate structures, a solid waste utility should carefully plan and evaluate changes to an existing rate structure. Several considerations (e.g., data availability, implementation feasibility, intraclass equity) can help a utility understand the degree to which different rate structures will advance the agency's objectives.

Section IV. SOLID WASTE REVENUE REQUIREMENTS

IV.A. OVERVIEW

A revenue requirement analysis forms the basis for a long-range financial plan and multi-year rate management strategy. The analysis is developed by completing an operating forecast that identifies future annual operating costs and a capital funding plan that defines a strategy for funding the capital improvement needs of the Division.

IV.A.1. Financial Forecast Period

The financial forecast for the rate model starts in 2021 and continues through 2040. The evaluation of future rate revenue adjustments is based on the 2021 to 2028 time period.

IV.B. OPERATING FORECAST ASSUMPTIONS

The purpose of the operating forecast is to determine whether the existing rates and charges are sufficient to recover the costs the Division incurs to operate and maintain the utility. The basis for this forecast is the Division's 2021 operating budget. The following list highlights some of the key assumptions used in the development of the operating forecast.

IV.B.1. Operating Revenue

- **Rate Revenue** was based on historic tonnage and transaction data, expected tonnage forecast increases and existing rates.
 - » **Tonnage** was based on the Division's 2019 and 2020 historical tonnage at each of the Division's transfer stations. Tonnage growth was assumed to be 3.0 percent per year throughout the forecast.
 - » **Transactions** were provided by the County project team for each location. Transaction growth was assumed to be 3.0 percent per year throughout the forecast.
- **Non-Rate Revenue** consists of grants, interest earnings, and other miscellaneous revenue. Non-rate revenue is estimated at \$800,000 in 2022 and are not expected to see significant changes in the future and were therefore forecast with no increase. The one exception is interest earnings which are calculated annually as 1.0 percent of the funds on hand.

IV.B.2. O&M Expenses

- Operating expenditures increase by the following inflation factors:
 - » **General Cost Inflation** is set at 2.5 percent annually based on the CPI-U for Seattle-Tacoma-Bellevue.

- » **Labor Inflation** is set at 5.0 percent in 2022 based on conversations with County staff. Beginning in 2023 it is assumed to be 3.75 percent annually based on the 2016-2020 change in Benefits from Employment Cost Index.
- » **Benefit Inflation** is set at 5.0 percent in 2022 based on conversations with County staff. Beginning in 2023 it is assumed to be 3.3 percent annually based on the 2016-2020 change in Wages and Salaries from Employment Cost Index.
- » **Construction Cost Inflation** is assumed to be 6.0 percent annually throughout the forecast based on regional estimates of cost inflation for recent construction projects
- » **Operating Contracts** are calculated based on the terms of each contract. They are escalated year over year based on the tonnage and transaction growth. Within the analysis, FCS GROUP calculated and projected four separate contracts:
 - » The OVTS operations contract with WM has a 20-year term effective June 2022. The contract includes a monthly fixed rate of \$162,000 plus a fee per ton for each material handled. The fixed cost does not increase throughout the contract, but the per ton variable rates increase by 100 percent of the CPI-West, Urban index assumed to be 2.5 percent annually beginning in 2024.
 - » The RAGF non-MSW Hauling contract includes transport and processing costs for non-MSW from the three RAGF locations, and increases by a contractual 3.5 percent annually throughout the forecast.
 - » RAGF MSW Hauling contract with WM covers the transport of MSW from the RAGFs and continues at the contractual rates until an update is adopted.
 - » RAGF White Goods Disposal with Total Reclaim also continues at contractual rates until an update is adopted.
- » **Kitsap County Public Health Transfer** is a per-ton expense assessed on total disposed MSW tons received at the OVTS transfer station. The existing Public Health Transfer Rate of \$4.30 per disposed ton is projected to increase to \$4.60 per ton in 2022.
- » **Clean Kitsap** litter collection operations will be transferred from the Kitsap County Sheriff's Office (via an MOU with the Division) to the Division in 2022. This organizational change is anticipated to have a net zero impact on the Division expenses.
- » **Kitsap Nuisance Abatement Team (KNAT) Transfer** is set by total disposed MSW tons and the rate of \$0.25 per ton.
- » **Scalehouse Workers** are projected to be added to the County's staff beginning with the implementation of the new OVTS contract in June 2022. Annual salary and benefit costs are added to the operating forecast for four scalehouse workers and one coordinator.
- » **MRW Operations Staff** are expected to be added with the expansion of the MRW facility in 2025. Annual salary and benefit costs are added to the operating forecast for three attendants and one supervisor.

IV.B.3. Debt Service

- **Existing Debt Service:** The solid waste program has one limited tax general obligation (LTGO) bond issued in 2020 with payments ending in 2035. Annual payments fluctuate year to year and average \$434,500 throughout the payment term.

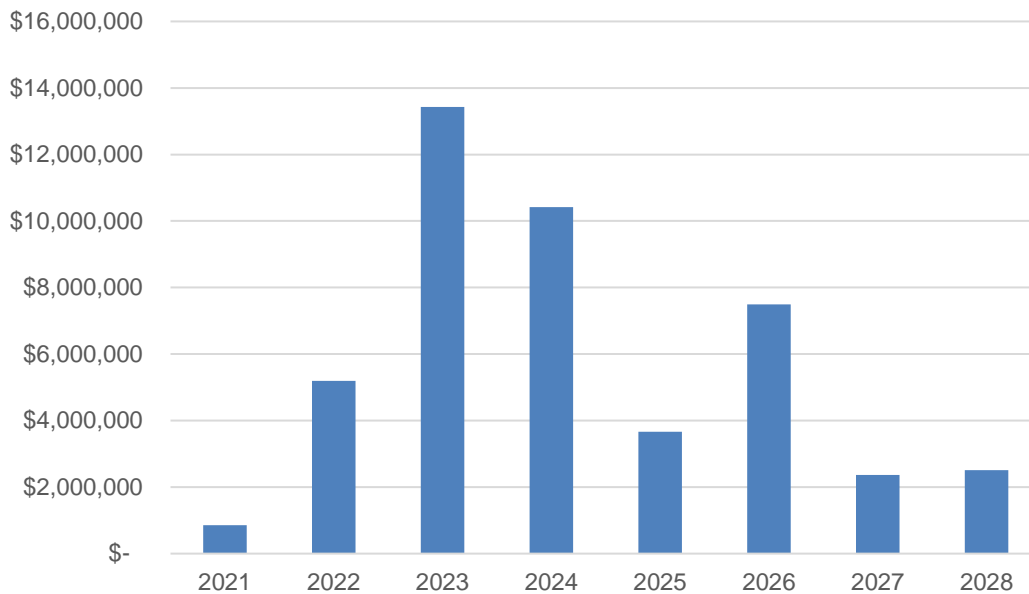
- **New Debt Service:** The forecast includes \$16.5 million in new revenue bond issuances over the forecast period (\$12.0 million in 2023 and \$4.5 million in 2026). Assumed terms for the new debt are a repayment schedule of 20 years, 4.0 percent annual interest rate, and a 1.0 percent issuance cost. Annual payments are projected to be \$1.0 million beginning in 2023, increasing to \$1.3 million in 2026.

IV.C. CAPITAL FUNDING PLAN

The financial planning period includes investments in improvements to the Olympic View Transfer Station, the three recycling and garbage facilities, and the north-end moderate risk waste facility. The improvements at OVTS account for approximately half of the \$46 million capital plan.

Exhibit 4.1 provides a summary of the capital expenditures.

Exhibit 4.1
2021-2028 Capital Improvement Program



IV.C.1. Division Capital Funding Summary

Funding for the capital plan comes from the following sources:

- **Revenue Bond Proceeds:** Revenue bond proceeds are estimated to fund \$21.9 million of capital projects, including: \$5.4 million from the 2020 bond proceeds, an expected \$12.0 million and \$4.5 million from 2023 and 2026 bond proceeds respectively.
- **Landfill Closure Funds:** The \$2.1 million in capital related to ongoing landfill projects is funded through the reserves from the three Landfill Closure Reserves.
- **Transfer from Fund 437:** Remaining capital funding (\$21.9 million) is provided by the annual cash transfers from the solid waste operating fund.

Exhibit 4.2 provides a summary of the funding sources for the capital expenditures. A detailed capital plan can be found in the technical appendix of the study.

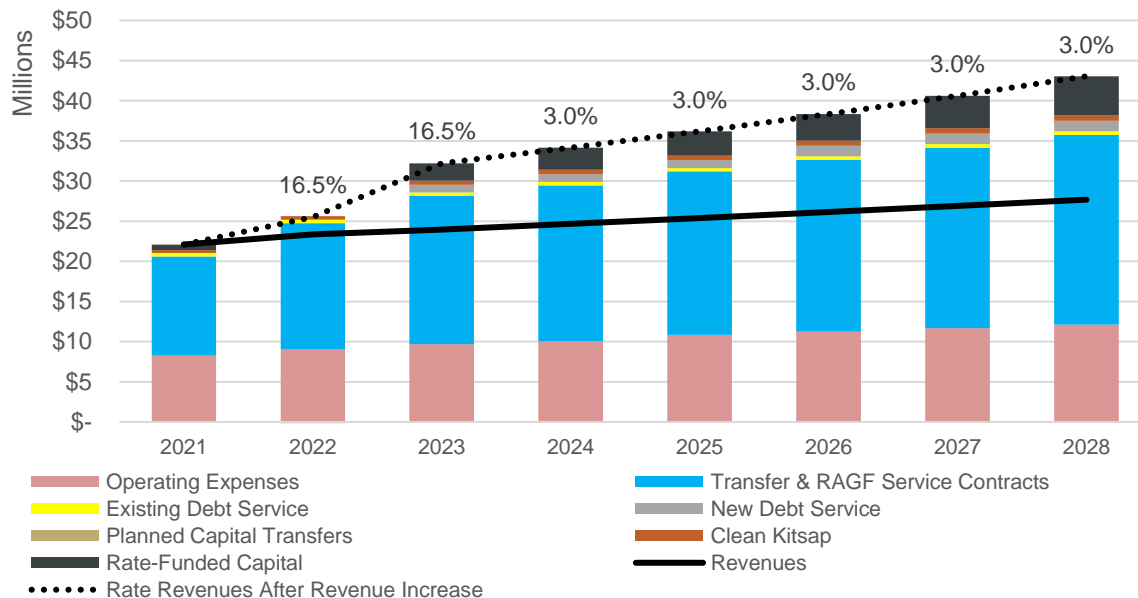
Exhibit 4.2
Solid Waste Division’s Capital Funding Summary

Funding Summary	2021	2022	2023	2024	2025	2026	2027	2028
Total Capital Costs	\$ 850,000	\$ 5,194,000	\$ 13,427,020	\$ 10,421,390	\$ 3,661,183	\$ 7,494,063	\$ 2,364,199	\$ 2,506,050
Funding Sources								
Transfers from Fund 401	\$ 400,000	\$ -	\$ 666,120	\$ 9,267,841	\$ 3,118,411	\$ 3,523,576	\$ 2,449,256	\$ 2,506,050
Landfill Closure Funds	350,000	424,000	280,900	297,754	315,619	468,379	-	-
Revenue Bond Proceeds	5,350,000	-	12,000,000	-	-	4,500,000	-	-
Total Capital Funding	\$ 6,100,000	\$ 424,000	\$ 12,947,020	\$ 9,565,595	\$ 3,434,030	\$ 8,491,955	\$ 2,449,256	\$ 2,506,050

IV.D. SUMMARY OF REVENUE REQUIREMENT

The forecast components for operating and maintenance expenses, debt service and rate-funded capital come together to form the multi-year revenue requirement. The revenue requirement compares the overall revenue available with forecasted expenses to evaluate the sufficiency of rates on an annual basis. **Exhibit 4.3** provides a summary of the solid waste revenue requirement findings.

Exhibit 4.3
Solid Waste Program Revenue Requirement Summary



A summary of solid waste revenue requirement is listed below:

- Revenues at current rate levels are projected to generate \$23.3 million in 2022 compared to \$25.1 million in expenditures – resulting in a cash deficit of \$1.8 million. The cash deficit is projected at \$5.3 million in 2023. There are several cost drivers causing the projected deficit:
 - Compared to the existing contract costs in 2021, the new OVTS service contract is expected to increase by \$6.0 million once fully in effect in 2023. Cost increases are due to contractual cost increases to handle, transport, and dispose of solid waste entering OVTS.
 - New debt service obligations associated with upcoming capital needs will increase annual debt service costs from \$0.4 million in 2021 to \$1.4 million in 2023.
 - Increased staffing needs for the scalehouse and the new MRW facility add \$0.2 million in operating expenses in 2022, increasing to \$0.8 million by 2025.

- Annual operating expenses are projected to continue to outpace revenues over the rate-setting period. By 2028, the annual cash deficit is projected to be \$9.3 million.
- To meet the projected financial obligations of the utility, the 2022 rate proposal includes 16.5 percent annual increases to the overall rate revenues. An additional 16.5 percent increase to rate revenues is projected in 2023. Inflationary-level revenue adjustments of 3.0 percent annually are forecasted from 2024 to 2028.

Section V. COST OF SERVICE

V.A. OVERVIEW

A cost-of-service analysis determines the proportional recovery of costs from customers according to unique demands each customer class places on the system. There are three fundamental steps to allocating the annual revenue requirement to customer classes and developing the final rates: 1) allocate utility assets and total utility costs by function, 2) develop customer-specific allocation factors and 3) allocate costs to customer classes. The methodology conforms to generally accepted industry practices as well as principles established in the American Public Works Association Rate Setting and Financing Guide for Solid Waste.

V.B. SOLID WASTE CLASSES OF SERVICE

A class of service is a grouping of utility customers with similar usage characteristics who are served at similar costs. Classes of service can be defined based on several factors such as demand levels and patterns, service requirements, geography, and waste material. A cost-of-service analysis determines the proportional recovery of costs from each class of service based on these unique demands. The classes of services evaluated as part of the rate study were based on the County's existing rates and include:

- **MSW:** This class includes commercial waste haulers as well as self-haulers that deliver refuse to OVTS from cities and unincorporated areas of Kitsap County.
- **MSW RAGF:** Private residents and businesses that deliver refuse and recyclables to the County's RAGFs.
- **Special Waste:** Waste delivered to OVTS that requires special handling (e.g., asbestos).
- **Yard / Wood Waste:** Private residents and businesses that deliver loads of yard and wood waste to OVTS.
- **Appliances:** Private residents and businesses that deliver appliances and white goods to the County's transfer stations.
- **Tires:** Private residents and businesses that deliver tires to the County's RAGFs.
- **Diverted Waste:** Private residents and businesses that deliver e-waste such as computer monitors, televisions or laptops free of charge to OVTS.
- **Recyclables:** Private residents and businesses that deliver recyclable materials free of charge to the County's transfer stations.
- **Household Hazardous Waste (HHW):** Household material waste such as oil, antifreeze and sharps that are delivered free of charge to the County's transfer stations.

V.C. DEFINING SOLID WASTE FUNCTIONS

The first step in the cost-of-service analysis is to allocate the revenue requirement for the County's solid waste fund into several functions or activities. This allocation assigns costs to functional categories based on documented program requirements (e.g., staffing levels, fixed asset records) and industry practices based on the relationship of each function and the costs incurred by the utility.

This cost “causation” provides the framework for the cost-of-service analysis. The functions of service to which the revenue requirement was allocated are discussed below.

- **Scalehouse:** associated with the operation of the entry gates and scale houses at the County’s transfer stations.
- **OVTS Waste Transfer:** associated with receiving, consolidating, and loading municipal solid waste into containers for transport to the landfill.
- **OVTS Diverted Materials Transfer:** associated with transportation of recyclables, appliances, tires and e-waste from the transfer stations for processing.
- **OVTS Yard / Wood Waste Transfer:** associated with the transfer, transport, and processing of yard and wood waste from OVTS.
- **Moderate Risk Waste (MRW):** associated with the receiving, consolidation and disposal of moderate risk waste such as antifreeze, oil, sharps and batteries.
- **Clean Kitsap:** associated with County’s Clean Kitsap program. These costs support litter abatement activities and are recovered through an itemized tipping fee on all MSW received at OVTS.
- **RAGF Diverted Materials Transfer:** associated with receiving, processing, and marketing of recyclables and appliances collected at the County’s RAGFs.
- **RAGF MSW Transfer:** associated with the receiving and transportation of MSW collected at the County’s RAGFs.
- **Special Waste Transfer:** associated with the transfer and disposal (via contract) of asbestos, bulky waste, creosote lumber and contaminated soils collected at OVTS.
- **Environmental Compliance:** associated with the long-term management of closed regional landfills, landfill gas and water monitoring, and environmental liability expenses.
- **MSW Transport:** the contract cost paid to the County’s contractor for transport of MSW.
- **MSW Disposal:** the contract cost paid to the County’s contractor for disposal of MSW.

V.C.1. Functional Cost of Service

The second step of the cost-of-service analysis is to allocate the revenue requirement for a test year to each solid waste function to determine the annual costs of each function. A test year is a period for which the utility’s cost of service is reviewed. The test year for the rate study is the projected revenue requirement for 2023 which is the first complete calendar year that the new OVTS service contract is in effect.

This process included assigning each line item account in the test year to the solid waste functions. In some cases, the expenses within an accounting cost center solely support one function of service. For example, all costs associated with the Clean Kitsap Program are directly assigned to the Clean Kitsap function. In other cases, the expenses within an accounting cost center support multiple functions of service: transfer station contract expenses are distributed to each function in proportion to the types and volumes of waste materials handled at OVTS. Functional allocation factors are developed to assign reasonable cost shares for expenses that support multiple functions.

V.C.1.a Functional Cost Allocation Factors

Functional cost allocation factors are used to proportionally distribute expenses not directly assigned to a solid waste function of service and were developed in coordination with the County project team. These factors are detailed below:

- **FTE Allocation**– 2021 full-time equivalents (FTEs) assigned to the County’s transfer & drop box systems, MRW operations, landfills, recycling, education & outreach programs, and administration.
- **MRW** – Distribution of costs based on the tons of MRW collected at each facility.
- **RAGF Tons** – Distribution of costs based on the percent ton distribution received at the RAGFs.
- **OVTS Tons** – Distribution of costs based on the percent ton distribution received at OVTS.
- **Capital Plan** – Distribution of costs based on the intended function of the capital projects as reviewed with County staff.
- **OVTS Contract** – The costs incurred from the WMI contract are allocated based on the individual components of the contract. All transportation elements are functionalized as MSW transport, all disposal elements are functionalized as MSW disposal. The fixed monthly component was allocated as OVTS waste transfer. The base fee was allocated based on tons of OVTS MSW and diverted materials. The contract costs for specific waste types (e.g., asbestos) was allocated directly to the respective waste function. The resulting combined allocation was 22% OVTS waste transfer, 54% MSW transport, 23% MSW disposal, and the remaining portion split between OVTS diverted materials, OVTS yard / wood waste, and special waste transfer.
- **RAGF Non-MSW Recycling Transport Contract** – Allocated as 100% RAGF diverted materials.
- **RAGF MSW Hauling Contract** – Allocated as 100% RAGF MSW transfer.
- **RAGF White Goods Disposal** – Allocated as 100% RAGF diverted materials transfer.

V.C.1.b Functionalization of Test Year Revenue Requirement

Following the development of the functional cost allocation factors, test year (2023) revenue requirements for each accounting cost center or object code were assigned to the functions of service as described below:

- **All Salaries and Benefits** – All expenses assigned to FTE Allocation.
- **Solid Waste Fuel Consumed and Hazardous Waste Disposal** – All expenses allocated to MRW.
- **All other Solid Waste Expenses** – All expenses assigned to All Other.
- **Clean Kitsap** – All Clean Kitsap expenses directly assigned to Clean Kitsap.
- **Non-Personnel Transfer Station Expenses** – Non-labor expenses unrelated to the service contracts are allocated based on a blend of tonnage ratios as determined by County staff. In some cases, specific object codes are allocated only to OVTS tons or to RAGF tons.
- **Projected Staff Additions to Scalehouse** – All expenses directly assigned to Scalehouse.
- **Projected Staff Additions to MRW** – All expenses directly assigned to MRW.
- **Existing and New Debt Service** – Debt service assigned to Capital Plan.
- **Taxes** – Annual state business and occupation taxes and refuse taxes assigned to All Other.
- **Non-Rate Revenue** – Non-rate revenues were assigned to related functions of service or allocated based on total expenses. Examples include:
 - » Clean Kitsap Grants are assigned to Clean Kitsap.
 - » All other DOE Grants are assigned to MRW.
 - » All other non-rate revenues assigned to All Other.

- **Net Cash Flow and Taxes from Rate Adjustments** – Net cash flow and additional tax expenses from rate adjustments are allocated based on total expenses.

Exhibit 5.1 details the functional allocation of the revenue requirement to each function of service.

Exhibit 5.1
Functional Allocation of Test Year Revenue Requirement

Function of Service	Test Year	As a Percent
Scalehouse	\$ 1,134,313	3.62%
OVTS Waste Transfer	6,092,051	19.43%
OVTS Diverted Materials Transfer	26,346	0.08%
OVTS Yard / Wood Transfer	27,553	0.09%
MRW	2,114,995	6.74%
Clean Kitsap	496,908	1.58%
RAGF Diverted Materials Transfer	1,370,084	4.37%
RAGF MSW Transfer	2,441,591	7.79%
Special Waste Transfer	324,018	1.03%
Environmental Compliance	190,552	0.61%
MSW Transport	12,088,261	38.55%
MSW Disposal	5,053,289	16.11%
Total	\$ 31,359,962	100.00%

V.C.2. Customer Class Cost of Service

The costs identified in the functional allocation of the revenue requirement are assigned to each customer class based on the demands each class places on the utility. In order to complete this task, forecasted tons and transactions for the customer classes are used as allocation factors. The allocation factors are intended to proportionally allocate the functional cost pools to the customer classes. These allocations were reviewed by the County project team. The functions of service are allocated to the customer classes of service based on the following factors:

- **Scalehouse** – Scalehouse expenses capture the staff time of each transaction at the entry point of each transfer station. The RAGFs do not have scales but do have attendants processing each customer. These costs are allocated to customer classes based on transaction counts.
- **OVTS Waste Transfer** – The allocation of OVTS waste transfer expenses to the classes of service is based on annual tons of MSW received at the facility in the test year.
- **OVTS Diverted Materials** – Allocation of diverted materials expenses is based on the annual tons of e-waste, tires, appliances and recyclables received at OVTS in the test year.
- **OVTS Yard / Wood Waste** – Allocated to all Yard and Wood Waste customer groups based on tons in the test year.
- **MRW** – Allocated to all MRW waste based on tons in the test year.
- **Clean Kitsap** – Allocated to all MSW based on tons in the test year.
- **RAGF Diverted Materials** – Assigned to all recyclable and appliances brought to the RAGFs based on tons in the test year.
- **RAGF MSW Transfer** – Allocated to all MSW brought to RAGFs based on tons in the test year.
- **Special Waste Transfer** – Allocated to all special waste based on tons in the test year.

- **Environmental Compliance** – Allocated to all MSW brought to all County facilities based on tons. While there is no charge for this service, the benefits are spread to all County residents and therefore costs are spread proportionate to tons of MSW.
- **MSW Transport** – The allocation of MSW transport expenses to the classes of service is based on annual tons of MSW received at OVTS in the test year.
- **MSW Disposal** – The allocation of MSW disposal expenses to the classes of service is based on annual tons of MSW received at OVTS in the test year.

V.D. COST OF SERVICE ANALYSIS RESULTS

The final step of the cost-of-service analysis is to compare the allocation of the test year revenue requirement with the rate revenue generated by each customer class at existing rates. This evaluation identifies general differences between the allocated cost to provide utility services to customer classes and the rate revenue collected. It also identifies proportional differences in the cost that the County incurs to provide services to different customer classes. The cost-of-service analysis provides an initial and reasonable basis for potential rate adjustments to align rates with the cost to provide service. This cost-rate relationship is a primary tool used by public utilities when developing changes to rates. Other rate objectives and tools are described in the following section **Rate Design**.

V.D.1. Test Year Cost of Service Analysis

Exhibit 5.3 provides a comparison of the current rate revenue distribution between customer classes and the distribution of revenues resulting from the cost-of-service analysis.

Exhibit 5.3
Test Year Cost of Service and Across-the-Board (ATB) Rate Revenue Comparison

Class of Service	Cost of Service	Existing w/ ATB	\$ Difference	% Difference
MSW	\$ 23,612,056	\$ 27,954,559	\$ (4,342,503)	-15.53%
MSW RAGF	3,808,896	2,912,220	896,676	30.79%
Special Waste	340,837	261,581	79,256	30.30%
Yard / Wood Waste	31,332	25,296	6,036	23.86%
Appliances	200,438	185,288	15,151	8.18%
Tires	8,442	21,019	(12,577)	-59.84%
Diverted Waste	2,423	-	2,423	0.00%
Recyclables	1,240,542	-	1,240,542	0.00%
HHW	2,114,995	-	2,114,995	0.00%
Total	\$ 31,359,962	\$ 31,359,962	\$ -	0.00%

The table above shows the nine classes of service identified for the cost-of-service analysis. The first column is the calculated cost to provide service, based on the methodology outlined above. This is compared to the revenue at the existing rates plus an across the board (ATB) adjustment to total necessary systemwide revenue needs. The classes that show a negative difference in the last two columns are currently paying more than the cost of the service provided. Those with a positive difference would need a rate increase to cover the full cost of service. The last three classes are for services provided free of charge, therefore there is no comparison to the existing rates. However, these costs are still incurred and therefore spread to other classes in the rate design process.

A cost-of-service analysis is a reasonable allocation of the test year revenue requirement to classes of service based on available financial and operational data, expectations of future demand for service, and the allocation methodologies described in the previous sections. Given the need for assumptions

and these other factors, FCS GROUP recommends a reasonable range for class-specific results to be plus or minus 5.0 percent, including the system average overall increase. Based on this framework, the cost-of-service results indicate that existing rate revenues generated from MSW customers are above the cost of service. Existing rate revenues for MSW RAGF, yard / wood waste, appliances, and special waste customer classes are below the cost to provide service. There is limited operating and cost data available to estimate the cost to provide tire disposal – FCS GROUP recommends that additional analysis be conducted prior to considering major adjustments to the rate for tire disposal.

V.D.2. Interpreting Cost of Service Results

A cost-of-service analysis is a snapshot in time and because costs fluctuate each year, the needed increase by class can also fluctuate and interclass rate changes are not suggested unless the class's revenue difference is consistently outside of the plus or minus 5.0 percent range of reasonableness. For classes outside the threshold, public utilities can leverage several financial strategies to align rate revenues with cost-of-service results. These policy decisions may focus on the timing and level of rate adjustments for a particular class of service. For example, an agency may decide to gradually increase rates for a class of service over several years in order to make progress towards cost of service while also keeping the rate increases relatively affordable. If an agency anticipates major changes to programs and services in the future, it may consider a slower or delayed strategy to rate adjustments until new cost data is available.

FCS GROUP recommends the following guidelines when considering policy options to adjust existing rates based on cost-of-service results:

- **Prioritize Class-Specific Rate Adjustments.** Prioritize adjustments to those classes that are farthest outside the threshold. Consider monitoring future cost of service results for classes that are relatively close but outside of the threshold.
- **Develop Multi-Year Phase-In Plan.** Developing a multi-year rate strategy can transition classes towards cost of service while also addressing potential affordability concerns.
- **Consider Future Utility Costs.** Future cost of service results can shift in response to major changes in programs, facility operations, and availability of information. Gradually implementing rate adjustments can provide flexibility in responding to current and future costs.
- **Hold Rates at Existing Levels.** For those customer classes whose rates are higher than the cost of service, consider holding rates at existing levels until rates are generally aligned with cost. This strategy can avoid the need to lower rates one year only to increase rates in future years.
- **Monitor Long-Term Trends.** Further evaluation may be appropriate for classes that are outside the range of reasonableness to confirm if results are indicative of an on-going trend or are an anomaly. This can be a particularly effective strategy if a cost-of-service analysis has not been conducted recently or is being completed for the first time.
- **Monitor Changes in Demand from Rate Adjustments.** Significant decreases or increases to rates can impact the demand for utility services – particularly for usage-based rates and subscription services. An agency should actively monitor the demand impact of major changes to rates and develop a contingency plan as needed.
- **Seek Legal Counsel.** Class-specific rate adjustments may be subject to existing contract agreements between the County and specific customer groups. FCS GROUP recommends that the County seek legal counsel to determine any legal restrictions or requirements that would affect rate adjustments based on the cost-of-service analysis.

V.D.3. Cost-of-Service Phase-in Strategy

Based on feedback from County staff, a multi-year strategy was developed to transition the classes of service towards cost of service over a three-year period (2022 to 2024). **Exhibit 5.4** details the annual changes to rate revenue by customer class (and subsets of customer class) to phase in existing rates towards cost of service through 2024.

Exhibit 5.4
Cost of Service Phase-In Strategy

Class of Service	2022	2023	2024
MSW	14.7%	14.0%	2.3%
MSW RAGF One-Can	10.0%	10.0%	2.0%
MSW RAGF Additional Can	58.0%	58.0%	11.6%
MSW RAGF per Cubic Yard	40.0%	40.0%	8.0%
Roofing/Drywall	49.0%	49.0%	9.8%
Mattress	12.0%	12.0%	2.4%
Sofa	88.0%	88.0%	17.6%
Sofa w Bed	48.0%	48.0%	9.6%
Asbestos	35.0%	35.0%	7.0%
Bulky Waste	35.0%	35.0%	7.0%
Creosote Treated Lumber	35.0%	35.0%	7.0%
Contaminated Soil	35.0%	35.0%	7.0%
Processed Wood Waste	29.0%	29.0%	5.8%
Yard Waste	29.0%	29.0%	5.8%
Appliances	16.5%	16.5%	3.0%
Tires	16.5%	16.5%	3.0%
Annual System-Wide Rate Increase	16.5%	16.5%	3.0%

Section VI. RATE DESIGN

VI.A. OVERVIEW

The principal objective of the rate design stage of the analysis is to implement a rate structure that collects the appropriate level of revenue and is both cost-based as well as aligns with the utility’s goals and objectives. Rate design is typically the final step in a rate study process. This section will review the existing and proposed rates at the County’s transfer stations.

VI.B. RATE DESIGN OBJECTIVES

Public utilities leverage rate structures as tools to advance their financial, operational, customer communication, and policy goals. **Exhibit 6.1** illustrates several rate design objectives used by utilities. In some instances, rate objectives can be complementary to each other; a rate structure that may generate stable revenue each year would also likely provide predictability year to year. In other cases, rate objectives may be less complementary to others. Establishing rates that promote conservation can create challenges to financial sustainability if rates are not calibrated accurately to changes in customer demand. Balancing a utility’s various rate objectives is an important consideration in rate design.

Exhibit 6.1 Examples of Utility Rate Design Objectives

Objective	Description
Financial sustainability	Sufficient and predictable revenues Stable and predictable impacts to customers
Conservation and efficiency	Promote conservation and efficiency of use Protect natural resources
Transparency and simplicity	Easy to understand, explain, and administer Minimizing unexpected changes to customer bills Compatible with billing system
Cost of service fairness and equity	Correlate rates with costs Reflect customer usage patterns Reflect other customer service requirements
Legal support	Complying with all applicable laws

VI.C. RATE DESIGN CONSIDERATIONS

No one rate structure will work well for every utility nor will one rate structure work equally well for all customer classes within a single utility. Solid waste utilities recover charges through a variety of rate structures from tipping fees, fixed fees, fees based on container size and container compaction rating, as well as service frequency. Given the range and complexity of potential rate structures, a solid waste utility should carefully plan and evaluate changes to an existing rate structure. The

following considerations can help a utility understand the degree to which different rate structures will advance the agency's objectives.¹

- **Availability and Quality of Data** – Any rate structure requires reliable, timely, and accurate billing data to develop and administer charges to customers.
- **Cost of Service** – Rates and rate structures should be reasonably related to the cost to provide service to different classes of customers.²
- **Implementation** – Utilities should consider the time and cost requirements of implementing and administering a new rate structure. New billing data may need to be created, existing service contracts may need to be adjusted, and accounting systems may need to be updated.
- **Intraclass Cost Consistency** – Rates assessed to customers within the same class of service should be uniformly applied (e.g., a utility cannot arbitrarily charge a higher or lower rate for customers within the same class).
- **Pricing Signals** – If rates are used to communicate the cost of service to customers to promote conservation and efficient use of the utility, the rate structure (e.g., billing frequency, usage charges) should provide customers with the ability to adjust their use on a timely and meaningful basis.
- **Revenue Sufficiency** – Rate structures should be designed to generate a sufficient and appropriate level of revenue to support the utility's annual and seasonal cash flow requirements.
- **Risk** – When applicable, utilities should consider the financial risks of price elasticity of demand, weather seasonality, and changes in economic activity when developing rates and rate structures.

VI.D. EXISTING RATE STRUCTURE

Most of the County's rate revenue is generated from a tipping fee assessed on every ton of material received at the Olympic View Transfer Station. The RAGFs do not have scales at the entry points, so rates are assessed based on the number or estimated volume of material delivered by customers.

Exhibit 6.2 provides a summary of existing rates.

¹ Principles of Water Rates, Fees, and Charges, Sixth Edition. American Water Works Association.

² The Solid Waste Rate Setting and Financing Guide published by the American Public Works Association identifies two general approaches to rate setting. Cost-based rate setting is designed to "accurately reflect the cost to provide a particular service" whereas market-based rate setting "can be designed to encourage customers to recycle, be consistent with rates in nearby jurisdictions, or maintain the structure of existing rates." Solid waste rates are often set using both approaches.

**Exhibit 6.2
Existing Fees**

OVTS Fee Schedule

DISPOSAL FEES	
WASTE TYPE	Existing
Municipal Solid Waste (MSW) -- per ton	\$90.00
Minimum Fee	\$21.24
Minimum Fee, <i>including 3.6% State Refuse Tax</i>	\$22.00
Contaminated Soils -- per ton	\$48.48
Bulky Waste -- per ton	\$120.82
Asbestos -- per ton	\$183.35
Coal Ash -- per ton	\$57.81
Creosote Treated Lumber -- per ton	\$57.81
Dredge Spoils -- per ton	\$48.48
Biosolids (<i>delivered loose</i>) -- per ton	\$78.35
Biosolids (<i>delivered in intermodal containers</i>) -- per ton	\$69.63
Yard Waste - per ton	\$77.67
Processed Wood Waste - per ton	\$48.08
Appliances - per appliance	\$20.00
Passenger Vehicle Tires - per tire	\$9.00
Commercial Vehicle Tire - per tire	\$11.00

RAGF Fee Schedule

DISPOSAL FEES	
	7/1/20
One-can (32-gallon)	\$10.62
w/ 3.6% State Refuse Tax	\$11.00
Each additional can	\$2.90
w/ 3.6% State Refuse Tax	\$3.00
Volume-based fees (per cubic yard)	\$24.94
Special Wastes	
Mattress, box spring, or recliner (each)	\$12.00
Sofa (each)	\$15.00
Sofa with bed (each)	\$30.00
Roofing (per cubic yard)	\$45.00
Drywall (per cubic yard)	\$45.00
Appliance (each)	\$20.00

VI.E. PROPOSED RATES

Based on feedback from County staff, the following rate design adjustments were made to transition existing rates towards cost of service over the next several years:

- **Minimum Fee Increase** – The existing minimum fee of \$22.00 is charged to all OVTS self-haul loads up to 460 pounds. The fee is proposed to increase to \$36.00 in 2022, \$41.00 in 2023, and \$42.00 in 2024. The new fees will cover up to 700 pounds of waste. The increased fees will also support a greater share of the cost of recycling services provided at the transfer stations which are primarily used by self-haulers.
- **RAGF Can Fees** – The first 32-gallon can per load will increase from \$11.00 to \$13.00 in 2022. Each additional 32-gallon can per load will increase from \$3.00 to \$5.00. The proposed increases would support a greater share of the recycling services provided at the transfer stations which are primarily used by self-haulers. The increase to additional 32-gallon cans is designed to recover the costs incurred by the Division to consolidate, transfer, and dispose of waste received at the RAGFs.
- **Special Waste Fees** – Tipping fees for contaminated soils, asbestos, creosote treated lumber, and other special wastes are proposed to increase based on the increased costs incurred by the Division from the new operating contract for OVTS. The tipping fee for asbestos is proposed to increase from \$183.35 per ton to \$247.52 per ton in 2022.

Exhibit 6.3 details the proposed transfer station fees for the 2022 to 2024 rate period. Projected rates for the 2025 to 2028 forecast period are based on an annual 3.00 increase to all fees and are included in the technical rate model provided to the County.

Exhibit 6.3
2022 to 2024 Proposed Fees

OVTS Fee Schedule				
WASTE TYPE	DISPOSAL FEES			
	Existing	6/1/22	1/1/23	1/1/24
Municipal Solid Waste (MSW) -- per ton	\$90.00	\$104.00	\$118.00	\$121.00
Minimum Fee	\$21.24	\$34.49	\$39.32	\$40.20
Minimum Fee, <i>including 3.6% State Refuse Tax</i>	\$22.00	\$36.00	\$41.00	\$42.00
Contaminated Soils -- per ton	\$48.48	\$65.45	\$88.35	\$94.54
Bulky Waste -- per ton	\$120.82	\$163.11	\$220.19	\$235.61
Asbestos -- per ton	\$183.35	\$247.52	\$334.16	\$357.55
Coal Ash -- per ton	\$57.81	\$78.04	\$105.36	\$112.73
Creosote Treated Lumber -- per ton	\$57.81	\$78.04	\$105.36	\$112.73
Dredge Spoils -- per ton	\$48.48	\$65.45	\$88.35	\$94.54
Biosolids (<i>delivered loose</i>) -- per ton	\$78.35	\$91.28	\$106.34	\$109.53
Biosolids (<i>delivered in intermodal containers</i>) -- per ton	\$69.63	\$81.12	\$94.50	\$97.34

RAGF Fee Schedule

DISPOSAL FEES				
	Existing	6/1/22	1/1/23	1/1/24
One-can (32-gallon)	\$10.62	\$12.55	\$13.51	\$13.51
w/ 3.6% State Refuse Tax	\$11.00	\$13.00	\$14.00	\$14.00
Each additional can	\$2.90	\$4.83	\$7.72	\$8.69
w/ 3.6% State Refuse Tax	\$3.00	\$5.00	\$8.00	\$9.00
Volume-based fees (per cubic yard)	\$24.94	\$34.92	\$48.88	\$52.79
Special Wastes				
Mattress, box spring, or recliner (each)	\$12.00	\$14.00	\$16.00	\$16.00
Sofa (each)	\$15.00	\$29.00	\$54.00	\$63.00
Sofa with bed (each)	\$30.00	\$45.00	\$66.00	\$73.00
Roofing (per cubic yard)	\$45.00	\$68.00	\$100.00	\$110.00
Drywall (per cubic yard)	\$45.00	\$68.00	\$100.00	\$110.00
Appliance (each)	\$20.00	\$24.00	\$28.00	\$28.00

Section VII. CONCLUSION AND RECOMMENDATIONS

VII.A. CONCLUSION

The Division is anticipating several operating and capital cost pressures over the next several years that, if left unaddressed, will impact the County's goals for providing efficient and reliable solid waste services that also protect and preserve human health, environmental quality, and natural resources.

- A new 20-year service contract for the operation of OVTS begins in 2022. The contract includes new compensation rates and services to address the County's requirements at the facility.
- The County has identified approximately \$46 million in capital project improvements at its solid waste facilities between 2021 and 2028.
- The Division's existing rate structure – charging customers a tipping fee based on the weight of MSW – is a common structure for transfer stations; however, it can create funding challenges for the utility. Some of the services provided by the Division are unrelated to disposed solid waste (e.g., recycling and hazardous materials processing), but are exclusively supported by a rate structure dependent on disposed solid waste.
- Disposal tonnage historically fluctuates from year to year in response to economic conditions and effects of resource recovery programs, creating a funding challenge for disposal services that are generally fixed relative to changes in disposed tons.
- All MSW collected at the RAGFs must be transported to OVTS before disposal. This creates two separate “touch points” to manage waste collected at the RAGFs, making the full cost of MSW collected at the RAGFs higher than the cost of MSW dropped directly at OVTS.
- Operationally, there is a higher cost per transaction for self-haulers when compared to commercial haulers. This is due to the amount of time it takes at the entry point of OVTS, compared to an automated system for commercial haulers. The County is looking to incentivize residential self-haulers to consider curbside collection services that would reduce customers' costs and decrease traffic volumes at the County facilities.

The cost-of-service and rate study evaluated the sufficiency of rate revenues at existing rates to respond to these anticipated cost pressures. The results of the rate study provide the framework for the Division's multi-year financial plan which includes a proposed 16.5 percent increase to rate revenues effective April 1, 2022. An additional 16.5 percent increase would occur January 2023. Inflationary-level revenue adjustments of 3.0 percent annually are forecasted from 2024 to 2028. With these revenue adjustments, the Division is projected to generate approximately \$24.6 million and \$31.4 million in 2022 and 2023 respectively. Adjustments to specific rates over the rate-setting period are designed to transition existing rates towards the cost to provide services to the utility's different customer groups.

VII.B. SUMMARY RECOMMENDATIONS

The MSW tipping fee is projected to increase from \$90.00 per ton to \$104.00 in 2022, \$118.00 in 2023, and \$121.00 in 2024. **Exhibit 7.1** details the scheduled increases to the County’s solid waste rates at OVTS and the RAGFs from 2022 to 2024.

Exhibit 7.1 Proposed Rate Schedule

OVTS Fee Schedule

WASTE TYPE	DISPOSAL FEES			
	Existing	6/1/22	1/1/23	1/1/24
Municipal Solid Waste (MSW) -- per ton	\$90.00	\$104.00	\$118.00	\$121.00
Minimum Fee	\$21.24	\$34.49	\$39.32	\$40.20
Minimum Fee, <i>including 3.6% State Refuse Tax</i>	\$22.00	\$36.00	\$41.00	\$42.00
Contaminated Soils -- per ton	\$48.48	\$65.45	\$88.35	\$94.54
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Dredge Spoils -- per ton	\$48.48	\$65.45	\$88.35	\$94.54
Biosolids (<i>delivered loose</i>) -- per ton	\$78.35	\$91.28	\$106.34	\$109.53
Biosolids (<i>delivered in intermodal containers</i>) -- per ton	\$69.63	\$81.12	\$94.50	\$97.34
Yard Waste - per ton	\$77.67	\$100.19	\$129.25	\$136.75
Processed Wood Waste - per ton	\$48.08	\$62.02	\$80.01	\$84.65
Appliances - per appliance	\$20.00	\$24.00	\$28.00	\$28.00
Passenger Vehicle Tires - per tire	\$9.00	\$11.00	\$13.00	\$13.00
Commercial Vehicle Tire - per tire	\$11.00	\$13.00	\$15.00	\$16.00

RAGF Fee Schedule

	DISPOSAL FEES			
	Existing	6/1/22	1/1/23	1/1/24
One-can (32-gallon)	\$10.62	\$12.55	\$13.51	\$13.51
w/ 3.6% State Refuse Tax	\$11.00	\$13.00	\$14.00	\$14.00
Each additional can	\$2.90	\$4.83	\$7.72	\$8.69
w/ 3.6% State Refuse Tax	\$3.00	\$5.00	\$8.00	\$9.00
Volume-based fees (per cubic yard)	\$24.94	\$34.92	\$48.88	\$52.79
Special Wastes				
Mattress, box spring, or recliner (each)	\$12.00	\$14.00	\$16.00	\$16.00
Sofa (each)	\$15.00	\$29.00	\$54.00	\$63.00
Sofa with bed (each)	\$30.00	\$45.00	\$66.00	\$73.00
Roofing (per cubic yard)	\$45.00	\$68.00	\$100.00	\$110.00
Drywall (per cubic yard)	\$45.00	\$68.00	\$100.00	\$110.00
Appliance (each)	\$20.00	\$24.00	\$28.00	\$28.00