WASTEWATER SYSTEM DEVELOPMENT CHARGE UPDATE

Draft Report
March 11, 2022

www.fcsgroup.com

FCS GROUP
Solutions-Oriented Consulting

TABLE OF CONTENTS

Section I. INTRODUCTION

This section describes the project scope and policy context upon which the body of this report is based.

I.A. PROJECT

The City of Milwaukie (City) imposes system development charges (SDCs) to recover eligible infrastructure costs and provide partial funding for the capital needs of its wastewater collection system. Wastewater collection SDCs are charged to all new development within the City's boundaries, both residential and commercial. For a typical single-family dwelling unit, the current wastewater collection SDC is $1,269. The City also collects wastewater treatment SDCs for the Clackamas Water Environment Services (WES), who treats the City's wastewater. The wastewater treatment SDC is currently $8,120.

In 2019, the City engaged Water Systems Consulting, Inc. (WSC) to begin updating its wastewater system master plan. At the same time, the City and WSC engaged FCS GROUP to update the City's wastewater collection SDC based on that new master plan.

I.B. POLICY

SDCs are enabled by state statute, authorized by local ordinance, and constrained by the United States Constitution.

I.B.1. State Statute

Oregon Revised Statutes (ORS) 223.297 to 223.314 enable local governments to establish SDCs, which are one-time fees on development that are paid at the time of development or redevelopment that creates additional demand for park facilities. SDCs are intended to recover a fair share of the cost of existing and planned facilities that provide capacity to serve future users (i.e., growth).

ORS 223.299 defines two types of SDC:

- A reimbursement fee that is designed to recover "costs associated with capital improvements already constructed, or under construction when the fee is established, for which the local government determines that capacity exists"
- An improvement fee that is designed to recover "costs associated with capital improvements to be constructed"

ORS 223.304(1) states, in part, that a reimbursement fee must be based on "the value of unused capacity available to future system users or the cost of existing facilities" and must account for prior contributions by existing users and any gifted or grant-funded facilities. The calculation must "promote the objective of future system users contributing no more than an equitable share to the cost of existing facilities." A reimbursement fee may be spent on any capital improvement related to the system for which it is being charged (whether cash-financed or debt-financed).

ORS 223.304(2) states, in part, that an improvement fee must be calculated to include only the cost of projected capital improvements needed to increase system capacity for future users. In other words, the cost of planned projects that correct existing deficiencies or that do not otherwise increase capacity for future users may not be included in the improvement fee calculation. An improvement fee may be spent only on capital improvements (or portions thereof) that increase the capacity of the system for which it is being charged (whether cash-financed or debt-financed).

In addition to the reimbursement and improvement fees, ORS 223.307(5) states, in part, that "system development charge revenues may be expended on the costs of complying" with state statutes concerning SDCs, including "the costs of developing system development charge methodologies and providing an annual accounting of system development charge expenditures."

I.B.2. Local Ordinance

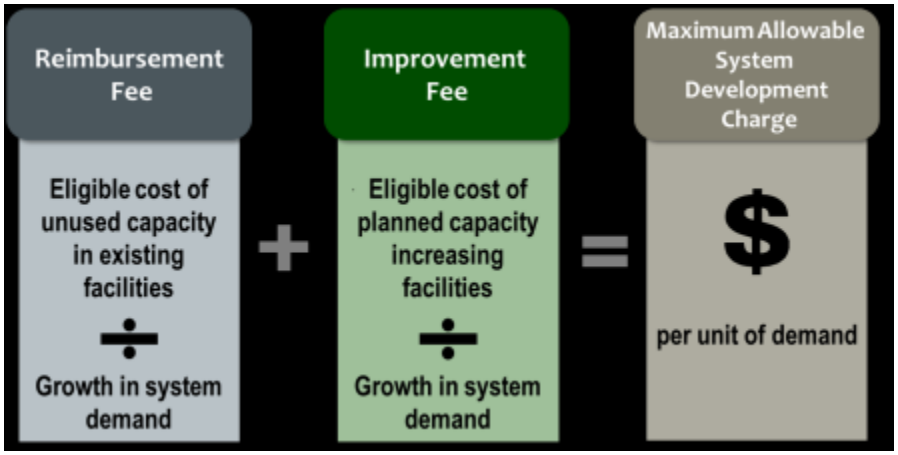
The City's code authorizes and governs the imposition and expenditure of SDCs in the City.

I.B.3. United States Constitution

The United States Supreme Court has determined that SDCs, impact fees, or other exactions that comply with state and/or local law may still violate the United States Constitution if they are not proportionate to the impact of the development. The SDCs calculated in this report are designed to meet all constitutional and statutory requirements.

I.C. SDC BACKGROUND

In general, SDCs are calculated by adding a reimbursement fee component (if applicable) and an improvement fee component—both with potential adjustments. Each component is calculated by dividing the eligible cost by growth in units of demand. The unit of demand becomes the basis of the charge. Below is an illustration of this calculation:



Section II. SDC Calculation

This section provides the detailed calculations of the maximum allowable wastewater SDC.

II.A. GROWTH

The calculation of projected growth begins with defining the units by which current and future demand will be measured. Then, using the best available data, we quantify the current level of demand and estimate a future level of demand. The difference between the current level and the future level is the growth in demand that will serve as the denominator in the SDC calculations.

II.A.1. Unit of Measurement

A good unit of measurement allows an agency to quantify the incremental demand of development or redevelopment that creates additional demand for system facilities. A great unit of measurement allows an agency to distinguish different levels of demand added by different kinds of development or redevelopment.

For wastewater SDCs, demand is often measured in terms of equivalent dwelling units (EDUs), where one EDU is equal to the wastewater flow of a typical single-family dwelling unit. To calculate the demand incurred by other development types, EDUs can be assigned based on the differential flow rates of different meter sizes, or by counting the number of plumbing fixture units.

Currently, the City charges its wastewater SDC using the EDU method, and calculates the demand of multi-family dwelling units and commercial developments using the number of plumbing fixture units. An EDU is assumed to have 16 plumbing fixture units. This method is also used for this wastewater SDC calculation.

II.A.2. Growth in Demand

In 2020, the City had a total dry-weather flow of 1,621,328 gallons per day. The 2019 Wastewater System Master Plan estimates that the flow will grow to 2,006,855 gallons per day by 2040. According to the wastewater system master plan, one EDU generates 115 gallons per day of flow. This implies that there are 14,099 EDUs in the system as of 2020. If EDUs grow at the same rate as dry-weather flow, there will be 17,451 EDUs in 2040. So, the growth in EDUs over the planning period is 3,352, and the growth share, or the percentage of EDUs in 2040 that will arrive between 2020 and 2040, is 19.21 percent.

These calculations are summarized in **Table 1** below. The growth of 3,352 EDUs will be the denominator for the SDC calculation.

Table 1: Growth in EDUs

	2020	2040	Growth	Growth Share
Dry-weather flow, gallons per day	1,621,328	2,006,855	385,527	19.21%
Flow per EDU, gallons per day	115	115		
Implied EDUs	14,099	17,451	3,352	19.21%

Source: 2019 Wastewater System Master Plan, Table 5-6 (2020 flow); Table 5-12 (2040 flow); Table 5-13 (flow per EDU)

II.B. IMPROVEMENT FEE

An improvement fee is the eligible cost of planned projects per unit of growth that such projects will serve. Since we have already calculated growth (denominator) above, we will focus here on the improvement fee cost basis (numerator).

II.B.1. Eligibility

A project's eligible cost is the product of its total cost and its eligibility percentage. The eligibility percentage represents the portion of the project that creates capacity for future users. Where possible, specific details about a project can provide an eligibility percentage. However, when this is not possible, projects can still be sorted into three broad categories.

The first category is for projects that do not provide capacity for future users. Such projects may be purely replacement projects, or they may be solving a deficiency in the wastewater system. Projects in this category are zero percent eligible. The second category is for projects that are purely for future users, such as when new pipe is laid to provide for a new development. These projects are 100 percent eligible. Finally, projects that provide capacity that will be proportionately shared between current and future users are eligible at the growth share percentage discussed in the previous section, 19.21 percent.

II.B.2. Improvement Fee Cost Basis

Projects in the improvement fee cost basis were taken from the City's 2019 Wastewater System. Each project except one was sorted into one of the three categories discussed above based on the descriptions provided in the plan and discussions with staff. The remaining project, "Pipe Upgrades," had specific details provided by WSC to justify a unique eligibility percentage.

Table 2 below shows all the projects in the wastewater system improvement fee cost basis. The eligibility for each project is shown in the SDC Eligibility column, and the SDC Eligible Costs column shows that full amount of the improvement fee cost basis is $1.16 million.

Table 2: Improvement Fee Cost Basis

Project ID	Project Name	Timing	Cost	SDC Eligibility	SDC-Eligible Costs
CAP-1	Manhole Surveying	2023-2041	$ 475,000	0.00%	$ -
CAP-2	Pipe Upgrades	2029	819,000	20.01%	163,899
CAP-3	Flow Monitoring	2026-2041	124,000	19.21%	23,821
CAP-4	Harvey Street Improvements	2022	5,000	0.00%	-
C-1	Pipeline Rehabilitation and Replacement	2023-2041	7,239,000	0.00%	-
C-2	Pump Station Condition Assessments	2023	30,000	0.00%	-
C-3 thru 7	Pump Station Improvements	2026-2041	4,250,000	19.21%	816,447
C-8	Johnson Creek Siphon Inspection	2026	100,000	0.00%	-
C-9	Waverly South	2023	91,000	0.00%	-
C-10	Waverly Heights Sewer System Reconfiguration	2023-2025	3,404,000	0.00%	-
C-11	SCADA Design & Construction	2022	105,000	0.00%	-
C-12	Ardenwald North Improvements	2022	476,000	0.00%	-
C-13	Milwaukie/El Puente SRTS Improvements	2022-2023	522,000	0.00%	-
C-14	Logus Road & 40th Ave Improvements	2022-2023	149,000	0.00%	-
C-15	Wastewater System Improvements FY2023	2023	491,000	0.00%	-
C-16	International Way Improvements	2024	144,000	0.00%	-
C-17	North Milwaukie Improvements	2025	465,000	0.00%	-
C-18	SAFE & SSMP FY 2025 Improvements - Park/Lloyd/Stanley	2025	139,000	0.00%	-
C-19	Vehicle Purchases	2022-2024	752,000	0.00%	-
C-20	Lift Station Pump & SCADA Controls Replacement	2022-2025	200,000	0.00%	-
C-21	Wastewater Capital Maintenance Program	2022-2041	1,000,000	0.00%	-
R-1	S1 Island Pump Station Rebuild	2026-2041	-	0.00%	-
R-2	S3 Home & Monroe Pump Station Retrofit	2026-2041	-	0.00%	-
R-3	S5 Brookside Pump Station Retrofit and Pump Upgrade	2026-2041	-	0.00%	-
R-4	Bolted Manholes	2027	13,000	0.00%	-
P-1	Wastewater System Master Plan Update	2026-2041	800,000	19.21%	153,684
		Total	$ 21,793,000		$ 1,157,851

Source: 2019 Wastewater System Master Plan, Table 10-1 (project list, timing, and cost); Water Systems Consulting (SDC eligibility)

II.C. REIMBURSEMENT FEE COST BASIS

A reimbursement fee is the eligible cost of the wastewater facilities available for future users per unit of growth that such facilities will serve. Since growth was calculated above, we will focus on the eligible cost of the wastewater facilities available for future users. That is, we will focus on the cost of reimbursable wastewater facilities.

II.C.1. Capacity in Sewer Pipes for Infill Development

According to WSC, the current collection system has sufficient capacity to allow for infill development in the City's limits. Such infill development is expected to account for 19.21 percent of the City's 2040 population, and so 19.21 percent of the original cost of the City's pipes can be allocated to growth. The original cost of the pipes is $16.93 million, and so $3.25 million can be allocated to growth.

However, the City has $964,578 in outstanding principal for debt related to the wastewater system. Because infill development will pay for this debt in either rates or property taxes, their share of the

principal must be removed from the reimbursement fee cost basis. So, a total of $3.07 million can be included in the reimbursement fee cost basis.

These calculations are summarized in **Table 3** below.

Table 3: Reimbursement Fee Cost Basis

Original Cost of Sewer Pipes	$ 16,930,032
Outstanding Principal	964,578
Capacity Available through 2040	19.21%
Reimbursable Cost	$ 3,067,044

Source: *City staff (original cost of pipes, outstanding principal); Water Systems Consulting (available capacity)*

II.D. CALCULATED SDC

This section combines the eligible costs from the improvement fee cost basis and the reimbursement fee cost basis and applies some adjustments. The result is a total SDC per EDU.

II.D.1. Adjustments

The City must reduce its cost bases to account for any remaining fund balance in its current SDC fund. The improvement fee cost basis must be lowered by $708,495, and the reimbursement fee cost basis must be lowered by $20,061. These adjustments are shown in Table 4below.

Table 4: Adjustments to the SDC Cost Bases

Unadjusted Improvement Fee Cost Basis	$ 1,157,851
Improvement Fee Fund Balance	(708,495)
Improvement Fee Cost Basis	$ 449,356
Unadjusted Reimbursement Fee Cost Basis	$ 3,067,044
Reimbursement Fee Fund Balance	(20,061)
Reimbursement Fee Cost Basis	$ 3,046,983

To account for the cost of complying with SDC law, the City should add $73,800 to the full SDC cost basis.

II.D.2. Calculated SDC

Table 5 below summarizes the full calculation of the SDC. As shown, the full SDC is $1,065 per EDU.

Table 5: Calculated SDC

Cost Basis:	
Improvement Fee	$ 449,356
Reimbursement Fee	3,046,983
Compliance Costs	73,800
Total Cost Basis	$ 3,570,139
Growth in EDUs	3,352
Improvement Fee per EDU	$ 134
Reimbursement Fee per EDU	909
Compliance Fee per EDU	22
Total SDC per EDU	$ 1,065

Table 6 below shows the full wastewater SDC schedule.

Table 6: SDC Schedule

	EDUs	Calculated SDC
Single-Family Dwelling Unit	1.00	$ 1,065
Duplex, ADU (per Dwelling Unit)	0.65	$ 692
Other	1.00	$ 1,065
Per EDU	1.00	$ 1,065
Per Fixture Unit	0.06	$ 67

Section III. IMPLEMENTATION

This section addresses practical aspects of implementing SDCs and provides a comparison with relevant jurisdictions.

III.A. INDEXING

ORS 223.304 allows for the periodic indexing of SDCs for inflation, as long as the index used is:

> (A) A relevant measurement of the average change in prices or costs over an identified time period for materials, labor, real property or a combination of the three;
> (B) Published by a recognized organization or agency that produces the index or data source for reasons that are independent of the system development charge methodology; and
> (C) Incorporated as part of the established methodology or identified and adopted in a separate ordinance, resolution or order.

In accordance with Oregon statutes, we recommend that the City use the *Engineering News-Record* (ENR) Construction Cost Index (CCI) 20-City Average as the basis for adjusting SDCs annually.

III.B. SCALING BY DWELLING UNIT SIZE

The City's wastewater collection system flows into a larger wastewater system managed by WES, who also treats the City's wastewater. WES sets the wastewater treatment SDC charged in the City and is considering moving to a different method for calculating the number of EDUs added by residential developments. Under this system, single-family housing units would have a different number of EDUs based on the square footage of the total living area in the residence. This EDU computation is based on research conducted on dwelling units in WES's jurisdiction.

The City can decide to charge its wastewater SDC to residential developments in the same way as WES without changing this methodology. The schedule for residential developments under this system is listed in **Table 7** below.

Note that the City has decided to call a dwelling unit with less than 500 square feet an accessory dwelling unit and evaluate it at a lower rate, which is different from how WES proposes to charge such units.

Table 7: Schedule for Single-Family Dwelling Units based on Total Living Area

	EDUs	Calculated SDC
< 500 sqft (use ADU rate)	0.60	$ 639
500-800 sqft	0.70	$ 745
800-1,799 sqft	0.90	$ 958
1,800-2,999 sqft	1.00	$ 1,065
3,000-3,799 sqft	1.10	$ 1,171
≥ 3,800 sqft	1.20	$ 1,278
Multi-family	0.80	$ 852
Accessory dwelling unit (ADU)	0.60	$ 639

WES is also considering calculating the EDUs added by non-residential developments based on a variety of factors rather than using plumbing fixture units. The City can elect to charge non-residential dwelling units using the same EDU methodology as WES without changing this SDC methodology.

III.C. COMPARISONS

This section provides comparisons for the city's current and proposed SDCs against those of comparable jurisdictions. As shown in **Table 8**, if the wastewater collection SDC is implemented as proposed, the City will maintain its high position relative to other cities but drop slightly.

An important note is that not all SDCs shown are set by the relevant city; some are set by overlapping jurisdictions. This includes the City of Milwaukie, where $8,120 of the total fee is set by WES.

Table 8: Wastewater SDC Comparisons with Comparable Cities

Gladstone	13,758
West Linn	12,363
Oregon City	10,636
Milwaukie (current)	9,389
Milwaukie (proposed)	9,185
Portland	7,235
Gresham	6,568
Beaverton	6,085
Tigard	6,085
Tualatin	6,085
Wilsonville	5,905
Lake Oswego	3,052
Sherwood	859

Source: *Survey by FCS Group, as of 12/7/2021*