

City of Tigard

WATER SYSTEM DEVELOPMENT CHARGE UPDATE

Draft Report
August 24, 2022

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TABLE OF CONTENTS

Table of Contents.....	ii
Section I. Introduction.....	1
I.A. Project.....	1
I.B. Policy.....	1
Section II. SDC Analysis.....	3
II.A. Growth.....	3
II.B. Improvement Fee.....	4
II.C. Reimbursement Fee.....	5
II.D. Calculated SDC.....	6

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 Tigard (City) imposes a system development charge (SDC) to provide partial funding for the capital needs of its water system. The current SDC is charged based on the size of the meter necessary for a new service, measured in terms of meter capacity equivalents (MCEs). The rate is currently \$10,853 for one MCE, which is the typical charge for a single-family residence.

In 2020, the City and Murraysmith completed a new Water System Plan. Also in 2020, the City engaged FCS GROUP to update the City's water SDC based on the capital and capacity needs of the water system identified by the new plan.

I.B. POLICY

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

I.B.1. State Statutes

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 water facilities. SDCs are intended to recover a fair share of the cost of existing and planned facilities that provide capacity to serve future users -- 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

Chapter 3.24 of the Tigard Municipal Code authorizes and governs the imposition and expenditure of water SDCs in Tigard.

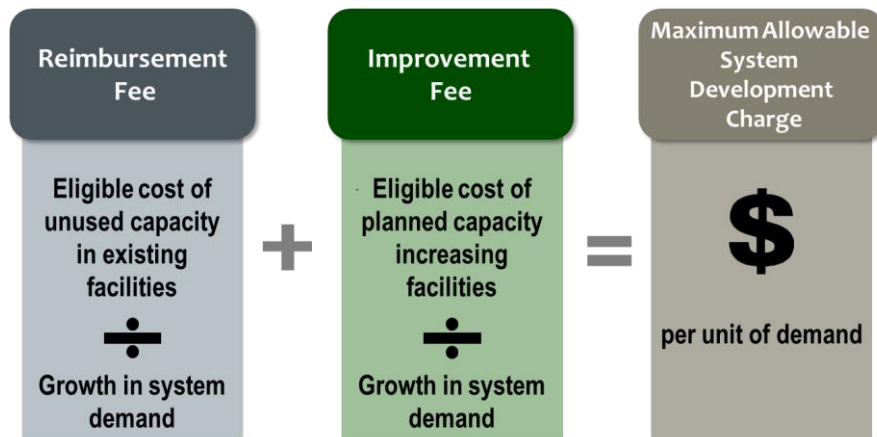
I.B.3. United States Constitution

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.

Section II. SDC ANALYSIS

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

In general, SDCs are calculated by adding a reimbursement fee component 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:



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 water facilities. A better unit of measurement allows an agency to distinguish different levels of demand added by different kinds of development or redevelopment.

For water SDCs, the meter size necessary for a development is broadly used as a measure of its potential water demand. In order to compare meters and calculate the total demand of the system, meters are often compared by their flow rates and measured by their meter capacity equivalents (MCEs). In this system, the smallest meter employed by the City has one MCE, and every larger meter has a larger number of MCEs based on their relative flow rates. The City uses its own schedule of flow rates to assign MCEs.

II.A.2. Growth in Demand

The current (2020) maximum daily water demand, representing demand for water facilities, is 14.67 million gallons per day (MGD). During the forecast period from 2020 to 2040, the water demand is expected to grow by 5.66 MGD. If MCEs grow proportionally, 15,872 MCEs will be added during that same period, which is the denominator of the SDC calculation. The calculations of growth are summarized in **Table 1** below.

Table 1: Growth in MCEs

	2020	2040	Growth	Growth Share
Water Demand, Max Daily Demand (MGD)	14.67	20.33	5.66	27.84%
MCEs	41,138	57,010	15,872	27.84%

Source: 2020 Tigard Water System Master Plan Table 2-8 (2040 MDD); e-mail from Brian Ginter, 07/09/2021 (2020 MDD); customer billing data (2019 MCEs).

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. In this case, the eligibility for each project was calculated by Murraysmith in the City’s 2020 Water System Plan.

II.B.2. Improvement Fee Cost Basis

Projects in the improvement fee cost basis were also taken from the City’s 2020 Water System Plan. **Error! Reference source not found.** below shows all the projects in the improvement fee cost basis. The eligibility for each project is shown in the Eligibility Percentage column, and the Eligible Cost column shows that full amount of the improvement fee cost basis is \$69.7 million.

Table 2: Water System Improvement Fee Cost Basis

	Project	Timing	Cost	Eligibility	
				Percentage	Eligible Cost
S-1	LOT Supply Expansion	2026-2030	\$ 7,876,000	100%	\$ 7,876,000
R-1	Reservoir 18	2021-2025	33,557,000	73%	24,608,467
R-2	Reservoir 19	2031-2040	7,552,000	100%	7,552,000
PS-1	Pump Station 8 Rebuild	2021-2025	5,038,000	28%	1,402,611
D-1	SW Burgundy Court Pressure Improvement	2021-2025	243,000	0%	-
D-2	560E/640 Zone Consolidation	2021-2025	401,000	0%	-
D-3	560C/560D Zone Consolidation	2021-2025	556,000	0%	-
D-4	560D/560E Zone Consolidation	2026-2030	506,000	0%	-
D-5	560F/560G Zone Consolidation	2026-2030	476,000	0%	-
D-6	560F/530 Zone Consolidation	2026-2030	14,543,500	28%	4,049,002
D-7	560G/560H Zone Consolidation	2026-2030	1,098,000	0%	-
D-8	560H/560A Zone Consolidation	2026-2030	138,000	28%	38,420
D-9	Pipe Renewal and Replacement Program	2021-2040	84,975,000	28%	23,657,575
P-1	50-year Water Distribution Seismic CIP	2021-2025	155,000	28%	43,153
P-2	ASR Feasibility Study	2021-2025	1,151,000	28%	320,446
P-3	Reservoir 8-1 Structural Analysis/Improvement	2021-2025	1,885,000	0%	-
P-4	Water System Master Plan	2026-2040	600,000	28%	167,044
P-5	Water Management and Conservation Plan	2026-2040	160,000	0%	-
O-2	Reservoir and Pump Station Abandonment Program	2021-2030	888,000	0%	-
	Total		\$ 161,798,500		\$ 69,714,717

Source: 2020 Tigard Water System Plan Table 8-1 (project list); City staff (project costs, eligibility percentages); Email from Brian Ginter (eligibility for project R-1)

II.C. REIMBURSEMENT FEE

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

II.C.1. Eligibility

To calculate the eligible cost of the City’s assets available for future users, four systems of the full water system were examined: supply, storage, pumping, and transmission and distribution. Details on the remaining capacity of each of these systems were sourced from the 2020 Water System Plan, and from Murraysmith where needed.

II.C.2. Calculated Reimbursement Fee Cost Basis

The reimbursement fee cost basis is the product of remaining capacity for each water system and the eligible original cost of those systems. The eligible cost for each system is simply the original cost, less any outside funding or outstanding principal for debt related to those systems. The eligible cost for reimbursement is shown in row 4 of **Table 3** below. The eligible cost multiplied by the capacity for growth equals the reimbursable cost of the City’s water system, which as shown in **Table 3** totals to \$36.6 million.

Table 3: Reimbursement Fee Cost Basis

	Supply	Storage	Pumping	Transmission & Distribution	Total
Original Cost	\$ 36,436,236	\$ 33,462,056	\$ 13,183,402	\$ 80,942,435	\$ 164,024,128
Outside Funding	-	-	-	8,916,258	8,916,258
Reimbursable Outstanding Debt	33,709,921	-	-	-	33,709,921
Original Cost Eligible for Reimbursement	\$ 2,726,315	\$ 33,462,056	\$ 13,183,402	\$ 72,026,177	\$ 121,397,949
Cost-Weighted Capacity for Growth	13%	40%	22%	28%	30%
Total Reimbursable Costs	\$ 344,706	\$ 13,288,629	\$ 2,940,702	\$ 20,052,541	\$ 36,626,578

Source: City staff (original cost, outside funding, and outstanding debt); 2020 Tigard Water System Plan, Tables 4-5, 5-4, and 5-7 (capacity for growth in the supply, storage, and pumping systems); Email from Brian Ginter (capacity in the transmission & distribution system)

II.D. CALCULATED SDC

This section combines the eligible costs from the improvement and reimbursement fee cost bases and applies adjustments for fund balance and compliance costs. The result is a total SDC per MCE, which can be charged to each development based on its water meter size.

II.D.1. Adjustments

The City estimates that it has \$16,052,039 in its improvement fee fund balance as of December 1, 2021. Unspent improvement fee revenue represents projects that remain unbuilt. Because these projects remain on the project list and are part of the improvement fee cost basis, it is reasonable to reduce this cost basis by the amount of revenue already received for those projects that remain on the list.

Table 4: Adjustment to the Improvement Fee Cost Basis

Unadjusted Improvement Fee Cost Basis	\$ 69,714,717
Improvement Fee Fund Balance	(16,052,039)
Improvement Fee Cost Basis	\$ 53,662,678

ORS 223.307(5) authorizes the expenditure of SDCs on “the costs of complying with the provisions of ORS 223.297 to 223.314, including the costs of developing system development charge methodologies and providing an annual accounting of system development charge expenditures.” To avoid spending monies for compliance that might otherwise have been spent on growth-related projects, this report also includes compliance costs as a separate cost basis. The City estimates that compliance costs will equal 5.00 percent of the improvement and reimbursement fees.

II.D.2. Calculated SDC

Table 5 below is a complete calculation of the water SDC showing the improvement fee, reimbursement fee, and compliance fee per MCE.

Table 5: Calculated SDC

Cost Basis:	
Improvement Fee	\$ 53,662,678
Reimbursement Fee	36,626,578
Total Cost Basis	\$ 90,289,257
Growth in MCEs	15,872
Improvement Fee per MCE	\$ 3,381
Reimbursement Fee per MCE	2,308
SDC per MCE	\$ 5,689
Compliance Fee per MCE	284
Total SDC per MCE	\$ 5,973

As shown above, the maximum allowable charge is \$5,973 per MCE. Below is a complete schedule for the water SDC based on meter size and the City's flow rates.














Table 6: Water SDC Schedule

Meter Size	MCEs by Meter	Improvement Fee	Reimbursement Fee	Compliance Fee	Calculated Full SDC
5/8"	1.00	\$ 3,381	\$ 2,308	\$ 284	\$ 5,973
3/4"	1.44	4,869	3,324	410	8,603
1"	2.67	9,019	6,156	759	15,934
1 1/2"	8.00	27,042	18,457	2,275	47,774
2"	12.99	43,911	29,971	3,694	77,576
3"	22.90	77,435	52,852	6,514	136,802
4"	46.97	158,810	108,393	13,360	280,564
6"	50.00	169,053	115,384	14,222	298,659
8"	80.00	270,484	184,614	22,755	477,853

II.D.3. Comparison

This section provides comparisons for the City's current and proposed SDCs against those of comparable jurisdictions. As shown in **Table 7** below, if SDCs are implemented as proposed, the City will have a lower water SDC than it currently charges, and will charge a middling water SDC relative to several comparable jurisdictions.

Table 7: Water SDC Comparison

		Water SDC per SFR	
Hillsboro	\$	13,395	
Wilsonville		10,971	
Tigard (Current)		10,853	
Cornelius		9,449	
Beaverton		9,354	
Lake Oswego		9,055	
Forest Grove		7,208	
Newberg		6,444	
Tigard (Proposed)		5,973	
Tualatin		5,306	
Sherwood		4,838	
Portland		4,563	
Milwaukie		2,041	

Source: Survey by FCS GROUP, as of 7/31/2022