

RESOLUTION NO. 21-05

A RESOLUTION AMENDING THE CITY OF SCAPPOOSE'S WATER SYSTEM DEVELOPMENT CHARGES

WHEREAS, the City of Scappoose System Development Charge (SDC) Code (Scappoose Municipal Code (SMC) Chapter 13.24), provides for the establishing of SDCs upon completion of an analysis of capital improvements already constructed and projected capital improvements to be constructed and adoption of a methodology explaining how the SDCs are calculated; and,

WHEREAS, SMC Chapter 13.24.030 (B) specifies that such charges shall be set by separate Resolution of the Scappoose City Council following a public hearing; and,

WHEREAS, the Oregon Revised Statutes (ORS) provide the framework for establishing an SDC, and for notification and public hearing of the City of Scappoose's intent to impose SDCs; and,

WHEREAS, the Scappoose City Council has adopted a Water System Master Plan Update (Carollo Engineers, January, 2020) which includes a list of completed and proposed capital improvements which affect SDCs; and,

WHEREAS, the City's current schedule of water SDCs consists of a reimbursement fee and an improvement fee; and,

WHEREAS, the City concludes it is appropriate to charge a water SDC based on ¾" meter equivalents (Equivalent Residential Units), consistent with the methodology used in the 2020 Water System Master Plan Update; and,

WHEREAS, the City has adopted a water SDC methodology via Resolution No. 02-19 dated August 5, 2002 that is based on ¾" meter equivalents; and,

WHEREAS, the City has prepared a schedule of water SDCs by ¾" meter equivalents (Water System Development Charge Update, March, 2021, Donovan Enterprises, Inc.) that incorporates the City's existing water SDC methodology, and made part of this Resolution as **Exhibit A**; and,

WHEREAS, the Scappoose City Council has determined the methodology and rates hereinafter specified and established are just, reasonable, and necessary.

NOW, THEREFORE BE IT RESOLVED,

Section 1: Amendment and updating of water SDCs. In accordance with SMC Chapter 13.24, this Resolution reaffirms the methodology and provides the basis for a water SDC that consists of a reimbursement, improvement, and administration fee.

Section 2: Scope of amendment and update of water SDCs. The SDCs established by this Resolution are separate from, and in addition to, any other applicable taxes, fees, assessments, or charges, including but not limited to SDCs, which are required by the City of Scappoose or represent a condition of a land use or development approval.

Section 3: Methodology. The reaffirmed methodology for the water SDCs is described in the attached **Exhibit A** and, by this reference, hereby made a part of this Resolution. The City amends and updates its water SDCs as described in the attached **Exhibit A**, hereby made a part of this Resolution.

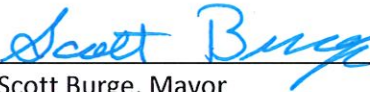
Section 4: Effective Date. This Resolution shall become effective upon its adoption by the Scappoose City Council.

Section 5: Review. This Resolution may be reviewed at the pleasure of the City Council, and the rates may be amended as appropriate.

Section 6: Rescind portion of Resolution No. 20-16, Attached Exhibit B, FY 20-21 rates for water SDCs is hereby rescinded and replaced with new rates effective immediately.

PASSED AND ADOPTED by the City Council this 17th day of May, 2021 and signed by the Mayor and City Recorder in authentication of its passage.

CITY OF SCAPPOOSE, OREGON


Scott Burge, Mayor

Attest: _____


Alexandra Rains, Interim City Manager

EXHIBIT A
 Water System Development Charge Update Final Report and Schedule of Water SDCs
 April, 2021 Donovan Enterprises, Inc.

Meter Size	AWWA Rated Flow (GPM)*	Flow Factor Equivalence	Proposed Schedule of Water SDCs				Total
			Reimbursement	Improvement	Administration		
0.625"x 0.75" - Displacement Multi-jet	30	1.00	\$ 896	\$ 7,618	\$ 426	\$ 8,940	
0.75"x 0.75" - Displacement Multi-jet	30	1.00	896	7,618	426	8,940	
1.00 inch - Displacement Multi-jet	50	1.67	1,493	12,697	710	14,900	
1.50 inch - Displacement Class I Turbine	100	3.33	2,987	25,393	1,420	29,800	
2.00 inch - Displacement or Class I & II Turbine	160	5.33	4,779	40,629	2,272	47,680	
3.00 inch - Displacement	300	10.00	8,960	76,180	4,260	89,400	
4.00 inch - Displacement or Compound	500	16.67	14,933	126,967	7,100	149,000	
6.00 inch - Displacement or Compound	1000	33.33	29,867	253,933	14,200	298,000	
8.00 inch - Compound	1600	53.33	47,787	406,293	22,720	476,800	

* - AWWA Manual of Practice M3; Safety Practices for Water Utilities; Table 2-2 Total Quantities Registered per Month by Meters Operating at Varying Percentages of Maximum Capacity

Meter Size	Proposed	Current	Difference
0.625"x 0.75" - Displacement Multi-jet	\$ 8,940	\$ 5,478	\$ 3,462
0.75"x 0.75" - Displacement Multi-jet	8,940	5,478	3,462
1.00 inch - Displacement Multi-jet	14,900	9,130	5,770
1.50 inch - Displacement Class I Turbine	29,800	18,260	11,540
2.00 inch - Displacement or Class I & II Turbine	47,680	29,216	18,464
3.00 inch - Displacement	89,400	54,780	34,620
4.00 inch - Displacement or Compound	149,000	91,300	57,700
6.00 inch - Displacement or Compound	298,000	182,600	115,400
8.00 inch - Compound	476,800	292,160	184,640

Presented by:



April

2021

Water System Development Charge Update

Final Report

Prepared for:



SCAPPOOSE
Oregon

Donovan Enterprises, Inc.
9600 SW Oak Street, Suite 335
Tigard, Oregon 97223-6596
☎ 503.517.0671



City of Scappoose
2021 Water SDC Methodology Update
Table of Contents

Introduction	1
SDC Legal Authorization	2
SDC Methodology	3
Reimbursement Fee Methodology	4
Improvement Fee Methodology	4
Methodology for the Granting of Credits, Exemptions, and Discounts	7
SDC Credits Policy	7
Partial and Full SDC Exemptions Policy	7
SDC Discount Policy	8
Conclusions and Recommendations	8
Water SDC Calculations	10
Existing and Future Water Demands in ¾" Meter Equivalents	10
Water Reimbursement Fee Calculations	11
2020 WSMPU 20 Year Capital Improvement Plan	13
Water Improvement Fee Calculations	14
Water SDC Model Summary	16

Introduction

The City of Scappoose conducts periodic updates to its Comprehensive Plan and its various Public Facility Plans to provide orderly and sustainable growth of local roads, water, sewer, stormwater, and parks. A key component to funding these public facilities is the system development charge (SDC) program. SDCs are one-time charges for new development—designed to recover the costs of infrastructure capacity needed to serve new development. This section describes the policy context and project scope upon which the body of this report is based. It concludes with a non-numeric overview of the calculations presented in subsequent sections of this report.

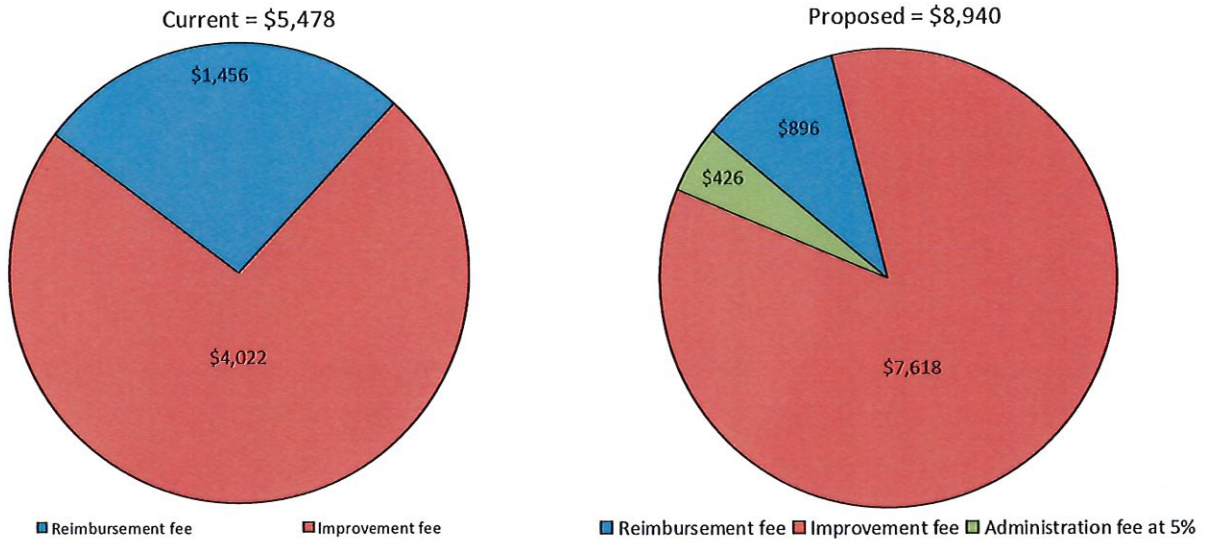
The city's current schedule of SDCs for Water were last reviewed in May of 2002. Upon completion of that review, the City Council adopted its current water SDC methodology via Resolution No. 02-19 dated August 5, 2002. In January, 2020, the City completed the task of updating the capital improvement plan (CIP) for the Water system. With the preparation/adoption of the new Water CIP and Water System Master Plan Update (WSMPU), the City commissioned this update of its Water SDCs to get the methodology and rates current. With this review and update, the City has stated a number of objectives:

- Review the basis for Water charges to ensure a consistent methodology;
- Address specific policy, administrative, and technical issues which had arisen from application of the existing Water SDCs;
- Determine the most appropriate and defensible fees, ensuring that development is paying its way;
- Consider possible revisions to the structure or basis of the charges which might improve equity or proportionality to demand;
- Provide clear, orderly documentation of the assumptions, methodology, and results, so that City staff could, by reference, respond to questions or concerns from the public.

This report provides the documentation of that effort and was done in close coordination with City staff and available facilities planning documents. The Water SDC update complies with Scappoose Municipal Code (SMC) section 13.24.

Table 1 gives a component breakdown for the current and proposed residential equivalent SDCs for Water. Appendix A to this report shows the detailed calculations that were used to arrive at the proposed SDCs for Water supply, treatment, storage, and distribution services.

Table 1 - Component Breakdown of the Proposed Residential Equivalent Water SDC



The framework for SDC calculation is established by Oregon Revised Statute (ORS) 223.297-314 which is the basis for this review. Under ORS 223.299, SDC's are defined as one-time fees imposed on new development and have two components: reimbursement and improvement.

The reimbursement fee considers the cost of existing facilities, prior contributions by existing users of those facilities, the value of the unused/available capacity, and generally accepted ratemaking principles. The objective is future system users contribute no more than an equitable share to the cost of existing facilities. The reimbursement fee can be spent on capital costs or debt service related to the systems for which the SDC is applied.

The improvement fee portion of the SDC is based on the cost of planned future facilities that expand the system's capacity to accommodate growth or increase its level of performance. An example is a facility which improves system capacity to better serve current customers. Only capacity increasing/level of performance costs provide the basis for the SDC calculation. The improvement SDC is calculated as a function of the estimated number of ¾" water meter equivalents to be served by the City's facilities over the planning period. Such a fee represents the greatest potential for future SDC changes.

The administration fee recovers costs incurred by the City for 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. The City's current water SDC does not have an administration fee component.

SDC Legal Authorization

SDCs are authorized by Oregon Revised Statute (ORS) 223.297-314. The statute is specific in its definition of system development charges, their application, and their accounting. In general, an SDC is a one-time fee imposed on new development or expansion of existing development and assessed at the time of development approval or increased usage of the system. Overall, the statute is intended to promote

equity between new and existing customers by recovering a proportionate share of the cost of existing and planned/future capital facilities that serve the developing property. Statute further provides the framework for the development and imposition of SDCs and establishes that SDC receipts may only be used for capital improvements and/or related debt service.

The methodology used to determine the improvement fee portion of the SDC must consider the cost of projected capital improvements needed to increase system capacity or level of performance. The improvement fee must also provide a credit for construction of a qualified public improvement.

Finally, two cost basis adjustments are potentially applicable to both reimbursement and improvement fees: fund balance and compliance costs.

Fund Balance - To the extent that SDC revenue is currently available in fund balance, that revenue should be deducted from its corresponding cost basis. For example, if the city has Water improvement fees that it has collected but not spent, then those unspent improvement fees should be deducted from the Water system’s improvement fee cost basis to prevent charging twice for the same capacity.

Compliance Costs - 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 includes an estimate of compliance costs in its SDCs. All estimates of compliance costs in this report are based on historical transfers from the appropriate SDC fund to the General Fund.

SDC Methodology

The essential ingredient in the development of an SDC methodology for Water services is valid sources of data. For this project, the consultant team has relied on a number of data sources. The primary sources have been the adopted 2020 WSMPU and plan updates for these municipal facilities. We have supplemented these data sources with City utility billing records, certified census data, and other documents that we deemed helpful, accurate, and relevant to this study. Table 2 contains a bibliography of the key documents/sources that we relied upon to facilitate our analysis and hence the resulting SDCs.

Table 2 - Data Sources for the Calculation of Water SDC

Service	Master Plan Document and/or Corroborating Source Documentation
Water	<ul style="list-style-type: none"> • Water System Master Plan Update for the City of Scappoose; January, 2020; Carollo Engineers, Inc. • Water System Development Charge Update; May 15, 2002; Economic & Financial Analysis, Inc. • Scappoose Water system fixed asset schedule; June 30, 2020; City records. • City of Scappoose Utility Billing System – active utility accounts and Equivalent Dwelling Units in service report; December 31, 2020. • Portland State University, College of Urban Affairs, Population Research Center; Certified census for Scappoose, Oregon; June, 2020

Reimbursement Fee Methodology

The reimbursement fee represents a buy-in to the cost, or value, of infrastructure capacity within the existing system. Generally, if a system were adequately sized for future growth, the reimbursement fee might be the only charge imposed, since the new customer would be buying existing capacity. However, staged system expansion is needed, and an improvement fee is imposed to allocate those growth-related costs. Even in those cases, the new customer also relies on capacity within the existing system, and a reimbursement component is warranted.

In order to determine an equitable reimbursement fee to be used in conjunction with an improvement fee, two points should be highlighted. First, the cost of the system to the City's customers may be far less than the total plant-in-service value. This is due to the fact that elements of the existing system may have been contributed, whether from developers, governmental grants, and other sources. Therefore, the net investment by the customer/owners is less. Second, the value of the existing system to a new customer is less than the value to an existing customer, since the new customer must also pay, through an improvement fee, for expansion of some portions of the system.

The method used for determining the reimbursement fee accounts for both of these points. First, the charge is based on the net investment in the system, rather than the gross cost. Therefore, donated facilities, typically including water infrastructure built by developers and dedicated to the City as a condition of land use approval and grant-funded facilities, would be excluded from the cost basis. Also, the charge should be based on investments clearly made by the current users of the system, and not already supported by new customers. Tax supported activities fail this test since funding sources have historically been from general revenues, or from revenues which emanate, at least in part, from the properties now developing. Second, the cost basis is allocated between used and unused capacity, and, capacity available to serve growth. This approach reflects the philosophy, consistent with the City's 2020 WSMPU, that facilities have been sized to meet the demands of the customer base within the established planning period.

Improvement Fee Methodology

There are three basic approaches used to develop improvement fee SDCs: "standards driven", "improvements-driven", and "combination/hybrid" approaches. The "standards-driven" approach is based on the application of Level of Service (LOS) standards for facilities. Facility needs are determined by applying the LOS standards to projected future demand, as applicable. SDC-eligible amounts are calculated based on the costs of facilities needed to serve growth. This approach works best where level of service standards has been adopted but no specific list of projects is available. The "improvements-driven" approach is based on a specific list of planned capacity increasing capital improvements. The portion of each project that is attributable to growth is determined, and the SDC-eligible costs are calculated by dividing the total costs of growth-required projects by the projected increase in projected future demand, as applicable. This approach works best where a detailed master plan or project list is available, and the benefits of projects can be readily apportioned between growth and current users. Finally, the combination/hybrid-approach includes elements of both the "improvements driven" and "standards-driven" approaches. Level of Service standards may be used to create a list of planned capacity-increasing projects, and the growth required portions of projects are then used as the basis for determining SDC eligible costs. This approach works best where levels of service have been identified and the benefits of individual projects are not easily apportioned between growth and current users.

In the 2002 update, the City utilized the “improvements” approach for the calculation of Water SDCs. This study is using the “improvements-driven” method and has relied on the capital improvement plans that are incorporated in the 2020 WSMPU for Water services.

For this SDC methodology update, the improvement fee represents a proportionate share of the cost to expand the systems to accommodate growth. This charge is based on the capital improvement plans established by the City in the master plans for Water services. The costs that can be applied to the improvement fees are those that can reasonably be allocable to growth. Statute requires that the capital improvements used as a basis for the charge be part of an adopted capital improvement schedule, whether as part of a system plan or independently developed, and that the improvements included for SDC eligibility be capacity or level of service expanding. The improvement fee is intended to protect existing customers from the cost burden and impact of expanding a system that is already adequate for their own needs in the absence of growth.

The key step in determining the improvement fee is identifying capital improvement projects that expand the system and the share of those projects attributable to growth. Some projects may be entirely attributable to growth, such as a new water line to serve a developing area. Other projects, however, are of mixed purpose, in that they may expand capacity, but they also improve service or correct a deficiency for existing customers. An example might be distribution reservoir that both expands Water storage capacity and corrects a chronic capacity issue for existing users. In this case, a rational allocation basis must be defined.

The improvement portion of the SDC is based on the proportional approach toward capacity and cost allocation in that only those facilities (or portions of facilities) that either expand the Water system capacity to accommodate growth or increase its respective level of performance have been included in the cost basis of the fee. As part of this SDC update, City Staff and their engineering consultants were asked to review the planned capital improvement lists in order to assess SDC eligibility. The criteria in Figure 1 were developed to guide the City’s evaluation:

Figure 1 - SDC Eligibility Criteria

City of Scappoose
Steps Toward Evaluating
Capital Improvement Lists for SDC Eligibility

ORS 223

1. Capital improvements mean the facilities or assets used for :
 - a. Source of water supply
 - b. Water treatment
 - c. Water transmission
 - d. Water storage
 - e. Water pumping and distribution

This definition DOES NOT ALLOW costs for operation or routine maintenance of the improvements;
2. The SDC improvement base shall consider the cost of projected capital improvements needed to increase the capacity of the systems to which the fee is related;
3. An increase in system capacity is established if a capital improvement increases the “level of performance or service” provided by existing facilities or provides new facilities.

Under the City’ approach, the following rules will be followed

1. Repair costs are not to be included;
2. Replacement costs will not be included unless the replacement includes an upsizing of system capacity and/or the level of performance of the facility is increased;
3. New regulatory compliance facility requirements fall under the level of performance definition and should be proportionately included;
4. Costs will not be included which bring deficient systems up to established design levels.

In developing the improvement fee, the project team in consultation with City staff evaluated each of its CIP projects to exclude costs related to correcting existing system deficiencies or upgrading for historical lack of capacity. Only capacity increasing/level of performance costs were used as the basis for the SDC calculation, as reflected in the capital improvement schedules developed by the City. The improvement fee is calculated as a function of the estimated number of projected additional ¾” meter equivalents to be served by the City’s facilities over the planning horizon.

Once the future costs to serve growth have been segregated (i.e., the numerator), they can be divided into the total number of new ¾” meter equivalents that will use the capacity derived from those investments (i.e., the denominator).

Methodology for the Granting of Credits, Exemptions, and Discounts

SDC Credits Policy

ORS 223.304 requires that credit be allowed for the construction of a "qualified public improvement" which is required as a condition of development approval, is identified in the Capital Improvement Plan, and either is not located on or contiguous to property that is the subject of development approval or is located on or contiguous to such property and is required to be built larger or with greater capacity than is necessary for the particular development project. The credit for a qualified public improvement may only be applied against an SDC for the same type of improvement and may be granted only for the cost of that portion of an improvement which exceeds the minimum standard facility size or capacity needed to serve the particular project. For multi-phase projects, any excess credit may be applied against SDCs that accrue in subsequent phases of the original development project. In addition to these required credits, the City may, if it so chooses, provide a greater credit, establish a system providing for the transferability of credits, provide a credit for a capital improvement not identified in the Capital Improvement Plan, or provide a share of the cost of an improvement by other means.

The City has adopted a policy for granting SDC credits and has codified this policy in the SMC §13.24.110. The adopted SDC credit policy consists of four (4) items as follows:

- A. The city may grant a credit against the SDC, which is otherwise assessed for a new development, for any qualified public improvements(s) constructed or dedicated as part of that new development. The applicant bears the burden of evidence and persuasion in establishing entitlement to an SDC credit and to a particular value of SDC credit. The credit provided shall be only for the improvement fee charged for the type of improvement being constructed and shall not exceed the improvement fee even if the cost of the capital improvement exceeds the applicable improvement fee.
- B. A change in use results whenever a building permit is issued to expand an existing structure or construct a new structure on a parcel of land which had an established use of all facilities upon the effective date of the ordinance codified in this chapter. When such a change of use occurs, a system development charge is imposed, but credit shall be given for all systems charge portions of the computed system development charge in an amount equal to what would otherwise be the charge for the existing structure and use. The credit so computed shall not exceed the calculated systems development charge. No refund shall be made on account of such credit.
- C. Credit shall not be transferable from one development to another but may be transferred from one phase of a development to another phase of the same development. Credits shall be used within a period of ten years from the date the credit is given.
- D. Credit shall not be transferable from one type of capital improvement to another.

Partial and Full SDC Exemptions Policy

The City may exempt certain types of development, from the requirement to pay SDCs. Exemptions reduce SDC revenues and, therefore, increase the amounts that must come from other sources, such as user fees and property taxes. As in the case of SDC credits, the City has articulated a policy relative to partial and full SDC exemption. This SDC exemption policy is codified in SMC §13.24.100, and is as follows:

- A. Additions to single-family dwellings that do not constitute the addition of a dwelling unit, as defined by the State Uniform Building Code, are exempt from all portions of the system development charge.
- B. An alteration, addition, replacement or change in use that does not increase the parcel's or structure's use of the public improvement facility are exempt from all portions of the system development charge.
- C. A project financed by city revenues is exempt from all portions of the system development charge.

SDC Discount Policy

The City, at its sole discretion may discount the SDC rates by choosing not to charge a reimbursement fee for excess capacity, or by reducing the portion of growth-required improvements to be funded with SDCs. A discount in the SDC rates may also be applied on a pro-rata basis to any identified deficiencies, which must be funded from sources other than improvement fee SDCs. The portion of growth-required costs to be funded with SDCs must be identified in the CIP. Because discounts reduce SDC revenues, they increase the amounts that must come from other sources, such as user fees or general fund contributions, in order to acquire the facilities identified in the Updated Master Plan

Conclusions and Recommendations

The 2021 Water SDC methodology update was done in accordance with SMC Chapter 13.24, and with the benefit of adopted WSMPU for Water services. We recommend the City update the SDC charge to reflect the current capital improvement program. This will provide additional revenues to help fund the utility's future capital needs. Our analysis indicates the City can charge a maximum of \$8,940 per ¾" meter equivalent for Water. The components of this fee are as follows:

Reimbursement fee	\$ 896
Improvement fee	7,618
Administration fee	<u>426</u>
Total SDC per ¾" ME	<u>\$8,940</u>

Appendix A

SDC Calculations

Water SDC Calculations

Existing and Future Water Demands in ¾” Meter Equivalents

Chapter 3 of the 2020 WSMPU (Water Requirements) developed existing and future water demand. Current water demands are based on historical customer billing records, and actual water meters in service. Future water use was projected using parameters developed from historical data and assumptions for future growth by land use designation. Several parameters were used to project future average daily demand (ADD) and maximum daily demand (MDD). The parameters, which are listed in Table 3.8 of the WSMPU, include ¾” meter equivalents values, future customer water use, MDD and ADD peaking factors, and water loss percentages. For each demand projection parameter, low, medium, and high values were established corresponding to the respective demand scenario. For the calculation of SDCs, we are using the medium demand forecast. For planning purposes, the future service area considers supplying additional annexation surrounding the airport. Future land use portrays projected land use in the year 2036. We have extrapolated this out to 2040 to complete the 20-year forecast for calculating SDCs. These land uses are used to distribute existing and future water demands throughout each of the City’s pressure zones in the water system hydraulic model for the purpose of evaluating the water distribution system.

The City principally serves single-family residential customers and to a lesser extent, small commercial and industrial customers. Single-family residential water services generally have a consistent daily pattern of water use whereas water demands for multifamily residences, commercial and industrial users may vary significantly from service to service depending on the number of multifamily units per service or the type of commercial enterprise. When projecting future water demands based on population change, the water needs of nonresidential and multi-family residential customers are represented by comparing the water use volume at these services to the average single-family residential water service. A method to estimate this relationship is to calculate “equivalent residential units (ERUs)”. In the case of Scappoose, the standard residential unit of demand is the rated capacity (in gallons per minute) of the ¾” water meter. Per Table 3.12 of the 2020 WSMPU, as of 2020, it is estimated the City is serving 3,966 ¾” meter equivalents. For the WSMPU medium growth case, by 2040, the City will be serving 7,561 ¾” meter equivalents. Table 3 contains the WSMPU growth data by demand scenario.

Table 3 – Existing and Future Water Demand Expressed in ¾” Meter Equivalents

Master Plan Demand Scenario ¹	Forecast Calendar Year							
	2018	2020	2023	2028	2033	2038	2040	2020-2040
Low Demand (ERUs)	3,654		4,484	5,421	6,330	7,187		
CAGR ²			4.18%	3.87%	3.15%	2.57%		
Medium Demand (ERUs)	3,654	3,966	4,484	5,421	6,330	7,187	7,561	
CAGR			4.18%	3.87%	3.15%	2.57%		3.28%
High Demand (ERUs)	3,807		4,650	5,604	6,527	7,403		
CAGR			4.08%	3.80%	3.10%	2.55%		

¹ Source - City of Scappoose Water Master Plan 2020; Carollo Engineers, Inc.; Table 3.12

² Compound Annual Growth Rate (CAGR)

Water Reimbursement Fee Calculations

Derivation of the Water reimbursement fee methodology is a six (6) step process. The methodological steps in its construction are restated here.

- Step 1: Calculate the original cost of Water fixed assets in service. From this starting point, eliminate any assets that do not conform to the ORS 223.299 definition of a capital improvement. This results in the **adjusted original cost of Water fixed assets**.
- Step 2: Subtract from the adjusted original cost of Water fixed assets in service the accumulated depreciation of those fixed assets. This arrives at the **modified book value of Water fixed assets in service**.
- Step 3: Subtract from the modified book value of Water assets in service any grant funding or contributed capital. This arrives at the **modified book value of Water fixed assets in service net of grants and contributed capital**.
- Step 4: Subtract from the modified book value of Water fixed assets in service net of grants and contributed capital any principal outstanding on long term debt used to finance those assets. This arrives a **gross Water reimbursement fee basis**.
- Step 5: Subtract from the gross Water reimbursement fee basis the fund balance held in the Water Reimbursement SDC fund (if available). This arrives at the **net Water reimbursement fee basis**.
- Step 6: Divide the net Water reimbursement fee basis by the sum of existing and future $\frac{3}{4}$ " meter equivalents to arrive at the **unit net reimbursement fee**.

The actual data that was used to calculate the total Water reimbursement fee is shown below in Table 4.

Table 4 - Water Reimbursement Fee Calculations

Line Item Descriptions	Amount
Utility Plant-in-Service (original cost): ¹	
Land	\$ 286,466
Buildings and improvements	1,438,308
Equipment	1,560,346
Water distribution system - Water Fund (40)	7,214,495
Water distribution system - Water SDC Fund (50)	7,209,059
Water distribution system - Airpark Fund (89)	2,033,529
Vehicles & Equipment	<u>Eliminated</u>
Total Utility Plant-in-Service	\$ 19,742,204
Accumulated depreciation ¹	
Land	\$ -
Buildings and improvements	1,094,050
Equipment	1,225,738
Water distribution system - Water Fund (40)	3,374,839
Water distribution system - Water SDC Fund (50)	2,568,851
Water distribution system - Airpark Fund (89)	1,042,182
Vehicles & Equipment	<u>Eliminated</u>
Total accumulated depreciation	\$ 9,305,659
Book value of water utility plant-in-service @ June 30, 2020	\$ 10,436,545
Eliminating entries:	
Principal outstanding on bonds, notes, and loans payable:	
Safe Drinking Water Loans:	
Miller Road water plant loan G03003 50-500	795,071
Water storage loan S03003 50-500	2,196,828
Dutch Canyon water line loan S03003B 40-400	666,495
Developer Contributions	-
Grants, net of amortization	<u>-</u>
Total eliminating entries	3,658,394
Net basis in utility plant-in-service available to serve future customers	\$ 6,778,150
Estimated existing and future 3/4" Meter Equivalentents (MEs)	7,561
Calculated reimbursement fee - \$ per 3/4" ME	<u>\$ 896</u>

¹ Source: Scappoose Multi-Sort Depreciation Report - Capitalized Assets as of June 30, 2020

2020 WSMMPU 20 Year Capital Improvement Plan

Table 5 - 2020 WSMMPU 20-year Capital Improvement Plan

Project Number	Project Description	Project Cost	Projected Funding Sources %				Total
			SDCs	Rates	Developer	Beyond 20 yrs.	
Source of Supply							
S-01	Dutch Canyon Well #2	\$ 480,000	0%	0%	0%	0%	0%
S-02	Dutch Canyon Well #3	2,100,000	100%	0%	0%	0%	100%
S-03	Miller Road Well #4	200,000	100%	0%	0%	0%	100%
S-04	Miller Road Well #5	1,970,000	100%	0%	0%	0%	100%
S-05	Miller Road Well #6	2,100,000	100%	0%	0%	0%	100%
S-06	Long term supply	12,650,000	100%	0%	0%	0%	100%
Treatment							
T-01	Miller Road plant repair and replacement	650,000	0%	100%	0%	0%	100%
T-02	Keys Road plant repair and replacement	340,000	0%	100%	0%	0%	100%
T-03	Supply and treatment plant LOS goals	20,000	0%	100%	0%	0%	100%
T-04	Seismic and life safety audit	160,000	0%	100%	0%	0%	100%
T-05	Treatment capacity and operations optimization study	290,000	0%	100%	0%	0%	100%
Distribution							
D-01	NW Eastview Drive replacement	790,000	40%	60%	0%	0%	100%
D-02	SW 5th street connection	210,000	100%	0%	0%	0%	100%
D-03	Sky Way Drive connection to Airport annex	50,000	0%	0%	100%	0%	100%
D-04	Dutch Canyon road to Ern Watts road	540,000	100%	0%	0%	0%	100%
D-05	Moore road to Airport annex	1,630,000	0%	0%	100%	0%	100%
D-06	Airport annex north of Bird road	610,000	100%	0%	0%	0%	100%
D-07	Water main repair and replacement	15,500,000	0%	100%	0%	0%	100%
D-08	Dead end and small diameter mains	3,530,000	0%	100%	0%	0%	100%
Pump Stations							
PS-01	High zone BPS	480,000	0%	100%	0%	0%	100%
Storage							
ST-01	2.0 mg Keys road reservoir	4,356,000	100%	0%	0%	0%	100%
ST-02	Reservoir seismic retrofit	900,000	0%	100%	0%	0%	100%
Miscellaneous							
Misc-01	City's capital outlay projects	5,570,000	50%	50%	0%	0%	100%
	Subtotal water	\$ 55,126,000					

Water Improvement Fee Calculations

The calculation of the Water improvement fee also follows the logic discussed in the body of this report. As earlier stated, this study uses the improvements-driven method, and has relied on the capital improvement plans, and plan updates for the Water infrastructure. Under this methodology, only three steps are required to arrive at the improvement fee. These steps are:

- Step 1: Accumulate the future cost of planned improvements needed to serve growth. This arrives at **the gross improvement fee basis**.
- Step 2: Subtract from the gross improvement fee basis the fund balance held in the Water Improvement SDC Fund. This arrives at **the net Water improvement fee basis**.
- Step 3: Divide the net Water improvement fee basis by the forecasted number of growth $\frac{3}{4}$ " meter equivalents over the planning period. This arrives at **the total Water improvement fee**.

The actual data that was used to calculate the total Water improvement fee is shown below in Table 6.

Table 6 - Water Improvement Fee Calculations

Project Name/Line Item Description	Total Cost	SDC Ineligible	SDC Eligible
<i>Source of Supply</i>			
Dutch Canyon Well #2	\$ 480,000	\$ -	\$ -
Dutch Canyon Well #3	2,100,000	-	2,100,000
Miller Road Well #4	200,000	-	200,000
Miller Road Well #5	1,970,000	-	1,970,000
Miller Road Well #6	2,100,000	-	2,100,000
Long term supply	12,650,000	-	12,650,000
<i>Treatment</i>			
Miller Road plant repair and replacement	650,000	650,000	-
Keys Road plant repair and replacement	340,000	340,000	-
Supply and treatment plant LOS goals	20,000	20,000	-
Seismic and life safety audit	160,000	160,000	-
Treatment capacity and operations optimization study	290,000	290,000	-
<i>Distribution</i>			
NW Eastview Drive replacement	790,000	474,000	316,000
SW 5th street connection	210,000	-	210,000
Sky Way Drive connection to Airport annex	50,000	50,000	-
Dutch Canyon road to Em Watts road	540,000	-	540,000
Moore road to Airport annex	1,630,000	1,630,000	-
Airport annex north of Bird road	610,000	-	610,000
Water main repair and replacement	15,500,000	15,500,000	-
Dead end and small diameter mains	3,530,000	3,530,000	-
<i>Pump Stations</i>			
High zone BPS	480,000	480,000	-
<i>Storage</i>			
2.0 mg Keys road reservoir	4,356,000	-	4,356,000
Reservoir seismic retrofit	900,000	900,000	-
<i>Miscellaneous</i>			
City's capital outlay projects	5,570,000	2,785,000	2,785,000
Total	55,126,000	26,809,000	27,837,000
Total Improvement Fee Eligible Costs for Future System Improvements			\$ 27,837,000
less: Water improvement SDC Fund balance as of June 30, 2020			443,692
Adjusted Improvement Fee Eligible Costs for Future System Improvements			\$27,393,308
Total Growth in 3/4" Meter Equivalents (20 year forecast)			3,596
Calculated Water Improvement Fee SDC per Meter Equivalent			<u>\$7,618</u>

Water SDC Model Summary

The 2021 water SDC update was done in accordance with SMC Chapter 13.24, and with the benefit of adopted plan updates for water services. We recommend the City update the SDC charge to reflect the current capital improvement program. Our analysis indicates the City can charge a maximum of \$8,940 for the standard ¾" residential water meter. A comparison of the proposed and current water SDCs for the average single-family residential customer is shown below in Table 7.

Table 7 - Proposed and Current Water SDCs for a ¾" Meter

Water SDC Components	Proposed	Current	Difference
Reimbursement fee	\$ 896	\$ 1,456	\$ (560)
Improvement fee	\$ 7,618	\$ 4,022	\$ 3,596
Administration fee at 5%	\$ 426	\$ -	\$ 426
Total water SDC	\$ 8,940	\$ 5,478	\$ 3,462

For water meters larger than ¾", the project team has developed a schedule of SDCs based on the general design criteria for meters that are installed in the Scappoose water service area. This criterion is from the standard approach of using American Water Works Association design criteria for displacement and compound water meters.

The resulting schedule of water SDCs for the array of potential meter sizes is shown below in Table 7.

Table 8 - Water SDCs by Water Meter Size

Meter Size	AWWA Rated Flow (GPM) *	Flow Factor Equivalence	Proposed Schedule of Water SDCs			Total
			Reimbursement	Improvement	Administration	
0.625" x 0.75" - Displacement Multi-jet	30	1.00	\$ 896	\$ 7,618	\$ 426	\$ 8,940
0.75" x 0.75" - Displacement Multi-jet	30	1.00	896	7,618	426	8,940
1.00 inch - Displacement Multi-jet	50	1.67	1,493	12,697	710	14,900
1.50 inch - Displacement Class I Turbine	100	3.33	2,987	25,393	1,420	29,800
2.00 inch - Displacement or Class I & II Turbine	160	5.33	4,779	40,629	2,272	47,680
3.00 inch - Displacement	300	10.00	8,960	76,180	4,260	89,400
4.00 inch - Displacement or Compound	500	16.67	14,933	126,967	7,100	149,000
6.00 inch - Displacement or Compound	1000	33.33	29,867	253,933	14,200	298,000
8.00 inch - Compound	1600	53.33	47,787	406,293	22,720	476,800

* - AWWA Manual of Practice M3: Safety Practices for Water Utilities; Table 2-2 Total Quantities Registered per Month by Meters Operating at Varying Percentages of Maximum Capacity

Meter Size	Proposed	Current	Difference
0.625" x 0.75" - Displacement Multi-jet	\$ 8,940	\$ 5,478	\$ 3,462
0.75" x 0.75" - Displacement Multi-jet	8,940	5,478	3,462
1.00 inch - Displacement Multi-jet	14,900	9,130	5,770
1.50 inch - Displacement Class I Turbine	29,800	18,260	11,540
2.00 inch - Displacement or Class I & II Turbine	47,680	29,216	18,464
3.00 inch - Displacement	89,400	54,780	34,620
4.00 inch - Displacement or Compound	149,000	91,300	57,700
6.00 inch - Displacement or Compound	298,000	182,600	115,400
8.00 inch - Compound	476,800	292,160	184,640